Research Report

Title: Evaluating public health interventions for obesity from the perspective of local health authorities

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No: 001

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The Policy Research Unit in Economic Evaluation of Health and Care interventions is funded by the Department of Health Policy Research Programme. It is a collaboration between researchers from the University of Sheffield and the University of York.

The Department of Health’s Policy Research Unit in Economic Evaluation of Health and Care Interventions is a 5 year programme of work that started in January 2011. The unit is led by Professor John Brazier (Director, University of Sheffield) and Professor Mark Sculpher (Deputy Director, University of York) with the aim of assisting policy makers in the Department of Health to improve the allocation of resources in health and social care.

This is an independent report commissioned and funded by the Policy Research Programme in the Department of Health. The views expressed are not necessarily those of the Department.
Introduction

The aim of the Policy Research Unit in Economic Evaluation in Health and Care Interventions is to assist policy makers in the Department of Health (DH) to improve the allocation of resources through high-quality research. As part of the agreed programme, the unit will be undertaking applied research on obesity with special reference to evaluating public health interventions for obesity from the local health perspectives (Annex 1).

The focus on interventions at the local level emanates from the government’s policy of local authorities in increasing the wellbeing of their population as articulated below:

“Local government is best placed to influence many of the wider factors that affect health and wellbeing.”[1]

This paper has been produced on request from the DH and is designed as a discussion document intended for dissemination to policy makers to help identify areas around which joint discussions would be useful in terms of identifying potential ideas, issues and questions relating to the project remit.

Scoping searches

In February and March 2011, we conducted a series of scoping searches covering both clinical databases and the internet (see Annex 2 for detailed results and methods). The object was to identify interventions or studies, devised to prevent or manage obesity, and funded by local authorities or public bodies in the Sheffield area. Given the local and specialist nature of the materials sought, the majority of relevant data are unlikely to be identified in the large health care databases such as Medline. Our findings from the scoping searches suggest that these data will be found by searching the internet to identify key schemes in a specific area and through contacting principal staff involved with the schemes. The data we identified through this strategy were not available on health care databases. We have also identified key specialist databases such as the Evidence for Policy and Practice Information (EPPI) centre database which was produced as an EPPI centre report output on large-scale and local schemes to attain healthy weights among obese and overweight children in England.[2]

Similar approaches have been successfully used in other reviews of social interventions where the most efficient methods were to search a few key resources (specialist databases) and where internet publications were found to make a substantial and unique contribution to the total set of relevant evidence.[3] Our search approach for the review proper will focus on this method of evidence identification, supplemented with an overview of the academic literature using the process detailed in Annex 2.
Summary of results from scoping searches

Our scoping database searches identified 11 potentially useful references describing interventions designed to prevent or reduce obesity (Table 1, Annex 2) and 16 reviews which included at least one UK study describing a public health intervention for obesity reduction or prevention (Table 2, Annex 2). The Google searches identified four relevant schemes in Sheffield which have either been completed or are ongoing, and two organisations that could be useful in terms of direction to other relevant projects. Although the searches did not identify any data or reports online, we understand through follow-up discussions with key personnel that some of these could be made available for use in this project (see Annex 3).

In addition, we have been informed of a Public Health Guidance topic in obesity, funded through NICE, which was recently suspended before completion.[4] The title of the project: “Preventing obesity using a whole-system approach at local and community level”, suggests that any research conducted prior to suspension would be informative for the current project. Three literature reviews were conducted and these are in the final stages of submission to academic journals. While we have been unsuccessful to date in gaining access to these reports, we believe they would be extremely informative in terms of discussing the next steps in the current project and in identifying sources of evidence.

Potential Issues

Our initial discussions with key contacts involved in local authority and public funded interventions and schemes indicate:

- while some reports may be in the public domain, access to others could potentially be difficult
- there are a wide range of interventions funded through local bodies
- the level and detail of evidence in terms of benefits (e.g. changes in weight) of interventions is poor / is often not collected
- study populations are diverse and the majority of interventions are targeted at children
- the volume of literature exploring the cost-effectiveness of local interventions is scarce.

Potential research questions

1. Are publically funded interventions used in the management and prevention of obesity at the local level beneficial or cost-effective?

While there are several initiatives to manage and prevent obesity at the local, there is no evidence base clearly demonstrating which interventions make a difference. This need is reflected as follows:
“There is patchy use of evidence about ‘what works’. Despite much activity at both national and local levels, further progress is needed to build and apply the evidence base for ‘what works’ and to ensure that resources are used more effectively and are linked to clear health outcomes.” [1] page 27

Using the Public Health Guidance systematic reviews as a basis (if made available), a comprehensive review of local interventions (Sheffield) will be carried out using systematic review methods [4] [reference NICE PH guidance]. Our review would focus on the Sheffield area initially and could potentially be extended to include a wider region or an area with different demographic or geographic characteristics. Suggestions are welcome as to potential regions that would be useful. In addition, as we stated earlier we are aware of three literature reviews conducted for a NICE Public Health Guidance topic in obesity, thus the results from our local review would be considered in the context of the broader literature both from the existing Public health reviews and supplementary searches undertaken by ourselves of the literature. The cost-effectiveness of interventions identified will be assessed based on the evidence that is available.

Sub-questions that could potentially be explored include:

- What are the wider social benefits of obesity programmes? How have they been measured? Can these measures be improved on?
- Can any conclusions be reached on optimal length and characteristics of programmes that have been shown to work?
- Is there sufficient evidence to assess the cost-effectiveness of interventions in obesity provided by local authorities?
- What evidence is required to assess the cost-effectiveness of interventions in obesity provided by local authorities?
- What are the generic and specific problems in assessing cost-effectiveness of intervention in obesity at a local level?
- What are the most useful outputs from economic models in obesity from the perspective of local authorities?
- What is the cost-effectiveness of interventions provided to prevention obesity?
- What is the cost-effectiveness of interventions provided to reduce or maintain obesity?
- What recommendations can be made with regard to improving cost-effectiveness analyses in obesity?
Next steps

We would be grateful for any feedback and steer from Department of Health colleagues working on obesity to help refine our research question and suggest alternatives that are in line with current policy directions.

Upon receipt of feedback from colleagues at the Department of Health, we will revise the research questions and write up a more detailed proposal with timelines for delivery of outputs.
Annex 1: Project description from the contract

Project 1: Evaluating public health interventions for obesity from the perspective of local health authorities

Policy issue

Public health interventions and preventative services typically have significant effects outside the health care system on the wider economy and other budget constrained sectors. For example, it has been suggested that while the NHS costs attributable to obesity could reach £10 billion per year by 2050, the wider cost to society and business could be £49.9 billion. The problem for policy making is that it is not clear how or whether a broader social perspective, which would incorporate all effects on all sectors, could be implemented within an economic evaluation, and how decisions resulting from such a perspective should be made.

Currently most economic evaluations of public health interventions for agencies like NICE tend to take a national perspective. Public health interventions are likely to be increasingly the responsibility of a local Public Health Service in the future and so another important methodological challenge is to make evaluations relevant and useable at the level of Local Authorities.

The application

The need to assess the cost-effectiveness of public health interventions using rigorous analytical methods was advocated in the Wanless Report in 2004. This project will develop and demonstrate a multi-sector approach to economic evaluations in public health by examining the evidence of public health interventions in obesity provided by local authorities and public funded bodies. A de novo economic model will be developed to demonstrate evidence based strategies in obesity proven to optimise the allocation of resources at a local community level to support local decision making.

The project provides an opportunity to build on existing work for the DH on the impact of alcohol pricing and a recent report on the principles of how the impacts on each sector can be valued in a way that is consistent with existing budgets. This offers the possibility of policy decisions based on a potential compensation test; accepting the intervention if, in principle, those sectors which gain from the intervention could compensate those that lose.

Methods

We will conduct a literature review of existing models funded by public sector organisations within local communities which are designed to reduce or prevent obesity. For example, programmes such as ‘The Focus on Food, Food and Health strategy’ and ‘City on the move! A Physical Activity...
Strategy for Sheffield’ provided to the local community by NHS Sheffield. In the initial period we will focus on two distinct geographical areas (South Yorkshire and a second to be agreed).

The results of the literature review will be integrated into a modelling framework building on existing methodologies and economic models in obesity. A local multi-sectoral perspective will be taken when assessing the costs associated with the interventions. To ensure the outcomes are relevant to commissioners such as Local Authorities we will conduct a scoping workshop with key official personnel utilising existing connections with local bodies.

The model will be used to examine a range of possible interventions to combat obesity. In addition to examining the costs and benefits of different interventions, an objective will be to consider the impacts on the distribution of health and future projected cost to society and consideration of sub-groups who might stand to gain or lose the most will also be investigated.
Annex 2: Proposed Search Methods and Initial Scoping Search

Search Methods

The primary aim is to review evidence on public health interventions that are local authority funded aimed at reducing or preventing obesity. In addition, the review is limited to examining the evidence in two geographical areas, with Sheffield being the first area (a second area is to be discussed). The standard approach to searching requires the definition of a clearly focused search question and extensive searches in an attempt to achieve a comprehensive retrieval of studies that match the question (Lefebvre 2009). The nature of the topic under review poses two problems in applying this approach.

Firstly there is a practical problem in terms of the location of the types of evidence required, which will likely reside in local authority reports that may or may not be freely available. If such information is freely available, it will not be located in health and social care electronic databases, and thus extensive database searching will not retrieve the required data. Secondly, the literature on the topic of obesity is extensive, and much will not be relevant to the review given the restrictions on geographical area and the types of evidence. In order to accommodate these considerations, an iterative approach will be taken, using the different search techniques described below.

Four iterations of searching are planned. These are described below and are summarised in Figure 1.

First iteration (this stage was conducted during February and March 2011 as a scoping exercise to inform both future search strategies and to identify the type and volume of evidence potentially available)

- Focused Medline and Social science citation searches, aimed at high precision, combining terms relating to obesity, interventions and limited to UK studies only
- Focused Medline and Social science citation searches, aimed at high precision, to identify reviews relating to obesity and interventions
- Focused Google search to identify schemes funded through public bodies aimed at reducing or preventing obesity in the Sheffield area.

Second iteration

- Extension to Database of promoting health effectiveness reviews (DoPHER), Trials Register of Promoting Health Interventions (TRoPHI) and EPPI centre databases (EPPI Centre), of focused searches combining terms to obesity, interventions and limited to UK studies only
- Citation searching and hand searching of key papers provided identified as being of possible relevance through 1st iteration searches.
Contact with key experts of Sheffield obesity reduction/prevention schemes to locate reports, data and contact details for additional projects

**Third iteration**

- Focused searches, aimed at high precision, of database searching, combining, combining terms relating to obesity, interventions and limited to UK studies only until no new studies are identified.
- Contact with further experts for Sheffield obesity reduction/prevention schemes to locate reports and data and other contact names

**Fourth iteration**

- Continuation of contact with further experts for Sheffield obesity reduction/prevention schemes to locate reports and data and other contact name

**Other search activities**

Studies were also identified through experts acting as advisers to the project.
Figure 1: Search process

1st search iteration
- Medline and SSCI* search for PH interventions to reduce/prevent
- Medline and SSCI* search for reviews on PH obesity interventions
- Google search for interventions to reduce/prevent obesity in Sheffield

2nd search iteration
- Additional databases using obesity search terms
-Author and citation searching and reference list checking
-Contact experts for Sheffield schemes: obtain reports, information on potential data availability; details of additional schemes/projects names

3rd search iteration
- Until data saturation/no further studies are found
- Contact further experts
- Additional databases using obesity search terms

4th search iteration
- No further relevant Sheffield schemes/contacts found

PH= Public health; SSCI= Social science citation index

= search activity

= link indicating results of one search activity informing scope of another search activity in next search iteration

= end of search activity
Scoping Searches Results

We have undertaken scoping searches to identify literature to identify schemes funded through public bodies which aim to reduce or prevent obesity. All searches were limited to research published in the UK and in the last ten years. See the Appendix for details of the approaches taken. The scoping searches consisted of the following:

1) Targeted searching for schemes funded through public bodies which aim to reduce or prevent obesity in Sheffield

Four relevant schemes in Sheffield which have been completed or are ongoing were identified using Google searching:

- **Let’s change for Life:** [http://www.sheffield4l.org.uk/](http://www.sheffield4l.org.uk/)
- **WatchIT:** [http://www.sheffield.nhs.uk/services/watchit.php](http://www.sheffield.nhs.uk/services/watchit.php)
- **SHINE:** [http://www.shine4u.org/index.php](http://www.shine4u.org/index.php)

As well as identifying specific schemes ongoing in the Sheffield area, the Google search identified two organisations which appeared useful in terms of directing us to relevant research:


**Follow-up from Google search**

For each scheme, little useful information, data or reports were found online. However, we have identified a number of key contacts in the Sheffield area and have started the process of identifying key contacts for each scheme. So far, we have looked into the key contacts for two schemes: Let’s change for Life and Go Sheffield.
1. **Targeted searching for interventions to prevent or reduce obesity**

This has identified 56 unique references (see Figure 2 in Appendix). Of these, while 11 relevant references have been identified (see Table 1 for a summary), none were in the Sheffield district.

**Table 1: Summary of relevant references from targeted intervention search**

<table>
<thead>
<tr>
<th>Author/ID/Status</th>
<th>Title</th>
<th>Population</th>
<th>Intervention</th>
<th>Setting</th>
<th>Outcomes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gray_1 Completed</td>
<td><strong>Addressing male obesity: an evaluation of a group-based weight management intervention for Scottish men</strong></td>
<td><strong>Scottish men</strong>&lt;br&gt;Mean age = 50.9 (23-74 years)&lt;br&gt;[Comparator group of men who did not participate in intervention]</td>
<td><strong>Camelon weight management group programme: eating plans, exercise goals, drinking goals, recipes for healthy meals, food labels....</strong></td>
<td><strong>Men’s Health clinics in NHS Forth Valley</strong></td>
<td><strong>Short-term weight loss (some data for long-term weight loss)</strong>&lt;br&gt;Experience of participants</td>
</tr>
<tr>
<td>Jolly/69 Ongoing</td>
<td><strong>A randomised controlled trial to compare a range of commercial or primary care led weight reduction programmes with a minimal intervention control for weight loss in obesity: the Lighten Up trial</strong></td>
<td><strong>Aged ≥ 18 years, with a raised BMI recorded within their primary care notes within the previous 15 months.</strong></td>
<td><strong>RCT comparing a range of 12-week commercial and NHS weight reduction programmes with a comparator group who are provided with 12 vouchers enabling free entrance to a local leisure centre.</strong>&lt;br&gt;The weight reduction programmes are:&lt;br&gt;(i) Weight Watchers,&lt;br&gt;(ii) Slimming World,&lt;br&gt;(iii) Rosemary Conley&lt;br&gt;(iv) a group-based dietetics-led programme (Size Down)&lt;br&gt;(v) general practice one-to-one counselling,&lt;br&gt;(vi) pharmacy-led one-to-one counselling&lt;br&gt;(vii) choice of any of the 6 programmes</td>
<td><strong>Participants are registered with general practices in South Birmingham Primary Care Trust</strong></td>
<td><strong>The primary outcome is weight loss at programme-end (3 months). Secondary outcomes are weight-loss at one year, self-reported physical activity at 3 and 12 months follow-up and percentage weight-loss at 3 months and one year.</strong></td>
</tr>
<tr>
<td>Author/ID/Status</td>
<td>Title</td>
<td>Population</td>
<td>Intervention</td>
<td>Setting</td>
<td>Outcomes</td>
</tr>
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</tr>
<tr>
<td>Maynard/34</td>
<td>Developing obesity prevention interventions among minority ethnic children in schools and places of worship: The DEAL (DiEt) and Active Living) study</td>
<td>Ethnic minority children aged 10-12 and their parents</td>
<td>Diet, physical activity or diet and activity sessions e.g. five a day fruit and veg interactive knowledge session plus small group work</td>
<td>Two settings compared: school vs. place of worship</td>
<td>Perspectives of parents, grandparents, teachers and religious leaders are also included-basis for pragmatic RCT later. Some efficacy data-relates to knowledge etc</td>
</tr>
<tr>
<td>McQuigg/53</td>
<td>Empowering primary care to tackle the obesity epidemic: the Counterweight Programme</td>
<td>Obese adults (18–75 y)</td>
<td>Complex intervention to empower clinicians and patients in weight management</td>
<td>Primary care- GP practices in 7 UK regions: Aberdeen, Bath, Birmingham and Solihull, Glasgow, Hammersmith (London), Leeds and Luton</td>
<td>Weight loss- immature results reported in this paper</td>
</tr>
<tr>
<td>Melville_4</td>
<td>A pilot study of the TAKE 5 weight loss intervention for adults with obesity</td>
<td>54 obese adults (no further info-conference abstract)</td>
<td>TAKE5 weight loss intervention (multi-component)- includes personalised diet, deficit and behavioural techniques to promote increased physical activity and healthy dietary patterns</td>
<td>??</td>
<td>Weight reduction Level of physical activity (accelerometer).</td>
</tr>
<tr>
<td>Pontin/71</td>
<td>Does a school based educational programme aimed at reducing consumption of carbonated drinks prevent excessive weight gain in children?</td>
<td>Children aged 7-11</td>
<td>four 1 hour sessions (1 each term) that focused on discouraging consumption of carbonated drinks.</td>
<td>6 junior schools in the UK.</td>
<td>BMI change, proportion of overweight and obese children, self-report of fizzy drink consumption.</td>
</tr>
</tbody>
</table>
| Read/58          | A primary care intervention programme for obesity and coronary heart | Adult patients between the ages of 18 and        | Education and support group sessions                                                                | Three health centres in the north locality of                           | Weight loss
<p>|                  |                                                                      |                                                 |                                                                                                         | Weight loss                                                              | Waist                                                                  |</p>
<table>
<thead>
<tr>
<th>Author/ID/Status</th>
<th>Title</th>
<th>Population</th>
<th>Intervention</th>
<th>Setting</th>
<th>Outcomes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sacher/32</td>
<td>Randomized Controlled Trial of the MEND Program: A Family-based Community Intervention for Childhood Obesity</td>
<td>Parents and children attended eighteen 2-h group educational and physical activity sessions held twice weekly in sports centers and schools, followed by a 12-week free family swimming pass.</td>
<td>Delivered at five UK sites by separate teams of health, social, education, and exercise professional</td>
<td>Waist circumference, BMI, body composition, physical activity level, sedentary activities, cardiovascular fitness, and self-esteem were assessed</td>
<td></td>
</tr>
<tr>
<td>Sahota/23</td>
<td>Randomised controlled trial of primary school based intervention to reduce risk factors for obesity</td>
<td>Primary school children</td>
<td>Primary school-based intervention, which included teacher training, modification of school meals, the development of school action plans targeting the curriculum, PE, tuck shops and playground activities.</td>
<td>10 primary schools in Leeds, UK</td>
<td>Fruit and Vegetable consumption, Sedentary behaviour, Vegetable consumption</td>
</tr>
<tr>
<td>Warren/59</td>
<td>Evaluation of a pilot school</td>
<td>Aged 5–7 year</td>
<td>Be Smart was a school and</td>
<td>Three primary</td>
<td>Changes in rates of</td>
</tr>
</tbody>
</table>
2. **Targeted searching for reviews of interventions to prevent or reduce obesity**: identified 330 unique references (Figure 2, Appendix). Of these, 16 reviews were identified which each included at least one UK study which investigated the effectiveness of a public health intervention for obesity reduction or prevention (see Table 2 for a summary). However, none were specifically based in the Sheffield area.

**Table 2: Reviews included at full-text level**

<table>
<thead>
<tr>
<th>Author/ID</th>
<th>Title</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>Avenell A_324</td>
<td>Systematic review of the long-term effects and economic consequences of treatments for obesity and implications for health improvement. [Review] [335 refs]. Health Technology Assessment (Winchester, England) 2001 May;8(21):</td>
<td>It may be useful to obtain some insights on parameters for modelling. A Markov model was adopted to examine the cost-effectiveness of a low-fat diet and exercise intervention in adults with obesity and impaired glucose tolerance. Orlistat, sibutramine and metformin appear beneficial for the treatment of adults with obesity. Exercise and/or behaviour therapy appear to improve weight loss when added to diet. Low-fat diets with exercise, with or without behaviour therapy, are associated with the prevention of type 2 diabetes and hypertension. Long-term weight loss in epidemiological studies was also associated with reduced risk of developing diabetes, and may be beneficial for cardiovascular disease. Low-fat diet and exercise interventions in individuals at risk of obesity-related illness, such as diabetes, are of comparable cost to drug treatments.</td>
</tr>
<tr>
<td>Brown_228</td>
<td>Literature review of nursing practice in managing obesity in primary care: developments in the UK</td>
<td>Definitely include references to PH interventions in UK</td>
</tr>
<tr>
<td>Author/ID</td>
<td>Title</td>
<td>Comments</td>
</tr>
<tr>
<td>------------------</td>
<td>----------------------------------------------------------------------</td>
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</tr>
<tr>
<td>Cook-Cottone_416</td>
<td>A Meta-Analytic Review of Obesity Prevention in the Schools: 1997-2008</td>
<td>To include 2 studies quoted in it pertaining to the UK (out of 40 studies) (James et al. 2004; Sahota et al. 2001)</td>
</tr>
<tr>
<td>Doak_284</td>
<td>The prevention of overweight and obesity in children and adolescents: a review of interventions and programmes</td>
<td>Includes one UK study- Sahota et al (although this has already been identified).</td>
</tr>
<tr>
<td>Enwald_100</td>
<td>Preventing the obesity epidemic by second generation tailored health communication: an interdisciplinary review</td>
<td>To include 1 study from Scotland (Papadaki and Scott 2008) 23 studies ; Scotland n = 1</td>
</tr>
<tr>
<td>Kamath_181</td>
<td>Behavioral Interventions to Prevent Childhood Obesity: A Systematic Review and Metaanalyses of Randomized Trials</td>
<td>34 studies Identified 3 UK based (think they’ve already been identified though- James, Sahota, Warren)</td>
</tr>
<tr>
<td>Katz_178</td>
<td>Strategies for the prevention and control of obesity in the school setting: systematic review and meta-analysis</td>
<td>Identified 3 UK based (think they’ve already been identified though- James, Sahota, Warren)</td>
</tr>
<tr>
<td>Kropski_210</td>
<td>School-based Obesity Prevention Programs: An Evidence-based Review</td>
<td>Identified 3 UK based (think they’ve already been identified though- James, Sahota, Warren)</td>
</tr>
<tr>
<td>Paul-Ebbohimhen_128</td>
<td>A Systematic Review of the Effectiveness of Group</td>
<td>One UK study- Jones et al</td>
</tr>
<tr>
<td>Saunders_234</td>
<td>Preventing obesity in pre-school children: a literature review.</td>
<td>To include 1 study from Scotland (Armstrong and Reilly 2002) Scotland n = 1 (USA n = 4; Thailand n = 1)</td>
</tr>
<tr>
<td>Small_247</td>
<td>Prevention and Early Treatment of Overweight and Obesity in Young Children: A Critical Review and Appraisal of the Evidence</td>
<td>One UK study- Sahota et al (already identified)</td>
</tr>
<tr>
<td>Wareham_301</td>
<td>Physical activity and obesity prevention: a review of the current evidence</td>
<td>One UK study-MacDonald et al</td>
</tr>
<tr>
<td>Ciampa_75</td>
<td>Interventions aimed at decreasing obesity in children younger than 2</td>
<td>At least one UK study</td>
</tr>
<tr>
<td>Author/ID</td>
<td>Title</td>
<td>Comments</td>
</tr>
<tr>
<td>---------------</td>
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</tr>
<tr>
<td>Hesketh_118</td>
<td>Interventions to prevent obesity in 0-5 year olds: an updated systematic review of the literature</td>
<td>At least one UK study</td>
</tr>
</tbody>
</table>
Appendix: Search methods and flow diagrams

**Google Search**

a) 'obesity prevention' Sheffield  
b) 'obesity reduction' Sheffield  

The searches were limited to Language: English and Region: United Kingdom. The first 100 results were scanned for relevant hits. Scanning would have continued for further results but very few relevant hits were being found by page 10 of the results. The most useful results were retrieved from search a) with search b) retrieving a large number of hits about surgical treatment for obesity. Google was also searched using the names of the relevant schemes identified in a) and b).

**Targeted searching for studies reporting on relevant interventions**

Specific searches were undertaken on Medline and Medline in process and Social Science Citation Index (SSCI) to identify reports of the effectiveness of public health interventions for the prevention or reduction of obesity.

**Medline and Medline in process search (adapted for SSCI)**

1. obesity.ti.  
2. (intervent$ or program$).ti.  
3. 1 and 2  
4. (UK or England or Scotland or Ireland or Wales or United Kingdom).in.  
5. 3 and 4  

**Targeted searching for reviews on interventions to prevent or reduce obesity**

1. obesity.ti.  
2. review.ti.  
3. 1 and 2
Figure 2: Results from intervention search

71 references

56 unique references examined at title level

46 references examined at abstract level

30 references examined at full-text level

11 reporting primary research
   [8 completed and 3 ongoing]

15 excluded studies

3 obesity reviews

1 review which identified another primary study
Figure 3: Results of reviews search

- 434 references
  - 11 duplicates with intervention search
  - 93 duplicates from SSCI & Medline
- 330 unique references examined at title level
  - 278 excluded at title
- 53 references examined at abstract level
  - 17 excluded at abstract level
- 36 references examined at full-text level
  - 16 includes
  - 5 maybes – need to determine if include any UK studies
  - 15 excludes
ANNEX 3: Example of potential leads from a follow-up discussion with a key contact

Notes from meeting March 23, 2010

Attendees: Ben Anderson (Change4Life), Roberta Ara, Diana Papaioannou, Anju Keetharuth (ScHARR)

| Tier 0 | Change 4 Life; funded through DoH  
This is a population level strategy (mostly focused on kids but does involve adults too) which involves numerous strands including:  
• Breastfeeding: mothers education & making Shef more Bfeed friendly environment  
  (interim report is available – fairly +ve findings, difficulty in relating outcomes to levels of obesity)  
• Schools: stay in school @ breaks; nutrition, growing, cooking, exercise etc. NCMP-reception & Yr6 targets – contact: Robert Copeland@shu (Bethan Plant, Julie Breaman) Report due out July 2011  
  Physical Component – either part of the School strand or a separate theme - One hour a day physical activity at school. After an increasing trend in recent years, the data demonstrates a plateau in proportion of obese children  
• Weight management: providing training to professionals & carers |
| Tier 1 | Primary Care level  
Training for GP to tackle/prevent obesity – no specific interventions here. Because this is loosely defined in QOF, the only data available is a register of obese people in the practice. These data are poor and obese patients will only be identified if they attend the practice and/or measurements are collected, thus will not have full set for all patients. |
| Tier 2 | Specialist weight management services  
Numerous themes & schemes. More details below |

**Tier 2 details**

<table>
<thead>
<tr>
<th>Projects</th>
<th>Funded by</th>
<th>Interventions</th>
<th>Population</th>
<th>Status</th>
<th>Comments</th>
</tr>
</thead>
</table>
| Way Ahead | DH PCT | Multidisciplinary 12 week: behaviour & lifestyle, dietetics With 6m fup | Adults | Started Nov 2010 | Data collection: 12 weeks (starting to emerge)  
May be able to gain access to these data. |
| Watch It (Zest) | DH PCT | Zest provide the exercise for children  
To investigate: How are children identified referred? | Children | Has been going on for two years | Some data available – possibly not BMI/weight.  
May be able to gain access to these data. |
| (to replace Watch it) | DH PCT | | Children | Tender stage | |
| Weightwise Barnsley | PCT | 10 week course on Weight management (excluding) | | | Data available but not fantastic  
Contact: Alison Milbourne/ |
<table>
<thead>
<tr>
<th>Location</th>
<th>Provider</th>
<th>Activities</th>
<th>Outcomes</th>
<th>Contact Info</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rio</td>
<td>Rotherham PCT</td>
<td>Weight management (medical, behavioural, onsite gym for those on the scheme) Plus pharma for some (n=1100)</td>
<td>Has been operating for 2 years officially (plus 3-4 years before that)</td>
<td>Contact: Dr Matt Capethorne, Clifton Medical Centre and Rotherham Institute of Obesity</td>
</tr>
<tr>
<td>Health champions</td>
<td>DoH PCT</td>
<td>Breastfeeding, exercise, etc. The remit is due to be expanded from 2012 to cover maternal nutrition, breastfeeding, weaning etc.</td>
<td>All</td>
<td>Ongoing</td>
</tr>
<tr>
<td>Healthy towns</td>
<td>DH funded</td>
<td>School nutrition: stay on site, have school meals</td>
<td>Children</td>
<td>Improved behaviour and increased physical activity</td>
</tr>
<tr>
<td>Barnsley 2008</td>
<td>PCT funding</td>
<td>Joint Health and planning training / Active travel (walk/bike)</td>
<td>Not sure</td>
<td>Contact: <a href="mailto:Alan.West@Barnsley.PCT.nhs.uk">Alan.West@Barnsley.PCT.nhs.uk</a></td>
</tr>
<tr>
<td>Activity Sheffield</td>
<td>Sheffield city council (Carol Weir &amp; Paul Bissel?)</td>
<td>Physical exercise Aim to achieve weight loss</td>
<td>ALL</td>
<td>Not sure</td>
</tr>
<tr>
<td>MEND MINI-MEND (MM not)</td>
<td>social enterprise (from one of the London Unis-</td>
<td>Weight management Motivation Exercise</td>
<td>ADULTS – this is work is starting</td>
<td>Ongoing</td>
</tr>
</tbody>
</table>

Sharon Stoltz
<table>
<thead>
<tr>
<th>Sheffield)</th>
<th>commercialised and franchised) Lottery finding National programme</th>
<th>Nutrition Do-it</th>
<th>7-14yrs &lt;7yrs</th>
</tr>
</thead>
<tbody>
<tr>
<td>SHINE</td>
<td>social enterprise (charity/not public funding)</td>
<td>Work with schools</td>
<td>‘Trouble children’ Looked after children</td>
</tr>
<tr>
<td>Cook and Eat</td>
<td>Sheffield Wild Life Trust</td>
<td>Cooking skills</td>
<td>Completed Decommissioned</td>
</tr>
<tr>
<td>Bariatric Surgery</td>
<td>Yorks&amp;Humber PCT</td>
<td>Contact Vicky Woodhead</td>
<td>Have data</td>
</tr>
</tbody>
</table>

**New/planned studies**

<table>
<thead>
<tr>
<th>Community Health Programme</th>
<th>PCT level</th>
<th>Longer study starting 2012</th>
<th>children</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cook &amp; eat work</td>
<td>Sheffield Wildlife Trust Baljit Sanghera</td>
<td>Working with families to develop and encourage cooking skills</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Urban Planning</th>
<th>Sheffield City Council (Mike Glasgow- until end of March 2011)</th>
<th>Getting physical activity into key documents, oversupply of fast food outlets, food deserts.</th>
<th>Follow on from this: Joint workshops PH Sheffield and Sheffield city council planners</th>
</tr>
</thead>
</table>

Rob Copeland is evaluating this- in July report? Ben Anderson has also done similar work on planning in Barnsley in 2008
References


