Preventing obesity using a 'Whole System Approach'

Report 2:

Preventing obesity:

The effectiveness of Whole System Approaches

Revised Final Report: 12th January 2011

APPENDICES

COMMISSIONED BY: NICE Centre for Public Health Excellence

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Appendix 1 Review Protocol

Review protocol

Preventing obesity: the effectiveness of whole system approaches

PH Programme or PH Intervention process:	**PROGRAMME**
Name of Programme or Intervention:	Preventing obesity using a whole systems approach
Programme Report No.:	PDG 2
CPHE Collaborating Centre:	PenTAG
Project manager at PenTAG	Harriet Hunt harriet.hunt@pcmd.ac.uk 01392 726074
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CPHE Associate Director	Jane Huntley

Title

Long title:

To assess the effectiveness of whole system approaches to preventing obesity or changing the pattern of factors which are related to obesity in an area or community.

Short title:

Preventing obesity: the effectiveness of whole system approaches

Review team

This project will be conducted by a team from PenTAG. The team members, and their roles on the review, will be:

Harriet Hunt, Associate Research Fellow	Lead systematic reviewer. Project managing the delivery of the various parts of the project. Making key methodological choices within the systematic review of effectiveness studies, and the review of evidence about barriers and facilitators. Screening, appraisal and data extraction of included studies. Writing and editing drafts and final report.
Dr Rob Anderson, Deputy Director (PenTAG) and Senior Lecturer in Health Economics	Second systematic reviewer. Screening, appraisal and data extraction of included studies. Writing and editing drafts and final report. Overall responsibility for delivery to NICE, ensuring report meets agreed protocol, discussing and agreeing with NICE any divergences from protocol. Writing and editing drafts and final report.
Anne Fry-Smith &Sue Bayliss (*at WMHTAC*, University of Birmingham), Information Specialists	Developing and conducting any formal searches (web-based, grey literature) for relevant reports. Writing up any relevant report methods sections.
Dr Ruth Garside	Third systematic reviewer (when needed for adjudication of inclusion or study quality assessment)

Key deliverables and dates

Deliverable	**Date (2010 unless otherwise indicated)**	**Comments back from NICE CPHE by:**
1st Draft review protocol	17th June	23rd June
Revised review protocol	24th June	28th June
Draft search protocol & search strategy	29th June	1st July
Signing-off of review protocol	29th June	
Signing-off of search protocol	2nd July	
Signing-off of initial search strategies	2nd July	
Interim progress meeting/ teleconference (1) –	(Post-PDG 1: 8 July	
Interim progress meeting/ teleconference (2) –	20 July	
Draft Report	10th September	17th September
Final Report submission	24th September	
PDG date	13th October	

Context

This Review Protocol is for Review 2 to be conducted within the agreed 12 week review period, from week commencing 5th July to 24th September 2010. This Protocol places emphasis on the whole system approach as described within the summary statements of Review 1.

For this and the subsequent WSA to obesity reviews/research projects an iterative approach will be adopted; that is, wherever possible adapting the focus of reviews according to the findings of previous reviews. For example, if the focus of the effectiveness review (Review 2) is substantially changed following the PDG meeting on 7th July, it is understood that - the remaining review period will be less than 11 weeks from week commencing 12th July to week ending 24th September 2010, and revised review timelines might also have to take into account time for revised search strategies to be run

Purpose of this document

This document describes the aims, scope and intended methods of the evidence review which will be produced by PenTAG to support the development of NICE Public Health Guidance on whole system approaches to obesity prevention.

Unless otherwise stated in this Review Protocol, this reviews , and its report will be conducted according to the 2nd Edition of the *Methods for the development of NICE public health guidance* (2009). However, as CPHE have already indicated, it is clear that this review - in addition to the related other reviews and research projects for this guidance - may need to be more conceptually and methodologically innovative and flexible than standard systematic review methods. This review in particular needs to be flexible about seeking effectiveness evidence relating to whole system or community-based approaches to obesity prevention (where we have relatively low expectations of studies of relevant interventions being available), or seeking effectiveness evidence relating to whole system approaches to smoking prevention (where we expect there might be more relevant studies).

Clarification of scope

This review aims to inform public health guidance on how local policy and decision makers can effectively prevent and reduce the prevalence of obesity in different communities by using whole system or “whole community” approaches where they exhibit core features of a whole system approach.

NB. In the remainder of this review protocol we use the term “whole community” approaches as short-hand for approaches which are community wide (i.e. they focus on a particular area, or particular organizations and/or subgroups in an area) and they exhibit some of the core features of whole system working (as defined in Review 1 and summarised below) but probably not enough to judged as a genuine whole system approach.

As stated above, this review needs to be flexible about seeking effectiveness evidence relating to whole system or community-based approaches to obesity prevention, and, as time allows, seeking effectiveness evidence relating to whole system approaches to smoking prevention – for which it is known that “system approaches” have been used more widely and for longer than in the field of obesity prevention.

Review Questions

Q1. How does the effectiveness, implementation and sustainability of whole system or whole community approaches to preventing obesity appear to vary in relation to:

- The specific combination of local actions and local strategies used to try and bring about change
- The characteristics of the population and/or places targeted (including level of social disadvantage)
- The local and national policy context
- Other factors which influence the effectiveness, implementation and sustainability of the relevant actions and strategies

Q2. How does the effectiveness, implementation and sustainability of whole system approaches to preventing smoking appear to vary in relation to the same factors listed for Q1.

NB. By "effectiveness", "implementation" or "sustainability" we do not imply that only positive or intended outcomes will be of interest. Included studies/interventions will also be examined for evidence of adverse or unintended consequences. Note also that effectiveness will be defined both in terms of both final health outcomes (e.g. mean BMI, obesity rates) and intermediate outcomes which reflect features of whole systems working (e.g. indicators of successful community engagement; indicators of capacity building activity).

Factors which influence the effectiveness, implementation or sustainability of interventions may be either positive ('facilitators') or negative ('barriers').

Populations

Groups that will be covered

Everyone except those undergoing clinical treatment for obesity.

Groups that will not be covered

Children and adults who are undergoing clinical treatment for obesity. This is covered by 'Obesity: the prevention, identification, assessment and management of overweight and obesity in adults and children'. NICE clinical guideline 43 (2006).

Interventions/approaches

Interventions/approaches that will be covered

Sub-national area-based interventions which: a) comprise most of the core features of a whole system approach to tackling public health (as defined in Review 1, and summarised below); and b) aim to prevent obesity and/or both increase physical activity and improve diet.

Explicit recognition of the public health problem(s) as a system: that is recognition of interacting and evolving system elements; self-regulation; synergy and emergent properties (see Review 1, Summary Statement 1)

Whole systems working: The principles of whole system working have explicitly informed the design and implementation of the programme (see Review 1, Summary Statement 2), for example:

Capacity building: capacity building within communities and organisations was an explicit goal

Local creativity: local creativity and/or innovation was encouraged

Relationships: clear methods were used to develop working relationships between individuals or individuals and organisations

Engagement: clear methods were used for engaging community members in programme development and delivery

Communication: clear methods were used for enhancing communication between actors in the system

To be included in the review, an evaluated local intervention will not have to exhibit all of these features – in any case, the presence of some of them is likely to be poorly reported and are not objective criteria. While, the first of the criteria listed above is probably the most important, we recognise that this was the least reported factor in whole community programmes identified and reported in Review 1

Once a provisional assessment of the number of includable studies relating to obesity prevention has been made, a decision may be made in discussion with CPHE, about extending the scope of this review to include whole system approaches to smoking prevention and tobacco control. If so, then the threshold for including studies on smoking prevention interventions will be based on a more restrictive definition of whole system approaches (i.e. they will have to exhibit more core features of whole system working, or exhibit them more strongly, in a defined area or community)

Intervention/approaches that will not be covered

- Clinical management of children and adults who are overweight or obese. This is covered by existing NICE guidance on obesity (see section 6).
- Prevention or management of medical conditions associated with being overweight or obese (such as type 2 diabetes or cardiovascular disease).
- Discrete interventions in a particular location, such as schools or workplaces. This is covered by existing NICE guidance (see section 6).
- Complementary therapy methods to reduce or manage obesity.
- Assessment of the definitions of 'overweight' and 'obese' in relation to children and adults.

Outcomes

For obesity prevention interventions:

- Quantitative changes in anthropometric measures – weight, BMI, waist etc
- Quantitative changes in dietary measures
- Quantitative changes in physical activity measures

For smoking prevention and tobacco control related interventions:

- Prevalence of smoking (smoking rates, whole population or for subgroups)
- Quit rates (with duration of follow-up, and whether self-reported or confirmed by bio-chemical measures e.g. CO, blood, urine)

For both obesity prevention and smoking prevention related interventions:

- Quantitative/qualitative changes in measures of attitudes and awareness
- Indicators of successful implementation or sustainability (e.g. development of partnerships; local policy development; increased and stable involvement of a range of key individuals and bodies; uptake of interventions by schools, workplaces, catering outlets; renewed or continuous funding from key agencies. (These indicators may be quantitative or qualitative))

Inclusion and exclusion criteria

Inclusion criteria:

- Studies of **obesity prevention interventions** demonstrating **some core features** of whole system approaches (as listed in Section 9), *OR* studies of **smoking prevention interventions** demonstrating **many core features** of whole system approaches (as listed in Section 9), *AND* are:
- Implemented in **whole populations or communities** (i.e. whether they are or obese, overweight (or smokers) or not); *AND* which;
- Report any of the **outcome measures** or other indicators of an intervention's success/failure listed above in Section 10, *AND* using;
- **Comparative study designs**: Evaluations (prospective or retrospective) using comparative designs (randomized controlled trials, non-randomized controlled trials, before and after studies, or natural experiments, time series), AND
- Studies published from 1990 and in the English language.

Exclusion criteria:

- Empirical studies which only document the design and implementation of interventions without reporting evidence of the outcomes listed or which do not show time trends or report other (e.g. historical) control data for the outcomes of interest.
- Empirical studies which only present the effectiveness or successful implementation of a component intervention within the overall intervention or strategy.
- Studies of interventions where EITHER obesity prevention, encouraging physical activity, or encouraging a healthy diet OR smoking prevention, are not a central or major aim of the intervention.

Search methods

Identifying the literature: Overview

Building on search terms and programme names identified through searches already conducted in Review 1, searches of relevant bibliographic databases, and also selected websites will be conducted in order to identify relevant primary research. This will be supplemented by communication with experts and/or organisations involved in the relevant research or policy areas and citation searching.

A separate and more detailed Search Protocol and Search Strategy will be agreed separately between this project's information specialists (at WMHTAC) and the relevant CPHE analysts and information specialists. Given the iterative nature of this review and the potential intervention strategy types to be covered, the Search Strategies are being agreed separately from the Search Protocol (which will provide the overall framework of what types of searches may be conducted amongst which databases and sources, and using which key search terms).

Search processes and methods

- Searches will cover bibliographic databases and grey literature sources particularly websites. A broad strategy will be devised comprising a combination of textwords and index terms to express the intervention (whole system approach) and the populations (obesity prevention and smoking prevention). Separate strategies will be run for each of the two topics, adapted appropriately to the various databases.

- Databases to be searched and search terms will be detailed separately in the search protocol and strategy.
- Two information specialists (SB & AF-S) will conduct the searches alongside the two reviewers (RA & HH) undertaking the review.
- All searches will be fully documented (databases and websites used, strategies and dates of searches. References will be stored on a Reference Manager database.

Study selection at search stage

- Studies published from 1990
- Studies published in the English language
- Studies conducted in OECD countries

Study selection process

Assessment for inclusion will be undertaken initially at title and/or abstract level (to identify potential papers/reports for inclusion) by a single reviewer (and a sample checked by a second reviewer of at least 10%, more if resources allow), and then by examination of full papers. A third reviewer will be used to help adjudicate inclusion decisions in cases of disagreement Where the research methods used or type of intervention evaluated are not clear from the abstract, assessment will be based upon a reading of the full paper.

If there are a large number of includable studies, such that a high quality review of them all would not be feasible within the time and resources available, then studies may be excluded from the full review on the basis of the study quality, the degree to which the intervention can be characterised as having used a whole systems approach, and/or their potential applicability to obesity prevention. The overall rationale and reasons for such exclusions will be discussed and agreed with the CPHE team at the second interim progress meeting and at other points during the review if necessary.

Quality assessment and data extraction

A decision on the approach to the assessment of the quality of studies will be made on the basis of the nature of the included studies once they have been collected and a preliminary assessment made. We will aim to use or adapt the generic quality assessment tool for quantitative comparative evaluations, but this checklist may not be appropriate.

Any proposed departures from the methods manual will be discussed and agreed with the NICE CPHE Team. Data extraction and quality assessment will be conducted by a single reviewer, and checked by a second reviewer.

Data synthesis and presentation, including evidence statements

Data synthesis and presentation, including evidence statements will be conducted according to the procedures outlined in the 2nd Edition of *Methods for development of NICE public health guidance 2009* where appropriate.

Key choices in how to synthesise the included evidence, or in how to develop evidence statements for this review, will be discussed with the relevant analysts at CPHE.

Appendix 2 Search Strategy

Preventing obesity using a whole-systems approach – Review 2: Preventing obesity: the effectiveness of whole systems approaches: Draft Search Protocol (1 July 2010)

This document outlines the proposed search methodology to be used to locate literature relevant to Review 2 Preventing obesity: the effectiveness of whole systems approaches. Following agreement of this document, the contents will be placed as an appendix to the Review Protocol.

Aims of Review 2

The aim of the review is to examine the following two questions relating to the effectiveness of whole systems approaches in public health:

Q1. How does the effectiveness, implementation and sustainability of whole systems or whole community approaches to preventing obesity appear to vary in relation to:

- The specific combination of local actions and local strategies used to try and bring about change
- The characteristics of the population and/or places targeted (including level of social disadvantage)
- The local and national policy context
- Other factors which influence the effectiveness, implementation and sustainability of the relevant actions and strategies

Q2. How does the effectiveness, implementation and sustainability of whole systems approaches to preventing smoking appear to vary in relation to the same factors listed for Q1.

Proposal for Searches for Review 2

Searches for Review 1 sought to identify the key elements of the whole systems approach generally as well as in relation to obesity prevention. The searches for review 2 will seek to identify literature relevant to the two questions above. They will cover bibliographic databases and grey literature sources particularly websites.

Separate strategies will be run for each of the two topics, adapted appropriately to the various databases.

A range of broad strategies were run for review 1 to locate studies on whole systems approaches to obesity and papers relating to effectiveness of approaches have been located by this route. A similarly broad strategy will be devised comprising a combination of textwords and index terms to express the intervention and the population for the smoking topic. This will replicate the broad searches run for the obesity prevention topic in review 1 (see search protocol 1).

In addition to this, supplementary more focused searches using a range of terms relating to multi-agency and partnership approaches which were proposed but not ultimately used in review 1 will be run for both the obesity and smoking prevention topics. The aim of this is to capture additional literature using the whole systems approach but perhaps not describing it explicitly as such.

Sample search strategies for MEDLINE are detailed in appendix 1.

Bibliographic databases searches

The following databases will be searched:

- Cochrane Library (Wiley) (CDSR, DARE, HTA, CENTRAL, NHS EED) - current
- MEDLINE (Ovid) 1950 – current
- MEDLINE In Process (Ovid) – present

- ASSIA (CSA) Applied Social Sciences Index and Abstracts 1987 - present
- CINAHL (EBSCO) – 1981 - present
- HMIC Health Management Information Consortium (Ovid) – current
- Social Science Citation Index (Web of Science) – 1898 - present
- EPPI Centre – Bibliomap, DoPHER, TRoPHI -current
- EPPI Centre - database on Obesity and Sedentary behaviour studies – current
- NHS CRD databases (DARE, HTA, EED) – current

All searches will be limited to English language publications and a date range of 1990-current.

Targeted web-site searches

The scoping review found that browsing/searching web-sites was the most fruitful method of finding information in this area.
Sites and reports found to be of potential interest during the course of the web-site searches for review 1 will be searched again for any relevant and more current information. Any additional sources of information found by reviewers during the course of review 1 have been added to the list to be searched for review 2.

General Websites:

The whole systems partnership: http://www.thewholesystem.co.uk/

Department of Health: http://www.dh.gov.uk/en

European Public Health Alliance: http://www.epha.org/a/3149

Health EU The public health portal of the European Union
http://ec.europa.eu/health-eu/health_in_the_eu/prevention_and_promotion/index_en.htm

National Institute for health services research: http://www.sdo.nihr.ac.uk/

Improvement and Development Agency:
http://www.idea.gov.uk/idk/core/page.do?pageId=1

Programme specific:

EPODE:http://www.epode.fr/

Improvement and Development Agency:
http://www.idea.gov.uk/idk/core/page.do?pageId=9410646

Queensland government Eat Health Programme http://www.your30.qld.gov.au/

Change4Life – Eat Well, Move More, Live Longer:
http://www.dh.gov.uk/en/News/Currentcampaigns/Change4Life/DH_092080

WHI (Walking for Health Initiative) (now called Walking for Health (WfH)) Case studies
http://www.whi.org.uk/details.asp?back=true&key=2335|0|3518495058248|R|849|22601429620064903716 31&parentkey=2335|0|3518495058248|p|849|0

Topic Specific – obesity:

Be active, be healthy: a plan for getting the nation moving
http://www.dh.gov.uk/prod_consum_dh/groups/dh_digitalassets/documents/digitalasset/dh_094359.pdf

International Association for the Study of Obesity/ International Obesity Task Force
http://www.iotf.org/

European Association for the Study of Obesity
http://www.easo.org/

World Health Organisation (WHO) collaborating centre for obesity: http://www.deakin.edu.au/hmnbs/who-obesity/research/ssop/index.php

National Obesity Observatory
http://www.noo.org.uk/

National Obesity Forum
http://www.nationalobesityforum.org.uk/news/522-european-obesity-day.html

Solving the problem of childhood obesity within a generation. White House Task Force on Childhood Obesity Report to the President Executive Office of the President of the United States of America ; May 2010 http://www.letsmove.gov/tfco_fullreport_may2010.pdf

OECD
http://www.oecd.org/

World Health Organization (Europe) http://www.euro.who.int/obesity

Health and Social Care Information Centre (2009) Statistics on physical activity, obesity and diet: England, February 2009
http://www.ic.nhs.uk/statistics-and-data-collections/health-and-lifestyles/obesity/statistics-on-obesity-physical-activity-and-diet:-england-february-2009

The Obesity Society (American Obesity Association) http://www.obesity.org/

State Government of Victoria, Australia http://www.health.vic.gov.au/doh

Australian 10,000 Steps http://www.10000steps.org.au/

Topic specific – smoking:
Action on Smoking and Health (ASH) http://www.ash.org.uk/
European Network for Smoking and Tobacco Prevention http://www.ensp.org/

World Health Organisation Tobacco Free Initiative http://www.who.int/tobacco/en/

European Community Health Indicators Tobacco
http://ec.europa.eu/health/tobacco/indicators/index_en.htm

Smoking Prevention National Cancer Institute
http://www.cancer.gov/cancertopics/smoking/quitting

National Cancer Institute Cancer Control and Population Sciences
www.cancercontrol.cancer.gov

Centre for Tobacco Control Research
http://www.ctcr.stir.ac.uk/projects_smoking_prevention.htm

US Centers for Disease Control and Prevention Smoking and Tobacco www.cdc.gov/tobacco

Additional grey literature searches:

Scrutiny committee reports (to be searched via an internet search engine)

ZeTOC database http://zetoc.mimas.ac.uk/(British Library)

ISI Proceedings (Web of Science) Conference Proceedings Citation Index (Web of Science) 1990 – present

Other web searches:

Searches via an internet search engine (Google.co.uk) for any named programmes considered for inclusion.
Internet search portals (INTUTE, TRIP and HTAi Vortal) will also be used to facilitate more precise searching of the internet.

Additional search methods

- Reference searching: reference lists of included studies and background reading will be used to identify additional potentially useful material
- As websites are being searched any additional sites found or journals indexed by these tools will be followed-up
- Where key authors are identified through their publications, or based on suggestions from CPHE or the PDG, author searches may also be undertaken.
- The PDG will be asked for recommendations of articles, books, reports etc. which meet the scope of the systematic review, although a deadline for their receipt by PenTAG in order to be included in this review may need to be agreed.
-

All searches will be fully documented (databases and websites used, strategies and dates of searches). References will be stored on a Reference Manager database and duplicates removed.

Appendix 1 Sample search strategies

Obesity topic
Database: Ovid MEDLINE(R) 1950 to June Week 3 2010
Search Strategy:
1 (multi-faceted or multifaceted or multi-agency or inter-organi?ational or partnership$ or multi-intervention$ or multi-factorial or cross-sector$).mp. (22086)
2 (system approach$ or systems approach$).mp. (2209)
3 (complex adj2 system$).mp. (6965)
4 (whole system or whole systems).mp. (783)
5 ((system or systems) adj work$).mp. (993)
6 or/1-5 (32804)
7 Obesity/ or obesity.mp. (127209)
8 (obes$ or over-weight or overweight).mp. (146739)
9 (weight adj2 (gain$ or change$ or loss$ or retention$)).mp. (88562)

10 weight gain/ or weight loss/ (33448)
11 adiposity.mp. (8732)
12 (health$ adj2 (diet$ or eat$ or choice$ or option$)).mp. (6772)
13 (exercis$ or physical$ or diet$ or activ$ or fit$).ti. (905842)
14 exp Diet/ (156296)
15 exp Exercise/ (51631)
16 Food Habits/ (15389)
17 or/7-16 (1207513)
18 6 and 17 (1740)
19 limit 18 to (english language and humans and yr="1990 - 2010") (1189)

Smoking topic
Search 1
Database: Ovid MEDLINE(R) 1950 to June Week 3 2010
Search Strategy:
1 (system approach$ or systems approach$).mp. (2209)
2 (complex adj2 system$).mp. (6965)
3 (whole system or whole systems).mp. (783)
4 ((system or systems) adj work$).mp. (993)
5 (community adj (wide or based)).mp. (25003)
6 ecolog$.ti,ab. (42045)
7 or/1-6 (77356)
8 (smoker$ or smoking or smoke$ or cigarette$ or tobacco).mp. (200288)
9 smoking cessation/ (14779)
10 smoking/ (98282)
11 or/8-10 (200288)
12 7 and 11 (2266)
13 limit 12 to (english language and humans and yr="1990 - 2010") (1928)

Search 2
Database: Ovid MEDLINE(R) 1950 to June Week 3 2010
Search Strategy:
1 (multi-faceted or multifaceted or multi-agency or inter-organi?ational or partnership$ or multi-intervention$ or multi-factorial or cross-sector$).mp. (22086)
2 (system approach$ or systems approach$).mp. (2209)
3 (complex adj2 system$).mp. (6965)
4 (whole system or whole systems).mp. (783)
5 ((system or systems) adj work$).mp. (993)
6 or/1-5 (32804)
7 (smoker$ or smoking or smoke$ or cigarette$ or tobacco).mp. (200288)
8 smoking cessation/ (14779)
9 smoking/ (98282)
10 or/7-9 (200288)
11 6 and 10 (537)
12 limit 11 to (english language and humans and yr="1990 - 2010") (452)

Appendix 3 Obesity prevention and smoking cessation - search strategies

OBESITY

Database: Ovid MEDLINE(R) 1950 to June Week 4 2010

1 (multi-faceted or multifaceted or multi-agency or inter-organi?ational or partnership$ or multi-intervention$ or multi-factorial or cross-sector$).mp.
2 (system approach$ or systems approach$).mp.
3 (complex adj2 system$).mp.
4 (whole system or whole systems).mp.
5 ((system or systems) adj work$).mp.
6 or/1-5
7 Obesity/ or obesity.mp.
8 (obes$ or over-weight or overweight).mp.
9 (weight adj2 (gain$ or change$ or loss$ or retention$)).mp.
10 weight gain/ or weight loss/
11 adiposity.mp.
12 (health$ adj2 (diet$ or eat$ or choice$ or option$)).mp.
13 (exercis$ or physical$ or diet$ or activ$ or fit$).ti.
14 exp Diet/
15 exp Exercise/
16 Food Habits/
17 or/7-16
18 6 and 17
19 limit 18 to (english language and humans and yr="1990 - 2010")

Database: Ovid MEDLINE(R) In-Process & Other Non-Indexed Citations June 30, 2010

1 (multi-faceted or multifaceted or multi-agency or inter-organi?ational or partnership$ or multi-intervention$ or multi-factorial or cross-sector$).mp.
2 (system approach$ or systems approach$).mp.
4 (whole system or whole systems).mp.
5 ((system or systems) adj work$).mp.
6 or/1-5
7 (obes$ or over-weight or overweight).mp.
8 (weight adj2 (gain$ or change$ or loss$ or retention$)).mp.
9 adiposity.mp.
10 (health$ adj2 (diet$ or eat$ or choice$ or option$)).mp.
11 (exercis$ or physical$ or diet$ or activ$ or fit$).ti.
12 ((food or eating) adj habit$).mp.
13 or/7-12
14 6 and 13
15 limit 14 to yr="1990 - 2010"
16 limit 15 to english language

Database: Cochrane Library (all databases) Wiley Internet 2010 Issue 2.

#1 multi next faceted
#2 multi next agency
#3 multi next intervention*
#4 multi next factorial
#5 cross sector*
#6 multifaceted or partnership*
#7 inter next organisational
#8 inter next organizational

#9 system next approach*
#10 systems next approach*
#11 complex near/2 system*
#12 whole next system
#13 whole next systems
#14 system next work*
#15 systems next work*
#16 (#1 OR #2 OR #3 OR #4 OR #5 OR #6 OR #7 OR #8 OR #9 OR #9 OR #10 OR #11 OR #12 OR #13 OR #14 OR #15)
#17 obesity or obes* or overweight
#18 MeSH descriptor Obesity, this term only
#19 over next weight
#20 (weight near/2 (gain* or change* or loss* or retention*))
#21 adiposity
#22 MeSH descriptor Weight Gain, this term only
#23 MeSH descriptor Weight Loss, this term only
#24 (health* near/2 (diet* or eat* or choice* or option*))
#25 (exercis* or physical* or diet* or activ* or fit*):ti
#26 MeSH descriptor Diet explode all trees
#27 MeSH descriptor Exercise explode all trees
#28 MeSH descriptor Food Habits, this term only
#29 (#17 OR #18 OR #19 OR #20 OR #21 OR #22 OR #23 OR #24 OR #25 OR #26 OR #27 OR #28)
#30 (#16 AND #29)
#31 (#30), from 1990 to 2010

Database: ASSIA (CSA Illumina) 1987 – July 2010

((((("multi faceted") or multifaceted or ("multi agency")) or (("inter organisational") or interorganizational or partnership*) or (("multi intervention*") or ("multi factorial") or ("cross sector*"))) or(("system approach*") or ("systems* approach*")) or(complex within 2 system*) or((("whole system*") or ("whole systems") or ("system work*")) or ("systems work*"))) and((DE="obesity") or((obesity or obes* or ("over weight")) or overweight) or(((weight within 2 gain*) or (weight within 2 change*) or (weight within 2 loss*)) or (weight within 2 retention*)) or(DE=("weight gain" or "obesity")) or(DE="obesity") or(adiposity) or(((health* within 2 diet*) or (health within 2 eat*) or (health within 2 choice*)) or (health within 2 option*)) or(TI=(exercise* or physical* or diet*) or TI=(activ* or fit*)) or(DE=("diet" or "high fat diet" or "low fat diet" or "omnivorous" or "veganism" or "vegetarianism" or "obesity")) or(DE="obesity") or(DE=("food habits" or "obesity")))
Date range: 1990 – 2010

Database: HMIC Health Management Information Consortium May 2010

1 (multi-faceted or multifaceted or multi-agency or inter-organi?ational or partnership$ or multi-intervention$ or multi-factorial or cross-sector$).mp.
2 (system approach$ or systems approach$).mp. [mp=title, other title, abstract, heading words]
3 (complex adj2 system$).mp.
4 (whole system or whole systems).mp.
5 ((system or systems) adj work$).mp.
6 or/1-5
7 obesity.mp. or exp OBESITY/

8 (obes$ or over-weight or overweight).mp.
9 (weight adj2 (gain$ or loss$ or change$ or retention$)).mp.
10 exp WEIGHT WATCHING/
11 adiposity.mp.
12 (health$ adj2 (diet$ or eat$ or choice$ or option$)).mp.
13 (exercis$ or physical$ or diet$ or activ$ or fit$).ti.
14 exp DIET/
15 exp PHYSICAL ACTIVITY/
16 exp FOOD HABITS/
17 or/7-16
18 6 and 17
19 limit 18 to yr="1990-2010"

Database: Social Science Citation Index searched via WOS 2 July 2010 (1898-July 2010)

Topic=(multi-faceted or multifaceted or system approach or systems approach or complex system or complex systems or inter-organisational or partnership* or cross-sector* or multi-agency) AND Title=(obesity or adiposity or overweight or obes* or diet* or exercise or healthy eat* or fit* or weight gain or weight loss)
Timespan=1990-2010. Databases=SSCI.

Database: CINAHL (EBSCO host) 1982 – July 2010

S1 multifaceted OR multi faceted OR multi agency or inter organi?ational
OR partnership* OR multi intervention* or multi factorial or cross sector*
S2 system approach* OR systems approach*
S3 (complex N2 system*)
S4 whole system or whole systems
S5 (system work* OR systems work*)
S6 s1 or s2 or s3 or s4 or s5
S7 (MH "Obesity")
S8 obesity
S9 (obes* OR over weight OR overweight)
S10 (weight N2 gain*)
S11 (weight N2 change*)
S12 (weight N2 loss*)
S13 (weight N2 retention*)
S14 (MH "Weight Gain")
S15 (MH "Weight Loss")
S16 adiposity
S17 (health N2 diet*)
S18 (health N2 eat*)
S19 (health N2 choice*)
S20 (health N2 option*)
S21 TI exercise* OR physical* OR diet* or activ* or fit*
S22 (MH "Diet+")
S23 (MH "Exercise+")
S24 (MH "Food Habits")
S25 (S7 or S8 or S9 or S10 or S11 or S12 or S13 or S14 or S15 or S16 or
S17 or S18 or S19 or S20 or S21 or S22 or S23 or S24)
S26 S25 AND S6
S27 S25 AND S6 Limiters - Published Date from: 19900101-20100731; English Language; Human

Databases: CRD Databases (searched 5 July 2010)

"multi faceted" OR multifaceted OR "multi agency" OR "inter organisational" OR interorganizational AND " OR partnership OR *" AND multi AND intervention* OR "multi factorial" OR "cross sector*" RESTRICT YR 1990 2010
"system approach*" OR "systems approach" RESTRICT YR 1990 2010
complex NEAR system* RESTRICT YR 1990 2010
"whole system*" OR "whole systems" RESTRICT YR 1990 2010
"system work*" OR "systems work*" RESTRICT YR 1990 2010
#1 or #2 or #3 or #4 or #5 RESTRICT YR 1990 2010
obesity RESTRICT YR 1990 2010
MeSH Obesity RESTRICT YR 1990 2010
obes* OR "over weight" OR overweight RESTRICT YR 1990 2010
weight NEAR gain* RESTRICT YR 1990 2010
weight NEAR change* RESTRICT YR 1990 2010
weight NEAR loss* RESTRICT YR 1990 2010
weight NEAR retention* RESTRICT YR 1990 2010
MeSH Weight Gain
MeSH Weight Gain RESTRICT YR 1990 2010
MeSH Weight Loss RESTRICT YR 1990 2010
adiposity RESTRICT YR 1990 2010
health* NEAR diet* RESTRICT YR 1990 2010
health* NEAR eat* RESTRICT YR 1990 2010
health* NEAR choice* RESTRICT YR 1990 2010
health* NEAR option* RESTRICT YR 1990 2010
exercise* OR physical* OR diet* OR activ* OR fit*:ti RESTRICT YR 1990 2010
MeSH Diet EXPLODE 1 2
MeSH Diet EXPLODE 1 2 RESTRICT YR 1990 2010
MeSH Exercise EXPLODE 1 2
MeSH Exercise EXPLODE 1 2 RESTRICT YR 1990 2010
MeSH Food Habits RESTRICT YR 1990 2010
#8 or #10 or #11 or #12 or #13 or #14 or #15 or #17 or #18 or #19 or #20 or #21 or #22 or #23 or #24 or #26 or #28 or #29 RESTRICT YR 1990 2010
#6 and #30 RESTRICT YR 1990 2010

Database: ISI Conference Proceedings Citation Index searched via WOS 2 July 2010
Topic=(multi-faceted or multifaceted or system approach or systems approach or complex system or complex systems or inter-organisational or partnership* or cross-sector* or multi-agency) AND Title=(obesity or adiposity or overweight or obes* or diet* or exercise or healthy eat* or fit* or weight gain or weight loss)
Timespan=1990-2010. Databases=CPCI-S.
Database: ZETOC searched via Ovid 2 July 2010
Terms used :
whole system*, complex system*, system approach* , multi-agency, partnership*, multi-faceted, inter-organisational, inter-organizational , cross-sector*
AND
public health, obesity, overweight, fitness , diet, exercise

Database: EPPI Centre Evidence for Policy and Practice Information and Co-ordinating Centre searches 5 July 2010

- TRoPHI . BiblioMap, DoPHER and Database on Obesity and Sedentary Behaviour Studies

Searched 5/7/2010 using terms: whole system*, complex system*, system* approach*, community wide, community based, ecological, multi-agency, partnership*, inter-organisational, cross-sector* and obesity

Gateway: TRIP Database. Searched 7 July 2010

A series of searches which used appropriately truncated text words and phrases from the MEDLINE strategy representing wsa:

Multi faceted, multi agency, inter organisational, partnership, multi interventions multi factorial cross sector, systems approach, complex systems, whole systems, systems work, with terms for obesity:

Obesity, over weight, weight gain or change or loss or retention, adiposity, healthy diet or eating or choices or options, exercise, physical activity, fitness, food and diet. Results were browsed and relevant refs were downloaded.

Gateway: INTUTE search engine searched 5 July 2010

Searched 5/7/2010 using terms: whole system*, complex system*, system* approach*, community wide, community based, ecological, multi-agency, partnership*, inter-organisational, cross-sector* and obesity

Gateway: HTAi Vortal search engine searched 6 July 2010

Searched 6/7/2010 using terms: whole system*, complex system*, system* approach*, community wide, community based, ecological, multi-agency, partnership*, inter-organisational, cross-sector* and obesity

SMOKING

Database: Ovid MEDLINE (R) 1950 to June Week 4 2010

Search Strategy 1:

1 (system approach$ or systems approach$).mp.
2 (complex adj2 system$).mp.
3 (whole system or whole systems).mp.
4 ((system or systems) adj work$).mp.
5 (community adj (wide or based)).mp.
6 ecolog$.ti,ab.
7 or/1-6
8 (smoker$ or smoking or smoke$ or cigarette$ or tobacco).mp.
9 smoking cessation/
10 smoking/
11 or/8-10
12 7 and 11
13 limit 12 to (english language and humans and yr="1990 - 2010")

Search Strategy 2 :

1 (multi-faceted or multifaceted or multi-agency or inter-organi?ational or partnership$ or multi-intervention$ or multi-factorial or cross-sector$).mp.
2 (system approach$ or systems approach$).mp.
3 (complex adj2 system$).mp.
4 (whole system or whole systems).mp.
5 ((system or systems) adj work$).mp.
6 or/1-5
7 (smoker$ or smoking or smoke$ or cigarette$ or tobacco).mp.
8 smoking cessation/
9 smoking/
10 or/7-9
11 6 and 10

12 limit 11 to (english language and humans and yr="1990 - 2010")

Database: Ovid MEDLINE(R) In-Process & Other Non-Indexed Citations June 30, 2010
Search Strategy 1:
1 (system approach$ or systems approach$).mp.
2 (complex adj2 system$).mp.
3 (whole system or whole systems).mp.
4 ((system or systems) adj work$).mp.
5 (community adj (wide or based)).mp.
6 ecolog$.ti,ab.
7 or/1-6
8 (smoker$ or smoking or smoke$ or cigarette$ or tobacco).mp.
9 7 and 8
10 limit 9 to (english language and yr="1990 - 2010")
Search Strategy 2:
1 (multi-faceted or multifaceted or multi-agency or inter-organi?ational or partnership$ or multi-intervention$ or multi-factorial or cross-sector$).mp.
2 (system approach$ or systems approach$).mp.
3 (complex adj2 system$).mp.
4 (whole system or whole systems).mp.
5 ((system or systems) adj work$).mp.
6 or/1-5
7 (smoker$ or smoking or smoke$ or cigarette$ or tobacco).mp.
8 6 and 7
9 limit 8 to (english language and yr="1990 - 2010")

Database: Cochrane Library (all databases) Wiley Internet 2010 Issue 2.
Search strategy 1:
#1 (community near (wide or based))
#2 ecolog*:ti,ab
#3 system next approach*
#4 systems next approach*
#5 complex near/2 system*
#6 whole next system
#7 whole next systems
#8 system next work*
#9 systems next work*
#10 (#1 OR #2 OR #3 OR #4 OR #5 OR #6 OR #7 OR #8 OR #9)
#11 (smoker* or smoking or smoke* or cigarette* or tobacco)
#12 MeSH descriptor Smoking Cessation, this term only
#13 MeSH descriptor Smoking, this term only
#14 (#11 OR #12 OR #13)
#15 (#10 AND #14)
#16 (#15), from 1990 to 2010
Search strategy 2:

Source – Cochrane Library (all databases) Wiley Internet 2010 Issue 2.
#1 multi next faceted
#2 multi next agency
#3 multi next intervention*
#4 multi next factorial
#5 cross sector*

#6 multifaceted or partnership*
#7 inter next organisational
#8 inter next organizational
#9 system next approach*
#10 systems next approach*
#11 complex near/2 system*
#12 whole next system
#13 whole next systems
#14 system next work*
#15 systems next work*
#16 (#1 OR #2 OR #3 OR #4 OR #5 OR #6 OR #7 OR #8 OR #9 OR #10 or #11 OR #12 OR #13 OR #14 OR #15)
#17 (smoker* or smoking or smoke* or cigarette* or tobacco)
#18 MeSH descriptor Smoking Cessation, this term only
#19 MeSH descriptor Smoking, this term only
#20 (#17 OR #18 OR #19)
#21 (#16 AND #20)
#22 (#21), from 1990 to 2010

Database: ASSIA (CSA Illumina) 1987 – July 2010
Search strategy 1:
#36Search Query #36 (((smoker* or smoking or smoke*) or (cigarette* or tobacco)) or(DE="smoking")) and((("system approach*") or ("systems* approach*")) or(complex within 2 system*) or((("whole system*") or ("whole systems") or ("system work*")) or ("systems work*")) or(("community wide") or ("community based")) or(TI=ecolog* or AB=ecolog*))
Date range: 1990 – 2010
Search strategy 2:
#32Search Query #32 ((((("multi faceted") or multifaceted or ("multi agency")) or (("inter organisational") or interorganizational or partnership*) or (("multi intervention*") or ("multi factorial") or ("cross sector*"))) or(("system approach*") or ("systems* approach*")) or(complex within 2 system*) or((("whole system*") or ("whole systems") or ("system work*")) or ("systems work*"))) and(((smoker* or smoking or smoke*) or (cigarette* or tobacco)) or(DE="smoking"))
Date range: 1990 – 2010

Database: HMIC Health Management Information Consortium May 2010
Search Strategy 1:

1 (system approach$ or systems approach$).mp.
2 (complex adj2 system$).mp.
3 (whole system or whole systems).mp.
4 ((system or systems) adj work$).mp.
5 (community adj (wide or based)).mp.
6 ecolog$.ti,ab.
7 or/1-6
8 (smoker$ or smoking or smoke$ or cigarette$ or tobacco).mp.
9 exp SMOKING CESSATION/
10 or/8-9
11 7 and 10

12 limit 11 to yr="1990 - 2010"
Search Strategy 2:
1 (multi-faceted or multifaceted or multi-agency or inter-organi?ational or partnership$ or multi-intervention$ or multi-factorial or cross-sector$).mp.
2 (system approach$ or systems approach$).mp.
3 (complex adj2 system$).mp.
4 (whole system or whole systems).mp.
5 ((system or systems) adj work$).mp.
6 or/1-5
7 (smoker$ or smoking or smoke$ or cigarette$ or tobacco).mp.
8 exp SMOKING CESSATION/
9 or/7-8
10 6 and 9
11 limit 10 to yr="1990 - 2010"

Database: Social Science Citation Index searched via WOS 2 July 2010 (1898 - July 2010)
Search strategy 1:
Topic=((system approach or systems approach or complex system or complex systems or ecolog* or community wide or community based)) AND Title=((smoker* or smok* or cigarette* or tobacco))
Timespan=1990-2010. Databases=SSCI.
Search strategy 2:
Topic=((multi-faceted or multifaceted or system approach or systems approach or complex system or complex systems or inter-organisational or partnership* or cross-sector* or multi-agency)) AND Topic=((smoker* or smok* or cigarette* or tobacco))
Timespan=1990-2010. Databases=SSCI.

Database: CRD Databases (searched 5th July 2010)
Search strategy 1:
"system approach*" OR "systems approach" RESTRICT YR 1990 2010
complex NEAR system* RESTRICT YR 1990 2010
"whole system*" OR "whole systems"
"system work*" OR "systems work*"
"community wide" OR "community based" RESTRICT YR 1990 2010
ecolog*:ti RESTRICT YR 1990 2010
#1 or #2 or #3 or #4 or #5 or #6 RESTRICT YR 1990 2010
smoker* OR smoking OR smoke* OR cigarette* OR tobacco RESTRICT YR 1990 2010
MeSH Smoking Cessation
MeSH Smoking RESTRICT YR 1990 2010
#8 or #9 or #10 RESTRICT YR 1990 2010
#7 or #11 RESTRICT YR 1990 2010
#7 and #11 RESTRICT YR 1990 2010
Search strategy 2:
"system approach*" OR "systems approach" RESTRICT YR 1990 2010
complex NEAR system*
"multi faceted" OR multifaceted OR "multi agency" OR interorganisational OR interorganizational OR partnership* OR "multi intervention*" OR "multi factorial" OR "cross sector*" RESTRICT YR 1990 2010
"whole system*" OR "whole systems" RESTRICT YR 1990 2010
"system work*" OR "systems work*"
#1 or #2 or #3 or #4 or #5 RESTRICT YR 1990 2010
smoker* OR smoking OR smoke* OR cigarette* OR tobacco RESTRICT YR 1990 2010

MeSH Smoking
#7 or #8 RESTRICT YR 1990 2010
#6 and #9 RESTRICT YR 1990 2010

Database: CINAHL (EBSCO host) 1982 – July 2010
Search strategy 1:
S1 system approach* OR systems approach*
S2 (complex N2 system*)
S3 whole system or whole systems
S4 (system work* OR systems work*)
S5 smoker* OR smoking OR smoke* OR cigarette* OR tobacco
S6 (MH "Smoking Cessation")
S7 (MH "Smoking")
S8 S5 or S6 or S7
S9 community wide or community based
S10 TI ecolog*
S11 AB ecolog*
S12 S1 or s2 or s3 or s4 or s9 or s10 or s11
S13 s12 and s8 Limiters - Published Date from: 19900101-20100731; English Language; Human
Search strategy 2:
S1 multifaceted OR multi faceted OR multi agency or inter organi?ational OR partnership* OR multi intervention* or multi factorial or cross sector*
S2 system approach* OR systems approach*
S3 (complex N2 system*)
S4 whole system or whole systems
S5 (system work* OR systems work*)
S6 s1 or s2 or s3 or s4 or s5
S7 smoker* OR smoking OR smoke* OR cigarette* OR tobacco
S8 (MH "Smoking Cessation")
S9 (MH "Smoking")
S10 S7 or S8 or S9
S11 S6 and S10
Limiters - Published Date from: 19900101-20100731; English Language; Human
Database: ISI Conference Proceedings Citation Index searched via WOS 2 July 2010
Search strategy 1:
Topic=((system approach or systems approach or complex system or complex systems or ecolog* or community wide or community based)) AND Title=((smoker* or smok* or cigarette* or tobacco))
Timespan=1990-2010. Databases=CPCI-S.
Search strategy 2:
Topic=(((multi-faceted or multifaceted or system approach or systems approach or complex system or complex systems or inter-organisational or partnership* or cross-sector* or multi-agency))) AND Title=(((smoker* or smok* or cigarette* or tobacco)))
Timespan=1990-2010. Databases=CPCI-S.
Database: ZETOC searched 2 July 2010
Terms used :
whole system*, complex system*, system approach* , multi-agency, partnership*, multi-faceted, inter-organisational, inter-organizational , cross-sector*
AND
smoking , cigarettes, smoker*

Database: EPPI Centre Evidence for Policy and Practice Information and Co-ordinating Centre searches 5 July 2010

- TRoPHI . BiblioMap, DoPHER and Database on Obesity and Sedentary Behaviour Studies

Searched 5/7/2010 using terms: whole system*, complex system*, system* approach*, community wide, community based, ecological, multi-agency, partnership*, inter-organisational, cross-sector* and smoking

Gateway: TRIP Database. Searched 7 July 2010

Search 1:

A series of searches which used appropriately truncated text words and phrases from the MEDLINE strategy representing wsa:

Systems approach, complex systems, whole systems, systems work, community wide, community based and ecology, with terms for smoking :

Smoking, smoker, smokers, cigarette, tobacco and smoking cessation

Results were browsed and relevant refs were downloaded.

Gateway: TRIP Database. Searched 7 July 2010

Search 2:

A series of searches which used appropriately truncated text words and phrases from the MEDLINE strategy representing wsa:

Multi faceted, multi agency, inter organisational, partnership, multi interventions multi factorial cross sector, systems approach, complex systems, whole systems, systems work, with terms for smoking:

Smoking, smoker, smokers, cigarette, tobacco and smoking cessation

Results were browsed and relevant refs were downloaded.

Gateway: INTUTE search engine searched 5 July 2010

Searched 5/7/2010 using terms: whole system*, complex system*, system* approach*, community wide, community based, ecological, multi-agency, partnership*, inter-organisational, cross-sector* and smoking

Gateway: HTAi Vortal search engine searched 6 July 2010

Searched 6/7/2010 using terms: whole system*, complex system*, system* approach*, community wide, community based, ecological, multi-agency, partnership*, inter-organisational, cross-sector* and smoking

Appendix 4 OECD countries

Austria	Korea
Australia	Luxembourg
Belgium	Mexico
Canada	Netherlands
Czech Republic	New Zealand
Denmark	Norway
Finland	Poland
France	Portugal
Germany	Slovak Republic
Greece	Spain
Hungary	Sweden
Iceland	Switzerland
Ireland	Turkey
Italy	United Kingdom
Japan	United States

Source: http://www.oecd.org/

Appendix 5 Title/abstract screening checklist

At title/abstract stage: (RECORD CODE IN USER Def. 1)	
0	Retrieve
1	Not an effectiveness/evaluation study
2	Not obesity prevention or smoking prevention
22	Programme aimed at increasing physical activity only (not diet)
222	Programme aimed at improving healthy eating only (not physical activity)
3	Not implemented in/targeted at whole populations or communities
33	Implemented within selected organisation type only (e.g. schools, workplaces, churches)
333	Targetting at risk groups (e.g. those at risk of developing diabetes)
3333	Single type of delivering mechanism (e.g. teacher-delivered intervention)
4	Does not use comparative study design
5	Not in English
6	Published pre-1990
7	Potentially relevant for qualitative review
8	Potentially relevant for cost-effectiveness review/ economic modelling
9	Potentially useful for case studies
10	Duplicate
g	Get for interest (less urgent than code “0” Retrieves
m	Mark for interest
d	Discuss with other reviewer
CVD	CVD programme

Appendix 6 Full text screening checklist

At full text stage: (RECORD CODE IN USER Def. 2)	
0	Include
1	**Not** an **effectiveness/evaluation study**
2	**Not obesity prevention** or **smoking prevention**
22	Programme aimed at increasing physical activity only (not diet)
222	Programme aimed at improving healthy eating only (not physical activity)
3	**Not** implemented in/targeted at **whole populations or communities**
33	Implemented within selected organisation type only (e.g. schools, workplaces, churches)
333	Targetting at risk groups (e.g. those at risk of developing diabetes)
3333	Single type of person delivering the intervention (e.g. nurse practitioners)
4	Does **not** use **comparative study design**
5	Not in English
6	Published pre-1990
7	Potentially **relevant for qualitative review**
8	Potentially **relevant for cost-effectiveness review**/ economic modelling
9	Potentially useful **for case studies**
10	Duplicate
11	Non-OECD country
g	Get for interest (less urgent than code “0” Retrieves
m	Mark for interest
d	Discuss with other reviewer
i	Insufficient data (either to determine extent/existence of whole community approach or to extract effectiveness data)

Appendix 7 Evidence tables

Obesity prevention interventions

Romp & Chomp

Programme focus	Study details	Whole system approach
Intervention name, Location Romp & Chomp (R&C; Sentinel Site), Greater Geelong area, Barwon-South West region of Victoria, Australia **Year/ timescale over which implemented** Started 2004 until 2008 (although aims to be sustainable) **Target population** The target population was children aged 0- 5 years and their families in the Greater Geelong area, Victoria, Australia. Greater Geelong has a population of approx. 200,000. The target population was approx. 12,000 children aged 0-5 years and their families. The total target population size (i.e. when including the families of the children) is unclear. **Theoretical perspective** The overall Sentinel Site programme used the following models (Bell et al., 2008, Ref235, p329): : • Determinants of Health model • Social Ecological Model • Social Marketing Theory	**Study name** Baseline was 2004, post-intervention data collected in 2007 **Setting** Community, preschool, **Author plus associated paper/source + paper/source focus** • Bell et al. (2008) [235] – Sentinel Site information • de Silva-Sanigorski et al. (2010) [3632] – Effectiveness evaluation • de Silva-Sanigorski et al. (no date) [3634] – Effectiveness data provided by Family Day Care services, including health promotion and intermediate outcomes • de Groot et al. (no date)[3633] – Evaluation of capacity building • WHO CCOP Summary Report (de Silva-Sanigroski et al.2009) [3648] – Summary data • WHO CCOP report, de Groot et al. (2009), Ref 3640 - Evaluation of capacity building • WHO CCOP report, Parker et al. (2009), Ref 3641 – Awareness of programme key messages	**Does the programme use the language of 'whole system' or 'whole community' approaches?** Not explicitly, but generally uses this type of language. **Levels of action** Individual, Family, Pre-school, Community, childcare services, Health Services, PH policy **Collections of organisations/partners/groups of actors involved** • The Sentinel Site team, based at Deakin University • Department of Human Services (DHS; the Victoria State health department), • Barwon Health (the largest regional health service provider in the Victoria-Dental and Allied Health Units) • CoGG (local government managers of a range of children's care and health services) • Geelong Kindergarten Association (a cluster manager for 33 community-based preschools in the Geelong region) • Leisure Networks Association (regional sporting coordinating body), • Bellarine Community Health (a health

R&C also based on the logic model (see all WHO CCOP reports and programme details below).

R&C also based on the New South Wales (NSW) Capacity Building Framework:
" This framework was developed to guide effective capacity building practice within health promotion and contains five domains (Partnerships, Leadership, Resource Allocation, Workforce Development and Organisational Development)" (de Groot et al. (no date, Ref 3633, p6)

Was local knowledge used in the design and/or delivery of the programme?
It was stated that the overall Sentinel programme involved the "local application of local and global knowledge" Bell et al. (2008) [Ref 235, Table 1]]

Policy context
It was stated in Bell et al. (2008) [Ref 235, p329] that:

"Sentinel Site interventions cover multiple settings and are led by policy and environmental changes (Swinburn and Egger, 2002)."

In R&C there was also integration of policies and early-childhood nutrition and active play into local government and health-service strategic and public health plans.

- WHO CCOP report, de Silva-Sanigorski et al. (2009), Ref 3642 – Process and impact (non-comparative)
- WHO CCOP report, Parker et al. (2009), Ref 3643 – Further programme details and process evaluation for reducing sweet drinks and increasing water consumption.
- WHO CCOP report, Parker et al. (2009), Ref 3644 – Further programme details and process evaluation for reducing energy dense snacks and increasing fruit and veg consumption
- WHO CCOP report, de Silva-Sanigorski et al. (2009), Ref 3645 – Further details and data from surveys and focus groups on decreasing TV viewing and increasing home and family based active play
- WHO CCOP report, Parker et al. (2009), Ref 3646 – Further programme details and process evaluation for increasing structured active play
- WHO CCOP report, Nichols et al. (2009), Ref 3647 – Process evaluation to assess the data collection process related to growth monitoring (anthropometrics)

Aim of study
To determine the effectiveness of the R&C intervention in reducing obesity and promoting healthy eating and active play in children aged 0–5 yrs

Study design
"repeat cross-sectional quasi-experimental design with measures taken pre- and post-intervention" (de Silva-Sanigorski et al., 2010, Ref 3632, p2)

de Silva-Sanigorski et al. (no date, Ref 3634) also

service provider)
- Dental Health Services Victoria (the state's public oral health promotion and dental service provider)
- Department of Education and Early Childhood Development (state government department).

Programme components
Nutrition, activity, education, community, preschool and health services based

Core feature descriptions:

System recognition

The following quotes from Bell et al. (2008) [Ref 235] could be seen as evidence of recognition for the overall Sentinel site programme although perhaps not explicit enough:

"The evidence suggests that multi-setting, multistrategy approaches to obesity prevention as most likely to work...the few successful approaches to childhood obesity prevention (Gortmaker et al., 1999; Robinson,1999) and experience from other epidemics (Swinburn, 2002) suggest that multiple strategies are required across multiple settings." p329-330

"An important feature of the plan is that it does not remain static. As it is implemented, it is updated based on knowledge gained from the implementation process." p331

Capacity building

The paper by Bell et al. (2008) [Ref 235] describes capacity building as one of the "three core objectives' of the overall Sentinel Site intervention.

	report data obtained from family Day Centre (FDC) services at post-intervention only de Groot et al. (no date, Ref 3633) report results from triangulated mixed methods data collection (document analysis, interviews with key informants, and the Community Capacity Index survey) **Study population** Children aged either 2 years or 3.5 years at the time of assessment living in the target population area. Number in study population varies according to outcome (target population was approx. 12000 children and data were collected opportunistically – e.g. at routine health checks). Comparison communities were sampled (matched for size, population, and SES) from non-intervention local government areas (LGAs) across the rest of Victoria. Demographics provided on anthropomorphic data population: **<u>Baseline</u>** **Intervention (2 yrs old):** n = 1587, Mean age = 2.07±0.003, 48.0% F, SEIFA percentile = 49.2 ±0.7 **Control(2 yrs old):** n = 17732, Mean age = 2.08±0.001, 48.1% F, SEIFA percentile = 57.2 ±0.2 **Intervention (3.5 yrs old):** n = 1191, Mean age = 3.63±0.004, 49.5% F, SEIFA percentile = 50.6 ±0.8 **Control (3.5 yrs old):** n = 14647, Mean age = 3.65±0.001, 48.8% F, SEIFA percentile = 57.6 ±0.3 **<u>Post-intervention</u>** **Intervention(2yrs old):** n = 1611, Mean age = 2.06±0.002, 47.5% F, SEIFA percentile = 49.6 ±0.7 **Control(2yrs old):** n = 21911, Mean age =	This was realised via “bringing leadership, training and funding in to a community as catalysts for a cyclic and expanding process of community and organizational change” P332 Training was tailored to the specific needs of the community. R&C specifically aimed to build the capacity of CoGG (local government managers of a range of children’s care and health services) and the Borough of Queenscliffe. **Local creativity** The program paper by Bell et al. (2008) [Ref 235] describes: “social marketing strategies...and, one or two innovative objectives that the community wants to try.” P331 In R&C, a structured Active Play Program developed with input from early-childhood workers **Relationships** As part of the capacity building process, the lead agency and funding agency aimed to provide support in building personal and organisational relationships. R&C aimed to build capacity through enhancing partnerships, strategic alliances and community organisational networks. **Community engagement** The ANGELO framework was used to enable communities to specify environmental and policy change targets.

	2.08±0.001, 48.7% F, SEIFA percentile = 57.1 ±0.2 **Intervention (3.5 yrs old):** n = 1239, Mean age= 3.63±0.004, 47.7% F, SEIFA percentile = 51.4±0.8 **Control (3.5 yrs old):** n = 19050, Mean age= 3.66±0.004, 49.5% F, SEIFA percentile = 57.2±0.2 Note: Intervention sample more SE disadvantaged than comparison sample. At baseline comparison sample has a lower prevalence of overweight/obesity than intervention sample. (de Silva-Sanigorski et al. (2010), Ref 3632, p6). de Silva-Sanigorski et al. (2010), Ref 3632, p6) also provide brief demographics for those completing the EPAQ: "intervention and comparison samples, respectively, participants in this component of the evaluation were aged 2.9 ±0.04 y and 2.8 ±0.03 y, were 51.2% and 49.5% female, and 34.3% and 33.9% had mothers with an educational level of secondary school or less at follow-up." The WHO CCOP Summary Report (de Silva-Sanigroski et al.2009) [3648] give numbers for the EPAQ as intervention n= 950 at baseline, n =375 post-intervention; comparison sample n=0 at baseline, n=786 post-intervention. Data reported in de Silva-Sanigorski et al. (no date, Ref 3634) was obtained from family Day Centre (FDC) services (n= 1 in the intervention area, comprising 28 care providers, SEIFA percentile mean =44.1, SE = 5.3, children attending care provider each week mean =8.2, SE=0.5; n=17 in the comparison area, comprising 223 care providers, SEIFA percentile mean =41.0, SE = 1.6, children attending care provider each week mean =6.5, SE=0.3). Comparison FDCs were matched to the intervention "on a range of population demographic variables (age and gender profile, community ethnic diversity, level of disadvantage etc), as well as the	Engagement with the community involved provision of training (e.g. workshops) and setting up committees (e.g. local implementation committee). R&C was developed with "extensive community consultation and stakeholder engagement". **Communication** In R&C, there was e-mail, phone, or site visit access to dietitian and other allied health professionals for early-childhood workers as required. The second strategy of R&C was to "develop and implement a communication plan" WHO CCOP report, Parker et al. (2009), Ref 3641 **Embeddedness** The overall Sentinel Site programme aimed to elicit policy change; "We used the ANGELO framework (Analysis Grid for Elements Linked to Obesity) to allow communities to specify the targets for the policy and environmental change". The R&C programme has an explicit aim to change policy. The Structured Active Play Program training incorporated into early-childhood workers' vocational training. There was also integration of policies and early-childhood nutrition and active play into local government and health-service strategic and public health plans. **Robustness & sustainability** Figure 1 in Bell et al. (2008) [Ref 235] demonstrates how the programme aims to be sustainable and for the reach of the programme to widen as time goes

	types and scale of health promotion programs currently being undertaken in the LGA" p9 Data reported in de Groot et al. (no date, Ref 3633) were based on interviews with key informants, and the Community Capacity Index survey which was administered to these informants (n=17 contacted, n=16 respondents). Informants identified by the evaluation manager from partner organisations who had worked closely with Romp & Chomp or had a significant influence on the project. **Source of funding** Funding for evaluation: • Department of Human Services • Deakin University Funding for programme: • Department of Human Services • Primary Care Partnership • Leisure Networks Other (not clear if evaluation or programme): • Department of Education and Early Childhood Development • City of Greater Geelong • Barwon Health • Commonwealth Department of Health and Ageing • Two authors were supported by a VicHealth fellowship and one author was supported by an Australian Research Council Australian Postgraduate Award. • "Substantial in-kind contributions and resources were also provided by these organisations and many other organisations, particularly Dental Health Services Victoria and Kids — 'Go For Your Life'." de Silva-Sanigorski et al. (no date) [3634], p19	on. Sustainability was also ensured through "a cycle of assessing and meeting needs as well as expanding the numbers of people involved in the change and enhancing their ability to make and maintain the changes." p332 In R&C, sustainability of changes was stated to be an explicit aim. One way in which this was implemented was by passing on the management of parent engagement sessions to kindergarten staff. **Facilitative leadership** In addition to leadership being provided by the lead agency and the funding agency, the programme aimed to "foster community based leadership" [Ref 235, Table 3] The overall Sentinel Site programme also explicitly aimed to build confidence and empower people to act. In R&C, community health professionals distributed folders to kindergartens with suggestions on possible applications, and community health workers and allied and dental health professionals trained to support kindergartens to undertake the intervention activities. Integration of the programme into local government and health-service strategic and public health plans was used as a way of ensuring sustainability.

	'Lessons' for the evaluation of obesity prevention programmes • Reliance on services– outcomes and ease of collection dependent on responsiveness and documentation quality of the services (used triangulation to try to overcome this, Groot et al. (no date, Ref 3633)) • Reliance on parental reports and service level data (for some outcomes) – likely to be subject to social desirability bias **Barriers and facilitators** Barriers highlighted by authors (de Silva-Sanigorski et al. (2010), Ref 3632): • Wide area boundaries • It was difficult to engage with privately run day-care centers These could apply to the programme and the evaluation. Groot et al. (no date, Ref 3633) highlight the following: "Based on our learnings we recommend the following: • Intervention strategies and their evaluation should be guided by an appropriate theoretical framework such as a capacity building framework • If taking a capacity building approach, ongoing activities are needed which address all aspects of capacity building with a focus on	

	leadership skills within the implementation network • Given the challenging nature of this approach, a commitment to long term efforts to foster and maintain collaborations and partnerships are required at all levels, from the individuals implementing the program to those high up in the stakeholder organisations involved • Ongoing specific intervention activities are needed to foster and maintain the implementation network and partnerships • Clarity around the roles and responsibilities of partner organisations and the recognition of their cash and in-kind contributions are important • Ongoing evaluation of the performance of the network and partnerships is required" p15	

Be Active Eat Well

Programme focus	Study details	Whole system approach
Intervention name, Location Be Active Eat Well (BAEW; Sentinel Site), Colac township, Barwon South Western region, Victoria, Australia **Year/ timescale over which implemented** Started in 2002 and aims to be sustainable (i.e. no end date for programme implementation) **Target population** The target population was children aged 4-12 yrs living Colac township, Barwon South Western region, Victoria, Australia *and* their family members. The Barwon South Western region is described as rural and socio-economically disadvantaged. Colac has a population of approx. 11,000. All ten Colac schools with ≥20 children enrolled took part in the programme (n= 1726 children in target population). It is not clear how many family members were in the target population. **Theoretical perspective** The overall Sentinel Site programme used the following models (Bell et al., 2008, Ref235, p329) • Determinants of Health Model • Social Ecological Model • Social Marketing Theory **Was local knowledge used in the design and/or delivery of the programme?** It was stated that the overall Sentinel programme	**Study name** Study data collected in 2003 and 2006 **Setting** Mainly school based, also community **Author plus associated paper/source+ paper/source focus** Bell et al. (2008) [ref 235]– Programme details Sanigorski et al. (2008) [Ref 278] – Evaluation data Moodie et al. (poster) [Ref 3635] – Cost-effectiveness **Aim of study** To evaluate the effects of BAEW on reducing children's unhealthy weight gain **Study design** NRCT/CBA design. Described in Sanigorski et al. (2008), Ref 278, p1062, as "quasi-experimental with non-randomized intervention and control groups and measures taken pre- and post- intervention in the same children". **Study population** Intervention group: Children attending one of four preschools (age 4 yrs) or one of six primary schools (age 5-12 years). Baseline data collected for n=997, follow-up n=833. Analysed n=833. Control group: 2687 children from a stratified random sample of schools (stratification was according to size; large ≥150, small ≥20) in the remainder of the region Barwon South Western	**Does the programme use the language of 'whole system' or 'whole community' approaches?** Not explicitly, but whole of the Bell et al. (2008) study (Ref 235) is written in this *type* of 'language' **Levels of action** Individual, Family, School, Community, PH policy **Collections of organisations/partners/groups of actors involved** • Victoria Department of Human Services (provided funding) • The Sentinel Site team, based at Deakin University Community agencies specific to BAEW: • "key organisations in Colac" including: Colac Area Health (lead agency), Colac Otway Shire, and Colac Neighbourhood renewal **Programme components** School and community based nutrition, physical activity and reducing television strategies, and policy-based strategies **Core feature descriptions:** (highlight examples) **System recognition** The following quotes from Bell et al. (2008) [Ref 235] could be seen as evidence of recognition for the overall Sentinel site programme although perhaps not explicit enough:

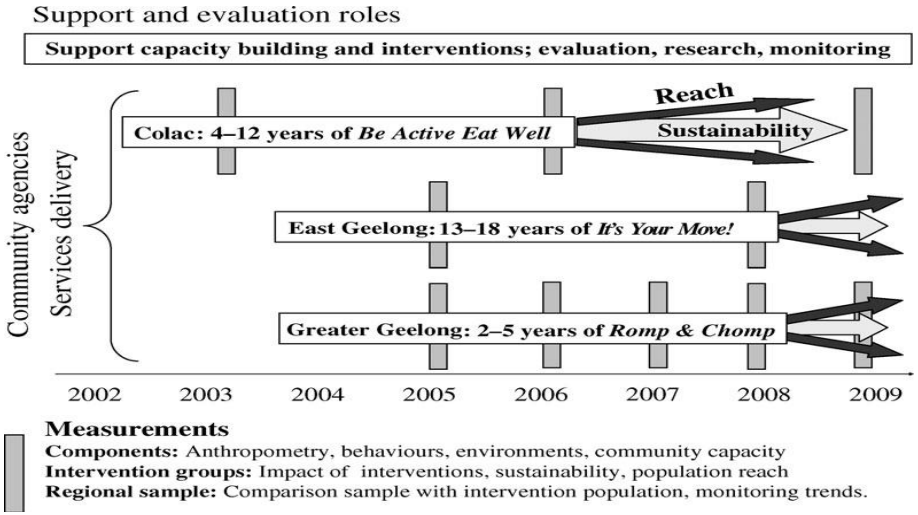
involved the "local application of local and global knowledge" Bell et al. (2008) [Ref 235, Table 1]] **Policy context** It was stated in Bell et al. (2008) [Ref 235, p329] that: "Sentinel Site interventions cover multiple settings and are led by policy and environmental changes (Swinburn and Egger, 2002)." In BAEW, policy change was part of the overall strategy with BAEW strategies incorporated into local polices such as the Municipal Early Years Plan (Colac Otway Shire) Integrated Health Promotion Plan (Colac Area Health), and the Municipal Public Health Plan (Colac Otway Shire).	region. Schools within 30km radius of Colac were excluded to avoid contamination. Baseline data collected for n=1181, follow-up n=974. Analysed n=974. The Barwon South Western region is described as rural and socio-economically disadvantaged. The sample was "predominantly Anglo-Saxon Australian". Note: 1800 children aged 4-12 years needed for power 0.80, alpha 0.05. Population characteristics at baseline: **Mean Age** - Intervention 8.21 years (SD = 2.26) Control 8.34 year (SD = 2.22) **Gender**- Intervention 53.6% F Control 50.2% F **Parents born oversees -** Intervention 6% Control 12% Population characteristics at follow-up: **Mean Age** - Intervention 11.13 years (SD = 2.27) Control 10.31 years (SD = 2.14) **Gender**- Intervention 53.7% F Control 49.1% F Populations similar at baseline for gender and age. Analyses are not given comparing rates of parents born oversees in the two groups. Controls had a significantly greater height at baseline ($p<0.01$). Height was entered at a covariate in most regression analyses (see below). **Source of funding** Victorian Department of Human Services Commonwealth department of Health and Aging Victorian Health Promotion Foundation (VicHealth)	"The evidence suggests that multi-setting, multistrategy approaches to obesity prevention as most likely to work...the few successful approaches to childhood obesity prevention (Gortmaker et al., 1999; Robinson,1999) and experience from other epidemics (Swinburn, 2002) suggest that multiple strategies are required across multiple settings." P329-330 "An important feature of the plan is that it does not remain static. As it is implemented, it is updated based on knowledge gained from the implementation process." p331 **Capacity building** The paper by Bell et al. (2008) [Ref 235] describes capacity building as one of the core objectives of the overall Sentinel Site intervention. This was realised via: "bringing leadership, training and funding in to a community as catalysts for a cyclic and expanding process of community and organizational change" P332 Training was tailored to the specific needs of the community, and BAEW was designed to build the capacity of the community, so that they could provide their own solutions, through "broad actions around governance, partnerships, co-ordination, training, and resource allocation". The programme project staff provided the leadership, funds, and knowledge to encouraged change (e.g. school canteen changes). The programme also sought to build on the skills of health professionals and other stakeholders. **Local creativity** The program paper by Bell et al. (2008) [Ref 235]

	'Lessons' for the evaluation of obesity prevention programmes Evaluation facilitators: • remote setting - improves ease at which social marketing activities can be directed without contamination of comparison populations • High level of financial support for the evaluation : "the ratio of support and evaluation funding to intervention funding in Be Active Eat Well was at least 50:50, much higher than the 15% of funds usually recommended for program evaluation" Evaluation barriers: • Working around school timetables and vacation periods resulted in extra time spent collecting data, and this appeared to be more pertinent for the intervention group than the comparison group, with a longer duration between baseline and follow-up measurements in the intervention group. **Barriers and facilitators** Facilitators highlighted by authors: • manageable target population size • identifiable area boundaries Note that the above were highlighted as programme facilitators but may also have facilitated the	describes: "social marketing strategies...and, one or two innovative objectives that the community wants to try." P331 In BAEW, the local community was supported to create its own solutions to promoting healthy eating and physical activity in the target population. **Relationships** As part of the capacity building process, the lead agency and funding agency aimed to provide support in building personal and organisational relationships. BAEW aimed to build networks and partnerships to help build capacity. **Community engagement** **T**he ANGELO framework was used to enable communities to specify environmental and policy change targets Engagement with the community involved provision of training (e.g. workshops) and setting up committees (e.g. local implementation committee). **Communication** No clear examples found **Embeddedness** The overall Sentinel Site programme aimed to elicit policy change; "We used the ANGELO framework (Analysis Grid for Elements Linked to Obesity) to

	evaluation.	allow communities to specify the targets for the policy and environmental change" BAEW strategies were incorporated into local polices such as the Municipal Early Years Plan (Colac Otway Shire) Integrated Health Promotion Plan (Colac Area Health), and the Municipal Public Health Plan (Colac Otway Shire) **Robustness & sustainability** Figure 1 in Bell et al. (2008) [Ref 235] demonstrates how the programme aims to be sustainable and for the reach of the programme to widen as time goes on. Sustainability was also ensured through "a cycle of assessing and meeting needs as well as expanding the numbers of people involved in the change and enhancing their ability to make and maintain the changes." p332 BAEW also explicitly aimed to develop sustainable health promotion strategies through community ownership and operation of the programme. **Facilitative leadership** In addition to leadership being provided by the lead agency and the funding agency, the programme aimed to "foster community based leadership" [Ref 235, Table 3] The overall Sentinel Site programme also explicitly aimed to build confidence and empower people to act. BAEW explicitly aimed to build leadership and community ownership.
Programme delivery – give details, including relevant diagrams and tables		

The overall Sentinel Site programme and evaluation is outlined diagrammatically in Bell et al. (2008) [Ref 235, Figure 1]:

Fig. 1: Sentinel Site for obesity prevention design. The support and evaluation roles (provided by Deakin University) link with the service delivery roles (provided by the community agencies) to establish, implement and evaluate the three community projects.



The way in which capacity was built (bringing leadership, training etc.) to the community to engender community change which is sustainable and continues to widen in reach) was outlined diagrammatically in Bell et al. (2008), Ref 235, Figure 2 – unable to copy and paste image (refer to paper if needed). Further details were given in Bell et al. (2008), Ref 235, Table 3.

Specific details of BAEW are given in Sanigorski et al. 2008, Ref 278, Table 1:

Table 1 Overview of the Be Active Eat Well intervention strategies

Nutrition strategies

- School-appointed dietitian for support
- School nutrition policies (including policies around water, fruit breaks, canteens, fundraising)
- Training for canteen staff
- Canteen menu changes
- Lunch pack (healthy combos in designed packaging; 549 sold during the pilot period and remaining packs, about 4000, provided to schools for ongoing use)
- Professional development for teachers about healthy eating curriculum
- One-off class sessions conducted by dietitians
- Taste tests of new canteen menu items
- Fresh taste program (Melbourne Markets)
- Healthy breakfast days

Interactive, glossy, children's newsletters (set of four 1600 copies of each newsletter distributed through the schools) Teacher fliers (linking to children's newsletters) Promotional materials (for example, balloons, stickers) Happy healthy families program (small groups, 6 weeks) Parent tips sheets (set of 10) Healthy lunchbox tip sheets Community garden Choice chips program (7 hot chip outlets in Colac) Fruit shop displays (3 shops involved) Physical activity strategies[b] After-school activities program Be Active Arts program Walking school buses Walk to school days Promotional materials (for example, balloons, stickers) Sporting club coach training Sporting club equipment Two class sets of pedometers for rotation between schools Screen time[c] TV power-down week, including a 2-week curriculum Interactive, glossy, children's newsletters (series of five 1600 copies of each distributed thorough the schools) Teacher fliers (linking to children's newsletters) Across all strategies Sponsorship of the Colac Kana festival 2004 Sponsorship of kids day out 2003 Broad media coverage over 4 years (57 newspaper articles, 21 paid adverts) Incorporation of BAEW strategies on Municipal Early Years Plan (Colac Otway Shire) Incorporation of BAEW strategies into Integrated Health Promotion Plan (Colac Area Health) Incorporation of BAEW strategies into Municipal Public Health Plan (Colac Otway Shire) Social marketing training Obesity-prevention training [a]Increase water, fruit and vegetables; decrease sweet drinks and energy dense snacks. [b]Increase active transport and time spent being active after school.[c]Limit TV viewing time.	
Outcomes	
Obesity - **Weight in kg** - **Waist circ. in cm** - **BMI** - **BMI-z**	**Anthropometric measures** (BMI, weight, waist circumference etc.): Note: baseline data was collected in 2003/2004, not 2002 • **Change in weight in kg** (measured at baseline and in 2006); measured in light clothing without shoes to the nearest 0.05kg using electronic scales (A&D Personal Precision Scale UC-321). Two measurements were recorded and where there was disagreement between these measures (of >0.1 kg) a third measure was recorded. The mean was used for analysis. Univariate regression analysis, with group (intervention or comparison) entered into the model together with the following covariates: baseline weight value, age at follow-up, height at follow-up, gender, time between measurements, and clustering by school, found that *the intervention group children gained less weight than controls (difference in weight gain =-0.92 (95% CI = -1.74, - 0.11) , robust standard error =0.41, p=0.03).*

	• **Change in waist circumference in cm** (measured at baseline and in 2006); measured at the level of the umbilicus using a plastic tape measure. Two measurements were recorded and where there was disagreement between these measures (>0.3cm), a third measure was recorded. The mean was used for analysis. Univariate regression analysis, with group (intervention or comparison) entered into the model together with the following covariates: baseline waist circumference value, age at follow-up, gender , time between measurements, and clustering by school, found that *the intervention group children gained less than controls (difference in waist circumference gain =-3.14 (95% CI = -5.07, - 1.22), robust standard error =0.96, p=0.01).* • **Change in BMI and BMI z scores (**measured at baseline and in 2006); using height and weight measurements. Height was measured to the nearest 0.1cm using a portable stadiometer (PE87 portable stadiometer). Two measurements were recorded for height and where there was disagreement between these measures (>0.5cm), a third measure was recorded. The mean was used for analysis. BMI z scores were calculated against the 2000 CDC growth reference from the United States. **For BMI,** univariate regression analysis, with group (intervention or comparison) entered into the model together with the following covariates: baseline BMI, age at follow-up, height at follow-up, gender , time between measurements, and clustering by school found *no significant difference between groups (difference in BMI increase =-0.28 (95% CI = -0.7, 0.15), robust standard error =0.21, p=0.20).* **For BMI z scores,** univariate regression analysis, with group (intervention or comparison) entered into the model together with the following covariates: baseline BMI z score, age at follow-up, height at follow-up, gender, time between measurements, and clustering by school, found that *the intervention group children had a lesser increase than controls (difference in z score increase =-0.11 (95% CI = -0.21, - 0.01), robust standard error =0.05, p=0.04).* • **Prevalence of overweight/obesity**; measured using the International Obesity Task Force age-specific BMI cut-offs to classify children's weight status as either: thinness grades1–3, healthy weight, overweight or obese. The prevalence of overweight and obesity increased in both groups, and the incidence of overweight/ obesity was *not significantly different between groups (point estimate of incidence rate ratio: 0.91 (95% CI: 0.65, 1.28)).* Prevalence of thinness/underweight was not significantly increased in either group (intervention from 3.1% at baseline to 3.6% at follow-up, comparison 2.2–2.4%, NS) • In the intervention group, none of the demographic variables (lower maternal education, lower paternal education, lower household income, and lower area level SES) were found to significantly predict change in the above anthropometric measures, but in the comparison group all of the demographic variables significantly predicted BMI increase, BMI z score increase, and weight increase, and all demographic variables but household income predicted waist circumference increase (see Sanigorski et al, 2008, Ref 278, Table 4).

	Physical activity measures : Note: baseline data was collected in 2003/2004, not 2002 Questions were derived from a variety of existing questionnaires including NSW Schools Physical Activity and Nutrition Survey (SPANS) (Booth et al., 2005) collected using Computer-Assisted Telephone Interviews (CATI) for parental reports of physical activity (baseline and in 2006) and collected using Direct Report of Physical Activity for children aged 10-12 years at baseline using a 16 item survey (baseline and in 2006). Although the BAEW programme aimed to reduce television viewing, increase Active Play after school and at weekends, and increase active transport to school, data are not provided for physical activity outcomes.
	Diet measures: Note: baseline data was collected in 2003/2004, not 2002 Questions derived from a variety of existing questionnaires including the 1995 National Nutrition Survey NSW Schools Physical Activity and Nutrition Survey (SPANS) (Booth et al., 2005) collected using Computer-Assisted Telephone Interviews (CATI) for parental reports of physical activity (baseline and in 2006) and collected using Direct Report of Physical Activity for children aged 10-12 years at baseline using the same 16 item survey as for the physical activity measures (baseline and in 2006). • Dieting practices. The intervention did not increase the attempts to lose weight in the previous 12 months (intervention 37.6–34.5%; comparison 42.5–45.2%, NS). Although the BAEW programme aimed to reduce sugar drinks, increase water consumption, reduce energy dense snacks and increase fruit intake, data are not provided on these outcomes
Both smoking and obesity	**Quantitative/qualitative changes in measures of attitudes and awareness** • Satisfaction with body shape and size, also collected using Direct Report of Physical Activity for children aged 10-12 years at baseline using the same 16 item survey as for the physical activity and diet measures (baseline and in 2006). The intervention did not increase the self-reported level of children's (aged10-12 at baseline) 'unhappiness'('fairly' and 'extremely') with their body size (intervention 6.3–13.4%; comparison 8.2–15.5%; NS); or the proportion not feeling good about themselves (intervention 2.5–9.8% comparison 2.3–4.8%, NS).

	Indicators of successful implementation or sustainability (e.g. development of partnerships; local policy development; increased and stable involvement of a range of key individuals and bodies; uptake of interventions by schools, workplaces, catering outlets; renewed or continuous funding from key agencies. (These indicators may be quantitative or qualitative)): • Changes to environments (using CATI questions and a school environment audit questionnaire [adapted from Carter and Swinburn, 2004]) related to healthy eating and physical activity. Data not provided • Changes in community capacity were assessed at baseline and follow-up using the capacity building index for key stakeholders. Data not provided

Notes

- Cluster randomisation was not employed because of costs
- BAEW programme started in 2002, but baseline evaluation data not collected until 2003
- Approx 6789 person hours required to deliver intervention
- Comparison (control) site was the remainder of the Barwon South West region, but this includes Geelong where Romp and Chomp was started in 2004
- Other factors measured: household demographics, episodes of teasing
- Poster by Moodie et al (Ref 3635) provides cost data: net cost per DALY saved of AUD31,658; ICER (AUD/BMI unit saved) not provided.

Programme delivery – give details, including relevant diagrams and tables

The overall Sentinel Site programme and evaluation is outlined diagrammatically in Bell et al. (2008) [Ref 235, Figure 1; See the data extraction form of Be Active Eat Well, above.

Summary of the strategies implemented in Romp & Chomp

Romp & Chomp objectives and activities undertaken

Objective 1: To increase the capacity of relevant Geelong organizations to promote healthy eating and physical activity in children aged ,5 y

Professional development for early-childhood workers and service staff
Development and enhancement of partnership, strategic alliances, and community organizational networks
Establishment of project management, coordination, budgetary, and governance structures
Identification of funding and resources to support program implementation
Objective 2: To increase awareness of the project's key messages in homes and early-childhood settings
Overarching campaign message: children aged ,5 y need daily 1) active play and 2) healthy food choices provided
Key messages: daily active play; less screen time; more fruit and vegetables; and more water
Communication plan and social marketing plan
Nutrition and physical activity resources for parents and early-childhood service staff from reputable and compatible sources
Series of posters, postcards, and brochures promoting overarching campaign and key messages (see above)
Postcards (.1000) by December 2006 for dissemination to all families presenting to Maternal and Child Health Services, Long Day Care centers, and Family Day Care service.
Resource folders ('1000) to 38 kindergartens by December 2006, with the goal of providing one folder to each family
Resource folders to a total of 46 kindergartens in total by April 2008
Community health professionals distribute folders to kindergartens with suggestions on possible applications.
All resource materials made available online for any early-childhood worker to access
Water bottles (1018) to 31 kindergartens in late 2006 (for 2007)
Water bottles (2031) to 43 kindergartens in late 2007 (for 2008)
Additional water bottles for children attending Long Day Care centers and Family Day Care service in April 2007
Lunch bags (2194) to 38 kindergartens in 2007 and 2826 lunch bags to 47 kindergartens in 2008
Sweet-drink demonstration resource to 76 kindergartens during 2005–2008
Family members (n = 926) attend a kindergarten sweet-drink demonstration in 2008
Energy-dense foods display disseminated to all kindergartens and Long Day Care centers for display
Nutrition objectives
Objective 4: To significantly decrease high-sugar drinks and promote the consumption of water and milk
Objective 5: To significantly decrease energy-dense snacks and increase consumption of fruit and vegetables
Use of benchmarks to inform policy, including consultation with staff and review of resources from similar projects: Best Start,
Start Right Eat Right, Smiles 4 Miles, and the Australian Guide to Healthy Eating for Children
Food safety regulations identified and supported
Production of 3 separate optional policies for kindergartens: 1) fruit and vegetable snack only; 2) fruit, vegetable, and healthy sandwich; and 3) fruit, vegetable, sandwich, and healthy alternative. All were pilot-tested and finalized.
Development and adoption of an overarching health and well-being policy for the Geelong Kindergarten Association in 2007/2008
Inclusion of policies into parent handbooks/booklets
Collaboration with Dental Health Services Victoria, which provided resources (lunch boxes, drink bottles, and social marketing material for kindergarten children)
Collaboration with Kids—Go For Your Life program from 2007 for healthy eating and drink choices resources
Engagement of dental and primary care staff into the Romp & Chomp project
Early-childhood settings staff trained to reinforce nutrition messages and healthy eating choices for children aged ,5 y
Kindergartens given support from allied and dental health professionals to engage with parents on the topic of healthy eating and to provide support for staff to adopt and implement health and well-being/nutrition policies
Community health workers and allied and dental health professionals trained to support kindergartens to undertake the intervention activities
Quarterly inserts into early-childhood newsletters
E-mail, phone, or site visit access to dietitian and other allied health professionals for early-childhood workers as required
Nutrition and drinks media release
Promotional materials (eg, balloons, stickers, posters, postcards) produced and distributed
Activity objectives
Objective 6: To increase structured active play in kindergarten and day care

Development, pilot testing, and implementation of a physical activity policy for early-childhood care and educational settings. Inclusion of policies into parent booklets Collaboration with Kids—Go For Your Life program from 2007 for active play resources. Structured Active Play Program developed with input from early-childhood workers. Pilot-tested, produced, and disseminated to all early-childhood settings. Settings staff trained in fundamental movement skills and ways to provide active play opportunities for young children. Professional development for early-childhood staff (active play workshops). Training included how to use the Structured Active Play Program and how to adapt it for each setting Active play demonstrations at kindergartens in City of Greater Geelong provided by allied health and dental professionals Active Play newsletter (with information for parents and games for children) produced and distributed Quarterly inserts placed into early-childhood newsletters Structured Active Play Program training incorporated into early-childhood workers' vocational training Presence at school and community festivals, where active-play games were demonstrated and children and parents encouraged to participate E-mail, phone, or site visit access to occupational therapists for early-childhood workers as required around implementing active-play program Active-play media release Promotional materials (eg, balloons, stickers, posters, postcards, etc.) produced and distributed. Objective 7: To significantly increase home/family-based active play and decrease television-viewing time Overall needs-assessment evaluation identifying factors found to influence quality and quantity of screen-time viewing Literature review, mind-mapping exercise, and focus groups with parents Overall summary of recommendations for possible future strategies directed at reducing screen time/exposure in children. Development and distribution of posters and postcards Cross-cutting intervention strategies Ministerial project launch. Ongoing media coverage (print and radio). Awareness-raising activities with parents, health professionals, and early-childhood workers. Community consultation. Development and pilot testing of intervention strategies with early-childhood workers. Development of professional training packages for early-childhood staff and dental and allied health professionals to implement the integrated health promotion package. Presence at community festivals in the intervention region. Presentations at community forums and early-childhood and health conferences. Integration of policies and early-childhood nutrition and active play into local government and health-service strategic and public health plans.	
Outcomes	
Obesity **-Weight in kg** **-BMI** **-BMI-z**	**Anthropometric measures** Electronic anthropometric data were collected by trained and experienced MCH nurses as part of routine 2-and 3.5-y-old Maternal and Child Health (MCH) Key Age and Stage (KA&S) health checks available at baseline (2004) and follow-up (2007), for approx. 60% and 50% of the children respectively. Note: Analyses did not adjust for all potential confounders (i.e. did not adjust for SES or area level prevalence of overweight/obesity at baseline, although overweight/obesity only differed at baseline, and different participants were assessed at the two time-points, but SES could have been included in the models). • **Weight in kg;** measured at baseline and post-intervention

	2yr olds: GLM regression analysis**,** adjusting for age, sex and height demonstrated a sig. between-group difference at baseline (Regression co-efficient=0.18, 95%CI = 0.12, 0.24) and at post-intervention (Regression co-efficient=0.15, 95%CI = 0.09,0.21). Children were heavier in the intervention group. ***3.5yr olds:*** GLM regression analysis**,** adjusting for age, sex and height demonstrated a sig. between-group difference at baseline (Regression co-efficient=0.11, 95%CI = 0.01, 0.21) but not at post-intervention (Regression co-efficient= -0.001, 95%CI = -0.09, 0.01) –i.e. the intervention children were no longer heavier than comparison sample. Note: WHO CCOP Summary Report (de Silva-Sanigroski et al.2009) [3648], Fig 1 and 2, p4 gives weight data graphically • **BMI;** measured at baseline and post-intervention ***2yr olds:*** GLM regression analysis**,** adjusting for age, sex and height demonstrated a sig. between-group difference at baseline (Regression co-efficient=0.24, 95%CI = 0.16, 0.31) and at post-intervention (Regression co-efficient=0.20, 95%CI = 0.12, 0.27). Children had a higher BMI in the intervention group. ***3.5yr olds:*** GLM regression analysis**,** adjusting for age, sex and height demonstrated a sig. between-group difference at baseline (Regression co-efficient=0.11, 95%CI = 0.02, 0.20) but not at post-intervention (Regression co-efficient= 0.004, 95%CI = -0.09, 0.09) –i.e. the intervention children no longer had a greater BMI than the comparison sample. • **BMI z score**; calculated according to the Centers for Disease Control and Prevention 2000 reference charts. ***2yr olds:*** GLM regression analysis**,** adjusting for age, sex and height demonstrated a sig. between-group difference at baseline (Regression co-efficient=0.17, 95%CI = 0.11, 0.22) and at post-intervention (Regression co-efficient=0.15, 95%CI = 0.1, 0.21). Children had a higher BMI z score in the intervention group. ***3.5yr olds:*** GLM regression analysis**,** adjusting for age, sex and height demonstrated a sig. between-group difference at baseline (Regression co-efficient=0.08, 95%CI = 0.02, 0.15) but not at post-intervention (Regression co-efficient= 0.01, 95%CI = -0.05, 0.07) –i.e. the intervention children no longer had a greater BMI z score than the comparison sample. • **Prevalence of overweight/obesity (in children aged 2 and 3.5 years only);** established using the International Obesity Task Force, Cole classification: ***For 2yr olds:*** Intervention % overweight/obese=17.1±1.0 at baseline, 14.6±0.9 at post-intervention, reduction of 2.5 percentage points. Control % overweight/obese=13.2±0.3 at baseline, 12.5±0.2 at post-intervention, reduction of 0.7 percentage points. GLM regression analysis**,** adjusting for age, sex and height demonstrated a sig. between-group difference at baseline (Regression co-efficient=0.29, 95%CI = 0.17, 0.42) and at post-intervention (Regression co-efficient=0.16, 95%CI = 0.03, 0.30).

	For 3.5yr olds: Intervention % overweight/obese=18.6±1.2 at baseline, 15.2±1.1 at post-intervention, reduction of 3.4 percentage points. Control % overweight/obese=16.4±0.3 at baseline, 15.7±0.3 at post-intervention, reduction of 0.7 percentage points. GLM regression analysis**,** adjusting for age, sex and height demonstrated a sig. between-group difference at baseline (Regression co-efficient=0.13, 95%CI = 0.06, 0.07error in reporting of CI?) and at post-intervention (Regression co-efficient=-0.03, 95%CI = -0.17, 0.12). See de Silva-Sanigorski et al. (2010), Ref 3632, Table 3 for these data and for within-intervention group (non-comparative) analyses. **Note: Data from de Silva-Sanigorski et al. (2010) [3632] is academic in confidence.**
	Physical activity measures : Physical Activity data were collected using ***parental-reported*** Eating and Physical Activity Questionnaire (EPAQ) when children attended for their 2-y-old or 3.5-y-old KA&S health check, before (intervention sample only) and after (both intervention and comparison samples) the intervention. Baseline N = 950 completed EPAQs (intervention only), post-intervention N= 375 (intervention) and N= 786 (comparison): • **Child taken to playground, park, pool etc. In the last week (times/week):** GLM regression analysis**,** adjusting for age, sex and maternal education demonstrated no sig. between-group difference at post-intervention (Regression co-efficient=0.05, 95%CI = -0.02, 0.12). See de Silva-Sanigorski et al. (2010), Ref 3632, Table 4 for within-intervention group (non-comparative) analysis. • **Time spent watching TV/DVD (min/day):** GLM regression analysis**,** adjusting for age, sex and maternal education demonstrated a sig. between-group difference at post-intervention (Regression co-efficient=-0.03, 95%CI = -0.04, -0.02), with lower viewing time in the intervention sample. See de Silva-Sanigorski et al. (2010), Ref 3632, Table 4 for within-intervention group (non-comparative) analysis. Note: Activity preferences and time spent playing computer games were assessed (see de Silva-Sanigorski et al. (2010), Ref 3632, p4) but data are not reported. Table 4 of de Silva-Sanigorski et al., no date, Ref 3634, Table 4, p30-31 also gives also gives Wald tests of difference in means, based on post-intervention data, for the outcomes below. Analysis was performed at the LGA level (primary sampling unit). These data are based on a 45-item audit completed by care providers (see study design section above). Note: this is only part of Table 4, the remainder is copied in other relevant sections of the form:

	Intervention	Comparison		
	Mean	Mean	95% CI	P
Screen-based sedentary behaviours				
Time children spent watching television[1] (min)	48.85	56.59	51.26-61.91	**0.007**
Time children spent on computer or electronic games[1] (min)	1.73	3.95	1.83-6.08	**0.04**
Physical Activity/Active Play				
Time children spent in organised active play[1] (min)	89.00	121.26	112.84-129.69	**<0.001**
Time children spent in free outside play[1](min)	153.89	140.28	121.64-158.92	0.14
Time children spent in free inside play[1] (min)	148.85	166.42	154.50-178.35	**0.006**
Minimum time spent in organised active play per session per day (min)	73.00	80.60	64.73-96.48	0.33
Minimum time spent in outside play per day (min)	95.63	83.09	71.92-94.26	**0.03**
Times/week taken for active play at a location other than the carers home	3.93	2.75	2.44-3.06	**<0.001**
Length of play sessions away from the family day care home (min)	82.50	81.28	75.85-86.70	0.64

[1]during previous day in care; P value relates to differences between intervention and comparison samples

WHO CCOP report, de Silva-Sanigorski et al. (2009), Ref 3645, Tables 3-12, p11-12, and p21 gives some **non-comparative** data from surveys and focus groups on screen-time and factors influencing screen time.

Note: Data from de Silva-Sanigorski et al. (2010) [3632], and de Silva-Sanigorski et al. (no date) [3634] is academic in confidence.

	Diet measures: Dietary data were also collected using ***parental-reported*** Eating and Physical Activity Questionnaire (EPAQ) as described above. All outcomes analysed at post-intervention using GLM regression analysis**,** adjusting for age, sex and maternal education. Within-group pre-post analyses were conducted (i.e. non-comparative), see de Silva-Sanigorski et al. (2010), Ref 3632, Table 4. • **Servings of vegetables the previous day:** Between-group difference at post-intervention was non-significant at p<0.05 (Regression co-efficient=0.10, 95%CI = -0.01, 0.20, p=0.07). • **Servings of packaged snacks the previous day:** Significantly lower in the intervention group than in the comparison sample at post-intervention (Regression co-efficient = -0.23, 95%CI = -0.44, -0.03, p = 0.03). • **Servings of fruit the previous day:** Between-group difference at post-intervention was non-significant at p<0.05 (Regression co-efficient=0.07, 95%CI = -0.02, 0.16, p=0.14). • **Servings of chocolate/ candy the previous day:** Between-group difference at post-intervention was non-significant at p<0.05 (Regression co-efficient =-0.06, 95%CI = -0.26, 0.14, p=0.56). • **Servings of cakes/muffins/cookies the previous day:** Between-group difference at post-intervention was non-significant at p<0.05 (Regression co-efficient=0.02, 95%CI = -0.15, 0.19, p=0.82). • **Servings of fruit juice the previous day:** Significantly lower intake of fruit juice in the intervention group than that in the comparison sample at post-intervention (Regression co-efficient=-0.52, 95%CI = -0.79, -0.25, p<0.001). • **Servings of cordial the previous day:** Significantly lower intake of cordial in the intervention group than that in the comparison sample at post-intervention (Regression co-efficient=-0.43, 95%CI = -0.73, -0.13, p=0.005). • **Servings of water the previous day:** Between-group difference at post-intervention was non-significant at p<0.05 (Regression co-efficient=0.02, 95%CI = -0.08, 0.11, p=0.74). • **Servings of plain milk the previous day:** Between-group difference at post-intervention was non-significant at p<0.05 (Regression co-efficient=0.01, 95%CI = -0.12, 0.13, p=0.92). • **Servings of flavoured milk the previous day:** Between-group difference at post-intervention was non-significant at p<0.05 (Regression co-efficient=-0.13, 95%CI = -0.05, 0.23, p=0.48). • **Usual servings of vegetables per day:** Significantly greater in the intervention group than that in the comparison sample

	at post-intervention (Regression co-efficient=0.13, 95%CI = 0.03, 0.23, p=0.01). • **Frequency of fast food consumption:** Between-group difference at post-intervention was non-significant at p<0.05 (Regression co-efficient=0.03, 95%CI = -0.05, 0.12, p=0.47). **Note: Data from de Silva-Sanigorski et al. (2010) [3632] is academic in confidence.**
Both smoking and obesity	**Quantitative/qualitative changes in measures of attitudes and awareness** Parental awareness of R&C; assessed using short intercept interviews with parents of preschool children attending 2 community festivals in 2006 and 2008 in the intervention arm (n = 181 in 2006; n = 123 in 2008): • Awareness of R &C was 23% in 2006 and 47% in 2008. WHO CCOP report, Parker et al. (2009), Ref 3641 gives these data in figures 4 and 5, p25-26. • Kindergartens were the main source of awareness-raising (WHO CCOP report, Parker et al. (2009), Ref 3641 gives these data in figures 6, p26). • Proportion of parents who reported that they were aware the following key messages (2008 data reported only): -increase daily consumption of water (97.6%) -increase daily consumption of fruit and vegetables (100%) - increase daily physical activity (98.3%) -cut down on TV and DVD viewing time (i.e., less screen time) (84.2%) -clean teeth often (i.e., clean well) (83.9%)
	Indicators of successful implementation or sustainability (e.g. development of partnerships; local policy development; increased and stable involvement of a range of key individuals and bodies; uptake of interventions by schools, workplaces, catering outlets; renewed or continuous funding from key agencies. (These indicators may be quantitative or qualitative)): de Silva-Sanigorski et al. (no date) [Ref 3634] used a 45 item audit which was "designed to capture the general characteristics of the setting (e.g. number of children cared for) and factors in the physical, policy, socio-cultural and economic environments of the setting that could enhance or inhibit efforts to promote healthy eating and active play for children aged 0-5 years who attend the setting"p9-10

Table 3 of the paper (de Silva-Sanigorski et al., no date, Ref 3634, Table 3, p28-29 gives regression analyses based on post-intervention data. Analysis was performed at the LGA level (primary sampling unit):

Table 3 Environmental aspects of intervention and comparison Family Day Care services in Romp & Chomp (logistic regression analysis with the comparison sample as the referent)

	Odds Ratio	95% CI	P
Physical Activity/Active Play			
Service has a set minimum time for outside play	0.48	0.28-0.80	**0.01**
Service has a set minimum time for organised active play	0.45	0.29-0.69	**<0.001**
Regularly take children to another location for active play time	0.79	0.51-1.22	0.27
Outdoor space has climbing equipment	1.02	0.70-1.47	0.93
Outdoor space has equipment that can be moved by children	0.99	0.74-1.31	0.93
Outdoor space has equipment that can be rearranged by care providers	0.94	0.72-1.24	0.66
Outdoor space has additional outdoor play equipment	0.91	0.59-1.40	0.66
All care providers have participated in training about physical activity and fundamental movement skills	2.61	1.60-4.25	**<0.001**
Healthy Eating			
Has rules about foods provided to children in care	1.46	1.14-1.88	**0.01**
Guidelines are provided about bringing health food	3.06	1.95-4.81	**<0.001**
Healthy food guidelines are written	2.49	1.61-3.86	**<0.001**
Healthy food guidelines are verbal	1.34	0.97-1.86	0.08
Action is taken ‘always’ or ‘most of the time’ if foods brought do not meet	3.63	2.63-4.99	**<0.001**

	guidelines			
	Care providers sit with children while they eat 'always' or 'most of the time'	0.91	0.50-1.64	0.73
	Care providers eat and drink the same things as children 'always' or 'most of the time'	1.88	1.43-2.47	**<0.001**
	Care providers talk to children about health foods 'always' or 'most of the time'	0.87	0.59-1.29	0.47
	Care providers give information to parents about healthy eating 'once a week or more'	2.35	1.46-3.79	**<0.001**
	Packaged snacks never allowed	0.38	0.21-0.71	**0.004**
	Soft drinks never allowed	2.40	1.42-4.03	**0.003**
	Cordial never allowed	5.59	1.69-3.98	**<0.001**
	Vegetables promoted 'once a week or more'	3.97	2.56-6.18	**<0.001**
	All care providers have participated in training about nutrition	1.57	1.01-2.46	**<0.05**
	Offer food as a reward	0.48	0.30-0.77	**0.004**
	Other			
	Member of the *Kids – 'Go For Your Life'* [1] program	3.81	1.67-8.67	**<0.001**
	Achieved the *Kids – 'Go For Your Life'* award	0.76	0.49-1.19	0.21

[1]A large-scale state government funded health promotion program in children's settings. The program is free to all early childhood schools and services and is centrally co-ordinated (Honisett *et al.* 2009).

Table 4 of the paper (de Silva-Sanigorski et al., no date, Ref 3634, Table 4, p30-31) also gives Wald tests of difference in means, based on post-intervention data, for the outcomes below. Analysis was performed at the LGA level (primary sampling unit). Note: this is only part of Table 4, the remainder is copied in other relevant sections of the form:

	Intervention	Comparison		
	Mean	Mean	95% CI	P
Rated availability of resources about physical activity[2]	8.75	7.90	7.61-8.18	**<0.001**
Rated confidence running activities to develop movement skills[2]	8.18	8.24	7.97-8.51	0.63
Rating of outdoor space[2]	8.73	8.64	8.46-8.82	0.29
Rating of outdoor equipment[2]	7.73	7.59	7.35-7.82	0.22
Rating of outdoor shade and shelter[2]	7.88	8.11	7.76-8.45	0.19
Rating of indoor space[2]	8.12	8.30	8.03-8.56	0.18
Rating of indoor equipment[2]	8.44	8.70	8.51-8.90	**0.01**
Number of strategies utilised by care providers to promote physical activity	4.25	4.40	3.98-4.83	0.46
Nutrition/Healthy Eating				
Rating of food preparation space[2]	8.95	8.37	8.13-8.61	**<0.001**
Rating of food storage space[2]	9.06	8.68	8.48-8.89	**0.001**
Rating of food serving / eating space[2]	9.06	8.71	8.51-8.91	**0.002**
Rated availability of resources about nutrition[2]	8.67	8.00	7.65-8.35	**<0.001**
Rated confidence answering questions about healthy eating[2]	8.24	8.24	7.95-8.54	0.98
Rated confidence encouraging parents to supply	8.13	7.78	7.39-8.17	0.08

	healthy food[2] Number of strategies utilised by care providers to promote healthy eating 4.71 4.64 4.17-5.11 0.74 [2]Rating ranges from 0-10 indicated on a visual analogue scale; P value relates to differences between intervention and comparison samples Note: The aim was to investigate "the possible mediating pathways leading to improved eating and increased activity patterns" de Silva-Sanigorski et al. (no date) [Ref 3634], p14, but full mediation analyses not reported. Information on similar outcomes is provided by WHO CCOP report, de Silva-Sanigorski et al. (2009), Ref 3642, but non-comparative. de Groot et al. (no date, Ref 3633) results from document analysis: **Table 1**: *Romp & Chomp* intervention activities mapped into the New South Wales capacity building framework **Framework domains and elements Intervention activities; n (%)** **Partnerships 21/53 (39.6%)** *Shared goals 6/21 (28.6%)* *Relationships 15/21 (71.4%)* *Planning 0/21 (0%)* *Implementation 0/21 (0%)* *Evaluation 0/21 (0%)* *Sustained outcomes 0/21 (0%)* **Leadership 0/53 (0%)** *Interpersonal skills 0/0 (0%)* *Technical skills 0/0 (0%)* *Personal qualities 0/0 (0%)* *Strategic visioning 0/0 (0%)* *Systems thinking 0/0 (0%)* *Visioning the future 0/0 (0%)*

	Organisational management 0/0 (0%) **Resource Allocation 12/53 (22.6)** *Financial resources 3/12 (25%)* *Human resources 1/12 (8.3%)* *Access to information 3/12 (25%)* 22 *Specialist advice 2/12 (16.7%)* *Decision making tools and models 0/12 (0%)* *Administrative support 3/12 (25%)* *Physical resources 0/12 (0%)* **Workforce development 4/53 (7.5%)** *Workforce learning 1/4 (25%)* *External courses 1/4 (25%)* *Professional development opportunities 2/4 (50%)* *Education/Under- and Postgrad degrees 0/4 (0%)* **Organisational Development 16/53 (30.2)** *Policies and procedures 1/16 (6.3%)* *Strategic directions 0/16 (0%)* *Organisational structures 5/16 (31.2%)* *Management support 6 /16 (37.5%)* *Recognition and reward system 0/16 (0%)* *Information systems 4/16 (25%)* *Quality Improvement systems 0/16 (0%)* *Informal culture 0/16 (0%)* **Total 53 (100%)** In total there were 53 actions in the action plan. [a] Score per domain is the proportion of actions in the action plan per NSW Framework domain. [b] Score per element is the proportion of actions in the action plan per NSW Framework element. This is given more simply in WHO CCOP report, de Groot et al. (2009), Ref 3640, p16:

Table 4 Actions described in *Romp & Chomp* action plan scored against the NSW Framework

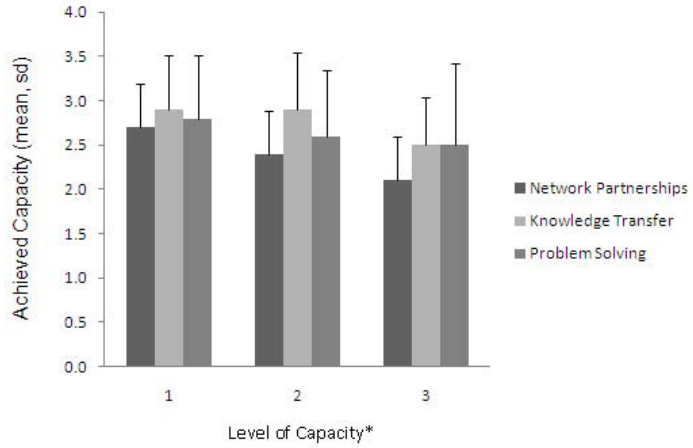
NSW Framework Domains	Score a per domain
Partnerships	21/53 (40%)
Leadership	0/53 (0%)
Resource Allocation	12/53 (23%)
Workforce development	4/53 (8%)
Organisational Development	16/53 (30%)

In total there were 53 capacity building actions documented in the action plan. The score per domain is the proportion of actions in the action plan within each of the NSW Framework domains.

Further qualitative information from informant interviews is provided (de Groot (no date) [Ref 3633], p9-10) and relates to relationships resources and structures.

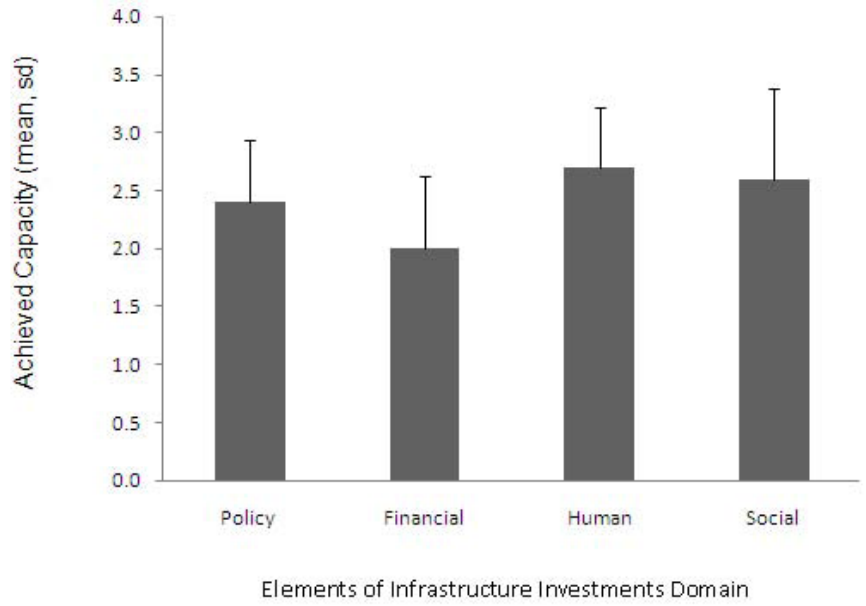
Data presented in de Groot (no date) [Ref 3633], from the Community Capacity Index survey (response rate 50%), gives two figures showing the mean level of capacity achieved in each four domains "(Network Partnerships (the relationships between the organisations within the community network); Knowledge Transfer (the development, exchange and use of information within and between the organisations and groups within the community network); Problem Solving (the ability to identify and solve problems arising in the development and implementation of the program); and Infrastructure (the level of investment in the network by the organisations)). For each of the first three domains there are three levels of capacity, for the remaining domain (infrastructure) there are four levels of capacity". (de Groot (no date) [Ref 3633], p8:

Figure 1 - Mean achieved Capacity in the 3 levels of Network Partnerships, Knowledge Transfer and Problem Solving



Network Partnership; level 1: identify partners, level 2: deliver program, level 3: maintain network.
Knowledge Transfer; level 1: develop program, level 2: transfer, level 3: integrate in mainstream practice.
Problem Solving; level 1: working together, level 2: identify and overcome problems, level 3: sustain.

Figure 2 - Mean achieved capacity of the four types of Infrastructure Investments



The following reports only contained assessments of processes using qualitative data

WHO CCOP report, Parker et al. (2009), Ref 3643 provides a synthesis of process evaluation qualitative data from key informant interviews and document analysis related to the **strategy aimed at increasing water consumption and reducing sweet drinks consumption** in young children – key themes below:

Partnerships. Working within settings. Liaison with other programs. Policy development and integration. Drinking water access.. L**ocal Marketing. Risk Management.**

WHO CCOP report, Parker et al. (2009), Ref 3644 provides a synthesis of process evaluation data from key informant interviews

	and document analysis related to the strategy aimed at decreasing **energy dense snacking and increasing consumption of fruit and veg.** in young children – covered under the themes below: **Partnerships. Working within settings. Liaison with other programs**. **Policy development and integration. Resources. Social Marketing. Risk Management** WHO CCOP report, de Silva-Sanigorski et al. (2009), Ref 3645 gives some information on the **success of strategies to reduce TV screen time assessed via focus groups** and a forum - covered under the themes below: **Promotional campaigns. TV allowances/budget. Community organised programs. Parent education sessions. Dance DVD.** WHO CCOP report, Parker et al. (2009), Ref 3646 provides a synthesis of **qualitative process evaluation** data from key informant interviews and document analysis related to the **strategy aimed at increasing structured active play in kindergarten and childcare settings** – and was summarise under the themes below: **Partnerships. Working within settings**. **Liaison with other programs**. **Policy development and integration. Training. Social Marketing. Risk Management.** Parker et al. (2009), Ref 3646, appendix 7, p32-33 also provide survey data evaluating a workshop to 'Train the Trainer', whereby staff representing agencies were trained so that they could train others within their agency to run active play programs and develop fundamental movement skills. Parker et al. (2009), Ref 3646, appendix 7, p37 provides graphical information presenting barriers to active play. WHO CCOP report, Parker et al. (2009), Ref 3647 provide information on improving routine collection, recording and access to anthropometric data so that it can be valuable to a range of users. ***Note: Data from de Silva-Sanigorski et al. (2010) [3632], de Silva-Sanigorski et al. (no date) [Ref 3634] and de Groot (no date) [Ref 3633] are academic in confidence.***
Notes	

- Cluster randomisation was not employed because of costs
- Two other programmes – Smiles4Miles and Kids – Go for Your Life were also operating in the R&C area and therefore 'incorporated' into R&C.
- The timeframe for data collection in the comparison sample varied for "logistical and practical reasons"
- Accurate individual-level parent response rates for each area were not provided due to the methods of the survey (i.e. exact target sample size not known).
- Anthropometric data were only received from 68% of the local government areas (LGAs).
- Analysis of weight, BMI and BMI-z data did not adjust for all confounders (i.e. did not adjust for SES).
- The design of the study (i.e. different participants at baseline and post-intervention) makes it difficult to assess *change* in outcomes.
- There are some basic cost data provided in the WHO CCOP reports.

Shape up Somerville: Eat Smart, Play Hard

Programme focus	Study details	Whole system approach
Intervention name, Location Shape up Somerville: Eat Smart, Play Hard (SUS), Somerville, Massachusetts, USA **Year/ timescale over which implemented** 2002-2005 (1 planning year, 2 intervention years) **Target population** (who were the people subjected to the different strategies e.g. African-American community) **(population number** e.g. 150 or 10,000**, town, area, country)** Elementary school children living in Somerville, an urban, culturally diverse city in Massachusetts, USA. The intervention and control communities are described as "cities outside of Boston...similar community demographic characteristics, such as non-English speaking in the home (28% to 36%), median household income ($39,507 to $46,315), and percentage living below the poverty level (12.5% to 14.5%)". Demographic data are not provided separately for the target population (intervention community children). **Theoretical perspective** (if mentioned – e.g. Social Ecological Model) Not mentioned, although research took a CBPR approach **Was local knowledge used in the design and/or**	**Study name (if different) [year]** "Pre-intervention" measures collected Sep/Oct 2003 "Post-intervention" measures May/June 2004 i.e. Interim analysis, beginning after the planning year and ending half way through the two intervention years **Setting (e.g. school, community, etc.)** School (before, during and after), community **Author (year) [Ref ID] plus associated paper/source** (i.e. papers addressing the same intervention) **+ paper/source focus** (e.g. outcome-based, economic evaluation, scope) • Economos et al. (2007) [3665] – first year effectiveness results • Economos & Curtatone (2010) [3668] – comment on success and sustainability (**see notes**) **Aim of study** "to test the hypothesis that a community-based environmental change intervention could prevent weight gain in young children (7.6 ± 1.0 years)." (Economos et al., 2007, Ref 3665, p1325) **Study design** NRCT	**Does the programme use the language of 'whole system' or 'whole community' approaches?** (if so, extract relevant text) No **Levels of action** (Individual, Family, School, Community, PH policy) Individual, Family, School, Community, Local level policy **Collections of organisations/partners/groups of actors involved** (e.g. Department of Health) "Many groups and individuals within the community "(Economos et al., 2007, Ref 3665, p1325): • Children • Parents • Teachers • School food service providers • City department • Policy makers • Healthcare providers • Before- and after-school programs • Restaurants • Media • Joseph A. Curtatone, the new Mayor of Somerville, and Lawrence S. Bacow, the President of Tufts University **Programme components**

delivery of the programme? (If so, describe) Members of the four major language communities (Portuguese, Haitian-Creole, Spanish, and English), worked on the design and plan of the programme/evaluation "focus groups with teachers, parents, and children informed the intervention design, eliciting crucial feedback on intervention ideas; for example, parents provided important information on what would make a walk-to-school initiative more feasible." (Economos & Curtatone, 2010, Ref 3668, pS98). **Policy context** (i.e. local policies & national initiatives - and other key contextual details) The programme informed/led to expansions of some existing local level policies (e.g. pedestrian safety and environmental policies). "At a time when **awareness of childhood obesity was growing nationwide**, local data revealed high rates of overweight and obesity among 4th graders in Somerville, sparking a call to action in the community. In the Somerville Public Schools, for example, both the Food Service Director and the Superintendent were interested in talking with researchers about changes to the school environment." (Economos & Curtatone, 2010, Ref 3668, pS97).	Using a CBPR approach **Study population** (from whom was outcome data collected? e.g. children aged 5-10 yrs attending Nashville primary schools) **(age, gender, socio-economic status, other relevant characteristics)** Children (n = 1178 analysed) in grades 1-3 attending public elementary schools in the intervention community (Somerville) and two comparison communities (matched for socio-demographics - SES and racial-ethnic diversity). All elementary schools in the three communities participated (intervention n=10; first control n=15; second control n=5). Eligible schoolchildren children across three communities n=5940 (not clear how many were eligible in each control community, n= 1600 in intervention community, Economos et al., 200, Ref 3665, p1327); agreed to participate n=1696 (intervention n= 631; first control n=708; second control n=357). Response rates cannot be calculated separately for each control group (intervention response rate 39.4%, combined control group response rate = 24.5%). Main analysis was conducted on n=385 intervention children and n=793 control children (first control n=561, second control 232). Therefore withdrawal/dropout/missing data rates were 39.0% in the intervention group, 20.8% in first control group and 35.0% in the second control group. Questionnaire data were received from n=733 participants (n=231 intervention group, n=359 first control, n=143 second control).	(e.g. Diet, Education, School-based) • School level: diet, exercise, education, policy/environment change • Extra-curricular (before and after school) level: diet, exercise, education, policy/environment change • Community level: diet, exercise, education, policy/environment change • Home/family level: diet, education, and event participation **Core feature descriptions:** (highlight examples) **System recognition** Perhaps not explicit enough, but Economos et al., 2007, Ref 3665, p1325 do mention that narrow focus of interventions (e.g. school only) may be the reason why other programmes are not successful, and that SUS involves "multifaceted community-based changes". Economos et al., 2007, Ref 3665, p1334 also state that "SUS intervened in multiple environments, using every aspect of the community that touches children and their families". **Capacity building** "professional development provided key stakeholders with the skills and confidence needed to adopt new behaviours and to implement intervention components. Training sessions were held for food service staff, teachers, school nurses, project staff, health care providers, city employees, and community partners." Economos & Curtatone, 2010, Ref 3668, pS98).

	Demographics for main analysis sample at "pre-intervention": **Gender data are not provided** **Age** **Intervention group:** Mean= 7.92 yrs (SD=1.06yrs) **Control 1:** Mean= 7.34 yrs (SD=0.94yrs) **Control 2:** Mean=7.8yrs (SD=1.05yrs) **Ethnicity** **Intervention group:** white 49.6%, black 7.5%, Hispanic 18.2%, Asian 9.1%, other 15.6% **Control 1:** white 37.8%%, black 25.1%, Hispanic 11.8%, Asian 2.3%, other 23.0% **Control 2:** white 51.7%, black 6.9%, Hispanic 22.8%, Asian 7.3%, other 11.2% **Non-English primary language at home** **Intervention group:** 33.0% **Control 1:** 15.9% **Control 2:** 35.3% **Weight-category** **Intervention group:** <85th percentile BMI 55.6%, 85th-95th percentile BMI 20.0%, >95th percentile BMI 24.4% **Control 1:** <85th percentile BMI 63.6%, 85th-95th percentile BMI 16.4%, >95th percentile BMI 20.0% **Control 2:** <85th percentile BMI 56.9%, 85th-95th percentile BMI 17.7%, >95th percentile BMI 25.4% **Note: intervention group described as a "high-risk study population" where approx. 20% were "already overweight" (Economos et al., 2007, Ref 3665, p1333).** **Additional demographics for n=733 questionnaire completers "pre-intervention":**	**Local creativity** "focus groups with teachers, parents, and children informed the intervention design, eliciting crucial feedback on intervention ideas" (Economos & Curtatone, 2010, Ref 3668, pS98). **Relationships** "Leadership, **relationship building**, community involvement, and sustainability have all been critical to the success of SUS." (Economos & Curtatone, 2010, Ref 3668, pS97). **Community engagement** Members of the four major language communities (Portuguese, Haitian-Creole, Spanish, and English), were engaged in order to work on the design and plan of the study (study in this context means the programme and the evaluation, using a CBPR approach). This "took several forms, including meetings, focus groups, and key informant interviews, and led to the formation of several SUS advisory councils that remained actively involved throughout the study." (Economos et al., 2007, Ref 3665, p1327) "Many groups and individuals within the community (including children, parents, teachers, school food service providers, city departments, policy makers, healthcare providers, before- and after-school programs, restaurants, and the media) were engaged in the implementation of the intervention." (Economos et al., 2007, Ref 3665, p1327)

	Parental marital status **Intervention group:** never married 10.7%, married 79.1%, separated/divorced 9.8% **Control 1:** never married 24.8%, married 60.0%, separated/divorced 14.7% **Control 2:** never married 13.4%, married 73.2%, separated/divorced 13.4% **Parent birthplace** **Intervention group:** US born mother 54.4%, US born father 51.1% **Control 1:** US born mother 70.4%, US born father 67.9% **Control 2:** US born mother 57.0%, US born father 54.7% **Mother's education** **Intervention group** (n=222)**:**, less than high school 14.0%, high school or equivalent 35.1%, some or all college 34.2%, graduate school 16.7% **Control 1**(n=344)**:**, less than high school 4.9%, high school or equivalent 48.0%, some or all college 41.0%, graduate school 6.1% **Control 2** (n=137)**:**, less than high school 14.0%, high school or equivalent 54.0%, some or all college 27.7%, graduate school 4.4% **Father's education** **Intervention group** (n=210)**:**, less than high school 14.8%, high school or equivalent 37.6%, some or all college 30.5%, graduate school 17.1% **Control 1**(n=327)**:**, less than high school 13.2%, high school or equivalent 55.7%, some or all college 25.1.0%, graduate school 6.1% **Control 2** (n=132)**:**, less than high school 11.4%, high school or equivalent 66.7%, some or all college 18.9%, graduate school 3.0%	"Leadership, relationship building, **community involvement**, and sustainability have all been critical to the success of SUS." (Economos & Curtatone, 2010, Ref 3668, pS97). **Communication** NA **Embeddedness** There were several policies developed (e.g. school wellness policy, new policies/union contract negotiations to enhance the school food service, changes to pedestrian safety and environmental policies, healthy meeting and event policy, city employee fitness wellness benefit): "Through SUS, numerous successful policy changes have been implemented. For example, through the development of a robust school wellness policy and a change in certain budgeting practices, the school food service department was able, over several years, to execute a preferred vendor contract with local food providers, thus securing fresh produce for public school meals while stimulating the local farm economy. Policy changes to promote active transit and physical activity have also been implemented: City Hall developed an Employee Wellness Policy, created a bike/pedestrian coordinator position, designated funding for bike racks and highly reflective crosswalk paint, installed count-down timers, and committed to bike path maintenance." (Economos & Curtatone, 2010, Ref 3668, pS98).

	Differences between groups at baseline: • Control group 1 participants were significantly less likely to be of white, Hispanic or Asian ethnicity, and significantly more likely to be of black or other ethnicity than intervention group participants. • Control group 1 participants were significantly younger than intervention group participants. • Control group 1 participants were less likely to be from a non-English primary language household than intervention group participants. • Control group 1 participants were more likely to be of desirable weight at baseline than intervention group participants • Control group 1 and 2 participants were both more likely to consume ≥2 fruits/day and ≥3 vegetables a day at baseline than intervention group participants • Control group 1 participants were less likely to participate in ≥4 sports or lessons/year at baseline than intervention group participants • Control group 1 participants were less likely to have parents who were married and more likely to have parents who had never married at baseline than intervention group participants • Control group 1 participants were more likely to have parents born in the US than intervention group participants • Control group 1 and 2 participants were less likely to have mothers who had graduate school level education at baseline than intervention group participants • Control group 2 participants were more likely to have mothers and fathers who had	**Robustness & sustainability** SUS helped the intervention community obtain more than $1.5 million funding from other sources in order to continue intervention activities. "successful grant-writing efforts secured multiple sources of additional funding and allowed continuation and expansion of the SUS goals. The most recent, an RWJF Healthy Kids, Healthy Communities grant, administered by Active Living By Design will allow SUS to expand and to spread lessons learned and successes nationwide." (Economos & Curtatone, 2010, Ref 3668, pS98). "SUS intervened in multiple environments, using every aspect of the community that touches children and their families, to provide healthier dietary and physical activity opportunities while creating policies to promote sustained change." (Economos et al., 2007, Ref 3665, p1334) "As this program is disseminated, communities will need to establish a method of collaboration to replicate the intervention." (Economos et al., 2007, Ref 3665, p1334) and "Since the completion of the CDC grant in 2005, SUS has evolved and expanded as a community-driven initiative and has emerged as a promising model to prevent childhood obesity." (Economos & Curtatone, 2010, Ref 3668, pS97). "Leadership, relationship building, community involvement, and **sustainability** have all been critical to the success of SUS." (Economos & Curtatone, 2010, Ref 3668, pS97).

	stopped education at high school or equivalent level at baseline than intervention group participants • Control group 1 participants were more likely to have fathers who had stopped education at high school or equivalent level or at college level at baseline than intervention group participants **Source of funding** • Grant R06/CCR121519-01 from the Centers for Disease Control and Prevention (to C.D.Economos.). • Blue Cross and Blue Shield of Massachusetts, Inc. • Blue Cross and Blue Shield of Massachusetts HMO Blue, Inc., • United Way of Massachusetts Bay • The United States Potato Board • Stonyfield Farm • Dole Food Company **'Lessons' for the evaluation of obesity prevention programmes** See barriers and facilitators **Barriers and facilitators** Study limitations: • Controlled, but not randomized. • **Interim (1 year data) only** • Only a subset of the entire eligible population of children were included in the study (see response rates above) • Not all factors exhibiting between-group	**Facilitative leadership** "Throughout the past seven years, other visible champions have emerged from multiple sectors to advance the cause, including representatives of the Council on Aging, local ethnic groups, and bike and pedestrian advocates." (Economos & Curtatone, 2010, Ref 3668, pS98).

	differences at baseline were adjusted in models (see notes section below) Programme/study barriers: • ”SUS encountered barriers and resistance to change, including budget allocation processes, union contracts, and concerned parents” (Economos & Curtatone, 2010, Ref 3668, pS98). • Up-front investment required to build and extend relationships during the planning year was time- and labour-intensive Programme/study facilitators: • “In 2003, changes in leadership at Tufts University and within the City of Somerville created an opportunity for enhanced collaboration between the city and the university. Joseph A. Curtatone, the newMayor of Somerville, and Lawrence S. Bacow, the President of TuftsUniversity, collaborated closely to cultivate a positive working relationship; both had a personal focus on healthy eating and active living.” (Economos & Curtatone, 2010, Ref 3668, pS97). • Assigning the intervention to Somerville enabled the developers to capitalize on an existing collaborative foundation and to execute the intervention within a relatively short time period of funding (3 years). • “a broad net of community partnerships, and Mayor Curtatone's unwavering commitment to the issue, galvanized sustained support for the SUS effort”. (Economos & Curtatone, 2010, Ref 3668, pS98).	

EPODE

Programme focus	Study details	Whole system approach
Intervention name, Location **EPODE** in a France-wide programme: • 226 towns in France (EPODE) However, EPODE methodology has also been rolled out in other European countries as part of the EPODE European Network (EEN): • 15 towns in Belgium (VIASANO) • 38 towns in Spain (THAO Salud Infantil) • 5 towns in Greece (PAIDEIATROFI) And the methodology has also been used in: • In 6 local councils in South Australia (OPAL) • "will be implemented in Mexico in the framework of the National Plan "5 Pasos" launched by the Ministry of Health to promote healthier lifestyles and prevent chronic diseases" (EPODE abstract, Feb 2010, , p6) **Year/ timescale over which implemented** EPODE started in 2004, ongoing **Target population** (who were the people subjected to the different strategies e.g.	**Study name (if different) [year]** Data collected annually between 2005-2009; but analysis based on 2005 and 2009 data only **Setting (e.g. school, community, etc.)** School-based evaluation **Author (year) plus associated paper/source + paper/source focus** • EPODE abstract (Feb 2010) – contextual information • EPODE results (July 2010) Academic in Confidence – evaluation data • European Public Health Alliance (March 2010) EPODE – Together Let's Prevent Childhood Obesity website [http://epha.org/a/3149] – contextual information • EPODE Press Kit (April 2005) - press release • Thin Living (December 2007) – comment piece, background to set-up **Aim of study** To assess the "evolution of the prevalence of childhood obesity in 8 pilot towns between 2005 and 2009" (EPODE results, July 2010, ***Academic in Confidence***) **Study design**	**Does the programme use the language of 'whole system' or 'whole community' approaches?** (if so, extract relevant text) Mentions that EPODE built upon FLVS which was "whole community" (EPODE abstract, Feb 2010, , p3) Other extracted text: "The EPODE model is based on the involvement of the community for the community, at the very heart of the "ecological niche": the town". (EPODE abstract, Feb 2010, , p4) "The EPODE vision statement is that childhood obesity will be reduced by local environments, childhood settings and family norms all being strongly supportive of children enjoying healthy eating, active play and recreation (EPODE abstract, Feb 2010, , p4) "The aim of Epode is to create the political commitment, resources, support services and evidence base to enable community stakeholders to implement effective and sustainable strategies to prevent childhood obesity". (EPODE abstract, Feb 2010, , p4) **Levels of action** (Individual, Family, School, Community, PH policy) Individual, Family, School, Community, Local Authority, PH Policy **Collections of organisations/partners/groups of actors involved** (e.g. Department of Health)

African-American community) **(population number** e.g. 150 or 10,000**, town, area, country)** EPODE programme – 4.5 million inhabitants of French towns Not clear about total number of inhabitants targeted in the other EEN countries (VIASANO, THAO, PAIDEIATROFI), in South Australia (OPAL), or planned target population in Mexico. Further details on target population not given. **Theoretical perspective** (if mentioned – e.g. Social Ecological Model) None stated **Was local knowledge used in the design and/or delivery of the programme?** (If so, describe) Likely that it was (the programmes were locally delivered and managed, with plenty of local stakeholders). However, using local ***knowledge*** was not explicitly mentioned. **Policy context** (i.e. local policies & national initiatives - and other key contextual details) EPODE was set up in the context of "official French guidelines on nutrition, diet and physical Activity". EPODE abstract (Feb 2010) "The EEN - EPODE European Network – is a European project to be run from 2008 to 2011 with the support of the European Commission (DG Health and Consumers)	Longitudinal epidemiologic study (like a BA study, but unlikely to be all the same children at each data collection point) **Study population** (from whom was outcome data collected? e.g. children aged 5-10 yrs attending Nashville primary schools) **(age, gender, socio-economic status, other relevant characteristics)** School children aged "4-5 to 11-12" from 8 of the EPODE pilot towns (Asnières-sur-Seine, Beauvais, Béziers, Evreux, Meyzieu, Roubaix, Royan et Vitré). *Note: Not clear whether this means 4-5 year olds and 11-12 year olds, or whether it means 4-12year olds, but most likely children of all school grades aged between 4 years and 12 years.* 2005: N=24 752 2009: N=23 617 Further demographic details not given, although results imply that both deprived and non-deprived areas were included. **Source of funding** Towns [i.e. presumably local government] sign up to provide all resources needed for the minimum actions and communication, and they agree (in writing) to make a 50% contribution to the cost per person of the programme. The other 50% of funding is provided by private partners. **'Lessons' for the evaluation of obesity prevention programmes** None reported	• EPODE team (incl. National Coordination Team, Local Authority Leaders (Mayors), Local Programme Managers) • Schools (including extra-curricular, school catering) • Health organisations • Health professionals • Infancy professionals • Network of associations • Shops, owners and local producers • Media • Other "local stakeholders", "facilities", and "decision makers" Given in Figure 1 in the programme delivery section below. **Programme components** (e.g. Diet, Education, School-based) Diet, Education, Physical Activity **Core feature descriptions:** (highlight examples) **System recognition** No evidence **Capacity building** Based on a "coordinated capacity-building approach". Nationally coordinated training and coaching of local project managers. **Local creativity** Despite considerable national coordination … "The local project manager establishes the networks and coordinates a local multidisciplinary steering committee (education, school catering, sports, health, community life, etc). This methodology enables the entire community (teachers, school catering, health professionals, parents, media…) to be empowered and contribute to create a healthy community All about resources and support "to enable community

and private partners. It has been designed to facilitate the implementation of CBI programs using the EPODE methodology in other European countries, regions and towns. The network, created and coordinated by the EEN coordinating team, is structured around four committees, involving four major European Universities, and built around the four pillars that originate from the EPODE methodology". See programme delivery section below	**Barriers and facilitators** None reported	stakeholders to implement effective and sustainable strategies" (p.4) Environment" EPODE abstract (Feb 2010), , p4 & p5 **Relationships** Project manager expected to "mobilize and get stakeholders involved at a local level" (EPODE abstract (Feb 2010), , p4) **Community engagement** "EPODE would be an empty shell without the commitment and conviction of many local players. Teachers, school nurses and doctors, caterers, shopkeepers, supermarkets, producers, associations and other participants all bring the programme to life through their input" p.22 EPODE Press Kit (April 2005) - press release "Involvement of the whole community is necessary" EPODE abstract (Feb 2010), , p3 **Communication** Although strong national to local communication, no specific evidence of developing better communications between organisations or groups within the towns. **Embeddedness** No Evidence **Robustness & sustainability** Member towns sign up to provide all resources needed for the minimum actions and communication, and they agree (in writing) to make a 50% contribution to the cost per person of the programme. The other 50% of funding is provided by private partners who have to sign up to a partnership charter to safeguard abuse of their position. p.25 EPODE Press Kit (April 2005) - press release Also, implementation of "sustainable strategies" is a stated

		goal (p.3, EPODE abstract (Feb 2010)) **Facilitative leadership** **No Evidence** **Monitoring & Evaluation** "the purpose of this measurement [annual BMI data measurement in schools], in addition to assessing the effectiveness of the EPODE programme, is to identify the most at-risk geographic and sociological areas where actions could be stepped up" p.12 EPODE Press Kit (April 2005) - press release
Programme delivery – give details, including relevant diagrams and tables		
EPODE started as a group of pilot programmes in ten towns in France, and aimed to be a National programme: "EPODE is a coordinated, capacity-building approach for communities to implement effective and sustainable strategies to prevent childhood obesity". EPODE abstract (Feb 2010), p4 A national coordination team used social marketing and organizational techniques to train and coaches local project managers in each EPODE town (or group of towns). The project manager's job was to "mobilize and get stakeholders involved at local level" EPODE abstract (Feb 2010), , p4 Figure 1:		

Example of categories of local stakeholders involved in EPODE towns. (EPODE abstract, Feb 2010, , Fig. 2, p5)

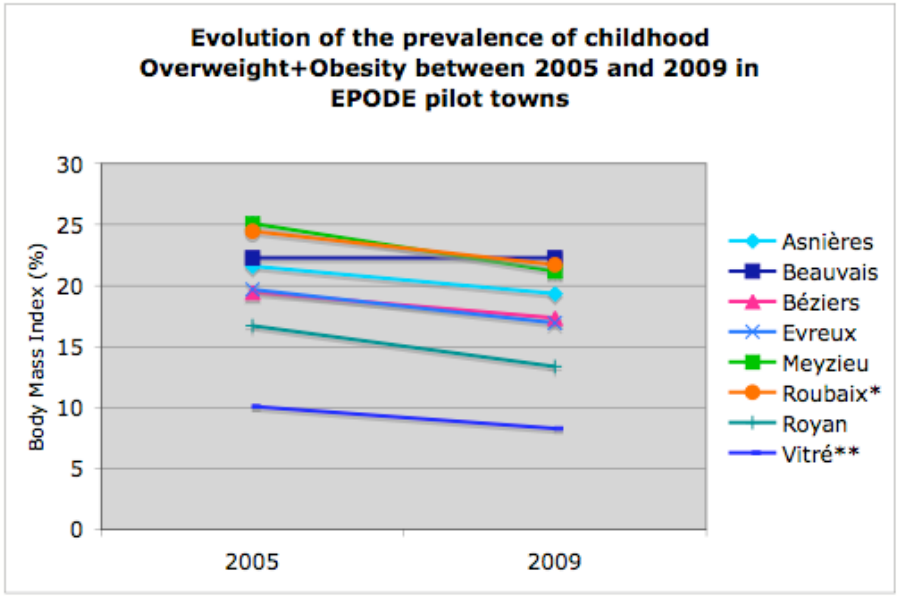
The EPODE programme is implemented in Europe through the EOPDE EUROPEAN NETWORK (EEN):

"The network, created and coordinated by the EEN coordinating team, is structured around four committees, involving four major European Universities, and built around the four pillars that originate from the EPODE methodology:
• Involvement of Political Representatives
• Scientific Evaluation and Dissemination
• Methods and Social Marketing
• Public / private partnership" (EPODE abstract, Feb 2010, p7)

However, No details provided on specific components of the programmes overall, or in the different towns

Outcomes	
Obesity **-BMI**	**Anthropometric measures** (BMI, weight, waist circumference etc.): "**encouraging evolution of the BMI of children in the 10 French pilot towns** (decrease of 10 to 15% of the prevalence of overweight children)". (EPODE abstract, Feb 2010, , p6) In 8 of the 10 pilot towns data from EPODE results paper (July 2010), , Academic in Confidence : • **BMI**; weight (assumed in kg, but not explicitly stated) and height (assumed in cm, but not explicitly stated) measured by School

Health professionals (schools nurses and school doctors), measured without shoes, or jacket, in their trousers and sweater, isolated from other children). Data presented graphically in EPODE results paper (July 2010), , Academic in Confidence, p1, copied below, ***but statistical analyses not provided***:



- **Prevalence of overweight/obesity**; calculated using IOTF cut off points; analyses presented in Table in EPODE results paper (July 2010), , Academic in Confidence, p1, copied below:

	2005			2009				
TOTAL towns	N	% case	N total	N	% case	N total	p***	% Decrease
Obese	1192	4,81		1051	4,45		0,056	
Overweight	3900	15,76		3397	14,38		**<0,0001**	
OverweightObese	5092	20,57	24752	4448	18,83	23617	**<0.0001**	-9,12%

These data were also analysed by SES of area, presented in Table in EPODE results paper (July 2010), , Academic in Confidence, p2, copied below:

	Total population			Non-Low SES Area			Low SES Area		
	2005	2009	p	2005	2009	p	2005	2009	p
Sample size	24752	23617		15286	14762		9466	8855	
Refusal (%)	2,7	5,8		2,27	5,86		3,38	5,82	
Obesity (%)	4,81	4,45	NS	3,6	3,22	NS	6,78	6,5	NS
Overweight (%)	15,76	14,48	< 0,0001	15,04	13,03	< 0,0001	16,91	16,65	NS
OB + OW (%)	20,57	18,83	< 0,0001	18,64	16,24	< 0,0001	23,7	23,15	NS

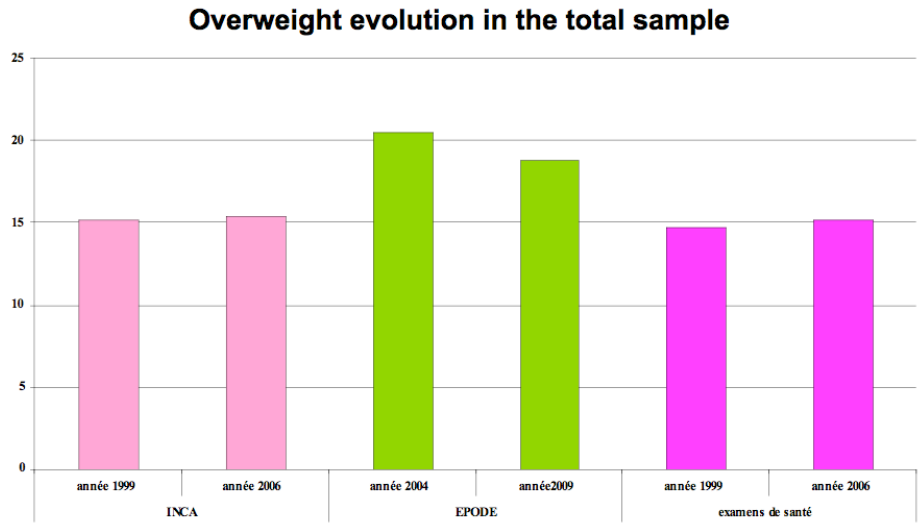
Note: Not clear what statistical tests were used to analyse the data

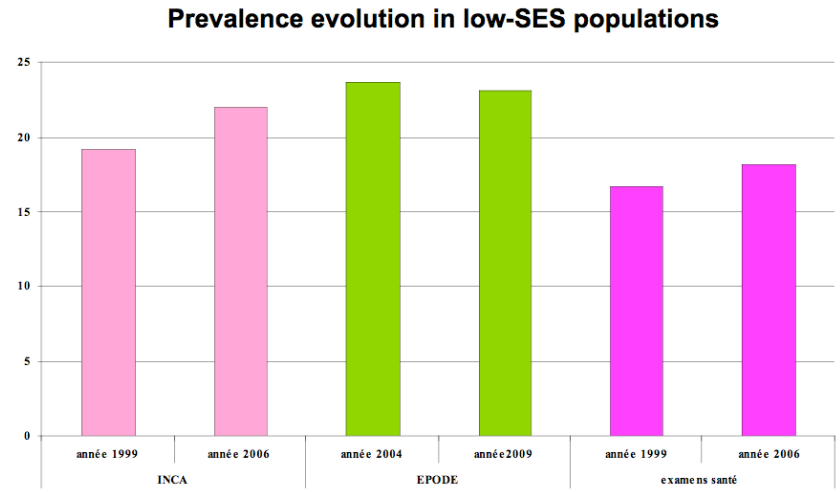
Note: No comparison sites/towns, but data population data presented to give an idea of change in overweight/obesity over time(although from different years) in EPODE results paper (July 2010), , Academic in Confidence, p2 and 3, copied below:

Population	Recruitment	Age	Refusal	Year	Sample size	Weight measurement
Inca 1	Representative sample	3-14 y	44%	1998-99	989	reported
Inca2 *			31%	2006-7	983	measured
Central / Western France **	Health centres	6 -15 y		1999	3551	measured
				2005	1953	
Epode 2005	schools	4-11 y	2,70%	2004-5	24752	measured
Epode 2009			5,80%	2008-9	23617	

** Lioret L. et Al., 2009. Trends in child overweight rates and energy intake in France from 1999 to 2007: relationships with socioeconomic status. Obesity;17(5):1092-100.*
*** Peneau et Al., 2009, Prevalence of overweight in 6- to 15-year-old children in central/western France from 1996 to 2006: trends toward stabilization. Int J Obes., Apr;33(4):401-7*

Effectiveness of Whole System Approaches





	Physical activity measures : None reported
	Diet measures: None reported
	Indicators of successful implementation or sustainability (e.g. development of partnerships; local policy development; increased and stable involvement of a range of key individuals and bodies; uptake of interventions by schools, workplaces, catering outlets; renewed or continuous funding from key agencies. (These indicators may be quantitative or qualitative)): "Success to date is measured by **a large field mobilization** and by the encouraging evolution of the BMI of children in the 10 French pilot towns (decrease of 10 to 15% of the prevalence of overweight children)". (EPODE abstract, Feb 2010, , p6)
Notes	
• ***All evaluation data are from the following document: EPODE results (July 2010) . This is Academic in Confidence information.***	

Healthy Living, Cambridge Kids

Programme focus	Study details	Whole system approach
Intervention name, Location Healthy Living, Cambridge Kids (HLCK), MA, USA **Year/ timescale over which implemented** 3 year intervention (2005-2007) **Target population** (who were the people subjected to the different strategies e.g. African-American community) **(population number** e.g. 150 or 10,000**, town, area, country)** Cambridge is a 'dense city' with a population of 101355. The target population was: 6444 children enrolled at 12 kindergarten-8th grade schools and one high-school (Cambridge Public Schools) in the Cambridge, MA. The number of children enrolled at the schools decreased to 5599 over the course of the study. 64% of students were non-white , 41% low-income, and 33% speaking a language other than English at home, and Cambridge Public Schools children have higher than national-average rates of overweight and obesity (i.e. higher than average rates of BMI >85th percentile). **Theoretical perspective** • Social Ecological Model (Chomitz et al., 2010, Ref 387, pS46) **Was local knowledge used in the design and/or delivery of the programme?** Local parents and other community members (e.g. teachers and school nurses) were involved with the project Task Force who worked on the design and	**Study name** Baseline data collected 2003-2004 Post-intervention data collected 2006-2007 **Setting** City-wide (community) and school **Author (year) [Ref ID] plus associated paper/source** (i.e. papers addressing the same intervention) **+ paper/source focus** (e.g. outcome-based, economic evaluation, scope) Chomitz et al. (2010) [387] –effectiveness evaluation **Aim of study** To assess the impact of the HLCK programme on child weight and fitness **Study design** Longitudinal, single-group, before and after study, using "community-based participatory research principals" Chomitz et al. (2010), [Ref 387], pS46 **Study population** Children who were in kindergarten to 5th grade at baseline in the Cambridge Public Schools (CPS) receiving HLCK. Children were excluded from the cohort if they were <5yrs at baseline or >14yrs post-intervention, or if they had special needs precluding measurement. Of the 3561 eligible children, 1858 (52%) had	**Does the programme use the language of 'whole system' or 'whole community' approaches?** No **Levels of action** Individual, Family, School, Community, PH policy **Collections of organisations/partners/groups of actors involved** (e.g. Department of Health) • Cambridge Public Schools (CPS) • Cambridge Schools Committee • Cambridge City • Institute for Community Health • School Health • Cambridge Public Health Department • Parents of children attending schools • Researchers Later expanded to include: • CitySprouts (gardening organisation) • Cambridge Department of Human Service Programs • Cambridge Green Streets Initiative • Federation of Massachusetts Farmers' Markets **Programme components** • City-wide policies • Advocacy • Public health outreach • Stakeholder training • School policies and systems changes (including changes to PE and school food

delivery of the programme **Policy context** Chomitz et al. (2010), [Ref 387], pS46, mention that "media and obesity watch newsletters are documenting that communities across the nation are initiating community- and school- level obesity prevention programmes" Guidelines for the HECK programme were based on "national goals and emergent research to promote healthy weight" Chomitz et al. (2010), [Ref 387], pS47 Intervention included creation of citywide policies and school policies.	usable data at both time-points. Children with missing (non-usable data) data post-intervention were more likely to be Asian and less likely to pass all five fitness tests at baseline (Chomitz et al., 2010, Ref 387, pS49). Based on n=1858: **Mean age** =7.7yrs (SD=1.8yrs) **Gender:** 48.2% Female, 51.8% Male **Income status:** 43.3% lower, 56.7% higher **Ethnicity:** 37.3% black, 14.0% Hispanic, 37.1% white, 10.2% Asian, 1.7% other **BMI percentile at baseline:** <5th 2.1%, 5th to <85th =61.0%, 85th to <95th =16.8%, 95th and above =20.2% **Source of funding** • Department of Education Carol M. White Physical Education Programme • USDA Community Food Projects • Blue Cross Blue Shield of Massachusetts • Massachusetts Dept. Of Public Health Possibly • School Health • Cambridge Public Health Department • Institute for Community Health **'Lessons' for the evaluation of obesity prevention programmes** See barriers below. Useful to look at different cohorts separately (e.g. different ethnic groups, different genders) as this has flagged up the potential need to tailor	service, school gardens, nutrition education) • Outreach events • Nutrition counselling • Health and fitness progress reports See below for further details on each of these components **Core feature descriptions:** **System recognition** Chomitz et al., 2010, Ref 387, pS51 briefly mention how the program has helped to create "systems changes", not explicitly about WSA though. **Capacity building** PE teachers and school nurses were trained in standardized anthropometry, and standardized equipment was purchased for each school (Chomitz et al., 2010, Ref 387, pS46). PE enhancement grants: to offer PE teachers professional development and for purchasing new school gym equipment Partnership organisations expanded during the course of the programme, see section on collections of organisations/partners/groups of actors involved above School food service staff were coached in new recipes (based on fresh local ingredients). **Local creativity**

	approaches to each specific group (Chomitz et al., 2010, Ref 387, pS51). **Barriers and facilitators** Barriers: • There was no control sample • There was a large amount of missing data (those that dropped out were more likely to be Asian and more likely to not pass all five fitness tests at baseline) – creates bias, limits generalisability • Fitness testing is subjectively measured and thus subject to possible measurement bias (PE teachers helped design the HLCK intervention and also assessed fitness levels) • Intervention phases were not distinct – so it was difficult to define cut-off points for pre- and post-intervention assessments	The Task Force (which included community members (i.e. parents, schoolteachers) created HLCK guidelines and were "mobilized to seek grants, garner resources, and pilot healthy weight interventions". (Chomitz et al., 2010, Ref 387, pS47). Feedback from families was used to modify individualised BMI and fitness reports for improved layout, language, and readability. **Relationships** Not explicit, but a task force was set up, and community members were encouraged to get involved in the task force etc. **Community engagement** The programme/evaluation used a community-based participatory research approach, and aimed to engage community members, including a collaborative task force (The Healthy Children Task Force). Task Force partners became involved in elements of the intervention and the evaluation. (Chomitz et al., 2010, Ref 387, pS46). Community forums and parent engagement took place to identify whether local families were interested in school-based improvements (to PE and to meals). **Communication** Not explicit, but the programme provided opportunities for community advocacy such as the 5-2-1 coalition and youth sports commission, and there was a Task Force involving community

		members, teachers, and other stakeholders. **Embeddedness** HLCK involved implementation strategies to provide policy support for healthy living choices (city council endorsement of the "5-2-1" guidelines and local food preference policy). (Chomitz et al., 2010, Ref 387, pS47). **Robustness & sustainability** Chomitz et al., 2010, Ref 387, pS51 note that enhancing community capacity and support systems engender "community-wide momentum" which "facilitated the **post intervention sustainability** of many policies". They also discuss how new partnerships have emerged post-intervention. **Facilitative leadership** NA

Programme delivery – give details, including relevant diagrams and tables

Chomitz et al. (2010), [Ref 387], Fig 1, pS47 outlines the programme (copied and pasted below from Review 1):

Key Components of *Healthy Living Cambridge Kids*

- **Citywide policies:** "5-2-1" guidelines; local food preference policy

  Advocacy: Monthly 5-2-1 coalition meetings; establishment of youth sports commission (13 members)

  Stakeholder training: Training for 20 after-school organisations

  Public health outreach: Healthy Living Cambridge poster campaign (12 schools, bus shelters, city buildings); quarterly newsletters (1,800 subscribers); mini-grants to 15 community-based organisations to promote 5-2-1; community fitness programmes (230 participants); >4,000 physical activity directories distributed annually

- **School policies and systems changes:** Wellness policy; 9 Food Service Advisory Board meetings; nutrition and vending machine guidelines; food purchasing system established with local farmer

Physical Education: "New PE" expanded to all K-8 schools, including non-traditional activities (i.e. yoga, ballroom dance, "Project Adventure"); quarterly professional development for teachers; before- and after-school programming expanded **School food service:** School nutritionist and consultant chef introduced 15 new recipes emphasising fresh, local ingredients; 110 "taste-tests" in 12 schools, including staff coaching to prepare recipe; 4 group technique trainings; farm-to-school activities **School gardens:** Educational programme expanded to six schools **Nutrition education:** 45 healthy cooking classes; 74 nutrition education sessions **Outreach events:** "Fit Together" family nights (721 participants); fitness expo (24 exhibitors) **Nutrition counselling:** Offered to families of obese children **Health and fitness progress report:** 4,000 K-8 reports distributed district-wide annually via mail	
Outcomes	
Obesity **-BMI-z**	**Anthropometric measures** (BMI, weight, waist circumference etc.): • **Change in BMI;** BMI calculated from height (in inches, to the nearest 0.25 inch, using a wall-mounted stadiometer) and weight (in lbs to the nearest 0.2lbs, using electronic scales, in clothing without shoes) measurements collected routinely by CPS teachers and school nurses. ***Analyses not reported.*** • **Change in BMI z scores;** z scores based on Centres for Disease Control and Prevention, CDC growth charts. BMI-z ≤-4 and ≥5 were excluded from the analysis. *A significant decrease in mean unadjusted BMI z score was observed (Baseline mean = 0.67 (SD=1.06), Post-intervention mean =0.63 (SD=1.03), Difference=-0.04, p<0.001).* Chomitz et al., 2010, Ref 387, Table 2, pS49 gives pre-post analyses separately by gender (a sig. pre-post difference was observed for females but not for males), income status (sig. pre-post difference was observed for both lower and higher income groups), and race (a sig. pre-post difference was observed for black and for white participants but not for Asian or for Hispanic participants). • **Prevalence of overweight/obesity;** using BMI percentiles based on age and gender (BMI≥95th percentile =obese; BMI≥85th and <95th percentile =overweight; BMI≥5thth and <85th percentile =healthy weight; BMI <5th percentile = underweight). *The prevalence of 'healthy weight' sig. increased from pre- to post- intervention (Baseline 61.0%, post-intervention 63.4%, change = 2.4 percentage points, p<0.05).* *The prevalence of 'underweight' did not sig. decrease from pre- to post- intervention at the p<0.05 level (Baseline 2.1%, post-intervention 1.2%, change = -0.9 percentage points, p<0.10).* **Note: this is inconsistent between table (p<0.10) and**

	text (p<0.05) *The prevalence of 'overweight' did not sig. decrease from pre- to post- intervention (Baseline 16.8%, post-intervention 17.4%, change = 0.6 percentage points, p>0.10).* *The prevalence of 'obese' sig. decreased from pre- to post- intervention (Baseline 20.2%, post-intervention 18.0%, change =-2.2 percentage points, p<0.05).* Chomitz et al., 2010, Ref 387, Table 3, pS50 also gives pre-post analyses of prevalence data separately by gender, income status, and race.
	Physical activity measures : Fitness data were collected routinely during PE each spring by CPS, comprising five age and gender adjusted fitness tests (listed below). Each test can be passed (with either an 'attainment' or 'outstanding' grade) or not passed, based on guidelines from the Amateur Athletic Union and the Cooper Institute: **-**Endurance cardiovascular test (correlates with obesity) **-**Abdominal strength test **-**Flexibility test -Upper body strength test -Agility test The following were assessed: • **Change in mean number of fitness tests passed;** sig. increase from pre- to post- intervention (Baseline = 3.7 (SD=1.32), post-intervention = 3.9 (SD=1.27), reported as significant but p value not given). • **Change in proportion passing all five tests;** sig. increased from pre- to post- intervention (Baseline 29.9%, post-intervention 44.5%, change = 14.6 percentage points, p<0.001). • **Change in proportion passing endurance cardiovascular test;** sig. increased from pre- to post- intervention (Baseline 52.6%, post-intervention 66.6%, change = 14.0 percentage points, p<0.001). Chomitz et al., 2010, Ref 387, Table 4, pS51 also gives pre-post analyses separately by gender, income status, and race.
	Diet measures: None reported
Both smoking and obesity	**Quantitative/qualitative changes in measures of attitudes and awareness** None reported

	Indicators of successful implementation or sustainability (e.g. development of partnerships; local policy development; increased and stable involvement of a range of key individuals and bodies; uptake of interventions by schools, workplaces, catering outlets; renewed or continuous funding from key agencies. (These indicators may be quantitative or qualitative)): None reported

Notes

No additional notes.

Programme delivery – give details, including relevant diagrams and tables

Economos et al. (2007), [Ref 3665], Table 1, p1328 provides an overview of the SUS programme:

Table 1. Components of the SUS intervention

Before school	**After school**
Breakfast program	SUS after-school curriculum
Increase fresh fruits, low-fat milk, whole grains	Increase physical activity
Taste tests	Cooking lessons
Adult monitors	Promote healthy snacks
Walk to School Campaign	Farm trips
Walking to school bus	Professional development for program staff
Traffic calming tactics	Walk from school campaign (see Walk to school campaign)
Walking contests	
International Walk to School Day	
Safe routes to school maps	
During school	**Home**
Professional development (nutrition and physical activity) for all school staff	Parent outreach and education
	Bi-monthly newsletter
School health office	Free and reduced coupons
Anthropometric equipment	Family events
Height/weight data collection	Parent nutrition forums
School food service	Child's "Health Report Card" mailed each year

Increase whole grains, fruits and vegetables, low-fat dairy Healthier a la carte snacks Monthly taste tests New vegetarian recipes Ice cream sold only one day/wk New equipment to enhance food presentation SUS classroom curriculum 10-minute daily "Cool Moves" 30-minute nutrition and physical activity lesson (1 week) Fun and healthy giveaways Enhanced recess New play equipment/game cards School "wellness" policy development School food service Classroom environment Physical education environment Structured day environment After-school environment School health environment To/from school environment SUS, Shape Up Somerville.	**Community** SUS Community Advisory Council Ethnic-minority group collaborations Support from local "community champions" Walking/pedestrian trainings City Employee Wellness Campaign "Farmers Market" initiative Local physician and clinic staff training SUS "approved" restaurants City ordinances on walkability/bikeability Annual SUS 5 K Family Fitness Fair Regular local media placement Monthly SUS column in the *Somerville Journal* Collaborated on City of Somerville health events Resource guides Physical Activity Guide Healthy Meeting Guide Health Message Translations Booklet
Outcomes	
Obesity **BMI-z**	**Anthropometric measures** (BMI, weight, waist circumference etc.): • **Change in BMI z score:** this was named by the authors as the primary outcome; height and weight were both obtained in triplicate (means used) and without shoes by "trained study personnel". Height was measured to the nearest eighth of an inch using a portable stadiometer and weight was measured in light clothing to the nearest 0.5 lb on a digital scale. z-scores were calculated as recommended by the U.S. Centers for Disease Control and Prevention. Analyses were conducted using the PROC SURVEYREG (SAS Institute, Inc., Cary, NC) estimating procedure, allowing for clustering effects at the community level, and also co-varying for sex, age, ethnicity, grade, primary language at home, BMI z-score at baseline, and child's school: - Change in BMI z score in the **intervention group compared with control 1**, covarying for above factors: **β = -0.13 (95% CI = -0.18, -0.08), p=0.02** - Change in BMI z score in the **intervention group compared with control 2,** covarying for above factors: **β = -0.10 (95% CI = -0.15, -0.06), p=0.02** - Change in BMI z score in the **intervention group compared with both control groups combined,** covarying for

	above factors: **β =-0.10 (95% CI = -0.11, -0.09), p=0.001** Note: These data are extracted from a combination of Table 6 and text from Economos et al., (2007), [Ref 3665], p1332. • **Change in prevalence of overweight/obesity:** categorised in accordance with the Centers for Disease Control guidelines (z score ≥ 5th and <85th percentile = desirable; ≥ 85th percentile and < 95th percentile = at risk for overweight; ≥95th percentile = overweight). Note: This is different from HLCK where ≥ 85th percentile and < 95th percentile = overweight; ≥95th percentile = obese. Analyses are not provided for this variable.
	Physical activity measures : • Sports and physical activity, and television viewing were assessed as part of a 68-item postal questionnaire for parents/caregivers written in the household language (English, Spanish, Portuguese, or Haitian Creole), n=733 respondents, but **these data did not form part of the programme evaluation: only "pre-intervention" data are presented** (Economos et al. (2007), [Ref 3665], Table 3, p1330). See study population section above for differences between groups at baseline.
	Diet measures: • Dietary intake and restrictions were assessed as part of a 68-item postal questionnaire for parents/caregivers written in the household language (English, Spanish, Portuguese, or Haitian Creole), n=733 respondents, **but these data did not form part of the programme evaluation: only "pre-intervention" data are presented (Economos et al. (2007), [Ref 3665], Table 3, p1330).** See study population section above for differences between groups at baseline.
Both smoking and obesity	**Quantitative/qualitative changes in measures of attitudes and awareness** None reported
	Indicators of successful implementation or sustainability (e.g. development of partnerships; local policy development; increased and stable involvement of a range of key individuals and bodies; uptake of interventions by schools, workplaces, catering outlets; renewed or continuous funding from key agencies. (These indicators may be quantitative or qualitative)): • **Taken from Economos et al. (2007), [Ref 3665]:** "Process evaluation allowed us to document the extent of implementation of all activities during the study. For example, the in-

	school curriculum was implemented by 90 teachers in 100% of 1 to 3 grade classrooms (N = 81), reaching 1600 children. Within the community, SUS participated in or conducted 100 events and 4 parent forums. We trained 50 medical professionals on childhood obesity guidelines and current screening practices, and we recruited 21 restaurants to become SUS approved. Our two newsletters reached 811 families through 9 parent newsletters and 353 community partners through 6 community newsletters. A monthly media piece (11 months) reached over 20,000 subscribers each month. A total of 14 after-school programs implemented the after-school curriculum. Various community-wide policies were developed to promote and sustain change. These included a school wellness policy, new policies and union contract negotiations that led to enhancements of the school food service, expanded pedestrian safety and environmental policies, the adoption of a healthy meeting and event policy, and a city employee fitness wellness benefit. As part of the CBPR approach, we also helped the intervention community secure over $1.5 million from other funding sources to continue many of these intervention activities. This approach addressed the complex environmental influences on energy balance and ensured maximal reach within a population of children. Environmental and programmatic changes were also documented in the control communities." p1327-28 • **Taken from Economos & Curtatone (2010),[Ref 3668]:** "Seven years later, the city's "Walk/Ride Days" still illustrate the importance of cross-sector collaboration, as advocates of active transit have teamed up with local businesses to offer incentives to residents who commute actively on designated days"pS98. "Throughout the past seven years, other visible champions have emerged from multiple sectors to advance the cause, including representatives of the Council on Aging, local ethnic groups, and bike and pedestrian advocates." pS98. "Since 2002, three positions have been created within city government to support the work of SUS; a part-time planner, a full-time SUS Coordinator, and a full-time SUS Director. Tufts and RWJF provided the initial funding to create these positions." pS98. "Through SUS, numerous successful policy changes have been implemented. For example, through the development of a robust school wellness policy and a change in certain budgeting practices, the school food service department was able, over several years, to execute a preferred vendor contract with local food providers, thus securing fresh produce for public school meals while stimulating the local farm economy. Policy changes to promote active transit and physical activity have also been implemented: City Hall developed an Employee Wellness Policy, created a bike/pedestrian coordinator position, designated funding for bike racks and highly reflective crosswalk paint, installed count-down timers, and committed to bike path maintenance." pS98.
Notes	
• Although control group 1 and 2 participants were both more likely to consume ≥2 fruits/day and ≥3 vegetables a day at baseline than intervention group participants and control group 1 participants were less likely to participate in ≥4 sports or lessons/year at baseline than intervention group participants, these factors were not included as covariates in the main analyses.	

- There were also sig. between group differences in parental marital status, parental birthplace, mother's education and father's education amongst those providing these data (data collected at baseline). Regression models were run again including mother's education and father's education as covariates (for a subsample of n=658) and these two factors were not found to significantly predict BMI z-score change, or change the main findings. However, the same was not done for parental marital status or for parental birthplace (although ethnicity was included as a covariate in the initial models).

- Economos et al., 2007, Ref 3665, p1334, discuss generalisability as follows: "These intervention components, given the common infrastructure of school systems, before- and afterschool programs, city governments, community organizations, and home environments, may be appropriate for a wide range of communities".

- Commercial sponsorship was received (see funders above).

Steps to a Healthier Yuma County

Programme focus	Study details	Whole system approach
Intervention name, Location Steps to a Healthier Yuma County, USA **Year/ timescale over which implemented** 2005 – 2008, but approx. 9 months between the action planning process and the final post assessment workshop" (p.160S) **Target population** (who were the people subjected to the different strategies e.g. African-American community) **(population number** e.g. 150 or 10,000**, town, area, country)** Kindergarten-age children living in Yuma County, their parents and child care centre staff; 30 childcare centres were included in the intervention employing "more than 337 staff" and serving 1,879 children (p.S159) **Theoretical perspective** (if mentioned – e.g. Social Ecological Model) • Centre for Disease Control and Prevention's community change model • Border Health Strategic Initiative conceptual framework • Social Ecological Model **Was local knowledge used in the design and/or delivery of the programme?** (If so, describe) No evidence for the use of local	**Study name (if different) [year]** Steps to a Healthier Yuma County (as part of the 'Steps to a Healthier Arizona' initiative) [2003 – 2008] **Setting (e.g. school, community, etc.)** not-for-profit, private/for profit, and school-based child care centers; community **Author (year) [Ref ID] plus associated paper/source** (i.e. papers addressing the same intervention) **+ paper/source focus** (e.g. outcome-based, economic evaluation, scope) Drummond, R.L. et al. (2009) [160] outcome-based **Aim of study** "preventing childhood obesity and diabetes by implementing nutrition and physical activity best practices in the child care setting" (p.S157) **Study design** Before and after study **Study population** (from whom was outcome data collected? e.g. children aged 5-10 yrs attending Nashville primary schools) **(age, gender, socio-economic status, other relevant characteristics)** Children, their parents and the staff attending 30 participating childcare centres in Yuma County, Arizona – although only the results from 17 centres were included **Source of funding** • Centres for Disease Control and Prevention	**Does the programme use the language of 'whole system' or 'whole community' approaches?** (if so, extract relevant text) No **Levels of action** (Individual, Family, School, Community, PH policy) Family, School, Community **Collections of organisations/partners/groups of actors involved** (e.g. Department of Health) • Yuma County Public Health Services • Community Nutrition • Arizona Nutrition Network • Women Infants and Children program, Health District **Programme components** (e.g. Diet, Education, School-based) Diet, Physical activity, education, Child care centre-based **Core feature descriptions:** (highlight examples) **System recognition** **n/a** **Capacity building** "Many adaptations were made in response to common reactions and questions throughout the program. For example, when information was presented on the U.S. Department of Agriculture guidelines for whole grains, participants frequently asked about the meaning of "whole" grain. Demonstration kits were developed, and recipes using whole grains were provided" (p.S160)

knowledge **Policy context** (i.e. local policies & national initiatives - and other key contextual details) Part of a wider state-wide initiative called 'Steps to a Healthier Arizona' designed "under the leadership of the Arizona Department of Health Services to reach the culturally diverse, rural communities in southern Arizona located along the U.S.–Mexico border."(p.S156) During the state-wide initiative, over 200 health professionals participated in the "2007 Arizona Policy Institute Training: Tools for Creating Policy Change in Your Community coordinated by the Arizona Department of Health Services in partnership with Prevention Institute. Follow-up with participants indicated that they would be better able to achieve organizational practice and policy change during the next year. The Arizona Policy Planning Committee continues to work with Prevention Institute to coordinate technical assistance and advanced training." (p.S157)	(via Steps to a Healthier Arizona, *aka* Arizona Steps) • FTF Initiative (funded state-wide from tobacco taxes) **'Lessons' for the evaluation of obesity prevention programmes** No 'lessons' highlighted in the paper; a clear lesson would be not to change the outcome assessment whilst the programme is running – in this intervention, the assessment measure was changed after the programme had started to the degree where results from the original and the revised measure could not be assessed comparably, so eventually only assessments from 17 centres were included in the study. **Barriers and facilitators** • See above. Also; • Assessment did not include the community in it's creation • Insufficient details given of the Nutrition and Physical Activity Self-Assessment for Child Care (NAP SACC) creation, reportedly successfully piloted during the 'Steps for a Healthier Yuma County' intervention – "The ripple effect of the NAP SACC program in Yuma County has reached beyond individual child care settings into the broader local community and state early childhood development systems." (p.S158)	"The NAP SACC coordinator arranged for additional trainings and connected child care centers to additional resources in the community"(p.164S) **Local creativity** "Many centers implemented changes not necessarily derived from the assessment or their original action plans, such as initiating a salad bar for the children once a week by asking parents to send a fruit or vegetable; this activity involved everybody, including the children, in the preparation of food." (p.164S) **Relationships** **"**The NAP SACC coordinator was an active member of local advocacy groups and made strategic presentations to raise awareness of childhood obesity…was also a member of the Yuma County chapter of the National Association for the Education of Young Children; she served as a community representative on the governing board." (p.165S) **Community engagement** **"**Several centers shared the new portable play equipment at community events, and parents became more involved in physical activity with their children." (p.S165) **Communication** n/a **Embeddedness** n/a **Robustness & sustainability** "Based on improvements seen through the NAP SACC assessment and testimonials from program participants, NAP SACC facilitators, and community members, the program has created a culture of health promotion within the child care setting….

		The NAP SACC program brought awareness of childhood obesity to a broader community of stakeholders, some of whom may now serve as FTF Regional Partnership Council members, or be applicants to FTF Request for Grant Applications (RFGAs). The FTF Initiative has allotted $150,000,000 statewide and $3,600,000 to the Yuma region for direct services that will be partially administered as RFGAs through the Regional Partnership Councils. These RFGAs potentially will sustain the work of CCHCs and implement evidence-based programs such as NAP SACC. Because the FTF is funded through tobacco taxes, its efforts at this point are considered sustainable." (p.166-267S) **Facilitative leadership** n/a
Programme delivery – give details, including relevant diagrams and tables		
This was a pilot intervention study "aimed at preventing childhood obesity and diabetes by implementing nutrition and physical activity best practices in the child care setting." This setting was chosen because childcare centres are a useful environment to both instill behaviours and monitor progress in children. The intervention was based in Yuma county – see demographic data below.		

Effectiveness of Whole System Approaches

Selected Demographic Information on Yuma County and Arizona

	Yuma County (%)	*Arizona (%)*
Hispanic (U.S. Census, 2007)	55.5	29.7
Below poverty level (U.S. Census, 2007)	17.6	14.2
Below poverty level, < 18 years (U.S. Census, 2007)	25.7	20.2
Uninsured, ages 18-64 years (CDC, 2007a)	25.8	21.9
Medicaid (Arizona Health Care Cost Containment System, 2009)	25.6	18.0
Adults obese or overweight[a] (CDC, 2007a)	69.0	62.6
Youth overweight or at risk[b] (CDC, 2007b)	34.9	25.9

a. Obese body mass index, 30.0 to 99.8. Overweight body mass index, 25.0 to 59.0.
b. Overweight ≥95th percentile body mass index. At Risk 85th to <95th percentile body mass index.

"This county is the largest agricultural producer in Arizona and has a large Hispanic farm worker community.

Approximately 56% of its population is of Hispanic or Latino origin. Of the 184,318 people living in poverty, 23.9% are Hispanic, and approximately 26% are under 18 years of age. Among Yuma County adults, 41% are obese, and an additional 28% are overweight. Among high school students 34.9% are overweight, or at risk for overweight. Approximately 26% of the population is uninsured, and an additional
26% is covered by the state Medicaid program."

"'Partners' at the Yuma County Public Health Services District piloted the Nutrition and Physical Activity Self-Assessment for Child Care (NAP SACC) as a complementary and integrated program within the Division of Health Promotion. The purpose of the program was to assist child care providers in implementing changes to organizational practices, policy, and environment to influence positive nutrition and physical activity behaviors in young children."

"From 2005 to 2008, the NAP SACC program was implemented in 30 child care centers in 6 communities. These centers included 22 not-for-profit, 6 private/for profit, and 2 school-based centers. Seventeen Head Start programs participated, including 5 migrant and one tribal program. Together, these 30 centers employed more than 337 staff, serving 1,876 children.

NAP SACC materials were adapted to fit the local community, resulting in a series of seven workshops facilitated by the NAP SACC coordinator at each day care site.

<table>
<tr><td colspan="2">- The first workshop, “About the NAP SACC,” was developed to raise awareness of childhood obesity and recruit centers to participate in the program.
- The second workshop consisted of completing the self-assessment questionnaire addressing 56 best practices in nutrition and physical activity.
- Each center was given its assessment score at the third workshop; based on their scores, the NAP SACC coordinator worked with staff to identify priority areas that needed improvement and develop strategies to address them. The action plans included specific activities to address each priority; materials, resources, and personnel to complete the activities; a time frame; and evaluation. Generally, to meet best practices addressing professional development for staff and education for parents, child care providers created action plans that included participating in the three NAP SACC workshops: Healthy Eating for Preschoolers, Physical Activity for Preschoolers, and Personal Health— Taking Care of Yourself.”

- The 4th and 5th workshops were adapted by translating them into Spanish so parents could attend and understand.

“Many adaptations were made in response to common reactions and questions throughout the program.”

However: approx. 9 months after the start of the intervention, a final workshop was held to complete the post assessment. “the NAP SACC assessment tool was modified by developers at the University of North Carolina after Arizona Steps partners in Yuma County had begun the program, and only a subset of 17 centers used the revised tool at both pre- and postprogram intervention. The content of the two instruments was such that analysis was not comparable; however, generally speaking, the extent to which all 30 centers indicated an improvement or not was similar.” It is therefore implicit in the results that only data from the 17 eligible centres was included in the evaluation.</td></tr>
<tr><td colspan="2">Outcomes</td></tr>
<tr><td>Obesity</td><td></td></tr>
<tr><td>Intermediate outcomes:

• number of childcare centres implementing best practice on various nutrition and physical activity items

Process outcomes:

See core features evidence</td><td>Table 1</td></tr>
</table>

Effectiveness of Whole System Approaches

Number of Best Practices Implemented by Center Baseline and Post (N = 17)

Center ID	Number of Nutrition Best Practices Implemented at Baseline	Number of Nutrition Best Practices Implemented Postintervention	Number of Physical Activity Best Practices Implemented at Baseline	Number of Physical Activity Best Practices Implemented Postintervention	Total Number of Best Practices Implemented at Baseline	Total Number of Best Practices Implemented Postintervention
11	29	28	8	13	37	41
12	22	34	7	10	29	44
13	21	25	11	13	32	38
14	25	29	11	15	36	44
15	25	32	11	13	36	45
16	24	31	9	10	33	41
17	26	28	12	12	38	40
18	18	22	9	6	27	28
19	13	28	10	16	23	44
22	16	30	8	14	24	44
23	26	29	11	16	37	45
24	9	24	6	8	15	32
26	33	35	14	16	47	51
27	25	36	14	16	39	52
28	29	36	10	16	39	52
29	31	35	8	17	39	52
30	30	36	15	18	45	54
Median	25	30	10	14	36	44
Minimum	9	22	6	6	15	28
Maximum	33	36	15	18	47	54
p[a]	.0003		.0014		.0003	

a. Wilcoxon sign-rank test with Bonferroni-adjusted alpha level = .0167.

Table 2

Number of Centers Implementing Nutrition and Physical Activity Self-Assessment for Child Care (NAP SACC) Best Practices

Nutrition and Physical Activity Best Practices (N = 17)	*Baseline, n (%)*	*Postintervention, n (%)*
Fruits and vegetables		
Fruit (not juice) is served two or more times per day	12 (70.6)	13 (76.5)
Fruit is served fresh, frozen, or canned in own juice all of the time	15 (88.2)	17 (100)
100% fruit juice is served one time per week or less	4 (23.5)	8 (47.1)
Vegetables (excluding French fries or fried potatoes) are served two or more times per day	8 (47.1)	10 (58.8)
Vegetables served are dark green, red, orange, or yellow in color one or more times per day	14 (82.4)	17 (100)
Cooked vegetables are prepared with added meat fat, margarine, or butter less than one time per week	14 (82.4)	16 (94.1)
Fried foods and high-fat meats		
Fried or prefried meats or fish are served less than once a week	14 (82.4)	14 (82.4)
Fried or prefried potatoes (French fries, tater tots, hash browns) are served less than once a week or never	14 (82.4)	16 (94.1)
High-fat meats (sausage, bologna, hot dogs, ground beef) are served less than once a week or never	9 (52.9)	12 (70.6)
Lean meats (baked or broiled chicken, turkey, or fish) are served one or more times per day	2 (11.8)	6 (35.3)
Beverages		
Drinking water is available outside, easily visible, and available for self-serve all of the time	15 (88.2)	16 (94.1)
Drinking water is available inside, easily visible, and available for self-serve all of the time	14 (82.4)	16 (94.1)
Sugary drinks (Kool-aid, sports drinks, sweet tea, punches, soda) other than 100% juice are served less than one time per week	14 (82.4)	16 (94.1)
Milk served to children aged 2 years and older is usually skim or nonfat	0	1 (5.9)
Soda and other soft drink vending machines are not located on-site	14 (82.4)	16 (94.1)
Menus and variety		
Menus used are 3-week or more with seasonal change	10 (58.8)	15 (88.2)
Menus include whole grain foods that are high in fiber (whole wheat bread, oatmeal, brown rice, Cheerios) two or more times per day	4 (23.5)	11 (64.7)
Weekly menus include a combination of both new and familiar foods all of the time	6 (35.3)	8 (47.1)
Weekly menus include foods from a variety of cultures all of the time	8 (47.1)	9 (52.9)
Meals and snacks		
When children eat less than half of a meal or snack, the staff help determine if they are full before removing plate all of the time	9 (52.9)	16 (94.1)
When children request seconds, staff help children determine if they are still hungry before serving the requested food all of the time	8 (47.1)	15 (88.2)
Children who are picky eaters (able to eat a food but resisting) are encouraged to try new or less favorite food all of the time	15 (88.2)	17 (100)

(continued)

Nutrition and Physical Activity Best Practices (N = 17)	*Baseline, n (%)*	*Postintervention, n (%)*
Sweets or high-fat, high-salt foods (cookies, cakes, candy, chips, cheese doodles) are served for snacks less than one time per week	13 (76.5)	16 (94.1)
Food is used to reward desired behavior rarely or never	16 (94.1)	17 (100)
Food is used to control behavior or withheld as punishment rarely or never	16 (94.1)	17 (100)
Foods offered outside of regular meals and snacks		
Guidelines provided to parents for food brought in for holidays or celebrations are written guidelines for healthier options that are usually enforced	5 (29.4)	13 (76.5)
Holidays are celebrated with mostly healthy foods or with nonfood treats like stickers all of the time	6 (35.3)	8 (47.1)

Nutrition and Physical Activity Best Practices (N = 17)	*Baseline,* n *(%)*	*Postintervention,* n *(%)*
TV use and TV viewing		
Television use consists of the TV used rarely and only for viewing educational programs	15 (88.2)	16 (94.1)
Children are allowed to watch TV and videos or play video games one time per week or less, usually for educational use only	16 (94.1)	16 (94.1)
Play environment		
A wide variety of fixed play equipment (swings, slides, climbing equipment, overhead ladders) is available and accommodates the needs of all children	11 (64.7)	12 (70.6)
Safety checks on equipment occur once per week	16 (94.1)	16 (94.1)
Portable play equipment that stimulates a variety of gross motor skills (wheel toys, balls, tumbling mats)	4 (23.5)	8 (47.1)

	The median total number of best practices increased from 36 to 44, which was a statistically significant improvement (p=0.0003). The median number of nutrition best practices increased from 25-30 (p=0.0003), and the median number of physical activity practices increased from 10-14 (p=0.0014) (table 1 above). Overall, the number of child care centres implementing the 49 of the 56 (87.5%) best practices increased. A list of these best practices and the centres implementing them is listed in table 2 above. **Process features:** ***Improvement to Nutrition Environment*** - most centres increased their provision of whole grains. - Staff increased their support to children in helping them to gauge their hunger

	- Parents were given guidelines “that were enforced” [how?] re. food brought in for parties and celebrations. - Creative implementation of changes not suggested by the intervention (e.g. salad bars, asking parents to send in a fruit or veg. once a week) - Snacks served ‘family-style’ in the classroom (previously had been done cafeteria-style in the cafeteria) - Staff were motivated to act as role models ***Improvements to the physical activity environment*** - many centres provided positive support for physical activity through positive statements and display of posters etc. - increase in number of centres providing indoor play space and portable equipment - mini-grants given out to centres to increase play equipment - some centres incorporated active play into structured activity - all-weather activities were considered ***Education for Staff and Parents*** - more training was organised for staff and parents in child care centres with additional resources in the community - staff were particularly targeted with the workstream ‘Taking care of Yourself’. ***Increasing Family and Community Involvement*** - some centres shared new play equipment at community events - Parents became more involved through, e.g. an end of year celebration field day. - some children influenced parents into taking up new and more family activities – more time spent on nature walks, bike rides, playing in the park etc. - impact of staff on their home environments – eating more whole grains and fruit, drinking more water ***Effect on Early Childhood Development Community*** - the NAP SACC Coordinator became o the first certified Child Care Health Consultant (CCHC) in Yume County o a registered S*CCEEDS trainer o an active member of local advocacy groups, raising awareness of childhood obesity through presentation o Chair of the Health Committee for Cradle to Kinder, a group formed with support from the Arizona Early Education Fund

	○ And also gave Presentations on childhood obesity and the NAP SACC to childhood development classes at Arizona Western College, reaching future child care providers and educators of young children. - *Steps to a Healthier Yuma County* partners worked closely with the Western Arizona Council of Governments (WACOG). One of its primary departments is the Head Start program. This supportive relationship resulted in all 10 of the Yuma area WACOG Head Starts participating in the program. - Active in working with Child Care Resource and Referral, the local coordinating mechanism of home-based child care, to implement an intensive 3-day workshop and a 6-month follow-up workshop. ***A Resource to Regional and State Systems*** - the NAP SACC coordinator in Yuma provided support and assistance to many *Arizona Steps* partners. - *Arizona Steps* partners in Cochise County provided training to local child care providers to raise awareness of the NAP SACC, and the program was implemented in three local child care centers. - Partners from the Tohono O'odham Nation travelled to Yuma for an initial training, and a subsequent workshop was provided on-site at the Tohono O'odham Head Start Program. - In 2006, Arizona voters passed Proposition 203 (aka First Things First (FTF)), a citizen's initiative that supports early childhood development and health at the local level with funding obtained through tobacco taxes - The FTF Initiative has allotted $150,000,000 statewide and $3,600,000 to the Yuma region for direct services
Both smoking and obesity	**Quantitative/qualitative changes in measures of attitudes and awareness**
	Indicators of successful implementation or sustainability (e.g. development of partnerships; local policy development; increased and stable involvement of a range of key individuals and bodies; uptake of interventions by schools, workplaces, catering outlets; renewed or continuous funding from key agencies. (These indicators may be quantitative or qualitative)):

Fleurbaix-Laventie Ville Santé (FLVS)

Programme focus	Study details	Whole system approach
Intervention name, Location Fleurbaix–Laventie Ville Sante´ (FLVS), in Fleurbaix and Laventie, northern France ***Note: FLVS was a precursor to EPODE. We only have academic in confidence data on EPODE, so this extraction relates to FLVS*** **Year/ timescale over which implemented** Three phases as follows: FLVS I (1992-1997) - nutrition education in schools only FLVS II (1997-2002) - continuation of FLVS I and observational study period; community involvement on the programme started during this time (i.e. in 1999) FLVS III (2002-2007) - continuation of FLVS I and physical activity and nutrition programme (school and community based actions) ***Note: This means that WSA-relevant part of the programme started in 1999 (see programme delivery section for further details)*** **Target population** • FLVS I only targeted school-children in these towns. School-based targeted population was n=805 in 1992 and n=607 in 2000. • FLVS II (from 1999) and FLVS III targeted the population of Fleurbaix and Laventie, two towns in Northern France (population sizes in 1991 were 2200 and 4400 respectively)	**Study name [year]** Primary (anthropometric) outcome data collected in 1992, 2000, 2003 and 2004 in intervention towns (only in 2004 for comparison towns, although a dietary survey was also completed by volunteer families in the comparison towns in 1992, and there are basic overweight/obesity prevalence data available for comparison towns in 1992). **Setting (e.g. school, community, etc.** School and community **Author plus associated paper/source+ paper/source focus** • Romon et al. (2008) – Outcome based evaluation data for the 2000-2004 study period • Heude et al. (2003)– Outcomes from 1992-2000 but not included because the programme was school-based during this time (used for contextual information about programme and populations) • EPODE abstract (Feb 2010) – Contextual information and some additional outcome-based data **Aim of study** “to describe BMI trends and changes in the prevalence of childhood overweight”(Romon et al., 2008, p2) **Study design** Described as a “Repeated, cross-sectional, school-based survey” (Romon et al., 2008, p1).	**Does the programme use the language of ‘whole system’ or ‘whole community’ approaches?** WSA language not mentioned explicitly, but the Romon et al. (2008) [] paper does imply that action at different levels is needed when describing a review of obesity prevention interventions: “They suggested that a combination of long-term actions (promoting healthy dietary habits and physical activity **throughout society**) should have more powerful effects than measures limited to the school environment alone”. Romon et al. (2008) p2 **Levels of action** individual, family, school, community, health professionals, local and national media **Collections of organisations/partners/groups of actors involved** • Schools • Local stakeholders (general practitioners, pharmacists, shopkeepers, sporting and cultural associations) **Programme components** FLVS I (1992–7): • school-based nutrition education programme (educational and practical approaches to nutrition). FLVS II (1997–2002)/FLVS III: • School-based interventions of the first stage were maintained • From 1999 on steadily increasing commitment of the community at large so

• Part of FLVS III specifically targeted those individuals with overweight, high blood pressure, high level of sedentary behaviour, unhealthy eating habits, hyperlipidaemia and smokers (see programme details section below) Target population demographics unclear for the relevant part of the programme (from 1999 onwards). **Theoretical perspective** Not mentioned **Was local knowledge used in the design and/or delivery of the programme?** Teachers, local health professionals, pharmacists, shopkeepers, and sporting and cultural associations contributed to development and delivery of the programme. **Policy context** Starting in 2004 (i.e. after evaluation) EPODE is based on official French guidelines on nutrition, diet and physical activity (i.e. not applicable for FLVS) EPODE: - Involves "a coordinated, capacity-building approach for communities to implement effective and sustainable strategies to prevent childhood obesity." - Is aimed at creating the "political commitment, resources, support services and evidence base to enable community stakeholders to implement effective and sustainable strategies to prevent childhood obesity." - Is "based on the involvement of the	However the study incorporates two designs: • Uncontrolled repeated measures longitudinal epidemiological design similar to a before and after study (but not all participants were the same at each time-point), with data collected in the intervention towns in school years beginning 1992, 2000, 2003, 2004 • Controlled comparison study in 2004 (there are also limited comparison data for 1992) ***Note: Romon et al (2008) report 2000-2004 data, and Heude et al. (2003) report 1992-2000 data (but the programme was not WSA until 1999)*** **Study population** **<u>Intervention sample</u>** Children aged 5-12 yrs attending the five schools in Fleurbaix or Laventie, enrolled between the "last section" of nursery schools and the "last section" of primary schools." (Heude et al., 2003, p236) Anthropometric data collected from: **1992:** Of the n=805 eligible children, complete data were obtained from n=804 (383 girls and 421 boys), mean age males= 8.0yrs (SD=1.7), mean age girls = 8.2yrs(SD=1.8) - *but 1992 data not relevant to WSA* **2000:** Of the n=607 eligible children, complete data were obtained from n=601 (296 girls and 305 boys), mean age males= 8.6yrs (SD=1.7), mean age girls = 8.6yrs(SD=1.9) **2002:** Not clear how many eligible children, complete data were obtained from n=515 (253 girls and 262 boys), mean age males=8.2yrs (SE=1.9), mean age girls =8.2yrs(SE=2.0)	that progressively the intervention addressed both children and adults (see FLVS III) • From 1999, dietitians performed interventions (school and community based) • From 1999, physical activity programme (school and community based). • From 1999, local stakeholders (general practitioners, pharmacists, shopkeepers, sporting and cultural associations) set up family activities focused on a 'healthy lifestyle'. • A health check-up was offered at home to 3000 volunteers from the FL population in 2003. Individuals with overweight, high blood pressure, high level of sedentary behaviour, unhealthy eating habits, hyperlipidaemia and smokers were offered family oriented advice on healthy eating and physical activity provided by a dietitian, who referred to the general practitioner in cases of identified health problems (including childhood obesity). In addition, there was media involvement (including newsletters, press releases, throughout the project FLVS I, II and III) **Core feature descriptions:** **System recognition** Some - Not explicitly stated but the Romon et al. (2008) [] paper does imply that action at different levels is needed when describing a review of obesity prevention interventions: "They suggested that a combination of long-term actions (promoting healthy dietary habits and

community for the community, at the very heart of the "ecological niche": the town". - "A national coordination team using social marketing and organizational techniques trains and coaches a local project manager nominated in each EPODE town or group of towns". - "get stakeholders involved at local level (see figure 2 below)" All quotes from EPODE abstract (Feb 2010) p4. ***Note: These elements are not described in the programme section, because they are only relevant to the EPODE programme, rather than FLVS.***	**2003:** Not clear how many eligible children, complete data were obtained from n=592 (280 girls and 312 boys), mean age males=8.1yrs (SE=1.8), mean age girls =7.9yrs(SE=1.8) **2004:** Not clear how many eligible children, complete data were obtained from n=633 (297 girls and 336 boys), mean age males=8.0yrs (SE=1.7), mean age girls =7.8yrs(SE=1.8); parental social classes I to IV represented respectively 17.1% (n = 107), 52.3% (n= 327), 26.2%(n =164) and 4.3% (n =27) - (class I, professional and managerial occupations; class II, intermediate occupations; class III, lower occupations, class IV, unemployed) **Comparison sample** Comparison towns selected for "similar socio-economic characteristics" "Romon et al., 2008, p3). Anthropometric data collected from n=349 school-children (169 girls and 180 boys), social classes I to IV represented respectively15.7% (n = 53), 53.2% (n = 180), 27.5% (n = 93) and 3.5% (n=12) - class I, professional and managerial occupations; class II, intermediate occupations; class III, lower occupations, class IV, unemployed) ***Note: Eligible population numbers are not given for some years (2002, 2003 or 2004), but the analysed sample was described as ranging from "95–98% of all eligible individuals" in the intervention towns and "98% of towns' school population" in the comparison towns (Romon et al., 2008, , p3)*** **Between group differences in demographics**	physical activity **throughout society**) should have more powerful effects than measures limited to the school environment alone". Romon et al. (2008) [, p2 **Capacity building** Some, limited to "Teachers had been trained in the basics of nutrition by nutritionists and dietitians and had developed their pedagogical methodology" (Romon et al., 2008, p2). "Two dietitians were employed to perform interventions in schools and associations and at various meetings in the town for both children and adults..... new sporting facilities were built and sport educators were employed to promote physical activity in primary schools, walking-to-school days were organized, and family activities were also organized." (Romon et al., 2008, p2). **Local creativity** School teachers were involved in the development of the nutrition education component: "This education programme was set up by the school teachers themselves (n = 44)." (Romon et al., 2008, p2). **Relationships** NR **Community engagement** NR **Communication**

	• In 2004 the age of intervention and control samples significantly differed (males only) • The intervention sample in 1992 and 2000 significantly differed in age (*this is not relevant to our review though – the programme only became WSA in 1999*) **Source of funding** • CEDUS (Centre for Sugar Research and Information) • Fournier Pharma • Lesieur • Nestle´ France • Produits Roche • Go-Sports companies • Conseil Regional Nord Pas de Calais **'Lessons' for the evaluation of obesity prevention programmes** See barriers and facilitators below **Barriers and facilitators** Limitations of study: • Lack of data concerning the schools attended by the children, and therefore no adjustments made for a school clustering effect second limitation is that we lack the • Lack of comparison town data for all but the 2004 time-point, therefore not clear if effects were specific to this intervention • Mediating variables were not measured, therefore it is not clear which aspects of the interventions were creating effects	"Regular communication including newsletters (three per annum) and press releases (one per annum) supported the project" (Romon et al., 2008, p2). **Embeddedness** NR **Robustness & sustainability** "The activities [of FLVS I] were originally intended to last for 5 years but are still running in all FL schools". Romon et al., 2008, p2). FLVS led to the EPODE programme. **Facilitative leadership** "This education programme was set up by the school teachers themselves (n = 44)." (Romon et al., 2008, p2). **Monitoring & Evaluation** Subjects identified during an initial check-up in phase 3 of the FLVS study were then specifically targeted through the intervention. p.2 Romon et al. (2008 – Outcome based evaluation data for the 2000-2004 study period

	Strengths of study: • Long follow-up within intervention towns 2000-2004	

Programme delivery – give details, including relevant diagrams and tables

Taken from Romon et al. (2008), p2:

"FLVS I (1992–7)
The aim of the FLVS I study was to evaluate the effects of a school-based nutrition education programme on the eating habits of the whole family. The programme consisted of both knowledge-oriented and practical approaches to nutrition. This stage was a school-based intervention and addressed children only. The knowledge-oriented approach aimed at improving children's knowledge of the characteristics of foods and nutrients, healthy eating habits, and food processing and labelling, and was implemented throughout the teaching syllabus. This education programme was set up by the school teachers themselves (n 44). Teachers had been trained in the basics of nutrition by nutritionists and dietitians and had developed their pedagogical methodology under the control of the Regional Board of Education (a senior counsellor was in charge of the project). During the first period there was no special focus on physical activity. Through a range of practical, cross-cutting initiatives, the practical approach promoted pleasant, affordable and diversified food, discovery meals in school cafeterias, cooking classes, visits to farms and various food shops, and family breakfasts organized in schools with monitoring from dietitians. The activities were originally intended to last for 5 years but are still running in all FL schools.

FLVS II (1997–2002)
FLVS II was a longitudinal epidemiological study to investigate the determinants of weight and fat mass changes in the FL population. Every two years, 294families living in FL had a clinical examination and were administered questionnaires about food habits, eating behaviour and physical activity. This stage was supposed to be an observational study without intervention; however, the school-based interventions of the first stage were maintained and there was a steadily increasing commitment of the community at large so that progressively the intervention addressed both children and adults.

FLVS III (2002–7)
FLVS III comprised two parts. First, in 2003, a health check-up was offered at home to 3000 volunteers from the FL population. It included a fasting blood sample, a clinical examination and a questionnaire aiming at screening unhealthy habits (smoking, physical inactivity, alcohol consumption). Second, from 2004 onwards, subjects identified on the basis of this initial check-up (individuals with overweight, high blood pressure, high level of sedentary behaviour, unhealthy eating habits, hyperlipidaemia and smokers) were offered family oriented advice on healthy eating and physical activity provided by a dietitian, who referred to the general practitioner in cases of identified health problems (including childhood obesity).From 1999 on, the community at large became increasingly committed to the programme. Two dietitians were employed to perform interventions in schools and associations and at various meetings in the town for both children and adults. The town councils supported actions in favour of physical activity, new sporting facilities were built and sport educators were employed to promote physical activity in primary schools, walking-to-school days were organized, and family activities were also organized. Various local stakeholders (general practitioners, pharmacists, shopkeepers, sporting and cultural associations) set up family activities focused on a 'healthy lifestyle'. Over the whole period covered by the present report (1992–2007), regular communication including newsletters (three per annum) and press releases (one per annum) supported the project. Media interest

about the programme was important during the period: 212 articles appeared in local newspapers, 190 in the medical press and 208 in the national press, and there were twenty-five television reports and seventy-five radio reports."	
Outcomes	
Obesity - **Weight in kg** - **BMI**	**Anthropometric measures** (BMI, weight, waist circumference etc.): • **Weight in kg;** measured in underwear to the nearest 0.1 kg, using a calibrated scale for 5- and 6-year-olds or a bipodal bioimpedance device for 7- to 12-year olds. For children who refused to take off their clothes, 1 kg was deducted by the assistants from the measurement. - To evaluate within-intervention changes over time, models were unadjusted. Results: Weight significantly decreased over time for females but not for males. Statistical information is provided in (Romon et al., 2008, Table 1, p5) and given as follows: Males: 2002 Mean =28.2, SE = 0.4; 2003 Mean =27.5, SE=0.4; 2004 Mean =27.0, SE = 0.49, p=0.2 Females: 2002 Mean =28.2, SE = 8.8; 2003 Mean =26.7, SE=7.9; 2004 Mean =26.1, SE = 7.8, p=0.008 • **BMI (kg/m2);** height was measured, without shoes to the nearest 0.1 cm and weight was measured as described above. - To evaluate within-intervention group changes over time, BMI scores were log-transformed to normalise distribution, and models were adjusted for age and took into account repeated observations. In the text, it also states that models were adjusted for height (Romon et al., 2008, p3), but this was not indicated in the relevant table (Romon et al., 2008, Table 1, p5). Results: It was stated (Romon et al., 2008, p3) that the adjusted BMI decreased significantly for both males and females from 2002 to 2004. Statistical information is provided in (Romon et al., 2008, Table 1, p5) and given below: Males: 2002 Mean =16.1, 95% CI = 15.8-16.3; 2003 Mean =15.8, 95% CI = 15.7-16.0; 2004 Mean =15.7, 95% CI = 15.6-15.9, p=0.001 Females: 2002 Mean =16.2, 95% CI = 16.0-16.4; 2003 Mean =16.0, 95% CI = 15.8-16.2; 2004 Mean =15.8, 95% CI =

	15.5-16.0, p<0.0001 - To evaluate predictors of 2004 BMI (intervention sample only), multivariate linear regression models were used with the following explanatory variables: parental social status, time spent living in intervention towns, age, gender and height. Results: Romon et al. (2008), p4, state that "analysis revealed that only parental social class (p=0.01) and height (p=0.001) were significantly related to BMI". Further statistical information is not provided. - To evaluate 2004 data in the intervention sample compared with the comparison sample, multivariate linear regression was used with adjustments made for age. In the text, it also states that models were adjusted for height (Romon et al., 2008, p3, and p4), but this was not indicated in the relevant table (Romon et al., 2008, Table 2, p6) Results: In 2004, BMI was significantly higher in the comparison sample compared with the intervention sample for both genders: Males: Intervention mean=15.7 (95% CI = 15.5, 15.9); Comparison mean=16.5 (95% CI = 16.2, 16.8); p=0.02 Females: Intervention mean=15.7 (95% CI = 15.5, 15.9); Comparison mean=16.4 (95% CI = 16.0, 16.7); p=0.005 • **Prevalence of overweight/obesity;** using the gender- and age- specific BMI cut-offs according to International Obesity Taskforce (6 month categories) to define overweight and obesity (International definition). - To evaluate within-intervention group changes over time, generalized estimation equations were used, adjusting for age. Results: It was stated (Romon et al., 2008, p3) that the model demonstrated a decrease in the prevalence of overweight/obesity from 2000 – 2004 (n=86, 14.3% in 2000 –from Heude et al., 2003, Table IV, p238; n=68, 13.2% in 2002; n=62, 10.5% in 2003; n=56, 8.8% in 2004 – from Romon et al., 2008, p3) but further statistical information from models are not provided to support this. Romon et al. (2008), Table 1, p5 indicates that in 2003 and 2004 (compared with 2002) age-adjusted OR for overweight/obesity only significantly decreased for females and not males: Males, overweight/obesity in 2003 (7.7%) compared with 2002 (9.5%); OR =0.82 (95% CI=0.55, 1.24) Males, overweight/obesity in 2004 (7.4%) compared with 2002 (9.5%); OR =0.72 (95% CI=0.48, 1.05)

	Females, overweight/obesity in 2003 (13.6%) compared with 2002 (17.1%); OR =0.65 (95% CI=0.47, 0.85) Females, overweight/obesity in 2004 (10.4%) compared with 2002 (17.1%); OR =0.69 (95% CI=0.52, 0.93) ***Note: The above analyses (by gender) were for the years 2002-2004 (2002 as the referent category), whereas, the combined analyses for both genders (only stated in text) was from 2000-2004 (Romon et al., 2008 p3).*** Romon et al. (2008, p3) also state that there was no change in prevalence rates between 1992 and 2004 (prevalence of overweight/obesity in 1992 given as n=92, 11.4% in Heude et al., 2003, Table IV, p238), but further statistical information from the model are not reported. Data are given graphically in Romon et al. (2008), Fig. 1, p3. - To evaluate predictors of 2004 overweight/obesity status (intervention sample only), multivariate linear regression models were used with the following explanatory variables: parental social status, time spent living in intervention towns, age, gender and height. Results: Romon et al. (2008), p4, state that "analysis revealed that only parental social class (p=0.01) and height (p=0.001) were significantly related to BMI. Multivariate logistic regression analysis of overweight status yielded the same results (data not shown)". Further statistical information is not provided. - To evaluate 2004 data in the intervention sample compared with the comparison sample, Pearson chi-squared tests were used. Results: It was stated that In 2004, overweight/obesity was significantly higher in the comparison sample compared with the intervention sample for both genders. However, the data provided in the table, suggests that this was not the case for females at the p<0.05 level of significance (Romon et al., 2008, Table 2, p6): Males: Intervention prevalence =7.4% (95% CI = 4.6, 10.2); comparison prevalence =19.4 (95% CI = 13.6, 25.2); p<0.0001 Females: Intervention prevalence =10.4% (95% CI = 6.9, 13.9); comparison prevalence =16.0 (95% CI = 10.5, 21.5); p=0.08

	Romon et al., 2008, p4 also state that "For girls and boys taken together, the prevalence was 8.8% in FL and 17.8% in the CT (P<0001)". FL = intervention, CT = comparison, 95% CIs not provided, only reported in text. Also reported in a table in the EPODE abstract (Feb 2010)], p2, but 95% CIs still not provided. When prevalence of overweight/obesity in 2004 was broken down by social class, it was found that there was significantly higher prevalence in social class II (p<0.001) and III (p<0.05) for those in the comparison towns compared with the intervention towns, but within social class I there was no significant difference between intervention and comparison towns. Further statistical information not provided, data represented in figure (Romon et al., 2008, Fig2, p6). - EPODE abstract (Feb 2010) [], p2, also gives 1992 data comparing prevalence of obesity/overweight in the intervention and comparison towns (Intervention 11.4%, comparison 12.6%, p=0.6), indicating no significant difference between intervention and comparison in 1992 (before start of FLVS). However, although data were available, no analyses were provided investigating change over time (1992-2004) between the intervention and comparison towns.
	Physical activity measures : None
	Diet measures: None, although a dietary survey was given out in comparison towns in 1992, no further details are given about this.
Smoking	**Prevalence of smoking** (smoking rates, whole population or for subgroups): NA
	Quit rates (with duration of follow-up, and whether self-reported or confirmed by bio-chemical measures e.g. CO^2, blood, urine) NA
Both smoking and obesity	**Quantitative/qualitative changes in measures of attitudes and awareness** NA

	Indicators of successful implementation or sustainability (e.g. development of partnerships; local policy development; increased and stable involvement of a range of key individuals and bodies; uptake of interventions by schools, workplaces, catering outlets; renewed or continuous funding from key agencies. (These indicators may be quantitative or qualitative)): EPODE was developed out of FLVS (EPODE abstract (Feb 2010) [], p3)
Notes	
• The programme started out as a schools-based programme focusing on improving nutritional knowledge: the initial objective was to see whether school-based information would improve dietary habits at home, rather than directly impacting obesity. Physical activity was not targeted at first.	

APPLE

Study details	Programme focus	Whole system approach
Intervention name, Location [year] A Pilot Programme for Lifestyle and Exercise (APPLE), Otago region, NZ (regional population of 205,400) [2006] **Setting** Schools (extra-curricular) and community **Author** Taylor et al. (2006) – effectiveness at 1 -year Taylor et al. (2007) – effectiveness at 2-years Taylor et al. (2008) – effectiveness 2-year follow-up McAuley et al. (2009) – Economic Evaluation **Aim of study** To determine whether increasing extra-curricular levels of activity, and promoting healthy eating, could reduce weight gain in children. **Study design** NRCT/CBA (intervention and control in separate schools/geographical areas) **Study population** Children aged 5-12yrs living in 'relatively-rural' communities in Ontago, NZ (n=302 in the intervention area, n=270 in the control area). Subjects were predominantly Caucasian (81.8%, 17.3% Maori and 0.9% Pacific Island), from middle-class backgrounds (Ministry of Education 2003 School Decile ratings of 3-7). **Source of funding** The Health Research Council, the National Heart Foundation, the Community Trust of Otago, the University of Otago, and the Otago Diabetes	**Year/ timescale over which implemented** 2 years **Target population** Children living in 'relatively-rural' communities (and possibly the wider community within which they live? – see notes) **Theoretical perspective** Not mentioned **Was local knowledge used in the design and/or delivery of the programme?** Specific physical activities delivered as part of the programme were influenced by local knowledge/skills of community members: "Such activities included golf, taekwondo, community walks, beach hikes, school triathlons, line dancing, children's games from other countries, and parent and child team sports. The specific activities initiated by each Activity Coordinator differed somewhat at each school, depending on current resources, available assistance, interests and requests by children, local expertise, community contacts and so forth. Although the ACs would generally run an activity session most days, they also arranged for other community members to take classes, set out equipment for children to use themselves and initiated games, particularly with the older children." (p 147) **Policy context** None apparent **'Lessons' for the evaluation of obesity**	**Does the programme use the language of 'whole system' or 'whole community' approaches?** No evidence **Levels of action** Individual, school, community **Collections of organisations/partners/groups of actors involved** Schools serving the Otago area (n=4 intervention schools and n=3 control schools) **Programme components** No evidence **WSA feature descriptions:** **System recognition** No evidence **Capacity building** No evidence **Local creativity** "The specific activities initiated by each AC differed somewhat at each school, depending on current resources, available assistance, interests and requests by children, local expertise, community contacts and so forth." (p 147) "… several community members (most not connected to the schools) volunteering their time to teach the children new skills or start new clubs." (p 147) **Relationships** No evidence **Community engagement**

Research Trust.	**prevention programmes** None apparent **Barriers and facilitators** Barriers were explored prior to intervention in community consultations: details not provided	"A major role of each AC was to encourage increased involvement of parents and others in the community. This resulted in several community members (most not connected to the schools) volunteering their time to teach the children new skills or start new clubs." (p 147) **Communication** No evidence **Embeddedness** No evidence **Robustness & sustainability** No evidence **Facilitative leadership** No evidence **Monitoring and Evaluation** *Not used* as **part of** the intervention to feed into the targeted actions, although employed to monitor BMI, waist circumference and systolic blood pressure throughout the intervention as outcome measures

Programme delivery – give details, including relevant diagrams and tables

- Two year intervention programme
- Focus of the intervention in Year 1 was on encouraging healthy eating and activity in all children, rather than highlighting weight or obesity as issues
- The main initiative was the provision of Community Activity Co-ordinators (ACs), attached to each intervention school who developed a community-based activity programme. Their main role was to encourage all children to be a little more physically active every day, by increasing the variety and opportunities for physical activity, beyond that which was currently provided in each school. They were employed for 20 hours per week, providing activity programmes for 8 hours and promoting activity in the community or undertaking administrative duties in the remainder of their time.
- Specific activities differed in each school and were dependent on knowledge/skills of community volunteers
- In Year 2, additional initiatives introduced in the second year included activities promoting reduction of intake of sugary drinks; increase in fruit and vegetable consumption; reduction of television time, and short activity breaks in class (no details given on how these initiatives was achieved). In addition, sport and play equipment was provided during lunchtime.

Notes:

- This was more like a school-based intervention programme than a WSA programme (school-based with limited community involvement).
- It was also not clear if the community was being targeted as well as the school-children or just encouraged to help deliver programme elements (e.g. sporting activities): the abstract reads "and the wider community was encouraged to participate".

Outcomes	
Obesity-related	**Anthropometric measures** (BMI, weight, waist circumference etc.): Differences from baseline to end of intervention (@ 2 years) and subsequent follow-up presented for three different subgroups of children:

Differences (and 95% CIs) between the intervention and control children at the end of the intervention and at follow-up for those children who participated in 2 y of the intervention and follow-up[1]

	End of intervention		Follow-up	
	Adjusted for clustering[2]	Multivariate adjusted[3]	Adjusted for clustering[2]	Multivariate adjusted[3]
Height z score[4]	−0.11 (−0.26, 0.04)	−0.03 (−0.12, 0.07)	−0.11 (−0.27, 0.05)	−0.02 (−0.14, 0.10)
Weight z score[4]	−0.38 (−0.52, −0.24)	−0.20 (−0.26, −0.14)	−0.36 (−0.52, −0.20)	−0.17 (−0.23, −0.11)
BMI z score[4]	−0.44 (−0.61, −0.27)	−0.30 (−0.36, −0.25)	−0.35 (−0.52, −0.19)	−0.21 (−0.29, −0.14)
Overweight prevalence[5]	0.61 (0.43, 0.87)	0.70 (0.54, 0.90)	0.71 (0.52, 0.97)	0.81 (0.69, 0.94)

[1] n = 125 control and 131 intervention participants. The data were analyzed by using generalized estimating equations.
[2] Adjusted for clustering only.
[3] Adjusted for age, sex, baseline values, clustering, total length of time in study, and whether the child was still attending an intervention school.
[4] Difference (95% CI) between intervention and control children at end of intervention and follow-up.
[5] Relative risk (95% CI) of being overweight (intervention compared with control children).

Source: Table 2 from Taylor et al. 2008

Differences (and 95% CIs) between the intervention and control children at the end of the intervention and at follow-up for those children who participated in ≥1 y of the intervention and follow-up (n = 389)

	End of intervention		Follow-up	
	Adjusted for clustering[1]	Multivariate adjusted[2]	Adjusted for clustering[1]	Multivariate adjusted[2]
Height z score[3]	−0.14 (−0.33, 0.06)	−0.02 (−0.08, 0.04)	−0.11 (−0.26, 0.05)	0.01 (−0.08, 0.10)
Weight z score[3]	−0.32 (−0.51, −0.13)	−0.14 (−0.18, −0.10)	−0.32 (−0.43, −0.20)	−0.14 (−0.17, −0.10)
BMI z score[3]	−0.34 (−0.52, −0.16)	−0.22 (−0.28, −0.16)	−0.31 (−0.40, −0.22)	−0.19 (−0.24, −0.13)
Overweight prevalence[4]	0.67 (0.52, 0.85)	0.82 (0.70, 0.96)	0.71 (0.54, 0.94)	0.88 (0.76, 1.03)

[1] Adjusted for clustering only.
[2] Adjusted for age, sex, baseline values, clustering, total length of time in study, and whether the child was still attending an intervention school.
[3] Difference (95% CI) between intervention and control children at end of intervention and follow-up.
[4] Relative risk (95% CI) of being overweight (intervention compared with control children).

Source: Table 4 from Taylor et al. 2008

Characteristics of the study population at each time point and differences between the intervention and control children at the end of the intervention and at follow-up in those children with at least one measurement during the intervention who participated in the follow-up[1]

	Baseline		Follow-up		Difference (and 95% CI) at follow-up	
	Control	Intervention	Control	Intervention	Adjusted for clustering[2]	Multivariate adjusted[3]
Age (y)	8.0 ± 1.9[4]	7.8 ± 2.0	11.1 ± 2.3	11.1 ± 2.4	—	—
Height (m)	1.28 ± 0.13	1.26 ± 0.13	1.46 ± 0.15	1.45 ± 0.15	—	—
Height *z* score	0.20 ± 0.95	0.13 ± 1.01	0.18 ± 0.94	0.12 ± 1.01	−0.06 (−0.19, 0.07)	0.04 (−0.03, 0.10)
Weight (kg)	30.7 ± 10.5	28.6 ± 9.0[5]	46.3 ± 16.9	42.7 ± 14.4	—	—
Weight *z* score	0.63 ± 0.98	0.47 ± 0.91	0.72 ± 0.99	0.47 ± 0.95	−0.06 (−0.11, −0.00)	−0.08 (−0.14, −0.02)
BMI (kg/m^2)	18.3 ± 3.4	17.6 ± 2.5[5]	20.9 ± 4.5	19.6 ± 3.6	—	—
BMI *z* score	0.76 ± 0.91	0.64 ± 0.82	0.82 ± 0.88	0.57 ± 0.87	−0.25 (−0.32, −0.19)	−0.17 (−0.25, −0.08)
Overweight (%)[6]	41	33	41	31	0.73 (0.64, 0.83)[7]	0.85 (0.71, 1.01)[8]

[1] $n = 274$ control and 280 intervention participants. The data were analyzed by using generalized estimating equations.
[2] Adjusted for clustering only.
[3] Adjusted for age, sex, baseline values, clustering, total length of time in study, and whether still attending an intervention school. Relative risk (95% CI) of being overweight in intervention compared with control children at [7]follow-up adjusted for clustering only.
[4] $\bar{x} \pm$ SD (all such values).
[5] Significantly different from control children at baseline, $P < 0.05$ (independent *t* test).
[6] Defined as a BMI value ≥85th percentile according to reference data from the Centers for Disease Control and Prevention (15). Values are the relative risk (95% CI) of being overweight in the intervention and control children.
[8] Relative risk (95% CI) of being overweight in intervention compared with control children at follow-up adjusted for age, sex, baseline values, clustering, total length of time in study, and whether still attending an intervention school.

Source: Table 5 from Taylor et al. 2008

Physical activity measures :

Diet measures:

Other

Quantitative/qualitative changes in measures of attitudes and awareness

Indicators of successful implementation or sustainability (e.g. development of partnerships; local policy development; increased and stable involvement of a range of key individuals and bodies; uptake of interventions by schools, workplaces, catering outlets; renewed or continuous funding from key agencies. (These indicators may be quantitative or qualitative)):

A range of indicators of healthy eating (4 indicators) or physical activity (8 indicators) policies and procedures were surveyed in APPLE intervention schools (n=4) both before the intervention and at follow-up. Although there was an increase in the number of schools “prohibiting access to foods of low nutritive value”, the overall pattern of results for

	other indicators was inconclusive.

Smoking cessation interventions

COMMIT

Programme focus	Study details	Whole system approach
Intervention name, Location COMMIT, USA & Canada **Year/ timescale over which implemented** January 1988 – 1993 Community cohort RCT (2001 follow-up survey) **Target population** (who were the people subjected to the different strategies e.g. African-American community) **(population number** e.g. 150 or 10,000**, town, area, country)** Smokers, particularly heavy smokers, resident in one of 22 US/Canadian communities (see below for list) identified as willing to take part in the study and with experience in smoking control and community studies. Total population number (across the 22 sites) = 3,404,192 Vallejo, California * Hayward, California Cedar Rapids, Iowa * Davenport, Iowa Fitchburg/Leominster, Mass.* Lowell, Mass. Paterson, NJ * Trenton, NJ Santa Fe, NM * Las Cruces, NM	**Study name (if different) [year]** COMMIT (1988 – 1993) **Setting (e.g. school, community, etc.)** School, community, workplace, **Author (year) [Ref ID] plus associated paper/source** (i.e. papers addressing the same intervention) **+ paper/source focus** (e.g. outcome-based, economic evaluation, scope) Shipley et al (1995) [673] COMMIT – economic evaluation Taylor et al (1998) [1468] COMMIT – attitudes Taylor et al (1998) [2646] COMMIT - attitudes Freedman et al. (1997) [1542] COMMIT – design Gail et al (1992) [2462] COMMIT - design Sorensen et al (1997) [2838] COMMIT – worksite appraisal Glasgow et al (1992) [700] COMMIT - worksite appraisal Thompson et al (1990) [4084] COMMIT – community engagement * greyscale – not included in evaluation Lichtenstein et al (1996) [2652] COMMIT – 1 year follow-up Thompson et al (2000) [2637] COMMIT – 2 year follow-up Glasgow et al (1996) [664] COMMIT – worksite appraisal COMMIT Research Group (1996) [2463] COMMIT – design summary Hyland et al (2006) [627] COMMIT – results and analysis	**Does the programme use the language of 'whole system' or 'whole community' approaches?** (if so, extract relevant text) **No** **Levels of action** (Individual, Family, School, Community, PH policy) Individual, Family, School, Community, PH policy **Collections of organisations/partners/groups of actors involved** (e.g. Department of Health) Local health department Local newspaper Health volunteer groups: American Cancer Society American Heart Association American Lung Association Existing tobacco coalition Medical society Hospital(s) Health care (other) Chamber(s) of commerce Wellness council(s) School superintendent office Substance abuse programme(s) Youth agency/group(s) Prior COMMIT members Other community spokespeople (p.357, Thompson et al [2637]

Yonkers, NY * New Rochelle, NY Utica, NY * Binghampton/Johnson City, NY Raleigh, NC * Greensboro, NC Medford/Ashland, Oregon * Albany,/Corvalis, Oregon Bellingham, Washington * Longview/Kelso, Washington Brantford, Ontario, Canada * Peterborough, Ontario, Canada * = *randomly allocated intervention site* **Theoretical perspective** (if mentioned – e.g. Social Ecological Model) Community Organization perspective (p.190; Thompson et al. ID ref.4084) "A community-based approach assumes that the best way to change behaviour [sic.] is to intervene through social structures within a community" (p.1621; COMMIT Research Group, ID. Ref.2463) **Was local knowledge used in the design and/or delivery of the programme?** (If so, describe) Yes – "The COMMIT intervention is delivered through a community organisation approach in which the communities are heavily involved in the entire project and have considerable input in decision making" (p.1623; COMMIT Research	COMMIT Research Group (1995) [2440] COMMIT – outcome based: quit rates COMMIT Research Group (1995) [2439] COMMIT - outcome based: quit rates Ockene et al (1997) [1487] COMMIT – outcome based: physician's practices **Aim of study** COMMIT (funded by the National Cancer Institute – USA) is a multi-site international trial which incorporates a variety of community interventions to help cigarette smokers – particularly heavy smokers – achieve and maintain cessation. **Study design** A randomised matched pairs design was used to identify 22 intervention and comparison sites. Longitudinal tobacco-use surveys at baseline (1998) and follow up (1993 and 2001). **Study population** (from whom was outcome data collected? e.g. children aged 5-10 yrs attending Nashville primary schools) **(age, gender, socio-economic status, other relevant characteristics)** Smokers, particularly heavy smokers, aged between 25 and 64 resident in one of 22 US/Canadian communities (see above for list) identified as willing to take part in the study and with experience in smoking control and community studies (**no different from target population**). "heavy smokers were oversampled and consisted of about half of the entire baseline cohort. …In 1993, attempts were made to assess the smoking status of all those initially identified in 1998. Over the study period [1988 – 1993], 31% of the baseline smokers were lost to follow-up (26% unable to locate, 2% death, 3% other reasons)."	**Programme components** (e.g. Diet, Education, School-based) Healthcare, worksite, cessation resources, public education, youth **Core feature descriptions:** (highlight examples) **System recognition** - **Capacity building** Goal 2 of COMMIT "*increase the community capacity to modify smoking behaviour*…The resources and services must be diverse enough to offer all smokers a cessation method of their choice…communities are encouraged to build smoking cessation opportunities and assistance into regular activities that occur within the various sectors of a community…" (p.190, Thompson et al [4084]) **Local creativity** "…communities were encouraged to develop their own approaches to delivery of the intervention activities…" (p. 1626, COMMIT Research Group [2463]) **Relationships** "it is important to have real collaboration, not merely representation…community partners are involved in the whole project and have significant decision-making ability" (p.191, Thompson et al [4084]) **Community engagement** "…change is more likely to occur when the people affected by a problem are involved in defining and solving the problem…it meant that outside "experts" – health educators, researchers, and other professionals – are meant to be facilitators to guide change, not to control and define it" (p.191, Thompson et al [4084]) **Communication** "…production of a regular local newsletter focussing on smoking issues, …development and promotion of a network to inform smokers of cessation activities, and coordination with local

Group, ID. Ref.2463) The trial was structured to incorporate this – see figure 1 below. **Policy context** (i.e. local policies & national initiatives - and other key contextual details) "The National Cancer Institute (NCI - funded by the US national government) identified a rapid reduction in adult smoking as a primary objective in the goal to reduce cancer mortality rates by 50% before the year 2000." (p.1620; COMMIT Research Group, ID. Ref.2463) "The NCI's division of Cancer Prevention and Control has initiated and supported more than 60 smoking cessation intervene trials in the USA and Canada since 1970". A major goal of these interventions has been to test the efficacy of delivery through diverse channels within communities such as clinics, worksites and schools. "The Community Intervention Trial for Smoking Cessation (COMMIT) is the NCI's final major test of these interventions prior to implementing national dissemination efforts" (p.1620; COMMIT Research Group, ID. Ref.2463)	"in the summer of 2001" baseline survey respondents were re-interviewed to assess long-term effects of the intervention. "Among the 12,435 baseline smokers interviewed in 1993 who resided in the United States and who agreed to be recontacted in the future, 6603 (53% of the 1993 sample and 35% of the original 1988 US sample) were successfully reinterviewed in 2001, resulting in a 8% attrition rate per year, …similar to the attrition rate observed between 1988 and 1993" (p.274, Hyland et al ref. ID: 627). **Source of funding** National Cancer Institute **'Lessons' for the evaluation of obesity prevention programmes** The community approach has a number of purported advantages: - wider exposure to the intervention - messages about behaviour change are widespread throughout the community, more difficult to avoid - likely to involve diverse range of groups and individuals - Over time, unhealthy behaviour becomes seen as more than a merely individual problem - Bigger community support base may reduce the funding requirements due to volunteers and magnification of 'seed money' - Long-term change more likely due to integration within the community - The community can work in 'partnership' with the intervention group, which can lead to the community developing 'ownership' of the intervention However, as a trial there are issues in community interventions: - different organisational structures within the community can compromise the integrity of the trial	cessation service providers to publicize cessation opportunities" (p.191, Thompson et al [4084]) **Embeddedness** *Increase the influence of existing policy and economic factors within a community that discourages smoking*…such policies are very influential in changing the social environment" (p.357, Thompson et al [2637]) **Robustness & sustainability** "…the interventions can be integrated into the community and its institutions so that long-term change is likely" "The trial-wide goals of COMMIT were designed with the view of changing the community environment" (p.189, Thompson et al [4084]) **Facilitative leadership** "…community members are involved in the whole project and have significant decision-making capability" "Communities differ in values, norms and structures, and those differences are vital to the manner in which partnerships must be established…there may be unique opportunities in a community that will make community organisation and interventions easier" (p.191-192, Thompson et al, [4084])

	- "too much mandated structure threatens ownership" of an intervention by the community - Not an equal partnership between intervention group and community - Scientific goals take higher priority than community development goals **Barriers and facilitators** - Confounding by other initiatives going on; California passed Proposition 99 (1988); American Stop Smoking Intervention Study for Cancer Protection (ASSIST) began before COMMIT finished and overlapped with a number of communities; - COMMIT did not spend enough time planning for durability - There may have been confusion over the long-term goals and planning, as COMMIT emphasised that it would not take on existing projects from other organisations; rather it would help communities to work together effectively with these groups. - **"It was not until midway through the intervention that researchers and community members agreed that durability might be an important feature to include in COMMIT"** (p.363, Thompson et al, ref. ID2637). - Typically, the groups that deal with health and cancer issues in communities are voluntary, and when COMMIT was running, activity of these groups in intervention areas went *down;* this is understandable as they only have finite resource so naturally if COMMIT has the funds to advertise it's presence for tobacco control, communities would go there instead; - Funds were limited and did not allow for future planning (p.363, Thompson et al, ref. ID2637).	
Programme delivery – give details, including relevant diagrams and tables		

COMMIT was a 7 year, multi-site matched-pairs randomised controlled trial. 11 matched pairs of communities were selected for participation in COMMIT (10 In US, 1 in Canada), and each pair was matched for general socio-demographic factors, (pop.size, ethnicity, %female, age, education, mean family income level, mobility/migration patterns, extent of urbanization, no. of worksites, estimated smoking prevalence rates, access to intervention channels (e.g. healthcare, media, cessation services)) .

A community was broadly defined and could consist of a "well-defined portion of a major metropolitan area or two small cities in the same geographic region" (p.1621, COMMIT Research Group [2463]). Communities had to have some boundary separation to maintain independence a prevent contamination.

"A cluster analysis was conducted using census data for 8 demographic variables on which the pairs should demonstrate agreement: racial distribution, Hispanic ethnicity, gender by age, gender by marital status, general occupational category, educational attainment, family income, and yrs resident in the current household. This analysis verified the comparability of the households in the community pairs." (p.1622, COMMIT research group [2463]).

Identification of end-points and evaluation cohorts: a baseline telephone survey (conducted centrally using a random dialling technique) collected data on gender, age, name and smoking status of each adult household member. Response rate was 88.1% with an av.6000 households listed in each of the 22 communities. From this list, smokers were asked about quantity and duration of cigarette smoking, quit attempts, desire to quit, demographic and socioeconomic characteristics, and were then split into two cohorts of heavy smokers (n=500) and light/moderate smokers (n=500) between 25 and 64 years old in each community. The response rate for this extended interview was 86.4%.

(defn. of smoker – a person who has smoked >100 cigarettes and smokes currently; heavy smoker= smokes≥25 cigs per day; light-to-moderate smoker= <25 cigs per day).

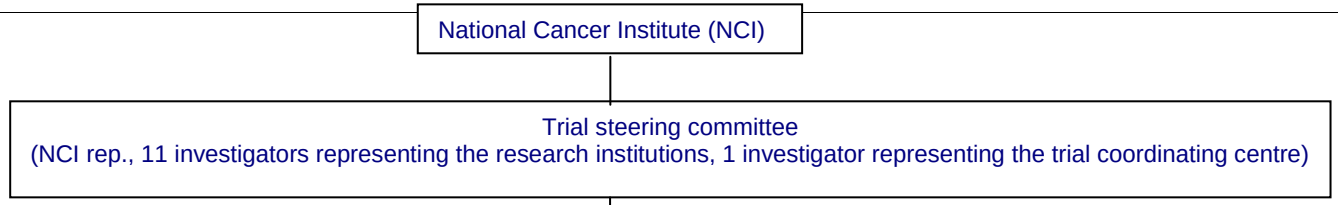
A randomly-chosen (no mention of how) 80% of each of these cohorts was drawn to form the end point cohorts to be contacted briefly each year to determine smoking status and update tracking info. To minimise reactivity (?), these cohorts were resurveyed in depth only at the end of the study. The remaining 20% plus 100 recent quitters (within last 5 yrs) and 100 non-smokers (never smoked or quit more than 5 yrs ago) formed an evaluation cohort.

This evaluation cohort was asked questions at baseline (1989) throughout the intervention (1990, 1991, 1992) and at the endpoint (1993). These questions aimed to assess the 3 elements related to intermediate trial goals:

The population impact of COMMIT on intervention programme awareness; receptivity; and participation; recognition of smoking as a public health problem; change in the social acceptability of smoking.

The trial was structured as shown below, with a Field Director recruited for each of the 11 pairs of communities. Their primary responsibility is to ensure that the intervention protocol is implemented in the local community. The 4 task forces represent the main focus of the intervention, recruited from the local community and selected for their knowledge in a chosen area.

The National Cancer Institute (NCI) gave 'seed money' to the communities to launch the intervention, with e view to becoming community-driven in future years. Over 4 years of intervention, activities were targeted to healthcare providers, worksites, organisations, schools, media and cessation resources so that community smokers would hear constant and regular messages about smoking cessation.



Outcomes			
Smoking Quit rates by COMMIT	**Prevalence of smoking** (smoking rates, whole population or for subgroups): From COMMIT Study Group 1995.		

intervention status and state

Quit rates by cohort (heavy and light/medium smokers)

Quit rates (estimated) intervention vs. control

Quit ratio among ages 25 to 64: final

Changes in cigarette smoking prevalence, all communities combined

TABLE 2—Changes in Cigarette Smoking Behavior, by Intervention Condition

Outcome Measure	Community Means: Intervention	Community Means: Comparison	Difference	*P* (One-Sided)	90% Confidence Interval
Smoking prevalence among ages 18+					
Baseline (1988)	24.6	25.1	−0.6		
Final (1993)	21.6	22.5	−0.8		
Change (1988–1993)	2.9	2.7	0.3	.31	−0.7, 1.3
Smoking prevalence among ages 25 to 64					
Baseline (1988)	27.6	28.6	−1.0		
Final (1993)	24.1	25.4	−1.3		
Change (1988–1993)	3.5	3.2	0.3	.36	−1.2, 1.8
Heavy smoking prevalence among ages 25 to 64					
Baseline (1988)	10.2	11.0	−0.9		
Final (1993)	7.3	8.2	−0.9		
Change (1988–1993)	2.9	2.9	−0.0	.51	−0.7, 0.7
Quit ratio among ages 25 to 64: final	0.198	0.185	0.013	.09	−0.003, 0.028
Per capita daily cigarette use among ages 25 to 64					
Baseline (1988)	5.64	6.02	−0.38		
Final (1993)	4.45	4.89	−0.44		
Change (1988–1993)	1.19	1.13	0.06	.37	−0.27, 0.38

TABLE 3—Results by Community for Cigarette Smoking Prevalence among Those Aged 25 to 64, Expressed as Percentage Smoking

	Intervention			Comparison			
Pair	Final 1993	(SE)[a]	Change 1988–1993	Final 1993	(SE)[a]	Change 1988–1993	Difference[b]
1	21.6	(0.76)	7.0	22.2	(0.75)	4.8	2.3
2	33.8	(0.91)	1.0	27.8	(1.02)	4.8	−3.8
3	24.8	(0.80)	0.7	26.4	(0.80)	2.2	−1.5
4	25.0	(0.84)	5.0	30.0	(0.87)	3.6	1.4
5	24.0	(0.77)	6.2	30.6	(0.92)	2.0	4.2
6	19.3	(0.73)	4.2	18.3	(0.72)	4.0	0.2
7	25.3	(0.82)	2.4	22.2	(0.79)	5.7	−3.3
8	29.3	(0.84)	2.1	28.3	(0.90)	2.3	−0.2
9	20.5	(0.79)	4.4	27.9	(0.85)	0.6	3.8
10	22.0	(0.87)	2.0	18.8	(0.82)	4.2	−2.2
11	19.9	(0.76)	3.5	27.1	(0.94)	1.4	2.1
Community means	24.1		3.5	25.4		3.2	0.3

[a]SE = standard error of final (1993) prevalence.
[b]Differences in prevalence change (1988–1993) between intervention and comparison communities.

Quit rates (with duration of follow-up, and whether self-reported or confirmed by bio-chemical measures e.g. CO^2, blood, urine)

Later years Quit rate results (based on repeat cross-sectional data from (Hyland et al. 2006)

Reported by intervention status and state 1998-1993, 1993-2001, 1988-2001*:

	1988-1993	**1993-2001**	**1988-2001**
Comparison:	N=2316 22.6% quit	N=1811 30.6% quit	N=2316 42.1% quit
Intervention:	N=2320 24.6% quit	N=1751 30.1% quit	N=2320 43.2% quit
Total:	**N=4636 23.6% quit**	**N=3562 30.4% quit**	**N=4636 42.6% quit**

* total sample size based on no. of participants who were current smokers in the baseline year for a given comparison and resided in the

same state or community during the entire period.

Table 1 below shows the Quit rates from the Cohort analysis results (Lynn et al. 1995a)

TABLE 1— Numbers (n) of Individuals in the Cohorts[a] and Fraction (*f*) of Those Who Met the Definition of Quitting, with Imputation for Those Unknown in 1993 (MAR Analysis)[b]

	Heavy Smoker Cohort (n = 10 019)					Light-to-Moderate Smoker Cohort (n = 10 328)				
	Intervention (n = 4976)		Comparison (n = 5043)			Intervention (n = 5177)		Comparison (n = 5151)		
Pair	n	*f*	n	*f*	Difference	n	*f*	n	*f*	Difference
1	442	0.139	435	0.205	−0.066	504	0.279	519	0.286	−0.007
2	531	0.163	489	0.202	−0.039	475	0.304	453	0.267	0.037
3	475	0.164	464	0.163	0.002	443	0.315	448	0.252	0.064
4	428	0.204	497	0.249	−0.045	463	0.345	475	0.299	0.046
5	440	0.183	458	0.160	0.022	473	0.342	472	0.332	0.010
6	450	0.164	454	0.186	−0.022	470	0.306	482	0.299	0.007
7	432	0.262	451	0.230	0.032	463	0.332	475	0.303	0.028
8	455	0.193	434	0.169	0.024	473	0.334	464	0.254	0.080
9	455	0.215	462	0.127	0.088	492	0.291	456	0.263	0.027
10	426	0.136	451	0.172	−0.036	479	0.244	467	0.256	−0.012
11	442	0.155	448	0.189	−0.034	442	0.273	440	0.218	0.055
Community means		0.180		0.187	−0.007*		0.306		0.275	0.030**

[a]In this table, n represents the sum of those with observed outcome and those with imputed outcome; estimates of quit rates based on such n have greater uncertainty than would occur with the same n if all had been observed.
[b]MAR = missing at random.
**P* (one-sided) = .68; 90% confidence interval = −0.031, 0.019.
***P* (one-sided) = .004; 90% confidence interval = 0.014, 0.047.

Process	**Quantitative/qualitative changes in measures of attitudes or awareness**

Effectiveness of Whole System Approaches

measures

Worksite Smoking Policies and Environment—1993 Mean (and Standard Deviation) across Communities

Worksite survey data	% Worksites/Community: Intervention	% Worksites/Community: Comparison	Significance of difference[a]
Worksites with written smoking policy	65.9 (10.9)	66.7 (9.1)	$P = 0.60$
Worksites with restrictive smoking policy or smokefree policy	75.5 (11.3)	76.8 (9.6)	$P = 0.72$
Worksites with smokefree policy[b]	43.1 (13.6)	44.6 (14.2)	$P = 0.68$
Worksites with cigarettes for sale on the premises	15.2 (4.4)	16.3 (3.2)	$P = 0.72$
Worksites aware of city, county, or state ordinances restricting smoking in worksite	39.7 (12.5)	40.1 (12.7)	$P = 0.54$
Mean % of worksites reporting employees comply with policy	68.0 (7.6)	67.4 (7.3)	$P = 0.42$
Attend workshop on smoking	21.3 (5.4)	16.1 (6.0)	$P = 0.02$

Employee data	Intervention 1989	Intervention 1993	Comparison 1989	Comparison 1993	Significance of difference
Worksite bans smoking[b] Average (Standard deviation)	19.7% (9.2)	39.3% (6.6)	19.4% (10.5)	39.3% (5.8)	$P = 0.54$
Worksite restricts smoking to designated areas Average (Standard deviation)	56.7% (6.6)	50.3% (6.4)	58.9% (6.7)	49.7% (4.8)	$P = 0.18$
Report pressure from coworkers to quit (smokers only) Average (Standard deviation)	33.2% (6.3)	22.0% (6.3)	34.5% (6.6)	20.3% (6.1)	$P = 0.06$

[a] Results of one-tailed significance testing using the permutation test and community as the unit of analysis.
[b] This question was asked somewhat differently on the worksite and employee surveys.

Effectiveness of Whole System Approaches

Worksite Smoking Cessation Activities Mean (and Standard Deviation) across Communities

Worksite survey data	In past year			Past 4 years		
	Intervention	Comparison	Significance of difference[a]	Intervention	Comparison	Significance of difference[a]
% Worksites offering quit-smoking lectures, classes, materials, and other programs	24.8 (6.9)	18.9 (5.6)	$P = 0.03$	37.0 (9.7)	31.4 (7.0)	$P = 0.04$
% Worksites offering between-worksite competition or participating in community-wide contest	5.9 (4.3)	3.2 (2.1)	$P = 0.06$		Not collected	
% Worksites participating in Great American Smokeout/ National Nonsmoking Week	20.7 (6.4)	17.5 (5.4)	$P = 0.07$		Not collected	

Employee data	Intervention		Comparison		Significance of difference
	1989	1993	1989	1993	
% Aware of stop-smoking program or contest at work[b]	29.7 (6.9)	34.1 (5.3)	28.3 (6.3)	30.4 (6.2)	$P = 0.01$
% Participate in stop-smoking program or contest at work[b]	3.3 (1.1)	4.4 (2.0)	2.4 (1.5)	4.1 (1.7)	$P = 0.83$

[a] Results of one-tailed significance testing using the permutation test and community as the unit of analysis.
[b] This question was asked somewhat differently on 1989 and 1993 surveys.

TABLE 1
WORKSITE CHARACTERISTICS ASSOCIATED WITH STRINGENT SMOKING POLICIES AND ATTENDANCE AT SMOKING POLICY WORKSHOPS

Worksite characteristic/level	% Worksites having indicated smoking policy as			Logistic regression results		% Worksites sending representative to policy workshop	Logistic regression results	
	Smoke-free	Restrictive	Lenient or no	Odds ratio	95% CI		Odds ratio	95% CI
Number employees				0.82	0.65–1.05		2.32	1.76–3.06
50–99 (n = 280)	14.3	32.5	53.2			14.1		
100–249 (n = 310)	13.9	34.5	51.6			29.2		
250+ (n = 167)	19.2	28.1	52.7			53.6		
Type business (SIC Categ.)				0.62[a]	0.43–0.91		0.64[a]	0.41–0.99
Manufacturing (n = 262)	8.0	26.7	65.3			30.3		
Wholesale/retail (n = 172)	10.5	36.6	52.9			11.1		
Services (n = 190)	24.7	35.3	40.0			40.7		
Other (n = 133)	21.8	33.8	44.4			32.2		
Percentage "professional" employees				1.11	0.77–1.61		1.29	0.84–1.96
≤10	11.3	32.8	55.9			21.4		
>10	18.7	30.7	50.6			36.1		
Percentage women employees				1.65	1.17–2.34		0.67	0.44–1.01
≤50	10.7	28.1	61.1			28.7		
>50	19.4	34.8	45.8			27.8		
Region				1.82	1.29–2.56		0.83	0.56–1.25
West	21.9	34.6	43.5			28.3		
All other	10.6	30.8	58.5			29.2		
Presence of law/ordinance				1.77	1.25–2.49		1.72	1.17–2.54
Yes	17.7	37.2	45.0			37.3		
No	12.4	28.8	58.8			25.0		
Offering other health promotion activities				1.27	0.89–1.82		1.38	0.91–2.08
Yes	19.3	31.1	49.6			35.9		
No	11.4	32.5	56.1			20.5		

[a] Odds ratio compares manufacturing and wholesale/retail organizations with all other businesses.

TABLE 2
WORKSITE CHARACTERISTICS ASSOCIATED WITH PROVIDING SMOKING CESSATION RESOURCES TO EMPLOYEES AND INVOLVEMENT IN COMMUNITY-WIDE SMOKING CESSATION ACTIVITIES

Worksite characteristic/level	% Worksites offering cessation resources	Logistic regression results		% Worksites participating in community-wide event	Logistic regression results	
		Odds ratio	95% CI		Odds ratio	95% CI
Number employees		1.71	1.33–2.20		1.68	1.27–2.21
50–99 (n = 280)	21.4			15.8		
100–249 (n = 306)	31.4			26.4		
250+ (n = 164)	53.7			42.4		
Type business (SIC Categ.)		0.67[a]	0.45–0.99		0.49[a]	0.32–0.77
Manufacturing (n = 263)	28.9			17.2		
Wholesale/retail (n = 172)	18.0			16.9		
Services (n = 184)	45.7			40.4		
Other (n = 131)	40.5			35.2		
Percentage "professional" employees		1.16	0.79–1.72		1.34	0.87–2.08
≤10	27.8			19.1		
>10	43.9			34.0		
Percentage women employees		0.88	0.60–1.28		1.18	0.78–1.78
≤50	34.3			21.4		
>50	36.6			30.1		
Region		1.60	1.11–2.30		1.49	1.00–2.23
West	41.7			30.6		
All other	30.8			23.1		
Presence of law/ordinance		1.29	0.90–1.85		1.53	1.03–2.28
Yes	40.4			31.7		
No	34.5			23.6		
Offering other health promotion activities		2.15	1.47–3.14		1.64	1.07–2.53
Yes	46.9			33.9		
No	23.8			17.9		

[a] Odds ratio compares manufacturing and wholesale/retail organizations with all other businesses.

	Indicators of successful implementation or sustainability (e.g. development of partnerships; local policy development; increased and stable involvement of a range of key individuals and bodies; uptake of interventions by schools, workplaces, catering outlets; renewed or continuous funding from key agencies. (These indicators may be quantitative or qualitative)):
Notes	

Breathing Space

Programme focus	Study details	Whole system approach
Intervention name, Location 'Breathing Space' – Wester Hailes, Edinburgh **Year/ timescale over which implemented** 1998 - 2002 **Target population** (who were the people subjected to the different strategies e.g. African-American community) **(population number** e.g. 150 or 10,000**, town, area, country)** Community living in Wester Hailes housing estate – a peripheral low-income housing estate in Edinburgh. Pop. in Wester Hailes – 22,884; Edinburgh; UK (see table 1 in notes). Target pop. was residents aged ≥12 years p12 **Theoretical perspective** (if mentioned – e.g. Social Ecological Model) "based on community development principles" (p.8 para. 2) **Was local knowledge used in the design and/or delivery of the programme?** (If so, describe) "Unusually, the local community in Wester Hailes had already begun to address smoking through implementing no-smoking policies and the local health agency (WHAA) provided support for smokers who wanted to	**Study name (if different) [year]** n/a Baseline data collected 1999 Post-intervention data collected 2001/2002 **Setting (e.g. school, community, etc.)** Community, primary care, 'young people' (including school) and workplace **Author (year) [Ref ID] plus associated paper/source** (i.e. papers addressing the same intervention) **+ paper/source focus** (e.g. outcome-based, economic evaluation, scope) Platt et al. (2003) [1918] - no associated papers. Evaluation based. **Aim of study** The aim of the study.."was to contribute to an assessment of the potential of community-based interventions for reducing social class variations in the prevalence of cigarette smoking through an evaluation of an experimental health promotion initiative" (p.15 para. 5). **Study design** Controlled before and after(using different groups at the before and after stage) **Study population** (from whom was outcome data collected? e.g. children aged 5-10 yrs attending Nashville primary schools) **(age, gender, socio-economic status, other relevant characteristics)**	**Does the programme use the language of 'whole system' or 'whole community' approaches?** (if so, extract relevant text) Not explicitly, although language use is very similar in relation to core features **Levels of action** (Individual, Family, School, Community, PH policy) Individual, Family, School, Community, PH policy **Collections of organisations/partners/groups of actors involved** (e.g. Department of Health) DoH Wester Hailes Urban Regeneration Partnership (WHURP) Lothian Health Board, Health Promotion Department Wester Hailes Health Agency (WHHA) Local Health Care Cooperative **Programme components** (e.g. Diet, Education, School-based) Community, primary care, young people (including schools), workplaces **Core feature descriptions:** (highlight examples) **System recognition** n/a **Capacity building** "Primary care staff were trained in brief and in-depth intervention methods, including motivational interviewing. Additionally, training planned for Wester Hailes at a regional level was supplemented by *Breathing Space*. Two additional

quit." (p.8 para.1) **Policy context** (i.e. local policies & national initiatives - and other key contextual details) "The initiative was conceived in early 1998 by the health subgroup of Wester Hailes Urban Regeneration Partnership (WHURP) who approached Lothian Health, Health Promotion Department for help in tackling the high prevalence of smoking in their area." (p.8 para.1) Also was in context of The White Paper *Smoking Kills (*Secretary of State for Health 1998) including three new targets: reducing smoking among children from 13% to 10% by 2005 and to 9% or less by 2010; reducing smoking in all social classes so that the overall rate falls from 28% to 26% by 2005 and to 24% or less by 2010; and to reduce smoking among pregnant women from 23% to 18% by 2005 and to 15% by 2010. Also growth of comprehensive NHS Smoking Cessation Service In November 2002 new legislation (the Tobacco Advertising and Promotion Act 2002) introduced a ban on press, billboard and most internet advertising of tobacco products and the promotion of smoking through free distribution of tobacco products, coupons and mailshots.	See table 1 and text for detail. Although Table 1 is based on target pop – demographics for randomly sampled pops, and respondents not given **Source of funding** Lothian Health Board Department of Health **'Lessons' for the evaluation of obesity prevention programmes** See below **Barriers and facilitators** (extracted from the text in full) **Leadership**: Sustaining coordination and developing complementary activity across all the settings (community, primary care, schools, workplaces). "Individual workers were **unable to cross the boundaries** of the different settings and this limited the potential for complementary action. The project **lacked a strategic management** that maintained and communicated the 'whole' vision of the project, **particularly at critical points of change** in the project." "**National and regional tobacco policies** created new procedures for smoking cessation services and training and **overrode existing locally developed community processes**, based on the local context. This led to a **demoralisation of the local effort**. ***Recommended improvements to practice*** • The development of a consistent	training days were held for local staff and community workers who were not employed by the NHS were encouraged to attend." (p.11) **Local creativity** **"**Despite the co-ordinator's hands-on role, ***many innovative ideas were not progressed.*** This was particularly true of activities aimed at influencing local policy and the environment planned under objectives four and five." (p.10) "to identify the 'underlying issues' why young people smoke and to develop activities to address these with a young people's remit and the local secondary school… Community organisations were invited to submit proposals to undertake work which progressed programme objectives. Seven small grants were awarded to four organisations." (p.12) **Relationships** **"**the initiative aimed to establish a bridge between them" [the four health promotion setting] "and thereby create a health promoting environment across the wider community" (p.8) (see fig.1 – structure of the intervention) **Community engagement** The community setting was conceived as the 'lynchpin' that would link the work taking place in all settings….to achieve maximum and ongoing community involvement at all levels and through the set up of appropriate structures to create effective channels of communication between all four settings." **BUT:** "As a result of limited resources the 'community' subgroup was not formed and plans for activity in this setting were put on hold until the project co-ordinator came into post." (p.10)

	involvement of senior management from of all the partnership organisations. • Cognisance of the impact of wider regional smoking policies and their potential to undermine developing local policies and process. A synthesis between regional and local policy implementation needs to be developed. • The adoption of 'vision' carriers across the life of complex projects. • Systematic planning and activity needs to be developed across the health promoting settings. Practice would be improved by approaches that improved the links between the different settings. **Findings of a qualitative process evaluation** of the programme was summarised under the following themes (including in some cases recommendations for practice) **Communication** **Programme Theory/Aim** **Flexibility** **Project stages** **Continuity** **Power** **Capacity (personnel)** **Priorities** **Research**	**Communication** "Additionally, the channels of communication forged between community organisations during the planning and implementation of the initiative continue to remain open and the WHHA is taking forward new pieces of partnership work outside the confines of the original project. In particular, there is considerable enthusiasm for work around smoking cessation with young people and work with primary schools is being negotiated. **Embeddedness** The initiative was based on community development principles and practice, in addition to health education theories and methods. Although focusing on four main health promotion 'settings' – community, primary care, young people (including school) and workplace – the initiative aimed to establish a bridge between them and thereby create a health promoting environment across the wider community. (p.8) **Robustness & sustainability** **"**It was contended that the 'normative shift' towards less permissive and tolerant community valuation of smoking would contribute significantly towards actual behaviour change in the medium to long term." (p.3) "Activity in this setting was advanced through collaboration with local organizations with a young people's remit and the local secondary school. Community organisations were invited to submit proposals to undertake work which progressed programme objectives. Seven small grants were awarded to four organisations." (p.12) "***A final aim of the Breathing Space initiative was to ensure that sustainable systems and resources developed by the programme would continue after the end of external funding*** (March 2002). In order to facilitate

		continuation of programme activities and their integration into existing community structures the programme co-ordinator's post was moved to the WHHA and extended for six months (to September 2002). **Facilitative leadership** n/a

Programme delivery – give details, including relevant diagrams and tables

A comprehensive 'mapping' audit was carried out over 6 months between 1998 and 1999 to ascertain community needs and "identify potential participants" (p.9)

"The findings of the mapping were used to inform a 'brainstorming exercise' with the aim of developing a draft action plan outlining preliminary objectives for each setting. This process was undertaken by a few representatives from community organisations and intervention team members. Key individuals were then invited to join subgroups, whose first task was to re-shape the draft action plan. In the event, subgroups were operationalised in only two of the four project settings (young people's and primary care). Implementation of project activities was scheduled to begin during early summer 1999. However, several unforeseen difficulties, including a number of organizational and structural changes within each partner organisation, the need to secure additional funds to employ a full-time project co-ordinator and prolonged baseline evaluation survey fieldwork effectively delayed" (p.9)

The four settings were:

Community
The community setting was conceived as the 'lynchpin' that would link the work taking place in all settings. **However,** "as a result of limited resources the 'community' subgroup was not formed and plans for activity in this setting were put on hold until the project co-ordinator came into post." (p.10)

Primary care
"An active subgroup comprising intervention team members, primary care staff (practice nurses, midwives and one GP) representing all three health centres in the
area, locality pharmacists and a dental representative."

Young people
Activity in this setting was advanced through collaboration with local organisations with a young people's remit and the local secondary school.

Workplace
"A formal 'workplace' subgroup was never established. This led ultimately to the approach being shaped by the wider agenda of workplace health promotion at Lothian Health Board. Objective one was pursued by workplace team members who also served on the main intervention team. Small and medium enterprises (SMEs) were offered a health and safety audit including advice on smoking issues. As well as being in keeping with the wider remit of the workplace health promotion team, it was anticipated that this broad approach would be more likely to encourage participation than a narrow focus on smoking. Although a few companies did accept this offer, the overall response was poor. The staff involved felt that the profile of companies in Wester Hailes did not suit the health and safety intervention and the work was re-located to other areas in the City of Edinburgh."

A summary of programme activities is below.

Summary of intervention activity

Effectiveness of Whole System Approaches

Setting	Programme activities
Community	Provision of smoking cessation support and holistic healthcare as an alternative to practice based support Development and delivery of training programme for community workers in smoking cessation support Distribution of information regarding support available to those who want to quit Profile raising activities: community events, posters, local newspaper (adverts/competitions), post-card drop to every household
Primary care	Operational and strategic input into local smoking cessation planning Training of health professionals in brief and in-depth intervention methods including motivational interviewing Support of smoking cessation counselling services set up through LHCC Provision of NRT through a community venue (WHHA)
Young people	Production of a sustainable education pack suitable for use as a teaching aid in secondary schools Leaflet design project and competition involving first year pupils in local secondary school Clear signage about no smoking policy adopted in local secondary school Funded community grant projects: posters, video, web-site design, alternatives to smoking/activity groups Development and implementation of a protocol for the provision of smoking cessation support for those aged under 16 years (WHHA)
Workplace	Offer of health audit/support to SMEs

Intervention details:

Baseline survey
Baseline survey carried out from April to August 1999 in Wester Hailes (intervention area) and 3 other peripheral low-income housing estates in Edinburgh (North Edinburgh, South Edinburgh and Craigmillar – see table 1 below for population, ethnicity and deprivation scores). In these areas, no similar intervention was planned or in progress. Although it had been intended to have a sample size of 1000 in each area in each sample wave, **a total of 2678 interviews** (2550 with adults, 128 with young people) were conducted at baseline, with a 59% response rate based on randomly sampled eligible population (using Postcode Address File) (see Table 2 below for survey outcomes). Interviews were conducted 'in house' by local residents trained as survey interviewers using two surveys, one for adults and one for children over 12 and a Kish grid was used to randomly select one adult to interview in houses with more than one adult resident. Problems encountered "in particular the large number of ineligible addresses, a high refusal rate, and high interviewer turnover, account for the shortfall between the intended and the actual sample sizes." (p.16)

Table 2

	Wester Hailes		Craigmillar		North Edinburgh		South Edinburgh		All areas	
	Wave 1	Wave 2	Wave 1	Wave 2	Wave 1	Wave 2	Wave 1	Wave 2	Wave 1	Wave 2
Completed interviews (N)	880	823	640	359	522	457	636	438	2678	2077
Response rate (%)	59.5	64.7	62.1	79.8	56.7	82.0	58.0	78.2	59.1	73.2
% interviews	41.3	37.7	41.1	42.3	38.8	53.8	42.6	51.5	41.0	43.9
% refusals	28.1	20.6	25.1	10.7	29.7	11.8	30.9	14.4	28.3	16.1
% ineligible	15.6	4.5	21.9	23.7	14.5	9.4	7.3	5.8	14.9	9.1
% no contact	15.0	37.2	11.9	23.3	17.0	25.1	19.3	28.4	15.7	30.9

Follow-up survey
A follow-up survey was carried out approx. 2 ½ years later between October 2001 and February 2002 with subjects drawn randomly at each wave (i.e. this was

not a 'panel' survey). This was carried out by an external contractor through competitive tendering due to the problems encountered in the baseline survey. The only difference reported between methodologies is that children were not sampled (adults were defined as aged 18+ years or 16-17 yrs and had left school). This was considered not cost effective due to a small sample size at baseline. **A total of 2077 interviews** was completed at follow-up, representing a response rate of over 73%. The main problem encountered at follow up was a high non-contact rate (see table 2 below).

Differences between surveys

"It should be noted that, although there were apparent differences between surveys in the proportions of households where interviews were not obtained due to refusal, ineligibility or non-contact, the difference in the overall interview rate (i.e. the number of achieved interviews divided by the total sample, expressed as a percentage) is much less marked (41 percent at baseline, 44 percent at follow-up)." (p.17)

Power

"The achieved sample sizes give high statistical power (α=0.05, β=0.80) to detect a difference between the intervention area and the combined control areas of about +/- 6.5% on an outcome variable with a prevalence of 40%". (p.17)

Evaluation was based on change over time, and compared with the 3 control communities.

Table 3

Variable name	Definition	Response categories	Whole or part sample?
Stage of change: self	Readiness to change own smoking behaviour	Pre-contemplators *versus* contemplation plus* (contemplators + preparing to take action + action)	Current and ex-smokers only
Stage of change: community	Perceived readiness of community to tackle smoking	At pre-contemplation stage *versus* contemplation plus* (contemplation + preparation to take action + action)	All
Smoking allowed in home	Rules about where and when smoking is allowed in the respondent's home	Never allowed anywhere* *versus* allowed anywhere/any time or not everywhere/at all times	All
Smoking as a local problem	Whether smoking is perceived to be a problem in the local area	Yes (very/fairly serious)* *versus* no (not very/not at all serious)	All
Ignoring local smoking restrictions	How often local smoking restrictions are ignored	Very/fairly often* *versus* sometimes + hardly ever + never	All
Quit attempt	Trying to quit smoking completely and staying off cigarettes for at least 24 hours	Yes* *versus* no	Smokers in past year (including current smokers)

Impact analysis
To assess awareness and reach of the intervention, as well as the strength of impact (the "dose") through self-report and attendance rates.

Outcome analysis
To assess the net 'effect' of the programme. The outcome analysis aimed to test the null hypothesis that there was no difference between the intervention area and the control areas in the amount of change in predefined measures of effect. A summary is in Table 3 below.

"The main analyses of effect compared the change in the proportion showing a particular characteristic between wave 1 and wave 2 in the intervention area with the change over the same period in the control areas. First, contingency tables were produced and the proportionate change in each variable across time and by survey area was plotted as a graph. Chi-square analyses were also undertaken to assess the statistical significance of change (over time) for each dependent variable and to compare the extent of change between intervention and control areas. Next, logistic regression was used to determine the impact of potentially confounding variables on the outcomes of interest. Logistic regression enabled the statistical significance of the intervention effect to be determined while simultaneously controlling for differences in the characteristics of intervention and control samples which may influence the outcome of the intervention." (p.18)

"The significance level was set at $p<.05$ (two-tailed) throughout. All analyses were conducted using SPSS version 10."

Process evaluation
"key themes were identified and explored in order to ascertain which aspects of the intervention enhanced or hindered the successful design, development, implementation and receipt of community based programmes." (p.19)

The process evaluation used a range of qualitative methods, including:
observation (at programme meetings and key events);
in-depth interviews - 59 semi-structured in-depth interviews were conducted with programme managers and intervention and sub-group members at key points across the course of the project (audit and planning, project design and development, and implementation stages).
focus groups (6 focus groups were conducted with programme implementers and young people); The group discussions captured the views and experiences of those who, although not members of the formal structures associated with the project (e.g. intervention team or subgroup members), had direct involvement with the project, as well as those who did not participate (despite having the opportunity to do so).; and
examination of official documents/minutes (reports, budget statements, policy documents and key correspondence).
In addition, **local newspapers and community publications** were monitored and a chronological log of project related activities was kept.

See Table 4 below for details.

Table 4 Interviews conducted as part of the process evaluation

Staff category	Organisation/ Setting	Phase of initiative			Total
		Mapping	Planning	Implementation	
Project co-ordinator(s)		-	-	8	8
Intervention team	Lothian Health Board	5	5	10	20
	WHURP	1	1	4	6
	WHHA	1	1	2	4
Subgroup members	Community*	-	-	2	2
	Primary Care	-	-	5	5
	Young People	-	-	6	6
	Workplace	-	-	-	-
Management	Lothian Health Board	1	1	3	5
	WHURP	-	-	1	1
	WHHA	-	-	2	2
Totals		**8**	**8**	**43**	**59**

** Although this subgroup was not formally initiated, two employees of the WHHA, whose remit was to implement activities arising from objectives in the community setting, were interviewed.*

Impact evaluation

"Prior to the start of the programme (wave 1) respondents in Wester Hailes demonstrated somewhat more awareness of smoking-related health promotion campaigns than respondents in the control areas, although overall awareness levels were low" [table 5 below]. "By wave 2 there had been only a modest increase in awareness of smoking-related campaigns in all areas, with no difference in the amount of change between Wester Hailes and the control areas. (Over the same period awareness of health promotion campaigns relating to other topics decreased in all areas.) Table [5] examines awareness of courses, support groups or other resources to help people in the local area stop smoking. At both waves respondents in Wester Hailes were more likely to show such awareness than respondents in control areas. There was very little change, however, between wave 1 and wave 2 in any of the areas (apart from in Craigmillar, one of the control areas)." (p.23)

"Prompted awareness was measured among Wester Hailes respondents of posters, leaflets and booklets associated with the programme" See table 6 below.

Table 5 Awareness of local health promotion campaigns, by area and wave

Area	Type of campaign	Wave 1 % of all respondents	Wave 2 % of all respondents
Craigmillar	*Breathing Space*/ other smoking	2.1	2.5
	Other topic	15.1	12.0
North Edinburgh	*Breathing Space*/ other smoking	0.8	1.5
	Other topic	16.4	9.0
South Edinburgh	*Breathing Space*/ other smoking	1.6	2.1
	Other topic	9.4	5.9
Wester Hailes	*Breathing Space*/ other smoking	5.1	5.5
	Other topic	16.6	11.2

Table 6 Prompted awareness of posters/leaflets (Wester Hailes)

Type of material	Prompted awareness % of all respondents
Football poster/postcard	28.7
Karate poster	15.9
Either/both *butterfly logo* leaflets advertising smoking cessation services	8.5
Breathe Easy booklet used as part of the health agency's local cessation support	7.5

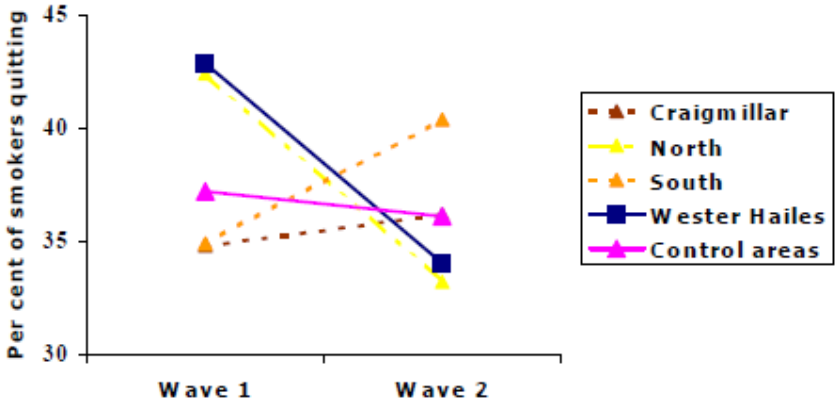
"Overall these findings (and other related findings not presented here) provide scant evidence of a major impact of the *Breathing Space* programme in the intervention area. Prior to the start of *Breathing Space* Wester Hailes appears to have been at a higher level of awareness and action relating to smoking cessation than the control areas, thus supporting the view held by professionals in the late 1990s that this area was ready for a more concentrated anti-smoking health promotion campaign. Two years of *Breathing Space*, however, has not increased that advantage." (p.23)

Outcome evaluation

"logistic regression analyses were conducted"…separately for six outcome variables. The data are unadjusted for potential confounders. Tables 7 to 12 below summarises the findings from the logistic regression analyses. Model 1 includes only area, wave and the interaction term 'area*wave', while model 2 also includes socio-demographic variables.

"With respect to the readiness of respondent smokers to change their smoking behaviour (table 7), the perceived readiness of the community to tackle smoking behaviour (table 8), attitudes to smoking in the house (table 9), the perception of smoking as a serious local problem (table 10) and quit attempts (table 12), there is no evidence to suggest an intervention effect.

"The situation with regard to quit attempts is more complex, with inconsistent trends between control areas, and a contrary trend (*reduction* in quit attempts) in the intervention area which appears to be more pronounced than the reduction across the control areas taken together. The formal test for an interaction effect (which, in this case, would be the reverse of that originally hypothesised) does not, however, reach statistical significance." "The only significant interaction effect, and one which is in the hypothesised direction, is found in the analysis of beliefs concerning the ignoring of local smoking restrictions (table 12). There was a trend towards a higher prevalence of perceived rule breaking in all control areas, whereas there was an increase in the prevalence of perceived adherence to smoking rules in Wester Hailes. It should be pointed out, however, that the percentage of respondents in Wester Hailes who believed, *at the time of the follow-up survey*, that local people were ignoring smoking restrictions (63.6%) was actually *higher* than the percentage of respondents in the control areas who held the same beliefs *at baseline* (61.8%). **"Overall, we conclude that there is no compelling evidence to refute the null hypothesis of no difference between intervention and control areas in the amount of cultural change towards smoking over the course of the intervention. In simpler words, *Breathing Space* does not appear to have achieved its intended outcome." (**p.26)	
Outcomes	
Smoking	**Prevalence of smoking** (smoking rates, whole population or for subgroups):
	Quit rates (with duration of follow-up, and whether self-reported or confirmed by bio-chemical measures e.g. CO^2, blood, urine) **Quit attempt in past year, by area and wave**



Quit attempt in past year: logistic regression

	Model 1 / Model 2

	Model 1 B (se)	Model 1 p value	Model 1 OR (95% CI)	Model 2 B (se)	Model 2 p value	Model 2 OR (95% CI)
Area		***.133***			***.134***	
Craigmillar	-.48 (.40)	.226	.62 (.28-1.35)	-.37 (.41)	.370	.69 (.31-1.55)
North Edinburgh	.15 (.40)	.709	1.16 (.53-2.53)	.28 (.41)	.492	1.32 (.60-2.94)
South Edinburgh	-.78 (.42)	.060	.46 (.20-1.03)	-.76 (.42)	.074	.47 (.20-1.08)
Wave	***-.18 (.10)***	***.078***	***.84 (.68-1.02)***	***-.18 (.11)***	***.086***	***.84 (.68-1.03)***
Area*Wave		***.167***			***.167***	
Craigmillar* Wave	.28 (.27)	.291	1.33 (.79-2.24)	.27 (.27)	.330	1.30 (.76-2.22)
North Edinburgh* Wave	-.14 (.26)	.589	.87 (.53-1.44)	-.20 (.26)	.453	.82 (.49-1.37)
South Edinburgh* Wave	.48 (.28)	.089	1.61 (.93-2.80)	.45 (.29)	.118	1.57 (.89-2.76)

Notes

se: standard error
OR: odds ratio
95% CI: 95% confidence interval
*Model 1: area, wave, area*wave*
Model 2: model 1 plus socio-demographic variables

Both smoking and obesity	**Quantitative/qualitative changes in measures of attitudes and awareness** **See above**

Table 7 Stage of change (self): contemplation plus: logistic regression analysis

	Model 1			Model 2		
	B (se)	P value	OR (95% CI)	B (se)	p value	OR (95% CI)
Area		***.398***			***.692***	
Craigmillar	-.42 (.36)	.248	.66 (.33-1.34)	-.32 (.37)	.392	.73 (.35-1.51)
North Edinburgh	.27 (.35)	.447	1.30 (.66-2.58)	.17 (.36)	.640	1.18 (.58-2.40)
South Edinburgh	.03 (.35)	.943	1.03 (.52-2.04)	.02 (.36)	.955	1.02 (.50-2.08)
Wave	***.16 (.09)***	***.067***	***1.18 (.99-1.40)***	***.14 (.09)***	***.136***	***1.15 (.96-1.37)***
Area*Wave		***.407***			***.738***	
Craigmillar* Wave	.05 (.24)	.850	1.05 (.66-1.67)	.00 (.25)	.989	1.00 (.62-1.62)
North Edinburgh* Wave	-.25 (.22)	.251	.78 (.50-1.20)	-.22 (.23)	.337	.80 (.51-1.26)
South Edinburgh* Wave	.17 (.24)	.476	1.18 (.75-1.88)	.04 (.24)	.881	1.04 (.64-1.67)

Notes

se: standard error
OR: odds ratio
95% CI: 95% confidence interval
*Model 1: area, wave, area*wave*
Model 2: model 1 plus socio-demographic variables

Table 8 Stage of change (community): contemplation plus: logistic regression analysis

	Model 1			Model 2		
	B (se)	p value	OR (95% CI)	B (se)	p value	OR (95% CI)
Area		***.103***			***.078***	
Craigmillar	-.76(.33)	.021	.47 (.24-.89)	-.78 (.34)	.020	.46 (.24-.88)
North Edinburgh	-.27 (.32)	.401	.76 (.41-1.43)	-.29 (.33)	.373	.75 (.40-1.42)
South Edinburgh	-.54 (.33)	.102	.59 (.31-1.11)	-.62 (.33)	.062	.54 (.28-1.03)
Wave	***.27 (.08)***	***.001***	***1.31 (1.12-1.53)***	***.26 (.08)***	***.002***	***1.29 (1.10-1.52)***
Area*Wave		***.498***			***.514***	
Craigmillar* Wave	.33 (.22)	.125	1.39 (.91-2.13)	.33 (.22)	.131	1.39 (.91-2.14)
North Edinburgh* Wave	.13 (.20)	.516	1.14 (.77-1.69)	.12 (.20)	.541	1.13 (.76-1.68)
South Edinburgh* Wave	.09 (.21)	.659	1.10 (.72-1.67)	.10 (.22)	.656	1.10 (.72-1.68)

Notes

se: standard error
OR: odds ratio
95% CI: 95% confidence interval
*Model 1: area, wave, area*wave*
Model 2: model 1 plus socio-demographic variables

Table 9 Smoking never allowed in the house: logistic regression analysis

	Model 1			Model 2		
	B (se)	p value	OR (95% CI)	B (se)	p value	OR (95% CI)
Area		***.879***			***.812***	
Craigmillar	.29 (.39)	.451	1.14 (.63-2.86)	.38 (.40)	.340	1.47 (.67-3.23)
North Edinburgh	.23 (.41)	.575	1.26 (.56-2.83)	.12 (.42)	.775	1.13 (.49-2.59)
South Edinburgh	.21 (.36)	.566	1.23 (.61-2.51)	.10 (.38)	.801	1.10 (.53-2.29)
Wave	***.27 (.09)***	***.003***	***1.31 (1.09-1.56)***	***.21 (.09)***	***.024***	***1.24 (1.03-1.49)***
Area*Wave		***.346***			***.695***	
Craigmillar* Wave	-.03 (.25)	.917	.97 (.60-1.59)	-.06 (.26)	.807	.94 (.57-1.56)
North Edinburgh* Wave	-.17 (.26)	.522	.85 (.51-1.41)	-.13 (.27)	.616	.88 (.52-1.48)
South Edinburgh* Wave	.28 (.23)	.220	1.32 (.85-2.06)	.17 (.24)	.477	1.18 (.75-1.87)

Notes

se: standard error
OR: odds ratio
95% CI: 95% confidence interval
*Model 1: area, wave, area*wave*
Model 2: model 1 plus socio-demographic variables

Table 10 Smoking perceived as a serious local problem: logistic regression analysis

	Model 1			Model 2		
	B (se)	p value	OR (95% CI)	B (se)	p value	OR (95% CI)
Area		***.225***			***.326***	
Craigmillar	-.47 (.33)	.157	.63 (.33-1.20)	-.34 (.34)	.314	.71 (.37-1.38)
North Edinburgh	-.55 (.33)	.098	.58 (.30-1.11)	-.43 (.34)	.201	.65 (.33-1.26)
South Edinburgh	-.52 (.31)	.089	.60 (.33-1.08)	-.54 (.31)	.084	.58 (.32-1.07)
Wave	***.51 (.08)***	***.000***	***1.67 (1.42-1.97)***	***.52 (.09)***	***.000***	***1.68 (1.42-1.98)***
Area*Wave		***.082***			***.204***	
Craigmillar* Wave	.35 (.23)	.134	1.42 (.90-2.23)	.30 (.24)	.203	1.35 (.85-2.14)
North Edinburgh* Wave	.49 (.22)	.029	1.63 (1.05-2.53)	.44 (.23)	.055	1.55 (.99-2.41)
South Edinburgh* Wave	.01 (.20)	.977	1.01 (.68-1.50)	.06 (.21)	.772	1.06 (.71-1.59)

Notes

se: standard error
OR: odds ratio
95% CI: 95% confidence interval
*Model 1: area, wave, area*wave*
Model 2: model 1 plus socio-demographic variables

Table 11 Local smoking restrictions often ignored: logistic regression analysis

	Model 1			Model 2		
	B (se)	p value	OR (95% CI)	B (se)	p value	OR (95% CI)
Area		***.004***			***.015***	
Craigmillar	.70 (.32)	.030	2.02 (1.07-3.80)	.53 (.33)	.111	1.70 (.89-3.25)
North Edinburgh	.90 (.30)	.003	2.46 (1.36-4.46)	.80 (.31)	.010	2.22 (1.21-4.08)
South Edinburgh	.91 (.30)	.002	2.48 (1.39-4.44)	.86 (.30)	.005	2.35 (1.30-4.27)
Wave	***-.20 (.08)***	***.010***	***.82 (.70-.95)***	***-.23 (.08)***	***.004***	***.80 (.68-.93)***
Area*Wave		***.004***			***.011***	
Craigmillar* Wave	-.73 (.23)	.001	.48 (.31-.75)	-.65 (.23)	.005	.52 (.33-.82)
North Edinburgh* Wave	-.53 (.20)	.007	.59 (.40-.87)	-.50 (.20)	.012	.60 (.41-.90)
South Edinburgh* Wave	-.34 (.20)	.082	.71 (.48-1.04)	-.40 (.20)	.048	.67 (.45-.99)

Notes

se: standard error
OR: odds ratio
95% CI: 95% confidence interval
*Model 1: area, wave, area*wave*
Model 2: model 1 plus socio-demographic variables

Table 12 Quit attempt in past year: logistic regression analysis

	Model 1			Model 2		
	B (se)	p value	OR (95% CI)	B (se)	p value	OR (95% CI)
Area		***.133***			***.134***	
Craigmillar	-.48 (.40)	.226	.62 (.28-1.35)	-.37 (.41)	.370	.69 (.31-1.55)
North Edinburgh	.15 (.40)	.709	1.16 (.53-2.53)	.28 (.41)	.492	1.32 (.60-2.94)
South Edinburgh	-.78 (.42)	.060	.46 (.20-1.03)	-.76 (.42)	.074	.47 (.20-1.08)
Wave	***-.18 (.10)***	***.078***	***.84 (.68-1.02)***	***-.18 (.11)***	***.086***	***.84 (.68-1.03)***
Area*Wave		***.167***			***.167***	
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Notes

se: standard error
OR: odds ratio
95% CI: 95% confidence interval
*Model 1: area, wave, area*wave*
Model 2: model 1 plus socio-demographic variables

Indicators of successful implementation or sustainability (e.g. development of partnerships; local policy development; increased and stable involvement of a range of key individuals and bodies; uptake of interventions by schools, workplaces, catering outlets; renewed or continuous funding from key agencies. (These indicators may be quantitative or qualitative)):

Process evaluation was carried out on key themes using a range of qualitative methods "including: observation (at programme meetings and key events); in-depth interviews (with programme managers and workers); focus groups (with programme implementers and young

people); and examination of official documents/minutes (reports, budget statements, policy documents and key correspondence). In addition, local newspapers and community publications were monitored and a chronological log of project related activities was kept." (p.19)

59-point interviews were also carried out with programme managers, and sub-group members (?). See table below for details of who was involved:

Table 5.3 Interviews conducted as part of the process evaluation

Staff category	Organisation/ Setting	Phase of initiative			Total
		Mapping	Planning	Implemen-tation	
Project co-ordinator(s)		-	-	8	8
Intervention team	Lothian Health Board	5	5	10	20
	WHURP	1	1	4	6
	WHHA	1	1	2	4
Subgroup members	Community*	-	-	2	2
	Primary Care	-	-	5	5
	Young People	-	-	6	6
	Workplace	-	-	-	-
Management	Lothian Health Board	1	1	3	5
	WHURP	-	-	1	1
	WHHA	-	-	2	2
Totals		**8**	**8**	**43**	**59**

** Although this subgroup was not formally initiated, two employees of the WHHA, whose remit was to implement activities arising from objectives in the community setting, were interviewed.*

	Focus groups were also carried out with key youth workers, young people, practice-based smoking cessation counsellors, and workers from local community organisations.
Notes	

Table 1

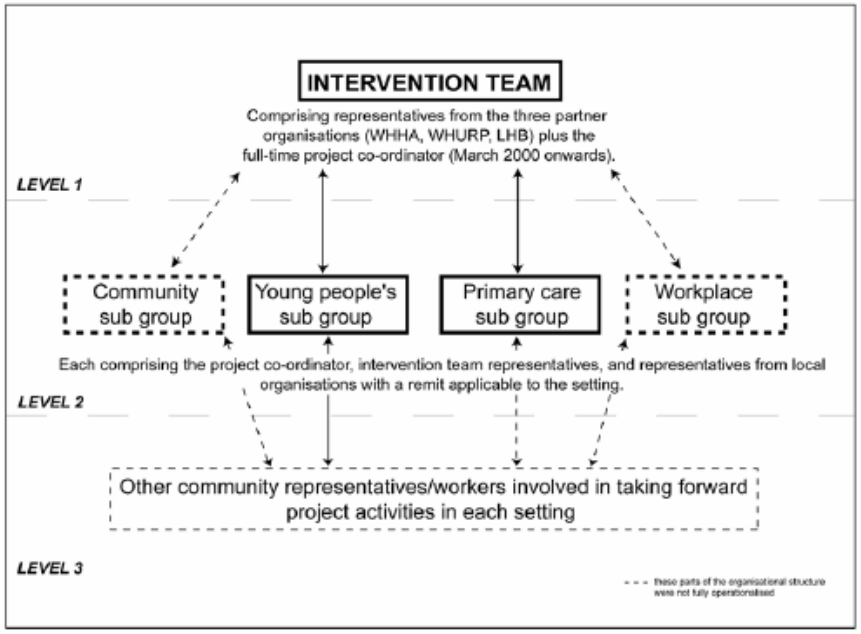
Table A2 Profile of research areas[1]

Areas	Population	Carstairs score	Arbuthnott score	Ethnicity	Standardised illness rate	Standardised mortality rate (<65 years)	Low birth weight	Unemploy-ment benefit claimants	Elderly income support claimants
Wester Hailes	22,884	1.71	1.10	81.70	101.69	101.59	164.38	152.36	99.69
Craigmillar	15,628	5.19	4.97	68.63	145.53	159.09	151.33	144.27	158.79
South Edinburgh	41,551	0.39	-0.07	103.28	99.42	98.83	118.40	88.83	92.23
North Edinburgh	35,018	2.60	1.81	85.90	114.23	127.08	118.04	121.05	112.46

1. See text for description of variables and scoring system.

Fig. 1 – structure of the intervention

Effectiveness of Whole System Approaches



Appendix 8 Sources excluded at full text stage

Obesity prevention

WSA effectiveness review obesity prevention references – excluded at full text	Reason for exclusion
Active partnerships: local democracy in action. 9-9-0099	Not an effectiveness/evaluation study
Partnership: fit for purpose? 9-9-0099	Not an effectiveness/evaluation study
Right fit: putting young people in the driving seat: an evaluation of the GlaxoSmithKline and Barnardo's health partnership with young people. (An independent evaluation of the Right Fit initiative.). 9-9-0099	Does not use comparative study design
The obesity culture: strategies for change: public health and university-community partnerships. 9-9-0099	Not an effectiveness/evaluation study
Call for rethink in obesity fight BBC News 14 December 2007. 2007	Not an effectiveness/evaluation study
Angell H. Community partnership program for overweight children in urban Seattle. Journal of Investigative Medicine 2006; 54(1):5144	Not implemented in/targeted at whole populations or communities
Barnes M, Maclean J, Cousens L. Understanding the structure of community collaboration: the case of one Canadian health promotion network. Health Promotion International 2010; 25(2):238-247	Programme aimed at increasing physical activity only (not diet)
Bobbitt-Cooke M. Energizing community health improvement: the promise of microgrants. Preventing Chronic Disease 2005; 2 Spec no:A16	Not obesity prevention or smoking prevention
Bors P, Dessauer M, Bell R, Wilkerson R, Lee J, Strunk SL. The Active Living by Design national program: community initiatives and lessons learned. American Journal of Preventive Medicine 2009; 37(6 Suppl 2):S313-S321	Not an effectiveness/evaluation study
Campbell P, Conway A. Developing a local public health infrastructure: the Maine Turning Point experience. Journal of Public Health Management & Practice 2005; 11(2):158-164	Not an effectiveness/evaluation study
Charlier N, Glover M, Robertson J. Keeping Kids Smokefree: lessons learned on community participation. Health Education Research 2009; 24:949-956	Not an effectiveness/evaluation study

Chotibang J, Fongkaew W, Mo-suwan L, Meininger JC, Klunklin P. Development of a family and school collaborative (FASC) Program to promote healthy eating and physical activity among school-age children. Thai Journal of Nursing Research 2009; 13(2: 133-46 ,(31 ref):133-146	Not an effectiveness/evaluation study
Cluss PA, Ewing LJ, Long KA, Krieger WG, Lovelace J. Adapting pediatric obesity treatment delivery for low-income families: a public-private partnership. Clinical Pediatrics 2010; 49(2):123-129	Implemented within selected organisation type only (e.g. schools, workplaces, churches)
Corbett KK. Susceptibility of youth to tobacco: a social ecological framework for prevention. Respiration Physiology 2001; 128(1):103-118	Not an effectiveness/evaluation study
Cowart LW, Biro DJ, Wasserman T, Stein RF, Reider LR, Brown B. Designing and pilot-testing a church-based community program to reduce obesity among African Americans. ABNF Journal 2010; 21(1):4-10	Implemented within selected organisation type only (e.g. schools, workplaces, churches)
Economos CD, Curtatone JA. Shaping up Somerville: a community initiative in Massachusetts. Preventive Medicine 2010; 50 Suppl 1:S97-S98	Not an effectiveness/evaluation study
Eisenmann JC, Gentile DG, Welk GJ, Callahan R, Strickland S, Walsh Mea. SWITCH: rationale, design, and implementation of a community, school, and family-based intervention to modify behaviors related to childhood obesity. BMC Public Health 2008; 8:223	Implemented within selected organisation type only (e.g. schools, workplaces, churches)
Evans N. Tackling smoking through partnership lessons learned from the National Alliance Scheme Health Development London. 2001. NHS Health Development Agency	Not implemented in/targeted at whole populations or communities
Fagan HB, King RL, Laurent M, Taylor DS. An obesity prevention program in a Delaware elementary school. Delaware Medical Journal 2010; 82(4):133-136	Implemented within selected organisation type only (e.g. schools, workplaces, churches)
Fairchild RM, Morgan MZ. Delivering multidisciplinary public health in action - the Cardiff food strategy case study. Public Health Nutrition 2007; 10(1):42-48	Not an effectiveness/evaluation study
Foerster SB, Kizer KW, Disogra LK, Bal DG, Krieg BF, Bunch KL. California's "5 a day--for better health!" campaign: an innovative population-based effort to effect large-scale dietary change. American Journal of Preventive Medicine 1995; 11(2):124-131	Not obesity prevention or smoking prevention
Frable PJ, Dart L, Bradley PJ. The Healthy Weigh/El Camino Saludable: a community campus partnership to prevent obesity. Journal of Interprofessional Care 2004; 18(4):447-449	Targetting at risk groups (e.g. those at risk of developing diabetes)
Gentile DA, Welk G, Eisenmann JC, Reimer RA, Walsh DA, Russell DW et al. Evaluation of a multiple ecological level child obesity prevention program: Switch what you do, view, chew. Bmc Medicine 2009; 7:49	Implemented within selected organisation type only (e.g. schools, workplaces, churches)

Gooze RA, Hughes CC, Finkelstein DM, Whitaker RC. Reaching staff, parents, and community partners to prevent childhood obesity in Head Start, 2008. Preventing Chronic Disease 2010; 7(3):A54	Not an effectiveness/evaluation study
Haire-Joshu D. Obesity Prevention Among Overweight Post Partum Teens: Partnerships for Effectiveness, and Dissemination. Annals of Behavioral Medicine 2007; 33:S9	Not obesity prevention or smoking prevention
Harrell TK, King D, Stewart J, Wofford M, Horton N. The Mississippi Child Activity and Nutrition to prevent Diabetes and Obesity (CAN-DO) partnership: Results from the student physical activity and nutrition questionnaire. Obesity Research 2005; 13:A180	Not an effectiveness/evaluation study
Hendy HM. Kids choice program: A school-home partnership for child obesity prevention. Annals of Behavioral Medicine 2008; 35:S27	Not an effectiveness/evaluation study
Hessel AS, Marshall JW, Brown W, Sabina AB, Deforest K. Healthy & Active Communities Initiative: A foundation's response to the obesity epidemic. Preventive Medicine 2010; 50:S93-S94	Not an effectiveness/evaluation study
Hill A, de Zapien JG, Stewart R, Whitmer E, Caruso Y, Dodge L et al. Building a successful community coalition-university partnership at the Arizona-Sonora border. Progress in Community Health Partnerships 2008; 2(3):245-250	Not an effectiveness/evaluation study
Huang TT, Yaroch AL. A public-private partnership model for obesity prevention. Preventing Chronic Disease 2009; 6(3):A110	Not an effectiveness/evaluation study
Levine DM, Becker DM, Bone LR, Stillman FA, Tuggle MB, Prentice M et al. A partnership with minority populations: a community model of effectiveness research. Ethnicity & Disease 1992; 2(3):296-305	Not an effectiveness/evaluation study
Maynard MJ, Baker G, Rawlins E, Anderson A, Harding S. Developing obesity prevention interventions among minority ethnic children in schools and places of worship: The DEAL (DiEt and Active Living) study. BMC Public Health 2009; 9	Not an effectiveness/evaluation study
McGinnis PB, Hunsberger M, Davis M, Smith J, Beamer BA, Hastings DD. Transitioning from CHIP to CHIRP: blending community health development with community-based participatory research. Family & Community Health 2010; 33(3):228-237	Not an effectiveness/evaluation study
Ockene JK, Fielding JE, Briss PA. Integrating evidence-based clinical and community strategies to improve health. American Journal of Preventive Medicine 2007; 32(3):244-252	Not obesity prevention or smoking prevention
Paine-Andrews A, Harris KJ, Fawcett SB, Richter KP, Lewis RK, Francisco VT et al. Evaluating a statewide partnership for reducing risks for chronic diseases. Journal of Community Health 1997; 22(5):343-359	Not an effectiveness/evaluation study

Peralta LR, Jones RA, Okely AD. Promoting healthy lifestyles among adolescent boys: the Fitness Improvement and Lifestyle Awareness Program RCT. Preventive Medicine 2009; 48(6):537-542	Not obesity prevention or smoking prevention
Pomietto M, Docter AD, Van BN, Alfonsi L, Krieger J, Liu LL. Small steps to health: building sustainable partnerships in pediatric obesity care. [Review] [21 refs]. Pediatrics 2009; 123 Suppl 5:S308-S316	Not an effectiveness/evaluation study
Pouliou T, Elliott SJ. Individual and socio-environmental determinants of overweight and obesity in Urban Canada. Health & Place 2010; 16(2):389-398	Not implemented in/targeted at whole populations or communities
Poulsen AA, Bush R, Tirendi J, Ziviani J, Abbott R, Macdonald D et al. Research around practice partnerships: an example of building partnerships to address overweight and obesity in children. Australian Journal of Primary Health - Interchange 2009; 15(4):285-293	Not an effectiveness/evaluation study
Richter DL, Gimarc JD, Preston G, Williams A. Implementing community-campus partnerships in South Carolina: collaborative efforts to improve public health. Public Health Reports 2003; 118(4):387-392	Not an effectiveness/evaluation study
Robertson W, Friede T, Blissett J, Rudolf MCJ, Wallis M, Stewart-Brown S. Pilot of "Families for Health" community-based family intervention for obesity. Archives of Disease in Childhood 2008; 93(11):921-928	Not obesity prevention or smoking prevention
Rudd RE, Goldberg J, Dietz W. A five-stage model for sustaining a community campaign. Journal of Health Communication 1999; 4(1):37-48	Not an effectiveness/evaluation study
Simmill-Binning C, Paylor I. Active Living For All: an evaluation. International Journal of Health Promotion & Education 2007; 45(4: 114-20 ,(7 ref):114-120	Programme aimed at increasing physical activity only (not diet)
Sund ER, Jones A, Midthjell K. Individual, family, and area predictors of BMI and BMI change in an adult Norwegian population: findings from the HUNT study. Social Science & Medicine 2010; 70(8):1194-1202	Not implemented in/targeted at whole populations or communities
Thompson LS, Grey M. Fighting childhood obesity with university-community partnerships. Nursing Leadership Forum 2002; 7(1):20-24	Not an effectiveness/evaluation study
Trauth JM, Jernigan J, Myers SM, Potter M, Fedor K, Procopio J et al. Developing an academic-community partnership in the context of Pennsylvania's State Health Improvement Plan. Public Health Reports 2003; 118(2):169-174	Single type of person delivering the intervention (e.g. nurse practitioners)
Vitale E. A school nursing approach to childhood obesity: an early chronic inflammatory disease. Immunopharmacology & Immunotoxicology 2010; 32(1):5-16	Single type of person delivering the intervention (e.g. nurse practitioners)

Yee SL, Williams-Piehota P, Sorensen A, Roussel A, Hersey J, Hamre R. The Nutrition and Physical Activity Program to Prevent Obesity and Other Chronic Diseases: monitoring progress in funded states.[Erratum appears in Prev Chronic Dis. 2006 Apr;3(2):A70]. Preventing Chronic Disease 2006; 3(1):A23	Not an effectiveness/evaluation study

Effectiveness of Whole System Approaches

Smoking prevention/cessation

WSA effectiveness review smoking prevention/cessation references – excluded at full text	Reason for exclusion
Has the California tobacco control program reduced smoking? 1998	Insufficient data
Abernathy TJ. Compliance for Kids: a community-based tobacco prevention project. Canadian Journal of Public Health 1994; Revue Canadienne de Sante Publique. 85(2):82-84	Not implemented in/targeted at whole populations or communities
Adkins SW, Davidson PJ, Matthew L, Navie SC, Wills DA, Taylor IN et al. Smoke and germination of arable and rangeland weeds. 2000	Not an effectiveness/evaluation study
Alesci NL, Forster JL, Erickson DJ. Did youth smoking behaviors change before and after the shutdown of Minnesota Youth Tobacco Prevention Initiative? Nicotine & Tobacco Research 2009; 11(10):1196-1204	Insufficient data
Barnes R. The Oklahoma Alliance on Health or Tobacco. A partnership for a healthier Oklahoma. Journal - Oklahoma State Medical Association 2002; 95(3):126	Not an effectiveness/evaluation study
Bryar RM, Candy B, Esmond G, Griffiths CJ, Ramsay J, Taylor SJC et al. Effectiveness of innovations in nurse led chronic disease management for patients with chronic obstructive pulmonary disease: systematic review of evidence. British Medical Journal 2009;485-488	Not an effectiveness/evaluation study
Burton D, Fahs M, Chang JL, Qu J, Chan F, Yen F et al. Community-based participatory research on smoking cessation among Chinese Americans in Flushing, Queens, New York City. Journal of Interprofessional Care 2004; 18(4):443-445	Not an effectiveness/evaluation study
Centers for Disease Control and Prevention (CDC). Decline in cigarette consumption following implementation of a comprehensive tobacco prevention and education program--Oregon, 1996-1998. MMWR - Morbidity & Mortality Weekly Report 1999; 48(7):140-143	Not an effectiveness/evaluation study
Charlier N, Glover M, Robertson J. Keeping Kids Smokefree: lessons learned on community participation. Health Education Research 2009; 24(6):949-956	Implemented within selected organisation type only (e.g. schools, workplaces, churches)
Cramer ME, Mueller KJ, Harrop D. Comprehensive evaluation of a community coalition: a case study of environmental tobacco smoke reduction. Public Health Nursing 2003; 20(6):464-477	Does not use comparative study design
Croghan IT, O'Hara MR, Schroeder DR, Patten CA, Croghan GA, Hays JT et al. A community-wide smoking cessation program: Quit and Win 1998 in Olmsted county. Preventive Medicine 2001; 33(4):229-238	Implemented within selected organisation type only (e.g. schools, workplaces, churches)

WSA effectiveness review smoking prevention/cessation references – excluded at full text	Reason for exclusion
Darity WA, Tuthill RW, Winder AE, Cernada GP, Chen TTL, Buchanan DR et al. A multi-city community based smoking research intervention project in the African-American population. International Quarterly of Community Health Education 1997; 17(2):117-130	Not implemented in/targeted at whole populations or communities
David SP, Smith M, Lee CS, Sullivan G. Successful Latino community partnership program for smoking cessation. American Journal of Public Health 2007; 97(8):1348-1349	Not implemented in/targeted at whole populations or communities
Dino GA, Horn KA, Goldcamp J, Kemp-Rye L, Westrate S, Monaco K. Teen smoking cessation: making it work through school and community partnerships. Journal of Public Health Management & Practice 2001; 7(2):71-80	Not an effectiveness/evaluation study
Elder JP, Edwards CC, Conway TL, Kenney E, Johnson CA, Bennett ED. Independent evaluation of the California Tobacco Education Program. Public Health Reports 1996; 111(4):353-358	Not an effectiveness/evaluation study
Florin P, Celebucki C, Stevenson J, Mena J, Salago D, White A et al. Cultivating systemic capacity: the Rhode Island tobacco control enhancement project. American Journal of Community Psychology 2006; 38(3-4):213-220	Not an effectiveness/evaluation study
Gold JA, Frisch J, Pepple S, Spurlin D. A systems approach works best for smoking cessation. WMJ 2000; 99(8):59	Not an effectiveness/evaluation study
Gomez-Zamudio M, Renaud L, Labrie L, Masse R, Pineau G, Gagnon L. Role of pharmacological aids and social supports in smoking cessation associated with Quebec's 2000 Quit and Win campaign. Preventive Medicine 2004; 38(5):662-667	Implemented within selected organisation type only (e.g. schools, workplaces, churches)
Groth-Marnat G, Leslie S, Renneker M. Tobacco control in a traditional Fijian village: indigenous methods of smoking cessation and relapse prevention. Social Science & Medicine 1996; 43(4):473-477	Non-OECD country
Hahn EJ, Rayens MK, Warnick TA, Chirila C, Rasnake RT, Paul TP et al. A controlled trial of a Quit and Win contest. American Journal of Health Promotion 2005; 20(2):117-126	Not implemented in/targeted at whole populations or communities
Jason LA, Pokorny SB, Ji P, Kunz C. Developing community - School-university partnerships to control youth access to tobacco. Journal of Educational and Psychological Consultation 2005; 16(3):201-222	Not an effectiveness/evaluation study

WSA effectiveness review smoking prevention/cessation references – excluded at full text	Reason for exclusion
Korhonen T, Urjanheimo EL, Mannonen P, Korhonen HJ, Uutela A, Puska P. Quit and Win campaigns as a long-term anti-smoking intervention in North Karelia and other parts of Finland. Tobacco Control 1999; 8(2):175-181	Implemented within selected organisation type only (e.g. schools, workplaces, churches)
Lan Y, Ma GX, Shive SE, Su X, Tan Y, Toubbeh JI. Acculturation and smoking behavior in Asian-American populations. Health Education Research 2007;615-625	Not an effectiveness/evaluation study
Leinweber CE, Macdonald JM, Campbell HS. Community smoking cessation contests: an effective public health strategy. Canadian Journal of Public Health 1994; Revue Canadienne de Sante Publique. 85(2):95-98	Not implemented in/targeted at whole populations or communities
Leonard B, Byers T, Campbell C, Wiese W. HealthNet New Mexico: a community-based statewide health promotion program. American Journal of Health Promotion 1991; 5(5):368-377	Not implemented in/targeted at whole populations or communities
Marin BV, Perez-Stable EJ, Marin G, Hauck WW. Effects of a community intervention to change smoking behavior among Hispanics. American Journal of Preventive Medicine 1994; 10(6):340-347	Not implemented in/targeted at whole populations or communities
Matthews AK, Sanchez-Johnsen L, King A. Development of a Culturally Targeted Smoking Cessation Intervention for African American Smokers. Journal of Community Health 2009; 34(6):480-492	Not an effectiveness/evaluation study
McAlister AL, Gumina T, Urjanheimo EL, Laatikainen T, Uhanov M, Oganov R et al. Promoting smoking cessation in Russian Karelia: a 1-year community-based program with quasi-experimental evaluation. Health Promotion International 2000; 15(2):109-112	Not implemented in/targeted at whole populations or communities
Minkler M, Vasquez VB, Warner JR, Steussey H, Facente S. Sowing the seeds for sustainable change: a community-based participatory research partnership for health promotion in Indiana, USA and its aftermath. Health Promotion International 2006; 21(4):293-300	Not obesity prevention or smoking prevention
Modayil MV, Cowling DW, Tang H, Roeseler A. An evaluation of the California community intervention. Tobacco Control 2010; 19 Suppl 1:i30-i36	Single type of 'deliverer'
Nakamura P. Prevention that works. Alaska Medicine 1996; 38(1):18-20	Not an effectiveness/evaluation study
Nigg C, Maddock J, Yamauchi J, Pressler V, Wood B, Jackson S. The healthy Hawaii initiative: A social ecological approach promoting healthy communities. American Journal of Health Promotion 2005; 19(4):310-313	Not an effectiveness/evaluation study

WSA effectiveness review smoking prevention/cessation references – excluded at full text	Reason for exclusion
Norman SA, Greenberg R, Marconi K, Novelli W, Felix M, Schechter C et al. A process evaluation of a two-year community cardiovascular risk reduction program: what was done and who knew about it? Health Educ Res 1990; 5(1):87-97	Not obesity prevention or smoking prevention
O'Riordan DL, Sutton N. A community-based approach to tobacco prevention: Hawaii's youth taking on the tobacco industry. Hawaii Medical Journal 2005; 64(11):310-312	Not an effectiveness/evaluation study
Pierce JP, Gilpin EA, Emery SL, White MM, Rosbrook B, Berry CC et al. Has the California tobacco control program reduced smoking?.[Erratum appears in JAMA 1999 Jan 6;281(1):37]. JAMA 1998; 280(10):893-899	Not an effectiveness/evaluation study
Pirie PL, Rooney BL, Pechacek TF, Lando HA, Schmid LA. Incorporating social support into a community-wide smoking-cessation contest. Addictive Behaviors 1997; 22(1):131-137	Implemented within selected organisation type only (e.g. schools, workplaces, churches)
Robbins H, Krakow M. Evolution of a comprehensive tobacco control programme: building system capacity and strategic partnerships--lessons from Massachusetts. Tobacco Control 2000; 9(4):423-430	Not an effectiveness/evaluation study
Spencer L. A community-wide smoking cessation program: Quit and win 1998 in Olmstead county. American Journal of Health Promotion 2005; 19(3):205-206	Duplicate
Steenkamp HJ, Jooste PL, Jordaan PC, Swanepoel AS, Rossouw JE. Changes in smoking during a community-based cardiovascular disease intervention programme. The Coronary Risk Factor Study. South African Medical Journal 1991; Suid-Afrikaanse Tydskrif Vir Geneeskunde. 79(5):250-253	Targetting at risk groups (e.g. those at risk of developing diabetes)
Steyn K, Hoffman M, Levitt NS, Lombard CJ, Fourie JM. Community-based tobacco control program: the Mamre study, a demonstration project. Ethnicity & Disease 2001; 11(2):296-302	Non-OECD country
Stillman, Frances A. Tobacco Control and Smoking Cessation Efforts in an Inner-City African American Community. Journal of Social Distress and the Homeless 1996; 5(1):Jan, 55-Jan, 66	Targetting at risk groups (e.g. those at risk of developing diabetes)
van Osch L, Lechner L, Reubsaet A, Steenstra M, Wigger S, de Vries H. Optimizing the efficacy of smoking cessation contests: an exploration of determinants of successful quitting. Health Education Research 2009; 24(1):54-63	Implemented within selected organisation type only (e.g. schools, workplaces, churches)
vanTeijlingen ER, Friend JA, Twine F. Evaluation of Grampian Smokebusters: A smoking prevention initiative aimed at young teenagers. Journal of Public Health Medicine 1996; 18(1):13-18	Not implemented in/targeted at whole populations or communities

WSA effectiveness review smoking prevention/cessation references – excluded at full text	Reason for exclusion
Vardavas CI, Tzatzarakis MN, Plada M, Tsatsakis AM, Papadaki A, Saris WH et al. Biomarker evaluation of Greek adolescents' exposure to secondhand smoke. Human & Experimental Toxicology 2010; 29(6):459-466	Not an effectiveness/evaluation study

Appendix 9 Physical activity only or diet only community-wide interventions reconsidered for full text screening

Report reference and abstract	Reason for exclusion
Bassett, E. M. & Glandon, R. P. 2008, "Influencing design, promoting health", *Journal of Public Health Management & Practice*, vol. 14, no. 3, pp. 244	Does not use comparative study design
Dobson, N. G. & Gilroy, A. R. 2009, "From partnership to policy: the evolution of Active Living by Design in Portland, Oregon", *American Journal of Preventive Medicine*, vol. 37, no. 6 Suppl 2, p. S436	Not an effectiveness/evaluation study
Raja, S., Ball, M., Booth, J., Haberstro, P., & Veith, K. 2009, "Leveraging neighbourhood-scale change for policy and program reform in Buffalo, New York", *American Journal of Preventive Medicine*, vol. 37, no. 6 Suppl 2, p. S352-S360.	Does not use comparative study design
Thomas, M. M., Hodge, W., & Smith, B. J. 2009, "Building capacity in local government for integrated planning to increase physical activity: evaluation of the VicHealth MetroACTIVE program", *Health Promotion International*, vol. 24, no. 4, pp. 353	Not obesity prevention or smoking prevention

Appendix 10 Excluded smoking prevention/cessation programmes exhibiting less than 4 WSA features

Report reference and abstract	Reason for exclusion
Larson, C. O., Schlundt, D. G., Patel, K., Wang, H., Beard, K., & Hargreaves, M. K. 2009, "Trends in smoking among African-Americans: a description of Nashville's REACH 2010 initiative", Journal of Community Health, vol. 34, no. 4, pp. 311-320. Abstract: African Americans bear a disproportionate burden of tobacco related morbidity and mortality despite smoking less than their Caucasian counterparts. Nashville's REACH 2010 initiative developed community partnerships to promote awareness, education and participatory programs to prevent and decrease smoking among residents of the northern geographic area of Nashville, TN, a majority African American community. A social-ecological model provided the framework for interventions used during a 5 year period that included: (a) community level strategies to increase awareness and knowledge about the effects of smoking; (b) individual level strategies to enlist and train community members to become advocates, lead smoking cessation classes and encourage current smokers in quit attempts; and (c) strategies directed to changing policy through education and partnership building. Smoking prevalence among residents was examined from 2001 through 2005 based on data from the Nashville CDC REACH 2010 Risk Factor Survey and the Tennessee CDC Behavioral Risk Factor Survey. Tests for linear trends indicated a significant decreasing trend (P < .02) of daily smoking and smoking uptake (P < .03) in North Nashville. In contrast to our community an increasing trend was observed in quitting smoking (P < .01). No trends were significant for African Americans in Tennessee. This study suggests that consistent, multiple and multi-level strategies targeted to an African American community may impact smokers who are not ready to quit but willing to reduce their level of smoking. This study underscores the importance of developing and implementing community wide campaigns to address the needs of African Americans	Exhibiting less than 4 WSA features
Ariza, C., Nebot, M., Tomas, Z., Gimenez, E., Valmayor, S., Tarilonte, V., & De, V. H. 2008, "Longitudinal effects of the European smoking prevention framework approach (ESFA) project in Spanish adolescents", European Journal of Public Health, vol. 18, no. 5, pp. 491-497.	Exhibiting less than 4 WSA features

Abstract: BACKGROUND: To describe the effects of a Spanish smoking prevention programme in the context of an European project on regular smoking, in a sample of Barcelona adolescents. METHOD: A quasi-experimental design was conducted. An experimental group (EG) (1080 pupils) was exposed to programme and compared with a control group (CG) (872 students). The intervention included a school-based programme (16 sessions in 3 years), reinforcement of a smoke-free school policy, smoking cessation for teachers, brochures for parents and other community-based activities involving youth clubs and tobacco sales. RESULTS: At 12 months, 4.5% of boys and 5.6% of girls were new smokers in the EG versus 6.7% and 11.7% in the CG (P < 0.001). At 36 months, 18.6% of boys and 31.2% of girls in the EG were regular smokers versus 21.6% of boys and 38.3% of girls in the CG (P < 0.001). The main factors associated with progression to regular smoking at 36 months were to be girl, to attend to a public school and to belong to the CG. CONCLUSION: These results endorse the effectiveness of multi-modal smoking prevention programmes, which include strategies with adults who influence adolescents.	
Cramer, M., Roberts, S., & Xu, L. 2007, "Evaluating community-based programs for eliminating secondhand smoke using evidence-based research for best practices", Family & Community Health, vol. 30, no. 2, pp. 129-143. Abstract: Extensive research has been conducted on the hazardous effects of tobacco use, and more recently attention has focused on the harmful effects of secondhand smoke (SHS). A growing body of evidence-based research supports best practices for eliminating SHS. This article describes the evaluation and outcomes of a community-based coalition in the midwest that used best practices to educate and change public attitudes on SHS, and thereby promote social policy change for tobacco-free environments. The evaluation model incorporated evidence-based indicators as measures for coalition goal achievement and found the best practices program to be effective for eliminating SHS exposure	Exhibiting less than 4 WSA features
Vartiainen, E., Pennanen, M., Haukkala, A., Dijk, F., Lehtovuori, R., & De, V. H. 2007, "The effects of a three-year smoking prevention programme in secondary schools in Helsinki", European Journal of Public Health, vol. 17, no. 3, pp. 249-256. Abstract: BACKGROUND: This study evaluates the effects of a 3-year smoking prevention programme in secondary schools in Helsinki. The study is part of the European Smoking prevention Framework Approach (ESFA), in which Denmark, Finland, the Netherlands, Portugal, Spain and the UK participated. METHODS: A total of 27 secondary schools in Finland participated in the programme (n = 1821). Schools were randomised into experimental (13) and control groups (14). The programme included 14 information lessons about smoking and refusal skills training. The 3-year smoking prevention programme was also integrated into the standard curriculum. The community-element of the	Exhibiting less than 4 WSA features

programme included parents, parish confirmation camps and dentists. The schools in the experimental group received the prevention programme and the schools in the control group received the standard health education curriculum. RESULTS: Among baseline never smokers (60.8%), the programme had a significant effect on the onset of weekly smoking in the experimental group [OR = 0.63 (0.45-0.90) P = 0.009] when compared with the control group. Being female, doing poorly at school, having parents and best friends who smoke and more pocket money to spend compared with others were associated with an increased likelihood of daily and weekly smoking onset. These predictors did not have an interaction effect with the experimental condition. CONCLUSION: This study shows that a school- and community-based smoking prevention programme can prevent smoking onset among adolescents

Darity, W. A., Chen, T. T., Tuthill, R. W., Buchanan, D. R., Winder, A. E., Stanek, E., Cernada, G. P., & Pastides, H. 2006, "A multi-city community based smoking research intervention project in the African-American population", International Quarterly of Community Health Education, vol. 26, no. 4, pp. 323-336.

Abstract: OBJECTIVE: To carry out a community-based research approach to determine the most effective educational interventions to reduce smoking among African-American smokers. The intervention included preparation of the community, planning and developing a model of change, and developing a community-based intervention. The study population consisted of 2,544 randomly selected adult African-American smokers residing in four sites in the northeastern and southeastern parts of the United States. The research design provided a comparison of active intervention sites with passive control sites as well as low income and moderate income areas. MAJOR OUTCOME MEASURES: Point prevalence of non-smoking at the time of interview; Period prevalence of non-smoking at the time of interview; Period prevalence of quit attempts in the prior six months; Number of smoke-free days in the prior six months; Number of cigarettes smoked daily at the time of interview. RESULTS: Based upon a survey eighteen months after baseline data was collected, all four measures of cigarette smoking behavior showed a strong statistically significant reduction of personal smoking behavior among those receiving active interventions versus the passive group. On the basis of process variable analysis, direct contact with the project staff in the prior six months was significantly higher in the active intervention areas. There was only a small non-significant increase in personal smoking behavior in moderate income groups as opposed to low income groups. CONCLUSION: An analysis of process variables strongly suggests that, within this African-American Community, "hands on" or "face to face" approaches along with mass media, mailings, and other less personal approaches were more effective in reducing personal smoking behavior than media, mailings, and other impersonal approaches alone addressed to large

audiences	
Meshack, A. F., Hu, S., Pallonen, U. E., McAlister, A. L., Gottlieb, N., & Huang, P. 2004, "Texas Tobacco Prevention Pilot Initiative: processes and effects", Health Education Research, vol. 19, no. 6, pp. 657-668. Abstract: The study was designed to examine how intensity of anti-smoking media campaigns and differing types of anti-smoking community-based programs influence young adolescents' tobacco use and related psychosocial variables. Sixth grade students attending 11 middle schools in eight study communities assigned to varying intervention conditions were assessed by a pre-intervention survey conducted in spring 2000. The assessment was followed by summer and fall 2000 media and community interventions that were evaluated by post-intervention data collection taking place with a new cohort of sixth graders in the same 11 schools in late fall 2000. In analyses conducted at the school level, the enhanced school and comprehensive community program conditions outperformed the no intervention program condition to reduce tobacco use and intentions to use tobacco. Combining the intensive or low media campaign with the comprehensive community program was most effective in suppressing positive attitudes toward smoking, while the enhanced school program alone was less effective in influencing attitudes. The most consistent changes, at least short-term, to reduce teen tobacco use, susceptibility to smoking and pro-smoking attitudes were achieved by combining the intensive media campaign with the comprehensive community program condition	Exhibiting less than 4 WSA features
McAlister, A., Morrison, T. C., Hu, S., Meshack, A. F., Ramirez, A., Gallion, K., Rabius, V., & Huang, P. 2004, "Media and community campaign effects on adult tobacco use in Texas", Journal of Health Communication, vol. 9, no. 2, pp. 95-109. Abstract: The present study reports on the effects on adult tobacco cessation of a comprehensive tobacco-use prevention and cessation program in the state of Texas. Differences in cessation rates across intervention conditions were measured by following a panel of 622 daily smokers, recruited from the original cross-sectional sample, from baseline to follow-up. The adult media campaign combined television, radio, newspaper and billboard advertisements featuring messages and outreach programs to help adults avoid or quit using tobacco products. The ads also promoted quitting assistance programs from the American Cancer Society Smokers' Quitline, a telephone counseling service. The cessation component of the intervention focused on increasing availability of and access to cessation counseling services and pharmacological therapy to reduce nicotine dependence. Both clinical and community-based cessation programs were offered. Intervention areas which combined cessation activities with high level media campaigns had a rate of smoking reduction that almost tripled rates in areas which received no services, and almost doubled rates in areas with media campaigns alone. Analyses of the dose of exposure to media	Exhibiting less than 4 WSA features

messages about smoking cessation show greater exposure to television and radio messages in the areas where high level media was combined with community cessation activities than in the other areas. Results also show that exposure to media messages was related to processes of change in smoking cessation and that those processes were related to the quitting that was observed in the group receiving the most intensive campaigns	
Biglan, A., Ary, D. V., Smolkowski, K., Duncan, T., & Black, C. 2000, "A randomised controlled trial of a community intervention to prevent adolescent tobacco use", Tobacco Control, vol. 9, no. 1, pp. 24-32. Abstract: OBJECTIVE: Experimental evaluation of comprehensive community wide programme to prevent adolescent tobacco use. DESIGN: Eight pairs of small Oregon communities (population 1700 to 13 500) were randomly assigned to receive a school based prevention programme or the school based programme plus a community programme. Effects were assessed through five annual surveys (time 1-5) of seventh and ninth grade (ages 12-15 years) students. INTERVENTION: The community programme included: (a) media advocacy, (b) youth anti-tobacco activities, (c) family communications about tobacco use, and (d) reduction of youth access to tobacco. MAIN OUTCOME MEASURE: The prevalence of self reported smoking and smokeless tobacco use in the week before assessment. RESULTS: The community programme had significant effects on the prevalence of weekly cigarette use at times 2 and 5 and the effect approached significance at time 4. An effect on the slope of prevalence across time points was evident only when time 2 data points were eliminated from the analysis. The intervention affected the prevalence of smokeless tobacco among grade 9 boys at time 2. There were also significant effects on the slope of alcohol use among ninth graders and the quadratic slope of marijuana for all students. CONCLUSION: The results suggest that comprehensive community wide interventions can improve on the preventive effect of school based tobacco prevention programmes and that effective tobacco prevention may prevent other substance use	Exhibiting less than 4 WSA features
Secker-Walker, R. H., Flynn, B. S., Solomon, L. J., Skelly, J. M., Dorwaldt, A. L., & Ashikaga, T. 2000, "Helping women quit smoking: results of a community intervention program", American Journal of Public Health pp. 940-946. Abstract: Community organisation approaches were used to create coalitions and task forces to develop and implement a multi-component intervention in 2 counties in Vermont and New Hampshire, with a special focus on providing support to help women quit smoking. Evaluation was by pre-intervention and post-intervention random digit-dialled telephone surveys in the intervention counties and the 2 matched comparison counties. In these rural counties, community participation in planning and implementing interventions was accompanied by favourable changes in women's smoking behaviour. (Original abstract - amended)Record 189 of 247	Exhibiting less than 4 WSA features

Appendix 11 Quality assessment of interventions

Obesity prevention

	Romp & Chomp	Be Active, Eat Well	Shaping Up Somerville	EPODE	Healthy Living, Cambridge Kids	Steps to a Healthier Yuma County	FLVS	APPLE
Source population well described?	++	+	+	+	+	-	-	++
Eligible population representative of the population of interest?	-	+	+	NR	+	+	+	+
Selected area represents eligible population?	+	+	-	+	-	+	+	++
Allocation to I/C arms	-	+	-	NA	NA	NR	-	+
I/C well described and appropriate?	+	+	+	-	++	-	+	++
Allocation concealed?	NA	NA	NA	NA	NA	+	NA	+
Participants/ investigators blind to exposure and comparison?	NR	NR	NR	NA	NA	NR	NR	+
Exposure to I/C adequate?	+	NR	+	NR	NR	NR	+	++
Contamination acceptably low?	-	-	+	NA	NA	+	+	++
Other interventions similar in both groups?	NR	NR	+	NA	NA	NR	NR	-
All participants accounted for at study conclusion?	NA	+	+	NA	-	-	NA	NR
Did the setting reflect usual UK practice?	+	+	+	+	+	+	+	+
Did I/C comparison reflect usual practice?	+	+	+	+	+	-	+	+
Outcome measures reliable?	+	+	++	+	+	+	+	++
Outcome measurement complete?	-	+	-	+	-	-	+	+
Were all important outcomes measures assessed?	+	+	-	+	-	-	+	+
Outcomes relevant?	++	++	++	++	+	+	+	++
Similar timing of outcome measurements in I/C groups?	+	+	+	NA	NA	NR	+	++
Follow-up time meaningful?	++	++	-	++	++	-	+	++
I/C groups similar at baseline? If not, were these adjusted?	-	+	-	NA	NA	NA	+	+
Intention to treat analysis?	NR	NR	NR	NR	NR	NR	NR	NR
Study sufficiently powered?	NR	+	NR	+	NR	NR	NR	++
Estimates of effect size given or calculable?	+	+	++	-	+	NR	+	++
Analytical methods appropriate?	-	++	+	-	-	+	-	+
Precision/uncertainty of intervention effects given or calculable? Were they meaningful?	++	++	++	-	+	NR	+	+
Study results internally valid (i.e. unbiased)?	-	-	-	+	-	-	+	-
Results generalisable to the source population (i.e. externally valid)?	+	+	+	+	+	-	+	+

Key:
NA - not applicable
NR - not reported

Smoking prevention/cessation

	Breathing Space	COMMIT
Source population well described?	+	+
Eligible population representative of the population of interest?	+	++
Selected area represents eligible population?	+	+
Allocation to I/C arms	+	++
I/C well described and appropriate?	+	++
Allocation concealed?	NA	NA
Participants/ investigators blind to exposure and comparison?	NR	+
Exposure to I/C adequate?	+	+
Contamination acceptably low?	+	+
Other interventions similar in both groups?	+	+
All participants accounted for at study conclusion?	NA	NA [a]
Did the setting reflect usual UK practice?	++	+
Did I/C comparison reflect usual practice?	++	+
Outcome measures reliable?	+	+
Outcome measurement complete?	+	+
Were all important outcomes measures assessed?	+	+
Outcomes relevant?	++	++
Similar timing of outcome measurements in I/C groups?	+	++
Follow-up time meaningful?	+	++
I/C groups similar at baseline? If not, were these adjusted?	+	++
Intention to treat analysis?	NR	NR
Study sufficiently powered?	+	++
Estimates of effect size given or calculable?	+	++
Analytical methods appropriate?	+	+
Precision/uncertainty of intervention effects given or calculable? Were they meaningful?	+	+
Study results internally valid (i.e. unbiased)?	+	++
Results generalisable to the source population (i.e. externally valid)?	+	++

[a] for cohort analysis

Key:
NA - not applicable
NR - not reported