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ORIGINAL RESEARCH

Growing CAPITOL (Critical Age Periods Impacting the Trajectory of Obesogenic Lifestyles) 4 Life

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Introduction: Emerging evidence highlights the value of place-based approaches in improving community health, including preventing childhood obesity. These approaches leverage local knowledge, build trust, and support co-designed initiatives. This case study presents a project in North-West Tasmania that combined capacity building and collective impact strategies to promote optimal early childhood development during the first 1000 days (F1D), with academic researchers playing a supportive role.

Methods: The project aimed to raise health literacy among parents and caregivers in Burnie, Circular Head and Devonport. It employed a comprehensive strategy informed by theories on F1D importance, health equity, health literacy, and systems thinking, along with place-based and asset-based frameworks. A broad group of stakeholders were engaged, and a mapping of local assets guided the implementation.

Results: Key early activities included stakeholder engagement and community asset mapping, concluding in early 2024, followed by storytelling workshops and academic evaluations. Community campaigns and learning products were co-designed and activated during the balance of 2024.

Discussion: The project exemplified the key principles of collective impact: establishing a shared agenda, defining success measures, coordinating aligned activities, maintaining open communication, and creating a backbone structure for support and data coordination. It offered valuable lessons for future policy and program development by emphasizing the importance of context-specific adaptation and community-led design.

Keywords: asset-based community development, capacity building, childhood obesity, co-design, collective impact, community-based system dynamics, first 1000 days

Introduction

An estimated thirty-eight percent of Australia's disease burden can be alleviated by addressing modifiable risk factors including obesity, poor diet, physical inactivity, smoking, and alcohol use.¹ Unfortunately, health challenges are amplified in certain regions due to factors such as geographical isolation and socio-economic disparities. Nearly one in three Australians reside in rural and remote regions, where they face considerable health disparities. For example, these communities bear a disproportionate burden of disease, with higher rates of obesity, smoking, alcohol misuse, and poor nutrition. Accordingly, compared to those in urban areas, rural and remote populations experience elevated incidence of cancer, stroke, and type 2 diabetes, as well as higher rates of preventable hospitalizations and avoidable deaths.^{2,3}

Tasmania, an island state, has long grappled with suboptimal health trends, with the North-West region particularly affected by high rates of overweight and obesity. Alarmingly, over two-thirds of pregnant women and one in three children in this area are living with obesity, risking long-term impacts on health, education, and quality of life.^{4,5} Urgent,

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coordinated, and sustainable action is crucial to improving health outcomes in this region. In this context, personcentered initiatives focused on the pillars of optimal health from early in life, and commencing with the first 1000 days (F1D)- connection, nutrition, caring, and moving- are crucial. Prioritizing the key life stages of pregnancy and early childhood for concerted action, should be non-negotiable. A renewed emphasis on the family unit, and enhancing families' capacity to navigate health challenges, is also essential. For example, helping families make healthier choiceswhere eating well and being active become the easiest, not hardest, options- must be a community priority, alongside fostering skills in connection and caregiving.

Efforts to date to prevent and manage chronic disease at the community level have proven ineffective, necessitating a paradigm shift. Despite a wealth of research demonstrating the success of prevention and health promotion interventions in controlled settings, few of these initiatives are translated into real-world practice.⁶ In this context, a divergence from traditional, and commonly impersonal methods is needed, in favor of strategies that empower individuals to take control of their own health. This means encouraging physical activity (PA), reducing sedentary behavior (SB), promoting healthier food choices, and employing person-centered communication to foster knowledge and understanding in key areas including connection, nutrition, caring, and moving.

This paper details the foundational principles, implementation, and progress of the North-West First 1000 Days (NW F1D) project, a co-created, asset-based community development (ABCD) initiative aimed at giving mothers and their children the best start to life. Co-creation, a concept widely debated in public health research, encompasses both co-design- the primary operational definition used here- and elements of co-production. At its core, these approaches aim to actively engage diverse stakeholders in understanding complex challenges and in designing and evaluating solutions that are contextually relevant and impactful.^{7,8}

The NW F1D project is rooted in the pioneering work initiated in 2021 by the Burnie Child & Family Learning Centre (CFLC), in partnership with Burnie Community House (BCH) and the Burnie Library and supported by a B4 Early Years Coalition Storytelling Grant. This community-driven initiative sought to make F1D messages meaningful and impactful for families, initially through an 8-week "Look Who's Talking" (LWT) program. Early work included a thorough review of contemporary research, the development of key resources, and the identification of four focus areas or quadrants- connection, nutrition, caring and moving- co-created with local parents.

At the heart of this approach, storytelling workshops were a powerful tool for communicating essential health messages. Parents, the primary stakeholders, played an active role by sharing personal experiences, making the messages more relatable and fostering a collective understanding of healthier choices. The initiative underscored the importance of consistent health messaging from the very start of life, as the F1D lay the foundation for many long-term health outcomes. This early work united a diverse group of stakeholders, including the CAPITOL (Critical Age Periods Impacting the Trajectory of Obesogenic Lifestyles) Project team from University of Tasmania (UTAS), public health and child development specialists, laying a strong foundation that evolved into the current NW F1D project.

Setting the Stage: Pre-Intervention Community Context LWT

The 8-week program was conceived as a flexible and responsive approach to promote language development from birth, highlighting the importance of attachment and language-building behaviors. By weaving together music, rhyme, talking, play, and emotional regulation, LWT is designed to support healthy brain development, address the critical need to engage with young children, and foster deeper emotional bonds. The program introduces essential strategies for caregivers to engage with their infants, nurture language skills and strengthen parent-child connections.

CAPITOL

The project was conceived as a community-driven, capacity building initiative based in NW Tasmania, with the primary aim of assessing and enhancing obesity prevention capacity through active community engagement and ongoing evaluation.⁹ At its core, the project recognized that addressing lifestyle risk factors- such as poor nutrition, physical inactivity, smoking, and mental health - requires sustained, multidisciplinary collaboration. The strengths-based approach in this pioneering effort acknowledged both the region's under-resourced preventive health system and the barriers posed

by a historically deficit-focused health narrative. By focusing on key life stages- motherhood, infancy, childhood, and adolescence- and the goal to create lasting impact, the project sought to shift this pervasive narrative. The Growing CAPITOL 4 life initiative, encompassing the NW F1D project, are natural extensions of this foundational work.

Objectives of the NW FID Project

The primary goal is to develop a parent-led, co-designed learning pathway and resources to give children the best start in life across the F1D. Guided by parents, caregivers, and professionals from NW communities, the materials will draw storytelling insights about what parents wished they had known and focuses on four key quadrants: connection, nutrition, caring, and moving. With the support of practitioners and academics, the co-design process aims to ensure that the resources developed were evidence-based and aligned with local public health efforts. By expanding access to parenting support, community hubs, and available information, the project seeks to enhance health literacy and contribute to both Child & Youth Wellbeing and Healthy Tasmania strategies to improve health outcomes for children and families.¹⁰

Specific Aims

- Strengthen parenting support and boost self-efficacy by promoting key strategies for optimal brain development through the 4 quadrants of connection, nutrition, caring, and moving.
- Expand access to valuable information and practical resources on effective parenting techniques.
- Enhance availability of community support hubs, such as CFLCs, CHs, libraries, and outreach centres, to provide parents with the resources they need.
- Support CFLC's focus on early literacy development and fostering a strong foundation for children's learning.
- Align with the Healthy Tasmania Strategic Plan by enabling a parent and community-led response to improve the health and wellbeing of children and families.
- Facilitate cross-sector collaboration, with government, community partners, and experts working together to drive collective action through shared decision-making.

Materials and Methods

Strategy Mix

Theoretical Underpinnings

The Importance of the FID

The first 1000 days of life are crucial for establishing strong developmental foundations and long-term health. Equipping parents and caregivers with health literacy in bonding, nurturing, nutrition, and physical activity while minimizing stressors is essential for optimal outcomes and it appears that significant progress is yet to be made in this context in Tasmania. Australian Early Development Consensus (AEDC) data show Tasmanian children face disadvantages, with suboptimal development in four of five domains: physical health, social competence, emotional maturity, and language/ cognition.^{11,12}

Importantly, parent-child attachment is crucial for early brain development, including language and literacy, a key aspect of development in the F1D. Evidence shows that Australian children aged 12–18 months from lower socioeconomic backgrounds lag in vocabulary development, prompting calls to encourage parental communication from infancy.^{11,13,14} Similarly, the community and social surroundings play a crucial role in nurturing the development of young children and requires the synergy of many social and service supports in pregnancy and infancy, the physical environment, including housing, built and natural environments, incorporating exposure to toxins.

In short, the early environment experienced by a child influences their brain development and may have far reaching implications for health inequalities across the lifespan. A collective focus with an empowerment approach that recognizes the interaction of these relationships and systems on connection and attachment, movement, nutrition, and caring can positively influence the individual and community factors that support healthy growth and development of children.¹⁵ An investment in such an approach would help to maximize brain development early in life and the health and wellbeing of young children, and thereby foster human capital in communities such as the NW of Tasmania.¹⁶

Health Equity

Addressing the significant health equity challenge of early childhood development in communities with persistent high cumulative indicators of disadvantage is imperative. By definition, health inequity is the difference in health outcomes between groups who have different risk factors associated with social determinants of health.¹⁷ Health equity is influenced by a range of social structures, including socioeconomic, political, ethnic, and cultural, that frame the conditions in which people live and impacts individual health behavior choices. Health inequity is the result of the unequal distribution of these social conditions.¹⁵

A range of recent state and national strategies have included actions designed to improve the traditionally poor health and wellbeing outcomes of many Australians, including Tasmanians.^{18–20} However, despite the identification of priorities and pathways for change, a major challenge is to integrate current strategies to maximize the likelihood of delivering better health and wellbeing outcomes, particularly for communities experiencing health inequities. This will also require that health equity is not simply incorporated as an indicator of change, for example in the Healthy Tasmania Strategic Plan, but there is also a means of tracking change. Equitable program implementation is a key focal point in this research.

Health Literacy

Health literacy reflects the collective personal characteristics and social resources that influence the ability of individuals and communities to access, understand, appraise, remember, apply and use information, knowledge and services to make decisions to promote health and sustain healthy behavior.^{17,21} In this context, pregnancy is a prime "window of opportunity" when women may be more motivated to seek health information. Similarly, the postpartum period, including times of increased stress as the infant grows and develops, is another critical stage of life. Health literacy solutions should be co-designed with end users to capitalize on opportunities during these critical periods, including to better understand what women are looking for, and the type of support likely to improve their health and disrupt generational health risks. Accordingly, enhancing health literacy among mothers and caregivers is no-brainer in improving community-wide health literacy during the first 1000 days. However, Tasmania still needs a better understanding of the evolving health literacy needs of this population.²²

Health literacy is distributed via social and community networks and these networks also influence decision-making and access to health support. Utilizing this social capital for sharing experience and knowledge could impact parents' attitudes and behaviors towards health-related choices.²² There is also growing evidence to suggest that frontline health and education professionals should work with community networks to develop transferable health literacy skills,²² including improvement of healthy conversation skills^{23,24} and "teach-back" approaches of practitioners²⁴ along with health literacy within organizations.²⁵

Place-Based, Asset and Systems Approach

Context-specific strategies that tackle these challenges and utilize local resources and opportunities should serve as a standard framework for scalable health interventions.²⁶ "Outside in" policies and interventions, including public health and health literacy approaches, typically do not consider or synergies with local influences. In fact, reflecting on years of experience working in obesity prevention, we advocate for a move away from the practice of introducing favored or road-tested interventions parachuted into communities to solve challenges within community.¹⁶ Working in place enables external stakeholders such as academic institutions, service organizations and governments to support local engagement, consider the way systems and people interact, and target resources and investment more effectively.^{26,27}

Collaborative approaches can draw from a range of methodologies and tools to structure and guide implementation. These include ABCD, a community development approach that assumes that local assets and strengths are key to mobilizing the community for change as determined by the citizens. For example, ABCD assumes that networks, community champions, cooperative actions, and collective investment already exist in the community. The approach begins with asset mapping and identifying an issue that the community aspires to resolve rather than starting with the mapping of a problem. The approach also sees citizens as primary contributors to change and asks three primary questions - what can communities do best; what communities require help with; and what do communities need outside agencies to do for them.²⁸

In addition to collaborating with the community, it is essential to work at the systems level to effectively engage with the complex, non-linear relationships present in real-life settings and maximize opportunities for change.^{29–31} There is much to be learned from approaches that follow community-based sustainable development principles, where change is driven by research support, community involvement, collaboration, effective actions, feedback on intervention success, and leadership engagement with community health behaviors and outcomes.³⁰

Collective Impact

More recently, governments and philanthropists have increasingly invested in place-based collective impact initiatives. Collectives typically involve networks of local community members, organizations and institutions which advance social impact by learning together and by aligning and integrating their actions to achieve population and systems level change.³² Such initiatives may focus on one or more system depending on what the community identifies as most important.⁵ Collective impact practice has a movement building paradigm with a focus on reforming systems. The practice seeks to create the following conditions in a community to create the environment for systems change including

- Authentic community engagement based on equity, inclusion, and trust.
- Shared vision for change through collaborative understanding and planning.
- Strategic learning with continuous reflection and adaptation, including shared measurement.
- Focus on high-leverage opportunities to maximize change.
- Providing the necessary infrastructure and resources for sustained collaboration.

Practical Implementation

The initiative integrated situational assessments, storytelling, co-design, evidence-based scaffolding, and continuous evaluation within the four quadrants, forming the project's theory of change. It progressed from informational change, enhancing understanding, to transformational shifts in attitudes, and culminated in catalytic change as parents shared knowledge. Adaptive project management emphasized collaboration, flexibility, and regular feedback. Design elements included a review of community assets to identify gaps, stakeholder interviews to explore barriers, and a rapid review of literature to integrate evidence. Storytelling and co-design workshops refined processes, ensuring alignment with local insights and academic research.

Selection and Recruitment of Stakeholders

Participants were recruited through established partnerships and networks, including CFLCs, CHs, and groups supported by CAPITOL staff, using purposive and snowball sampling via community networks. Stakeholders from four key categories-lay community members, community leaders (eg, politicians, organizational heads), health or community workers, and external experts (academics, senior public health practitioners)-were invited for consultative interviews. Initial consultations in each community helped engage stakeholders and organizations connected to mothers and carers of young children. Parents and carers collaborated with the project team, using a storytelling approach across all communities, to clarify baseline elements and test assumptions about barriers, ensuring a comprehensive understanding of the issues.

Selection and Recruitment of Parents

Eligible participants included any parent or individual expecting a child (aged 18 or older) with children under the age of five, residing in the Devonport, Burnie, or Circular Head Local Government Areas, and proficient in English. Recruitment focused on men and women aged 18–50 who were interested in parenting. This encompassed expectant parents, parents of infants aged 0–12 months, toddlers aged 1–2 years, or preschoolers aged 3–5 years. These stakeholders represented individuals, groups, and organizations with lived experience of the challenges faced by children and young people, including frontline practitioners from government, community, and private sector organizations.

Asset Mapping

Three distinct categories of assets were mapped in relation to the project's key focus areas (Figure 1a-c).

- 1. Known and static assets: these are stable assets, such as buildings and natural resources, which are not expected to change. As these assets remain consistent, no active engagement or updates are required.
- 2. Known and engaged assets: this category includes assets such as services, businesses, and cultural resources. Due to potential changes in funding, service delivery, or personnel, these assets may need to be periodically updated throughout the life of the project.
- 3. Known but unengaged assets: the project team is aware of these assets, but no connection has been established with them to date. The services they offer are currently unknown, and they are not yet integrated into the project.

Results

Progress to Date

Timeline

The project followed a structured timeline, beginning with governance setup, project planning, and recruitment by September 2023. Key early activities included stakeholder engagement and community asset mapping, concluding in early 2024, followed by storytelling workshops and academic evaluations. Community campaigns and learning products were co-designed and activated during the balance of 2024. The rollout of the course, incorporating prototyping and feedback, is scheduled from May to December 2025, culminating in final evaluations and reporting by March 2026 (Figure 2). The project represents a comprehensive collaboration between Burnie Works, the University of Tasmania, and Department of Premier and Cabinet (Tasmanian Government) throughout all phases.



Figure I Continued.

b) Asset Map - Devonport



Figure I Continued.

Assets

Around 50 physical, natural, and human resources were identified as key assets for this initiative, encompassing culturally and linguistically diverse (CALD)-specific services, support programs, youth-focused initiatives, and child, youth, and family services. Employment agencies, educational institutions, and government support across federal, state, and local levels also contributed. Health services are available across each LGA, ensuring comprehensive care. Nearly 75% of these assets were actively involved in the project, with Smithton showing the highest engagement and Devonport the lowest (~50%). Despite Devonport having the largest population (26,150), asset distribution did not correlate directly with size, as smaller Smithton (~4000 residents) had 11 engaged assets.

Stakeholders

A diverse group of stakeholders from a range of backgrounds including early childhood and education partnerships, healthcare providers, community services/ development personnel, libraries/ early learning coordinators, support service workers, health specialists, and creative/indigenous programs formed the final cohort of participants who contributed to the various co-design sessions outlined. While no specific target or "ideal" number of participants was predetermined, the expectation was that up to ten stakeholders from each LGA would be engaged. A snowball sampling method was primarily used for recruitment, and the contributions of these participants significantly advanced the progress of the project.

Stakeholder Consultations

Burnie

Discussions revealed deep concerns about access to essential services and support. Many parents highlighted the persistent lack of mental health resources and good parenting information, exacerbated by social media pressures. The

c) Asset Map - Smithton



Figure I (a) Burnie Asset Map. (b) Devonport Asset Map. (c) Smithton Asset Map.

rising cost of living has made access to nutritious food difficult, leading to stress, guilt, and reliance on takeaways. Connection with family, friends, and nature were seen as vital for fostering a sense of belonging and emotional support. Lastly, movement- whether through pregnancy, play, or walks- was closely tied to both physical and mental well-being, emphasizing the holistic impact of each quadrant on health.

Further, a set of guiding principles emerged to ensure a safe, inclusive, and respectful environment. Key among these was a commitment to no judgement- acknowledging the courage it takes to share personal stories and offering gratitude and support for any concerns raised. Deep listening was emphasized, encouraging participants to be present, allow silence, and avoiding shifting the focus. Trust was critical, ensuring participants felt in control of their stories, with privacy and consent respected, including the option for anonymity. Flexibility in engagement approaches was prioritized, offering various formats for participation and creative self-expression. The four quadrants provided structure and purpose to keep conversations focused. Efforts were made to include diverse voices from all backgrounds, ensuring representation of different communities. Adequate time was allotted for contributions, allowing for multiple sessions if needed. Clear project explanations ensured transparency about the process and the use of stories. Lastly, a trauma-aware approach was adopted, creating a safe space for emotions and recognizing when further support might be necessary beyond the scope of the project.



Figure 2 Project Timeline.

Devonport

Discussion at this site emphasized the importance of managing stress and creating a safe, nurturing environment, including the repair of emotional ruptures with children through simple gestures like hugs or apologies. In terms of nutrition, navigating feeding transitions and maintaining oral health were highlighted, along with the role of early stages in language development. Regarding connection, participants noted the significance of support- both formal and informal- and the need to break generational patterns while fostering positive attachments. In relation to moving, practical advice was shared on tummy time, daily activity, and techniques like bicycle legs to help babies, underscoring the importance of physical activity and routines.

Several guiding principles were established to create a supportive and respectful environment. Understanding individual needs was emphasized, with support workers and educators uniquely positioned to foster feelings of safety and trust by acknowledging these needs. Building strong relationships based on trust was crucial, ensuring that parents feel comfortable sharing their stories and confident that their experiences will be honoured. Sufficient time was essential to fully hear each person's journey. Clear understanding of the project's purpose, consent processes, and story usage was vital, inviting participants to engage fully. Acknowledgement of every participant's contribution, with validation and thanks, reinforced their value. The potential impact of trauma on mental health was recognized, with workers prepared to refer serious issues to appropriate services when needed. It was also important to capture both parent and child experiences, offering a comprehensive picture of family life. Finally, the use of prompting questions helped guide discussions, encouraging both positive and challenging stories, fostering a shared learning experience.

Smithton

Discussion regarding connection emphasized the importance of post-hospital support, playgroups, and safe attachment, while also noting the negative impacts of screens and disconnection, especially for babies in ICU. For nutrition, participants felt pressure and guilt around breastfeeding, struggled with lack of confidence in feeding, and noted the effects of poor nutrition and addiction on babies, alongside issues like allergies and bottle-feeding practices. In relation to moving, participants highlighted gross motor development, the need for suitable parks and swimming awareness, and challenges related to weather and access to health services. Finally, in relation to caring, feelings of isolation, child behavior issues, lack of sleep, and the stress caused by family violence and inadequate childcare, were common concerns. Many participants were unsure where to find support.

A clear framework for storytelling emerged, emphasizing trust, inclusivity, and respect. It is important to ensure that families understand where their stories will go, using simple language and symbols to communicate project goals. The storytelling environment should be comfortable, fostering a sense of belonging, whether in groups or one-on-one settings. Trust and safety are paramount, with families encouraged to share with people they know, supported by trusted workers or friends. Inclusivity is key, with diverse families- Aboriginal and Torres Strait Islander, multicultural, LGBTQI+, single parents, and others- invited to participate. Finally, consent is vital; parents should feel empowered to share their stories, with the option to remain anonymous.

Discussion

The primary goal of this initiative was to enhance the health literacy of mothers, fathers, and caregivers, ensuring the best possible start to life for children in NW Tasmania. Health literacy, though often inconsistently defined, is broadly understood as the combination of personal abilities and social resources that enable individuals and communities to access, comprehend, evaluate, retain, and apply information and services to make informed decisions that promote health and support sustained healthy behaviors. The World Health Organization (WHO) emphasizes this in its definition, which is integral to the Shanghai Declaration on promoting health within the 2030 Agenda for Sustainable Development.³³ This declaration continues to shape global health promotion and public health priorities.

At the outset, the research team established working groups across key areas, conducted numerous focus groups that also served as co-design workshops, and identified both existing and potential supports to sustain these initiatives into the future. All intended activities were completed according to the original timeline with minimal disruption or delay, a laudable achievement in the often-challenging implementation of scalable public health initiatives.

Discussions held across Burnie, Devonport, and Smithton communities emphasized the collective challenges faced by local families, particularly around the four quadrants of connection, nutrition, moving, and caring. Central to the success of the initiative has been the collective impact framework, a tried and tested method in community-level public health endeavors,^{34,35} which engaged diverse voices to address concerns holistically. Through the substantive working groups and co-design workshops, the project created an inclusive, nonjudgmental space for parents to share personal stories, fostering trust and offering practical solutions. By understanding individual needs, acknowledging trauma, and ensuring inclusivity, the initiative has taken significant steps in promoting a healthier start to life for mothers and young children, while setting the foundation for sustainable community-driven change.

Pregnancy represents a pivotal period that can profoundly shape the health trajectories of both mother and child. Increasing evidence highlights a strong connection between maternal health and the development of non-communicable diseases (NCDs) and their associated risk factors.³⁶ Accordingly, this life stage demands focused attention and should be leveraged as an opportunity to improve future health outcomes. Enhancing the health literacy of mothers, fathers, and caregivers is crucial in this regard. However, in Tasmania, many individuals face significant challenges in managing their health, critically evaluating health information, and navigating the healthcare system.³⁷ Further compounding the issue, there has been a lack of research on the specific health literacy needs of pregnant women and mothers at the state level.³⁸

While it is premature to determine the impact of the initiative, the work to date has contributed to an increase in the foundational knowledge and understanding required for the best start to life for mothers and young children in the three LGAs. The integrated and coordinated approach- aligned with collective impact and community capacity building- has been well received, with a focus on promoting a healthy lifestyle through connection, nutrition, caring, and moving.

Previous work in the region, including the collaborative efforts with key stakeholders throughout the earlier CAPITOL project (https://www.utas.edu.au/health/community-programs/capitol), was instrumental in the successful engagement of the current stakeholders. This underscored the importance of the strong relationships established within each community, built on extensive consultation and trust, in the engagement process. The person-centered, asset-based, community-led, and multidisciplinary nature of the work- both implemented to date and proposed for the future-demanded the involvement of a suitable cohort of stakeholders. These individuals, representing local knowledge and community readiness, were best positioned to identify specific community needs. Decades of evidence have shown that internal community readiness, supported by environments rich in appropriate resources, is a critical factor in building the capacity necessary for successful community health interventions.³⁹

The co-design framework, a key element of the broader concept of co-creation, was also central to this communityled project, driving both its impact and sustainability. By involving diverse stakeholders throughout the entire processfrom problem identification to project implementation - the initiative ensured meaningful engagement and relevance.^{40–42} Notably, the stakeholder group was intentionally diverse, a reflection of the inclusive recruitment strategy adopted by the research team. This approach prioritized the project's place-based focus, deliberately avoiding external researchers or special interest groups imposing selective agendas or dominating the process.

Evaluation of the project to date has been guided by key indicators such as community participation, program impact, and long-term sustainability. Central to its success has been empowering local communities to take ownership, foster capacity-building, and deepen engagement. The project was also sensitive to the importance of integrating the new NW F1D initiative with existing services to amplify its value. Through shared decision-making, community members co-created the content and guided its implementation through participatory action research. An emphasis on sustainable partnerships further strengthened local networks, while evidence-based strategies informed health promotion efforts.

Limitations

This type of work is labor-intensive and takes considerable time commitment from all parties. We acknowledge the advantages associated with building on existing relationships developed through earlier project work, and what could be perceived as a captive audience and not a true reflection of stakeholders in each community in need of the greatest support. The counter argument is that such an approach enables the generation of a diverse set of commentaries and reflections from an increasing number of trusted parties within each community and the development of local capacity likely to maximize the sustainability of F1D approach in each setting. Similarly, the nuanced approach to developing priority areas of content using the frame of the 4 quadrants provides a foundation for the introduction of the concept in other settings across the state.

Conclusion

This project embodied both the core principles of collective impact—developing a common agenda, defining success, coordinating mutually reinforcing activities, fostering continuous communication, establishing a backbone structure for project support and data management—and provided important insights regarding broader policy initiatives and tailoring activities to the specific needs of the local population. Guided by the Tasmanian Child & Youth Wellbeing Strategy (2021), the Department *for* Education, Youth & Young People's Strategic Plan (2022–2024),⁴³ and the Healthy Tasmania Five-Year Strategic Plan (2022–2026),⁴⁴ the project goals were aligned with national and international frameworks, including the WHO Nurturing Care Framework (2018)⁴⁵ and the National Obesity Strategy (2022–2032).⁴⁶ By integrating these policies, and adopting an authentic place-based approach, the project ensured that all efforts resonated with the realities of the communities it served. Co-designed with parents, caregivers, and professionals, the initiative responded to local priorities while being supported by cutting-edge evidence and regional public health networks. This ensured that the pathways and resources developed not only reflect global best practice, but they are contextually relevant to the unique needs of the NW Coast region.

The significance of "place" as an ecological, social, and cultural determinant of health- particularly in rural and remote areas of Australia- has gained increasing recognition and should serve as the foundation for future community-based health interventions.⁴⁷ People living in these regions face unique stressors, including geographic isolation, limited social infrastructure, and vulnerability to environmental hazards, compounded by low health literacy levels. These factors are critical to the success or failure of health interventions in such communities.

Despite evidence regarding these challenges, outcomes are often skewed by socioeconomic disparities, and current services fail to address disadvantage effectively. A shift is needed from traditional behavior change efforts to reducing barriers by simplifying processes and improving access to information. Strategies include community storytelling, enhancing social support, and lowering out-of-pocket costs. This initiative fosters collective learning among partners, emphasizing community-led co-design to improve early childhood outcomes. Engaging local communities in decision-making and advocating for an integrated, intersectoral approach involving government, councils, education, NGOs, and communities is essential for driving sustainable, community-driven change.

Abbreviations

ABCD, Asset-Based Community Development; AEDC, Australian Early Development Consensus; BCH, Burnie Community House; CALD, Culturally and Linguistically Diverse; CAPITOL, Critical Age Periods in the Trajectory of Obesogenic Lifestyles; CFLC, Child and Family Learning Centers; LGA, Local Government Authority; LWT, Look Who's Talking; NCD, Non-communicable diseases; NWF1D, North-West First 1000 Days; PA, Physical activity; SB, Sedentary behavior; UTAS, University of Tasmania; WHO, World Health Organization.

Data Sharing Statement

The datasets used and/or analyzed during the current study are available from the corresponding author on reasonable request.

Ethics Approval and Informed Consent

Ethics approval was obtained for all procedures from the Human Research Ethics Committee (Tasmania) Network (30027) and will be implemented in accordance with relevant guidelines and regulations stipulated in the Declaration of Helsinki. Both written and verbal consent (where practicable) will be obtained from all participants.

Consent for Publication

All authors have read and approved the final version of the manuscript.

Author Contributions

All authors made a significant contribution to the work reported, whether that is in the conception, study design, execution, acquisition of data, analysis and interpretation, or in all these areas; took part in drafting, revising or critically reviewing the article; gave final approval of the version to be published; have agreed on the journal to which the article has been submitted; and agree to be accountable for all aspects of the work.

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Disclosure

The authors declare no competing interests in this work.

References

- 1. Department of Health and Aged Care. National preventive health strategy 2021–2030. Australian Government. Available from: https://www.health.gov.au/resources/publications/national-preventive-health-strategy-2021-2030?language=en. Accessed September 30, 2024.
- 2. Australian Institute of Health and Welfare. Rural and remote health Australian government. Available from: https://www.aihw.gov.au/reports/rural-remote-australians/rural-and-remote-health. Accessed September 30, 2024.
- 3. National Rural Health Allance. Rural health in Australia snapshot Australian government department of health and aged care. Available from: https://www.ruralhealth.org.au/rural-health-australia-snapshot. Accessed July 10, 2025.
- Council of Obstetric & Paediatric Mortality & Morbidity. Annual report department of health, Tasmanian government. Available from: https://www. health.tas.gov.au/sites/default/files/2022-02/Council%200f%20Obstetric%20and%20Paediatric%20Mortality%20and%20Morbidity%20% 28COPMM%29%202016%20Annual%20Report.pdf. Accessed September 30, 2024.
- Luccisano SP, Weber HC, Murfet GO, Robertson IK, Prior SJ, Hills AP. An audit of pre-pregnancy maternal obesity and diabetes screening in rural regional Tasmania and its impact on pregnancy and neonatal outcomes. Int J Environ Res Public Health. 2021;18(22):12006. doi:10.3390/ ijerph182212006
- 6. Glasgow RE, Lichtenstein E, Marcus AC. Why don't we see more translation of health promotion research to practice? Rethinking the efficacy-toeffectiveness transition. *Am J Public Health*. 2003;93(8):1261–1267. doi:10.2105/AJPH.93.8.1261
- 7. Vargas C, Whelan J, Brimblecombe J, Allendera S. Co-creation, co-design and co-production for public health: a perspective on definitions and distinctions. *Public Health Res Pract.* 2022;32(2). doi:10.17061/phrp3222211
- 8. Ozcan K, Ramaswamy V. The Co-Creation Paradigm. Stanford University Press; 2014.

- Hughes R, Ahuja KD, Patterson KA, et al. An exploration of the determinants of overweight and obesity and the capacity to intervene in North-West Tasmania: a stakeholder consultation. *Health Promot J Austr.* 2023;35(2):385–392. doi:10.1002/hpja.763
- 10. Department of Premier and Cabinet. It takes a Tasmanian village: child and youth well-being strategy. Tasmanian Government. Available from: https://wellbeing.tas.gov.au/strategy. Accessed September 30, 2024.
- 11. Moore T, Arefadib N, Deery A, West S, Keyes M. The first thousand days: an evidence paper-summary. 2017.
- 12. Department of Education. Australian early development census (AEDC). Available from: https://www.education.gov.au/early-childhood/early-childhood-data-and-reports/australian-early-development-census-aedc. Accessed 3, May, 2024.
- 13. Shonkoff JP. Protecting brains, not simply stimulating minds. Science. 2011;333(6045):982-983. doi:10.1126/science.1206014
- 14. Brushe ME, Lynch J, Reilly S, Melhuish E, Mittinty MN, Brinkman SA. The education word gap emerges by 18 months: findings from an Australian prospective study. *BMC Pediatric*. 2021;21(1):247. doi:10.1186/s12887-021-02712-1
- Marmot M. Achieving health equity: from root causes to fair outcomes. *Lancet*. 2007;370(9593):1153–1163. doi:10.1016/S0140-6736(07)61385-3
 Hills AP. Imagine a healthy lifestyle for all: early years nutrition and physical activity to prevent obesity. *Eur J Clin Nutr.* 2024;78(1):1–5. doi:10.1038/s41430-022-01230-2
- Nutbeam D, Lloyd JE. Understanding and responding to health literacy as a social determinant of health. Annu Rev Public Health. 2021;42(1):159– 173. doi:10.1146/annurev-publhealth-090419-102529
- 18. Goodhue R, Dakin P, Noble K. What's in the Nest? Exploring Australia's wellbeing framework for children and young people. Canberra. 2021;20:2021.
- Demaio S, Goldfeld SR, Maury S. The future healthy countdown 2030: holding us to account for children's and young people's health and wellbeing. *Med J Australia*. 2023;219(10):465–466. doi:10.5694/mja2.52141
- Tasmanian Government. Healthy Tasmania Five-Year Strategic Plan. 2022. Available from: https://www.health.tas.gov.au/sites/default/files/2022-03/Healthy_Tasmania_Five-Year_Strategic_Plan_2022%E2%80%932026_DoHTasmania2022.pdf. Accessed July 10, 2025.
- Sørensen K, Levin-Zamir D, Duong TV, Okan O, Brasil VV, Nutbeam D. Building health literacy system capacity: a framework for health literate systems. *Health Promotion Int.* 2021;36(Supplement_1):i13–i23. doi:10.1093/heapro/daab153
- Melwani S, Cleland V, Patterson K, Nash R. Health literacy status of pregnant women and women with young children in Tasmania. *Health Promot J Austr.* 2023;34(1):138–148. doi:10.1002/hpja.675
- Hollis JL, Kocanda L, Seward K, et al. The impact of healthy conversation skills training on health professionals' barriers to having behaviour change conversations: a pre-post survey using the theoretical domains framework. BMC Health Serv Res. 2021;21(1):880. doi:10.1186/s12913-021-06893-4
- Talevski J, Wong Shee A, Rasmussen B, Kemp G, Beauchamp A. Teach-back: a systematic review of implementation and impacts. *PLoS One*. 2020;15(4):e0231350. doi:10.1371/journal.pone.0231350
- Tasmanian Council for Social Service. HeLLO Tas! A toolkit for health literacy learning organisations. Available from: https://www.hellotas.org.au/ . Accessed 3, May, 2024.
- 26. Victoria State Government. A framework for place-based approaches. Department of premier and cabinet. Available from: https://www.vic.gov.au/ framework-place-based-approaches. Accessed 15, April, 2024.
- 27. Van Dyke N, Craike M. Review of the evidence about place-based approaches: findings snapshot. 2021.
- 28. Nurture Development. ABCD Training and Resources. Available from: https://www.nurturedevelopment.org/. Accessed 15, April, 2024.
- 29. Carey G, Malbon E, Carey N, Joyce A, Crammond B, Carey A. Systems science and systems thinking for public health: a systematic review of the field. *BMJ open*. 2015;5(12):e009002. doi:10.1136/bmjopen-2015-009002
- Brown AD, Whelan J, Bolton KA, et al. A theory of change for community-based systems interventions to prevent obesity. Am J Preventive Med. 2022;62(5):786–794. doi:10.1016/j.amepre.2021.10.006
- 31. Li B, Alharbi M, Allender S, Swinburn B, Peters R, Foster C. Comprehensive application of a systems approach to obesity prevention: a scoping review of empirical evidence. Front Public Health. 2023;11:1015492. doi:10.3389/fpubh.2023.1015492
- 32. Burnie Works. Available from: https://burnieworks.com.au/. Accessed 15, April, 2024.
- 33. World Health Organization. Shanghai declaration on promoting health in the 2030 agenda for sustainable development. Shanghai Declaration Promoting Health 2030 Agenda Sustainable Develop. 2017.
- 34. Hayes A, Freestone M, Day J, Dalton H, Perkins D. Collective Impact approaches to promoting community health and wellbeing in a regional township: learnings for integrated care. Int J Integr Care. 2021;21(2). doi:10.5334/jjic.5617
- 35. Kania J, Kramer M. Collective Impact. Beijing, China: FSG; 2011.
- 36. Kapur A, Hod M. Maternal health and non-communicable disease prevention: an investment case for the post COVID-19 world and need for better health economic data. Int J Gynecol Obstet. 2020;150(2):151–158. doi:10.1002/ijgo.13198
- Australian Bureau of Statistics. National health survey: health literacy Australian government. Available from: https://www.abs.gov.au/statistics/ health/health-conditions-and-risks/national-health-survey-health-literacy. Accessed September 30, 2024.
- Melwani S, Cleland V, Patterson K, Nash R. Health literacy and non-communicable disease knowledge of pregnant women and mothers in Tasmania: qualitative exploration. *Health Promot J Austr.* 2024;35(4):1206–1216. doi:10.1002/hpja.854
- Kavanagh SA, Hawe P, Shiell A, Mallman M, Garvey K. Soft infrastructure: the critical community-level resources reportedly needed for program success. *BMC Public Health*. 2022;22(1):420. doi:10.1186/s12889-022-12788-8
- 40. Ansell C, Torfing J. Public Governance as Co-Creation: A Strategy for Revitalizing the Public Sector and Rejuvenating Democracy. Cambridge University Press; 2021.
- 41. Trischler J, Dietrich T, Rundle-Thiele S. Co-design: from expert-to user-driven ideas in public service design. *Public Manage Rev.* 2019;21 (11):1595–1619. doi:10.1080/14719037.2019.1619810
- 42. Voorberg WH, Bekkers VJ, Tummers LG. A systematic review of co-creation and co-production: embarking on the social innovation journey. *Public Manage Rev.* 2015;17(9):1333–1357. doi:10.1080/14719037.2014.930505
- Deapartment of Education. Children and young people strategic plan Tasmanian government. Available from: https://www.decyp.tas.gov.au/aboutus/strategies-and-frameworks/strategic-plan/. Accessed September 30, 2024.
- 44. Tasmanian Department of Health. Healthy Tasmania five-year strategic plan. Healthy Tasmania. Available from: https://www.health.tas.gov.au/sites/ default/files/2022-03/Healthy_Tasmania_Five-Year_Strategic_Plan_2022%E2%80%932026_DoHTasmania2022.pdf. Accessed October 10, 2024.

- 45. World Health Organisation. Nurturing care framework United Nations children's fund. Available from: https://iris.who.int/bitstream/handle/10665/ 369449/9789240074460-eng.pdf. Accessed October 10, 2024.
- 46. Department of Health and Aged Care. National Obesity Strategy 2022–2032. Australian Government. Available from: https://www.health.gov.au/ resources/publications/national-obesity-strategy-2022-2032?language=en. Accessed October 10, 2024.
- 47. Butterworth I, Duggan T, Greene R, et al. The importance of 'place' and its influence on rural and remote health and well-being in Australia. *Aust J Rural Health*. 2024;32(4):840–846. doi:10.1111/ajr.13158

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