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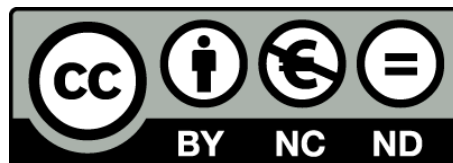
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Continuous quality improvement processes in child protection: A systematic literature review

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Continuous quality improvement processes in child protection: A systematic literature review

Abstract

Purpose

Protecting children from mistreatment is a global concern and further research and evaluation in child protection services is required. Continuous Quality Improvement (CQI) has demonstrated potential but to date there is no systematic review of studies that evaluate the application of CQI in child protection.

Method

This systematic literature review examined the application of CQI in child protection services. The review identified published, English language evaluations of CQI in child protection from 2000-2016 and critique the characteristics, methodological quality, and reported benefits of the included studies.

Results

A search of social science electronic databases identified eight peer-reviewed studies, including six quantitative studies, one mixed methods study and one qualitative study.

Discussion

The review highlighted that many studies on this topic lack specific validating data but there is evidence that CQI models have some potential to improve processes for working with children and families by promoting implementation fidelity.

Key Words

Child Protection; Continuous Quality Improvement; CQI; Systematic Literature Review;

Introduction

Protecting children from abuse, neglect and mistreatment is a major concern across the globe, with most western countries confronting increasing numbers of children in need of support from child welfare services. To illustrate, approximately 3.9 million child abuse cases are reported each year in the United States (Green et al., 2016); over 500,000 referrals to child protection services are made yearly in the United Kingdom (Bentley, O'Hagan, Raff & Bhatti, 2016) and; more than 320,000 reports of child abuse and neglect are received annually in Australia (Australian Institute of Health and Welfare, 2016). In each of these jurisdictions a range of principles, laws, and service systems aimed at keeping children safe, have been developed (Hart, Lee, & Wernham, 2011). However, while protecting children from harm is a clear global and national priority, the number of children and families impacted by the interventions of child protection services in Australia continues to grow (Australian Institute of Health and Welfare, 2016) and the effectiveness of the systems charged with achieving the stated goals of child safety and wellbeing is heavily scrutinised and often contested (Tilbury, 2006; Broadley & Goddard, 2015).

The persistence of child safety concerns in Australia demonstrates that child protection service delivery is complex, and multiple issues impact the success of interventions. For example, systems can be culturally biased, interventions do not necessarily ensure the safety of children, and preventative programs are often inadequate (Hart et al., 2011). Other concerns include the burgeoning costs, the lack of evidence-based interventions (Child Protection Systems Royal Commission, 2016), an organisational culture of risk

aversion and over-burdened staff (Carmody, 2013; Collins-Camargo, Ellett, & Lester, 2011; Glisson, Dukes, & Green, 2006). The widespread perceptions of poor quality, ineffective services contribute to calls for alternative approaches which place greater emphasis on research, evaluation and systemic improvement (Hart et al., 2011). Increasingly strategies and processes that critically examine, measure, monitor and evaluate all aspects of the child protection system have been proposed (Broadley & Goddard, 2015). The successful application of continuous quality improvement (CQI) processes to address similar issues in other countries, and in other fields of practice, offers possibilities for similar models in child protection in Australia (Percival, O'Donoghue, Lin, Tsey & Bailie, 2016). This paper conducts a systematic literature review to critically examine the application of CQI processes in child protection systems with the aim of providing insights for child protection delivery in Australia.

Systematic literature reviews have been extensively used in health research to identify gaps in knowledge and to guide practice options (Moher, Liberati, Tetzlaff, Altman, & Prisma Group, 2009; Shamseer et al., 2015). Such reviews are underutilised in the human services such as child protection research because of their apparent emphasis on empirical evidence and connection with positivism (Kelly, 2011). However, Kelly claims that systematic literature reviews can provide a useful opportunity to identify and evaluate literature and research congruent with the core values of the human services field. Systematic literature reviews can facilitate improved planning, documentation and evaluation, as well as inform decision making and prompt collaboration (Shamseer et al., 2015).

Continuous Quality Improvement (CQI)

Continuous quality improvement (CQI) is the identification and analysis of organisational strengths and limitations using structured problem solving that focuses on

measuring organisational outcomes and performance (Casey Family Programs, 2015). It is a process that focuses on the systematic collection and review of performance data "...that allows an agency to monitor, understand, and improve, on an ongoing basis, all aspects of service delivery and documentation" (Baker & Charvat, 2008, p. 336). Performance measurement and statistical evaluation are important tools of CQI systems, concentrating the organisational focus on implementing strategies, testing outcomes, learning from results and revising solutions (Flango, Gatowski & Sydow, 2015). Successful CQI implementation relies on an organisational philosophy and culture that supports continuous learning and is committed to the proactive, ongoing improvement of the organisation and the services it delivers. Leadership commitment, team-based decision making, strategically linked planning and assessment goals, and the systematic, continuous collection of evaluative data are all important components of any CQI process (Baker & Charvat, 2008) as is the active inclusion and engagement of employees and consumers of organisational services (Casey Family Programs, 2015).

Continuous quality improvement processes are embedded within philosophical principles which focus attention on system rather than individual failure, and which value employees' capacity to identify problems and solutions, and to apply structured, problem solving approaches informed by statistical analyses (Shortell et al., 1995). Used widely in health care across the developed world, CQI appears to be a promising method for monitoring performance and stimulating improvements in fragmented service systems (Gardner et al., 2011; Percival et al., 2016). CQI guides the implementation of organisational processes and service delivery systems that result in demonstrably improved performance in selected indicators. These performance indicators are grounded in evidence-based guidelines and can be explicitly measured to determine that desired outcomes have been achieved (Varkey, Reller, & Resar, 2007). Performance data against these indicators are systematically

collected and used to establish a benchmark, then analysed to set goals, inform the implementation best practice strategies and evaluate improvements (Gibson-Helm et al., 2016). This process of iterative data collection, targeted interventions and continual evaluation of outcomes, has the potential to enhance the capacity of child protection systems to achieve a sustained reduction in child maltreatment in Australia (Broadley & Goddard, 2015).

Child Protection and CQI

Literature confirms that the application of principles and processes of CQI in the area of child protection is well established in the United States (Casey Family Programs, 2015; Children's Bureau, 2016). The Children's Bureau of the U.S. Department of Health and Human Services, for example, has developed a CQI framework applicable to child welfare practice and has documented guidelines for the establishment and maintenance of CQI systems across state borders (Children's Bureau, 2012). A federally mandated performance measurement system is in place (Carnochan, Samples, Lawson, & Austin, 2013) and there are a number of centres that monitor the implementation of CQI strategies in child protection agencies (Children's Bureau, 2016).

In Australia, all eight states and territories voluntarily report on 20 nationally agreed performance indicators all of which aim to improve child protection service delivery. However, variations in reporting and the disconnection from performance improvement strategies inhibit the quality of this data (Tilbury, 2004). Cummins, Scott and Scales (2012) in the *Report of the Protecting Victoria's Vulnerable Children Inquiry* highlight this issue, claiming "comprehensive and robust data over time to provide the basis for ...reducing the incidence and impact of child abuse and neglect, are not available in Victoria or most other [Australian] jurisdictions" (p. 77). Nevertheless, aspects of CQI are emerging in Australian

government policy documentation. The Council of Australian Governments' strategy to respond to the needs of children who have been abused or are at risk of abuse is to "Support enhanced national consistency and continuous improvement in child protection services" (Commonwealth of Australia, 2010, p. 117). Continuous improvement is mentioned in the child protection policies and reviews of seven of the eight Australian states and territories, including Western Australia, South Australia, Victoria, the Australian Capital Territory, Tasmania, New South Wales and Queensland (Child Protection Systems Royal Commission, 2016; Commission for Children and Young People, 2014; Commonwealth of Australia, 2010; NSW Ombudsman, 2014; Government of Western Australia, 2016).

However, despite the adoption of CQI rhetoric in child protection policy documents, there is no evidence of its application in the Australian context. Further, there is limited systematic evidence that confirms the links between improved organisational performance and enhanced children's safety, increased support for parents and families, or improved care for children. The indiscriminate application of performance measurement tactics is problematic due to issues such as data bias, or the comparison of varying cohort data (Courtney, Needell, & Wulczyn, 2004). Moreover, the application of CQI can be messy, complex and time consuming, and outcomes can be influenced by factors such as staff turnover, poor data capture systems, or policy changes (Gardner et al., 2011); these issues are not discussed at length in the available literature and their impact is unknown. Instead there is literature from reports, guides and memorandums that showcase particular aspects of evidence based practice (Children's Bureau, 2014) or evaluate the application of CQI to specific aspects of practice (see for example, Wulczyn, 2007). Alongside this fragmentary coverage of CQI as it is applied and relevant to child protection practice, our own search failed to locate any systematic literature review of CQI in child protection. Therefore this

paper addresses this gap and reports on a systematic literature review which examines the application of CQI processes in child protection systems.

Method

A systematic literature review was undertaken to examine the application of CQI in child protection systems. The research team collaborated to develop a research protocol in accordance with the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) guidelines for systematic literature reviews (Moher et al., 2009). A draft protocol was submitted to a leading CQI researcher outside the review team for comments prior to implementation and that feedback contributed to further development of the protocol.

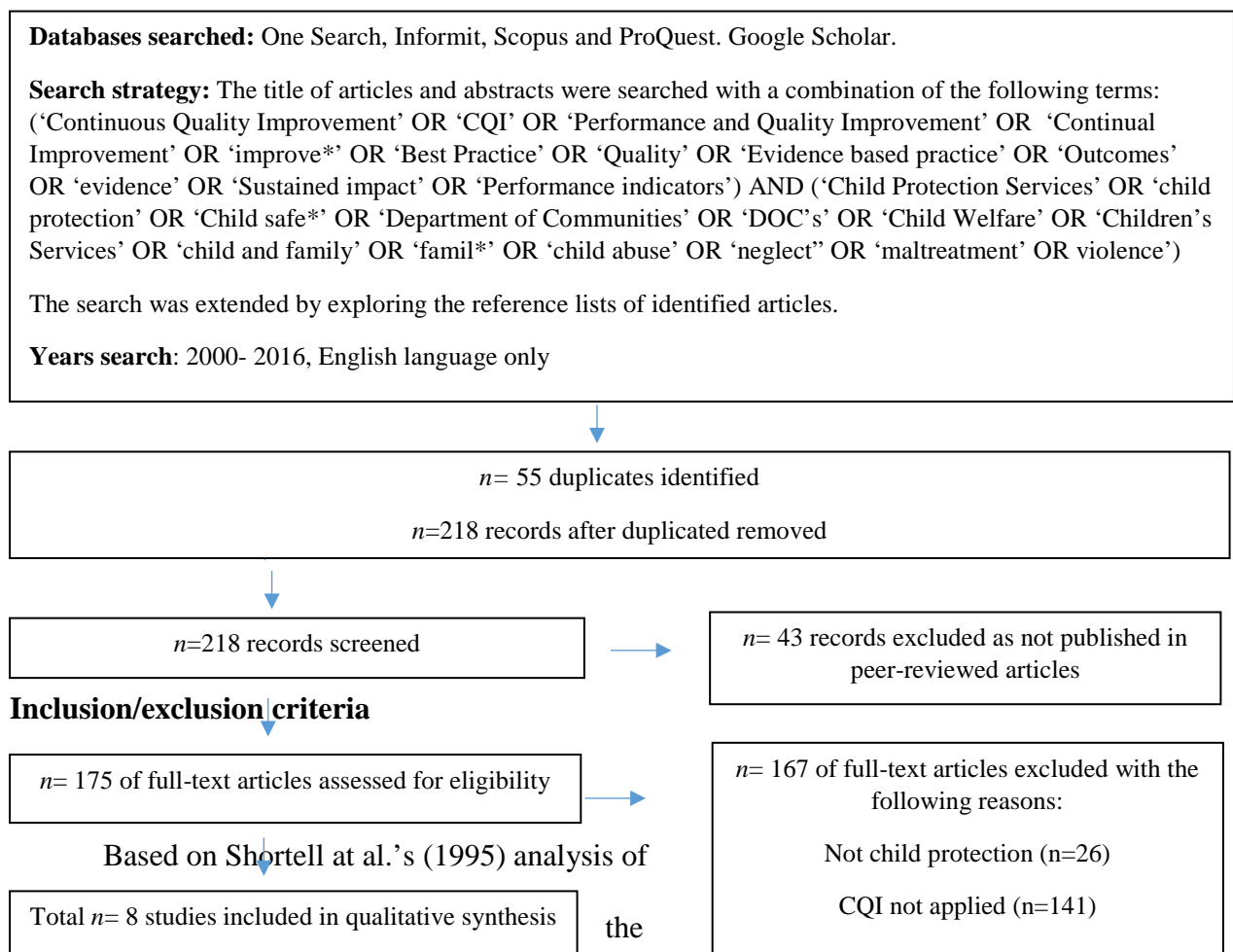
Given the absence of other systematic reviews that analyse the application of CQI principles to child protection, the aim of this review was to identify strengths and limitations in the existing evidence of the use of CQI in child protection, in order to inform future interventions, particularly in the Australian context. The review sought to examine the research question of how the application of CQI in child protection systems improves processes, service delivery and outcomes. The primary objective was to examine the characteristics of studies that have evaluated the application of CQI processes in child protection and to ascertain the study design quality of such studies. The secondary objective was to consider the implications of the review findings for further research and for Australian policy and practice.

Search Strategy

Ensuring the inclusion of all relevant literature in the initial search is a challenge for all systematic literature reviews (Kelly, 2011) and this issue was addressed by using the social science orientated databases Informit, Scopus, and ProQuest as well as Google Scholar and the online library tool One Search. To further maximise results, a research librarian was

consulted to review the search terms and explore the capacities and options of the selected databases (Kelly, 2011). Figure 1 specifies the variety and multiple combinations of the search terms used. Citation searches within selected articles were used to extend the original database searches. A PRISMA flowchart (see Figure 1) describes the process used to record the literature search and results (Moher et al., 2009).

Figure 1 Study Selection log



the core principles of CQI, a data screening tool was created and pilot tested across the review team to ensure consistency of the screening process. Studies were included in the review if they described the application and evaluation of CQI in some aspect of the child protection system and were published as English language peer-reviewed articles between 2000 and 2016. This included evaluations of organisational processes, structured practice approaches, employee participation and collaboration, and a focus on multiple stakeholders (Shortell et

al., 1995). The period from 2000 to 2016 was set as a search parameter, as this period reflects the time period of developments in the use CQI processes in child protection services in the United States (Children's Bureau, 2012; 2016) and coincides with the introduction of CQI language in child protection legislation in Australia (Commonwealth of Australia, 2010). The authors considered the possibility of including grey literature in the systematic review at some length and acknowledged that not all relevant research is accessible in peer reviewed journals. However, as has been highlighted by numerous authors (see for example Mahood, Van Eerd & Irvin, 2014; Adams et al., 2016) searching for relevant grey literature can be challenging because of the multitude of potential sources all with differing interfaces and capacities. As a result, Mahood et al. (2014) recommend that review teams make informed decisions which consider time and resources. With these cautions in mind, and as this review is the first of its type in this area, the decision was made to limit the search to peer review articles in this initial review in order to establish clear parameters from which future research may expand. Therefore, publications that were not focused on child protection, did not apply or evaluate CQI processes, or were not published in English language, peer-reviewed journals between 2000 and 2016, were excluded.

Review process

Application of the screening tool. The initial search resulted in the identification of 273 citations. After the removal of 55 duplications, 218 articles were divided between two reviewers and assessed against the agreed exclusion criteria described above. Additionally, 10% of the articles ($n= 21$) were randomly assigned to a third author for blind review. The level of interrater agreement was 95%. The authors identified 18 studies that required a second opinion and these were discussed jointly, exploring potential discrepancies, with one classification concern resolved by a third reviewer. The application of the inclusion/

exclusion criteria described above resulted in the inclusion of eight studies for in depth systematic review.

Application of the data extraction tool. A modified PRISMA framework was developed which in addition to author, country, and reported outcomes, included the type of child protection service involved, whether the CQI applied followed the principles proposed by Shortell et al. (1995) and to what extent these principles were met. The extraction tool was piloted by all reviewers, who then met and discussed the tool to ensure inter-rater reliability. Two researchers then separately analysed the data that emerged from the application of the extraction tool. The research team then met, discussing emerging themes and jointly synthesizing the data to ensure inter-rater reliability. Given the paucity of data on the topic, the main outcome of interest is the broad characteristics of the included studies and the reported outcomes.

Application of quality assessment tool. As well as examining the nature and outcomes of the CQI application, each of the eight studies was reviewed for research rigour and quality. The quality of the studies was appraised using the Critical Appraisal Skills Programme [CASP] (2013) checklist for qualitative studies and the Effective Public Health Practice Project [EPHPP] (2009) quality assessment tool for quantitative studies. Two reviewers separately appraised the studies. The process involved developing a framework for assessment, independently rating initially one qualitative and one quantitative study and reaching inter-rater agreement. Then each study was assessed by both reviewers, the results were discussed, and a consensus decision reached about the quality and rigour of each study.

Results

The systematic literature review revealed informative evidence about the potential and possibilities of applying CQI processes to child protection systems (See Table 1).

Table 1 Study characteristics and reported outcome

Author Country of origin	Area of Child Protection Practice	Type of CQI	Extent of application of CQI	Reported outcomes
Antle et al. (2012) USA	Government child protection service	Application of Solution- Based Casework (SBC) practice model in child protection interventions	Tool used to review items and outcomes of safety, permanency and wellbeing	High compliance with SBC principles correlates with improved safety, permanency and wellbeing
		SBC model rated against 33 CQI principles developed for Child Welfare offices	Evaluation of whether SBC correlated with CQI review instrument	SBC compliance at case management (CM) and case planning (CP) improved permanency outcomes Well-being most likely achieved when CM, CP and casework applied SBC principles
Cash et al. (2012) USA	Non - government residential service	'Balanced Scorecard' and 'Performance Dashboard' tools applied.	Terms of CQI used, but unclear whether all principles applied.	Fidelity issues identified were then addressed through further training resulting in better service performance.
		Tools used to evaluate service performance and to integrate measures for improvement	Tools provide 'real-time' feedback to employees about problem areas with goal of improvement	Use of performance measures provided real time feedback for evaluation and system improvement
Flango et al. (2015) USA	Court improvement program in child abuse and neglect cases	Evaluated the application of 9 performance measures devised.	Evaluated what and how the performance measures were used.	Use of State-wide court performance measures increased data exchange between courts and Child protection service
		Evaluation tool kit provided to states		Provision of tool kit critical reflection and improved goal setting
				Tool kit rather than standardised curriculum allows for identification of specific needs for improvement No evidence that performance measures used to change and improve the service
Glissen et al. (2006) USA	Government child protection service	ARC (availability, reliability and continuity) organisational intervention model applied	Multiple intervention components (collaboration, participation and innovation) 4 phases (problem identification, direction setting, implementation, and stabilisation)	Application of ARC reduces staff turnover which other research shows leading to better outcomes in child protection
		Impact of model on turnover, organisational culture and organisational climate assessed		Resulted in less depersonalisation, emotional exhaustion, role conflict or role overload for staff.
				Improved organisational climate of teams, but no evidence of impact on whole organisation Conclusion that intervention mediates impact
Holden et al. (2010) USA	Residential care of children in care	Application of CARE model assessed	Qualitative interviews with staff report level of CARE model application.	Agency staff report use of CARE principles in solving problems
		Application of CQI to examine how CARE principles are operationalised, facilitated, reinforced and sustained	Author observation of CARE principles in action	Leadership support important Anecdotal evidence (author observation) positive practices in facilities occurred because of CARE

Author Country of origin	Area of Child Protection Practice	Type of CQI	Extent of application of CQI	Reported outcomes
Lambert et al. (2015) USA	Child protection staff at welfare centre	Authors identified 12 principles key to implementing evidence based interventions CQI principles implicit within key principles	Child welfare staff rank key principles according to importance at different stages of implementation Principles include aspects of CQI principles implicitly	Understanding agency culture and climate is key to implementation and engagement of stakeholders. Leadership is needed during exploration to align agency goals to project vision. Stakeholder involvement crucial in implementation and design Implementation supports for building networks and exploring contextual issues important in child protection.
Lawrence et al. (2011) USA	Specific Program (Multiple Response System [MRS]) in Government Social Services	MRS applied as part of organisational CQI process	Family Assessment tool developed and data collection instigated and then evaluated Philosophy and process of CQI applied to evaluate service, including focus groups interviews with care givers	MRS encourages child safety outcomes, and positive engagement of social workers and families Reduced substantiation rates and re-entry Enhanced services provided to families in assessment stage Improved rapport and family engagement More collaborative case planning and engagement with key stakeholders Application of CQI processes improved service delivery
van Zyl et al. (2014) USA	Government child protection service	Application of Solution- Based Casework (SBC) practice model in child protection interventions SBC model rated against 33 CQI principles developed for Child Welfare offices	Identified worker behaviours in engagement, assessment, case planning and working with families Assessed what behaviours resulted in successful outcomes against permanency, safety and wellbeing criteria	Working with nuclear family not enough, need to engage with extended family to ensure permanency happens Assessment focus on addressing what creates risk so children can live safely at home Recommends the elimination of unnecessary policies and focus on fewer relevant aspects that make a difference.

Author, county of origin and area of child protection practice

Although the search strategies sought any articles published in peer-reviewed English language journals, only empirical articles from the United States explicitly reported on the application and evaluation of CQI processes in child protection or child welfare programs and therefore met the inclusion criteria. The search did uncover a number of reports reporting on agency or state level evaluations, however, these were not published in peer-reviewed articles

and thus not included due to lack of resources to adequately search all the grey literature and information.

Government departments or state child welfare authorities delivered the majority, that is six out of eight of the reviewed studies, of child protection services to which CQI processes were applied. This reflects the US federal government push to implement a CQI framework across states to improve child welfare practice (Children's Bureau, 2012). However, two non-Government services, including a residential service (see Cash et al., 2012), also applied and evaluated CQI processes.

Type and extent of CQI application in child protection

The review highlights several consistencies in the studies but also identifies some noteworthy gaps. All the studies (n=8) stated that the aim of applying CQI measures was to improve organisational processes and six also described the establishment of measures to determine this improvement (Antle, Christensen, van Zyl & Barbee, 2012; Cash et al., 2012; Flango et al., 2015; Lambert, Richards & Merrill, 2015; Lawrence, Rosanbaum & Dodge, 2011; van Zyl et al., 2014). Collaborative team work in identifying issues and applying CQI processes (a core feature of Shortell et al.'s definition) was highlighted as a feature in six (Antle et al., 2012; Flango et al., 2015; Glisson et al., 2006; Holden et al., 2010; Lambert et al., 2015; Lawrence et al., 2011) and a focus on key stakeholders and their involvement was clearly identified by three of the eight papers, namely Cash et al. (2012), Holden et al. (2010) and Lawrence et al. (2011). However, while the articles claimed to have applied CQI strategies, very few (n=3) explicitly described the methodology of applying these strategies to service delivery or what part CQI played in the evaluation processes.

Reported outcomes of CQI in child protection

Despite the lack of explicit methodological discussion, the selected studies claimed positive outcomes were achieved for both clients and organisations as a result of applying CQI processes to child protection systems. Two studies claimed using CQI processes directed the gathering of appropriate evidence to contribute to outcome measurement (Cash et al., 2012; Flango et al., 2015) and two claimed heightened rapport and collaboration with stakeholders (Antle et al., 2012; Lawrence et al., 2011). Other reported outcomes of the application of CQI included increased support networks for families (Lambert et al., 2015); increased use of critical reflection among staff (Flango et al., 2015; Lambert et al., 2015); and improved practice in assessment and planning (Flango et al., 2015; Lawrence et al., 2011). The introduction of CQI based models of performance assessment was also found to enhance the organisational climate of the team, the understanding of agency culture (Glisson et al., 2006; Lambert et al., 2015) and the problem-solving capacity of staff (Holden et al., 2010).

Four studies concluded that the introduction of systematic approaches to evaluate and improve service delivery required time, training, resources and leadership support (Antle et al., 2012; Cash et al., 2012; C. Glisson et al., 2006; Lawrence et al., 2011). Consistently applying CQI processes was found to contribute to the identification of training needs and to the dissemination of resources to where they were most needed in two studies (Flango et al., 2015; Lawrence et al., 2011). Three studies identified that specific training enhanced the commitment of staff to program fidelity thus contributing to improved outcomes for children and families (Glisson et al., 2006; Holden et al., 2010; Lambert et al., 2015).

Data collection and information sharing emerged as CQI factors that improved service delivery in child protection. Three studies concluded that data management strategies which provided real time feedback to staff, contributed to effective evaluation and to systemic improvements (Cash et al., 2012; Lambert et al., 2015; van Zyl et al., 2014). One further study highlighted the importance of case data collection, progress reporting, and data

management strategies (Antle et al., 2012). Data sharing between courts was an indicator of improved practice in aspects of child protection decision making, in the study reported by Flango et al. (2015).

Practice approaches that contributed to improved service delivery and outcomes

As well as highlighting positive outcomes of CQI processes, certain practice approaches were consistently described across the studies as enhancing service delivery in child protection. Strengths-based, solution focused models of practice which were inclusive of the families engaged with child protection services, were consistently found to result in improved outcomes for children. While different labels were attached to these practice models (for example, Solution Based Casework as discussed by Antle et al. (2012) and van Zyl et al. (2014); Multiple Response Systems described by Lawrence et al. (2011); and the CARE model applied by Holden et al. (2010), the core elements of a strengths informed approach underpinned by respectful communication and non-adversarial relationships were identified in four of the eight studies.

Four studies highlighted the value of engagement with, and the involvement of, families (Holden et al., 2010; Lambert et al., 2015; Lawrence et al., 2011; Van Zyl et al., 2014). Van Zyl et al. (2014), moreover, highlighted that working with the nuclear family was not enough; engagement needed to include the extended family. Additionally, community stakeholder involvement was found to be crucial in the implementation and design of child protection intervention programs in six of the eight studies (Cash et al., 2012; Flango et al., 2015; Glisson et al., 2006; Lambert et al., 2015; Lawrence et al., 2011; van Zyl et al., 2014).

Quality of studies

Quality appraisal results are presented in Table 2 and Table 3 below. Of the eight studies, six were quantitative studies, one was a qualitative study and one applied mixed

methods. Overall, the methodological quality of the studies was assessed as weak to moderate, with only one methodologically strong study identified, though some strong elements existed in others. The reporting of the quantitative studies in particular lacked evidence and clarity about study design, participant consent, and the purpose and use of the data collection tools. Overall, the study design and implementation of the two studies using qualitative methods showed stronger methodological quality. However, both these studies lacked information about participant recruitment strategies and the relationship between the participants and researcher, as well as any robust consideration of ethical issues.

Table 2 Quality appraisal of the studies reporting on CQI application in child protection utilising the EPHPP (Effective Public Health Practice Project, 2009) tool

Author	Design & Data collection	Selection bias	Study design	Confounders	Binding	Data-Collection methods	Withdrawals and dropouts
Antle, et al. (2012)	Case review; quasi-experimental design Random sample of 4559 child welfare cases	Strong	Strong	Strong	Moderate	Strong	N/A
Cash, et al. (2012)	Internal evaluation of program outcomes	Weak	Weak	Weak	Weak	Weak	Weak
Flango, et al. (2015)	Survey conducted with Court Improvement Program directors to identify use of performance measures	Moderate	Moderate	Weak	Weak	Moderate	N/A
Glissen, et al. (2006)	Pre-post experimental design assessing functioning and turnover of case workers Random assignment of 10 urban and 16 rural case managements into intervention or control conditions	Moderate	Strong	Moderate	Weak	Strong	Strong
Holden et al. (2010)	Program description, anecdotal data, reflections and preliminary	Weak	Weak	Can't tell	Moderate	Moderate	Can't tell

	quantitative survey results.						
	Pre- and post-application of survey assessing knowledge and impact of training of 74 staff. 54% response rate.						
Lawrence, et al. (2011)	Mixed method. Quantitative part: evaluation of program; comparison of data from 9 counties that implemented MRS with matched control counties; set criteria	Moderate	Moderate	Moderate	Moderate	Strong	N/A
Van Zyl, et al. (2014)	Review of cases that met application of SBC principles; Of random sample of 4559 child welfare cases, 867 met requirements	Moderate	Strong	Can't tell	moderate	Strong	N/A

Table 3 Quality appraisal of the studies reporting on CQI application in child protection utilising the CASP (Critical Appraisal Skills Programme, 2013) tool.

		Authors	Lambert et al. (2015)	Lawrence et al. (2011)
Design & Data collection			Exploratory study to evaluation intervention strategy Interviews with 5-10 project staff in four States at three points of project points: early, mid, and end	Mixed method. Qualitative part: 30 focus groups with practitioners, and 223 interviews with caregivers
CASP evaluation criteria	1. Was there a clear statement of the aims of the research?		Yes	Yes
	2. Is a qualitative methodology appropriate?		Yes	Yes
	3. Was the research design appropriate to address the aims of the research?		Yes	Yes
	4. Was the recruitment strategy appropriate to the aims of the research?		Can't tell	No
	5. Was the data collected in a way that addressed the research issue?		Yes	Yes
	6. Has the relationship between researcher and participants been adequately considered?		Can't tell	Can't tell
	7. Have ethical issues been taken into consideration?		Can't tell	Can't tell
	8. Was the data analysis sufficiently rigorous?		Yes	Yes
	9. Is there a clear statement of findings?		Yes	Yes
	10. How valuable is the research?		Moderately Valuable	Moderately valuable

Discussion and applications to practice

This systematic review of eight empirical studies about the application of CQI processes in the context of child protection was conducted in order to inform the developing use of such strategies in Australia. The literature highlights that the implementation of CQI processes in child protection settings relies on a clear articulation of aims/objectives, proposed mechanisms of change, and short, medium, and long term outcomes that pertain to benefits for children. Only eight of the 218 identified studies examined in this review were able to meet all these criteria which points to the accuracy of Gardner et al.'s (2011) claim that CQI is a poorly tested strategy. The nominal descriptions of research process and method in the studies reviewed suggest that the evidence supporting the application of CQI in child protection settings lacks rigor. Rubenstein et al. (2014) similarly conclude that despite being widely referenced, discussions and reports of CQI are often devoid of “substantiating details” and that even the core meaning of the term remains “imprecise” (p. 10). However, the consistent reference to CQI concepts in child protection policy documentation makes further exploration of this issue imperative.

Several limitations to this review are acknowledged. Only English language, peer-reviewed journals were included in the original search which immediately excludes a wide variety of potentially useful sources including journal articles published in languages other than English, books, reports and other grey literature. As Smith (2006) has highlighted, negative evaluations, i.e. studies that demonstrate an intervention does not work, are unlikely to be submitted to or accepted by peer review journals. Therefore, accessing only peer-reviewed articles results in a potential bias in the analysis of findings about the effectiveness of CQI, possibly presenting a more positive landscape than actually exists. Further, the

criteria used to guide the inclusion and exclusion of articles resulted in only studies from the USA being included in the systematic review.

However, the application of the PRISMA systematic approach, and the high level of consensus achieved between the reviewers, suggests the outcomes may provide some guidance to the emerging use of CQI in child protection in Australia, where the language of continuous improvement is now appearing in government child protection policies (see for example, Child Protection Systems Royal Commission, 2016; Commission for Children and Young People, 2014; Commonwealth of Australia, 2010; Government of Western Australia, 2016). Despite these acknowledged limitations, and the absence of clear explanations about the methodology of apparently successful CQI processes, this review has highlighted some important outcomes.

Each of the studies claimed that the application of a CQI process was associated with improvements in processes for working with children and families, or advances in the consistent application of practice frameworks or more positive and engaged staff climates. The lack of methodological information about how these outcomes was not conducive to the application of a meta-analysis. While the results do not provide evidence that these achievements resulted in increased safety for children, other literature highlights the importance of rethinking practice frameworks (Carmody, 2013), and the development of relationships with families (Tilbury, 2015) in order to improve outcomes for children in child protection. The outcomes from the studies reviewed here claim that CQI processes have contributed to the consistent integration of these aspects of practice into child protection systems.

An analysis of the findings described in each of the studies under review highlight the importance of key stakeholder involvement and engagement, in particular the involvement of families and children in the development, review and evaluation child protection programs

and systems. Interventions that are reported to have had a positive impact used strengths-based, solution-focused models of practice that were “...more flexible, non-punitive, family oriented and serving the best interest of the children” (Holden et al., 2010, p. 144). While this is important, it is not necessarily a new finding in child protection research. The effectiveness of family engaged practice with a focus on strengths has been stressed before (see for example, Fernandez, 2007; Tomison, 2002). The impact of a positive organisational climate in reducing staff turn-over and achieving better outcomes in child protection (another consistent finding in the reviewed articles), has also been identified in other studies (Ellett, 2009; Glisson & Hemmelgarn, 1998; McBeath, Briggs & Aisenberg, 2009). This suggests that the diverse and multiple goals, agendas, settings and jurisdictions confound the knowledge and evidence already available to improve child protection outcomes. Projects that address this are imperative. The studies reviewed here again point to the potential of CQI processes in promoting the consistent implementation and fidelity of evidence based approaches to practice that improves outcomes for children.

The lack of Australian studies sourced for this review indicates the evaluation of CQI processes to improve outcomes in child protection services is in its early development in the Australian setting. However, the Australian Indigenous primary health care sector is well advanced in its application of CQI processes and evidence from this sector has shown advances over time in both the quality of health care provided and in positive organisational processes (Panaretto et al., 2005). Most importantly, lessons from this sector demonstrate a willingness in uptake can lead to the successful implementation of CQI in diverse and complex systems of care across different Australian jurisdictions (Schierhout et al., 2013). The application of CQI has promise, but improvements can be iterative rather than linear, and need organisational support, resources and, overall, a “no-blame’ experience-based learning approach” (Gardner et al., 2011, p. 114). As this review highlighted, the introduction of

systematic approaches to data collection, monitoring, evaluation and improved service delivery in child protection requires time, training, resources and leadership support. Whether and how the uptake and implementation of CQI will be embraced in the Australian child protection setting remains to be seen, however given the exponentially expanding costs and the enormous social and emotional consequences of child maltreatment and subsequent intervention (Child Family Community Australia, 2016), business as usual is no longer an option.

Conclusion

Evidence-based approaches for Australian child protection services, based on appropriate and timely systems performance data are needed (Broadley & Goddard, 2016) and CQI can provide one such option. Although few studies have evaluated the application of CQI in child protection to date, this review has identified that CQI shows some promise in the development, implementation and evaluation of evidence-based programs and policies. New policy directions in various Australian states and at a national level, highlight the importance of continued improved service delivery in child protection (Child Protection Systems Royal Commission, 2016; Commonwealth of Australia, 2010). However, transferring learning from other contexts would need a close analysis of how differences in the child protection systems impact outcomes. Nevertheless, the implementation of CQI in child protection shows some promise in providing a systematic approach to improving outcomes for children and families.

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