

Background: The prevalence of obesity among children is increasing in the Netherlands. Intensive treatment for severe obesity in children is required, but evidence-based cost-effective options are not yet available.

Aim: To compare the cost-effectiveness of two intensive one-year inpatient interventions and outpatient treatment in severely obese children and adolescents. The two inpatient interventions are different with respect to the length of the hospitalization period.

Design: A randomized clinical trial with three study arms.

Setting and subjects: Eighty children aged 8–12 years and adolescents aged 12–18 years admitted to the KBCZ in Hilversum, the Netherlands, with therapy resistant severe obesity (SDS-BMI > 3.0 or SDS-BMI > 2.3 with obesity-related comorbidity).

Interventions: Group A receives inpatient treatment for 6 months during weekdays. Group B receives inpatient

treatment for 2 months, followed by biweekly hospital admissions for 2 d during 4 months. In the second half year there are six sessions of 2 d aimed at reinforcement of learned behaviour in both groups. Both intervention programs are intensive lifestyle programs with emphasis on nutrition, exercise and cognitive behavioural therapy. In both programs active participation of the parents is required. Group C receives usual care for a year after which they are randomized to treatment A or B.

Preliminary results: Mean baseline SDS-BMI for adolescents was 3.4 and 3.3 for children. High triglycerides were observed in 6.7% and 5% of adolescents and children, respectively. Low HDL-cholesterol was observed in 56.7% and 60% of adolescents and children. Hypertension was more prevalent in adolescents (53.6% *v.* 10.5%, $P < 0.01$). Intensive treatment is warranted.

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67 – ‘http://HANCPTool.org’ as the first step to school menu reformulations

A Colom¹, M Autonell¹, M Buades¹, E Cabeza¹, E Ferragut¹, P Palou¹, Y Vega¹, M Monino², M Colomer², A Terrassa² and FA Colom²

¹Balearic Islands Public Health Department, Spain: ²Balearic Dieticians and Nutritionists’ Official Association, Spain

Introduction: Diet-related diseases are becoming growing epidemics and are major contributors to the leading causes of childhood unhealthiness in Europe.

Rationale: Obesity and weight-problem prevention by stimulating food reformulation to modify school diets by reducing the contents of saturated fatty acids (SFA), sodium (salt) and free sugars (extrinsic sugars).

Method: Development of a new tool based on the classic HACCP (Hazard Analysis and Critical Control Points) to translate scientific knowledge into operational terms:

- ‘FNO’: Food Nutritional Objective: the maximum concentration of a nutritional risk.

- ‘NPC’: Nutritional Performance Criteria: the desired concentration reduction of a nutritional risk.
- ‘WONRAC’: Workplace Nutritional Risk Assessment and Control: points where something is added or a process made that can alter the contents monitored by Google analytics to bring about an awareness of the Health Impact Assessment (HIA).

Results: The newly developed tool, HANCPTool (Hazard Analysis Nutritional Control Points) is presented in the web2.0 area of <http://www.foodprofit.org>

Conclusions: This approach facilitates the measurement of nutrients in order to understand the leading problem, improve them via reformulation and predict the HIA consequences of school menus.

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68 – EMPOWER – empowering parents to prevent obesity at weaning – exploratory research

R Lang¹, J Barlow¹, S Whitlock¹, D Kaklamanou², S Hanson³, K Sylvester⁴ and MC Rudolf^{2,3}

¹University of Warwick, Warwick Medical School, Gibbet Hill, Coventry, UK: ²University of Leeds, Clarendon Wing, Leeds General Infirmary, Belmont Grove, Leeds, UK: ³Leeds Primary Care Trust, Leeds, UK: ⁴Heart of Birmingham Primary Care Trust, Birmingham, UK

Introduction: Childhood obesity has a high prevalence across the Western world, and infancy has been identified as being important for establishing later eating patterns. There have to date, been few attempts to develop or evaluate programs aimed at the primary prevention of obesity.

Aims: To pilot and evaluate a primary preventive health visitor delivered intervention focusing on five key lifestyle areas (parenting, emotional well-being, eating behaviour, physical activity and nutrition), in terms of its impact on nutrition and physical activity patterns in infants at increased risk of obesity.

Method: The study was conducted in two phases. The first phase piloted the intervention with eight families; the second phase comprises an ongoing feasibility trial in which sixty-two women (BMI > 35 kg/m²) were recruited at booking and randomized into intervention or usual care pathways following the birth. A mixed methods approach is being used to ascertain objective outcomes

including weight status and to evaluate acceptability of the program.

Findings: The pilot study demonstrated that families found the program acceptable, valuing in particular the approach of the health visitor, with its emphasis on non-judgemental listening, partnership working and shared problem-solving. A range of benefits were also identified including increased knowledge of appropriate foods for their children and the family as a whole.

Conclusions: To our knowledge this will be the first health visitor-led primary prevention intervention in the early years internationally. The results from the feasibility trial will provide the data needed to seek funding for a definitive effectiveness RCT with infants at increased risk of obesity.

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69 – Crossing borders for obesity prevention: the EPODE approach

JM Borys, C Roy, J Mayer, P Richard and Y Le Bodo

EPODE Coordination, Paris, France

Introduction: EPODE is a coordinated, capacity-building approach for communities to implement effective and sustainable strategies to prevent childhood obesity.

Method: At central level, a coordination team using social marketing and organizational techniques trains and coaches a local project manager nominated in each EPODE town by the local authorities. The local project manager is provided with training, coaching and tools to mobilize local stakeholders through a local steering committee and local networks. This methodology enables the entire community to be empowered and contribute to create a healthier environment facilitating social norms change and healthier behaviours. The added value of the methodology is based on critical components such as a strong scientific input, institutional endorsement, evidence-base and social marketing techniques, sustainable resources, brand dynamics and programme monitoring and evaluation.

Results: The EPODE methodology is now implemented in more than 300 towns in six countries (Spain, Belgium, Greece, France, South Australia and Mexico) and concerns more than five million people. EPODE Monitoring

and Evaluation practices to date include not only outcome but also process and output indicators at central, local, settings and child levels. At child level we monitor the prevalence of overweight and obesity in children aged 5–12 years. The response rate is high (95%) in the eight pilot towns. The prevalence of children overweight including obesity decreased in the pilot towns between 2005 and 2009 (from 20.6% to 18.8%, $P < 0.0001$). Building on EPODE experiences and multidisciplinary expertise, the EPODE European Network project is enriching the EPODE methodology and facilitating the implementation of similar initiatives in other European countries.

Conclusions: Childhood obesity is a complex issue and needs a multi-stakeholder involvement at all levels to foster healthier lifestyles in a sustainable way. The EPODE methodology contributes to this approach.

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