

Overview

The childhood obesity epidemic presents one of the greatest health threats to both children's and the UK's future¹. Weight status in childhood is an important predictor of overweight, obesity, health and mortality risk across the life course, and we know that children who are obese are around five times more likely to grow into adults who are obese². It follows, therefore, that the lack of progress to date in reducing childhood obesity will translate to significant additional morbidity and mortality in the future adult population, placing increased social and economic burdens on future generations.

Our State of Child Health report 2017 called for Government to extend the National Child Measurement Programme to additionally measure children after birth, before school and during adolescence. We believe that the infrastructure currently exists to rapidly enable reinstatement of universal monitoring of child weight and growth from infancy to adolescence, particularly in England. Measuring should begin from birth, the beginning of the critical first two years of a child's life, to its final years of attending secondary school. These adolescent measurements are as important as screening in earlier childhood to ensure that signs of overweight in females of childbearing age are eliminated before the parents of tomorrow leave school for the adult world.

We recognise that there is a lack of strong evidence supporting routine weight monitoring. However this is not the same as evidence of lack of effectiveness. In the fight against childhood obesity, there is a growing consensus that actions should be considered if they have face validity and are likely to contribute to obesity prevention, even where strong evidence is lacking. Recent evidence from adults that 30 second interventions by GPs can result in significant weight loss³ suggest that measurement and brief interventions may be similarly effective in children.

There is currently no financial incentive for GPs to measure children, whilst measuring the BMI of an adult is an established element of the Quality and Outcomes Framework that provides additional payments to GPs. This is clear discrimination against children, and should be a priority for the NHS.

We are concerned that the approach taken in the two documents (*Screening for obesity in children <5 years* and *Screening for obesity in children age 7-11 years*) is dismissive, and could threaten the future of child measurement and of the national child measurement programme. We would like to highlight the following evidence under three themes picked out across both documents to demonstrate support for continued obesity screening and weight measurement in children.

¹ RCPCH State of Child Health report 2017. https://www.rcpch.ac.uk/sites/default/files/2018-09/soch_2017_uk_web_updated_11.09.18.pdf

² Simmonds, M., Llewellyn, A., Owen, C. G. & Woolacott, N. Predicting adult obesity from childhood obesity: A systematic review and meta-analysis. *Obes. Rev.* **17**, 95–107 (2016)

³ Aveyard et al 2016. Screening and brief intervention for obesity in primary care: a parallel, two-arm, randomised trial. *Lancet*. 2016 Nov 19;388(10059):2492-2500

1. Links with other health problems

Section and / or page number	Text or issue to which comments relate
Screening for obesity in children <5 years. Page 4	<i>The review found that overweight or obese children up to 5 years of age may remain overweight or obese later in life. But it is not clear whether this leads to health problems. Some long-running studies suggest that there might be a risk of some overweight or obese children developing diabetes. Other studies do not suggest that child obesity is not linked with problems like heart disease.</i>
Screening for obesity in children age 7-11 years. Page 4	<i>The review found that overweight or obese children aged 7 to 11 years are about 4-5 times more likely to become overweight or obese as adults. Some long running studies suggest that 7 to 11 year olds with higher body may be more likely to develop diabetes. It's less clear whether there could be any links with other health problems like heart disease or high blood pressure. Problems with the studies make it difficult to be sure of these results. For example, only a small group of the original participants were available at the end of the studies. This makes it difficult to know if the results are reliable. They also looked at children born over 60 years ago when obesity was much less common</i>

Comments

Both documents claim that the link between childhood obesity and later health problems is unclear. To question this link is simply inaccurate. A number of systematic reviews have shown that weight status in early childhood is an important predictor of overweight and obesity in later life and of health and mortality risk across the life-course.⁴⁵⁶

Being overweight or obese during childhood can:⁷⁸

- Lead to an increased risk of a host of conditions including Type 2 diabetes, high blood pressure, cardiovascular disease and bowel cancer.
 - Numbers of children with Type 2 diabetes have risen significantly, with an increase in those receiving treatment within paediatric diabetes units of 41% since 2014, coinciding with the obesity epidemic.⁹
- Negatively impact educational attainment.
- Lead to low self-esteem and negative body image, and limit the ability to take part in physical activity.

⁴ WHO. Report of the commission on ending childhood obesity. 2016. Available from www.who.int/end-childhood-obesity/en/

⁵ Brophy S et al. Risk factors for childhood obesity at age 5: analysis of the Millennium Cohort Study. BMC Public Health 2009; (9): 467.

⁶ Gardner DS et al. Contribution of early weight gain to childhood overweight and metabolic health: a longitudinal study. Pediatrics 2009; 123(1): 67-73

⁷ Caird J et al. Childhood obesity and educational attainment: a systematic review. 2011.

⁸ Griffiths LJ et al. Self-esteem and quality of life in obese children and adolescents: a systematic review. International Journal of Paediatric Obesity 2010; 5(4): 282-304.

⁹ Office for National Statistics (2017) [National Child Measurement Programme 2017](#) ONS: London

- Increase visits to the GP.

Assessing weight status in early childhood is an essential part of a coordinated approach to childhood obesity prevention, and for individuals it is key to taking action to help children stay on or return to a healthy weight across their life. Recognition is a problem: it is estimated that a third of parents in England are unable to recognise that their children are overweight¹⁰.

Other benefits of growth trend data

The following non-exhaustive list outlines conditions where growth trend data is highly relevant to management and interpretation of treatment responses:

- Drug dose calculations
- Food intolerance, cow's milk allergy, coeliac disease
- Failure to thrive
- Gastro-oesophageal reflux disease (GORD) and infantile vomiting
- Safeguarding issues, child neglect, and monitoring of foster children
- Self-harm risk assessment in teenagers
- Risk assessment in emerging eating disorders – it is crucial that health professionals have appropriate reference ranges for teenagers in order to assess physical risks from anorexia
- Morbid obesity in children – tracking of weight change in order to consider type 2 diabetes, cardiovascular and non-alcoholic fatty liver disease risks.
- Depression and anxiety and bullying – is body image a factor?
- Precocious or delayed puberty
- Assessing children in relation to anaesthetic risk
- Using change in growth trend to interpret risk of serious underlying condition if a child presents with medically unexplained physical symptoms (MUPS)

¹⁰ Black JA et al. Child obesity cut-offs as derived from parental perceptions: cross-sectional questionnaire. British Journal of General Practice 2015; 65(633): e234-239

2. Use of BMI measure

Section and / or page number	Text or issue to which comments relate
Screening for obesity in children <5 years. Page 4	<i>The main test is measurement of body mass index (BMI) which uses height and weight. Other tests for obesity are also available. But no research has been published about the accuracy of these tests in children up to 5 years of age.</i>
Screening for obesity in children age 7-11 years. Page 4	<i>The main test for obesity is measurement of body mass index (BMI) which uses height and weight. If a BMI measure indicates overweight or obesity this is likely to be correct. But the test would miss some children with excess body fat. There was a lack of information on why this might be. Some studies suggest that other tests may be better than BMI but there were only a small number of studies. More research would help to confirm this finding, including looking at the feasibility of undertaking such measurements.</i>

Comments

A single growth measurement (ie height, weight and calculated BMI measured at a distinct point in time) is difficult to interpret without the ability both to view trends and to compare with the population, and what is normal. This is only achieved by comparison of a child's data with age and sex appropriate norms (e.g. on growth charts). The obesity thresholds for adults (e.g. BMI of 30kg/m²) are essentially meaningless in children – who need their BMI assessed for age and sex to identify overweight and obesity.

We recognise that assessing BMI in children is more complicated than in adults, because children's BMI will change as they grow and mature. BMI centiles should therefore be used to measure how far a child's BMI is above or below the average BMI value for their age and sex, and usually categorised as healthy weight, overweight or underweight. This method of measurement is well-established and there are a variety of evidence-based, age related growth charts to choose from.¹¹

Measurement is an important part of the Healthy Child Programme and as part of the partnership between the Professional Record Standards Body (PRSB) and NHS Digital there are now established standards¹² for measurement, including height, weight, head circumference and BMI. These standards have been endorsed /supported by 19 organisations and involved 3 workshops and over 2000 consultations received. The idea of these standards is to allow GPs to view the trend of growth from birth and importantly the growth before the NCMP that happens in Reception (remembering that by then a third are overweight or obese).¹³

¹¹ <https://www.rcpch.ac.uk/resources/uk-world-health-organisation-growth-charts-2-18-years>

¹² <https://theprsb.org/standards/healthychildrecord-2/>

¹³ Royal College of Paediatrics and Child. State of Child Health. 2017. <https://www.rcpch.ac.uk/state-of-child-health>

3. Interventions for overweight and obese children

Section and / or page number	Text or issue to which comments relate
Screening for obesity in children <5 years. Page 4	<i>Interventions are available for overweight and obese children. These usually aim to increase physical activity and change diet. Sometimes they include parents as well as children. These have resulted in small reductions in weight over a short period of time. But it is not clear if the weight reductions would continue over a longer period of time without ongoing support. At the same time the studies did not look at children found through screening. This is important as children found in this way might respond in a different way to the offer of these interventions.</i>
Screening for obesity in children age 7-11 years. Page 4	<i>Interventions are available for overweight and obese children. These usually aim to increase physical activity and change diet. Sometimes they involve parents as well as children. These have resulted in small reductions in weight over a short period of time. But most studies have not followed children up beyond 12 months. It is not clear if the weight reductions would continue over a longer period of time without ongoing support.</i>

Comments

Routine linkage of existing data on birthweight/infant growth data with national measurement programme data at the individual level would provide weight/BMI trajectory data for individuals, particularly in England where a second school-age (year 6) measurement occurs. This would allow identification of individuals rapidly gaining weight and allow early intervention. This is particularly important as the effectiveness of interventions when children are already obese is very low.¹⁴

There is under-referral of children where increasing BMI centile trends are a concern. This may reflect inadequate service provision to refer children with obesity to as well as historically dismissive attitudes to obesity amongst health professionals. There is a recognised need in the health system to integrate health prevention strategies into primary care assessments as part of the ‘making every contact count’ agenda. Recent research has highlighted a lack of confidence by GPs in having difficult conversations about obesity during consultations.¹⁵ Currently, few conversations around child weight management are happening in primary care – and only 9% of GPs surveyed recently felt confident in starting a discussion on weight management¹⁶.

Time is often cited as a barrier to discussing health promotion matters, however that does not mean that it does not warrant the additional investment. This is particularly important in UK primary care

¹⁴ Oude LH, Baur L, Jansen H, et al. Interventions for treating obesity in children. *CochraneDatabaseSystRev* 2009; (1): CD001872

¹⁵ Johnson R, Robertson W. Evaluation of the Eat Well Move More child weight management service. Division of Health Sciences, Warwick Medical School, University of Warwick: Coventry, 2016

¹⁶ Viner et al. Understanding and improving general practitioner (GP) use of childhood BMI surveillance data from NCMP. Available on request.

where GPs have appointments typically of ten minutes' duration to discuss the reason for attendance and other ongoing issues; clinicians are free, of course, to spend as long as they see fit.

Research has demonstrated that behaviourally-informed, very brief, physician-delivered opportunistic interventions are acceptable to patients and an effective way to reduce population mean weight.¹⁷ Separate research in East London has demonstrated that children who are overweight are more likely to consult GPs for weight management, particularly around the time of the NCMP measurements.¹⁸ This demonstrates the need for measurement to facilitate conversations about weight and, thinking longer-term, to facilitate weight interventions.

There is an emerging anxiety about children whose growth data indicates that they are severely obese, yet their parents are not engaging. The CHAMPS¹⁹ project has shown that where parents do engage in their child's growth data, they can influence the weight trajectory that their child is on. Increased weight data would allow for better and earlier trend identification and more opportunities to engage with parents and patients and influence a child's growth.

Creating a focus on child growth measurement would stimulate greater engagement with discussing weight issues with families. The need for normalisation of measurement is increasingly recognised – including an active response to that information, rather than normalisation of denial of obesity.

Summary of RCPCH policy priorities on child weight measurement

- The National Child Measurement Programme should be extended to measure children after birth, before they start school and during adolescence in order to monitor trends and act quickly.
- Children should be given parity with adults under the Quality and Outcomes Framework (QOF) so that GPs are equally incentivised to measure children and young people's BMI.
- Capacity for measurement in primary care should be strengthened, with the necessary IT systems and measuring instruments routinely available to accurately measure and record a child's BMI.
- A consistent approach should be developed across health professions to capture data effectively, and information about a child's weight should be accessible to all professionals who need it.

About the RCPCH

The College is a UK organisation which comprises over 15,000 members who live in the UK, Ireland and abroad and plays a major role in postgraduate medical education, as well as professional standards.

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¹⁷ <https://www.ncbi.nlm.nih.gov/pubmed/27789061>

¹⁸ [https://www.thelancet.com/pdfs/journals/lancet/PIIS0140-6736\(17\)32972-0.pdf](https://www.thelancet.com/pdfs/journals/lancet/PIIS0140-6736(17)32972-0.pdf)

¹⁹ <https://champshealth.org/>