

Quality management systems in Aboriginal Community Controlled Health Services: a review of the literature

Jenifer Olive Darr ¹, Richard C Franklin ¹, Kristin Emma McBain-Rigg ¹, Sarah Larkins,² Yvette Roe,³ Kathryn Panaretto,⁴ Vicki Saunders,⁵ Melissa Crowe²

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¹College of Public Health, Medical and Veterinary Sciences, James Cook University, Townsville, Queensland, Australia

²College of Medicine and Dentistry, James Cook University, Townsville, Queensland, Australia

³Molly Wardaguga Research Centre, Charles Darwin University, Brisbane, Queensland, Australia

⁴Faculty of Medicine, The University of Queensland, Saint Lucia, Queensland, Australia

⁵First Peoples Health Unit, Griffith University Faculty of Health, Gold Coast, Queensland, Australia

Correspondence to

Jenifer Olive Darr;
jenny.darr@my.jcu.edu.au

ABSTRACT

Background A national accreditation policy for the Australian primary healthcare (PHC) system was initiated in 2008. While certification standards are mandatory, little is known about their effects on the efficiency and sustainability of organisations, particularly in the Aboriginal Community Controlled Health Service (ACCHS) sector.

Aim The literature review aims to answer the following: to what extent does the implementation of the International Organisation for Standardization 9001:2008 quality management system (QMS) facilitate efficiency and sustainability in the ACCHS sector?

Methods Thematic analysis of peer-reviewed and grey literature was undertaken from Australia and New Zealand PHC sector with a focus on First Nations people. The databases searched included Medline, Scopus and three Informit sites (AHB-ATSIS, AEI-ATSIS and AGIS-ATSIS). The initial search strategy included quality improvement, continuous quality improvement, efficiency and sustainability.

Results Sixteen included studies were assessed for quality using the McMaster criteria. The studies were ranked against the criteria of credibility, transferability, dependability and confirmability. Three central themes emerged: accreditation (n=4), quality improvement (n=9) and systems strengthening (n=3). The accreditation theme included effects on health service expenditure and clinical outcomes, consistency and validity of accreditation standards and linkages to clinical governance frameworks. The quality improvement theme included audit effectiveness and value for specific population health. The theme of systems strengthening included prerequisite systems and embedded clinical governance measures for innovative models of care.

Conclusion The ACCHS sector warrants reliable evidence to understand the value of QMSs and enhancement tools, particularly given ACCHS (client-centric) services and their specialist status. Limited evidence exists for the value of standards on health system sustainability and efficiency in Australia. Despite a mandatory second certification standard, no studies reported on sustainability and efficiency of a QMS in PHC.

INTRODUCTION

Aboriginal Community Controlled Health Service (ACCHS) sector operates in dynamic

and innovative settings. These settings are rich, intuitive environments remaining relevant and effective since the first ACCHS opened in Redfern in 1972. The sector has evolved to deliver comprehensive primary healthcare (PHC) to First Nations people.¹ Nationally, the ACCHS sector includes more than 154 health organisations, specialising in a variety of health areas including population, environmental, tropical and public health.² ACCHSs can be considered as boutique marketplaces for specialty training.³ ACCHSs deliver services that are groundbreaking, sustainable and effective in financially suppressed operating environments.⁴ These are traits demonstrating the continued relevance of the sector's resilience and strength-based approach, a true testament and acknowledgement to the culture and tenacity of the ACCHS sector nationally.

Australia spends \$154.6 billion on healthcare annually⁵ and performs well by international health service standards.⁶ Three tiers of healthcare delivery comprise the Australian healthcare system. Tertiary care (hospital specialist), secondary care (private specialists) and primary care (general practitioner (GP) and client). In some areas of service delivery, Australia performs well below international standards for equitable levels of healthcare coverage and outcomes.⁷ Most notably is the inequity among First Nations people, for whom chronic disease, psychosocial illness and the social determinants of health account for the majority of disparities in health outcomes between them and the rest of the Australian population.⁸

To quantify the quality and safety of the Australian health system, a significant commissioned study in 1994 reviewed adverse events experienced in tertiary hospitals in New South Wales and South Australia.⁹ The Quality in Australian Health Care Study identified the

quality of healthcare in Australia as problematic¹⁰: 16.6% of hospital admissions in South Australia and New South Wales resulted in adverse events (including client disability and longer hospital stay), and of the adverse events, 51% were deemed preventable.⁹ This evidence resulted in the establishment of the Quality in Australian Health Care taskforce⁹ and subsequently a national expert advisory group and the Australian Council for Safety and Quality in Healthcare.^{11 12} Part of the statutory authority's mission is to improve healthcare across the country.¹¹

STANDARDS AND QUALITY ASSESSMENTS IN PHC

Internationally, by the mid-2000s, there was a growing body of evidence concerning the importance of a systems approach to enhancing the quality of care in PHC.^{13–15} In 2008, the Australian Commonwealth government introduced vital policy reforms to the Australian healthcare system, including a national accreditation framework.¹⁶ The Australian Commonwealth government holds primary responsibility for financing the primary care sector.^{16 17} For many primary care providers, the national accreditation framework triggered the application of dual standards: the Royal Australian College of General Practitioners (RACGP)¹⁸ Standards and the International Organisation for Standardization (ISO) 9001:2008, quality management system (QMS), an international, whole-of-organisation certification.¹⁹ The RACGP non-legislated accreditation standard focuses on clinical service delivery and clinical governance arrangements with a choice of two national accreditation bodies of Australian General Practice Accreditation Limited (AGPAL) and General Practice Accreditation Plus.¹³

There are differences between accreditation and certification. The RACGP defines accreditation as peer-reviewed recognition of a health practice meeting requirements of Australian general practice standards, known as practice accreditation.¹⁸ Conversely, certification is a process whereby an authorised independent agency recognises

individuals or healthcare organisations as meeting predetermined requirements, beyond those set by licensure.²⁰ The other notable difference between accreditation and certification is the mandatory audit schedule as an inbuilt system of self-monitoring activities for the certification process. Audits routinely identify gaps for improvement and are integral components of clinical governance. Phillips describes clinical governance as a framework of strategies including clinical audits, clinical competence, client-directed interventions, risk management, education and training schedules and use of service information. Integration and a systematic approach to these strategies ensure services deliver quality and accountable healthcare.²¹ Illustrations of quality assessment models currently operating in Australia in the primary care context are presented in [table 1](#). The ACCHS sector applies two or more standards to their business operations and service delivery.¹⁹

In January 2013, the National Safety and Quality Health Standards (NSQHS) were introduced for all health-related facilities in Australia.²² The Queensland ACCHSs in 2010–2012, in compliance with the legislated national accreditation scheme, applied ISO 9001:2008 QMS together with the non-legislated RACGP Standard.¹⁸

LITERATURE REVIEW QUESTION

Ultimately, standards aim to improve outcomes; thus, the underlying logic of applying a QMS is (a) improving business performance and creating systems that are process dependent, (b) improving systems and microsystems via increased process dependency, (c) improved and inter-linked microsystems providing enhanced service and (d) enhanced service sustainability and efficiency.^{13–15 19 23–25} This literature review aims to answer the following: to what extent does the implementation of the ISO 9001:2008 QMS facilitate efficiency and sustainability in the ACCHS sector?

Table 1 Australian primary healthcare quality assessment models

QA type	Aim	Rationale	Method	Outcome
Peer review of professional performance	Assesses professional performance of individuals and practice team	Professionals can self-regulate to improve professional performance	Systematic site visit based on systems criteria and peer review	Assessment report only with no certificate of achievement
Practice accreditation	Assess organisation and delivery of specific practice services	Practices need to demonstrate public accountability	Peer assessment against explicit standards	Accreditation of practice and development of systems necessary for quality improvement for medical care of clients
International Organisation for Standardization (ISO) model	Implement international norms for quality systems	Quality systems and management processes can be strengthened and standardised to achieve efficiencies	Audit by ISO experts, (not peers) against generic international standards	Certificate of compliance with standards for whole-of-organisation development

Adapted from Buetow and Wellingham,²⁰ 2003 p. 2.

METHODS

Systematic, iterative searches of five databases (discussed below) occurred from October 2016 to October 2018. Key studies were identified and reviewed for quality, study characteristics, data collection and analyses, overall rigour, conclusions and implications.

DATA SOURCES AND STUDY SELECTION

Searches were performed in Medline, Scopus and three Informit databases (AHB-ATSI, AEI-ATSI and AGIS-ATSI). The literature searches were performed and conducted for the years 1995–2018. Exclusion criteria applied to studies are (i) not related to the Australian and New Zealand First Nations' PHC context and (ii) not in English. Grey literature searches were picked up from reference lists of identified literature. Initial searches found limited studies using the search term 'quality management system'. Using the broader terms 'continuous quality improvement', 'quality improvement' and 'systems approach' identified 251 studies from a title and abstract review. In a second iterative phase, the terms 'accreditation' and 'systems strengthening' were included to narrow down the search to the final sixteen studies. In total, 7675 studies were identified, and of these, 401 were reviewed (figure 1). The second phase identified 52 studies in full-text review with 16 studies selected for the final review. The initial search criteria were discussed with an academic librarian with search criteria adaptations and presented using the Preferred Reporting Items for Systematic Reviews and Meta-Analyses framework (figure 1).²⁶

The eligibility criteria were as follows:

1. PHC with a focus on Aboriginal and Torres Strait Islander or First Nation populations.
2. Publications between 1 January 1995 and October 2018.
3. Publications in English.
4. Human.
5. Studies in the Australian and New Zealand PHC context.
6. Application of quality improvement (and variants) and its impact on efficiency and sustainability.

LITERATURE QUALITY

The McMaster framework was applied to explore indicators of quality in the sixteen included studies.²⁷ A quality assessment of the studies was performed using the representative criteria of credibility, transferability, dependability and confirmability, which were established to separate the sixteen studies into four categories as listed below (results displayed in table 2) to quantify the quality.

Category one includes studies of high quality with all the representative criteria confirmed;

Category two represents studies with limited transferability;

Category three has not confirmed means of dependability and confirmability.

Category four studies have only one of the four representative criteria, confirmed from the synthesis of the study.

RESULTS

A total of sixteen studies met the eligibility criteria (as evidenced in figure 1); of these, fifteen were from Australia, with one from a New Zealand general practice context. Of the sixteen studies, three were systematic reviews, and nine were observational studies. Ten studies were participatory action research in design with the introduction of two conceptual models as improvement models for trial in primary care. Two studies were audits (desktop and chart). The desktop review of published literature was on health systems and structures throughout each state and territory in the Australian healthcare system. The inclusion of the systematic reviews was due to the limited literature on a QMS. These reviews explain the systematic nature to QMSs.

Table 3 shows how the 16 included articles were categorised by practice setting/context, the article's overarching theme and details on the type of study.

Iterative thematic analysis of the literature selected for review highlighted three themes that are also reflected in the broader PHC sector as shown in online supplemental table 4. Theme 1: systems strengthening (n=3) includes subcategories of systems thinking and system reform. Theme 2: quality improvement (n=9) includes eight observational studies with subcategories of audits and continuous quality improvement. Theme 3: accreditation (n=4) includes two studies discussing the application of standards employed in Australian primary care and the validity of these across healthcare contexts, and a further two studies focused on RACGP practice accreditation. One is a pilot study of RACGP Standards applied in a New Zealand GP context, from GPs' perspectives. Another study focuses on the AGPAL surveyor perspective, of the impact of RACGP accreditation, on patient safety in Australian general practice environments.

THEME 1: SYSTEMS STRENGTHENING

A key theme from three publications is systems strengthening. The WHO defines this as '(i) a process identifying and implementing policy changes and practice in a country's health system to be responsive to its health and health system challenges; (ii) any array of initiatives and strategies improving health systems functions, leading to better access, coverage, quality or efficiency'.²⁸

Systems strengthening refers to the supporting instruments that enhance the effective delivery of health services such as continuous improvement, audits, staffing models, staff performance and review frameworks and communication pathways to promote systems thinking.²⁹ Bailie's 'Partnership Learning Model' (PLM)³⁰ uses integrated concepts for the translation of knowledge to enhance health outcomes. The PLM is not dissimilar to

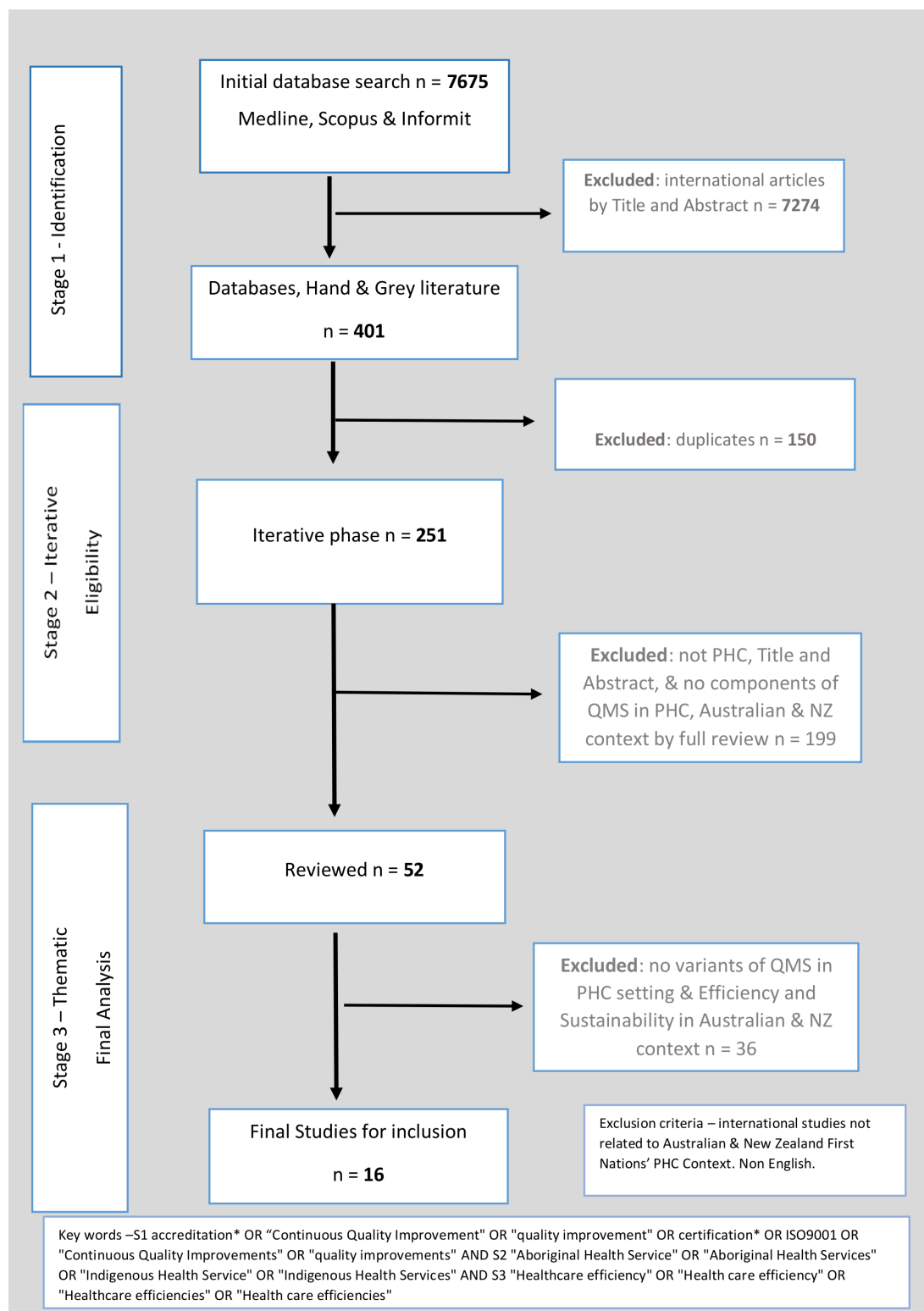


Figure 1 Preferred Reporting Items for Systematic Reviews and Meta-Analyses diagram literature review. ISO, International Organisation for Standardization; NZ, New Zealand; PHC, primary healthcare; QMS, quality management system.

the current working business model used by ACCHSs. This ACCHS business model has evolved since ACCHS sector inception in 1972 and now aligns to a holistic ACCHS philosophy and responsive culture.³¹ Panaretto reports that in recent times ACCHSs have been building their capacity to use, collect and compile regional service

data to monitor the health status of client cohorts,³² a process not dissimilar to the PLM concept described by Bailie.³⁰

Dwyer argued that the health systems reforms implemented by each state and territory, towards centralisation, would be counterproductive to stemming the

Table 2 Study quality assessed using the McMaster framework

Theme	Studies	Credibility	Transferability	Dependability	Confirmability	Category
QI	1. Bailie <i>et al</i> ³⁷	•				4
QI	2. Bailie <i>et al</i> ³⁶	•		•	•	2
QI	3. Bailie <i>et al</i> ³⁴	•		•	•	2
SS	4. Bailie <i>et al</i> ³⁰	•	•			3
AC	5. Braithwaite <i>et al</i> ²³	•	•	•	•	1
AC	6. Braithwaite <i>et al</i> ¹⁵	•	•	•	•	1
QI	7. Brennan <i>et al</i> ⁴⁰	•	•	•	•	1
AC	8. Buetow ²⁰	•	•			3
SS	9. Dwyer ³³	•		•	•	2
AC	10. Elnour <i>et al</i> ⁴¹				•	4
QI	11. Gardner <i>et al</i> ³⁵	•		•	•	2
QI	12. Marley <i>et al</i> ²⁴	•	•	•	•	1
QI	13. McDonald ³⁸			•		4
SS	14. Phillips <i>et al</i> ²¹	•	•	•	•	1
QI	15. Ralph <i>et al</i> ²⁵	•	•	•	•	1
QI	16. Schierhout <i>et al</i> ³⁹	•		•	•	2

AC, accreditation; QI, quality improvement; SS, systems strengthening.

burgeoning tide of chronic disease plaguing the primary and secondary care levels of the Australian health system.³³ Dwyer flagged a need for better, innovative models of care.³³ The clinical governance models examined by Phillips describe clinical governance as a systematic, integrated approach to assuring safe, good, quality healthcare.²¹ Phillips' endorsement of the ACCHS model as a systems approach at an organisational level may lead to effective PHC, a decrease in chronic disease and an efficient business model.²¹ Phillips describes the ACCHS sector as leaders in clinical governance in Australia with valuable lessons for primary care more broadly. The knowledge gap in PHC, Phillips reported, was the fragmented evidence for the outcomes of clinical governance, with few models addressing safety, efficiency, sustainability and the cost for primary care.²¹

There is a need to understand what quality systems are being used in the ACCHS sector (and how) to (i) drive and holistically measure the quality of care delivered by clinical teams and (ii) measure the quality of the organisation through corporate governance.

THEME 2: QUALITY IMPROVEMENT

Quality improvement is one of the six building blocks defined by the WHO for health systems strengthening.³⁰ Audits augment an organisation's risk management and clinical governance system.²⁸ Seven observational studies authored by one research group describe the benefits and improvements of independent audit tools across a variety of health programmes conducted within Aboriginal primary care settings.^{25 34–39}

The common feature in these nine studies reaffirms that audits, when designed with specific indicators

and under the right conditions, have the propensity to enhance and improve health service programmes.^{24 25 40}

From a systems perspective, the application of independent quality tools operates external to an organisation's compliance standard. Increasingly, health services implement (at a minimum) dual standards of quality enhancement systems. The result is a duplication of multiple audit processes through multiple quality enhancement tools, coupled with the uptake of independent audit data, into multiple legislated standard frameworks. The harmonisation of these quality tools for the ACCHS business raises questions of efficiency and sustainability. Under these conditions, the onus rests on the organisation to systematise the different standard processes into a QMS for national compliance. The responsibility to reduce duplication, optimise financial outlays, maximise human resource efficiencies and successfully operate health service delivery in a fiscally constrained environment is burdensome for ACCHS leadership.¹⁹

Based on the evidence presented by these studies, gaps in knowledge remain: What added value are stand-alone audits offering to the existing QMS certification operating within the organisation? How efficient and sustainable are these stand-alone quality systems? Based on the synthesis and the questions raised, the overarching question being posed is as follows: Have these quality systems driven efficiency in the ACCHS sector?

All authors in themes 1 and 2 recognised vertical programme funding between state and federal government and the effectiveness of government policy as the common limitations and disablers to harmonisation supported by Phillips²¹ and Dwyer.³³

Table 3 Article analysis by category

Author and year	Context	Theme	Type of study
Dwyer, ³³ 2004	Australian healthcare system	Health systems strengthening	DESKTOP AUDIT Australian states and territories
Phillips <i>et al</i> , ²¹ 2010	Australian general practice (GP) primary care	Health Systems strengthening (n=25 databases and 19 high-quality studies)	Systems strengthening SYSTEMATIC REVIEW
Bailie <i>et al</i> , ³⁰ 2013	Primary care Aboriginal health services	Health systems strengthening (n=various concepts)	Promotion of systems strengthening for organisational performance through the application of stratified modelling OBSERVATIONAL STUDY Participatory Action Research (PAR) design
Bailie <i>et al</i> , ³⁶ 2008	Primary care Aboriginal health services	Quality improvement (n=40–50 health centres across four Australian states/territories)	Promotion of ABCDE Project as audit tools for chronic disease management OBSERVATIONAL STUDY PAR design
Bailie <i>et al</i> , ³⁴ 2010	Primary care Aboriginal health services	Quality improvement (n=study protocols across six states/territories over 5 years)	Promotion of audit tools for indigenous health services OBSERVATIONAL STUDY PAR design
Bailie <i>et al</i> , ³⁷ 2007	Primary care Aboriginal health services	Quality improvement (n=12 community health centres)	Promotion of ABCD tools in a CQI approach for service delivery; effective and sustainable health programmes OBSERVATIONAL STUDY PAR design
Brennan <i>et al</i> , ⁴⁰ 2012	Australian healthcare	Quality improvement (n=41 instruments)	Instruments for CQI /team success factors SYSTEMATIC REVIEW
Ralph <i>et al</i> , ²⁵ 2013	ACCHS—rheumatic heart disease and rheumatic fever	Quality improvement (n=154 participants)	CQI for improvements in clinical outcomes OBSERVATIONAL STUDY PAR design
Gardner <i>et al</i> , ³⁵ 2010	ACCHS—Aboriginal health service enrolment in ABCD Project	Quality improvement (n=48 participants)	AUDIT TOOLS in Aboriginal health OBSERVATIONAL STUDY PAR design
Marley <i>et al</i> , ²⁴ 2012	ACCHS—Aboriginal health service	Quality improvement (n=254 participants)	Measurement of CQI and its relationship with clinical outcomes (ie, T2D management in DAHS—Derby AHS) CHART AUDIT
McDonald, ³⁸ 2013	ACCHS—Aboriginal health service	Quality improvement (n=8 participants)	AUDIT TOOLS in INDIGENOUS HEALTH , healthy community assessment tool and CQI OBSERVATIONAL STUDY PAR design
Schierhout <i>et al</i> , ³⁹ 2013	ACCHS—Aboriginal health service	Quality improvement (n=12 participants)	Barriers and enablers for the update of CQI in NT, ABORIGINAL HEALTH SERVICES (ABCD Project) OBSERVATIONAL STUDY PAR design
Buetow, ²⁰ 2003	Accreditation in GP in New Zealand (NZ) and Australia	Accreditation	AUSTRALIAN and NZ GP ACCREDITATION NON-SYSTEMATIC REVIEW
Elnour <i>et al</i> , ⁴¹ 2014	Accreditation in GP, Australian healthcare system	Accreditation (n=10 participants)	GP ACCREDITATION and patient safety OBSERVATIONAL STUDY
Braithwaite <i>et al</i> , ²³ 2006	Tertiary care and primary care	Accreditation (n=multilevel, multidiscipline, multimethod)	Hospital and primary care ACCREDITATION PAR design
Braithwaite <i>et al</i> , ¹⁵ 2011	Australian GP, aged care and acute setting	Accreditation (n=12 interrelated studies)	Twelve interrelated studies of accreditation PAR design

ABCD, Audit for Best practice Chronic Disease clinical audit tool; ABCDE, The Audit and Best practice for Chronic Disease Expansion project clinical audit tool; ACCHS, Aboriginal Community Controlled Health Service; AHS, Aboriginal HealthService; CQI, Continuous Quality Improvement; NT, Northern Territory; T2D, Type 2 Diabetes.

THEME 3: ACCREDITATION

Four studies were included in the accreditation theme. Two studies related to the RACGP Standards (Buetow and Wellingham²⁰ and Elnour⁴¹). The remaining two studies focused on the ACCREDIT Project by Braithwaite.^{15 23}

Three of the four studies investigated the need for vendors and consumers, through research, to understand the value, impact and benefit of accreditation.

At a health service level, standards of compliance (such as RACGP accreditation (Australia) and QMS

certification) provide a level of quality and safety for clients. Buetow and Wellingham discuss whether the non-legislated RACGP Standards provide consistency or validity, with a requisite for the RACGP Standard to be an inclusion to the clinical governance framework in the NZ context.²⁰ Braithwaite's 2006 and 2011 studies, performed in the Australian context, evaluate the validity, impact and value of accreditation.^{15 23} A knowledge gap highlighted by Braithwaite's research is the need for reliable evidence on the efficiency and effectiveness of accreditation in achieving organisational improvements and on the value of accreditation in cost-benefit terms.^{15 23} The task of applying dual accreditation standards is a large assignment, is resource intensive and is an expensive process for any organisation, its leadership and staff to undertake. The stand-alone quality enhancement tools such as audit tools and non-legislated standards operate external to the organisations' certification system. The conjecture is that these additional quality systems and non-legislated standards are extra cost imposts and compliance requirements, stretching existing resources and inhibiting a sustainable, systematic and efficient healthcare delivery. These discussions prompted the following questions: Is there value in the application of dual systems at the primary care level? How much do they cost? Are double accreditation/certification standards sustainable? How are these standards impacting the health and community outcomes of First Nations people?

Of the 16 studies, ten studies refer to efficiency, effectiveness and sustainability. Phillips and Braithwaite were the only authors to contextualise efficiency and sustainability to primary care.^{21 23} Braithwaite's 2006 study sought to measure these quality criteria through a prospective research study across 12 countries.²³ Eight studies discussed efficiency, effectiveness and sustainability as outcome measures specific to the interventions being applied in these studies, but not in the context of a QMS as a standard used to the delivery of PHC services. The limitation evident in this review is an absence of studies exploring the application of a QMS certification standard in an Australian primary care context and its facilitation of efficiency and sustainability for health services.

LITERATURE QUALITY

Table 2 presents the study themes and literature quality based on the criteria of credibility, transferability, dependability and confirmability. Six studies in category one met all of the criteria for overall rigour.²⁷ Five studies were graded as category two, two studies as category three and three studies as category four (table 2).

DISCUSSION

It is over a decade since the implementation of Australian health system standards, with limited evidence of the impact, sustainability and efficiency of these initiatives on health service delivery in the PHC sector.¹⁶ Nationally, the ACCHS sector has more than 154 health organisations

that are specialists in their healthcare. They are considered boutique markets where holistic and rewarding training experiences in comprehensive PHC are sourced.³

Systematic searches of the literature found no studies currently addressing the efficiency and sustainability of implementing ISO 901:2008 standard/QMS and quality enhancement tools in the ACCHS sector. The standards and quality enhancement tools presently used do not appear to promote efficiency and sustainability within the ACCHS business model. Since 2010, a proliferation of accreditation standards has been introduced into the ACCHS sector (due to the highly specialised set of care services provided in an ACCHS) and a massive increase in the number of certification bodies. At least nine different standards operate in the ACCHS, maintaining a silo effect to certification and accreditation standards. The limited evidence suggests a duplication and lack of clarity on the appropriateness of the diversity of standards currently being used.

Additionally, anecdotal evidence indicates there are, on average, nine standards in operation for ACCHSs in Queensland and Victoria.⁴² These standards include the RACGP Standards (2015), ISO Certification QMS 9001:2015, NSQHS Standards and National Disability Insurance Scheme (NDIS) Practice Standards, Human Services Quality Framework (for services that deliver child safety and disability services in Queensland) and Victorian Human Service Standards. Current national aged care standards include the National Aboriginal and Torres Strait Islander Flexible Aged Care Standards, Accreditation Standards, Home Care Standards and Transition Care Standards. After 1 July 2019, all aged care standards need to meet the one in Aged Care Quality Standards.⁴²

If the standards' design is to improve the quality of business and client outcomes, the proliferation of certification/accreditation standards for PHC services raises the following question: How can health services provide quality services while applying several standards with limited synergy? The application of dual standards increases staffing costs, is a financial burden and cost impost and removes the focus from providing quality services, with flow-on effects for client health and well-being, community prosperity and a systematic approach to quality outcomes. The health disparity that First Nations people continue to experience is a result of centuries of uninformed, myopic and reactive policy, a stance supported by Pearson and Hunter.^{43 44}

The national accreditation policy was a catalyst for the emergence of a new workforce to support the application of standards across every level of the Australian healthcare system. At the regional level for the ACCHS sector, diverse new roles were established to support the application of multiple standards. New roles included quality coordinators, quality managers, auditors and an increase in certification bodies nationally. Their responsibility is for the application, assessment, monitoring and management of these standards. This research aims to contribute

to the body of substantial evidence on the efficiency and sustainability of standards within the ACCHS sector.

The limited synergy of multiple standards is burdensome for ACCHSs in fiscally constrained environments. Furthermore, this burden reduces efforts to obtain sustained, holistic health and well-being outcomes for First Nations people.⁴⁵ The missing component is the substantiated evidence that standards improve the efficiency and sustainability of ACCHS's business environment. The contemporary evidence supporting this statement is the number of standards any one ACCHS applies for compliance.

To comprehensively address health inequality at various levels requires an explicit focus on issues of participation, governance and the politics of power, decision making and empowerment.⁴⁶ The review findings and the status of onerous compliance standards for ACCHSs prompt questions of the accountability of state and federal governments in monitoring the synergy of certification and accreditation industry standards. The legislation is yet to be examined and assessed on how efficient and sustainable a national accreditation framework is for the Australian PHC sector.

STRENGTHS AND LIMITATIONS

This study identified several independent quality enhancement tools in operation in the compliance and governance area for PHC services. The PHC sector at a minimum applies dual accreditation standards. The literature raised more questions to explore: the value of the application of multiple standards in individual health services and how sustainable these are in terms of their business model. This study does not include the assessment of value, as this is the focus of a subsequent search and review as part of the overarching research project. A limitation identified in the literature was the lack of evidence for efficiency and sustainability of stand-alone quality systems and stand-alone audit tools and their subsequent fit and synergy with applied certification standards by ACCHS. In this review, there was an absence of studies exploring the extent of a QMS in an Australian primary care context and its facilitation of efficiency and sustainability for health services. While search terms could be expanded to include concepts of efficiency and sustainability, this is the focus of further research questions in the field: What are the quality systems used in the ACCHS sector? How do these quality systems drive and holistically measure the quality of care delivered? How are these standards impacting the health and community outcomes of First Nations people? The strengths of the gaps in the literature and the questions posed set the course and dialogue for the next level of research activity.

CONCLUSION

The application of multiple mandated certification standards, plus independent quality enhancement tools, is the current accreditation status for ACCHSs, creating a level

of limited synergy between each 'quality system'. There is little evidence assessing the efficiency and sustainability of multiple standards and quality enhancement tools on ACCHS business model efficiencies. There are unanswered questions as to whether the implementation of quality systems has driven efficiency and sustainability in the ACCHS sector. The benefit of multiple standards for PHC services, and their impact on the health and well-being outcomes of First Nations people (and their corresponding community benefit), has not been explored adequately to assert its value.

The review findings and the status of onerous compliance standards for ACCHSs prompt questions about the accountability of state and federal governments, to monitor the synergy of compliance standards in a systems approach to healthcare. It is crucial to ensure health services are not overburdened with compliance standards and extraneous operating expenses at the cost of delivering quality health services. The Australian government funds PHC services to provide substantial, high-quality health outcomes for First Nations people, for whom chronic disease, psychosocial illness and the social determinants of health account for the majority of disparities in health outcomes. As the burden of chronic illness grows, pressure mounts on primary care to be efficient in its service delivery. Research in ACCHSs for dependable evidence on the efficiency and sustainability of compliance standards and effectiveness of quality systems in achieving organisational improvements is vital.

Twitter Richard C Franklin @Franklin_R_C

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ORCID iDs

Jenifer Olive Darr <http://orcid.org/0000-0002-6638-863X>

Richard C Franklin <http://orcid.org/0000-0003-1864-4552>

Kristin Emma McBain-Rigg <http://orcid.org/0000-0001-6597-1359>

REFERENCES

- NACCHO. *NACCHO history of Aboriginal health from 1967*. Canberra: NACCHO, 2014: 1–29.
- Alford K. *Economic value of Aboriginal community controlled health services*. Canberra: NACCHO, 2014: 1–21.
- Larkin S. Race blindness in neo-liberal and managerial approaches to Indigenous administration. *IJCIS* 2009;2:36–42.
- Alford K. Investing in Aboriginal Community Controlled Health Makes Economic Sense. In: *Economic value of Aboriginal community controlled health services*. Canberra: NACCHO, 2014: 1–21.
- AIHW Australian Government. *Health expenditure Australia 2013 - 2014: analysis by sector (Category number 55)*. Canberra: AIHW, 2015.
- AIHW Australian Government. *Health expenditure Australia 2014 - 15*. In: *Health and welfare expenditure. series no.57 (cat No. HWE 67)*. Canberra: AIHW, 2016: 57.
- Wenitong M, Mokak R, Councillor H, et al. Rising to the health challenge for Aboriginal and Torres Strait Islander peoples: what will it take? *Med J Aust* 2007;186:491–2.
- Gomersall JS, Gibson O, Dwyer J, et al. What Indigenous Australian clients value about primary health care: a systematic review of qualitative evidence. *Aust N Z J Public Health* 2017;41:1–7.
- Wilson RM, Runciman WB, Gibberd RW, et al. The quality in Australian health care study. *Med J Aust* 1995;163:458–71.
- Richardson JR. Priorities of health policy: cost shifting or population health. *Aust New Zealand Health Policy* 2005;2:1.
- Rubin GL, Leeder SR. Health care safety: what needs to be done? *Med J Aust* 2005;183:529–31.
- Smallwood RA. The safety and quality of health care: from Council to Commission. *Med J Aust* 2006;184:39–40.
- Wise M, Angus S, Harris E. *National appraisal of continuous quality improvement Initiatives in Aboriginal and Torres Strait Islander primary health care. final report*. Melbourne: The Lowitja Institute, 2013.
- Øvretveit J. The quality of health purchasing. *Int J Health Care Qual Assur Inc Leadersh Health Serv* 2003;16:116–27.
- Braithwaite J, Westbrook J, Johnston B, et al. Strengthening organizational performance through accreditation research—a framework for twelve interrelated studies: the ACCREDIT project study protocol. *BMC Res Notes* 2011;4:390.
- Bennett CC. *Beyond the blame game: accountability and performance benchmarks for the next Australian health care agreements*. Canberra, ACT: NHHR Commission, 2008: 189. 31–2.
- Segal L. *Health & Hospital Reform Commission: Prevention Theme Opinion Piece A vision for primary care: Funding and other System Factors for optimising the primary care contribution to the community's health*. University of South Australia, 2008: 1–22.
- RACGP. *RACGP standards for general practice 4th edition*. East Melbourne VIC: Royal Australian College of General Practitioners, 2010: 159.
- Silburn K, Thorpe A, Carey L. *Is Funder reporting undermining service delivery? compliance reporting requirements of Aboriginal community controlled health organisations in Victoria*. The. Melbourne: Lowitja Institute, 2016: 1–40.
- Buetow SA, Wellingham J. Accreditation of general practices: challenges and lessons. *Qual Saf Health Care* 2003;12:129–35.
- Phillips CB, Pearce CM, Hall S, et al. Can clinical governance deliver quality improvement in Australian general practice and primary care? A systematic review of the evidence. *Med J Aust* 2010;193:602–7.
- Australian Commission Safety and Quality in Healthcare. *NSQHS standards in 2013: transforming the safety and quality of health care*. Sydney NSW, 2001: Commonwealth of Australia 2014, 2014.
- Braithwaite J, Westbrook J, Pawsey M, et al. A prospective, multi-method, multi-disciplinary, multi-level, collaborative, social-organisational design for researching health sector accreditation [LP0560737]. *BMC Health Serv Res* 2006;6:1–10.
- Marley JV, Nelson C, O'Donnell V, et al. Quality indicators of diabetes care: an example of remote-area Aboriginal primary health care over 10 years. *Med J Aust* 2012;197:404–8.
- Ralph AP, Fittock M, Schultz R, et al. Improvement in rheumatic fever and rheumatic heart disease management and prevention using a health centre-based continuous quality improvement approach. *BMC Health Serv Res* 2013;13:1–13.
- Moher D, Liberati A, Tetzlaff J. Preferred Reporting Items for Systematic Reviews and Meta-Analyses: The PRISMA Statement 2009 [cited 2015. PRISMA flowchart]. Available: <http://www.prisma-statement.org>
- Letts L, Wilkins S, Law M. *Critical Review Form - Qualitative Studies (Version 2.0)*. McMaster University: University of South Australia, 2007.
- World Health Organisation. *World health organisation health systems strengthening glossary*. Geneva: WHO, 2011: 1–22.
- Wilkinson R, Marmot M, eds. *Social Determinants of Health The Solid Fact*. 2nd ed. Denmark: World Health Organisation Europe, 2003.
- Baillie R, Matthews V, Brands J, et al. A systems-based partnership learning model for strengthening primary healthcare. *Implementation Sci* 2013;8:1–12.
- NACCHO. *Investing in Aboriginal community controlled health makes economic sense*. Canberra: NACCHO, 2014: 1–21.
- Panaretto KS, Wenitong M, Button S, et al. Aboriginal community controlled health services: leading the way in primary care. *Med J Aust* 2014;200:649–52.
- Dwyer JM. Australian health system restructuring - what problem is being solved? *Aust New Zealand Health Policy* 2004;1:6.
- Baillie R, Si D, Shannon C, et al. Study protocol: National research partnership to improve primary health care performance and outcomes for Indigenous peoples. *BMC Health Serv Res* 2010;10:129.
- Gardner KL, Dowden M, Togni S, et al. Understanding uptake of continuous quality improvement in Indigenous primary health care: lessons from a multi-site case study of the audit and best practice for chronic disease project. *Implementation Sci* 2010;5:1–14.
- Baillie R, Si D, Connors C, et al. Study protocol: audit and best practice for chronic disease extension (ABCDE) project. *BMC Health Serv Res* 2008;8:184.
- Baillie RS, Si D, O'Donoghue L, et al. Indigenous health: effective and sustainable health services through continuous quality improvement. *Med J Aust* 2007;186:525–7.
- McDonald EL, Baillie R, Michel T. Development and trialling of a tool to support a systems approach to improve social determinants of health in rural and remote Australian communities: the healthy community assessment tool. *Int J Equity Health* 2013;12:15–10.
- Schierhout G, Hains J, Si D, et al. Evaluating the effectiveness of a multifaceted, multilevel continuous quality improvement program in primary health care: developing a realist theory of change. *Implementation Sci* 2013;8:1–15.
- Brennan SE, Bosch M, Buchan H, et al. Measuring organizational and individual factors thought to influence the success of quality improvement in primary care: a systematic review of instruments. *Implement Sci* 2012;7:121.
- Abou Elnour A, Hernan AL, Ford D, et al. Surveyors' perceptions of the impact of accreditation on patient safety in general practice. *Med J Aust* 2014;201:S56–9.
- Schmidt B. *Personal communication: current status of ACCHS uptake of accreditation standards*. Cairns, 2018.
- Pearson N. *Radical hope: education and equality in Australia*. Collingwood, Victoria 3066: black Inc, 2011: 202.
- Hunter EM. Indigenous health: radical hope or groundhog day? *Med J Aust* 2014;200:621–2.
- Australian Government. *Commonwealth of Australia, department of the prime minister and cabinet, closing the gap report 2020*. Canberra: Commonwealth of Australia, 2020.
- Barten F, Mitlin D, Mulholland C, et al. Integrated approaches to address the social determinants of health for reducing health inequity. *J Urban Health* 2007;84:164–73.

Table 4. Data synthesis of eligible papers in describing the application of QMS and facilitation of efficiency and sustainability in primary care.

Theme & Doc ref #	Publisher	Author/year	Concept	Context/setting	Theme
System Strengthening 3 Studies 0001	Medical Journal of Australia	Phillips Christine B. Pearce Christopher M. Hall Sally. Traveagkua Joanne. de Lusignan Simon. Love Tom and Kljakovic Marjan. 2010	Review of the literature on models of Clinical Governance & exploring their relevance to the Australian PHC sector	Australian General Practice Primary Care	QI - Clinical Governance & systems strengthening
002	Implementation Science	Bailie, R. Matthews V. Brands J. Schierhout G. 2013	Promotion of an EB approaches to systems establishment and maintenance in PHC via a stratified model	Primary Care – Aboriginal health services	SS - Promotion of Systems strengthening for organisational performance through the application of stratified modelling
003	Australian and New Zealand Health Policy	Dwyer, Judith M. 2004	(State by State) Examined the outcomes of the most recent official published reviews of systems and structures; identifies the common themes; and addresses two questions: what problems are being addressed? And how would we know if the changes were successful?	Australian Healthcare system	SR - Australian Health SYSTEMS REFORM
Quality Improvement 9 Studies 004	Implementation Science	Schierhout, G. Hains, J. Si, D. Kennedy, C. Cox, R. Kwedza, R. O'Donoghue,	Patterns of change in service delivery is achieved in a diverse range of health centres	Aboriginal Health Services	QI - Barriers and Enablers for the update of CQI in NT, ABORIGINAL HEALTH

		L. Fittock, M. Brands, J. Lonergan, K. Dowden, M. Bailie, R. 2013	in a wide-scale program to achieve improvements in quality of care for Indigenous Australians		SERVICES (ABCD project)
005	Medical Journal of Australia	Marley, J. V. Nelson, C. O'Donnell, V. Atkinson, D. 2012	A decade of data to audit a health service in Derby (DAHS - 1999 - 2009). Retrospective review of paper and electronic records.	Aboriginal communities	QI - Measurement of CQI & its relationship with clinical outcomes (i.e.: T2D MANAGEMENT IN DAHS - Derby AHS)
006	Australian Journal of Primary Health	Gardner, K. L. Dowden, M. Togni, S. Bailie, R. 2010	Examines the practices and processes in policy and organisational context & aim to explore the ways in which they interact support or hinder service participation in Indigenous PHC CQI	Aboriginal health services enrolled in ABCD project	QI - AUDIT TOOLS in Aboriginal Health
007	BMC Health Services Research	Bailie, R. Si, D. Shannon, C. Semmens, J. Rowley, K. Scromgeour, D. Nagel, T. Anderson, I. Connors, C. Weeramanthri, T. Thompson, S. McDermott, R. Burke, H. Moore, E. Weston, R. Grogan, H. Stanley, A. Gardner, K. 2010	Study protocol: National research partnership to improve primary health care performance and outcomes for Indigenous peoples	Primary Care – Aboriginal health services	QI Promotion of Audit tools for Indigenous health services

008	International Journal for Equity in Health	McDonald, E. L., Bailie, R. Michel, T. 2013	Development and trialling of a tool to measure, monitor and evaluate key social determinants of health at community level.	Aboriginal communities	QI - AUDIT TOOLS in INDIGENOUS HEALTH (HCAT) healthy community assessment tool & CQI
009	BMC Health Services Research	Ralph, A. P. Fittock, M. Schultz, R. Thompson, D. Dowden, M. Clemens, T. Parnaby, M. G., Clark, M. McDonald, M. I. Edwards, K. N. Carapetis, J. R. Bailie, R. S. 2013	CQI approach for improvements in rheumatic fever and rheumatic heart disease in an ACCHO	Rheumatic heart disease and Rheumatic fever in ACCHO	QI - CQI for improvements in clinical outcomes
010	BMC Health Services Research	Bailie, R. Si, D. Connors, C. Weeramanthri, T. Clark, L. Dowden, M. O'Donohue, L. Condon, J. Thompson, S. Clelland, N. Nagel, T. Gardner, K. Brown, A. 2008	Pre-designed Audit tool for the specific management of chronic disease in an identified population and service setting	Primary Care – Aboriginal health services	QI Promotion of ABCDE project as Audit tools for Chronic Disease management
011	Medical Journal of Australia	Bailie, R. S. Si, D. O'Donoghue, L. Dowden, M. 2007	Promotion of ABCD tools as CQI in support of effective and sustainable health services	Primary Care – Aboriginal health services	QI Promotion of ABCD tools in a CQI approach for service delivery
012	Implementation Science	Brennan, S. E. Bosch, M. Buchan, H. Green, S. E. 2012	Systematic review of instruments to measure CQI	Australian Health Care	QI - Instruments for CQI / Team Success factors
Accreditation 4 Studies	BMC Health Service Research	Braithwaite, J. Westbrook, J. Pawsey, M. Greenfield, D. Naylor, J.	A prospective, multi-method, multi-	Australian Health Care Services	Accreditation – discussion on the research design as a
013					

		Iedema, R. Runciman, B. Redman, S. Jorm, C. Robinson, M. Nathan, S. and Gibberd, R. 2006	disciplinary, multi-level, collaborative, social- organisational design for researching health sector accreditation [LP0560737]		framework for suitable application to future international research into accreditation
014	BMC Research notes	Braithwaite, J. Westbrook, J. Johnston, B. Clark, S. Brandon, M. Banks, M. Hughes, C. Greenfield, D. Pawsey, M. Corbett, A. Georgiou, A. Callen, J. Vretveit, J. Pope, C. Süol, R. Shaw, C. Debono, D. Hinchcliff, R. Westbrook, M. Moldovan, M. 2011	Study in progress - Evaluate the effectiveness of Australian accreditation as it applies to health care across the spectrum with a variety of industry partners involved in this research.	Australian General Practice, Aged Care and Acute setting	ACCREDITATION - Effectiveness of Australian accreditation for organisational performance
015	Quality and Safety in Health Care	Buetow, S. A. Wellingham, J. 2003	Non-systematic review of relevant research literature in English. Personal response to the posed four questions by the researcher.	Accreditation in General Practice in NZ, Australia and UK.	ACCREDITATION - AUST, UK & NZ GP ACCREDITATION
016	Medical Journal of Australia	Elnour, A. A. Hernan, A. L. Ford, D. Clark, S. Fuller, J. Johnson, J. K. Dunbar, J. A. 2014	Explored AGPAL surveyors perception of the impact of accreditation on patient safety	Accreditation in General Practice, Australian Healthcare System	ACCREDITATION - GP ACCREDITATION & Patient Safety