

perceptions, approach and challenges faced by midwives, obstetricians and general practitioners who provide antenatal care to women who are overweight and obese during pregnancy with the view to informing the development of an antenatal lifestyle intervention.

Methods Semi-structured interviews were conducted with a purposive sample of health care professionals (HCPs) from Cork University Maternity Hospital (CUMH) (n=10) and with a sample of General Practitioners (GPs) working in primary care in the region (n=7). Data was collected until data saturation occurred. Interviews were digitally recorded and transcribed into NVivo V.10 software. Thematic analysis is ongoing.

Results Preliminary results identified 'knowledge of weight management' and 'antenatal services' as key issues. A lack of knowledge was evident involving risks, complications and initiating a conversation around overweight and obesity in pregnancy. Variation exists around what is considered appropriate weight gain and whether HCPs were following any particular guidelines. HCPs expressed concern about the dramatic increase in the number of pregnant women who are overweight and obese and how weight perception has changed in society. Large 'caseloads' meant that lifestyle factors were not routinely discussed with the women and furthermore, a lack of communication is very evident between HCPs in the hospital and GPs in terms of the services provided.

Conclusion HCPs expressed challenges when communicating with their patients about weight management in pregnancy. By ensuring midwives and other HCPs have the knowledge, skills and opportunity to discuss weight and lifestyle factors with pregnant women, the women, in turn, may be more motivated to maintain healthy behaviour's during pregnancy.

P90

SOCIO-ECONOMIC VARIATION IN CHILD BMI TRAJECTORY FROM INFANCY TO ADOLESCENCE IN THREE CONTEMPORARY EUROPEAN CHILD COHORTS

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Background Rates of overweight and obesity have been shown to vary across socio-economic groups (SEG) from at least the age of three years but little is known about whether SEG differentials vary after adipose rebound and into adolescence and whether these trajectories differ by national context. This study examines socio-economic differentials in children's body mass trajectories in infancy and extending across childhood into early adolescence in three contemporary child cohort studies.

Methods Data on body mass index (BMI) measured on at least three occasions between birth and adolescence was obtained from four prospective cohort studies – Generation 21 (G21–Portugal), Growing Up in Ireland (GUI–Ireland) (infant and child cohorts), and the Millennium Cohort Study (MCS–UK) – involving a total sample of 44 136 children. SEG differentials in children's BMI trajectories was modelled by maternal educational level (primary, secondary, tertiary) using hierarchical models with fixed and random components for each cohort study.

Results Child BMI growth trajectory was greater for children of lower educated mothers but only from three years of age. In G21, the educational differential emerged by 4 years of age and increased from 0.25_{boys} [CI₉₅=0.14, 0.38] and 0.44_{girls} [CI₉₅=0.30, 0.58] to 0.45_{boys} [CI₉₅=0.25, 0.64] and 0.70_{girls} [CI₉₅=0.48, 0.92] by 7 years of age. In GUI, the mean difference in BMI between polarised educational groups increased from 0.21_{boys} [CI₉₅=0.08, 0.35] and 0.35_{girls} at 3 years of age [CI₉₅=0.21, 0.49] to 0.92_{boys} [CI₉₅=0.63, 1.21] and 1.40_{girls} [CI₉₅=1.09, 1.71] by 13 years of age. In MCS, the educational differential was first observed at 5 years of age and increased from 0.14_{boys} [CI₉₅=0.06, 0.23] and 0.19_{girls} [CI₉₅=0.10, 0.28] to 0.66_{boys} [CI₉₅=0.49, 0.83] and 0.61_{girls} [CI₉₅=0.42, 0.79] by 11 years of age.

Conclusion Socio-economic factors are strongly implicated in the aetiology of childhood obesity. This study shows that the socio-economic differentials emerge in early childhood and widen over time providing important policy evidence about the timing of potential policy interventions designed to eliminate the adverse life course health effects associated with early emerging adiposity.

P91

MECHANISMS OF ACTION IN GROUP-BASED INTERVENTIONS (MAGI) STUDY: A FRAMEWORK OF CHANGE PROCESSES IN GROUP-BASED HEALTH INTERVENTIONS

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Background Groups are often used to promote personal and health-related psychological and behavioural change. Although there is considerable literature on group dynamics and intra- and inter-personal change processes in groups, this knowledge is dispersed across different disciplines and rarely used in the design, delivery and evaluation of group-based health interventions. The aim of the Mechanisms of Action in Group-based Interventions (MAGI) study was to identify and enhance understanding of change processes in group-based health interventions by (1) developing a conceptual framework of change processes in groups, (2) identifying examples of these processes and practical strategies for facilitating them, and (3) exploring potential relationships between group processes and intervention engagement and outcomes in three group-based weight loss interventions.

Methods Qualitative methods were used to develop the conceptual framework and identify examples of change processes and practical strategies. This involved (1) reviewing literature on theories of group dynamics and change in groups, qualitative studies, taxonomies of behaviour change techniques, and assessment tools to measure group processes; (2) reviewing and coding content of intervention manuals and 38 transcripts of group session recordings from three studies of group-based weight loss interventions; and (3) consultations with researchers, practitioners, facilitators and participants involved with group-based interventions. Further 24 transcripts of group sessions from one of the weight loss studies were coded using the framework and analysed to explore associations with intervention engagement and outcomes.

Results Key concepts and processes were synthesised into a framework of change processes in group-based health interventions. Processes were categorised into: (1) group dynamic and development processes, (2) inter-personal change processes, and (3) intra-personal change processes in groups. Examples of practical strategies to facilitate and manage these processes were identified and categorised into: (1) group design elements, (2) group set-up tasks, (3) group facilitation strategies, and (4) group closure tasks. Work to identify examples of how group interaction and group processes might link with participant engagement and outcomes is still in progress but will be presented.

Discussion The presented framework integrates a large body of literature on change processes in groups, and provides examples of practical strategies that can be used to instigate and facilitate change processes in group-based health interventions. It provides a practical tool for researchers and practitioners that can be used to design and deliver better group-based health interventions, train group facilitators, and guide evaluations of group-based interventions, with a view to optimising intervention engagement and outcomes.

P92 **LIFESTYLE INTERVENTIONS FOR THE TREATMENT OF OVERWEIGHT/OBESE ADOLESCENTS—COCHRANE REVIEW**

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Background The prevalence of overweight and obese adolescents has increased worldwide, presenting a global public health crisis. This review assessed the efficacy of diet, exercise and behavioural interventions for the treatment of overweight/obesity in adolescents (12–17 years).

Methods A systematic literature search (up to July 2016) with no language restrictions was performed in CENTRAL, MEDLINE, EMBASE, PsycINFO, CINAHL, LILACS, and the trial registers ClinicalTrials.gov and ICTRP Search Portal. Search terms included obesity, diet, exercise and adolescent. References of identified studies and systematic reviews were checked. Authors of included studies were contacted for missed studies. Two reviewers evaluated studies independently at all stages. Eligibility: RCTs that observed participants for \geq six months, overweight/obese (investigator-assessed) adolescents (mean age 12–17 years), interventions with a primary aim to treat overweight/obesity with any form of dietary, exercise and/or behavioural therapy delivered as a single or multi component intervention, any setting and any delivery method. Comparators were no treatment/wait list control, usual care or an alternative concomitant therapy providing it is delivered in the intervention arm. Primary outcomes were changes in BMI/weight measured at baseline and at \geq 6 months. Data that could be meta-analysed were expressed as mean differences (MD) with 95% CI otherwise data were reported narratively. Heterogeneity, risk of bias and quality of evidence were assessed.

Results The searches generated 16 106 records (duplicates removed). Title and abstract screen excluded 15 422 records. 736 records were assessed for eligibility. 105 trials were included: 50 ongoing; 11 awaiting classification, 44 qualitative synthesis and 39 quantitative synthesis. This review included 4682 participants. BMI change at the longest follow-up was MD -1.18 (95% CI -1.67 to -0.69); $p < 0.00001$; 2774 participants; 28 trials; low quality evidence. Most studies were multi-disciplinary interventions (BMI MD -1.18 , 95% CI -1.75 to -0.61 , $p < 0.0001$; 2293 participants; 22 studies), some studies were diet alone (BMI MD -0.62 , 95% CI -1.29 to 0.06 ; $p = 0.07$; 277 participants; 3 studies) or exercise alone interventions (BMI MD -1.73 , 95% CI -3.12 to -0.34 , $p = 0.01$; 229 participants; 4 studies). Studies undertaken in schools showed a lower effect compared to community and health care settings.

Conclusion Interventions that involve a combination of diet, exercise and behavioural components appear to be an effective treatment option for overweight/obese adolescents. Effects of lifestyle interventions were maintained at 18–24 months follow-up. Results should be interpreted with caution as the evidence was rated as low quality for inconsistency and publication bias.

P93 **WHAT ARE THE VIEWS OF OVERWEIGHT AND OBESE ADOLESCENTS (12–17YRS) ATTENDING LIFESTYLE TREATMENT INTERVENTIONS: A QUALITATIVE SYSTEMATIC REVIEW**

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Background A third of all children in England are overweight or obese. Physical and psychosocial effects of obesity in adulthood are now seen in children and adolescents. Current NICE guidance recommends that obese adolescents attend a family-based multi-component weight management service. Cochrane reviews have shown that lifestyle programmes can be effective. However, weight management interventions recruit $< 2\%$ of the childhood population. For those that do attend weight management interventions, attrition is high. Understanding the views of adolescents is necessary for planning and development of future interventions.

The goals of this systematic review include:

- To explore the views of overweight or obese adolescents aged 12–17 years who have attended a lifestyle treatment intervention.
- To identify what adolescents deem as successful and unsuccessful components of an intervention to inform future practice, as well as research.

Methods This review examined studies of overweight or obese adolescents who have attended a lifestyle treatment intervention. Interventions were single or multi-component and contained one or more diet, physical activity and behavioural elements. Only studies that collected and analysed data qualitatively were included. There were no language restrictions.

Published literature was identified by searching the following databases: MEDLINE, EMBASE, Web of Science, PsycINFO, ASSIA and CINAHL. Reference lists of included studies were screened.