

Table 1. Literature review of economic evaluations of studies in childhood obesity

Authors/title	Country	Intervention	Age of participants	Authors' conclusion
<p>Hayes A, Lung T, Wen LM, Baur L, Rissel C, Howard K. Economic evaluation of "Healthy Beginnings" an early childhood intervention to prevent obesity. <i>Obesity</i> (Silver Spring). 2014 Jul; 22(7):1709-15.</p>	<p>Australia</p>	<p>The intervention consisted of eight home visits by specially trained community nurses, including one visit at 30-36 weeks gestational age, and seven visits at 1, 3, 5, 9, 12, 15, and 24 months after birth. These visits included one-on-one consultations of 1-h duration at which age-appropriate education and advice on feeding, nutrition and physical activity were provided. Both control and intervention participants received the usual childhood nursing service from their local Area Health Service, consisting of one home visit by a community nurse within a month of birth plus visits to the local clinic. The control group also received home safety information sent by mail at 1, 3, 5, 9, and 18 months.</p>	<p>1 month old; followed up to 2 years of age</p>	<p>“Healthy Beginnings” is a moderately priced intervention with demonstrated effectiveness that offers similar or better value for money than existing obesity prevention or treatment interventions targeted at older children.</p>
<p>Moodie ML, Herbert JK, de Silva-Sanigorski AM, Mavoia HM, Keating CL, Carter RC, Waters E, Gibbs L, Swinburn BA. The cost-effectiveness of a successful community-based obesity prevention program: The Be Active Eat Well Program. <i>Obesity</i></p>	<p>Australia</p>	<p>The interventions targeted evidence-based behaviour change- reduction of television viewing; reduced consumption of sugar sweetened drinks, and increased water consumption; reduced consumption of energy dense snacks and increased consumption of fruit and vegetables; increased active play after school and at weekends; and increased active transport to schools.</p>	<p>4-12 years</p>	<p>Be Active Eat Well Program (BAEW) was affordable and cost-effective, and generated substantial spin-offs in terms of activity beyond funding levels. Elements fundamental to its success and any potential cost efficiencies associated with scaling-up now require identification.</p>

(Silver Spring). 2013 Oct; 21(10):2072-80.		Current practice covered any initiatives to address concerns about healthy eating, physical activity, or childhood obesity.		
McAuley KA, Taylor RW, Farmer VL, Hansen P, Williams SM, Booker CS, Mann JI. Economic evaluation of a community-based obesity prevention program in children: the APPLE project. Obesity (Silver Spring). 2010 Jan; 18(1):131-6.	New Zealand	The main intervention was the provision of community activity coordinators (ACs) to encourage all children to be a little more physically active every day by increasing the variety and opportunities for physical activity at interval, lunchtime and after school beyond what was currently provided. Nutrition-based interventions included supplying intervention schools with a cooled water filter and the provision of free fruit for a 6-month period. Several nutrition resources were developed targeting reductions in sugary drinks and increased fruit and vegetable intakes including “APPLE Bites” (a community-based resource highlighting ideas, recipes, hints and tips for being more active and eating well at home), science lessons at school and an innovative card game simulating completing a triathlon.	5-12 years	The relatively simple intervention approach employed by the APPLE project was successful in significantly reducing the rate of excessive weight gain in children, with implementation costs of NZ\$664-1,708 per kg of weight-gain prevented over 4 years.
Kalavainen M, Karjalainen S, Martikainen J, Korppi M, Linnosmaa I, Nuutinen O. Cost-effectiveness of routine and group programs for treatment of obese children. Pediatr Int. 2009 Oct; 51(5):606-11.	Finland	The routine program consisted of two individual appointments for the children by school nurses, and it was modified from the current counselling practice for obese children in school health care in our region. The group program consisted of 14 evening sessions held separately for parents and children, and of one joint session of making healthy snacks.	7-9 years	Family-based group treatment is more costly compared with individual routine counselling.

Wake M, Baur LA, Gerner B, Gibbons K, Gold L, Gunn J, Levickis P, McCallum Z, Naughton G, Sanci L, Ukoumunne OC. Outcomes and costs of primary care surveillance and intervention for overweight or obese children: the LEAP 2 randomised controlled trial. <i>BMJ</i> . 2009 Sep 3; 339:b3308. doi: 10.1136/bmj.b3308.	Australia	The intervention consisted of primary care screening, followed by a brief structured secondary prevention programme, which consisted of four standard consultations over 12 weeks with the aim of changing nutrition, physical activity, and sedentary behaviour. The comparator was the usual care.	5-10 years	Primary care screening followed by brief counselling did not improve BMI, physical activity, or nutrition in overweight or mildly obese 5-10 year olds, and it would be very costly if universally implemented.
Goldfield GS, Epstein LH, Kilanowski CK, Paluch RA, Kogut-Bossler B. Cost-effectiveness of group and mixed family-based treatment for childhood obesity. <i>Int J Obes Relat Metab Disord</i> . 2001 Dec; 25(12):1843-9.	USA	Families were randomised to one of two groups: mixed treatment whereby subjects received a mixture of individualized plus group treatment (mixed), and group treatment that did not involve individual therapy (group).	8-12 years	A family-based, behavioural intervention employing group treatment alone is a more cost-effective approach to treating paediatric obesity than a mixed group plus individual format.
Hollinghurst S, Hunt LP, Banks J, Sharp DJ, Shield JP. Cost and effectiveness of treatment options for childhood obesity. <i>Pediatr Obes</i> . 2014 Feb; 9(1):e26-34.	UK	The treatments were (i) a hospital clinic (control in both trials), comprising a multidisciplinary team of consultant, dietician and exercise specialist; (ii) a nurse-led primary care clinic replicating the service provided by the hospital and (iii) an intensive intervention using Mandometer®, a behaviour modification tool aimed at encouraging slower eating and better	5-16 years	Intensive management using Mandometer® was effective but costly (£432 per 0.1 reduction in BMI SDS) compared to conventional care (range £153-£173). A total of 26% children receiving conventional care achieved a clinically meaningful reduction

		recognition of satiety.		in BMI SDS; however, use of Mandometer® training may be justified in children not responding to conventional lifestyle interventions.
Janicke DM, Sallinen BJ, Perri MG, Lutes LD, Silverstein JH, Brumback B. Comparison of program costs for parent-only and family-based interventions for paediatric obesity in medically underserved rural settings. J Rural Health. 2009 Summer; 25(3):326-30.	USA	For both the family-based and parent-only interventions, weekly 90-minute group sessions were held for the first 8 weeks, then bi-weekly for the next 8 weeks. Child and parent participants in both treatments monitored dietary intake and physical activity. Families were taught to categorize foods as red, yellow, and green based on a modified version of the Stoplight program. Increased physical activity was promoted through a pedometer-based step program. Families and group leaders worked together to set daily dietary and physical activity goals at the end of each group session.	8-14 years	Parent-only interventions may be a cost-effective alternative treatment for paediatric obesity, especially for families in medically underserved settings.