Conclusion Birthweight has a U-shaped relationship with obesity in middle age. This relationship tends towards being J-shaped after adjustment for adult height.

047 IS THE RECENT RISE IN TYPE 2 DIABETES MELLITUS INCIDENCE FROM 1984 TO 2007 EXPLAINED BY THE TREND IN INCREASING BODY MASS INDEX? EVIDENCE FROM A PROSPECTIVE STUDY OF BRITISH MEN

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Objective Incidence of type 2 diabetes mellitus (T2DM) in the UK has increased by two-thirds in the last decade. Understanding the reasons for the unfavourable trend may help inform efforts to curb future increases. The association between T2DM and adiposity has been established. However, few attempts have been made to quantify the contribution of adiposity changes to the observed time trend in T2DM. We estimated the proportion of the time trend in T2DM incidence in British men over 24 years that may be explained by increasing population body mass index (BMI) levels.
Design Longitudinal study.
Setting 24 British towns.
Participants 6460 men from a socially and geographically representative cohort of older British men, followed up for doctor-diagnosed T2DM incidence between 1984 (aged 45 to 65 years) and 2007 (aged 67 to 89 years) inclusive. Men with a diagnosis of diabetes before 1984 were excluded.
Main outcome measures The age-adjusted increase in the hazard of T2DM between 1984 and 2007 and the contribution of changing BMI to this increase, derived from Cox proportional hazards modelling with time-updated covariates.
Results Between the periods 1984–1992 and 1999–2007, the age-adjusted hazard of T2DM more than doubled (hazard ratio 2.33, 95% CI 1.75 to 3.10). An estimated 26% (95% CI 17 to 38) of this hazard increase could be statistically explained by a population-averaged age-adjusted increase in BMI from 1984 to 1999 of 1.42 kg/m^2 (95% CI 1.10 to 1.74). Earlier and later portions of the follow-up were examined separately. Between 1984–1992 and 1992–1999, T2DM incidence increased by half (hazard ratio 1.59, 95% CI 1.23 to 2.05). 22% (95% CI 12 to 48) of this increase could be explained by rising BMI. Between 1992–1999 and 1999–2007, a similar increase in T2DM incidence was observed (hazard ratio 1.47, 95% CI 1.17 to 1.84). 31% (95% CI 17 to 81) of this increase was explained by BMI.
Conclusion BMI changes can account for an appreciable portion of the increase in T2DM. Control and reversal of rising adiposity levels is therefore an important priority in controlling the diabetes epidemic. There remained a large "unexplained" portion of the T2DM increase. This may reflect imprecision of BMI as a measure of visceral fat or the independent contributions of changes in other determinants, such as physical activity and diet. The presence of other contributing factors would suggest the need for a more multi-factorial approach to combat rising T2DM in the population.

048 CHANGES IN WAIST CIRCUMFERENCE AND BMI IN ADOLESCENTS IN ENGLAND FROM 1977/1987 TO 2005–2007

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Objective To compare changes in BMI and waist circumference in the past 30 years among English children aged 11–16 years.
Design Cross-sectional health examination surveys.
Setting The Health Survey for England (HSE) is a survey of a random sample of the general population living in private households in England.
Participants A new, nationally representative sample is selected each year. 1988 children aged 11–16 years had a nurse visit in the three HSE years 2005–2007, of whom 1770 had valid waist circumference measurements. HSE data were compared with age-specific centile charts for waist circumference for British children aged 5.0–16.9 years derived from baseline surveys of 3585 boys in 1977 and 4770 girls in 1987.
Main outcome measures BMI and waist circumference z-scores derived from the baseline data, as BMI and waist circumference vary by age and sex.
Results The mean z-scores for waist circumference for children aged 11–16 years in 2005–2007 was substantially higher than the mean z-score for BMI, for both sexes: WC 1.0 (95% CI 0.93 to 1.1), BMI 0.54 (0.44 to 0.63) for boys; WC 1.3 (1.2 to 1.4), BMI 0.48 (0.40 to 0.56) for girls (both $p<0.001$). There were no significant differences by sex in mean z-score for BMI, weight or height but the mean waist z-score for girls was significantly higher than that for boys ($p<0.001$). There were no significant differences by age in waist circumference or BMI. All children except for those in the lowest decile of waist circumference for girls had an increase in waist circumference of at least +1 SD since the 1977/87 baseline. BMI z-score increased across the top nine deciles of the BMI distribution by 0.4SD (2nd to 4th deciles) to 0.9SD (top decile). There were no significant differences by sex in the change over time except for the 10% of girls with the largest waist circumference for their age (1.6SD in girls vs 1.4SD in boys, $p<0.01$).
Conclusion Waist circumference in adolescents has increased more than BMI, which may result in greater obesity-related adverse health impacts in the future. The increase in waist circumference has been greater for girls than for boys. Increases in the mean z-score across the majority of the population suggests that the whole population is becoming more obese, although this effect is more pronounced at the upper end of the distribution.

049 THE REVERSAL OF THE SOCIAL GRADIENT OF OBESITY AMONG WOMEN IN EGYPT: AN ANALYSIS OF TRENDS USING MULTIPLE CROSS SECTIONAL SURVEYS 1995–2008

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Background The global obesity epidemic is spreading rapidly with a social distribution that varies according to the level of economic development: as countries develop, the burden of obesity appears to shift from the rich to the poor. Studying these changes as they occur can help shed further light on the social processes that fuel the obesity epidemic and determine its social distribution. Egypt provides a case in point for this research. Findings would be relevant to other low-and-middle income countries but may also be generalisable to an extent to poor communities in high income countries.
Objectives To examine the social distribution of obesity among Egyptian women by socio-economic status and how it has changed over time.
Design and methods Retrospective analysis using four nationally representative cross-sectional surveys (Demographic and Health Surveys) conducted in Egypt between 1995 and 2008. Socio-economic status was defined as the highest reported educational level attained.
Setting Egypt.
Participants 64 605 women between 15 and 49 years excluding pregnant women.
Main outcome measure Obesity: defined as BMI (height/weight^2) equal to or above 30.

Results The overall level of obesity among Egyptian women rises from 30% in 1995 (urban=33%; rural=27%) to 40% in 2008 (urban=43%; rural=34%). Among urban women, in 1995, the prevalence of obesity is lower in the group without education (24%; 95% CI 19 to 29) in comparison to the group with secondary education (33%; 95% CI 29 to 37). In 2008, the prevalence of obesity has risen in a statistically significant manner in both groups compared with 1995. In addition, the prevalence in the group without education (45%; 95% CI 41 to 50) appears to have exceeded the prevalence in those with secondary education (41%; 95% CI 38 to 44). Although there is overlap in the CI at the 95% level, the overall trend suggests that the social gradient in obesity may be reversing, as predicted elsewhere.

Conclusion Egypt provides a dynamic model of the reversal of the social gradient of obesity. Further analysis of Demographic and Health Surveys using other indicators of socio-economic status and risk factors for obesity such as consumption of fruit and vegetables may shed light on the processes behind the probable gradient reversal, and the factors putting the poor at increased risk of obesity. This is important in informing urgent prevention efforts at a population level.

Policy

050 NEWS MEDIA COVERAGE OF NICE'S DECISIONS ON NEW HEALTH TECHNOLOGIES

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Objective This project aims to: (1) describe the frequency of news coverage in mass media related to the National Institute for Health and Clinical Excellence (NICE) draft or final guidance; (2) analyse the types of evidence and sources of information that was quoted in the news; (3) compare whether the patterns of coverage differ between media.

Design A survey of news articles related to decisions made by NICE's Health Technology Appraisal committees was conducted. Relevant news articles were retrieved from websites of major UK news media. Inclusion criteria were: (1) news articles related to specific NICE decision(s); (2) articles were written by a reporter/writer/editor of the news media. Articles that mentioned NICE for other reasons, columns and readers' letters were excluded.

Setting Major UK news media, including national newspapers and news channels.

Samples News articles published during 2007–2008 in 13 different sources of media including tabloids (Daily Express, Daily Mail, News of the World, The Mirror, The Sun), broadsheets (Independent, Guardian, The Telegraph, The Times) and news channels (BBC, ITN, Sky News and Reuters).

Main outcome measure The following data were collected by one author and checked by another: nature of guidance (disease area; positive or negative recommendation), use of generic or brand name and source/type of evidence that was quoted. Descriptive statistics were compiled and comparisons between types/sources of news media were made using χ^2 test.

Results 329 articles were included. BBC, Daily Mail and The Telegraph published more than 50 articles related to health technology appraisal whereas ITN and News of the World published less than 10 articles during the 2-year period assessed. Two-thirds (220/329) of the articles were related to negative recommendations. There was significant difference in the proportion of articles relating to negative recommendations between individual sources of media (p=0.001) but not between types of media (p=0.286). Cancer (33%), neurology—mainly Alzheimer's disease (22%), ophthalmology (13%) and rheumatology (10%) were most frequently covered areas. 58% (192/329) of the articles quoted only brand names without mentioning generic names of the drugs. Approximately 50% of articles included statements of effectiveness without referring to the source of evidence and another 40% did not describe clinical effectiveness. 24% of articles did not mention drug costs or cost-effectiveness.

Conclusion NICE decisions on new drugs, particularly negative recommendations, attracted significant media attention but the coverage and contents varied substantially between individual sources.

051 A POLICY EFFECTIVENESS-FEASIBILITY LOOP? PROMOTING THE USE OF EVIDENCE TO SUPPORT THE DEVELOPMENT OF HEALTHY PUBLIC POLICY

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Background Historically, policy initiatives have made variable contributions to improvements in public health. Today there is a growing interest in translating evidence from health research into healthy public policy. Although research evidence may be a component of policy development, it is rarely enough, because policy makers are subject to a wide range of influences. Furthermore, researchers and policy makers usually work within different time frames and rules of evidence. There is a growing, albeit limited, literature on how researchers can most effectively engage with policy makers. Evidence suggests that more active and effective dialogue between researchers and policy makers is needed, in the formulation of research questions, presentation of evidence, and drafting and choice of policy options.

Aim To develop, implement, and evaluate an interactive approach to informing policy for the prevention and management of cardiovascular disease (CVD) and diabetes.

Setting This work is being undertaken in four eastern Mediterranean territories, known to have high burdens of CVD and diabetes: Palestine, Tunisia, Turkey and Syria.

Methods and results Available epidemiological data are being identified, appraised and used to populate the IMPACT CHD Policy Model in order to examine CHD trends. Two corresponding epidemiological models have been developed to examine trends in type 2 diabetes and ischaemic stroke. An intensive review of the literature and consultation assists in the identification of efficacious policy interventions. A situation analysis is being undertaken within each country using mixed methods, which include: key informant and in depth interviews, document reviews, and participant observation. Its aim is to review current policy (stated and implemented), perceived facilitators and barriers to policy change, including health beliefs, and aspects of the health system. Policy makers are explicitly involved as key informants, participants, advisors and "lobbyists". The epidemiological modelling, evidence based reviews, and situation analyses are together being used to generate diverse policy