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# Building grass roots capacity to tackle childhood obesity

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## Abstract

**Aims:** In recognition of the increasing problem of child obesity in London and elsewhere, we were commissioned to build capacity to tackle this major public health concern. This paper describes one of the outputs of this work: to develop and deliver effective brief intervention training on the subject of childhood healthy/unhealthy weight and obesity to be used by anyone who works with children and families, regardless of their job title or level of educational achievement.

**Methods:** A literature review informed the process. The slim evidence derived was combined with the expertise of an expert working group to develop clear learning objectives for training and then to develop a flexible one-day training programme suitable for delivery to mixed groups of participants, to meet the learning objectives. Evaluation was built into the programme by means of a questionnaire at the end of the training session and by the use of a structured reflective log to be returned by participants once they had put their training into practice.

**Results:** The training programme was delivered free of charge to over 560 people during the course of a Regional Public Health Group-sponsored project. Subsequently it has been delivered to several more audiences working in the NHS, local government and third sectors in London on a not-for-profit basis.

**Conclusions:** The programme, based on best available evidence and clear evidence of needs, provides a low-cost evaluated intervention that permits people from diverse professional and occupational backgrounds to acquire the knowledge, skills and confidence needed to raise the subject of healthy and unhealthy weight with parents of primary school-aged children and signpost them to appropriate local facilities and services. Although developed in London, the programme may be used anywhere in the UK, with the substitution of local information about prevalence of overweight and obesity and about local services and facilities.

## INTRODUCTION

Obesity has been described as a modern epidemic and, after many years' restriction to the developed world, has recently begun to affect less-developed nations where starvation and obesity sit strangely side by side, so that obesity is now demonstrating the attributes of a pandemic. In addition to the impact on personal and public health, obesity has huge macroeconomic consequences. In 2007, Foresight<sup>1</sup> estimated the total cost to the NHS in England of diseases related to an elevated body mass index (BMI) to be £17.4 billion. In 2009, the New Economics Foundation looked at the macroeconomic costs of several issues that could be remedied or prevented in the early years, which included obesity.<sup>2</sup> In the current climate

of public sector funding constraints, the need to establish an evidence base for low-cost interventions is critical.

We know that overweight children are more likely to become obese adults than their childhood peers of normal weight, and that obesity in adults appears to be causally associated with reduced life expectancy and with a range of serious long-term medical conditions, from osteoarthritis to type 2 diabetes and some cancers. So it is rational that this major public health problem should be tackled in the early years of life. Recent evidence indicates that in the UK there are ethnic differences, independent of social class, in the prevalence of childhood obesity, with children from some ethnic groups, notably Asian and black, at greater risk of obesity

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than others.<sup>3</sup> This, is in addition to the social class gradient,<sup>4</sup> which means that children from poorer families are more likely to become obese than those from more affluent families, thus contributing significantly to health inequalities.

In London, 32.6% of children leaving primary school at the age of 11 were overweight or obese in 2008/9.<sup>5</sup> The figure for 2009/10 is one in three (33.4%).<sup>5</sup> There is substantial variation in the prevalence of overweight and obesity within London, and in some boroughs about half the children leaving primary school at the age of 11 are overweight or obese. The proportion of overweight and obese children has risen relentlessly over the past two decades and London has the highest mean prevalence of overweight and obese primary school-aged children in England.

It remains government policy to address obesity by slowing down this harmful upward trend,<sup>6</sup> but the extent to which change should be brought about by government intervention or by local community and personal action remains a fraught topic. The recent public health White Paper in England, *Healthy Lives, Healthy People*,<sup>7</sup> uses the ladder of intervention introduced by the Nuffield Council on Bioethics<sup>8</sup> to put greater emphasis on local and personal responsibility. While government retains responsibility for improving and protecting the health of the population, it suggests in the latest White Paper that delivery will, as much as possible, be devolved to local level. Whether this approach could be effective for preventing child obesity is unclear. This is an area where evidence is thin, but tackling the ubiquitous *obesogenic* environment in which all our children are now being raised is likely to need the intervention of the state. Local action cannot control the behaviour of the food industry, for example, in determining access to healthy choices by shoppers. The concept of 'nudging' people towards healthier choices has also emerged recently<sup>9</sup> as an option potentially attractive to a government wishing to steer clear of excess intervention, although there is, as yet, no clear

evidence of the effectiveness of such strategies. The recent government publication for the consultation of an Outcomes Framework<sup>10</sup> for public health includes five domains for action, and within Domain 3, Health Promotion, healthy child weight is notably the first proposed outcome indicator, confirming government priority in recognizing the imperative to tackle unhealthy weight in children.

### PREVALENCE OF UNHEALTHY WEIGHT IN CHILDREN

Since it was established in 2005, the National Child Measurement Programme (NCMP) has weighed and measured school children in reception (four to five years) and Year 6 (10–11 years). Measurement is conducted using consistent criteria so that results from different schools and areas can be compared. Uptake of NCMP, although hesitant at the start, is now high, so that prevalence data from this source for overweight and obesity are now considered to be robust. Originally, the data were collected and analysed with no feedback to parents. Now, however, primary care trusts (PCTs) are expected to provide individual feedback on request to parents of children measured each year, together with signposting information to enable families to address overweight or obesity (often described euphemistically as 'very overweight'), while not medicalizing the finding other than in exceptional circumstances. Feedback to parents requires knowledge and sensitivity, so schools, PCT staff and others working with children need to understand the implications of healthy and unhealthy weight and how to deal with parents' very mixed reactions to the information they receive.

Against a backdrop of increasing prevalence of child obesity, emerging national policy to tackle obesity, and pressure to respond constructively to parents being told that their child is of unhealthy weight, in 2008 the London Regional Public Health Group commissioned pan-London work to build capacity to address this growing contemporary epidemic.

## METHODS

### Developing and delivering targeted interventions

An initial stocktake of London's 31 PCTs showed that they were at very different stages in developing plans to tackle childhood obesity as a public health issue. Some had already commissioned sophisticated intervention programmes, while others were still at the planning stage. Few had conducted a robust needs assessment. No PCT was aware of the existence of any interventions suitable for children in reception classes who were at risk of unhealthy weight, as identified through the NCMP.

Next we commissioned, in partnership with colleagues conducting work on child obesity for North West Strategic Health Authority, two rapid reviews of the literature to find out what might work: the first to look at using brief interventions for tackling obesity,<sup>11</sup> the second to consider effective community-based interventions for families with young children at risk of obesity.<sup>12</sup> Unsurprisingly, and perhaps despite the existence of National Institute for Clinical Excellence (NICE) guidance,<sup>13</sup> both of these reviews confirmed the dearth of relevant published and unpublished evidence. For example, while brief intervention is known to be effective in addressing tobacco use in adults,<sup>14</sup> there was little to indicate that extrapolation of similar methodology to tackle child obesity would be effective. We found no universal definition of brief intervention and so used the definition proposed through the literature review commissioned at the start of the project (Box 1).

Making best use of the thin evidence available, together with multi-professional academic and practical expertise drawn together from across London in focused working groups, three deliverables were developed:

1. A training programme for frontline workers to acquire the competencies needed when encountering children and their families for whom weight was considered a health risk.
2. Training people to deliver a community-based intervention for

families with children aged four to seven years at risk of unhealthy weight.

3. Developing and delivering a community-based intervention for families with children aged four to seven years at risk of unhealthy weight.

This paper reports on achieving the first deliverable and lessons learned. The second and third are written up briefly elsewhere,<sup>15</sup> with further papers in preparation. In summary, intervention 2 involved the recruitment of 30 members of the local workforce (from any sector) in four London boroughs, for a four-day intensive training programme in order to deliver the targeted intervention. Intervention 3 was the design, development and delivery of the family-based programme Creating Healthy Active London Kids (CHALK).

### Brief intervention training

Through the efforts of the multi-professional expert working group, a one-day brief intervention training programme was developed, suitable for anyone who works with children or families. The aim of the programme was to enable those trained to raise the subject of healthy vs unhealthy weight and to signpost parents to appropriate local services or facilities. The training programme is generic and transferable to any other region: the information about local prevalence and local facilities is added as bespoke content for each training location. Box 2 summarizes the learning outcomes of the brief intervention training programme.

Through our contact with obesity leads in PCTs, we had discovered existing widespread recognition of the need for training diverse staff groups who work with children and families, from NHS, local government and the third sector organizations, although very little effort had previously been made in most areas to meet these needs. The opportunity of easy access to this training was therefore welcomed by the PCTs that were approached to participate in the development and rollout of the training programme. Because of the clear social

### Box 1

#### Definition of brief intervention used throughout this project

1. Being provided by suitably trained 'professionals' and in a variety of settings.
2. Being opportunistic in nature.
3. Targeting individuals, families or groups.
4. Having limited duration and frequency (i.e. within the space of a single consultation session and no greater than four sessions).
5. Consisting of an initial identification of health issues and assessment of an individual's motivation and stage of behaviour change.
6. Incorporating negotiation, goal and forward-looking solution setting.
7. Permitting provision of advice, counselling and information.
8. Utilizing follow-up, reinforcement or referral as appropriate.

The above concept is appropriate for use in relation to brief overweight and obesity management interventions for primary school children and their families.

Source: West and Saffin, 2008

### Box 2

#### Brief intervention training – learning outcomes

1. To recognize your own opportunities for promoting healthy weight in children.
2. To know the causes and consequences of overweight in children.
3. To know how diet and nutrition can help to achieve healthy weight.
4. To know how physical activity can help to achieve healthy weight.
5. To be able to raise the issue of healthy weight with children and families.
6. To be able to signpost children and families to appropriate support and services.
7. To be able to engage in a self-reflective log with mentoring support, as required.
8. To cascade the learning points to others in your organization.

class gradient in childhood and adult obesity, we tried to target PCTs covering less affluent parts of London first, where public health benefit might be greatest and whereby health inequalities may potentially be narrowed. A more targeted approach was taken in the more affluent boroughs where pockets of deprivation exist. Participating PCTs were invited to participate in the programme at no cost, apart from the modest costs associated with inviting participants and identifying a suitable venue. The development and delivery of the training programme, catering and training costs were all met by the sponsoring Regional Public Health Group.

As the causes of obesity are multifaceted and we live in an obesogenic environment, the response needs to engage with all sectors. A key aim, therefore, was the engagement of diverse participants, both health and non-health professionals, from the public and independent sectors. The Department of Health's *Healthy Weight, Healthy Lives: A Toolkit for Developing Local Strategies*<sup>16</sup> outlines a list of key local leaders in delivering the obesity strategy. It includes the usual suspects of health visitors, children's centre managers, school nurses and health trainers, but also leisure providers, youth workers, health walk leaders, voluntary

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and community sector groups and the commercial sector – our participants were all these and more.

The programme was targeted at staff working in local authority, primary, secondary and community healthcare, the commercial sector and the third sector. Recruitment was initially via PCTs (the toolkit suggests 'strategic leadership of PCT'<sup>16</sup>), while offering our support to engage with a wider workforce. Some PCTs wished to use their existing networks with their local voluntary service council (VSC) to recruit, but due to capacity issues at the PCT and local VSC, were unable to engage/recruit. For this reason, we quickly diversified our recruitment strategy to engage directly with the third sector, chiefly via the Healthy Living Alliance (HLA) – which leads an active network of health-orientated voluntary and community sector organizations across England. This enabled us to engage large numbers of suitable staff and volunteers from the third sector.<sup>17</sup>

Trainers to deliver the brief intervention programme were recruited following limited dissemination of a person specification. Applicants were experienced health educators and were asked to role play a short extract from the programme as part of the selection process. Those who met the standard subsequently completed an induction day organized by the project team and were then included in a bank of trainers and called upon to deliver training during the course of the project. Each training session was led by two trainers. Whenever possible, trainers from complementary backgrounds were paired up so that, for example, a nutrition specialist and a physical activity specialist would deliver the programme together. In all, we held a bank of 10 trainers.

The one-day brief intervention training programme was piloted in one PCT in west London, following which adjustments were made and the programme was pre-tested with an expert panel prior to larger-scale rollout across 13 PCTs. The adjustments related to the time spent on different elements of the programme and resulted in a better

balance of content as well as appropriate terminology for the intended wide audience. The programme requires active participation by those attending and there was evidence, even at the pilot stage, of co-learning among participants from diverse occupational and social backgrounds. A rather radical decision had been taken by the project steering group to train together participants from very varied backgrounds. There was little relevant evidence to aid decision making as to whether or not this was appropriate, but almost universally positive feedback from both trainers and participants vindicated the decision. In the event, we ran two to four training days per PCT, always with a rich mix of participants. We also asked participants to complete a reflective log as part of their learning, which they were encouraged to return to the project team. The purpose of this was twofold: to issue a certificate of completion of training and for evaluation of the programme.

### RESULTS

Our expectation that some groups, particularly nursing and medical staff, might view themselves as already competent to deliver this brief intervention, was largely incorrect and much of the demand for training came from health professionals working directly with children and their families. While some participants knew more than others about specific aspects of child health and weight, prior to training they did not possess comprehensive competencies to tackle the issue effectively and sensitively with families – for example, a nutritionist would enlighten the group with creative, affordable and simple recipe ideas, but a junior school teaching assistant could explain how to motivate six year olds to be physically active.

During the pilot, we discovered that many participants (including health professionals) had difficulty understanding BMI in children. While it is undesirable and inappropriate for everyone who works with children to be measuring them, we believe that people who work with children and who may offer brief intervention to parents in

regard to healthy weight, should be able to explain BMI to a parent who asks them, particularly given that this is the measure used for NCMP feedback. We did not conduct a formal analysis of learning needs, but it became apparent that the level of numeracy required for the use and interpretation of standard height and weight charts for measuring children's BMI was outside the comfort zone of a large proportion of participants. We therefore developed, in partnership with Harlow Printing, and then commissioned from them a simple 'wheel' for indicating low, normal and overweight in boys and girls at different ages, which has proven useful in the field.

### DISCUSSION

During the rollout of the project, over 560 people – from at least 88 different occupations across all sectors in 13 London PCT areas – completed brief intervention training. Responding to participants' feedback, we put in place telephone and email helplines to support anyone conducting brief intervention post-training. The most frequent enquiries were about using the material to cascade training in participants' own organizations, which we were happy to encourage, or asking for delivery of further training sessions in their locality. At the end of the Regional Public Health Group-sponsored programme, 95% of participants reported feeling confident enough to raise the topic of healthy weight following training.

The completed reflective logs, which were received from only 10% of participants in the initial project, indicated that respondents were mostly carrying out brief interventions in the course of their usual work/daily activities. Many had also given formal or informal presentations to their colleagues about their training and had cascaded knowledge about the use of brief intervention in the context of child obesity at regular internal team/unit meetings etc. Having learned from the initial low uptake of the reflective log, subsequent delivery of the programme has been accompanied by an agreement with commissioners to ensure reminders and follow-up support for participants.

Evaluation showed the added value that the learning gave to participants themselves, whose own newly raised awareness influenced them to make changes for the benefit of their own families. The training programme continues to be available, updated regularly, to PCTs, local authorities and other organizations on request. Since the completion of the project, the training programme has been delivered to other PCTs, mainly in London, and also to some local authorities, with the costs of the programme being met on a not-for-profit basis by the organization commissioning the programme.

While costs varied in different locations, due to variables such as number of participants, accommodation and catering, for example, the actual course, after research, design and development, was delivered 'on the ground' for a mean cost of around £50 per participant.

## CONCLUSION

The intervention described in this paper provides an opportunity for the new public health presence in local

government, together with the NHS, to meet the need for locally sensitive commissioning, which will build local capacity to tackle a major public health challenge, in this case, obesity. We note that in its recent consultation document, *Healthy Lives, Healthy People: Consultation on the Funding and Commissioning Routes for Public Health*,<sup>18</sup> the government is proposing that local authorities will be responsible for commissioning affordable local initiatives to prevent and address obesity, and working alongside the NHS locally, which will be responsible for brief interventions concerning weight that take place in primary care settings.

In the current climate of public-sector funding constraints, we hope this type of low-cost, evaluated intervention for ensuring local capacity for tackling childhood obesity will be attractive to local authorities keen to take seriously their public health responsibilities, while at the same time growing the public health capability of their local grass roots workforce.

For more information, visit <http://www.healthychildren.org.uk> or <http://lphn.lshtm.ac.uk>.

## ETHICAL APPROVAL

The work was approved by LSHTM Ethics Committee – approval no. 5389 [2008].

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