A rapid review of implementation frameworks underpinning Aboriginal and Torres Strait Islander children's health and social care programs

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Submitted: 21 April 2023; Accepted: 1 May 2023

Abstract

Objective: This rapid review aimed to identify (1) key frameworks and components underpinning the effective implementation of Health and Social Care (HSC) programs for Aboriginal and Torres Strait Islander children; and (2) participatory and co-design frameworks guiding the implementation.

Methods: Four databases were searched for peer-reviewed English-language articles published between 2015 and 2021. The focus was on HSC models, frameworks, projects or services with an implementation focus for Aboriginal and Torres Strait Islander children aged 0–12 years.

Results: Seven studies identifying components supporting effective implementation of Aboriginal and Torres Strait Islander HSC programs were included. Continuous Quality Improvement was the most widely applied approach. Most studies described participatory and co-design approaches to ensure suitability for Aboriginal and Torres Strait Islander children and families.

Conclusions: There remains a paucity of evidence on the effective implementation of Aboriginal and Torres Strait Islander children's HSC programs. Implementation approaches that foster cultural safety and Aboriginal and Torres Strait Islander leadership, support diverse partnerships and promote localised application may facilitate the effective implementation of HSC programs.

Implications for Public Health: Future research in this area would benefit from greater consideration of appropriate implementation frameworks and co-design approaches, and emphasis on reporting interventions, implementation frameworks and co-design approaches for HSC programs for Aboriginal and Torres Strait Islander children.

Key words: health and social care programs, Aboriginal and Torres Strait Islander health, child health, implementation frameworks, co-design

Introduction

Health and well-being of Aboriginal and Torres Strait Islander children

Aboriginal and Torres Strait Islander people have deep and long connections to country, culture, language and community, and they share a continuing legacy of resilience, strength and determination. However, the ongoing effects of colonisation, racism, and social and economic marginalisation experienced by Aboriginal and Torres Strait Islander peoples continues to impact their health and well-being, leading to Aboriginal and Torres Strait Islander children experiencing significant disadvantage.[1]

It is well-established that Aboriginal and Torres Strait Islander children in Australia experience increased developmental risk factors and poorer health and social outcomes compared to non-Indigenous children, including being less likely to be enrolled in and attend preschool; and more than twice as likely to be considered developmentally vulnerable upon school entry.[2] Furthermore, Aboriginal and Torres Strait Islander children are also largely over-represented in the child protection, youth justice and homelessness

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Aust NZ J Public Health. 2023; Online; https://doi.org/10.1016/j.anzjph.2023.100063

systems.[2–4] Aboriginal and Torres Strait Islander people have long asserted the importance of healing past traumas by, in part, ensuring culturally appropriate responses to children's health and development.[5] Consequently, there have been concerted efforts to design and deliver culturally safe, trauma-informed support programs, tools, and services for Aboriginal and Torres Strait Islander children and their families.[6,7]

Health and social care interventions for Aboriginal and Torres Strait Islander children refer to a broad range of preventive and early intervention focused programs, tools, resources, and services aimed at supporting and improving health and well-being in a timely, safe, and culturally sensitive way. It is well established that early identification of developmental difficulties followed by targeted early intervention and support during early childhood is necessary to optimise a child's developmental trajectory and enhance their life outcomes.[8] Increasingly, there have been attempts to adapt or develop customised tools and interventions for Aboriginal and Torres Strait Islander children and families. Some examples include the Ages and Stages Questionnaire-Talking about Raising Aboriginal Kids (ASQ-TRAK)—the first, culturally adapted and validated developmental screening tool[7,9]; Congress Child and Family services—delivering early childhood services to Aboriginal and Torres Strait Islander families across the Northern Territory[10]; and Koorie Kids Shine—supporting Aboriginal and Torres Strait Islander children's engagement in kindergarten.[11]

Implementation frameworks for health and social care (HSC) programs

Achieving health equity for Aboriginal and Torres Strait Islander children ultimately rests on effective implementation, uptake, and dissemination of appropriate HSC interventions. Implementation science is the process of examining the methods and processes that promote the systematic uptake of research findings, evidence-based programs or practices into routine practice.[12] There are numerous implementation models, frameworks or theories that have been designed to guide the implementation of HSC interventions. Tabak and colleagues[13] identified over 61 models/frameworks/theories to support the implementation of interventions. Notably, there is no consensus on the use of descriptive terms, as they are often used interchangeably. Implementation science *frameworks* (used herein to describe frameworks, models and theories) seek to inform implementation by addressing one of three key aims: (1) describe the process of translating research into practice; (2) identify the various factors that may influence implementation outcomes; and (3) assess or evaluate the implementation process.[14] Examples of key *frameworks* that are commonly applied in the HSC context include the Knowledge to Action Framework to guide the process of translating research into practice (Nilsen, 2015); the Consolidated Framework for Implementation Research (CFIR) to identify various factors that may influence implementation[15]; Powell and colleagues'[16] Expert Recommendations for Implementing Change (ERIC); the RE-AIM Framework, which supports the evaluation of implementation[17]; and the Society for Implementation Research Collaboration has compiled a repository of over 400 implementation-related measures for evaluation.[12]

While there are numerous implementation frameworks available that can guide and inform HSC programs, there is a paucity of implementation frameworks that have been specifically designed for Aboriginal and Torres Strait Islander communities.[18] The He Pikinga Waiora (HPW) is one particular implementation framework specifically for designing and implementing interventions in Indigenous (Maori) communities.[19] It proposes that implementation science in this context must be grounded in Indigenous knowledge, participatory and co-design approaches, culture-centred approaches, community engagement and systems thinking.[19] Specifically, experience-based co-design emphasises genuine relationships, authentic partnerships, and collaboration between researchers, service-users, community and all other stakeholders involved.[20] Participatory and co-design processes place the community's values, needs, aspirations and goals at the centre of the implementation research and outcomes.

To enhance implementation in Aboriginal and Torres Strait Islander communities, several cultural approaches have been proposed. These include strength-based empowerment; investing time in the development and maintenance of relationships; reciprocity; respect of knowledge and ways; co-creation with the community; Aboriginal and Torres Strait Islander community governance and leadership; and incorporation of narrative practices such as yarning.[21,22] Importantly, respect for Aboriginal and Torres Strait peoples, and their culture, and commitment to developing respectful and trusting relationships with community members, are key to effective implementation.[18] Empowering Aboriginal and Torres Strait Islander and Torres Strait communities to implement HSC interventions involves mobilising, leveraging and extending on the knowledge, skills and experiences that already exist within community members.[20]

These strategies described above seek to fulfil self-determination principles in which Aboriginal and Torres Strait Islander families and communities are empowered to control, lead and take ownership of the dissemination, uptake and implementation of HSC interventions.[23] It is well established that when this is the case, greater outcomes are observed.[24] However, there remains a lack of agreed upon best-practice methods for implementing these strategies in the real world.

Rationale for this review

There are numerous implementation models, theories, frameworks, and approaches underpinning the implementation of various HSC interventions.[13] However, the examination of such frameworks to support the implementation of programs focused on Aboriginal and Torres Strait Islander children has yet to be synthesised. A review of this research is highly warranted to identify best-practice strategies and core components that may inform and guide the effective implementation of culturally specific tools and programs for Aboriginal and Torres Strait Islander children to yield optimal health, social, educational and developmental outcomes. Therefore, this rapid review aimed to identify (1) key components, models, frameworks or approaches underpinning the effective implementation of HSC programs for Aboriginal and Torres Strait Islander children; and (2) participatory and co-design frameworks, principles and practices guiding the implementation of such programs.

Methods

A rapid review methodology was applied to identify and examine recent evidence on the (a) models, frameworks or approaches guiding

the effective implementation of HSC programs for Aboriginal and Torres Strait Islander children; and (b) participatory and co-design frameworks, principles and approaches guiding the included research, programs and services. Rapid reviews allow a streamlined approach to evidence generation,[25] and this approach includes components of the "gold standard" systematic review process but is simplified to produce information in a timely manner.[26,27]

HSC programs for the purpose of this review encompass a broad range of preventative and treatment focused programs and services aimed at supporting and improving the health and well-being of Aboriginal and Torres Strait Islander children. This includes research, programs and services related to education and early childhood development. The review process involved meetings and consultations across multiple project stakeholders, including Aboriginal Elder and key project partner (EM), along with the project lead investigator (AD), and the research team. The review team established a protocol outlining the review aims and process to be followed.

Search strategy

We searched for peer-reviewed publications through four electronic databases [OVID-MEDLINE, PsycINFO, CINAHL Plus and PubMed]. The search was undertaken between June and November 2021. A combination of the following terms was used and searched for in the title, abstract and keyword. Key search terms were truncated as appropriate to each database.

Concepts	Search terms
1. Aboriginal and Torres Strait Islander communities and populations	Aboriginal and Torres Strait Islander, Aboriginal, Indigenous, First Nations.
2. Health and social care	Health, child, social, well-being, development
3. Project, program and research	Program, project, research, evidence, service.
4. Co-design approaches	Co-design, co-creation, participatory, Indigenous-led
5. Implementation models and frameworks	Implementation, framework, model, strategy

Inclusion and exclusion criteria

Publications were included if they were peer-reviewed and published in English between 2015 and 2021. Publications needed to focus on HSC models, frameworks, projects or services with an implementation focus. The population of interest was Australian Aboriginal and Torres Strait Islander children aged 0–12 years. However, many studies encompassed a broader definition of childhood, and therefore, studies including older children and young people up to 21 years of age were also included, as long as they did include children aged 0–12 years.

Publications were excluded if they were not specific to Aboriginal and Torres Strait Islander children aged 0–12 years or the broader childhood definition up to age 21; or they primarily focused on program development, pilot-testing or evaluation without significant consideration of how they were implemented.

Screening of search results

Search results were managed using Covidence systematic review management software, in which two independent reviewers screened the titles, abstracts and keywords of every article retrieved in the search according to the selection criteria. The full texts were retrieved for further assessment to confirm eligibility. Articles excluded during the full-text assessment were tabulated with reasons for their exclusion, as per PRISMA guidelines.[28]

Data extraction

Data were extracted from the included studies using a specifically designed data extraction form. Extracted data included general study details; data collection methods, implementation models, approaches and/or frameworks; components or strategies used during implementation; participatory and co-design approaches; and key outcomes or recommendations. Articles were synthesised narratively (descriptively) rather than by quantitative or meta-analytic methods, as outcomes measured were not directly comparable. A summary of the extracted data is presented in Table 1.

Results

Of 7,688 articles retrieved, 3,085 duplicates were removed, and a total of 4,603 articles were screened using titles and abstracts by two independent reviewers (**Figure 1**). Of these, 4,348 articles were removed due to not meeting eligibility criteria. The remaining 255 articles were reviewed in full text, and a further 247 studies were excluded for reasons documented (Figure 1). A total of seven papers were included in this review. Across the included papers, three reported qualitative study designs, two mixed-methods designs, one quantitative study design, and one a narrative paper reporting on the development of implementation indicators. The following sections report on the rapid review results by examining the implementation frameworks, models and factors across the papers, along with identifying the participatory and co-design approaches.

Implementation frameworks and models

Continuous quality improvement (CQI)

Greenstein et al.[29] ("Improving physiotherapy services to Indigenous children with physical disability: Are client perspectives missed in the continuous quality improvement approach?") applied the Audit and Best Practice for Chronic Disease (ABCD) CQI framework to identify clinical and organisational improvements and impacts on child health. The ABCD CQI is described as well suited to Indigenous health services research with a specific focus on participation and capacity building. A CQI cycle was completed in the first year, which included identifying and auditing files that met inclusion criteria, presenting the results at a workshop and undertaking goal-setting, strategy development and implementation. A second audit was completed the following year. In-depth client interviews were conducted during and at the end of each CQI cycle. The CQI framework identified strengths in staff development and team cohesion, including a lack of linkages with community and external services. The study also reported a significant gap between the data in the CQI process and client interviews, reflecting the importance of including client and community perspectives in service design, delivery and evaluation. Community perspectives highlighted barriers within the healthcare

Table 1: Data summary – Investigating implementation frameworks, models and components underpinning Aboriginal children's health and social care programs.

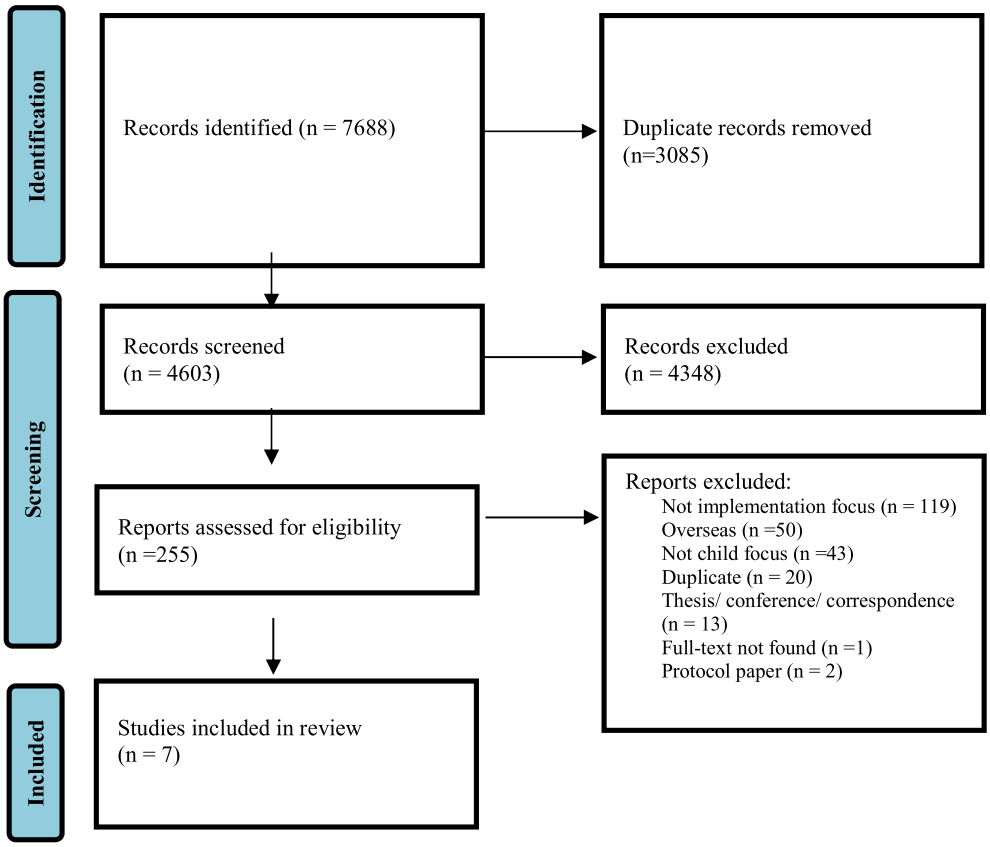
Author & year publication	Study Location & Population	Children (age)	Study Design	Study Aim/s	Intervention description	Implementation components	Implementation models, frameworks and approaches	Participatory & co-design principles, practices and frameworks
Campbell et al. (2018)	Cape York Queensland ACCHS	Infants	Qualitative evaluation	Determine how the program was implemented and i dentify the enablers and strategies used, formative implementation outcomes.	Baby One Program: family-centred, Indigenous Healthworker-led, home-visiting model of care	Relationships key to effective implementation between health practitioners and families Full-time project officer Workforce strengthening – including project position providing 'on-the-ground' training and support to health workers	Pragmatic step-wise approach Quality improvement approach Embedded evaluation and establish indicators	Participants involved in program development Mothers essential partners but relationships with whole family was important. Valuing cultural ways Yarning Create and test concepts, messages and materials
Greenstein et al. (2016)	Paediatric allied health Northern Australia	0-21 years	Mixed methods case study.	Compare the outcomes of two cycles of continuous quality improvement.	Community-based paediatric physiotherapy services for Aboriginal children with physical disability	Auditing files. Adapting ABCD tools for local use. Client interviews Present and review results with stakeholders	Audit and Best Practice for Chronic Disease (ABCD) continuous quality improvement approach. Systems assessment tool	Outcomes-based participatory action CQI process.
McAullay et al. (2018)	Primary health care centres	0-2 years	Quantitative	Determine whether participation in the CQI program associated with improved care and outcomes for Indigenous children	Primary care centres delivering child health checks and healthcare services	Child health checks and assessments File audits	ABCD Continuous quality improvement	Not described.
Mitchell et al. (2021)	Maningrida, Northern Territory	School-aged children	Evaluation study	Evaluate the RHD project using a community-led development approach.	Lurra rheumatic heart disease health communication & screening school-based project	Local vision setting – child-focused vision Continuous feedback and reflection Stakeholders reflecting on local-level data, including community members Growing collaborative leadership Translation into appropriate community languages and working together to translate meaning across concepts.	Developmental evaluation	Community-led development. Action research. Both-ways learning. Build from strengths Learn by doing 'Lurra' – underpinning concept to represent people coming together and working collaboratively

(continued)

TABLE 1. Continued

Author & year publication	Study Location & Population	Children (age)	Study Design	Study Aim/s	Intervention description	Implementation components	Implementation models, frameworks and approaches	Participatory & co-design principles, practices and frameworks
Phillips et al. (2021)	Barunga, Northern Territory	0-5	Qualitative case study	Describe the key components and evolution of the program between 1998 and 2016.	Child anaemia treatment and prevention program	Aboriginal leadership Stable, skilled and experienced team Culturally supportive processes Participatory and collaborative processes Building trust and strong relationships Building community acceptance Holistic focus PARIHS domains – drawing on the dedication, knowledge and experience of health practitioners rather than implementation theoretical approach	Promoting Action on Research Implementation in Health Services (PARIHS) framework Continuous quality improvement Program logic Co-designed data collection tools	Program implementation facilitated by Aboriginal leadership and culturally supportive approaches
Sibthorpe et al. (2017)	ACCHS	0-18	Narrative.	Describe the process and indicators for continuous quality improvement for the prevention and management of otitis media and related primary health care.	Indicators for continuous quality improvement for otitis media diagnosis and treatment services for Aboriginal children	Implementation indicators at 4 levels: Level 1- stewardship role of governments Level 2 – local health services organisational structures and processes Level 3 – processes of care Level 4 – intermediate outcomes	Continuous quality improvement Framework for Performance Assessment in Primary Health Care Menu of indicators for ACCHS and primary care organisations to monitor quality of care	Not described.
Young et al. (2016)	NSW ACCHS	0-17 years	Mixed methods case study.	Describe and evaluate the HEALS project, as an enhanced model for clinical services arising from Aboriginal health research.	Hearing Ear health and Language Services (HEALS) enhanced clinical services	Healthcare network Dedicated staff at each site MOUs for partners Service delivery data and cross-checked Community awareness Expanded service delivery Capacity building Sustainability – remains a challenge	ACCHS fundamental part of the framework	Reported following guidelines advocated by community Philosophy – no research without service Close community consultation Capacity building

Figure 1: Search results.



system, including negative experiences, racism, transport issues and lack of support. The iterative process led to changes in implementation processes, professional development, partnerships and service delivery.

McAullay et al.[30] ("Sustained participation in annual continuous quality improvement activities improves quality of care for Aboriginal and Torres Strait Islander children") also reviewed the ABCD CQI framework in their audit of primary healthcare organisations delivering child health checks. The study explored whether the ABCD process improved care outcomes for Indigenous children. Auditing client records was the key data collection method, and unlike Greenstein et al.,[29] the study did not include the use of stakeholder workshops and client interviews. While the study reported significant improvements in quality of care, it did not describe the contextual factors supporting or influencing results. The study highlighted the limited published literature on CQI effectiveness.

Sibthorpe et al.[31] ("Indicators for continuous quality improvement for otitis media in primary health care for Aboriginal and Torres Strait Islander children") published the process of developing CQI indicators to guide primary health care organisations in delivering otitis media prevention and management services to Aboriginal and Torres Strait Islander children. The study applied a framework for Performance Assessment in Primary Health Care and established four levels of indicators for assessing the delivery of otitis media services: Level 1: stewardship role of governments, Level 2: local health services, Level 3: processes of care, and Level 4: intermediate outcomes. The indicator development process went through several stages of refinement, including canvassing stakeholder ideas, expert group refinement, and final stage, field-testing in community-controlled settings. The process resulted in 12 best practice indicators including screening numbers, the incidence of disease, appropriate prescribing, appropriate testing, care planning and timely follow-up. The indicators will be tested in practice and need to be supported with quality and meaningful data collection. The indicators were recommended to be reviewed and updated with partners over time.

Campbell et al.[32] ("Implementing the Baby One Program: a qualitative evaluation of family-centred child health promotion in remote Australian Aboriginal communities") explored the implementation of an Aboriginal and Torres Strait Islander family-centred child health program, detailing strategies used and identifying enablers for implementation. The program applied a pragmatic, step-wise approach and was driven by each organisation's capacity and staffing arrangements. Quality improvement was described as a foundation for the program but CQI frameworks or approaches were not reported specifically. The study showed that the relationships formed between health practitioners and families were crucial for effective implementation. Responsiveness to family needs was integral for both program development and quality improvement, and while mothers were essential partners, a relationship with the whole family was important. The study also identified the following key influences: (a) challenging environments for new families living in remote communities, (b) valuing cultural ways, (c) resourcing program delivery, to help address organisational resource limitations, (d) a team approach to sharing knowledge and perspectives, (e)

negotiating the cultural interface, (f) engaging families, (g) exchanging knowledge through yarning (conversation), (h) strengthening the workforce, (i) seeing health changes in families and showing positive achievements. The family-centred approach and focus on quality of relationships, principles of choice and self-determination compliments and strengthens existing maternal and child health services in the area.

PARIHS framework

The Promoting Action on Research Implementation in Health Services (PARIHS) framework was used by Phillips et al.[33] ("How Barunga Aboriginal community implemented and sustained an anaemia program - A case study evaluation") to explore the implementation of a child anaemia prevention and treatment program located in remote northern Australia. The study used a case study evaluation to describe the program components and its evolution over 18 years. The PARIHS framework consists of three domains: evidence, context and facilitation and theorises that incorporating a focus on all three factors will increase implementation effectiveness. Phillips et al.[33] applied the PARIHS framework to explore the factors influencing program implementation and found their program ranked highly across all three areas: evidence, context and facilitation. The study identified that Aboriginal and Torres Strait Islander leadership, the use of culturally supportive processes and building trust and strong relationships contributed to effective implementation and the program's impacts in reducing childhood anaemia over time. Phillips et al.[33] recommended the use of an overarching and systematic monitoring and evaluation framework that can guide the reporting of local adaptations and program impacts on child health. The study also highlighted the importance of qualitative data collection to enhance understanding of health program implementation in the remote Aboriginal context.

Developmental evaluation

A developmental evaluation (DE) approach was used by Mitchell et al.[34] ("Using community-led development to build health communication about rheumatic heart disease in Aboriginal children: a developmental evaluation") in their work exploring implementation effectiveness and contextual influences of a school-based rheumatic heart disease education program in a community in remote northern Australia. The program was established with a community-led development (CLD) approach to creating a shared vision, building from strengths, working with diverse people and sectors, growing collaborative leadership and learning by doing. DE aligns with this CLD approach, focusing on the learning process, providing continuous feedback and reflection to capture the journey, rather than assessing against preset indicators. The DE approach led the project to undertake regular group reflections, participant observations and establish a storyline, along with stakeholder interviews to understand the implementation process. Findings and implications were discussed across the project partners. The study identified important features supporting implementation including both ways learning, exposure to local level data, having a focus on conceptual and language issues in framing the project and the health condition. The flexibility of the DE approach was described as a strength; that is, the ability to match the complexity and flexibility of the project enabled real-time reflection on what was working and not working.

No specified framework

One final publication by Young et al.[35] ("A case study of enhanced clinical care enabled by Aboriginal health research: the Hearing, EAr health and Language Services [HEALS] project") presented a case study evaluation of a project aiming to improve Aboriginal and Torres Strait Islander children's hearing and language services across New South Wales. The project sought to develop enhanced clinical services in five Aboriginal Community Controlled Health Organisations in partnership with hospitals, government departments, researchers and local providers. While the study reported on the implementation and outcomes of the project, it did not describe the inclusion of a specific implementation framework or approach. However, similar to methods used in previous publications, data collection consisted of regular service delivery data reports and stakeholder interviews. The study found that the project increased and expanded children's hearing and language services, and raised community awareness about ear disease, speech and language problems. Factors supporting implementation included expanding and building new partnerships, establishing a memorandum of understanding (MOU), and employing dedicated project staff at each site to avoid overburdening partner organisations.

Discussion

To our knowledge, this is the first review to synthesise the varying types of implementation frameworks for HSC programs for Aboriginal and Torres Strait Islander children. Specifically, this review aimed to identify (1) key components, models, frameworks or approaches underpinning the effective implementation of HSC programs for Aboriginal and Torres Strait Islander children; and (2) participatory and co-design frameworks, principles and practices guiding the implementation of such programs.

Despite the large number of implementation frameworks available to inform HSC programs, there is little in the literature describing frameworks that have been used in the Aboriginal and Torres Strait Islander context. Notably, key implementation frameworks specific for this context (e.g., the HPW framework) were not identified in the current findings, reinforcing the lack of research and lack of implementation frameworks applied to this work. In our review, clinical quality improvement (CQI) was the most widely described approach to guide the implementation of Aboriginal and Torres Strait Islander children's HSC projects. The studies that applied the CQI framework described that this approach has been successful in other areas of Aboriginal and Torres Strait Islander healthcare and a necessary component of high-quality health service delivery. However, most of the included studies did not choose and apply the CQI implementation framework but rather worked with the existing CQI processes in primary healthcare to evaluate the programs, or develop indicators. Only two studies stated a rationale for their specific choice of implementation framework; Phillips et al. selected the PARIHS framework because it has been widely used and evaluated for the regional context and for its use in a literature review of the Aboriginal Primary Health Care programs[33]; and Mitchell et al. deemed the Developmental Evaluation method appropriate because of its flexibility to address the contextual complexities, participant characteristics and novel activity.[34]

Factors supporting implementation

The seven papers identified a range of approaches and components supporting the effective implementation of Aboriginal and Torres Strait Islander HSC research and projects. The routine collection of service delivery data was a common feature across the papers, typically through a CQI approach. For several studies, the collection and auditing of data created opportunities for regular consultation, review and reflection with their stakeholders. The papers reported Aboriginal and Torres Strait Islander leadership, diverse partnerships, and participation and engagement as essential components for effective implementation. This aligns with findings from an overview of Aboriginal and Torres Strait Islander health implementation reviews that cited leadership and community involvement in decision-making as being of critical importance.[36]

The majority of the Aboriginal and Torres Strait Islander HSC implementation projects described strong foundations of participation and co-design with a focus on relationships, engagement and collaboration. These participatory and co-design factors were described as essential to build trust and co-create culturally safe approaches. This is consistent with previous research that has identified the importance of developing and maintaining collaborative relationships, underpinned by respect for Aboriginal and Torres Strait Islander peoples, culture and ways.[18,37] Respect emerged as the essential element for positive change in a critical review of implementation frameworks for CQI in Aboriginal and Torres Strait Islander primary healthcare.[18]

Participatory and co-design methods were also crucial in aiding understanding of local contexts and allowing for tailored implementation across different project sites and locations. Four papers described the inclusion of localised project staff, resources, and training as important for effective implementation. A quality improvement protocol by McCalman et al.[38] for a Family Wellbeing Program similarly identified the need to establish a set of co-developed improvement criteria, tailored in each community to sustainably meet the specific needs of their local situation. The overview of Aboriginal and Torres Strait Islander health implementation reviews identified that the reviews all recognised the need for tailoring implementation.[36] Key factors supporting the implementation of HSC programs for Aboriginal and Torres Strait Islander children that emerged from our review are listed in Box 1.

Box 1. Key factors supporting the implementation of HSC programs for Aboriginal and Torres Strait Islander children.

- *regular collection and auditing project information and service data*
- *ongoing review, reflection and adaptation with diverse stakeholder groups*
- *Aboriginal and Torres Strait Islander leadership, co-design and participation throughout*
- *culturally supportive approaches throughout*
- *project governance and advisory groups*
- *holistic relationships across organisations, practitioners and families*
- *co-designed and locally relevant project tools*
- *cross-organisational partnerships and collaboration*
- *resourcing to support local implementation (staffing)*
- *capacity building, training and mentoring tailored to local context and needs*

Participatory and co-design approaches

This review found that five papers discussed participatory and co-design approaches; however, the detail and level of priority given to these approaches in the papers varied. Campbell et al.[32] and Mitchell et al.[34] described extensive Aboriginal and Torres Strait Islander partnerships and leadership across the projects with communities involved in the design, leadership and implementation of the work. A further three studies in our review described the inclusion of components including Aboriginal and Torres Strait Islander leadership, co-design and yarning but did not discuss them at length. In a protocol for a Foetal Alcohol Spectrum Disorder implementation trial to assess the effectiveness and implementation of neurodevelopmental assessment for Aboriginal and Torres Strait Islander children, two-way learning and experience-based co-design were identified as important components in the design of culturally appropriate assessment; this approach prioritises the community's values and needs.[22] Other research has gone further, emphasising the need for *continuous* co-design to prevent slippage away from community focused outcomes.[39] The final two studies made no reference to the inclusion of participatory and co-design approaches in their studies, instead describing implementation frameworks, data and results, with gaps in ensuring culturally safe and appropriate processes and protocols. Box 2 lists the key participatory and co-design approaches to the implementation of HSC programs for Aboriginal and Torres Strait Islander children highlighted by this review.

It is well established that when programs, strategies, or interventions are not implemented as intended, their effectiveness may be limited.[24,36] Future research focusing on implementation in this context is undoubtedly essential. Indeed, advancing the evidence-

Box 2. Key participatory and co-design approaches to the implementation of HSC programs for Aboriginal and Torres Strait Islander children.

- *community-led development*
- *outcomes-based participatory action*
- *experience-based co-design*
- *strengths-based*
- *cultural safety - Aboriginal and Torres Strait Islander leadership and program facilitation*
- *participants involved in program development*
- *valuing cultural ways*
- *yarning and yarning circles*
- *testing concepts, materials and resources*
- *holistic family relationships*
- *both-ways learning – incorporating Aboriginal and Torres Strait Islander ways of being and doing*

base around effective implementation, uptake, and dissemination of HSC interventions for this population is crucial for achieving equitable health and well-being outcomes for Aboriginal and Torres Strait Islander children.

Study limitations

There are limitations to this study. First, we did not complete a quality appraisal, as the focus was identifying the range of studies available on the topic and examining the way implementation models, frameworks and approaches are currently applied for Aboriginal and Torres Strait Islander children's HSC programs. Second, while there is likely a greater body of evidence examining implementation models, frameworks and approaches for Aboriginal and Torres Strait Islander HSC programs more broadly, reviewing papers across this broader population was outside the scope of this review.

Conclusions and implications for public health

This review has synthesised key strategies that may inform and guide the effective implementation of culturally specific tools and HSC programs for Aboriginal and Torres Strait Islander children. Approaches that foster cultural safety and Aboriginal and Torres Strait Islander leadership, support diverse partnerships and promote localised application may ensure effective implementation of HSC programs. Such strategies will support efforts to achieve health equity among Australia's First Nations population.

Despite the growth in implementation research, we found a paucity of evidence on the effective implementation of Aboriginal and Torres Strait Islander children's HSC programs. Future research in this area would benefit from greater consideration of appropriate implementation frameworks and co-design approaches. Greater emphasis on the reporting of intervention activities, implementation frameworks and co-design approaches is needed to ensure that processes are transparent and robust.

Ethical approval

This review did not require ethical approval.

Conflicts of interest

The authors have no competing interests to declare.

Acknowledgements

This research was funded by a Murdoch Children's Research Institute, Population Theme seed grant.

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