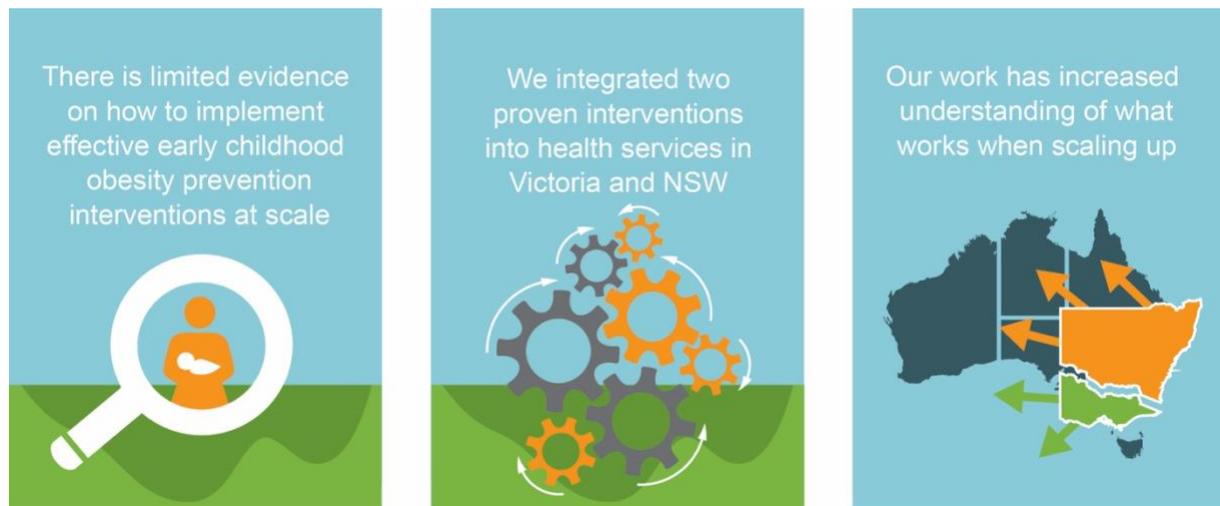


Integrating early childhood obesity prevention into health services



Key points

- The first 2,000 days in a child's life is a critical period for preventing childhood obesity.
- There is limited evidence on how effective interventions to address obesity prevention in early life can be implemented into practice and policy.
- Healthy Beginnings and INFANT are evidence-based early childhood obesity prevention interventions. We implemented these at scale, and then evaluated barriers and enablers to scale up and parents' experiences of the programs.
- We found it was feasible to integrate Healthy Beginnings and INFANT into existing health services at scale.
- Key enablers of this process include supportive policies, such as statewide priorities and plans, and aligning program outcomes with organisational priorities.
- Parents are receptive to interventions to promote healthy lifestyles in early childhood, and endorse group-based, app and telephone approaches for delivering interventions.
- Through INFANT and Healthy Beginnings, we established extensive partnerships with local government areas, health services, community organisations and research organisations.
- Our work has laid the foundation for the statewide scale up of both interventions.

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What is the issue?

Almost one in four Australian children has overweight or obesity by the time they start school,¹ an increase from one in five in 2015.²

The first 2,000 days in a child's life – from conception to five years – is a critical period for preventing childhood obesity. This is a time of major development and growth, and when key lifestyle behaviours, such as eating habits, active play and sleep patterns, are established. It is also a time when parents are most engaged with health services.

Research on obesity prevention in early life has increased considerably,^{3,4} but studies on how to implement this research into policy and practice are limited.⁴

The implementation and scale up of early childhood obesity prevention research findings into relevant practice and policy can make a unique and significant contribution to population health.

What did we do?

[Healthy Beginnings](#) (NSW) and [INFANT](#) (Victoria) are examples of evidence-based early childhood obesity prevention interventions. They focus on assisting parents to establish healthy lifestyle behaviours in the first years of their child's life.

Our research focuses on implementing these interventions at scale and evaluating barriers and enablers for delivery through health services, and parents' experiences of the programs.

Healthy Beginnings

Healthy Beginnings is a family-focused intervention aimed at preventing overweight and obesity in early childhood by supporting parents to achieve good nutrition and active play for their child.

The program started as a home visiting intervention delivered by community nurses to first-time mothers from the third trimester of pregnancy to when their children were aged 24 months. It has been shown to be effective in improving body mass index and infant feeding practices, and in reducing TV viewing time.⁵

As a home visiting intervention, it is not cost effective due to its intensive delivery mode.⁶ Our research therefore focuses on the use of a low-cost mode of delivery. This includes integrating the program into an existing home visiting service in NSW and delivering a telephone or SMS-based intervention called Communicating Healthy Beginnings Advice by Telephone (CHAT). We have also conducted a feasibility study to explore cultural adaptation of CHAT to support migrants from Chinese- and Arabic-speaking backgrounds.

INFANT

INFANT is believed to be the first program of its kind to address obesity risk in the first year of an infant's life using universally delivered services.⁷ INFANT supports parents to achieve healthy eating and physical activity behaviours for themselves and their children.

It is delivered by trained facilitators including maternal and child health nurses, dietitians, health promotion officers and parent support officers. Parents attend four group sessions when infants are aged around 3, 6, 9 and 12 months. Extra support is provided by an evidence-based app (My Baby Now) and the INFANT website.

When delivered as a randomised controlled trial, INFANT showed positive effects on a range of parents' and children's health behaviours with sustained benefits at five years of age. These included consuming more fruit, vegetables and water and fewer sugar-sweetened beverages and snacks, and watching less television. Mothers' knowledge and confidence in feeding their children as well as their own diet also improved.⁸

This study provided proof of concept to evaluate small-scale translation of INFANT in 10 local government areas (LGAs) in Victoria and explore factors influencing parental engagement, and sustained implementation.

What did we find?

Key lessons about integrating early childhood obesity prevention into existing services

- The evidence base of the intervention is highly regarded by health services when considering adoption. It is therefore crucial to communicate this evidence in appropriately different ways to the various stakeholders (i.e. managers and clinicians) across the organisation.
- Alignment of intervention outcomes with organisational priorities is an important facilitator, situating the intervention as core business and adding value to current practice. When considering integration into routine practice, the complexity and cost of implementation are key barriers.
- Health services frequently describe the challenge of maintaining fidelity while being flexible to adapt the intervention to meet their service goals and participants' needs. This requires an understanding of which elements need to remain constant and which elements can be adapted without affecting outcomes.
- Providing a sustainable mode of training for providers is necessary to strengthen fidelity and support a scaled-up approach.
- Supportive policies, such as statewide priorities and plans, especially those that enable resourcing, are essential to facilitate implementation across local, state and national levels by creating an environment conducive to change and long-term, sustained implementation.
- Organisational readiness for implementation is perhaps the strongest indicator of commitment to program adoption and sustained implementation, and requires leadership engagement and management support.

Key lessons from parents' experiences of participating in the programs

- Early childhood is an opportune time to support parents through services and programs, when engagement with maternal and child health services is high, particularly among first-time parents.
- Parents are receptive to interventions to prevent early childhood obesity, such as support for optimal infant feeding, active play and screen time behaviours.
- Mothers who participated in Healthy Beginnings CHAT, culturally adapted CHAT and INFANT largely felt their needs were met, appreciated support from health professionals and valued continuity of care.
- Some mothers suggested involving partners and extended family to reinforce messages about infant feeding and active play and to strengthen family involvement in infant care.
- Mothers endorsed both group-based (shared experiences with other parents) and app or telephone (individual) support.

What does it mean for policy and practice?

Integration into routine service delivery

- It is feasible to integrate Healthy Beginnings and INFANT at scale within existing health services because clinicians regard these interventions as supporting core business.
- Barriers to implementation and scale up include lack of awareness of the evidence base of these interventions and lack of flexibility to integrate initiatives into established organisational systems and processes.
- Enablers that support integration include implementation training and support, adequate staffing and resources, alignment with organisational priorities (such as job descriptions), and efficient data collection (i.e. breastfeeding duration, age of solids introduction) through organisational databases.

Supporting parents

- Early promotion and enrolment during the pre- and postnatal period are needed to create awareness and enhance program attendance. Continuity of care across this period is also needed to build relationships with parents and sustain parents' involvement in services and programs.
- Group-based, app and telephone approaches are promising modes of delivery for early childhood obesity prevention interventions.
- Consulting with, and involving, parents is crucial to understanding their experiences and enhancing their engagement with early childhood obesity prevention interventions.

What did we produce?

- 10 peer-review publications
- More than 20 conference presentations.

Parent resources

- A range of booklets in English, Chinese and Arabic for parents participating in Healthy Beginnings
- The Healthy Beginnings app, which the Ministry of Health has incorporated into its statewide program 'Get Healthy in Pregnancy and Beyond'
- The My Baby Now app to complement INFANT group-based sessions
- A contemporary website (infantprogram.org) with resources and program referral information for parents.

Health professional resources

- Resources for child and family health nurses delivering Healthy Beginnings
- Resources for INFANT implementation staff including online training (6 to 8 hours online), facilitator guide, implementation guide and community of practice forums.

Impact on policy and practice

Through INFANT, we established extensive partnerships with LGAs, the Victorian Government, community organisations and research organisations. Some Victorian LGAs that were part of the small-scale translation have included INFANT in their Municipal Health and Wellbeing Plans. INFANT implementation training has been embedded into the Victorian Maternal and Child Health professional development calendar.

INFANT has been recommended in key state and national health policies including:

- The Victorian Public Health and Wellbeing Plan (2019–2023)⁹
- The 2019 consensus statement for obesity prevention, A Healthier Start for Victorians, released by VicHealth's Healthy Eating and Active Living (HEAL) roundtable¹⁰
- The Australian Institute of Family Studies guidebook on evidence-based programs.¹¹

Through Healthy Beginnings, we established extensive partnerships with Local Health Districts, NSW Health, community organisations and research organisations. Healthy Beginnings has been embedded within services in four Local Health Districts across NSW.

Healthy Beginnings has been recommended in:

- The NSW Healthy Eating and Active Living (HEAL) Strategy: Preventing overweight and obesity (2013-2018)¹²
- The NSW Healthy Children Initiative, Healthy Supported Playgroups report¹³
- The United States Department of Health and Human Services Home Visiting Evidence of Effectiveness, which highlights Healthy Beginnings as one of the top 20 models worldwide that meet the rigorous criteria for effectiveness in home visiting services for new parents.¹⁴

Next steps

INFANT

Our findings are informing our implementation of INFANT at scale across Victoria to assess effectiveness and implementation when delivered at a population level. This research is being conducted in partnership with the state department of health, maternal and child health, community health services, local governments and community groups.

There is also a need to explore:

- Transferability of at-scale delivery across Victoria to national delivery across Australia
- Regional and rural models of delivery
- Adaptations required to reach fathers and other carers, Aboriginal and Torres Strait Islander families, and culturally and linguistically diverse families.

Healthy Beginnings

Our findings will inform implementation of Healthy Beginnings at scale across NSW. We will continue to evaluate the effectiveness of the program delivered via telephone and explore the sustainability of impacts on children's health behaviour at five years. We have also recently been awarded a Medical Research Future Fund grant to bring the program to parents online, and a Public Health and Chronic Disease Program Early Childhood Nutrition grant to develop training videos for clinicians and videos for parents.

There is also a need to explore:

- The effectiveness of delivering the program to culturally and linguistically diverse families
- Adaptations required to reach Aboriginal and Torres Strait Islander families.

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