NICE

Rapid review of economic evidence of interventions to reduce the rate of premature death in the most disadvantaged populations.

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1.0 Executive summary

Introduction

The National Institute for Health and Clinical Excellence (NICE) has been asked by the Department of Health to develop 'guidance for reducing health inequalities in the short, medium and long term', on interventions that reduce the rates of premature death in the most disadvantaged with particular reference to proactive case finding, retention and improving access to services. This review focuses on the following two interventions: statins and treatments for smoking cessation. This report presents the findings from the review of cost-effectiveness studies.

Methodology

The review was conducted in four stages: search, screening, critical appraisal and synthesis. A total of 5,293 titles and abstracts were screened. A screening against the original inclusion criteria eliminated all the studies. As a result, the inclusion criteria were relaxed to include studies concerned with proactive case finding, retention and improving access to services for both non-disadvantaged as well as disadvantaged populations. Following a second screening, full paper copies of 16 studies were obtained. 6 studies were data extracted and quality assessed in the final review. All these studies related to smoking cessation interventions. No studies relating to statins were included in the view. The small number of studies and the difficulties directly comparing across studies (for instance, due to lack of reporting of the price base year at which estimates were made) meant that no quantitative synthesis of results was undertaken.

Results

Figure one summarises the results of the review. The interventions that aimed to improve participation in smoking cessation interventions were arranged into the following three groups:

- interventions to improve enrolment in Quitline services;
- interventions to improve participating in Quit to Win contests; and
- media campaigns to promote quit-attempts.

Intervention	Statement	Grade[1]	Evidence
Improved enrolment in Quitline services: free NRT	There is some evidence to suggest that the addition of free NRT to Quitline services improves enrolment in Quitline. The cost per extra person enrolling in Quitline varied from $24 to $216. The greater the amount of free NRT given, the greater the cost per extra participant.	Effect: ++	Two high quality cohort studies
		Economic: -	Two low quality cost-effectiveness analyses
Improved enrolment in Quitline services: contacting smokers	There is limited evidence to suggest that contacting smokers by phone is a more cost-effective way to improve Quitline enrolment than contacting smokers by postcard ($24 vs. $76 per extra enrolment).	Effect: -	One low quality RCT
		Economic: -	One low quality cost-effectiveness analysis
Improved participation in Quit-to-Win contests	There is some evidence to suggest that media campaigns are a more cost-effective way to improve participation in Quit-to-Win contests than face-to-face recruitment at local events, which is more cost-effective than recruitment through the workplace.	Effect: -	One low quality cohort study, one good quality cohort study
		Economic: -	Two low quality cost-effectiveness analyses
Media campaigns to increase quit-attempts	There is some evidence suggest that TV campaigns work to promote quit attempts.	Effect: +	One good quality cohort study
		Economic: -	One low quality cost-effectiveness analysis

Figure 1: evidence statement for interventions to improve participation in smoking cessation interventions.

[1] For further detail on the grading structure, see section 3.3

2.0 Background

The National Institute for Health and Clinical Excellence (NICE) has been asked by the Department of Health to develop 'guidance for reducing health inequalities in the short, medium and long term', on interventions that reduce the rates of premature death in the most disadvantaged with particular reference to proactive case finding, retention and improving access to services. This review focuses on the following two interventions: statins and treatments for smoking cessation.

This report presents the findings from the review of cost-effectiveness studies. It attempts to answer the following two questions:

- What is the cost-effectiveness of interventions to improve health service availability, access, and use interventions?
- How does the demographic profile of the participants, who delivers the intervention, the length and intensity of the intervention, the context of delivery, influence the cost-effectiveness of the interventions?

2.1 The need for guidance: background and policy context

Socioeconomic inequalities in health and life expectation have been found in many contemporary and past societies. In England, although information based on an occupational definition of social class has only been available since 1921, other data identifying differences in longevity by position in society have been available for at least two hundred years. These differences have persisted despite the dramatic fall in mortality rates over the last century.

Inequalities in health exist, whether measured in terms of mortality, life expectancy or health status; whether categorised by socioeconomic measures or by ethnic group or gender. Recent efforts to compare the level and nature of health inequalities in international terms indicate that Britain is generally around the middle of lists of comparable western countries, depending on the socioeconomic and inequality indicators used. Although disadvantage is generally associated with worse health, the patterns of inequalities vary by place, gender, age, year of birth and other factors, and differ according to which measure of health is used. Despite improvements, the gap in health outcomes between those at the top and bottom ends of the social scale remains large and in some areas continues to widen.[2] Some parts of the country have the same life expectancy as the national average for the 1950s. These inequalities mean poorer health, reduced quality of life and early death for many people.

[2] Tackling health Inequalities, A programme for Action, Department of Health, 2003.

These growing differences in health inequalities across the social spectrum were apparent for many of the major causes of death, including coronary heart disease, stroke, lung cancer and suicides among men, and respiratory disease and lung cancer among women.[3]

> In the early 1970s death rates among men of working age were almost twice as high for unskilled groups as they were for professional groups. By the early 1990s, death rates were almost three times higher among unskilled groups. There are regional differences too. In 1999/2001, the difference between areas with the highest (North Dorset) and lowest (Manchester) life expectancy at birth was 9.5 years for boys and 6.9 years for girls. The highest life expectancy for girls was in West Somerset and the lowest in Manchester. In smaller communities within these areas, the difference can be even greater [DH, 2003].

Soon after being elected in 1997, the Blair government commissioned an Independent Inquiry into Inequalities in Health, chaired by the former Chief Medical Officer, Sir Donald Acheson. The report made 39 recommendations and provided policy directions to tackle health inequalities. It recognised that tackling health inequalities would require actions to address all of the 'layers of influence', as well as ensuring that access and utilisation of health services improves among those who had previously been under-served.

The Government gave a commitment in the NHS Plan to establish national health inequalities targets which would narrow the gap in health status in childhood and throughout life, between socio-economic groups, and between different areas in the country. These were originally announced in February 2001, and are now included as part of the 2002 Spending Review Public Service Agreement (PSA) for the Department of Health in the following form:

> *" By 2010 reduce inequalities in health outcomes by 10% as measured by infant mortality and life expectancy at birth"*

The importance of reducing health inequalities is also highlighted by a number of key policy documents:

- Wanless Report: securing good health for the whole population (2004).
- Reaching out: an action plan on social exclusion (HMG 2006).
- Our health, our care, our say (DH 2006d).

[3] Independent Inquiry into Inequalities in Health Report 1. http://www.archive.official-documents.co.uk/document/doh/ih/part1b.htm

2.2 Scope of rapid review

The following parameters represent the scope of the review,

- ***Participants***
  - Including: (i) statins: patients at increased risk of developing CHD (primary prevention); and patients with established CHD (secondary prevention); (ii) smoking cessation: adults aged 16 years and over who smoke, in particular pregnant women, disadvantaged groups and manual workers. Disadvantaged groups will be defined as: individuals with mental health problems; people who are institutionalised including those serving a custodial sentence; some black and minority ethnic groups; ; homeless people; people on low incomes; lone parents and poor families; and people on benefits and living in public housing
  - Excluding: (i) statins: patients not at increased risk of developing, or with established, CHD; (ii) smoking cessation: people aged 16 years and over who do not smoke.

- ***Interventions***.
  - Statins:
    - NHS interventions aimed at finding and then supporting adults at increased risk of developing, or with established, CHD. These activities will cover both primary and secondary prevention.
    - NHS interventions aimed at providing – and improving access to – services for adults at increased risk of developing, or with established CHD, These activities will cover both primary and secondary prevention.
  - Smoking cessation
    - NHS interventions aimed at finding and then supporting people aged 16 years and over who smoke. These activities will cover both primary and secondary prevention.
    - NHS interventions aimed at providing – and improving access to – services for people aged 16 years and over who smoke. These activities will cover both primary and secondary prevention.
  - Excluding:
    - Interventions and activities not aimed at reducing and/or eliminating premature death from coronary heart disease and other smoking related causes of premature death.
    - Interventions and activities aimed at reducing and/or eliminating infant mortality.
    - The wider determinants of health inequalities such as macro level policies aimed at tackling poverty and economic disadvantage.

- ***Comparators.*** Interventions will be examined, where possible, against relevant comparators and/or no intervention.

- ***Outcomes.*** Outcomes will include measures of service reach, including:

- how services identify and reach patients at increased risk of developing, or with established CHD;
- how services identify and reach people aged 16 years and over who smoke, in particular pregnant women, disadvantaged groups and manual workers;
- service use, accessibility and availability among patients at increased risk of developing, or with established CHD; and
- service use, accessibility and availability among people aged 16 years and over who smoke, in particular pregnant women, disadvantaged groups and manual workers.

3.0 Methodology

3.1 Literature Search

A search of the literature was undertaken by Cardiff University. Details of the search strategy employed are available in appendix D.

3.2 Selection of studies for inclusion

An initial review of the output from the review of the cost-effectivenesss literature suggested that no studies met all the inclusion criteria outlined in the scope of the review. As a result, the inclusion criteria were relaxed to include non-disadvantaged as well as disadvantaged populations.

Having relaxed the inclusion criteria, the following process was employed to assess the output from the literature search against the revised scope:

- Round 1: titles and abstracts identified in the literature search were assessed against the inclusion criteria by two reviewers. Of the studies excluded at this stage, 68 percent were excluded because they did not contain cost data. The remaining 32 percent were excluded because they were studies of interventions outside the scope of the review.
- Round 2: abstracts were identified for those studies for which the literature search had not provided abstracts. Abstracts for studies already familiar to the study team were also included and reviewed at this point.
- Round 3: copies of the papers were obtained and reviewed to determine (a) whether the intervention could be targeted at disadvantaged group, despite the fact that the specific study was not concerned with disadvantaged groups, and (b) whether the study provided sufficient data to calculate the cost per improved reach / access / use of smoking cessation or statins interventions.

Figure two provides more detail on the exclusion of studies throughout the review. The result of the review of studies was that six studies of intervention to improve access and/or use of smoking cessation interventions were included in the review, and no studies of interventions to improve access and/or use of statins interventions were included.

Appendix A summarises the sixteen papers identified after the review of titles and abstracts (round 2), whether they were included or excluded from the review, and the reason for their exclusion.

Review	Output of search (number of papers)	Papers included after round 1	Papers included after round 2	Papers included after round 3
Search for smoking cessation studies	1949	51	12	5
Search for statins studies	2898	26	3	0
Supplementary search	446	1	1	1

Figure 2: summary of literature search

3.3 Summary of study grades

The six studies identified by the review were graded according to their methodological quality. This section summarises the quality systems used to grade the efficacy and economic elements of the studies.

3.3.1 Efficacy studies

Figure three summarises the grading system for the efficacy studies included in the review. The remainder of this section then discusses the criteria used to determine the level of bias in each study.

Level of evidence	Type of evidence
++	High quality study with a very low risk of bias
+	Well conducted study with a low risk of bias
-	Low quality study with a risk of bias

Figure 3: Level of evidence for efficacy studies[4]

RCT

Figure four summarises the grading of the one RCT included in the review. The study was assessed against the criteria included in the table, taken from those set out in Appendix C of NICE's Guideline Development Method[5]. Holtrop (2005), the only RCT identified from the review, was graded as a low quality study, as it did not report on any of the methodological criteria, other than the fact that allocation to treatment and control group was random.

[4] Adapted from: NICE (2004), Guideline Development Methods: Information for National Collaborating Centres and Guideline Developers. London: Nation Institute for Clinical Excellence, www.nice.org.uk

[5] A good quality RCT was defined using the guidance available from NICE Centre for Public Health Excellence Methods Manual (version 1, 2006) www.nice.org.uk

Criteria	Holtrop (2005)
Allocation random	Yes
Allocation concealed	Don't know
Allocation blind - researcher	Don't know
Allocation blind - participant	Don't know
Intention to treat	No
Control for selection bias	Don't know
Significant difference in treatment and control groups	Don't know
Control for different in treatment and control groups	N/a
Assessment (++ , + , -)	**-**

Figure 4: Grading of RCT effectiveness studies

Cohort study

Figure five summarises the grading of the cohort studies included in the review. Each of the studies was assessed against the criteria included in the table, taken from those set out in Appendix D of NICE's Guideline Development Method[6]:

Criteria	An et al. (2006)	Nelson et al. (1989)	Cummings et al (2006)	Mudde et al (1999)	Shipley et al. (1995)
Intention to treat	Yes	Don't know	Yes	Don't know	Yes
Control for selection bias	No	Don't know	No	Don't know	No
Significant difference in treatment and control groups	Yes	Don't know	Don't know	Yes	Don't know
Control for difference	Yes	N/A	Yes	Yes	No
Assessment (++ , + , -)	++	-	++	+	+

Figure 5: Grading of Cohort studies

A high quality grade was awarded to those studies that fulfilled at least two of the following three criteria: the study was conducted on an intention to treat basis, controlled for selection bias, and controlled for significant differences between treatment and control groups. A well conducted grade was awarded to those studies that fulfilled one of the above three criteria. A low quality grade was awarded to those studies that failed to fulfil any of the above criteria.

[6] A good quality RCT was defined using the guidance available from NICE Centre for Public Health Excellence Methods Manual (version 1, 2006) www.nice.org.uk

3.3.2 Economic studies

Figure six summarises the grading system for the economic studies included in the review. The remainder of this section then discusses the criteria used to determine the grading of the economic studies.

Type and quality	Economic study
++	High quality economic study with a very low risk of bias
+	Well-conducted study with a low risk of bias
-	Low quality study with a high risk of bias

Figure 6: Matrix economic evidence grading system

Figure seven summarises the grading of the economic studies included in the review. Each of the studies was assessed against the 'Drummond checklist'. [7] A summary of the assessment of each study is available in appendix C.

Criteria	An *et al* (2006)	Holtrop (2005)	Nelson *et al*. (1989)	Cummings *et al.* (2006)	Mudde *et al*. (1999)	Shipley et al. (1995)
Incremental analysis	Yes	Yes	No	Don't know	No	Yes
Include indirect cost	No	No	No	No	No	No
Include capital cost	Don't know	No	No	No	No	No
Costs complete	No	Don't know	No	Don't know	No	Don't know
Method for cost measurement	Top down	Don't know	Top down	Don't know	Top down	Top down
Costs valued at market-values	Don't know	Yes	Don't know	Don't know	Don't know	Don't know
Adjust for inflation	Don't know	Don't know	Yes	Don't know	Don't know	Don't know
Adjust for discount rates	Don't know	Don't know	Don't know	Don't know	Don't know	Don't know
If data stochastic, was appropriate analysis performed	Yes	No	No	No	No	Yes
Sensitivity analysis performed	No	No	No	No	No	No
Assessment (++ , + , -)	-	-	-	-	-	-

Figure 7: Grading of the Economic studies

[7] Drummond MF et al. (1997) Critical assessment of economic evaluation. In: Methods for the Economic Evaluation of Health Care Programmes. 2nd edition. Oxford: Oxford Medical Publications.

A study was awarded a well-conducted grade if they measured a complete list of costs (including capital costs), if these costs were valued at market-values, and if the costs were adjusted appropriately for inflation and discount rates. A study achieved a high quality grade if, as well as the criteria required for a well-conducted study, costs were measured incrementally and appropriate sensitivity analysis was performed.

3.4 Summary of studies selected for inclusion

3.4.1 Quality of studies

Figure eight summarises the quality of the studies included in the review.

Quality of evidence	Efficacy	Economic
++	2 studies	
+	2 study	
-	2 studies	6 studies

Figure 8: Quality of studies included

3.4.2 Description of studies

Study design: the intervention studies included one individual RCT and five cohort studies. All the six studies were cost-effectiveness analyses (CEA).

Length of follow-up: out of the five cohort studies, four reported the follow-up period (one, four, six and eight months). One cohort study did not state its follow-up period. The follow-up period for the RCT was two months.

Location: one of the interventions is located in the Netherlands, and five in the US.

Setting: all of interventions are set in the community.

4.0 Findings: summary of economic evidence

Figure ten summarises the economic data on interventions designed to improve the availability and access to smoking cessation interventions. Three broad intervention types were identified: interventions to improve enrolment in Quitline services, interventions to improve participating in Quit to Win contests, and media campaigns to promote quit-attempts.

4.1 Improving enrolment in Quitline services

Three studies were identified that assessed the cost-effectiveness of interventions to improvement enrolment in Quitline services. Within these three studies there are data on the cost-effectiveness of seven types of interventions. Figure nine summarises the impact on costs and enrolment of these interventions, where '+' indicates that either costs or enrolment increased, 'o' that there was no change, and '-' indicates that costs or enrolment reduced. It demonstrates that all the interventions cost more and improved enrolment.

		Enrolment in Quitline		
		+	0	-
Costs	+	7		
	0			
	-			

Figure 9: Summary of the impact on cost and enrolment in Quitline

Two of the studies (accounting for 5 of the interventions) assessed the addition of free Nicotine Replacement Therapy (NRT) to standard Quitline counselling and advice. The delivery of the free NRT and the amount of free NRT available varied between the studies:

- voucher for 2-weeks supply of NRT (Cummings *et al*, 2006);
- mailing of 1-week supply of NRT (Cummings *et al*, 2006);
- mailing of 2-week supply of NRT (Cummings *et al*, 2006);
- mailing of 6-week supply of NRT with follow-up phone call (Cummings *et al*, 2006); and
- mailing 8-weeks supply of NRT (An *et al,* 2006).

In each case of the addition of free NRT to Quitline services was advertised in local newspapers.

The final study (Holtrop, 2005) looked at different ways of promoting Quitline Services, comparing passive recruitment (allowing smokers to access Quitline through standard routes (from providers or newsletters and self-contact the quitline) with either recruitment through sending postcards to peoples' homes or through phone calls.

Figure 10: summary of study outcomes[8]

Source	Intervention	Counterfactual	Cost (+, o, -)	Quality of econ. study (++, +, -)	Effect (+, o, -)	Quality of effect. study (++, +, -)	Value for money
Recruitment to Quitline services							
An *et al* (2006)	Multi-session counselling + mailing of free 8-week supply of NRT through Quitline	Standard Quitline counselling and advice	+	-	+	++	Increased cost/person enrolled in Quitline: $216
Cummings *et al.* (2006)	Quitline counselling and advice + sent voucher for 2-week supply of patches or gum	Standard Quitline counselling and advice	+	-	+	++	Increased cost/person enrolled in Quitline: $42
Cummings *et al.* (2006)	Quitline counselling and advice + 1-week supply of patches sent to home	Standard Quitline counselling and advice	+	-	+	++	Increased cost/person enrolled in Quitline: $29
Cummings *et al.* (2006)	Quitline counselling and advice + 2-week supply of patches sent to home	Standard Quitline counselling and advice	+	-	+	++	Increased cost/person enrolled in Quitline: $42
Cummings *et al.* (2006)	Quitline counselling and advice + 6-week supply of patches sent to home + follow-up phone call	Standard Quitline counselling and advice	+	-	+	++	Increased cost/person enrolled in Quitline: $76
Holtrop (2005)	Recruitment to Quitline through postcards	Passive recruitment	+	-	+	-	Increased cost/person enrolled in Quitline: $73.25
Holtrop (2005)	Recruitment to Quitline through phone calls	Passive recruitment	+	-	+	-	Increased cost/person enrolled in Quitline: $23.80

[8] In the columns labelled 'cost' and 'effect', '+' indicates that either costs or enrolment increased, 'o' that there was no change, and '-' indicates that costs or enrolment reduced .

Quit to Win Contests (Q to W)							
Nelson *et al*. (1989)	Recruitment to Q to W at a local event (1983)	Do nothing	+	-	+	-	Cost per participant: $21.78
Nelson *et al*. (1989)	Recruitment to Q to W at a local event (1984)	Do nothing	+	-	+	-	Cost per participant: $11.32
Nelson *et al*. (1989)	Recruitment to Q to W at a local event (1985)	Do nothing	+	-	+	-	Cost per participant: $19.65
Nelson *et al*. (1989)	Recruitment to Q to W at a local event (1986)	Do nothing	+	-	+	-	Cost per participant: $7.65
Nelson *et al*. (1989)	Recruitment to Q to W at a local event (1987)	Do nothing	+	-	+	-	Cost per participant: $7.58
Nelson *et al*. (1989)	Recruitment to Q to W in workplace (1985)	Do nothing	+	-	+	-	Cost per participant: $60.78
Nelson *et al*. (1989)	Recruitment to Q to W in workplace (1986)	Do nothing	+	-	+	-	Cost per participant: $36.10
Nelson *et al*. (1989)	Recruitment to Q to W in workplace (1987)	Do nothing	+	-	+	-	Cost per participant: $94.17
Nelson *et al*. (1989)	Recruitment to Q to W at local event + through media (1983)	Do nothing	+	-	+	-	Cost per participant: $19.20
Nelson *et al*. (1989)	Recruitment to Q to W at local event + through media (1984)	Do nothing	+	-	+	-	Cost per participant: $9.05
Nelson *et al*. (1989)	Recruitment to Q to W at local event + in workplace + through media (1985)	Do nothing	+	-	+	-	Cost per participant: $12.30
Nelson *et al*. (1989)	Recruitment to Q to W at local event + in workplace + through media (1986)	Do nothing	+	-	+	-	Cost per participant: $10.43

Nelson *et al*. (1989)	Recruitment to Q to W at local event + in workplace + through media (1987)	Do nothing	+	-	+	-	Cost per participant: $6.28
Shipley *et al*. (1995)	Community wide quit smoking contests	Do nothing	+	-	+	+	Cost per participant: $78.57 (sd. $33.77) An increase of one dollar per community smoker in non- prize expenditures is associated with an increase of 0.674 in the participation percentage (a percentrage point change)
Media campaigns							
Mudde *et al.* (1999)	"Quit Smoking Together" media campaign	No media campaign	+	-	+	+	$0.53 per quit attempt

The cost per person enrolling in Quitline varied from $23.80 (recruitment to Quitline using phonecalls) to $216 (addition of 8-weeks of NRT to Quitline services). However, the comparability of the cost per enrolment estimates may be limited, as the papers did not report the base-year at which the estimates are produced.

We can be more certain about comparisons between interventions within the same study. Cummings *et al* (2006) found that the most cost-effective intervention at improving participation in Quitline was the addition of one week of NRT ($29/enrolment), followed by the addition of 2-weeks supply of NRT and sending vouchers for 2-weeks of NRT (both $42 per enrolment). The least cost-effective intervention was the addition of 6-weeks of NRT and follow-up phone calls ($76 per enrolment). However, these estimates don't take account of variance in likelihood of quitting between the different interventions. For instance, it is reasonable to assume that a 6-week programme of NRT with a follow-up phone call is more likely to result in a successful quit than a 1-week programme of NRT with no follow-up.

Holtrop (2005) found that recruitment to Quitline by phoning smokers in their homes was more cost-effective than recruitment through sending postcards to their homes ($23.80 per enrolment compared to $73.25 per enrolment). Contact details were drawn from existing health plan records, and the resource required to contact smokers varied with the quality of this data.

It is important to consider the methodology quality of the papers before drawing conclusions about the cost-effectiveness of different interventions. The measurement of the effect of the above interventions is generally good (both An *et al* and Cummings *et al* score a '++', though Holtrop only scores a '-'). However, the quality of the economic methodology employed in each of these studies is poor (each study scores a '-').

4.2 Improving participating in Quit to Win contests

Two studies were identified that assessed the cost-effectiveness of interventions to improvement participating in Quit to Win contests. Within these two studies there are data on the cost-effectiveness of fourteen types of interventions. Figure eleven summarises the impact on costs and enrolment of these interventions, where '+' indicates that either costs or enrolment increased, 'o' that there was no change, and '-' indicates that costs or enrolment reduced. It demonstrates that all the interventions cost more and improved enrolment.

Participating in Quit to Win contests

Costs	+	0	-
+	14		
0			
-			

Figure 11: Summary of the impact on cost and participation in Quit to Win contests

Nelson et al (1989) measures the cost per Quit to Win contest participant of a range of recruitment strategies, including:

- face-to-face recruitment at local events;
- recruitment using co-ordinators in worksites; and
- a combination of all of the above two interventions supplemented with traditional media campaigns.

The cost per Quit-to-Win participant varied from $6.28 (an intervention combining a traditional media campaign, face-to-face recruitment at local events, and recruitment in the workplace) to $94.17 (recruitment in the workplace). Figure 12 summarises the variation in cost per participant of recruitment into Quit-to-Win contests as measured by Nelson *et al*. Workplace recruitment was consistently the most costly recruitment method (ranging from $36 to $94 per participant). The cost per Quit-to-Win contest participant recruited at local events ranged from $8 to $22.

	Local events	Workplace	All interventions
1983	$21.78		$19.20
1984	$11.32		$9.05
1985	$19.65	$60.78	$12.30
1986	$7.65	$36.10	$10.43
1987	$7.58	$94.17	$6.28

Figure 12: Cost per participant of recruitment into Quit-to-Win contests (Nelson et al, 1989)

Nelson *et al* did not separate out the cost per participant of media campaigns, they estimated these in combination with the costs of local events, or both local events and workplace recruitment. However, the addition of media campaigns to either recruitment at local events, in the workplace or both tended to reduce the cost per Quit-to-Win contest participant.

Nelson *et al's* work suggests that media campaigns are more cost effective at recruiting participants to Quit-to-Win contests than face-to-face recruitment at local events, which is more cost effective than recruiting in the workplace. However, these results are based on a poor quality assessment of both effect and economic variables.

Shipley *et al* (1995) also evaluates the cost per participant of Quit-to-Win contests. They estimated that the average cost per contest participant was $78.57 (s.d. $33.77). This figure is not directly comparable with Nelson *et al's* estimates, as they contain the costs the contest, as well as the cost of promotion of the contest. However, Shipley *et al's* data is taken from twenty-six different contests of varying sizes, allowing the marginal cost and benefit of expenditure on Quit-to-Win contests to be calculated. They estimated that an increase of one dollar per community smoker in non-prize expenditures is associated with an increase of 0.674 in the participation percentage.

4.3 Media campaigns to promote quit attempts

One study was identified that evaluated the impact of media campaigns on quit attempts (Mudde and Vries, 1999). The media campaign consists of TV shows following famous people trying to quit smoking, a TV clinic involving life models, local group programs conducted by local and regional organization, and a national quit line and publicity campaign. The campaign cost $2.2 million.

The impact of the campaign was that 88 percent of the population recalled the campaign, and different elements of the campaign reached 48% of the population. Those who saw the TV shows of famous people trying to give up smoking where 1.18 times more likely to attempt to quit as those who didn't see the shows. Those who saw the TV clinic where 1.31 times more likely to attempt to quit as those who didn't see the clinic.

However, the measurement of the effect and the cost of the programme are both based upon poor research designs.

5.0 Evidence tables

First author	Study efficacy[9]		Economics		Research question and design	Population	Follow-up	Results	Confounders, potential sources of bias and other comments
	Type	Qual	Type	Qual					
An *et. al.* (2006)	Cohort study	2++	CEA	1-	**Aim:** Increase reach and effectiveness of a statewide tobacco quitline. **Treatment**: Multi-session counselling + mailing of free NRT (8 week supply) through QUITLINE **Control:** Multi-session counselling through QUITLINE. **Setting:** Community, USA (Minnesota). **Length of intervention**: 2 months	Smokers aged 18 years or older	Six months	**Call volume:** Callers/month register for QUITPLAN: pre 155 (sd 75), post 679 (sd 180) Change: 524 callers per month (95% CI: 323 – 725). **Receipt of NRT:** - Callers in multi-session counselling: pre 23.4%, post 90.1% (↑66.6%, 95% CI: 60.8 – 71.6) - Completed multi-session (>1): pre 83.1%, post 94.9% (↑ 11.8%, 95% CI: 4.3 – 21.7) - Use of NRT by those in multi-session counselling: pre 32.9%, post 85.4% (↑ 52.5%, 95% CI: 43.8 – 60) - Bupropion use: pre 24.3%, post 10% (↓14.3%, 95% CI -21.6 - -6.9) **Costs:** - Average cost / caller receiving QUITLINE: pre $136 (sd $61); post $352.00 ($110). - Increase cost/caller enrolled in Quitline:	**Study limitations** Observational study and therefore not possible to conclude that changes are due to the addition of NRT, especially as there are other forms of assistance available to smokers Self-report as an outcome measure. There is a potential of under-reporting.

[9] The system used to grade the methodology employed can be found in section 3.3

First author	Study efficacy[9]		Economics		Research question and design	Population	Follow-up	Results	Confounders, potential sources of bias and other comments
	Type	Qual	Type	Qual					
								$216 (95% CI: $204 – $229)	
Cummings *et. al.* (2006)	Cohort Study	2++	CEA	1-	**Aim**: To make available free nicotine patches and gum to smokers. **Treatment:** Quitline counselling and advice + one of 3 interventions: 1. sent voucher for 2-week supply of patches or gum 2. 1 or 2 week supply of patches sent to home 3. 6-week supply of patches sent to home + follow-up phone call **Control:** Quitline counselling and advice **Setting:** Community, USA (New York) **Length of Interventions:** varied 1 wk to 6 wk.	Smokers ages 18 + registered for Quitline	4 months.	**% local smokers enrolled:** NRT voucher: 0.5% Mail 1-wk NRT: 0.8% Mail 2-wk NRT: 0.8% Mail 6-wk NRT: 4.8% **% enrolled who use NRT:** NRT voucher: 84% Mail 1-wk NRT: 78% Mail 2-wk NRT: 81% Mail 6-wk NRT: 89% **% enrolled who use all NRT:** NRT voucher: 61% Mail 1-wk NRT: 56% Mail 2-wk NRT: 49% Mail 6-wk NRT: 23% **Cost per smoker enrolled, $:** NRT voucher: $42/enrolment Mail 1-wk NRT: $29/enrolment Mail 2-wk NRT: $42/enrolment Mail 6-wk NRT: $76/enrolment	**Study limitations:** Historic comparison group was used. A larger, better controlled study is needed.
Holtrop	RCT	1-	CEA	1-	**Aim:** Promotion of quitline	Smokers,		**Enrolment (diff stat sign, p<0.001):**	**Implementation challenges:**

First author	Study efficacy[9]		Economics		Research question and design	Population	Follow-up	Results	Confounders, potential sources of bias and other comments
	Type	Qual	Type	Qual					
(2005)	(individual)				services **Treatment**: one of two treatments: 1. sent 2 postcards containing information about quitline 2. received a phone call, including brief motivational message and description of quitline **Control:** Passive recruitment (learn about the quitline from providers or newsletters and self-contact the quitline). **Setting:** Community, USA **Length of intervention:** Nurses made up to 4 contact attempts.	members of health plans Mean age 49.1 (sd 12.6)	2 months	- Control: 0% enrolled. - Postcard: 1.3% - Telephone group: 43.8%. **Total costs per enrolment:** Postcard group: $1694.63 Telephone call group: $74.46 **Incremental cost per enrolment**: Postcard group: $73.25 Telephone call group: $23.80	- The length of time it takes to contact the participant is challenging due to the limited reliability of telephone numbers in health plan database. **Study limitations:** - Small and narrow sample
Mudde *et al* (1999)	Cohort study	2+	CEA	1-	**Aim:** Mass media led smoking cessation campaign. **Treatment**: "Quit Smoking	Smokers aged 15+	Not stated	**TV campaign:** - 88% recalled the campaign - Campaign elements reached 48%. **Quit attempts:**	1. The treatment and control group both receive the intervention (media campaign), but to different extents. This limitation has been offset by

First author	Study efficacy[9]		Economics		Research question and design	Population	Follow-up	Results	Confounders, potential sources of bias and other comments
	Type	Qual	Type	Qual					
					Together" campaign onTV consisting of the following: 1. Famous people trying to quit smoking (a matching booklet: $3). 2. A TV clinic involving life models (matching manual: $10). 3. Local group programs conducted by local and regional organization (matching manual: $55). 4. A national quit line. 5. Publicity campaign (advertisements, posters, etc.) **Control:** No media campaign. **Setting:** Community, Netherlands.			- Positive relationship between TV Clinics and attempting to quit (OR = 1.18, 95% CI = 1.08, 1.28, and OR = 1.31, 95% CI = 1.31, 1.52, respectively). - Sustained abstinence was related to recalling more campaign elements (OR = 3.28, 95% CI = 1.65, 6.48) and watching more TV clinic episodes (OR = 1.36, 95% CI = 1.13, 1.65). **Cost:** - Cost of developing and implementing the campaign: $2.2 million. - Cost-effectiveness of the program: $12 per quit.	analysing effect by exposure (i.e. ignoring the original treatment and control groups). The results selected have tried to reflect this latter approach. 2. Since the sequence of events between measurements was not known, causal conclusions with respect to short-term cessation cannot be drawn. 3. Self-reports may represent poor conceptualizations of actual exposure to mass media elements and participation in treatment modalities. The possibility of positive extraneous events was ruled out.
Nelson *et. al.* (1989)	Cohort Study	2-	CEA	1-	**Aim:** To improve participation in smoking cessation programmes through Quit and Win contests **Treatment**: Three broad	Smokers in a blue collar community	One month.	**Public events:** 1983: 297 participants ($21.78/part.) 1984: 191 participants ($11.32/part.) 1985: 133 participants ($19.65/part.) 1986: 129 participants ($7.65/part.) 1987: 93 participants ($7.58/part.)	**Study limitations:** The results of the study are only suggestive as an experimental design was not adopted. People at public events may sign up to get rid of "pesky

First author	Study efficacy[9]		Economics		Research question and design	Population	Follow-up	Results	Confounders, potential sources of bias and other comments
	Type	Qual	Type	Qual					
					types of Quit to Win contests employed: 1. Face-to-face recruitment at a local event **2.** Recruitment using co-ordinators in worksites **3.** Traditional media approaches **Control:** Do nothing. **Setting:** Community, USA (New England). **Length of intervention:** Not stated.			**Worksite recruitment:** 1985: 43 participants ($60.78/part.) 1986: 65 participants ($36.10/part.) 1987: 6 participants ($94.17/part.) **All interventions combined** 1983: 337 participants ($19.20/part.) 1984: 239 participants ($9.05/part.) 1985: 253 participants ($12.30/part.) 1986: 248 participants ($10.43/part.) 1987: 128 participants ($6.28/part.)	recruiters"
Shipley *et al.* (1995)	Cohort study	2+	CEA	1-	**Aim:** To measure the impact of quit-contest programme cost on participation rates **Treatment**: Promotion of community-wide-quit-smoking contests. **Control:** Do nothing **Setting:** Community,	Smokers aged 18+	Eight months	**Participation:** - Contest participation: 0.27% to 3.11% of smokers (mean: 1.25%, sd 0.82%)). **Cost:** - Average total cost to conduct a contest: $24,857 (sd $18,510, range $5,751 - $74,556) - Cost per participant: $78.57 (sd. $33.77) - An increase of one dollar per community smoker in non- prize expenditures is associated with an increase of 0.674 in the participation percentage.	It is difficult to generalise the participation-prediction equations to other community-wide quit-smoking contests.

First author	Study efficacy[9]		Economics		Research question and design	Population	Follow-up	Results	Confounders, potential sources of bias and other comments
	Type	Qual	Type	Qual					
					USA.				

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7.0 Appendix A: inclusion and exclusion of studies

This appendix summarises the sixteen papers included after the review of titles and abstracts (after round two, as reported in section 3.2). .

Author	Intervention	Intervention Type	Incl / excl	Reason excluded
An *et al* (2006)	Smoking cessation	Mailing of free Nicotine Replacement Therapy (NRT – patch or gum, 8-week supply) to callers enrolling in multi-session counselling through QUITLINE.	Yes	
Bains *et al.* (1998)	Smoking cessation	Community or population-based interventions that have used incentives to promote smoking cessation	No	This is a review and the study presents very limited economic data. One study included in the review presents economic data. This study was reviewed separately.
Cummings *et al.* (2006)	Smoking cessation	Interventions to make free nicotine patches and gum available to smokers. • Intervention 1: smokers sent a voucher redeemable at a local pharmacy for a 2-week supply of either nicotine patches or gum. • Intervention 2: smokers received either a 1-week supply or a 2-week supply of nicotine patches sent to their home. • Intervention 3: smokers received a 6-week supply of nicotine patches and a follow-up phone call.	Yes	

Hawk *et al.* (2006)	Smoking cessation	Quit & Win contest and nicotine replacement therapy (NRT) voucher giveaway promotion.	No	No information on £ per increase in Reach/ Access/Use/ Participation/ Availability.
Holtrop (2005)	Smoking cessation	Recruitment to Quitline through, either: • recruitment postcard: • recruitment telephone call	Yes	
Hopkins *et al* (2001)	Smoking cessation	Interventions to Reduce Tobacco Use: (a) Smoking Bans and Restrictions; (b) Community Education to Reduce Exposure to ETS in the Home; (c) Mass Media Campaigns; (d) Increasing the Unit Price for Tobacco Products; (e) Mass Media Education; (f) Health Care Systems and Providers; (g) Multicomponent Interventions That Include Patient Telephone Support	No	This study is a review with no economic data.
Lowey *et al.* (2003)	Smoking cessation	Smoking Cessation services	No	The study does not report any economic data.
Mudde *et al*. (1999)	Smoking cessation	Mass media led smoking cessation campaign among Dutch smokers.	Yes	

Nelson *et al*. (1989)	Smoking cessation	Recruitment to Quit to Win contests through: • Face-to-face recruitment at a local event • Recruitment using co-ordinators in worksites • Traditional media approaches.	Yes	
Reid (2007)	Smoking cessation	Tobacco Control programs.	No	No economic data.
Ronckers (2006)	Smoking cessation	A network of multiple smoking cessation interventions.	No	No economic data
Shipley *et al*. (1995)	Smoking cessation	Community-wide-quit-smoking contests to entice smokers in a Community Intervention Trial (COMMIT) intervention communities to commit to quit smoking.	Yes	
Windsor *et al* (2003)	Smoking cessation	Smoking cessation treatments for pregnant women.	No	No economic data

Blake *et al* (2003)	Statins	Screening followed by statin therapy.	No	Outcome measure not relevant: no change in service awareness, availability, reach or use reported.
Ito (2003)	Statins	Pharmacist in initiation and management of lipid interventions.	No	Outcome measure not relevant: no change in service awareness, availability, reach or use reported.
Lim *et al* (2001)	Statins	Allocating Statins according to the Pharmaceutical Benefits Scheme Criteria.	No	No economic data included. Outcome measure not relevant.

8.0 Appendix B: Data extraction forms

PAPER 1

Author/s and year: Lawrence C An, Barbara A Schillo, Annette M Kavanaugh, Randi B Lachter, Michael G Luxenberg, Ann H Wendling, Anne M Joseph
Title: Increased reach and effectiveness of a statewide tobacco quitline after the addition of access to free nicotine replacement therapy
Source: *Tobacco Control, 15 (2006) 286-293.*

1. Intervention

Type:
☐ Statins
☑ Smoking cessation
☐ Other

Description:
Mailing of free Nicotine Replacement Therapy (NRT – patch or gum) to callers enrolling in multi-session counselling through QUITLINE. Eligible callers were mailed an eight-week supply of nicotine patch or gum with the starting dose determined by their baseline level of tobacco use. The addition of NRT to the helpline was reported by major news outlets, including a front-page story in the state's largest newspaper.

Length (months): 2

Setting: Community

Location: USA (Minnesota)

Who delivers the intervention? Minnesota Partnership for Action Against Tobacco (MPAAT)

Description of control:
Multi-session counselling through QUITLINE: one-call comprehensive session + four proactive calls, including motivational interviewing and cognitive behavioural counselling techniques.

2. Target population

Disadvantaged group:

☑ No
☐ Pregnant women
☐ Manual workers
☐ Individuals with mental health problems
☐ People who are institutionalised (incl. prison)
☐ Black and minority ethnic groups
☐ Homeless people
☐ People on low income
☐ Lone parents
☐ Poor families
☐ People on benefits
☐ People living in public housing

Age (years): 18 years or older**.**

Established CHD or at risk of CHD: Yes ☐ No ☐ Don't know ☑

Smoker: Yes ☑ No ☐ Don't know ☐

NRT was recommended for callers who smoked five or more cigarettes per day, planned to quit within 30 days, were age 18 or older, and did not have contraindications to the use of NRT (such as pregnancy, prior sensitivity, chest pain, etc).

3. Methodology (effectiveness)

Research design:

☐ Systematic review (including just experimental studies)
☐ Systematic review (including any study design)
☐ Randomised Controlled Trial (individual)
☐ Randomised Controlled Trial (cluster)
☐ Controlled non-randomised trial
☐ Controlled before-after
☐ Interrupted time series
☐ Before-after
☐ Cross sectional
☑ Cohort study
☐ Case study

Length of follow-up (months): Six month.

Intention to treat: Yes ☑ No ☐ Don't know ☐

Rate of attrition: 41.3% sample lost between base-line and follow-up

Control for selection bias: Yes ☐ No ☑ Don't know ☐

Significant difference treatment and control groups: Yes ☑ No ☐ Don't know ☐

If yes, control for difference: Yes ☑ No ☐ Don't know ☐

4. Methodology (economics)

Type of economic evaluation:
☐ Cost analysis
☐ Cost consequence analysis
☑ Cost effectiveness analysis
☐ Cost utility analysis
☐ Cost benefit analysis

Perspective (cost valuation):
☐ Social
☑ Public sector
☐ Healthcare
☐ Other
☐ Not stated

Perspective (effect valuation):
☐ Social
☐ Public sector
☐ Healthcare
☐ Other
☐ Not stated
☑ n/a

Incremental analysis? Yes ☑ No ☐ Don't know ☐

Include indirect costs? Yes ☐ No ☑ Don't know ☐

Include capital costs? Yes ☐ No ☐ Don't know ☑

Costs included:
Pre-NRT: these costs are determined by the number of individuals who receive single or single or multi-session counselling (based on contract in place with Free & Clear to provide QUITLINE services)
Post-NRT: costs include both the cost of providing phone counselling and the cost of providing free NRT. [Media expenditures, as media efforts promoted cessation in general and did not specifically mention the availability of NRT from the helpline.]

Costs complete? Yes ☐ No ☑ Don't know ☐

If no, which costs excluded?
Pre-NRT a lot of callers used pharmacological therapy, but these non-programme costs were not included

Method for cost measurement:
☑ Top-down
☐ Bottom-up

Costs valued at market-values? Yes ☐ No ☐ Don't know ☑

Adjust for inflation? Yes ☐ No ☐ Don't know ☑

If yes, base year:

Adjust for discount rates? Yes ☐ No ☐ Don't know ☑

If yes, discount rate:

If data stochastic, was appropriate analysis performed? Yes ☑ No ☐ Don't know ☐

Sensitivity analysis performed? Yes ☐ No ☑ Don't know ☐

Which effects valued? (cost-benefit analysis only)
N/a

5. Results (effectiveness)

Sample size

Pre-NRT: 216
Post-NRT: 219

Effect:

Call volume

Pre-NRT: An average of 155 (sd 75) callers per month registered for QUITPLAN services.
Post-NRT: 679 (sd 180) callers per month registered for QUITPLAN services.
Change: 524 callers per month (95% CI: 323 – 725).

Receipt of NRT

	Pre-NRT		**Post-NRT**		**Change (95% CI)**
	n	**%**	**n**	**%**	
1. Service					
One-call	291	76.6	37	9.9	
Multi-session	89	23.4	336	90.1	66.6 (60.8 – 71.6)
2. Multi-session					
Mean (sd) calls	2.49 (1.62)		2.71 (1.27)		0.22 (-0.15 – 0.59)
Completed > 1 call	74	83.1	319	94.9	11.8 (4.3 – 21.7)
3. NRT use	71	32.9	187	85.4	52.5 (43.8 – 60)
4. Bupropion use	52	24.3	22	10.0	-14.3 (-21.6 – -6.9)
5. Two or more meds	27	12.5	23	10.5	-2.0 (-8.4 – 4.4)

Tobacco abstinence (30 days) outcomes at six months

	Pre-NRT		**Post-NRT**			
	N	**%**	**N**	**%**	**Difference (95%CI)**	**p-value**
Among survey respondents	216		219			
Abstinent 7 days	41	19.0%	81	37.0%	18.0 (9.7 to 26.3)	<.001
Abstinent 30 days	38	17.6	68	31.1	13.5 (5.4 to 21.5)	.001
By intention to treat	380		373			
Abstinent 7 days	41	10.8%	81	21.7%	10.9 (5.5 to 16.3)	<.001
	380		373			
Abstinent 30 days	38	10.0%	68	18.2	8.2 (3.1 to 13.4)	0.001

Logistic regression of 30-days abstinence
Adjusting for baseline characteristics OR: 1.75 (1.09 – 2.83)

Adjusting for baseline characteristics + use of cessation services OR: 1.44 (0.73 – 2.82). [Only stat significant predictor is whether use pharmacotherapy or not – OR: 3.02 (1.56 – 5.86)]

6. Results (economics)

Cost:
Not reported

Value effect
N/a

Value for money
The average cost per caller receiving QUITPLAN services in the pre-NRT evaluation cohorts was $136.17 (sd $61.49). The average cost per caller receiving QUITPLAN services in the post-NRT evaluation cohorts was $352.00 ($109.51). The increased cost per caller post-NRT ($215.83, 95% CI $203.08 to $228.56, p<0.001) is due to an increase in the proportion of callers enrolling in multi-session counselling and the cost of providing free nicotine patch or gum.

Pre-NRT, one in 10 callers quit (30-day abstinence by intention to treat). At a cost of $136.17 per caller, this leads to a pre-NRT cost per quit of $1362 ($207). Post-NRT, approximately one in 5.5 callers quit. At a cost of $352 per caller, this leads to a post-NRT cost per quit of $1934 ($215). There appears to be an increase in the cost per quit post-NRT (+$572) although we cannot conclude this with complete certainty because the confidence interval for this difference includes zero (95% CI - $12 to $1157).

7. Other comments

Are the results generalisable?

Factors affecting ability to implement intervention?

Study limitations

(1) This is an observational study so it is not possible to conclude definitively that increase in call volume or abstinence rates are in fact due to the addition of NRT. The logistic regression model suggests the increase in abstinence was due to greater use of cessation rather than differences in caller characteristics. There were also no changes in cigarette prices, restrictions on public smoking, or the level of paid media encouraging cessation during the study period. However, increased news media coverage of helpline services associated with the addition of NRT, or other non-measured factors post-NRT may have contributes to the changes reported here.
(2) Use of self report of relatively short term abstinence as an outcome measure. Minnesota QUITPLAN Helpline services do not involve face-to-face contact with callers and collection samples for biochemical validation of tobacco use status for this statewide programme was not practical or feasible. However, reviews of prior studies suggest that there is little under-reporting of tobacco use after low contact interventions such as telephone counselling.
(3) The Minnesota QUITPLAN Helpline is just one of many sources of assistance for tobacco users in Minnesota. A population-based evaluation will be needed to determine if increased QUITPLAN Helpline participation represents recruitment of tobacco users would not have otherwise uses NRT and counselling or rather a shift in tobacco users' choice of services from other potential sources of assistance.

PAPER 2

Author/s and year: W. V. S. W. Holtrop JS, 2005.

Title: Recruiting health plan members receiving pharmacotherapy into smoking cessation counseling,

Source: The American journal of managed care, 11 (2005) 501-507.

1. Intervention
Type:
☐ Statins
☑ Smoking cessation
☐ Other

Description:
Recruitment of health plan members filing a claim for smoking cessation pharmacotherapy to increase participation in quitline services. Two forms of recruitment:

- recruitment postcard: sent one of two postcards usually used by the health plan to encourage participation in quitline. Each contained the quitline telephone number and messages about the programme being free of charge and offering 24/7 telephone-based enrolment, nurse counsellor support, and educational tools.
- recruitment telephone call by a nurse quitline counsellor. Not letters sent. The content of the call included a brief motivational message, description of the quitline programme, and an invitation to enrol.

Length (months):
Nurses made up to 4 contact attempts.

Setting: Community

Location: USA

Who delivers the intervention? nurse and admin staff.

Description of control:
Usual communication: passive recruitment in which smokers learn about the quitline from providers or newsletters and self-contact the quitline.

2. Target population

Disadvantaged group:

☑ No
☐ Pregnant women
☐ Manual workers
☐ Individuals with mental health problems
☐ People who are institutionalised (incl. prison)
☐ Black and minority ethnic groups
☐ Homeless people
☐ People on low income
☐ Lone parents
☐ Poor families
☐ People on benefits
☐ People living in public housing

Age (years): All members in the study, the mean age was 49.1 years, sd was 12.6 years. For the Telephone call group (treatment group), mean age was 48.8 years.

Established CHD or at risk of CHD: Yes ☐ No ☐ Don't know ☑

Smoker: Yes ☑ No ☐ Don't know ☐

Study subjects were health plan members who had filled a prescription for smoking cessation pharmacotherapy. Subjects were enrolled in a preferred provider organization or a traditional fee-for service insurance plan and had pharmacy benefit coverage through these plans. Members who did not have health plan coverage for pharmacotherapy or otherwise made out-of-pocket purchases for over-the-counter nicotine replacement products were not considered as subjects for this study.

Persons were considered ineligible for participation in the study if they (1) were a member of the health plan's health maintenance organization (excluded because of recent receipt of postcard mailings encouraging quitline participation, (2) lacked an address or telephone number on file, (3) were previously enrolled in the quitline program, or (4) were a patient of a provider enrolled in a larger ongoing study of smoking cessation interventions.

3. Methodology (effectiveness)

Research design:

☐ Systematic review (including just experimental studies)
☐ Systematic review (including any study design)
☑ Randomised Controlled Trial (individual)
☐ Randomised Controlled Trial (cluster)
☐ Controlled non-randomised trial
☐ Controlled before-after
☐ Interrupted time series
☐ Before-after
☐ Cross sectional
☐ Cohort study
☐ Case study

Length of follow-up (months): 60 days

Intention to treat: Yes ☐ No ☑ Don't know ☐

Rate of attrition:
Not reported

Control for selection bias: Yes ☐ No ☐ Don't know ☑

Significant difference treatment and control groups: Yes ☐ No ☐ Don't know ☑

If yes, control for difference: Yes ☐ No ☐ Don't know ☐

Randomised Controlled Trial
Allocation random: Yes ☑ No ☐ Don't know ☐
Allocation concealed: Yes ☐ No ☐ Don't know ☑
Allocation blind – researcher: Yes ☐ No ☐ Don't know ☑
Allocation blind – participant: Yes ☐ No ☐ Don't know ☑

4. Methodology (economics)

Type of economic evaluation:
☐ Cost analysis
☐ Cost consequence analysis
☑ Cost effectiveness analysis
☐ Cost utility analysis
☐ Cost benefit analysis

Perspective (cost valuation):
☐ Social
☐ Public sector
☑ Healthcare
☐ Other
☐ Not stated

Perspective (effect valuation):
☐ Social
☐ Public sector
☐ Healthcare
☐ Other
☐ Not stated
☑ n/a

Incremental analysis? Yes ☑ No ☐ Don't know ☐

Include indirect costs? Yes ☐ No ☑ Don't know ☐

Include capital costs? Yes ☐ No ☑ Don't know ☑

Costs included:
Nurse time, administrative staff time, cost of supplies (postcard, educational material package).

Costs complete? Yes ☐ No ☐ Don't know ☑

If no, which costs excluded?

Method for cost measurement:
☐ Top-down
☐ Bottom-up
☑ Don't know

Costs valued at market-values? Yes ☑ No ☐ Don't know ☐

Adjust for inflation? Yes ☐ No ☐ Don't know ☑

If yes, base year:

Adjust for discount rates? Yes ☐ No ☐ Don't know ☑

If yes, discount rate:

If data stochastic, was appropriate analysis performed? Yes ☐ No ☑ Don't know ☐

Sensitivity analysis performed? Yes ☐ No ☑ Don't know ☐

Which effects valued? (cost-benefit analysis only)
N/a

5. Results (effectiveness)

Sample size: Refer Flow Chart above in 3.
Control: 157
Postcard: 156
Telephone: 146

Effect:

Enrolment:

(1) Control: 0% enrolled
(2) Postcard: 1.3% (all level 1)
(3) Telephone group: 43.8% (64/146) (15.1 % (22/146) level 1 and 28.8% (42/146) for level 2 (additional educational information and periodic telephone call backs)).
(4) Increased enrolment into the quitline program was significant by randomization group (p<.001).
(5) The enrolled group was significantly older (51.9 vs 48.1 years; p=.03, paired t test) than those not enrolling, although there was no significant difference in the sex distribution.
(6) Other factors that were significantly predictive of quitline enrolment: having quit and relapsed vs remaining smoke free at contact (52.9% vs 19.2% enrolment; p<.001); and reporting a lower vs higher confidence in quitting (mean score, 7.7 vs 8.5; p=.04).

Quit rates

(1) Quit rates were measure only in the telephone call group; at 60 days after enrolment, 4 subjects remained in the quitline program and had quit smoking. The quit rate in this group (18.2% [4/22 entering level 1]) was similar to the usual member reported rates for the program.

6. Results (economics)

Cost:

Table 2. Cost Analysis

Costs	Postcard Group ($)	Telephone Call Group ($)
Sumary of total costs	3389.00	4766.00
Summary of incremental costs	146.50	1523.20
Total costs per outcome		
Single-session contact (level 2)*	—	113.47
Program enrollment contact (level 1)†	1694.63	216.62
Total contact‡	1694.63	74.46
Per actual quit at 2 mo§	—	1191.42
Per estimated quit‖	6778.52	397.17
Incremental costs per outcome		
Single-session contact (level 2)*	—	36.26
Program enrollment contact (level 1)†	73.25	69.22
Total contact‡	73.25	23.80
Per actual quit at 2 mo§	—	380.73
Per estimated quit‖	292.99	126.93

*n = 42.
†n = 24.
‡n = 66.
§n = 4.
‖n = 12.5.

Value effect
N/a

Value for money
See table above

7. Other comments

Are the results generalisable?

Factors affecting ability to implement intervention?

1. The length of time it takes to contact the participant is an issue for other health plans to consider in implementing similar interventions. A lag in contact was largely a result of how current the data were in the pharmacy database. In most health plans, getting pharmacy data less than a week old is problematic. This may have been a factor in the low enrolment.
2. Limited reliability of telephone numbers in health plan database, which adds to the burden of staff who are contacting participants.

Study limitations

(1) Selection bias: the study sample did not include the health maintenance organization members of the health plan, subjects not having smoking cessation cessation pharmacotherapy, and subjects having providers enrolled in a larger ongoing study.
(2) The size of the subject pool was small, and self-report data from the telephone call group did not include a specific time frame regarding cessation experience.
(3) Quit rates were not validated by carbon monoxide or cotinine tests, although research on cessation data by self report is reliable.
(4) Beyond age and sex, additional demographic data were not available, and quit rates and further information on subjects in the control group and the postcard group were not available

PAPER 3

Author/s and year: Nelson, D.J., Lasater, T.M., Niknian, M. and Carloton, R.A. (1989)

Title: Cost effectiveness of different recruitment strategies for self-help smoking cessation programs

Source: Health Education Research Theory and Practice, Vol. 4, No. 1, 1989, pg 79-85.

1. Intervention

Type:
☐ Statins
☑ Smoking cessation
☐ Other

Description:
A variety of recruitment strategies to improve participation in smoking cessation programmes based on the Quit and Win contests (winner determined by lottery drawn from the names of all those who had successfully quit for one month). Participants pledged to quit smoking and maintain their abstinence for four weeks. All entrants received a self-help "quit kit".

- 1983:
  - Face-to-face recruitment efforts during two-days of the annual Octoberfest.
  - Traditional media approaches, e.g., news releases, public service announcements, and a small newspaper advertisement
- 1984
  - Recruitment at Octoberfest – as above
  - PHHP staff encouraged smokers who participated in Heart Check (a multiple risk factor screening with direct participant counselling, education and follow-up) at organisations, such as worksites to enrol in Quit and Win
  - Newspaper article and advertisement and PSAs.
- 1985:
  - Recruitment at Octoberfest – as above
  - Recruitment among employees at individual worksites.
    - Phase 1: PHHP staff members 'sold' Quit and Win to each worksites. Additionally, trained volunteers called 120 worksite contacts and encouraged participation.
    - Phase 2: Recruitment of employees into Quit and Win by the worksite co-ordinators (PHHP volunteers) using promotional materials and suggestions provided by HHP.
- 1986:
  - Recruitment at Octoberfest – as above
  - Letters were mailed to all the companies contacted in 1985. In an effort to establish personal contact with additional companies, a PHHP staff member called 64 of the worksites and followed-up these calls with a more detailed letter to 36 of the companies. Additionally, companies contacted by PHHP staff were offered additional promotional support. PHHP provided the theme "Quit Cold Turkey", encouraging worksites to raffle turkeys to those who quit, and supported it with advance posters, stickers and payroll stuffers.
- 1987:
  - Recruitment at Octoberfest – as above
  - Relied primarily on the recruitment efforts of established worksite contacts. Worksites that offered Quit and Win in 1985 and 1986 were encouraged to offer it again. Staff did not offer extensive training and telephone follow-up as

in previous years. Participating companies has use of posters, entry flyers and balloons.

Length (months): Not stated

Setting: Community

Location: New England, USA

Who delivers the intervention? Pawtucket Hearth Health Program (PHHP) staff, trained volunteers and lay personnel.

Description of control: Do nothing

2. Target population

Disadvantaged group:
☐ No
☐ Pregnant women
☑ Manual workers
☐ Individuals with mental health problems
☐ People who are institutionalised (incl. prison)
☐ Black and minority ethnic groups
☐ Homeless people
☐ People on low income
☐ Lone parents
☐ Poor families
☐ People on benefits
☐ People living in public housing

Intervention implemented in a blue collar community

Age (years): Not stated.

Established CHD or at risk of CHD: Yes ☐ No ☐ Don't know ☑

Smoker: Yes ☑ No ☐ Don't know ☐

3. Methodology (effectiveness)

Research design:

☐ Systematic review (including just experimental studies)
☐ Systematic review (including any study design)
☐ Randomised Controlled Trial (individual)
☐ Randomised Controlled Trial (cluster)
☐ Controlled non-randomised trial
☐ Controlled before-after
☐ Interrupted time series
☐ Before-after
☐ Cross sectional
☑ Cohort study
☐ Case study

Length of follow-up (months): 1 month

Intention to treat: Yes ☐ No ☐ Don't know ☑

Rate of attrition:
N/a

Control for selection bias: Yes ☐ No ☐ Don't know ☑

Significant difference treatment and control groups: Yes ☐ No ☐ Don't know ☑

If yes, control for difference: Yes ☐ No ☐ Don't know ☐

4. Methodology (economics)

Type of economic evaluation:
☐ Cost analysis
☐ Cost consequence analysis
☑ Cost effectiveness analysis
☐ Cost utility analysis
☐ Cost benefit analysis

Perspective (cost valuation):
☐Social
☐ Public sector
☑ Healthcare
☐ Other
☐ Not stated

Perspective (effect valuation):
☐ Social
☐ Public sector
☐ Healthcare
☐ Other
☐ Not stated
☑ n/a

Incremental analysis? Yes ☐ No ☐ Don't know ☑

Include indirect costs? Yes ☐ No ☑ Don't know ☐

Include capital costs? Yes ☐ No ☐ Don't know ☑

Costs included: (1) PHHP staff recruitment time, (2) volunteer tele-marketing time, (3) worksite coordinator recruitment time, (4) costs of promotional and educational material

Costs complete? Yes ☐ No ☑ Don't know ☐

If no, which costs excluded?
Time spent by worksite co-ordinators delivering the program

Method for cost measurement:
☑ Top-down
☐ Bottom-up

Costs valued at market-values? Yes ☐ No ☐ Don't know ☑

Adjust for inflation? Yes ☑ No ☐ Don't know ☐

If yes, base year: 1987

Adjust for discount rates? Yes ☐ No ☐ Don't know ☑

If yes, discount rate:

If data stochastic, was appropriate analysis performed? Yes ☐ No ☐ Don't know ☐

Sensitivity analysis performed? Yes ☐ No ☑ Don't know ☐

Which effects valued? (cost-benefit analysis only)
N/a

5. Results (effectiveness)

Sample size:
N/a

Effect:
See tables in econ results section

6. Results (economics)

Cost:
See table below

Value effect
N/a

Value for money

Table I. *Cost effectiveness of recruitment*

Cost effectiveness	Year				
	1983	1984	1985	1986	1987
Total					
Number of part.	337	239	253	248	128
Cost per part.	$19.20	$9.05	$12.30	$10.43	$6.28
Octoberfest[a]					
Number of part.	297	191	133	129	93
Cost per part.	$21.78	$11.32	$19.65	$7.65	$7.58
Worksites[b]					
Number of part.	NA	NA	43	65	6
Cost per part.	NA	NA	$60.78	$36.10	$94.17

[a]Participants recruited at Octoberfest only.
[b]Participants recruited at worksites only.

Table II. *Cost effectiveness—quitters*

Cost effectiveness	Year				
	1983	1984	1985	1986	1987
Total					
No. of quitters[a]	39(9%)	25(11%)	40(16%)	30(12%)	9(7%)
Cost per quitter	$165.88	$86.54	$77.84	$86.21	$89.44
Octoberfest[b]					
No. of quitters	NA	NA	7	9	2
Cost per quitter	NA	NA	$336.14	$191.08	$352.47
Worksites[b]					
No. of quitters	NA	NA	23	15	2
Cost per quitter	NA	NA	$33.08	$57.78	$282.51

[a]Those who attended post-ecolyzer.
[b]Does not include quitters from other than Octoberfest and worksites.

7. Other comments

Are the results generalisable?

Factors affecting ability to implement intervention?

(1) While those who join the contest generally rely on self help programs in order to quit, it is obvious that the sponsor of the contest must mount a well-planned campaign with

focussed staff time to make recruitment an effective process.

Study limitations

(1) Data collected are not definitive, as they were not gathered in a carefully protocoled experimental design comparing a variety of strategies, they are highly suggestive.
(2) It seems that careful examination of the relative strengths and weaknesses of various sites and recruitment strategies could lead to even more cost effective efforts.
(3) It could be argued that many people at the public event simply signed up to get rid of the pesky recruiters.

PAPER 4

Author/s and year: K. Michael Cummings, Brian Fix, Paula Celestino, Shannon Carlin-Menter, Richard O'Connor, and Andrew Hyland, 2006
Title: Reach, Efficacy, and Cost-effectiveness of Free Nicotine Medication Giveaway Programs
Source: *J Public Health Management Practice*, 2006, 12(1), 37–43

1. Intervention

Type:
☐ Statins
☑ Smoking cessation
☐ Other

Description:
Interventions to make free nicotine patches and gum available to smokers. Smokers' Quitline used to screen and register eligible smokers. The free NRT was advertised through press releases and staged events. In some instances, posters were produced, and newspapers and radio adverts purchased.

- Intervention 1: smokers sent a voucher redeemable at a local pharmacy for a 2-week supply of either nicotine patches or gum.
- Intervention 2: smokers received either a 1-week supply or a 2-week supply of nicotine patches sent to their home.
- Intervention 3: smokers received a 6-week supply of nicotine patches and a follow-up phone call.

All participants mailed an instruction sheet on how to use the medication, a copy of Quitline's *Break Loose* stop smoking program.

Further detail is available in the table below.

TABLE 1 ● Description of the NRT giveaway intervention programs

Intervention	Dates (mo/d/yr) when NRT was available to smokers	Counties/borough	Promotion done to inform smokers of free NRT	Number enroll program
Voucher for 2-wk supply of NRT	February 17 to March 3, 2004	Erie, Niagara	Press release; posters in Eckerd drugs stores; Quit & Win contest	1,099
1-wk supply of nicotine patches	3 Programs December 30, 2003, to March 1, 2004 December 30, 2003, to February 26, 2004 December 30, 2003, to February 10, 2004	Albany, Fulton, Montgomery, Rensselaer, Saratoga, Schenectady, Washington, Warren	Press release and kick-off press conference; paid radio advertising	1,334
2-wk supply of nicotine patches	6 Programs December 30, 2003, to February 5, 2004 January 5 to 7, 2004 January 25 to February 20, 2004 January 5 to 13, 2004 January 5 to February 28, 2004 January 7 to February 3, 2004	Chemung, Delaware, Genesee, Livingston, Monroe, Ontario, Orleans, Otsego, Schoharie, Schuyler, Seneca, Steuben, Wayne, Wyoming Yates	Press release; two print advertisements in the newspaper	2,323
6-wk supply of nicotine patches	April 2 to May 14, 2003	Bronx, Brooklyn, Manhattan, Queens, Staten Island	Press release and kick-off press conference	35,334

Length (months):
See above

Setting:
Community

Location:
New York, USA

Who delivers the intervention?
Not stated

Description of control:
Contact Quitline, but not receive free NRT. Callers received counselling support and a free *Break Loose* cessation guide.

2. Target population

Disadvantaged group:

☑ No
☐ Pregnant women
☐ Manual workers
☐ Individuals with mental health problems
☐ People who are institutionalised (incl. prison)
☐ Black and minority ethnic groups
☐ Homeless people
☐ People on low income
☐ Lone parents
☐ Poor families
☐ People on benefits
☐ People living in public housing

Age (years): 18+

Established CHD or at risk of CHD: Yes ☐ No ☐ Don't know ☑

Smoker: Yes ☑ No ☐ Don't know ☐

Eligibility limited to: current daily smokers of 10 or more cigarettes per day who were willing to make a quit attempt in the next 7 days.

3. Methodology (effectiveness)

Research design:

☐ Systematic review (including just experimental studies)
☐ Systematic review (including any study design)
☐ Randomised Controlled Trial (individual)
☐ Randomised Controlled Trial (cluster)
☐ Controlled non-randomised trial
☐ Controlled before-after
☐ Interrupted time series
☐ Before-after

☐ Cross sectional
☑ Cohort study
☐ Case study

Length of follow-up (months): A telephone follow-up survey of program participants was conducted 4 mths after enrolment in the free NRT giveaway program.

Intention to treat: Yes ☑ No ☐ Don't know ☐

Rate of attrition:

	Voucher 2-wk	Mail 1-wk	Mail 2-wk	Mail 6-wk
Follow-up survey				
# selected to be interviewed	742	721	1,033	1,386
# interviews completed	500	500	500	884
Response rate, %	67	69	48	64
Average duration of follow-up, mo	3.4	2.9	3.1	5.6

Control for selection bias: Yes ☐ No ☑ Don't know ☐
Respondents were slightly younger, more likely to be male, and non-White than non-respondents.

Significant difference treatment and control groups: Yes ☐ No ☐ Don't know ☑

If yes, control for difference: Yes ☑ No ☐ Don't know ☐

4. Methodology (economics)

Type of economic evaluation:
☐ Cost analysis
☐ Cost consequence analysis
☑ Cost effectiveness analysis
☐ Cost utility analysis
☐ Cost benefit analysis

Perspective (cost valuation):
☐ Social
☑ Public sector
☐ Healthcare
☐ Other
☐ Not stated

Perspective (effect valuation):
☐ Social
☐ Public sector
☐ Healthcare
☐ Other
☐ Not stated
☑ Not applicable

Incremental analysis? Yes ☐ No ☐ Don't know ☑

Include indirect costs? Yes ☐ No ☑ Don't know ☐

Include capital as well as operating costs? Yes ☐ No ☑ Don't know ☐

Costs included:
Costs associated with offering NRT and advertising the program. Program cost included those associated with marketing, purchasing, and mailing out the free NRT, and the costs of registering and counselling smokers when they called the Quitline.

Costs complete? Yes ☐ No ☐ Don't know ☑

If no, which costs excluded?

Method for cost measurement:
☐ Top-down
☐ Bottom-up
☑ Not stated

Costs valued at market-values? Yes ☐ No ☐ Don't know ☑

Adjust for inflation? Yes ☐ No ☐ Don't know ☑

If yes, base year:

Adjust for discount rates? Yes ☐ No ☐ Don't know ☑

If yes, discount rate:

If data stochastic, was appropriate analysis performed? Yes ☐ No ☑ Don't know ☐

Sensitivity analysis performed? Yes ☐ No ☑ Don't know ☐

Which effects valued? (cost-benefit analysis only)
n/a

5. Results (effectiveness)

Sample size

Treatment: see above
Control: 515 Quitline callers interviewed in July 2001

Effect:

Programme reach:

TABLE 2 ● Follow-up survey, program reach, and NRT usage for each intervention programs

	Voucher 2-wk	Mail 1-wk	Mail 2-wk	Mail 6-wk

Program reach—Enrollment				
# enrolled	1,099	1,334	2,323	35,334
# smokers in region	199,999	172,660	279,775	735,224
% of smokers enrolled	0.5	0.8	0.8	4.8
Program reach—Average weekly call volume				
4 wk before	63	79	60	552
4 wk during	312	393	931	7,213
4 wk after	71	103	102	539
Ratio				
During/before	5.0	4.97	15.5	13.1
During/after	4.4	3.82	9.13	13.4

Efficacy (use of medication)

TABLE 2 ● Follow-up survey, program reach, and NRT usage for each intervention programs

	Voucher 2-wk	Mail 1-wk	Mail 2-wk	Mail 6-wk
Self-reported use of NRT				
% Received NRT	83	97	99	99
% Used NRT	84	78	81	89
Mean # days used NRT	All–61% >0.5%–22% <0.5%–17%	5	9	21
% Used all NRT	61	56	49	23
% Purchase more NRT	12	22	19	3
% With side effects	31	27	46	52
% Discontinued	3	5	9	8

Efficacy (smoking behaviour)

TABLE 3 ● Quit rates of each free NRT program compared to a similar group of smokers who called the Quitline but did not receive free NRT

Intervention	*N*	% Quit*	RR†	95% CI (lower-upper)
No NRT	422	12	1.0	Referent
Voucher 2-wk	464	27	2.9	1.9–4.4
Mail 1-wk	469	21	2.0	1.3–3.1
Mail 2-wk	472	24	2.4	1.6–3.7
Mail 6-wk	578	33	3.85	2.6–5.7

6. Results (economics)

Cost
Not reported

Value effect
N/a

Value for money
See table below

TABLE 4 ● Quit attempts, quit rates, and cost-effectiveness of intervention programs

	Voucher 2-wk	Mail 1-wk	Mail 2-wk	Mail 6-wk
Smoking behaviors				
% Making quit attempt	86	85	87	90
% Quit at 4 months	27	21	24	33
Cost-effectiveness				
Cost of intervention, $	46,365	38,441	96,826	2.7 million
Cost per smoker enrolled, $	42	29	42	76
# enrollees who quit	301	285	558	11,863
# of quits attributable to NRT	169	125	279	7,770
Cost per extra quit attributable to NRT, $	274	306	347	347

7. Other comments

Are the results generalisable?

Factors affecting ability to implement intervention?

Study limitations
Historic comparison group was used to compare the quit success of Quitcaline callers who got free NRT with the quit success of those who did not is far from perfect. A larger, better controlled study is needed to compare differences in quit rates.

PAPER 5

Authors: Aart N Mudde, PhD, and Hein De Vries, PhD.
Title: The Reach and Effectiveness of a National Mass Media – Led Smoking Cessation Campaign in the Netherlands
Source: American Journal of Public Health, 1999, 89, 3.

1. Intervention

Type:
☐ Statins
☑ Smoking cessation
☐ Other

Description:
Mass media led smoking cessation campaign among Dutch smokers. The "Quit Smoking Together" campaign consisted of a series of informative and entertaining television programs showing famous people trying to quit smoking in various ways (a matching booklet was available at a cost of $3), a TV clinic involving everyday life models (matching manual: $10), local group programs conducted by 73 local and regional organizations (8 meetings; matching manual:$55), a national quit line staffed with trained counsellors, and a comprehensive publicity campaign (advertisements, posters, leaflets, self-help manual, brochure for general practitioners).

Length (months): Not stated

Setting: Community.

Location: Netherlands

Who delivers the intervention? The Dutch Smoking and health Foundation**.**

Description of control:
No media campaign

2. Target population

Disadvantaged group:

☑ No
☐ Pregnant women
☐ Manual workers
☐ Individuals with mental health problems
☐ People who are institutionalised (incl. prison)
☐ Black and minority ethnic groups
☐ Homeless people
☐ People on low income
☐ Lone parents
☐ Poor families
☐ People on benefits
☐ People living in public housing

Age (years): 15+

Established CHD or at risk of CHD: Yes ☐ No ☐ Don't know ☑

Smoker: Yes ☑ No ☐ Don't know ☐

3. Methodology (effectiveness)

Research design:

☐ Systematic review (including just experimental studies)
☐ Systematic review (including any study design)
☐ Randomised Controlled Trial (individual)
☐ Randomised Controlled Trial (cluster)
☐ Controlled non-randomised trial
☐ Controlled before-after
☐ Interrupted time series
☐ Before-after
☐ Cross sectional
☑ Cohort study
☐ Case study

Length of follow-up (months): 12 months

Intention to treat: Yes ☐ No ☐ Don't know ☑

Rate of attrition:
Total sample at post-test: 1613
Total sample at follow-up: 1295

Control for selection bias: Yes ☐ No ☐ Don't know ☑

Significant difference treatment and control groups: Yes ☑ No ☐ Don't know ☐

If yes, control for difference: Yes ☑ No ☐ Don't know ☐

4. Methodology (economics)

Type of economic evaluation:
☐ Cost analysis
☐ Cost consequence analysis
☑ Cost effectiveness analysis
☐ Cost utility analysis
☐ Cost benefit analysis

Perspective (cost valuation):
☐ Social
☑ Public sector
☐ Healthcare
☐ Other

☐ Not stated
☐ N/A

Perspective (effect valuation):
☐ Social
☐ Public sector
☐ Healthcare
☐ Other
☐ Not stated
☑ n/a

Incremental analysis? Yes ☐ No ☑ Don't know ☐

Include indirect costs? Yes ☐ No ☑ Don't know ☐

Include capital costs? Yes ☐ No ☑ Don't know ☐

Costs included:
Development and implementation of the campaign.

Costs complete? Yes ☐ No ☑ Don't know ☐

If no, which costs excluded? Free airtime

Method for cost measurement:
☑ Top-down
☐ Bottom-up

Costs valued at market-values? Yes ☐ No ☐ Don't know ☑

Adjust for inflation? Yes ☐ No ☐ Don't know ☑

If yes, base year:

Adjust for discount rates? Yes ☐ No ☐ Don't know ☑

If yes, discount rate:

If data stochastic, was appropriate analysis performed? Yes ☐ No ☑ Don't know ☐

Sensitivity analysis performed? Yes ☐ No ☑ Don't know ☐

Which effects valued? (cost-benefit analysis only)
N/a

5. Results (effectiveness)

Sample size:
Pre-test: 918
Non-pretest: 377
(However, these groups do not represent those who receive and don't receive the intervention. The difference between these groups is whether they were interviewed before the campaign or not)

Program Reach:

- The campaign was noticed by high percentages of smokers: 88% of the non-pretested smokers recalled the campaign, and 45% could reproduce a name or description of one of the campaign elements.
- More pretested smokers knew of the campaign (OR = 2.34, 95% CI = 1.81, 3.04)
- Campaign elements reached 48% of the non-pretested smokers at least once (based on self reports), mainly by way of the TV elements.

Behavioural Effects:
(The results for the pretest and nonpretest groups have not been extracted, as these don't represent good measures of the campaign and non-campaign groups)

- The frequencies of watching TV shows and TV Clinics were positively related to attempting to quit between the pretest and the posttest (OR = 1.18, 95% CI = 1.08, 1.28, and OR = 1.31, 95% CI = 1.31, 1.52, respectively).
- Quit attempts between the posttest and the follow-up test and abstinence after the campaign and at follow-up were each promoted by watching more TV clinic episodes (OR = 1.37, 5% CI = 1.15, 1.62; OR = 1.21, 95% CI = 1.04, 1.39; and OR = 1.27, 95% CI = 1.09, 1.48, respectively)
- Sustained abstinence was enhanced by recalling more campaign elements (OR = 3.28, 95% CI = 1.65, 6.48) and watching more TV clinic episodes (OR = 1.36, 95% CI = 1.13, 1.65)

6. Results (economics)

Cost:
The additional cost of developing and implementing the campaign: $2.2 million

Value effect
N/a

Value for money
The 4.5% of Dutch smokers (4.15 million individuals) the campaign might have stimulated to quit is equivalent to 187,000 ex-smokers. Based on this estimation, the cost-effectiveness of the program appears to be on the order of $12 per quit.

7. Other comments

Are the results generalisable?

Factors affecting ability to implement intervention?

Study limitations

a. The treatment and control group both receive the intervention (media campaign), but to different extents. This limitation has been offset by analysing effect by exposure (i.e. ignoring the original treatment and control groups). The results selected have tried to reflect this latter approach.
b. Since the sequence of events between measurements was not known, causal conclusions with respect to short-term cessation cannot be drawn. For instance, people who stopped smoking first may have watched TV programs on smoking later.
c. Self-reports are acceptable for the assessment of smoking behaviour. However, they may represent poor conceptualizations of actual exposure to mass media

	elements and participation in treatment modalities. d. In a small country such as the Netherlands, national media have the potential to reach everyone. Therefore it was impossible to incorporate a comparable to control group that would be known before hand not to be exposed. e. The possibility of positive extraneous events was ruled out because the Dutch Smoking and Health Foundation coordinates almost all smoking cessation activities and has contrasts with all other organisations in the field, and therefore it was known that no positive extraneous events took place during the campaign.

PAPER 6
Authors: Shipley RH, Hartwell TD, Austin WD, Clayton AC, Stanley LC.
Title: Community stop-smoking contests in the COMMIT trial: relationship of participation to costs.
Source: Addiction (1995), 24 (3), pp. 286-292.

1. Intervention

Type:
☐ Statins
☑ Smoking cessation
☐ Other

Description: Community-wide-quit-smoking contests to entice smokers in a Community Intervention Trial (COMMIT) intervention communities to commit to quit smoking.

Length (months): 1

Setting: Community.

Location: USA

Who delivers the intervention? Not stated

Description of control: Do nothing

2. Target population

Disadvantaged group:

☑ No
☐ Pregnant women
☐ Manual workers
☐ Individuals with mental health problems
☐ People who are institutionalised (incl. prison)
☐ Black and minority ethnic groups
☐ Homeless people
☐ People on low income
☐ Lone parents
☐ Poor families
☐ People on benefits
☐ People living in public housing

Age (years): 18+

Established CHD or at risk of CHD: Yes ☐ No ☐ Don't know ☑

Smoker: Yes ☑ No ☐ Don't know ☐

3. Methodology (effectiveness)

Research design:

☐ Systematic review (including just experimental studies)
☐ Systematic review (including any study design)
☐ Randomised Controlled Trial (individual)
☐ Randomised Controlled Trial (cluster)
☐ Controlled non-randomised trial
☐ Controlled before-after
☐ Interrupted time series
☐ Before-after
☐ Cross sectional
☑ Cohort study
☐ Case study

Length of follow-up (months): 8

Intention to treat: Yes ☑ No ☐ Don't know ☐

Rate of attrition: 0%

Control for selection bias: Yes ☐ No ☑ Don't know ☐

Significant difference treatment and control groups: Yes ☐ No ☐ Don't know ☑

If yes, control for difference: Yes ☐ No ☑ Don't know ☐

4. Methodology (economics)

Type of economic evaluation:
☐ Cost analysis
☐ Cost consequence analysis
☑ Cost effectiveness analysis
☐ Cost utility analysis
☐ Cost benefit analysis

Perspective (cost valuation):
☐ Social
☑ Public sector
☐ Healthcare
☐ Other
☐ Not stated

Perspective (effect valuation):
☐ Social
☐ Public sector
☐ Healthcare
☐ Other
☐ Not stated
☑ n/a

Incremental analysis? Yes ☑ No ☐ Don't know ☐

Include indirect costs? Yes ☐ No ☑ Don't know ☐

Include capital costs? Yes ☐ No ☑ Don't know ☐

Costs included:
Media advertising, labour time, contest resources (brochure design, printing and distribution, cost of events, design of logo), prize value**.**

Costs complete? Yes ☐ No ☐ Don't know ☑

Method for cost measurement:
☑ Top-down
☐ Bottom-up
☐ Don't know

Costs valued at market-values? Yes ☐ No ☐ Don't know ☑

Adjust for inflation? Yes ☐ No ☐ Don't know ☑

If yes, base year:

Adjust for discount rates? Yes ☐ No ☐ Don't know ☑

If yes, discount rate:

If data stochastic, was appropriate analysis performed? Yes ☑ No ☐ Don't know ☐

Sensitivity analysis performed? Yes ☐ No ☑ Don't know ☐

Which effects valued? (cost-benefit analysis only)
N/a

5. Results (effectiveness)

Participation:

	Mean	s.d	Minimum	Maximum
No. of smokers	21,174	9,613	11,016	42,574
Smoking prevalence	26.4%	4.0%	21.15%	33.26%
Total contest Participation	365	291	65	1,109
Contest participation percentage of smokers	1.25%	0.82%	0.27%	3.11%

6. Results (economics)

Cost:

	Mean	Standard deviation	Minimum	Maximum
Actual COMMIT Dollars Spent	$11,528	$ 8,725	$ 3,451	$18,742
Total Value of Resources Utilized	$24,857	$18,510	$ 5,751	$74,556
COMMIT resources	18,127	14,902	3,600	65,800
Community resources	6,731	5,816	0	20,942
Total prize value	2,634	2,015	520	11,250
COMMIT resources	1,238	655	0	2,570
Community resources	1,396	1,873	0	9,330
Total nonprize value	22,223	17,384	4,251	71,656
Media value	7,298	8,521	0	42,575
COMMIT resources	4,683	7,089	0	37,300
Community resources	2,615	2,940	0	12,913
Labor value	8,350	8,112	1,050	26,700
COMMIT resources	6,600	6,975	600	25,200
Community resources	1,750	2,940	0	15,000
Other value	6,575	5,467	303	18,900
COMMIT resources	5,607	4,694	0	16,822
Community resources	968	1,471	0	5,500
Actual COMMIT Dollars Spent per Total Contest Participant[a]	$ 36.49	$ 13.67	$ 17.21	$ 66.11
Total Value of Resources per Total Contest Participant[a]	$ 78.57	$ 33.77	$ 27.68	$ 154.21
Total Value of Resources per Capita	$ 0.33	$ 0.25	$ 0.06	$ 1.23
Total Value of Resources per Smoker	$ 1.33	$ 1.13	$ 0.22	$ 5.56

An increase of one dollar per community smoker in non- prize expenditures is associated with an increase of 0.674 in the participation percentage.

7. Other comments

Are the results generalisable?

It is difficult to generalise the participation-prediction equations to other community-wide quit-smoking contests. Each contest included in the current analyses was conducted within the context of COMMIT, a comprehensively community intervention. Isolated contests conducted without the support of a large community-wide public health intervention may not fit the model.

Factors affecting ability to implement intervention?

Study limitations

-It would be incorrect to attribute causality between resource variables and contest participation. Controlled studies that manipulate the level of resource variables and measure the effect on participation percentages are needed.

-No sensitivity analysis was performed.

9.0 Appendix C: Health economics appraisal forms

Study		**An et al (2006)**
	Evaluation criteria	**Comments**
1	**Was a well-defined question posed in answerable form?**	**Yes**
1.1	Did the study examine both costs and effects of the service(s) or programme(s)?	Yes
1.2	Did the study involve a comparison of alternatives?	Yes
1.3	Was a viewpoint for the analysis stated and was the study placed in any particular decision-making context?	Yes
2	**Was a comprehensive description of the competing alternatives given (that is, can you tell who? did what? to whom? where? and how often?)?**	**Yes**
2.1	Were any important alternatives omitted?	No
2.2	Was (should) a do-nothing alternative (be) considered?	No
3	**Was the effectiveness of the programmes or services established?**	**Yes**
3.1	Was this done through a randomised, controlled clinical trial? If so, did the trial protocol reflect what would happen in regular practice?	No
3.2	Was effectiveness established through an overview of clinical studies?	No
3.3	Were observational data or assumptions used to established effectiveness?	No
4	**Were all the important and relevant costs and consequences for each alternative identified?**	**No (costs included NRT and counselling, they did not include media expenditure)**
4.1	Was the range wide enough for the research question at hand?	Yes

4.2	Did it cover all relevant viewpoints? (Possible viewpoints include the community or social viewpoint, and those of patients and third-party payers.)	No
4.3	Were capital costs, as well as operating costs, included?	Not clear
5	**Were costs and consequences measured accurately in appropriate physical units (for example, hours of nursing time, number of physician visits, lost work-days, gained life-years)?**	**No detailed information was reported**
5.1	Were any of the identified items omitted from measurement? If so, does this mean that they carried no weight in the subsequent analysis?	Yes
5.2	Were there any special circumstances (for example, joint use of resources) that made measurement difficult? Were these circumstances handled appropriately?	Not clear
6	**Were costs and consequences valued credibly?**	**No**
6.1	Were the sources of all values clearly identified? (Possible sources include market values, patient or client preferences and views, policy-makers' views and health professionals' judgements.)	No
6.2	Were market values employed for changes involving resources gained or depleted?	Not clear
6.3	Where market values were absent (for example, volunteer labour), or did not reflect actual values (for example, clinic space donated at reduced rate), were adjustments made to approximate market values?	Not clear
6.4	Was the valuation of consequences appropriate for the question posed (that is, has the appropriate type or types of analysis – cost-effectiveness, cost-benefit, cost-utility – been selected)?	Yes
7	**Were costs and consequences adjusted for differential timing?**	

7.1	Were costs and consequences which occur in the future 'discounted' to their present values?	
7.2	Was any justification given for the discount rate used?	No
8	**Was an incremental analysis of costs and consequences of alternatives performed?**	**YES**
8.1	Were the additional (incremental) costs generated by one alternative over another compared to the additional effects, benefits or utilities generated?	YES
9	**Was allowance made for uncertainty in the estimates of costs and consequences?**	**YES**
9.1	If data on costs or consequences were stochastic, were appropriate statistical analyses performed?	YES
9.2	Were study results sensitive to changes in the values (within the assumed range for sensitivity analysis, or within the confidence interval around the ratio of costs to consequences)?	Not clear
10	**Did the presentation and discussion of study results include all issues of concern to users?**	**NO**
10.1	Were the conclusions of the analysis based on some overall index or ratio of costs to consequences (for example, cost-effectiveness ratio)?	YES
10.2	Were the results compared with those of others who have investigated the same question? If so, were allowances made for potential differences in study methodology?	NO
10.3	Did the study discuss the generalisability of the results to other settings and patient/client groups?	NO
10.4	Did the study allude to, or take account of, other important factors in the choice or decision under consideration (for example, distribution of costs and consequences, or relevant ethical issues)?	NO
10.5	Did the study discuss issues of implementation, such as the feasibility of adopting the 'preferred' programme	NO

	given existing financial or other constraints, and whether any freed resources could be redeployed to other worthwhile programmes?	
Overall assessment of study		
How well was the study conducted? (++, +, -)		-
Are the results directly applicable to the patient group targeted by this guidance?		The study was carried out in the US and may not be applicable to the UK

Study		**Cummings et al (2006)**
	Evaluation criteria	**Comments**
1	**Was a well-defined question posed in answerable form?**	**YES**
1.1	Did the study examine both costs and effects of the service(s) or programme(s)?	YES
1.2	Did the study involve a comparison of alternatives?	YES
1.3	Was a viewpoint for the analysis stated and was the study placed in any particular decision-making context?	YES
2	**Was a comprehensive description of the competing alternatives given (that is, can you tell who? did what? to whom? where? and how often?)?**	**YES**
2.1	Were any important alternatives omitted?	NO
2.2	Was (should) a do-nothing alternative (be) considered?	NO
3	**Was the effectiveness of the programmes or services established?**	**YES**
3.1	Was this done through a randomised, controlled clinical trial? If so, did the trial protocol reflect what would happen in regular practice?	NO
3.2	Was effectiveness established through an overview of clinical studies?	NO
3.3	Were observational data or assumptions used to established effectiveness? If	NO
4	**Were all the important and relevant costs and consequences for each alternative identified?**	**YES**
4.1	Was the range wide enough for the research question at hand?	YES
4.2	Did it cover all relevant viewpoints? (Possible viewpoints include the community or social viewpoint, and those of patients and third-party payers.)	Not clear

4.3	Were capital costs, as well as operating costs, included?	NO
5	**Were costs and consequences measured accurately in appropriate physical units (for example, hours of nursing time, number of physician visits, lost work-days, gained life-years)?**	**No detailed information was reported**
5.1	Were any of the identified items omitted from measurement? If so, does this mean that they carried no weight in the subsequent analysis?	NO
5.2	Were there any special circumstances (for example, joint use of resources) that made measurement difficult? Were these circumstances handled appropriately?	Not clear
6	**Were costs and consequences valued credibly?**	**Not clear**
6.1	Were the sources of all values clearly identified? (Possible sources include market values, patient or client preferences and views, policy-makers' views and health professionals' judgements.)	NO
6.2	Were market values employed for changes involving resources gained or depleted?	Not clear
6.3	Where market values were absent (for example, volunteer labour), or did not reflect actual values (for example, clinic space donated at reduced rate), were adjustments made to approximate market values?	Not clear
6.4	Was the valuation of consequences appropriate for the question posed (that is, has the appropriate type or types of analysis – cost-effectiveness, cost-benefit, cost-utility – been selected)?	YES
7	**Were costs and consequences adjusted for differential timing?**	**NO**
7.1	Were costs and consequences which occur in the future 'discounted' to their present values?	Not clear
7.2	Was any justification given for the discount rate used?	NO

8	**Was an incremental analysis of costs and consequences of alternatives performed?**	**Not clear**
8.1	Were the additional (incremental) costs generated by one alternative over another compared to the additional effects, benefits or utilities generated?	Not clear
9	**Was allowance made for uncertainty in the estimates of costs and consequences?**	**NO**
9.1	If data on costs or consequences were stochastic, were appropriate statistical analyses performed?	NO
9.2	Were study results sensitive to changes in the values (within the assumed range for sensitivity analysis, or within the confidence interval around the ratio of costs to consequences)?	NO
10	**Did the presentation and discussion of study results include all issues of concern to users?**	**NO**
10.1	Were the conclusions of the analysis based on some overall index or ratio of costs to consequences (for example, cost-effectiveness ratio)?	YES
10.2	Were the results compared with those of others who have investigated the same question? If so, were allowances made for potential differences in study methodology?	NO
10.3	Did the study discuss the generalisability of the results to other settings and patient/client groups?	NO
10.4	Did the study allude to, or take account of, other important factors in the choice or decision under consideration (for example, distribution of costs and consequences, or relevant ethical issues)?	NO
10.5	Did the study discuss issues of implementation, such as the feasibility of adopting the 'preferred' programme given existing financial or other constraints, and whether any freed resources could be redeployed to other worthwhile programmes?	NO

Overall assessment of study	
How well was the study conducted? (++, +, -)	-
Are the results directly applicable to the patient group targeted by this guidance?	The study was carried out in the US and may not be applicable to the UK

Study		**Holtrop (2005)**
	Evaluation criteria	**Comments**
1	**Was a well-defined question posed in answerable form?**	**YES**
1.1	Did the study examine both costs and effects of the service(s) or programme(s)?	YES
1.2	Did the study involve a comparison of alternatives?	YES
1.3	Was a viewpoint for the analysis stated and was the study placed in any particular decision-making context?	YES
2	**Was a comprehensive description of the competing alternatives given (that is, can you tell who? did what? to whom? where? and how often?)?**	**YES**
2.1	Were any important alternatives omitted?	NO
2.2	Was (should) a do-nothing alternative (be) considered?	NO
3	**Was the effectiveness of the programmes or services established?**	
3.1	Was this done through a randomised, controlled clinical trial? If so, did the trial protocol reflect what would happen in regular practice?	YES
3.2	Was effectiveness established through an overview of clinical studies?	NO
3.3	Were observational data or assumptions used to established effectiveness? If	NO
4	**Were all the important and relevant costs and consequences for each alternative identified?**	**YES**
4.1	Was the range wide enough for the research question at hand?	YES
4.2	Did it cover all relevant viewpoints? (Possible viewpoints include the community or social viewpoint, and those of patients and third-party payers.)	NO

4.3	Were capital costs, as well as operating costs, included?	NO
5	**Were costs and consequences measured accurately in appropriate physical units (for example, hours of nursing time, number of physician visits, lost work-days, gained life-years)?**	**YES**
5.1	Were any of the identified items omitted from measurement? If so, does this mean that they carried no weight in the subsequent analysis?	NO
5.2	Were there any special circumstances (for example, joint use of resources) that made measurement difficult? Were these circumstances handled appropriately?	NO
6	**Were costs and consequences valued credibly?**	**YES**
6.1	Were the sources of all values clearly identified? (Possible sources include market values, patient or client preferences and views, policy-makers' views and health professionals' judgements.)	YES
6.2	Were market values employed for changes involving resources gained or depleted?	YES
6.3	Where market values were absent (for example, volunteer labour), or did not reflect actual values (for example, clinic space donated at reduced rate), were adjustments made to approximate market values?	N/A
6.4	Was the valuation of consequences appropriate for the question posed (that is, has the appropriate type or types of analysis – cost-effectiveness, cost-benefit, cost-utility – been selected)?	YES
7	**Were costs and consequences adjusted for differential timing?**	**NO**
7.1	Were costs and consequences which occur in the future 'discounted' to their present values?	Not clear
7.2	Was any justification given for the discount rate used?	NO

8	**Was an incremental analysis of costs and consequences of alternatives performed?**	**YES**
8.1	Were the additional (incremental) costs generated by one alternative over another compared to the additional effects, benefits or utilities generated?	YES
9	**Was allowance made for uncertainty in the estimates of costs and consequences?**	**NO**
9.1	If data on costs or consequences were stochastic, were appropriate statistical analyses performed?	NO
9.2	Were study results sensitive to changes in the values (within the assumed range for sensitivity analysis, or within the confidence interval around the ratio of costs to consequences)?	NOI
10	**Did the presentation and discussion of study results include all issues of concern to users?**	**NO**
10.1	Were the conclusions of the analysis based on some overall index or ratio of costs to consequences (for example, cost-effectiveness ratio)?	YES
10.2	Were the results compared with those of others who have investigated the same question? If so, were allowances made for potential differences in study methodology?	NO
10.3	Did the study discuss the generalisability of the results to other settings and patient/client groups?	NO
10.4	Did the study allude to, or take account of, other important factors in the choice or decision under consideration (for example, distribution of costs and consequences, or relevant ethical issues)?	NO
10.5	Did the study discuss issues of implementation, such as the feasibility of adopting the 'preferred' programme given existing financial or other constraints, and whether any freed resources could be redeployed to other worthwhile programmes?	YES

Overall assessment of study	
How well was the study conducted? (++, +, -)	-
Are the results directly applicable to the patient group targeted by this guidance?	The study was carried out in the US and may not be applicable to the UK

Study		**Mudde et al (1999)**
	Evaluation criteria	**Comments**
1	**Was a well-defined question posed in answerable form?**	**YES**
1.1	Did the study examine both costs and effects of the service(s) or programme(s)?	YES
1.2	Did the study involve a comparison of alternatives?	YES
1.3	Was a viewpoint for the analysis stated and was the study placed in any particular decision-making context?	YES
2	**Was a comprehensive description of the competing alternatives given (that is, can you tell who? did what? to whom? where? and how often?)?**	**NO**
2.1	Were any important alternatives omitted?	Not clear
2.2	Was (should) a do-nothing alternative (be) considered?	YES
3	**Was the effectiveness of the programmes or services established?**	**YES**
3.1	Was this done through a randomised, controlled clinical trial? If so, did the trial protocol reflect what would happen in regular practice?	NO
3.2	Was effectiveness established through an overview of clinical studies?	NO
3.3	Were observational data or assumptions used to established effectiveness? If	NO
4	**Were all the important and relevant costs and consequences for each alternative identified?**	**NO**
4.1	Was the range wide enough for the research question at hand?	NO
4.2	Did it cover all relevant viewpoints? (Possible viewpoints include the community or social viewpoint, and those of patients and third-party payers.)	NO

4.3	Were capital costs, as well as operating costs, included?	NO
5	**Were costs and consequences measured accurately in appropriate physical units (for example, hours of nursing time, number of physician visits, lost work-days, gained life-years)?**	**Not clear**
5.1	Were any of the identified items omitted from measurement? If so, does this mean that they carried no weight in the subsequent analysis?	YES
5.2	Were there any special circumstances (for example, joint use of resources) that made measurement difficult? Were these circumstances handled appropriately?	NO
6	**Were costs and consequences valued credibly?**	**Not clear**
6.1	Were the sources of all values clearly identified? (Possible sources include market values, patient or client preferences and views, policy-makers' views and health professionals' judgements.)	NO
6.2	Were market values employed for changes involving resources gained or depleted?	Not clear
6.3	Where market values were absent (for example, volunteer labour), or did not reflect actual values (for example, clinic space donated at reduced rate), were adjustments made to approximate market values?	Not clear
6.4	Was the valuation of consequences appropriate for the question posed (that is, has the appropriate type or types of analysis – cost-effectiveness, cost-benefit, cost-utility – been selected)?	YES
7	**Were costs and consequences adjusted for differential timing?**	**NO**
7.1	Were costs and consequences which occur in the future 'discounted' to their present values?	Not clear
7.2	Was any justification given for the discount rate used?	NO

8	**Was an incremental analysis of costs and consequences of alternatives performed?**	**NO**
8.1	Were the additional (incremental) costs generated by one alternative over another compared to the additional effects, benefits or utilities generated?	NO
9	**Was allowance made for uncertainty in the estimates of costs and consequences?**	**NO**
9.1	If data on costs or consequences were stochastic, were appropriate statistical analyses performed?	NO
9.2	Were study results sensitive to changes in the values (within the assumed range for sensitivity analysis, or within the confidence interval around the ratio of costs to consequences)?	NO
10	**Did the presentation and discussion of study results include all issues of concern to users?**	**NO**
10.1	Were the conclusions of the analysis based on some overall index or ratio of costs to consequences (for example, cost-effectiveness ratio)?	YES
10.2	Were the results compared with those of others who have investigated the same question? If so, were allowances made for potential differences in study methodology?	NO
10.3	Did the study discuss the generalisability of the results to other settings and patient/client groups?	NO
10.4	Did the study allude to, or take account of, other important factors in the choice or decision under consideration (for example, distribution of costs and consequences, or relevant ethical issues)?	NO
10.5	Did the study discuss issues of implementation, such as the feasibility of adopting the 'preferred' programme given existing financial or other constraints, and whether any freed resources could be redeployed to other worthwhile programmes?	NO

Overall assessment of study	
How well was the study conducted? (++, +, -)	-
Are the results directly applicable to the patient group targeted by this guidance?	The study was carried out in the US and may not be applicable to the UK

Study		**Nelson et al (1989)**
	Evaluation criteria	**Comments**
1	**Was a well-defined question posed in answerable form?**	**YES**
1.1	Did the study examine both costs and effects of the service(s) or programme(s)?	YES
1.2	Did the study involve a comparison of alternatives?	YES
1.3	Was a viewpoint for the analysis stated and was the study placed in any particular decision-making context?	YES
2	**Was a comprehensive description of the competing alternatives given (that is, can you tell who? did what? to whom? where? and how often?)?**	**YES**
2.1	Were any important alternatives omitted?	NO
2.2	Was (should) a do-nothing alternative (be) considered?	NO
3	**Was the effectiveness of the programmes or services established?**	**YES**
3.1	Was this done through a randomised, controlled clinical trial? If so, did the trial protocol reflect what would happen in regular practice?	NO
3.2	Was effectiveness established through an overview of clinical studies?	NO
3.3	Were observational data or assumptions used to established effectiveness? If	NO
4	**Were all the important and relevant costs and consequences for each alternative identified?**	**NO**
4.1	Was the range wide enough for the research question at hand?	NO
4.2	Did it cover all relevant viewpoints? (Possible viewpoints include the community or social viewpoint, and those of patients and third-party payers.)	NO

4.3	Were capital costs, as well as operating costs, included?	Not clear
5	**Were costs and consequences measured accurately in appropriate physical units (for example, hours of nursing time, number of physician visits, lost work-days, gained life-years)?**	**Not clear**
5.1	Were any of the identified items omitted from measurement? If so, does this mean that they carried no weight in the subsequent analysis?	YES
5.2	Were there any special circumstances (for example, joint use of resources) that made measurement difficult? Were these circumstances handled appropriately?	NO
6	**Were costs and consequences valued credibly?**	**Not clear**
6.1	Were the sources of all values clearly identified? (Possible sources include market values, patient or client preferences and views, policy-makers' views and health professionals' judgements.)	NO
6.2	Were market values employed for changes involving resources gained or depleted?	Not clear
6.3	Where market values were absent (for example, volunteer labour), or did not reflect actual values (for example, clinic space donated at reduced rate), were adjustments made to approximate market values?	Not clear
6.4	Was the valuation of consequences appropriate for the question posed (that is, has the appropriate type or types of analysis – cost-effectiveness, cost-benefit, cost-utility – been selected)?	YES
7	**Were costs and consequences adjusted for differential timing?**	**Not clear**
7.1	Were costs and consequences which occur in the future 'discounted' to their present values?	Not clear
7.2	Was any justification given for the discount rate used?	NO

8	**Was an incremental analysis of costs and consequences of alternatives performed?**	**Not clear**
8.1	Were the additional (incremental) costs generated by one alternative over another compared to the additional effects, benefits or utilities generated?	Not clear
9	**Was allowance made for uncertainty in the estimates of costs and consequences?**	**NO**
9.1	If data on costs or consequences were stochastic, were appropriate statistical analyses performed?	NO
9.2	Were study results sensitive to changes in the values (within the assumed range for sensitivity analysis, or within the confidence interval around the ratio of costs to consequences)?	NO
10	**Did the presentation and discussion of study results include all issues of concern to users?**	**NO**
10.1	Were the conclusions of the analysis based on some overall index or ratio of costs to consequences (for example, cost-effectiveness ratio)?	YES
10.2	Were the results compared with those of others who have investigated the same question? If so, were allowances made for potential differences in study methodology?	NO
10.3	Did the study discuss the generalisability of the results to other settings and patient/client groups?	NO
10.4	Did the study allude to, or take account of, other important factors in the choice or decision under consideration (for example, distribution of costs and consequences, or relevant ethical issues)?	NO
10.5	Did the study discuss issues of implementation, such as the feasibility of adopting the 'preferred' programme given existing financial or other constraints, and whether any freed resources could be redeployed to other worthwhile programmes?	YES

Overall assessment of study	
How well was the study conducted? (++, +, -)	-
Are the results directly applicable to the patient group targeted by this guidance?	The study was carried out in the US and may not be applicable to the UK

Study		**Shipley et al (1995)**
	Evaluation criteria	**Comments**
1	**Was a well-defined question posed in answerable form?**	**YES**
1.1	Did the study examine both costs and effects of the service(s) or programme(s)?	YES
1.2	Did the study involve a comparison of alternatives?	NO
1.3	Was a viewpoint for the analysis stated and was the study placed in any particular decision-making context?	YES
2	**Was a comprehensive description of the competing alternatives given (that is, can you tell who? did what? to whom? where? and how often?)?**	**NO**
2.1	Were any important alternatives omitted?	Not clear
2.2	Was (should) a do-nothing alternative (be) considered?	YES
3	**Was the effectiveness of the programmes or services established?**	**YES**
3.1	Was this done through a randomised, controlled clinical trial? If so, did the trial protocol reflect what would happen in regular practice?	NO
3.2	Was effectiveness established through an overview of clinical studies?	NO
3.3	Were observational data or assumptions used to established effectiveness? If	NO
4	**Were all the important and relevant costs and consequences for each alternative identified?**	**YES**
4.1	Was the range wide enough for the research question at hand?	YES
4.2	Did it cover all relevant viewpoints? (Possible viewpoints include the community or social viewpoint, and those of patients and third-party payers.)	YES

4.3	Were capital costs, as well as operating costs, included?	NO
5	**Were costs and consequences measured accurately in appropriate physical units (for example, hours of nursing time, number of physician visits, lost work-days, gained life-years)?**	**Not clear**
5.1	Were any of the identified items omitted from measurement? If so, does this mean that they carried no weight in the subsequent analysis?	NO
5.2	Were there any special circumstances (for example, joint use of resources) that made measurement difficult? Were these circumstances handled appropriately?	NO
6	**Were costs and consequences valued credibly?**	**Not clear**
6.1	Were the sources of all values clearly identified? (Possible sources include market values, patient or client preferences and views, policy-makers' views and health professionals' judgements.)	NO
6.2	Were market values employed for changes involving resources gained or depleted?	Not clear
6.3	Where market values were absent (for example, volunteer labour), or did not reflect actual values (for example, clinic space donated at reduced rate), were adjustments made to approximate market values?	Not clear
6.4	Was the valuation of consequences appropriate for the question posed (that is, has the appropriate type or types of analysis – cost-effectiveness, cost-benefit, cost-utility – been selected)?	YES
7	**Were costs and consequences adjusted for differential timing?**	**Not clear**
7.1	Were costs and consequences which occur in the future 'discounted' to their present values?	Not clear
7.2	Was any justification given for the discount rate used?	NO

8	**Was an incremental analysis of costs and consequences of alternatives performed?**	**YES**
8.1	Were the additional (incremental) costs generated by one alternative over another compared to the additional effects, benefits or utilities generated?	YES
9	**Was allowance made for uncertainty in the estimates of costs and consequences?**	**YES**
9.1	If data on costs or consequences were stochastic, were appropriate statistical analyses performed?	YES
9.2	Were study results sensitive to changes in the values (within the assumed range for sensitivity analysis, or within the confidence interval around the ratio of costs to consequences)?	NO
10	**Did the presentation and discussion of study results include all issues of concern to users?**	**NO**
10.1	Were the conclusions of the analysis based on some overall index or ratio of costs to consequences (for example, cost-effectiveness ratio)?	YES
10.2	Were the results compared with those of others who have investigated the same question? If so, were allowances made for potential differences in study methodology?	NO
10.3	Did the study discuss the generalisability of the results to other settings and patient/client groups?	YES
10.4	Did the study allude to, or take account of, other important factors in the choice or decision under consideration (for example, distribution of costs and consequences, or relevant ethical issues)?	NO
10.5	Did the study discuss issues of implementation, such as the feasibility of adopting the 'preferred' programme given existing financial or other constraints, and whether any freed resources could be redeployed to other worthwhile programmes?	NO

Overall assessment of study	
How well was the study conducted? (++, +, -)	-
Are the results directly applicable to the patient group targeted by this guidance?	The study was carried out in the US and may not be applicable to the UK

10.0 Appendix D: search strategies

10.1 Smoking cessation

Database: Ovid **MEDLINE** Search Strategy:

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1 SMOKING/ (81885)
2 SMOKING CESSATION/ (10442)
3 TOBACCO/ (15915)
4 "TOBACCO USE DISORDER"/ (4039)
5 "TOBACCO USE CESSATION"/ (306)
6 (smoker$ or smoking).ti,ab. (95982)
7 or/1-5 (101283)
8 (nhs service$ or treatment service$).ti,ab. (1346)
9 (equity adj3 access).ti,ab. (333)
10 (equity adj3 audit).ti,ab. (8)
11 health impact assessment.ti,ab. (151)
12 (case adj3 find$).ti,ab. (7219)
13 health action zone$.ti,ab. (37)
14 ((service$ or programme$ or program$ or healthcare or treatment$) adj3 evaluation).ti,ab. (17673)
15 (barrier$ adj5 (delivery or service$ or uptake or access or healthcare or treatment)).ti,ab. (3898)
16 (outcome$ adj3 evaluat$).ti,ab. (11748)
17 (cessation adj3 outcome$).ti,ab. (222)
18 ((unequal or equal) adj3 access).ti,ab. (601)
19 (risk adj3 profile).ti,ab. (3582)
20 (risk factor adj3 detect$).ti,ab. (92)
21 (access$ adj (service$ or programme$ or program$ or care or treatment)).ti,ab. (791)
22 ((service$ or programme$ or program$ or treatment$) adj3 (uptake or provision or evaluation)).ti,ab. (22567)
23 ((retention or retaining) adj3 (people or patient$ or person$ or adult$ or smoker$)).ti,ab. (1876)
24 (market$ adj3 (service$ or programme$ or program$ or treatment$)).ti,ab. (1560)
25 social marketing.ti,ab. (477)
26 ((retention or retaining or complying or compliance) adj3 (service$ or programme$ or program$ or treatment$)).ti,ab. (5317)
27 ((improv$ or promot$ or increas$ or enhanc$ or support$ or encourag$) adj3 (recruitment or retention or compliance or access)).ti,ab. (22354)
28 ((improv$ or promot$ or increas$ or enhanc$ or support$ or encourag$) adj3 (delivery or uptake) adj3 (care or service$ or programme$ or program$ or treatment$)).ti,ab. (1517)
29 (outreach adj3 (care or healthcare or service$ or programme$ or program$ or treatment$)).ti,ab. (1490)
30 (service adj3 (access$ or utilisation or availability or utilization or usage or provision or providing or uptake)).ti,ab. (5353)
31 ((reach$ or target$ or identify$ or find$ or support$ or attract$ or recruit$) adj5 smok$).ti,ab. (4579)
32 (disadvant$ or low income or deprived or deprivation or minority group$ or vulnerable or pregnant or black or homeless or lone parent$ or ethnic minorit$ or underserved or benefit$ recipient$ or social welfare or itinerant$ or traveller$ or gyps$ or learning disability$ or mental health or mental disorder$ or mental illness or institutionali?ed).ti,ab. (287454)
33 (inequality or inequalities or variation$ or inequity or equitable).ti,ab. (266699)
34 (poor or poorer or poorest).ti,ab. (201574)
35 ((low or lowest or lower) adj3 (socioeconomic or education or social class$)).ti,ab. (7952)

36 (debt$ or arrear$ or financial hardship$ or low pay$ or low paid or poverty).ti,ab. (8740)
37 (damp housing$ or poor housing$ or crowding$ or standard of living$).ti,ab. (3807)
38 (lone parent$ or divorce or marital separation or single parent$).ti,ab. (3308)
39 (social adversity or social disparit$).ti,ab. (159)
40 Health Services Accessibility/ (27826)
41 Delivery of Health Care/ (44310)
42 Community Health Services/ (21129)
43 Marketing of Health Services/ or Marketing/ or Social Marketing/ (13832)
44 "Outcome and Process Assessment (Health Care)"/ or Treatment Outcome/ or "Outcome Assessment (Health Care)"/ (329033)
45 Medically Underserved Area/ (3501)
46 Patient compliance/ (31332)
47 or/8-31 (90597)
48 or/32-39 (745395)
49 6 and 47 and 48 (988)
50 or/40-46 (457348)
51 7 and 50 (3388)
52 49 or 51 (4293)
53 limit 52 to yr="1995 - 2007" (3491)
54 exp ECONOMICS/ (375813)
55 exp "Costs and Cost Analysis"/ (129414)
56 exp "Cost Allocation"/ (1801)
57 exp Cost-Benefit Analysis/ (40089)
58 exp "Cost Control"/ (22827)
59 exp "Cost Savings"/ (5703)
60 exp "Cost of Illness"/ (9149)
61 exp "Cost Sharing"/ (2555)
62 exp "Deductibles and Coinsurance"/ (1120)
63 exp Medical Savings Accounts/ (339)
64 exp Health Care Costs/ (28541)
65 exp Direct Service Costs/ (802)
66 exp Drug Costs/ (7948)
67 exp Employer Health Costs/ (964)
68 exp Hospital Costs/ (5236)
69 exp Health Expenditures/ (11188)
70 exp Capital Expenditures/ (1796)
71 exp "Value of Life"/ (4847)
72 exp "Quality of Life"/ (59486)
73 exp Quality-Adjusted Life Years/ (2921)
74 QALY.mp. (1276)
75 exp Economics, Hospital/ (14731)
76 exp Economics, Medical/ (11355)
77 exp Economics, Nursing/ (3741)
78 exp Economics, Pharmaceutical/ (1764)
79 exp BUDGETS/ (9970)
80 exp "Value of Life"/ (4847)
81 (econom$ or cost or costs or costly or costing or price or prices or pricing or pharmaeconomic$).ti,ab. (245796)
82 budget$.ti,ab. (10892)
83 (value adj money).ti,ab. (1)
84 ((low or high or health care) adj cost$).ti,ab. (19242)
85 (fiscal or funding or financial or finance).ti,ab. (40647)
86 (cost$ adj (estimate or variable)).ti,ab. (110)
87 (expenditure$ not energy).ti,ab. (10410)
88 (cost adj (effectiveness or utility or minimization or minimisation or benefit) adj analysis).ti,ab. (5100)

89 or/54-88 (601300)
90 53 and 89 (563)
91 from 90 keep 1-563 (563)

Database: Ovid **EMBASE** - Search Strategy:
---
1 CIGARETTE SMOKING/ (28708)
2 SMOKING/ (46864)
3 SMOKING CESSATION/ or SMOKING CESSATION PROGRAM/ (14439)
4 (smoker$ or smoking).ti,ab. (81553)
5 or/1-3 (81513)
6 (nhs service$ or treatment service$).ti,ab. (1196)
7 (equity adj3 access).ti,ab. (267)
8 (equity adj3 audit).ti,ab. (7)
9 health impact assessment.ti,ab. (144)
10 (case adj3 find$).ti,ab. (5930)
11 health action zone$.ti,ab. (20)
12 ((service$ or programme$ or program$ or healthcare or treatment$) adj3 evaluation).ti,ab. (14390)
13 (barrier$ adj5 (delivery or service$ or uptake or access or healthcare or treatment)).ti,ab. (3277)
14 (outcome$ adj3 evaluat$).ti,ab. (10866)
15 (cessation adj3 outcome$).ti,ab. (190)
16 ((unequal or equal) adj3 access).ti,ab. (455)
17 (risk adj3 profile).ti,ab. (3547)
18 (risk factor adj3 detect$).ti,ab. (77)
19 (access$ adj (service$ or programme$ or program$ or care or treatment)).ti,ab. (632)
20 ((service$ or programme$ or program$ or treatment$) adj3 (uptake or provision or evaluation)).ti,ab. (18492)
21 ((retention or retaining) adj3 (people or patient$ or person$ or adult$ or smoker$)).ti,ab. (1485)
22 (market$ adj3 (service$ or programme$ or program$ or treatment$)).ti,ab. (948)
23 social marketing.ti,ab. (315)
24 ((retention or retaining or complying or compliance) adj3 (service$ or programme$ or program$ or treatment$)).ti,ab. (4877)
25 ((improv$ or promot$ or increas$ or enhanc$ or support$ or encourag$) adj3 (recruitment or retention or compliance or access)).ti,ab. (18858)
26 ((improv$ or promot$ or increas$ or enhanc$ or support$ or encourag$) adj3 (delivery or uptake) adj3 (care or service$ or programme$ or program$ or treatment$)).ti,ab. (1053)
27 (outreach adj3 (care or healthcare or service$ or programme$ or program$ or treatment$)).ti,ab. (1059)
28 (service adj3 (access$ or utilisation or availability or utilization or usage or provision or providing or uptake)).ti,ab. (4486)
29 ((reach$ or target$ or identify$ or find$ or support$ or attract$ or recruit$) adj5 smok$).ti,ab. (3959)
30 (disadvant$ or low income or deprived or deprivation or minority group$ or vulnerable or pregnant or black or homeless or lone parent$ or ethnic minorit$ or underserved or benefit$ recipient$ or social welfare or itinerant$ or traveller$ or gyps$ or learning disability$ or mental health or mental disorder$ or mental illness or institutionali?ed).ti,ab. (222614)
31 (inequality or inequalities or variation$ or inequity or equitable).ti,ab. (217305)
32 (poor or poorer or poorest).ti,ab. (178812)
33 ((low or lowest or lower) adj3 (socioeconomic or education or social class$)).ti,ab. (6417)
34 (debt$ or arrear$ or financial hardship$ or low pay$ or low paid or poverty).ti,ab. (5828)

35 (damp housing$ or poor housing$ or crowding$ or standard of living$).ti,ab. (2301)
36 (lone parent$ or divorce or marital separation or single parent$).ti,ab. (2267)
37 (social adversity or social disparit$).ti,ab. (133)
38 HEALTH CARE DELIVERY/ (34205)
39 HEALTH CARE UTILISATION/ (18499)
40 HEALTH CARE FACILITY/ (9645)
41 MARKETING/ or SOCIAL MARKETING/ (7444)
42 HEALTH CARE ACCESS/ (16606)
43 HEALTH IMPACT ASSESSMENT/ (21)
44 PATIENT COMPLIANCE/ (38085)
45 PATIENT PARTICIPATION/ (1544)
46 TREATMENT REFUSAL/ (1108)
47 REFUSAL TO PARTICIPATE/ (182)
48 OUTCOME ASSESSMENT/ (20258)
49 or/6-29 (76469)
50 or/30-37 (606873)
51 4 and 49 and 50 (898)
52 or/38-48 (134426)
53 5 and 52 (2895)
54 51 or 53 (3689)
55 limit 54 to (english language and yr="1995 - 2007") (3116)
56 exp ECONOMICS/ or exp HEALTH ECONOMICS/ (205532)
57 exp "Cost Benefit Analysis"/ (26140)
58 exp cost effectiveness analysis/ (48752)
59 exp cost control/ (15174)
60 exp cost minimization analysis/ (1136)
61 exp cost of illness/ (3837)
62 exp cost utility analysis/ (1920)
63 exp health care cost/ (88985)
64 exp COST/ (108273)
65 exp health care financing/ (8579)
66 exp drug cost/ (29563)
67 exp hospital cost/ (8216)
68 exp quality of life/ (78394)
69 exp quality adjusted life year/ (2998)
70 QALY.mp. (1268)
71 exp budget/ (6964)
72 (econom$ or cost or costs or costly or costing or price or prices or pricing or pharmaeconomic$).ti,ab. (198916)
73 budget$.mp. (12476)
74 (value adj money).ti,ab. (0)
75 Economic Aspect/ (67337)
76 ((low or high or health$care) adj cost$).ti,ab. (14221)
77 (fiscal or funding or financial or finance).ti,ab. (29251)
78 (cost adj (estimate or variable)).ti,ab. (110)
79 (expenditure$ not energy).ti,ab. (8496)
80 (cost adj (effectiveness or utility or minimi$ation or benefit) adj analysis).ti,ab. (4594)
81 or/56-80 (435038)
82 55 and 81 (859)

Database: Ovid **HMIC** - Search Strategy:
---
1 SMOKING/ (2032)
2 SMOKING CESSATION/ or SMOKING CESSATION PROGRAM/ (783)

3 TOBACCO/ (303)
4 TOBACCO CONSUMPTION/ (68)
5 (smoker$ or smoking).ti,ab. (3700)
6 or/1-4 (2659)
7 (nhs service$ or treatment service$).ti,ab. (612)
8 (equity adj3 access).ti,ab. (167)
9 (equity adj3 audit).ti,ab. (22)
10 health impact assessment.ti,ab. (138)
11 (case adj3 find$).ti,ab. (240)
12 health action zone$.ti,ab. (239)
13 ((service$ or programme$ or program$ or healthcare or treatment$) adj3 evaluation).ti,ab. (1498)
14 (barrier$ adj5 (delivery or service$ or uptake or access or healthcare or treatment)).ti,ab. (542)
15 (outcome$ adj3 evaluat$).ti,ab. (571)
16 (cessation adj3 outcome$).ti,ab. (16)
17 ((unequal or equal) adj3 access).ti,ab. (183)
18 (risk adj3 profile).ti,ab. (42)
19 (risk factor adj3 detect$).ti,ab. (0)
20 (access$ adj (service$ or programme$ or program$ or care or treatment)).ti,ab. (981)
21 ((service$ or programme$ or program$ or treatment$) adj3 (uptake or provision or evaluation)).ti,ab. (5621)
22 ((retention or retaining) adj3 (people or patient$ or person$ or adult$ or smoker$)).ti,ab. (63)
23 (market$ adj3 (service$ or programme$ or program$ or treatment$)).ti,ab. (572)
24 social marketing.ti,ab. (45)
25 ((retention or retaining or complying or compliance) adj3 (service$ or programme$ or program$ or treatment$)).ti,ab. (244)
26 ((improv$ or promot$ or increas$ or enhanc$ or support$ or encourag$) adj3 (recruitment or retention or compliance or access)).ti,ab. (1856)
27 ((improv$ or promot$ or increas$ or enhanc$ or support$ or encourag$) adj3 (delivery or uptake) adj3 (care or service$ or programme$ or program$ or treatment$)).ti,ab. (533)
28 (outreach adj3 (care or healthcare or service$ or programme$ or program$ or treatment$)).ti,ab. (218)
29 (service adj3 (access$ or utilisation or availability or utilization or usage or provision or providing or uptake)).ti,ab. (3196)
30 (disadvant$ or low income or deprived or deprivation or minority group$ or vulnerable or pregnant or black or homeless or lone parent$ or single parent$ or ethnic minorit$ or underserved or benefit$ recipient$ or social welfare or itinerant$ or traveller$ or gyps$ or learning disability$ or mental health or mental disorder$ or mental illness or institutionali?ed).ti,ab. (22448)
31 (inequality or inequalities or variation$ or inequity or equitable).ti,ab. (6944)
32 (poor or poorer or poorest).ti,ab. (4679)
33 ((low or lower or lowest) adj3 (socioeconomic or education or social class$)).ti,ab. (304)
34 (debt$ or arrear$ or financial hardship$ or low pay$ or low paid or poverty).ti,ab. (1863)
35 (damp housing$ or poor housing$ or crowding$ or standard of living$).ti,ab. (154)
36 (lone parent$ or single parents$ or divorce or marital separation).ti,ab. (410)
37 (social adversity or social disparit$).ti,ab. (8)
38 exp HEALTH SERVICE UTILISATION/ or exp PATIENT COMPLIANCE/ (1371)
39 exp SERVICE PROVISION/ or HEALTH SERVICE PROVISION/ (15551)
40 exp MARKETING/ (1018)
41 exp HEALTH OUTCOMES/ (1276)
42 exp EQUITY/ or HEALTH SERVICE MARKETING/ (449)
43 exp ACCESS TO HEALTH SERVICES/ (2858)

44 exp HEALTH IMPACT ASSESSMENT/ (180)
45 exp HEALTH ACTION ZONES/ (220)
46 exp HEALTH SERVICE EVALUATION/ (17)
47 exp PREVENTIVE MEDICINE/ (9585)
48 exp OUTCOME MEASURES/ (360)
49 exp HEALTH INEQUALITIES/ (2736)
50 exp PUBLIC HOUSING/ (125)
51 or/7-29 (12363)
52 or/38-50 (32877)
53 or/30-37 (32567)
54 5 and 51 and 53 (58)
55 6 and 52 (748)
56 54 or 55 (794)
57 limit 56 to yr="1995 - 2007" (646)
58 limit 57 to article (261)
59 exp HOSPITAL ECONOMICS/ or exp ECONOMICS/ or exp HEALTH ECONOMICS/ (4013)
60 exp COSTS/ (3968)
61 exp TREATMENT COSTS/ or exp COMPARATIVE COSTS/ or exp HOSPITAL COSTS/ or exp PRESCRIBING COSTS/ or exp VARIABLE COSTS/ (246)
62 exp "COST CONTROL"/ (788)
63 exp "COST EFFECTIVENESS"/ (2915)
64 exp "COST BENEFIT ANALYSIS"/ (535)
65 exp ECONOMIC EVALUATION/ (784)
66 exp "COST SHARING"/ (6)
67 exp HEALTH EXPENDITURE/ (265)
68 exp "QUALITY OF LIFE"/ (1589)
69 exp QUALITY ADJUSTED LIFE YEARS/ (153)
70 QALY.ti,ab. (215)
71 budget$.ti,ab. or exp BUDGETS/ or exp GENERAL PRACTICE BUDGETS/ (3205)
72 (value adj money).ti,ab. (717)
73 (fiscal or funding or financial or finance).ti,ab. (11904)
74 (cost$ adj (estimate or variable)).ti,ab. (10)
75 (expenditure$ not energy).ti,ab. (2536)
76 (cost adj (effectiveness or utility or minimi$ation or benefit) adj analysis).ti,ab. (572)
77 or/59-76 (27218)
78 58 and 77 (21)

Database: **British Nursing Index** - Search Strategy:
---
1 SMOKING/ (1142)
2 (smoker$ or smoking).ti,ab. (1291)
3 (nhs service$ or treatment service$).ti,ab. (62)
4 (equity adj3 access).ti,ab. (8)
5 (equity adj3 audit).ti,ab. (3)
6 health impact assessment.ti,ab. (11)
7 (case adj3 find$).ti,ab. (15)
8 health action zone$.ti,ab. (40)
9 ((service$ or programme$ or program$ or healthcare or treatment$) adj3 evaluation).ti,ab. (172)
10 (barrier$ adj5 (delivery or service$ or uptake or access or healthcare or treatment)).ti,ab. (101)
11 (outcome$ adj3 evaluat$).ti,ab. (79)
12 (cessation adj3 outcome$).ti,ab. (3)

13 ((unequal or equal) adj3 access).ti,ab. (20)
14 (risk adj3 profile).ti,ab. (3)
15 (risk factor adj3 detect$).ti,ab. (0)
16 (access$ adj (service$ or programme$ or program$ or care or treatment)).ti,ab. (33)
17 ((service$ or programme$ or program$ or treatment$) adj3 (uptake or provision or evaluation)).ti,ab. (532)
18 ((retention or retaining) adj3 (people or patient$ or person$ or adult$ or smoker$)).ti,ab. (13)
19 (market$ adj3 (service$ or programme$ or program$ or treatment$)).ti,ab. (13)
20 social marketing.ti,ab. (11)
21 ((retention or retaining or complying or compliance) adj3 (service$ or programme$ or program$ or treatment$)).ti,ab. (76)
22 ((improv$ or promot$ or increas$ or enhanc$ or support$ or encourag$) adj3 (recruitment or retention or compliance or access)).ti,ab. (448)
23 ((improv$ or promot$ or increas$ or enhanc$ or support$ or encourag$) adj3 (delivery or uptake) adj3 (care or service$ or programme$ or program$ or treatment$)).ti,ab. (41)
24 (outreach adj3 (care or healthcare or service$ or programme$ or program$ or treatment$)).ti,ab. (132)
25 (service adj3 (access$ or utilisation or availability or utilization or usage or provision or providing or uptake)).ti,ab. (357)
26 ((reach$ or target$ or identify$ or find$ or support$ or attract$ or recruit$) adj5 smok$).ti,ab. (75)
27 (disadvant$ or low income or deprived or deprivation or minority group$ or vulnerable or pregnant or black or homeless or lone parent$ or ethnic minorit$ or underserved or benefit$ recipient$ or social welfare or itinerant$ or traveller$ or gyps$ or learning disability$ or mental health or mental disorder$ or mental illness or institutionali?ed).ti,ab. (8987)
28 (inequality or inequalities or variation$ or inequity or equitable).ti,ab. (691)
29 (poor or poorer or poorest).ti,ab. (591)
30 ((low or lowest or lower) adj3 (socioeconomic or education or social class$)).ti,ab. (28)
31 (debt$ or arrear$ or financial hardship$ or low pay$ or low paid or poverty).ti,ab. (234)
32 (damp housing$ or poor housing$ or crowding$ or standard of living$).ti,ab. (10)
33 (lone parent$ or divorce or marital separation or single parent$).ti,ab. (53)
34 (social adversity or social disparit$).ti,ab. (1)
35 exp HEALTH SERVICE PLANNING/ (1410)
36 exp HEALTH PROVISION/ (19616)
37 exp COMMUNITY HEALTH SERVICES/ (2558)
38 exp Health Inequalities/ (620)
39 exp Socioeconomic Factors/ (5211)
40 exp HOUSING/ (129)
41 or/3-26 (1749)
42 or/27-34 (10268)
43 2 and 41 and 42 (14)
44 or/35-40 (24626)
45 1 and 44 (138)
46 43 or 45 (149)
47 exp ECONOMICS/ (0)
48 exp "COSTS AND COST ANALYSIS"/ (0)
49 exp "Cost Benefit Analysis"/ (0)
50 exp "Cost Control"/ (0)
51 exp "Cost Savings"/ (0)
52 exp "Economic Aspects of Illness"/ (0)
53 exp Health Care Costs/ (0)
54 exp Health Facility Costs/ (0)
55 exp "Economic Value of Life"/ (0)

56 "Quality of Life"/ (2135)
57 QALY.mp. (3)
58 Economics, Pharmaceutical/ (0)
59 Financial Management/ (369)
60 Resource Allocation/ (0)
61 (econom$ or cost or costs or costly or price or prices or pricing or pharmaeconomic$).ti,ab. (1653)
62 (value adj money).ti,ab. (0)
63 ((low or high or health$care) adj cost$).ti,ab. (39)
64 (fiscal or funding or financial or finance).ti,ab. (777)
65 (costs adj (estimate or variable)).ti,ab. (0)
66 (expenditure$ not energy).ti,ab. (23)
67 (cost adj (effectiveness or utility or minimi$ation or benefit) adj analysis).ti,ab. (47)
68 or/47-67 (4522)
69 46 and 68 (12)
70 limit 46 to yr="1995 - 2007" (141)
71 68 and 70 (11)

Database: Ovid **PsycINFO** - Search Strategy:
---
1 smoking cessation/ (4397)
2 passive smoking/ (123)
3 tobacco smoking/ (12468)
4 or/1-3 (13911)
5 (nhs service$ or treatment service$).ti,ab. (1485)
6 (equity adj3 access).ti,ab. (90)
7 (equity adj3 audit).ti,ab. (1)
8 health impact assessment.ti,ab. (6)
9 (case adj3 find$).ti,ab. (1084)
10 health action zone$.ti,ab. (8)
11 ((service$ or programme$ or program$ or healthcare or treatment$) adj3 evaluation).ti,ab. (8822)
12 (barrier$ adj5 (delivery or service$ or uptake or access or healthcare or treatment)).ti,ab. (1734)
13 (outcome$ adj3 evaluat$).ti,ab. (3360)
14 (cessation adj3 outcome$).ti,ab. (134)
15 ((unequal or equal) adj3 access).ti,ab. (311)
16 (risk adj3 profile).ti,ab. (323)
17 (risk factor adj3 detect$).ti,ab. (3)
18 (access$ adj (service$ or programme$ or program$ or care or treatment)).ti,ab. (341)
19 ((service$ or programme$ or program$ or treatment$) adj3 (uptake or provision or evaluation)).ti,ab. (11868)
20 ((retention or retaining) adj3 (people or patient$ or person$ or adult$ or smoker$)).ti,ab. (371)
21 (market$ adj3 (service$ or programme$ or program$ or treatment$)).ti,ab. (723)
22 social marketing.ti,ab. (314)
23 ((retention or retaining or complying or compliance) adj3 (service$ or programme$ or program$ or treatment$)).ti,ab. (2506)
24 ((improv$ or promot$ or increas$ or enhanc$ or support$ or encourag$) adj3 (recruitment or retention or compliance or access)).ti,ab. (5773)
25 ((improv$ or promot$ or increas$ or enhanc$ or support$ or encourag$) adj3 (delivery or uptake) adj3 (care or service$ or programme$ or program$ or treatment$)).ti,ab. (497)
26 (outreach adj3 (care or healthcare or service$ or programme$ or program$ or treatment$)).ti,ab. (988)

27 (service adj3 (access$ or utilisation or availability or utilization or usage or provision or providing or uptake)).ti,ab. (3761)
28 ((reach$ or target$ or identify$ or find$ or support$ or attract$ or recruit$) adj5 smok$).ti,ab. (1781)
29 (disadvant$ or low income or deprived or deprivation or minority group$ or vulnerable or pregnant or black or homeless or lone parent$ or ethnic minorit$ or underserved or benefit$ recipient$ or social welfare or itinerant$ or traveller$ or gyps$ or learning disability$ or mental health or mental disorder$ or mental illness or institutionali?ed).ti,ab. (182747)
30 (inequality or inequalities or variation$ or inequity or equitable).ti,ab. (50311)
31 (poor or poorer or poorest).ti,ab. (46058)
32 ((low or lowest or lower) adj3 (socioeconomic or education or social class$)).ti,ab. (4980)
33 (debt$ or arrear$ or financial hardship$ or low pay$ or low paid or poverty).ti,ab. (7303)
34 (damp housing$ or poor housing$ or crowding$ or standard of living$).ti,ab. (1353)
35 (lone parent$ or divorce or marital separation or single parent$).ti,ab. (10092)
36 (social adversity or social disparit$).ti,ab. (99)
37 exp HEALTH CARE SERVICES/ (40695)
38 exp HEALTH CARE DELIVERY/ (17112)
39 exp HEALTH CARE UTILIZATION/ (7617)
40 exp TREATMENT OUTCOMES/ (18043)
41 exp PREVENTIVE MEDICINE/ (1105)
42 exp TREATMENT COMPLIANCE/ (6466)
43 treatment effectiveness evaluation/ (8575)
44 exp disadvantaged/ (4388)
45 exp "equity(social)"/ (1996)
46 exp RISK MANAGEMENT/ (1420)
47 exp AT RISK POPULATIONS/ (20006)
48 or/5-28 (33228)
49 or/29-36 (282943)
50 or/37-47 (110759)
51 4 and 50 (1087)
52 5 and 48 and 49 (545)
53 51 or 52 (1629)
54 limit 53 to (english language and yr="1995 - 2007") (1185)

Database: Ovid **CINAHL** - Search Strategy:
---
1 exp ECONOMICS/ (210252)
2 exp "COSTS AND COST ANALYSIS"/ (22471)
3 exp "Cost Benefit Analysis"/ (5592)
4 exp "Cost Control"/ (5632)
5 exp "Cost Savings"/ (3301)
6 exp "Economic Aspects of Illness"/ (1258)
7 exp Health Care Costs/ (8665)
8 exp Health Facility Costs/ (1020)
9 exp "Economic Value of Life"/ (48)
10 "Quality of Life"/ (15245)
11 QALY.mp. (177)
12 Economics, Pharmaceutical/ (866)
13 Financial Management/ (3381)
14 Resource Allocation/ (214)
15 (econom$ or cost or costs or costly or price or prices or pricing or pharmaeconomic$).ti,ab. (40855)
16 (value adj money).ti,ab. (0)

17 ((low or high or health$care) adj cost$).ti,ab. (2008)
18 (fiscal or funding or financial or finance).ti,ab. (13142)
19 (costs adj (estimate or variable)).ti,ab. (0)
20 (expenditure$ not energy).ti,ab. (1676)
21 (cost adj (effectiveness or utility or minimi$ation or benefit) adj analysis).ti,ab. (663)
22 or/1-21 (245913)
23 SMOKING/ (11223)
24 SMOKING CESSATION/ (4057)
25 TOBACCO/ (1520)
26 (smoker$ or smoking).ti,ab. (12670)
27 or/23-25 (14275)
28 (nhs service$ or treatment service$).ti,ab. (382)
29 (equity adj3 access).ti,ab. (103)
30 (equity adj3 audit).ti,ab. (6)
31 health impact assessment.ti,ab. (37)
32 (case adj3 find$).ti,ab. (485)
33 health action zone$.ti,ab. (44)
34 ((service$ or programme$ or program$ or healthcare or treatment$) adj3 evaluation).ti,ab. (3619)
35 (barrier$ adj5 (delivery or service$ or uptake or access or healthcare or treatment)).ti,ab. (1296)
36 (outcome$ adj3 evaluat$).ti,ab. (2197)
37 (cessation adj3 outcome$).ti,ab. (60)
38 ((unequal or equal) adj3 access).ti,ab. (178)
39 (risk adj3 profile).ti,ab. (423)
40 (risk factor adj3 detect$).ti,ab. (11)
41 (access$ adj (service$ or programme$ or program$ or care or treatment)).ti,ab. (353)
42 ((service$ or programme$ or program$ or treatment$) adj3 (uptake or provision or evaluation)).ti,ab. (5540)
43 ((retention or retaining) adj3 (people or patient$ or person$ or adult$ or smoker$)).ti,ab. (191)
44 (market$ adj3 (service$ or programme$ or program$ or treatment$)).ti,ab. (405)
45 social marketing.ti,ab. (154)
46 ((retention or retaining or complying or compliance) adj3 (service$ or programme$ or program$ or treatment$)).ti,ab. (1075)
47 ((improv$ or promot$ or increas$ or enhanc$ or support$ or encourag$) adj3 (recruitment or retention or compliance or access)).ti,ab. (4511)
48 ((improv$ or promot$ or increas$ or enhanc$ or support$ or encourag$) adj3 (delivery or uptake) adj3 (care or service$ or programme$ or program$ or treatment$)).ti,ab. (586)
49 (outreach adj3 (care or healthcare or service$ or programme$ or program$ or treatment$)).ti,ab. (678)
50 (service adj3 (access$ or utilisation or availability or utilization or usage or provision or providing or uptake)).ti,ab. (2375)
51 ((reach$ or target$ or identify$ or find$ or support$ or attract$ or recruit$) adj5 smok$).ti,ab. (1010)
52 (disadvant$ or low income or deprived or deprivation or minority group$ or vulnerable or pregnant or black or homeless or lone parent$ or ethnic minorit$ or underserved or benefit$ recipient$ or social welfare or itinerant$ or traveller$ or gyps$ or learning disability$ or mental health or mental disorder$ or mental illness or institutionali?ed).ti,ab. (47569)
53 (inequality or inequalities or variation$ or inequity or equitable).ti,ab. (11876)
54 (poor or poorer or poorest).ti,ab. (17779)
55 ((low or lowest or lower) adj3 (socioeconomic or education or social class$)).ti,ab. (1598)
56 (debt$ or arrear$ or financial hardship$ or low pay$ or low paid or poverty).ti,ab. (2526)
57 (damp housing$ or poor housing$ or crowding$ or standard of living$).ti,ab. (252)

58 (lone parent$ or divorce or marital separation or single parent$).ti,ab. (666)
59 (social adversity or social disparit$).ti,ab. (35)
60 HEALTH CARE DELIVERY/ (11018)
61 HEALTH SERVICES ACCESSIBILITY/ (15248)
62 COMMUNITY HEALTH SERVICES/ (6244)
63 MARKETING/ or SOCIAL MARKETING/ (4065)
64 "PROCESS ASSESSMENT(HEALTH CARE)"/ or TREATMENT OUTCOMES/ or OUTCOME ASSESSMENT/ (40670)
65 PREVENTIVE HEALTH CARE/ (3826)
66 MEDICALLY UNDERSERVED AREA/ (234)
67 PATIENT COMPLIANCE/ or HELP SEEKING BEHAVIOR/ (8177)
68 or/28-51 (19428)
69 or/52-59 (75746)
70 or/60-67 (85075)
71 27 and 70 (953)
72 26 and 68 and 69 (259)
73 71 or 72 (1187)
74 limit 73 to (english and yr="1995 - 2007") (1087)
75 22 and 74 (578)

Cochrane Database of Systematic Reviews (CDSR)
Database of Abstracts of Reviews of Effectiveness (DARE)
Cochrane Central Register of Controlled Trials
Medline search strategy was used for the above databases.

ASSIA simplified search strategy
inequalit* or socioeconomic or "social class" or "single parent*" or "lone parent*" or divorce) or deprived or disadvant* or poor or "low income" or "damp housing" or homeless or ethnic minorit* or vulnerable or black)) and smoking or "SMOKING CESSATION" or TOBACCO AND outcome* or NHS service* or treatment or service* or program* or programme* or Delivery or uptake NOT substance use Limited to 1995 -2007

Sociological Abstracts
smoking or smoking-cessation or tobacco) or KW=smoker AND inequalit* or social-class or socioeconomic or single parent* or lone parent* or divorce) or low income or homeless or damp housing or poorest or deprived or disadvant* AND outcome* or NHS service* or treatment* or (service* or program* or programme*) or prevention or uptake or access or treatment outcome Limited to 1995 -2007

SIGLE simplified search strategy
Smoking or smoking cessation or tobacco AND Social class or single parent or lone parent or homeless or low income or socioeconomic or inequality or deprived or deprivation or disadvantaged AND Healthcare or treatment or clinic or health or services or health service Limited to 1995 -2007

Social Policy and Practice simplified search strategy
Smoking or smoking cessation or tobacco AND Social class or single parent or lone parent or homeless or low income or socioeconomic or inequality or deprived or deprivation or disadvantaged AND Healthcare or treatment or clinic or health or services or health service Limited to 1995 -2007

EPPI Centre Databases
No results

Econlit simplified search strategy
Smoking AND disadvantaged or depriv* or social class or low income or social welfare or single parent or socioeconomic status or lone parent or homeless or inequality AND health

NHS EED (NHS Economics Evaluation Database
Smoking or tobacco or smoking cessation AND disadvantaged or depriv* or social class or low income or social welfare or single parent or socioeconomic status or lone parent or homeless or inequality AND health.

Database: **HEED**(**Health Economics Evaluation Database)**
---
1 SMOKING.kw
2 SMOKING CESSATION.kw
3 TOBACCO.kw
4 "TOBACCO USE DISORDER.kw
5 "TOBACCO USE CESSATION.kw
6 (smoker$ or smoking).AX {ie all terms}
7 or/1-5
8 (nhs service$ or treatment service$).ax
9 (equity and access).ax
10 (equity and audit).ax
11 health impact assessment.ax
12 (case and find$).ax
13 health action zone$.ax
14 ((service$ or programme$ or program$ or healthcare or treatment$) and evaluation).ax
15 (barrier$ and (delivery or service$ or uptake or access or healthcare or treatment)).ax
16 (outcome$ and evaluat$).ax.
17 (cessation and outcome$).ax.
18 ((unequal or equal) and access).ax.
19 (risk and profile).ax
20 (risk factor and detect$).ax
21 (access$ and (service$ or programme$ or program$ or care or treatment)).ax
22 ((service$ or programme$ or program$ or treatment$) and (uptake or provision or evaluation)).ax
23 ((retention or retaining) and (people or patient$ or person$ or adult$ or smoker$)).ax
24 (market$ and (service$ or programme$ or program$ or treatment$)).ax
25 social marketing.ax
26 ((retention or retaining or complying or compliance) and (service$ or programme$ or program$ or treatment$)).ax
27 ((improv$ or promot$ or increas$ or enhanc$ or support$ or encourag$) and (recruitment or retention or compliance or access)).ax
28 ((improv$ or promot$ or increas$ or enhanc$ or support$ or encourag$) and (delivery or uptake) and (care or service$ or programme$ or program$ or treatment$)).ax
29 (outreach and (care or healthcare or service$ or programme$ or program$ or treatment$)).ax
30 (service and (access$ or utilisation or availability or utilization or usage or provision or providing or uptake)).ax
31 ((reach$ or target$ or identify$ or find$ or support$ or attract$ or recruit$) and smok$).ax
32 (disadvant$ or low income or deprived or deprivation or minority group$ or vulnerable or pregnant or black or homeless or lone parent$ or ethnic minorit$ or underserved or benefit$ recipient$ or social welfare or itinerant$ or traveller$ or gyps$ or learning disability$ or mental health or mental disorder$ or mental illness or institutionali?ed).ax
33 (inequality or inequalities or variation$ or inequity or equitable).ax
34 (poor or poorer or poorest).ax
35 ((low or lowest or lower) and (socioeconomic or education or social class$)).ax

36 (debt$ or arrear$ or financial hardship$ or low pay$ or low paid or poverty).ax
37 (damp housing$ or poor housing$ or crowding$ or standard of living$).ax
38 (lone parent$ or divorce or marital separation or single parent$).ax
39 (social adversity or social disparit$).ax
40 Health Services Accessibility.kw
41 Delivery of Health Care.kw
42 Community Health Services.kw
43 Marketing of Health Services or Marketing or Social Marketing.kw
44 "Outcome and Process Assessment or Treatment Outcome or Outcome Assessment.kw
45 Medically Underserved Area.kw
46 Patient compliance.kw
47 or/8-39
48 or/40-46
49 yr=1995 – 2007
50 6 and 47 and 49 = 148 hits

10.2 Smoking cessation: supplementary search

OVID databases

1. (equity adj3 access).ti.
2. (equity adj3 audit).ti.
3. (health impact assessment or nhs service$ or treatment service$).ti.
4. ((case adj3 find$) or (equity adj3 access) or (equity adj3 audit)).ti.
5. health action zone$.ti.
6. ((service$ or programme$ or program$ or healthcare or treatment$) adj3 evaluation).ti.
7. (barrier$ adj5 (delivery or service$ or uptake or access or healthcare or treatment)).ti.
8. (outcome$ adj3 evaluat$).ti.
9. (cessation adj3 outcome$).ti.
10. ((unequal or equal) adj3 access).ti.
11. (risk adj3 profile).ti.
12. (risk factor adj3 detect$).ti.
13. ((screening or surveillance) adj3 (risk or diagnos$ or detect$)).ti.
14. (risk adj3 (management or managing)).ti.
15. (primary adj1 prevention).ti.
16. (risk adj3 assess$).ti.
17. (outcome$ adj3 evaluat$).ti.
18. (access adj3 healthcare).ti.
19. (patient compliance or high risk patient$).ti.
20. (detect$ adj3 risk$).ti.
21. (barrier$ adj3 statin$).ti.
22. (access$ adj (service$ or programme$ or program$ or care or treatment)).ti.
23. ((service$ or programme$ or program$ or treatment$) adj3 (uptake or provision or evaluation)).ti.
24. ((retention or retain$) adj3 (people or patient$ or person$ or adult$)).ti.
25. ((reach$ or target$ or find$ or recruit$ or indentif$ or attract$) adj3 smok$).ti.
26. (market$ adj3 (service$ or programme$ or program$ or treatment$)).ti.
27. social marketing.ti.
28. ((retention or retain$ or complying or compliance) adj3 (service$ or programme$ or program$ or treatment$)).ti.
29. ((improv$ or promot$ or increas$ or enhanc$ or support$ or encourag$) adj3 (recruitment or retention or compliance or access)).ti.
30. ((improv$ or promot$ or increas$ or enhanc$ or support$ or encourag$) adj3 (delivery or uptake) adj3 (care or service$ or programme$ or program$ or treatment$)).ti.
31. (outreach adj3 (care or healthcare or service$ or programme$ or program$ or treatment$)).ti.

32. (service adj3 (access$ or utilisation or availability or utilization or usage or provision or providing or uptake)).ti.
33. (PATIENT COMPLIANCE or health status indicator$ or risk assessment).ti.
34. MARKET$.ti.
35. Outcome Assessment.ti.
36. health service utili#ation.ti.
37. (service provision or health service provision).ti.
38. health outcome$.ti.
39. (equity or health service marketing).ti.
40. access to health services.ti.
41. (health impact assessment or treatment outcome or delivery of healthcare or health services accessibility or community health services).ti.
42. health service evaluation.ti.
43. (equity or health service marketing).ti.
44. (smoking or smoker$ or tobacco).ti.
45. or/1-43
46. 44 and 45
47. limit 46 to yr="1995 - 2007"

+ Medline economic filter

1. exp ECONOMICS/
2. exp "Costs and Cost Analysis"/
3. exp "Cost Allocation"/
4. exp Cost-Benefit Analysis/
5. exp "Cost Control"/
6. exp "Cost Savings"/
7. exp "Cost of Illness"/
8. exp "Cost Sharing"/
9. exp "Deductibles and Coinsurance"/
10. exp Medical Savings Accounts/
11. exp Health Care Costs/
12. exp Direct Service Costs/
13. exp Drug Costs/
14. exp Employer Health Costs/
15. exp Hospital Costs/
16. exp Health Expenditures/
17. exp Capital Expenditures/
18. exp "Value of Life"/
19. exp "Quality of Life"/
20. exp Quality-Adjusted Life Years/
21. QALY.mp.
22. exp Economics, Hospital/
23. exp Economics, Medical/
24. exp Economics, Nursing/
25. exp Economics, Pharmaceutical/
26. exp BUDGETS/
27. exp "Value of Life"/
28. (econom$ or cost or costs or costly or costing or price or prices or pricing or pharmaeconomic$).ti,ab
29. budget$.ti,ab.
30. (value adj money).ti,ab.
31. ((low or high or health care) adj cost$).ti,ab.
32. (fiscal or funding or financial or finance).ti,ab.
33. (cost$ adj (estimate or variable)).ti,ab.
34. (expenditure$ not energy).ti,ab.

35. (cost adj (effectiveness or utility or minimization or minimisation or benefit) adj analysis).ti,ab.
36. or/1-35

HEED

1. AX=smok* or tobacco
2. KW= 'SMOKING'
3. CS=1 or 2
4. AB=(delivery or service* or uptake or access or healthcare OR TREATMENT) AND BARRIER*
5. AB=(retention or retaining or compli*) and (service* or program* or treatment* or people or patient*)
6. AB=(service* or program* or healthcare or treatment*) and (evaluation OR UPTAKE OR PROVISION OR MARKET* OR ACcESS)
7. AB=(improv* or promot* or increas* or support* or encourag*) and (compli* or access or program*)
8. AB=service* and (access or utili* or availab* or usage or provi* or uptake)
9. AB=(Screen* or detect* or indentif* or target*) and risk
10. AB=case and find*
11. AB=social marketing
12. AB=equity and access
13. AB=equity and audit
14. AB=health impact assessment or (nhs and service*) or (treatment and service*)
15. AB= (reach* or target* or identify* or find* or support* or attract* or recruit*) and (smok*)
16. CS= 4 or 5 or 6 or 7 or 8 or 9 or 10 or 11 or 12 or 13 or 14 or 15
17. CS=16 and 3

Econlit

S16 S12 and S15
S15 S13 or S14
S14 (ZW “SMOKING”)
S13 (TX (smoking or smoker*)
S12 (S1 or S2 or S3 or S4 or S5 or S6 or S7 or S8 or S9 or S10 or S11)
S11 (reach* or target* or identify* or find* or support* or attract* or recruit*) and (smok*)
S10 health impact assessment or (nhs and service*) or (treatment and service*)
S9 (equity and audit)
S8 (equity and access)
S7 (risk and (identif* or screen* or detect* or diagnos*))
S6 ((service* or program* or care or treatment*) and (evaluation or uptake or prov* or social marketing or access))
S5 TX (access or barrier or case finding)
S4 TX ((retention or retain* or compli*) and (service* or program* or treatment* or people or patient*))
S3 TX ((improv* or promot* or increas* or support* or encourag*) and (compli* or access or program*))
S2 TX (service* and (access or utili* or availab* or usage or provi* or uptake))
S1 ((((((((ZW "ACCESS") or (ZW "ACCESS TO HEALTH CARE")) or ((ZW "MARKETING"))) or ((ZW "HEALTH SERVICES UTILISATION"))) or ((ZW "HEALTH OUTCOMES"))) or ((ZW "EQUITY"))) or ((ZW "HEALTH IMPACT ASSESSMENT"))) or ((ZW "RISK ASSESSMENT")))

NHS EED

#1 service* AND (access OR utili* OR availab* OR usage OR providing OR provision OR uptake)
#2 (retention OR retain* OR compliance OR comply) AND (service* OR program* OR treatment* OR people OR patient*)
#3 (improv* OR promot* OR increas* OR support* OR encourag*) AND (compliance OR comply OR access OR program*)
#4 (service* OR program* OR healthcare OR treatment*) AND (evaluation OR UPTAKE OR providing OR provision OR MARKET* OR ACcESS)
#5 case AND finding
#6 (reach* OR target* OR identify* OR find* OR support* OR attract* OR recruit*) AND (smok*)
#7 #1 or #2 or #3 or #4 or #5 or #6
#8 smoking or smoker* or tobacco
#9 #7 and #8

10.3 Statins

OVID databases

1. cardiovascular disease$.ti.
2. vascular disease$.ti.
3. coronary disease$.ti.
4. heart disease$.ti.
5. CHD.ti.
6. hypercholesterolaemia.ti.
7. cholesterol.ti.
8. hypertension.ti.
9. blood pressure.ti.
10. lipid$.ti.
11. statin$.ti.
12. coronary disease$.ti.
13. cholesterol measurement.ti.
14. or/97-109
15. (equity adj3 access).ti.
16. (equity adj3 audit).ti.
17. health impact assessment.ti.
18. (case adj3 find$).ti.
19. health action zone$.ti.
20. ((service$ or programme$ or program$ or healthcare or treatment$) adj3 evaluation).ti.
21. (barrier$ adj5 (delivery or service$ or uptake or access or healthcare or treatment)).ti.
22. (outcome$ adj3 evaluat$).ti.
23. (cessation adj3 outcome$).ti.
24. ((unequal or equal) adj3 access).ti.
25. ((early adj3 diagnosis) or health check).ti.
26. (early adj3 detection).ti.
27. (risk adj3 profile).ti.
28. (risk indicator adj3 detect$).ti.
29. ((screening or surveillance) adj3 (risk or diagnos$ or detect$)).ti.
30. (risk adj3 (management or managing)).ti.
31. (primary adj1 prevention).ti.
32. (risk adj3 assess$).ti.
33. (outcome$ adj3 evaluat$).ti.
34. (access adj3 healthcare).ti.
35. (patient compliance or high risk patient$).ti.

36. (detect$ adj3 risk$).ti.
37. (barrier$ adj3 statin$).ti.
38. (access$ adj (service$ or programme$ or program$ or care or treatment)).ti.
39. ((service$ or programme$ or program$ or treatment$) adj3 (uptake or provision or evaluation)).ti.
40. ((retention or retain$) adj3 (people or patient$ or person$ or adult$)).ti.
41. ((reach$ or target$ or find$ or recruit$ or identif$ or attract$) adj3 risk$).ti.
42. (market$ adj3 (service$ or programme$ or program$ or treatment$)).ti.
43. social marketing.ti.
44. ((retention or retain$ or complying or compliance) adj3 (service$ or programme$ or program$ or treatment$)).ti.
45. ((improv$ or promot$ or increas$ or enhanc$ or support$ or encourag$) adj3 (recruitment or retention or compliance or access)).ti.
46. ((improv$ or promot$ or increas$ or enhanc$ or support$ or encourag$) adj3 (delivery or uptake) adj3 (care or service$ or programme$ or program$ or treatment$)).ti.
47. (outreach adj3 (care or healthcare or service$ or programme$ or program$ or treatment$)).ti.
48. (service adj3 (access$ or utilisation or availability or utilization or usage or provision or providing or uptake)).ti.
49. (PATIENT COMPLIANCE or health status indicator$ or risk assessment).ti.
50. MARKETING.ti.
51. PREVENTIVE MEDICINE.ti.
52. "Outcome Assessment (Health Care)".ti.
53. health service utili#ation.ti.
54. (service provision or health service provision).ti.
55. health outcome$.ti.
56. (equity or health service marketing).ti.
57. access to health services.ti.
58. health impact assessment.ti.
59. health service evaluation.ti.
60. (equity or health service marketing).ti.
61. or/111-156
62. 157 and 110
63. limit 158 to (english language and yr="1995 - 2007")

MEDLINE

Sensitive search for disadvantaged groups

1. cardiovascular disease$.ti,ab.
2. vascular disease$.ti,ab.
3. coronary disease$.ti,ab.
4. heart disease$.ti,ab.
5. CHD.ti,ab.
6. hypercholesterolaemia.ti,ab.
7. cholesterol.ti,ab.
8. hypertension.ti,ab.
9. blood pressure.ti,ab.
10. lipid$.ti,ab.
11. statin$.ti,ab.
12. coronary disease$.ti,ab.
13. cholesterol measurement.ti,ab.
14. (equity adj3 access).ti,ab.
15. (equity adj3 audit).ti,ab.
16. health impact assessment.ti,ab.
17. (case adj3 find$).ti,ab.
18. health action zone$.ti,ab.
19. ((service$ or programme$ or program$ or healthcare or treatment$) adj3 evaluation).ti,ab.
20. (barrier$ adj5 (delivery or service$ or uptake or access or healthcare or treatment)).ti,ab.
21. (outcome$ adj3 evaluat$).ti,ab.
22. (cessation adj3 outcome$).ti,ab.
23. ((unequal or equal) adj3 access).ti,ab.
24. ((early adj3 diagnosis) or health check).ti,ab.
25. (early adj3 detection).ti,ab.
26. (risk adj3 profile).ti,ab.
27. (risk indicator adj3 detect$).ti,ab.
28. ((screening or surveillance) adj3 (risk or diagnos$ or detect$)).ti,ab.
29. (risk adj3 (management or managing)).ti,ab.
30. (primary adj1 prevention).ti,ab.
31. (risk adj3 assess$).ti,ab.
32. (outcome$ adj3 evaluat$).ti,ab.
33. (access adj3 healthcare).ti,ab.
34. (patient compliance or high risk patient$).ti,ab.
35. (detect$ adj3 risk$).ti,ab.
36. (barrier$ adj3 statin$).ti,ab.
37. (access$ adj (service$ or programme$ or program$ or care or treatment)).ti,ab.
38. ((service$ or programme$ or program$ or treatment$) adj3 (uptake or provision or evaluation)).ti,ab.
39. ((retention or retain$) adj3 (people or patient$ or person$ or adult$)).ti,ab.
40. ((reach$ or target$ or find$ or recruit$ or identif$ or attract$) adj3 risk$).ti,ab.
41. (market$ adj3 (service$ or programme$ or program$ or treatment$)).ti,ab.
42. social marketing.ti,ab.
43. ((retention or retain$ or complying or compliance) adj3 (service$ or programme$ or program$ or treatment$)).ti,ab.
44. ((improv$ or promot$ or increas$ or enhanc$ or support$ or encourag$) adj3 (recruitment or retention or compliance or access)).ti,ab.
45. ((improv$ or promot$ or increas$ or enhanc$ or support$ or encourag$) adj3 (delivery or uptake) adj3 (care or service$ or programme$ or program$ or treatment$)).ti,ab.
46. (outreach adj3 (care or healthcare or service$ or programme$ or program$ or treatment$)).ti,ab.

47. (service adj3 (access$ or utilisation or availability or utilization or usage or provision or providing or uptake)).ti,ab.
48. health service utili#ation.ti,ab.
49. (service provision or health service provision).ti,ab.
50. health outcome$.ti,ab.
51. (equity or health service marketing).ti,ab.
52. access to health services.ti,ab.
53. health impact assessment.ti,ab.
54. health service evaluation.ti,ab.
55. health inequalit$.ti,ab.
56. (disadvant$ or low income or deprived or deprivation or minority group$ or vulnerable or pregnant or black or homeless or lone parent$ or ethnic minorit$ or underserved or benefit$ recipient$ or social welfare or itinerant$ or traveller$ or gyps$ or learning disability$ or mental health or mental disorder$ or mental illness or institutionali?ed).ti,ab.
57. (inequality or inequalities or inequity or equitable).ti,ab.
58. (poor or poorer or poorest).ti,ab.
59. ((low or lowest or lower) adj3 (socioeconomic or education or social class$)).ti,ab.
60. (debt$ or arrear$ or financial hardship$ or low pay$ or low paid or poverty).ti,ab.
61. (damp housing$ or poor housing$ or crowding$ or standard of living$).ti,ab.
62. (lone parent$ or divorce or marital separation or single parent$).ti,ab.
63. (social adversity or social disparit$).ti,ab.
64. unemploy$.ti,ab.
65. or/1-13
66. or/14-54
67. or/55-64
68. 65 and 66 and 67
69. "marketing of health services"/
70. exp "health services accessibility"/
71. exp MARKETING/
72. exp PREVENTIVE MEDICINE/
73. "Outcome Assessment (Health Care)"/
74. or/69-73
75. exp Cholesterol/
76. exp Heart Diseases/
77. exp Cardiovascular Diseases/
78. exp Patient Compliance/
79. or/75-77
80. health status indicators/
81. risk assessment/
82. 78 or 80 or 81 or 74
83. Minority Groups/
84. Medically Underserved Area/
85. social class/
86. poverty/
87. psychosocial deprivation/
88. vulnerable populations/
89. Socioeconomic Factors/
90. MEDICALLY UNDERSERVED AREA/
91. exp PUBLIC HOUSING/
92. educational status/
93. or/83-92
94. 93 and 82 and 79
95. 94 or 68
96. limit 95 to (english language and yr="1995 - 2007")

'OR' with failsafe search
AND with cost effectiveness filter:

1. exp ECONOMICS/
2. exp "Costs and Cost Analysis"/
3. exp "Cost Allocation"/
4. exp Cost-Benefit Analysis/
5. exp "Cost Control"/
6. exp "Cost Savings"/
7. exp "Cost of Illness"/
8. exp "Cost Sharing"/
9. exp "Deductibles and Coinsurance"/
10. exp Medical Savings Accounts/
11. exp Health Care Costs/
12. exp Direct Service Costs/
13. exp Drug Costs/
14. exp Employer Health Costs/
15. exp Hospital Costs/
16. exp Health Expenditures/
17. exp Capital Expenditures/
18. exp "Value of Life"/
19. exp "Quality of Life"/
20. exp Quality-Adjusted Life Years/
21. QALY.mp.
22. exp Economics, Hospital/
23. exp Economics, Medical/
24. exp Economics, Nursing/
25. exp Economics, Pharmaceutical/
26. exp BUDGETS/
27. exp "Value of Life"/
28. (econom$ or cost or costs or costly or costing or price or prices or pricing or pharmaeconomic$).ti,ab
29. budget$.ti,ab.
30. (value adj money).ti,ab.
31. ((low or high or health care) adj cost$).ti,ab.
32. (fiscal or funding or financial or finance).ti,ab.
33. (cost$ adj (estimate or variable)).ti,ab.
34. (expenditure$ not energy).ti,ab.
35. (cost adj (effectiveness or utility or minimization or minimisation or benefit) adj analysis).ti,ab.
36. or/1-35

Limit to English language and 1995 to 2007

EMBASE

1. cardiovascular disease$.ti,ab.
2. vascular disease$.ti,ab.
3. coronary disease$.ti,ab.
4. heart disease$.ti,ab.
5. CHD.ti,ab.
6. hypercholesterolaemia.ti,ab.
7. cholesterol.ti,ab.
8. hypertension.ti,ab.
9. blood pressure.ti,ab.
10. lipid$.ti,ab.
11. statin$.ti,ab.
12. coronary disease$.ti,ab.
13. cholesterol measurement.ti,ab.
14. (equity adj3 access).ti,ab.
15. (equity adj3 audit).ti,ab.
16. health impact assessment.ti,ab.
17. (case adj3 find$).ti,ab.
18. health action zone$.ti,ab.
19. ((service$ or programme$ or program$ or healthcare or treatment$) adj3 evaluation).ti,ab.
20. (barrier$ adj5 (delivery or service$ or uptake or access or healthcare or treatment)).ti,ab.
21. (outcome$ adj3 evaluat$).ti,ab.
22. (cessation adj3 outcome$).ti,ab.
23. ((unequal or equal) adj3 access).ti,ab.
24. ((early adj3 diagnosis) or health check).ti,ab.
25. (early adj3 detection).ti,ab.
26. (risk adj3 profile).ti,ab.
27. (risk indicator adj3 detect$).ti,ab.
28. ((screening or surveillance) adj3 (risk or diagnos$ or detect$)).ti,ab.
29. (risk adj3 (management or managing)).ti,ab.
30. (primary adj1 prevention).ti,ab.
31. (risk adj3 assess$).ti,ab.
32. (outcome$ adj3 evaluat$).ti,ab.
33. (access adj3 healthcare).ti,ab.
34. (patient compliance or high risk patient$).ti,ab.
35. (detect$ adj3 risk$).ti,ab.
36. (barrier$ adj3 statin$).ti,ab.
37. (access$ adj (service$ or programme$ or program$ or care or treatment)).ti,ab.
38. ((service$ or programme$ or program$ or treatment$) adj3 (uptake or provision or evaluation)).ti,ab.
39. ((retention or retain$) adj3 (people or patient$ or person$ or adult$)).ti,ab.
40. ((reach$ or target$ or find$ or recruit$ or identif$ or attract$) adj3 risk$).ti,ab.
41. (market$ adj3 (service$ or programme$ or program$ or treatment$)).ti,ab.
42. social marketing.ti,ab.
43. ((retention or retain$ or complying or compliance) adj3 (service$ or programme$ or program$ or treatment$)).ti,ab.
44. ((improv$ or promot$ or increas$ or enhanc$ or support$ or encourag$) adj3 (recruitment or retention or compliance or access)).ti,ab.
45. ((improv$ or promot$ or increas$ or enhanc$ or support$ or encourag$) adj3 (delivery or uptake) adj3 (care or service$ or programme$ or program$ or treatment$)).ti,ab.
46. (outreach adj3 (care or healthcare or service$ or programme$ or program$ or treatment$)).ti,ab.

47. (service adj3 (access$ or utilisation or availability or utilization or usage or provision or providing or uptake)).ti,ab.
48. health service utili#ation.ti,ab.
49. (service provision or health service provision).ti,ab.
50. health outcome$.ti,ab.
51. (equity or health service marketing).ti,ab.
52. access to health services.ti,ab.
53. health impact assessment.ti,ab.
54. health service evaluation.ti,ab.
55. health inequalit$.ti,ab.
56. (disadvant$ or low income or deprived or deprivation or minority group$ or vulnerable or pregnant or black or homeless or lone parent$ or ethnic minorit$ or underserved or benefit$ recipient$ or social welfare or itinerant$ or traveller$ or gyps$ or learning disability$ or mental health or mental disorder$ or mental illness or institutionali?ed).ti,ab.
57. (inequality or inequalities or inequity or equitable).ti,ab.
58. (poor or poorer or poorest).ti,ab.
59. ((low or lowest or lower) adj3 (socioeconomic or education or social class$)).ti,ab.
60. (debt$ or arrear$ or financial hardship$ or low pay$ or low paid or poverty).ti,ab.
61. (damp housing$ or poor housing$ or crowding$ or standard of living$).ti,ab.
62. (lone parent$ or divorce or marital separation or single parent$).ti,ab.
63. (social adversity or social disparit$).ti,ab.
64. unemploy$.ti,ab.
65. or/1-13
66. or/14-54
67. or/55-64
68. 65 and 66 and 67
69. exp CHOLESTEROL/
70. exp HEART DISEASE/
71. exp CARDIOVASCULAR DISEASE/
72. patient compliance/
73. risk assessment/
74. exp MARKETING/
75. exp preventive medicine/
76. Outcome Assessment/
77. Minority Group/
78. social class/
79. POVERTY/
80. Social Isolation/
81. vulnerable population/
82. socioeconomics/
83. housing/
84. exp Health Care Access/
85. or/69-71
86. 72 or 73 or 74 or 75 or 76 or 84
87. or/77-83
88. 85 and 86 and 87
89. 68 or 88
90. limit 89 to (english language and yr="1995 - 2007")

'OR' with failsafe search
'AND' with Embase economic filter

1. exp ECONOMICS/ or exp HEALTH ECONOMICS/
2. exp "Cost Benefit Analysis"/
3. exp "Cost Effectiveness Analysis"/

4. exp "Cost Control"/
5. exp "Cost Minimization Analysis"/
6. exp "Cost of Illness"/
7. exp "Cost Utility Analysis"/
8. exp "Health Care Cost"/
9. exp "COST"/
10. exp Health Care Financing/
11. exp "Drug Cost"/
12. exp "Hospital Cost"/
13. exp "Quality of Life"/
14. exp Quality Adjusted Life Year/
15. QALY.mp.
16. exp Budget/
17. (econom$ or cost or costs or costly or costing or price or prices or pricing or pharmaeconomic$).ti,ab.
18. budget$.mp.
19. (value adj money).ti,ab.
20. Economic Aspect/
21. ((low or high or health$care) adj cost$).ti,ab.
22. (fiscal or funding or financial or finance).ti,ab.
23. (cost adj (estimate or variable)).ti,ab.
24. (expenditure$ not energy).ti,ab.
25. (cost adj (effectiveness or utility or minimi$ation or benefit) adj analysis).ti,ab.
26. or/1-25

CINAHL

1. cardiovascular disease$.ti,ab.
2. vascular disease$.ti,ab.
3. coronary disease$.ti,ab.
4. heart disease$.ti,ab.
5. CHD.ti,ab.
6. hypercholesterolaemia.ti,ab.
7. cholesterol.ti,ab.
8. hypertension.ti,ab.
9. blood pressure.ti,ab.
10. lipid$.ti,ab.
11. statin$.ti,ab.
12. coronary disease$.ti,ab.
13. cholesterol measurement.ti,ab.
14. (equity adj3 access).ti,ab.
15. (equity adj3 audit).ti,ab.
16. health impact assessment.ti,ab.
17. (case adj3 find$).ti,ab.
18. health action zone$.ti,ab.
19. ((service$ or programme$ or program$ or healthcare or treatment$) adj3 evaluation).ti,ab.
20. (barrier$ adj5 (delivery or service$ or uptake or access or healthcare or treatment)).ti,ab.
21. (outcome$ adj3 evaluat$).ti,ab.
22. (cessation adj3 outcome$).ti,ab.
23. ((unequal or equal) adj3 access).ti,ab.
24. ((early adj3 diagnosis) or health check).ti,ab.
25. (early adj3 detection).ti,ab.
26. (risk adj3 profile).ti,ab.
27. (risk indicator adj3 detect$).ti,ab.
28. ((screening or surveillance) adj3 (risk or diagnos$ or detect$)).ti,ab.
29. (risk adj3 (management or managing)).ti,ab.
30. (primary adj1 prevention).ti,ab.
31. (risk adj3 assess$).ti,ab.
32. (outcome$ adj3 evaluat$).ti,ab.
33. (access adj3 healthcare).ti,ab.
34. (patient compliance or high risk patient$).ti,ab.
35. (detect$ adj3 risk$).ti,ab.
36. (barrier$ adj3 statin$).ti,ab.
37. (access$ adj (service$ or programme$ or program$ or care or treatment)).ti,ab.
38. ((service$ or programme$ or program$ or treatment$) adj3 (uptake or provision or evaluation)).ti,ab.
39. ((retention or retain$) adj3 (people or patient$ or person$ or adult$)).ti,ab.
40. ((reach$ or target$ or find$ or recruit$ or identif$ or attract$) adj3 risk$).ti,ab.
41. (market$ adj3 (service$ or programme$ or program$ or treatment$)).ti,ab.
42. social marketing.ti,ab.
43. ((retention or retain$ or complying or compliance) adj3 (service$ or programme$ or program$ or treatment$)).ti,ab.
44. ((improv$ or promot$ or increas$ or enhanc$ or support$ or encourag$) adj3 (recruitment or retention or compliance or access)).ti,ab.
45. ((improv$ or promot$ or increas$ or enhanc$ or support$ or encourag$) adj3 (delivery or uptake) adj3 (care or service$ or programme$ or program$ or treatment$)).ti,ab.
46. (outreach adj3 (care or healthcare or service$ or programme$ or program$ or treatment$)).ti,ab.
47. (service adj3 (access$ or utilisation or availability or utilization or usage or provision or providing or uptake)).ti,ab.
48. health service utili#ation.ti,ab.
49. (service provision or health service provision).ti,ab.

50. health outcome$.ti,ab.
51. (equity or health service marketing).ti,ab.
52. access to health services.ti,ab.
53. health impact assessment.ti,ab.
54. health service evaluation.ti,ab.
55. health inequalit$.ti,ab.
56. (disadvant$ or low income or deprived or deprivation or minority group$ or vulnerable or pregnant or black or homeless or lone parent$ or ethnic minorit$ or underserved or benefit$ recipient$ or social welfare or itinerant$ or traveller$ or gyps$ or learning disability$ or mental health or mental disorder$ or mental illness or institutionali?ed).ti,ab.
57. (inequality or inequalities or inequity or equitable).ti,ab.
58. (poor or poorer or poorest).ti,ab.
59. ((low or lowest or lower) adj3 (socioeconomic or education or social class$)).ti,ab.
60. (debt$ or arrear$ or financial hardship$ or low pay$ or low paid or poverty).ti,ab.
61. (damp housing$ or poor housing$ or crowding$ or standard of living$).ti,ab.
62. (lone parent$ or divorce or marital separation or single parent$).ti,ab.
63. (social adversity or social disparit$).ti,ab.
64. unemploy$.ti,ab.
65. or/1-13
66. or/14-54
67. or/55-64
68. 65 and 66 and 67
69. exp Cholesterol/
70. exp heart diseases/
71. exp cardiovascular diseases/
72. or/69-71
73. patient compliance/
74. health status indicators/
75. risk assessment/
76. exp MARKETING/
77. exp preventive medicine/
78. exp Health Services Accessibility/
79. or/73-78
80. Minority groups/
81. medically underserved area/
82. social class/
83. poverty/ or poverty areas/
84. psychosocial deprivation/
85. special populations/
86. socioeconomic factors/
87. medically underserved area/
88. public housing/
89. Educational Status/
90. or/80-89
91. 90 and 79 and 72
92. 91 or 68
93. limit 92 to (english language and yr="1995 - 2007")

'OR' with failsafe search
'AND' with Cinahl economic filter:

1. exp ECONOMICS/
2. exp "COSTS AND COST ANALYSIS"/
3. exp "Cost Benefit Analysis"/
4. exp "Cost Control"/
5. exp "Cost Savings"/
6. exp "Economic Aspects of Illness"/
7. exp Health Care Costs/
8. exp Health Facility Costs/
9. exp "Economic Value of Life"/
10. "Quality of Life"/
11. QALY.mp.
12. Economics, Pharmaceutical/
13. Financial Management/
14. Resource Allocation/
15. (econom$ or cost or costs or costly or price or prices or pricing or pharmaeconomic$).ti,ab.
17. (value adj money).ti,ab.
18. ((low or high or health$care) adj cost$).ti,ab.
19. (fiscal or funding or financial or finance).ti,ab.
20. (costs adj (estimate or variable)).ti,ab.
21. (expenditure$ not energy).ti,ab.
22. (cost adj (effectiveness or utility or minimi$ation or benefit) adj analysis).ti,ab.
23. or/1-22

Limit to: English language and 1995 to 2007

British Nursing Index

Search History

1. cardiovascular disease$.ti,ab.
2. vascular disease$.ti,ab.
3. coronary disease$.ti,ab.
4. heart disease$.ti,ab.
5. CHD.ti,ab.
6. hypercholesterolaemia.ti,ab.
7. cholesterol.ti,ab.
8. hypertension.ti,ab.
9. blood pressure.ti,ab.
10. lipid$.ti,ab.
11. statin$.ti,ab.
12. coronary disease$.ti,ab.
13. cholesterol measurement.ti,ab.
14. (equity adj3 access).ti,ab.
15. (equity adj3 audit).ti,ab.
16. health impact assessment.ti,ab.
17. (case adj3 find$).ti,ab.
18. health action zone$.ti,ab.
19. ((service$ or programme$ or program$ or healthcare or treatment$) adj3 evaluation).ti,ab.
20. (barrier$ adj5 (delivery or service$ or uptake or access or healthcare or treatment)).ti,ab.
21. (outcome$ adj3 evaluat$).ti,ab.
22. (cessation adj3 outcome$).ti,ab.
23. ((unequal or equal) adj3 access).ti,ab.
24. ((early adj3 diagnosis) or health check).ti,ab.
25. (early adj3 detection).ti,ab.
26. (risk adj3 profile).ti,ab.
27. (risk indicator adj3 detect$).ti,ab.
28. ((screening or surveillance) adj3 (risk or diagnos$ or detect$)).ti,ab.
29. (risk adj3 (management or managing)).ti,ab.
30. (primary adj1 prevention).ti,ab.
31. (risk adj3 assess$).ti,ab.
32. (outcome$ adj3 evaluat$).ti,ab.
33. (access adj3 healthcare).ti,ab.
34. (patient compliance or high risk patient$).ti,ab.
35. (detect$ adj3 risk$).ti,ab.
36. (barrier$ adj3 statin$).ti,ab.
37. (access$ adj (service$ or programme$ or program$ or care or treatment)).ti,ab.
38. ((service$ or programme$ or program$ or treatment$) adj3 (uptake or provision or evaluation)).ti,ab.
39. ((retention or retain$) adj3 (people or patient$ or person$ or adult$)).ti,ab.
40. ((reach$ or target$ or find$ or recruit$ or identif$ or attract$) adj3 risk$).ti,ab.
41. (market$ adj3 (service$ or programme$ or program$ or treatment$)).ti,ab.
42. social marketing.ti,ab.
43. ((retention or retain$ or complying or compliance) adj3 (service$ or programme$ or program$ or treatment$)).ti,ab.
44. ((improv$ or promot$ or increas$ or enhanc$ or support$ or encourag$) adj3 (recruitment or retention or compliance or access)).ti,ab.
45. ((improv$ or promot$ or increas$ or enhanc$ or support$ or encourag$) adj3 (delivery or uptake) adj3 (care or service$ or programme$ or program$ or treatment$)).ti,ab.
46. (outreach adj3 (care or healthcare or service$ or programme$ or program$ or treatment$)).ti,ab.
47. (service adj3 (access$ or utilisation or availability or utilization or usage or provision or providing or uptake)).ti,ab.
48. health service utili#ation.ti,ab.

49. (service provision or health service provision).ti,ab.
50. health outcome$.ti,ab.
51. (equity or health service marketing).ti,ab.
52. access to health services.ti,ab.
53. health impact assessment.ti,ab.
54. health service evaluation.ti,ab.
55. or/1-13
56. or/14-54
57. 55 and 56
58. exp Heart Disorders/
59. exp "CARDIOVASCULAR DISORDERS PREVENTION AND SCREENING"/
60. exp vascular disorders/
61. or/58-60
62. exp patients compliance/
63. exp "Contracts and Marketing"/
64. SCREENING/
65. health promotion/
66. Risk Management/
67. or/62-66
68. 67 and 61
69. 68 or 57
70. limit 69 to yr="1995 - 2007"
71. from 70 keep 1-197

'OR' with failsafe search
'AND' with BNI economic filter

1 exp ECONOMICS/
2 exp "COSTS AND COST ANALYSIS"/
3 exp "Cost Benefit Analysis"/
4 exp "Cost Control"/
5 exp "Cost Savings"/
6 exp "Economic Aspects of Illness"/
7 exp Health Care Costs/
8 exp Health Facility Costs/
9 exp "Economic Value of Life"/
10 "Quality of Life"/
11 QALY.mp.
12 Economics, Pharmaceutical/
13 Financial Management/
14 Resource Allocation/
15 (econom$ or cost or costs or costly or price or prices or pricing or pharmaeconomic$).ti,ab.
16 (value adj money).ti,ab.
17 ((low or high or health$care) adj cost$).ti,ab.
18 (fiscal or funding or financial or finance).ti,ab.
19 (costs adj (estimate or variable)).ti,ab.
20 (expenditure$ not energy).ti,ab.
21 (cost adj (effectiveness or utility or minimi$ation or benefit) adj analysis).ti,ab.
22 or/1-21 limit to yr="1995 - 2007"

HMIC

1. cardiovascular disease$.ti,ab.
2. vascular disease$.ti,ab.
3. coronary disease$.ti,ab.
4. heart disease$.ti,ab.

5. CHD.ti,ab.
6. hypercholesterolaemia.ti,ab.
7. cholesterol.ti,ab.
8. hypertension.ti,ab.
9. blood pressure.ti,ab.
10. lipid$.ti,ab.
11. statin$.ti,ab.
12. coronary disease$.ti,ab.
13. cholesterol measurement.ti,ab.
14. (equity adj3 access).ti,ab.
15. (equity adj3 audit).ti,ab.
16. health impact assessment.ti,ab.
17. (case adj3 find$).ti,ab.
18. health action zone$.ti,ab.
19. ((service$ or programme$ or program$ or healthcare or treatment$) adj3 evaluation).ti,ab.
20. (barrier$ adj5 (delivery or service$ or uptake or access or healthcare or treatment)).ti,ab.
21. (outcome$ adj3 evaluat$).ti,ab.
22. (cessation adj3 outcome$).ti,ab.
23. ((unequal or equal) adj3 access).ti,ab.
24. ((early adj3 diagnosis) or health check).ti,ab.
25. (early adj3 detection).ti,ab.
26. (risk adj3 profile).ti,ab.
27. (risk indicator adj3 detect$).ti,ab.
28. ((screening or surveillance) adj3 (risk or diagnos$ or detect$)).ti,ab.
29. (risk adj3 (management or managing)).ti,ab.
30. (primary adj1 prevention).ti,ab.
31. (risk adj3 assess$).ti,ab.
32. (outcome$ adj3 evaluat$).ti,ab.
33. (access adj3 healthcare).ti,ab.
34. (patient compliance or high risk patient$).ti,ab.
35. (detect$ adj3 risk$).ti,ab.
36. (barrier$ adj3 statin$).ti,ab.
37. (access$ adj (service$ or programme$ or program$ or care or treatment)).ti,ab.
38. ((service$ or programme$ or program$ or treatment$) adj3 (uptake or provision or evaluation)).ti,ab.
39. ((retention or retain$) adj3 (people or patient$ or person$ or adult$)).ti,ab.
40. ((reach$ or target$ or find$ or recruit$ or identif$ or attract$) adj3 risk$).ti,ab.
41. (market$ adj3 (service$ or programme$ or program$ or treatment$)).ti,ab.
42. social marketing.ti,ab.
43. ((retention or retain$ or complying or compliance) adj3 (service$ or programme$ or program$ or treatment$)).ti,ab.
44. ((improv$ or promot$ or increas$ or enhanc$ or support$ or encourag$) adj3 (recruitment or retention or compliance or access)).ti,ab.
45. ((improv$ or promot$ or increas$ or enhanc$ or support$ or encourag$) adj3 (delivery or uptake) adj3 (care or service$ or programme$ or program$ or treatment$)).ti,ab.
46. (outreach adj3 (care or healthcare or service$ or programme$ or program$ or treatment$)).ti,ab.
47. (service adj3 (access$ or utilisation or availability or utilization or usage or provision or providing or uptake)).ti,ab.
48. health service utili#ation.ti,ab.
49. (service provision or health service provision).ti,ab.
50. health outcome$.ti,ab.
51. (equity or health service marketing).ti,ab.
52. access to health services.ti,ab.
53. health impact assessment.ti,ab.
54. health service evaluation.ti,ab.

55. health inequalit$.ti,ab.
56. (disadvant$ or low income or deprived or deprivation or minority group$ or vulnerable or pregnant or black or homeless or lone parent$ or ethnic minorit$ or underserved or benefit$ recipient$ or social welfare or itinerant$ or traveller$ or gyps$ or learning disability$ or mental health or mental disorder$ or mental illness or institutionali?ed).ti,ab.
57. (inequality or inequalities or inequity or equitable).ti,ab.
58. (poor or poorer or poorest).ti,ab.
59. ((low or lowest or lower) adj3 (socioeconomic or education or social class$)).ti,ab.
60. (debt$ or arrear$ or financial hardship$ or low pay$ or low paid or poverty).ti,ab.
61. (damp housing$ or poor housing$ or crowding$ or standard of living$).ti,ab.
62. (lone parent$ or divorce or marital separation or single parent$).ti,ab.
63. (social adversity or social disparit$).ti,ab.
64. unemploy$.ti,ab.
65. or/1-13
66. or/14-54
67. or/55-64
68. 65 and 66 and 67
69. exp cholesterol/
70. exp heart diseases/
71. exp cholesterol measurement/
72. exp coronary diseases/
73. or/69-72
74. exp patient compliance/
75. exp HEALTH INDICATORS/
76. exp health service utilisation/
77. exp service provision/
78. exp health outcomes/
79. health service marketing/
80. exp access to services/
81. exp health impact assessment/
82. exp health action zones/
83. exp health service evaluation/
84. exp preventive medicine/
85. exp outcome measures/
86. or/74-85
87. exp health inequalities/
88. exp equity/
89. exp public housing/
90. exp ETHNIC GROUPS/ or exp SOCIOECONOMIC FACTORS/ or exp EDUCATIONAL PERFORMANCE/ or exp DEPRIVATION/ or exp ETHNIC MINORITIES/
91. exp social class/ or exp poverty/ or exp vulnerability/ or exp depressed areas/
92. or/87-91
93. 92 and 86 and 73
94. 93 or 68
95. limit 158 to yr="1995 - 2007"

'OR' with failsafe search
'AND' with HMIC economic filter:

1. exp HOSPITAL ECONOMICS/ or exp ECONOMICS/ or exp HEALTH ECONOMICS/
2. exp COSTS/
3. exp TREATMENT COSTS/ or exp COMPARATIVE COSTS/ or exp HOSPITAL COSTS/ or exp PRESCRIBING COSTS/ or exp VARIABLE COSTS/
4. exp "COST CONTROL"/
5. exp "COST EFFECTIVENESS"/
6. exp "COST BENEFIT ANALYSIS"/
7. exp ECONOMIC EVALUATION/

8. exp "COST SHARING"/
9. exp HEALTH EXPENDITURE/
10. exp "QUALITY OF LIFE"/
11. exp QUALITY ADJUSTED LIFE YEARS/
12. QALY.ti,ab.
13. budget$.ti,ab. or exp BUDGETS/ or exp GENERAL PRACTICE BUDGETS/
14. (value adj money).ti,ab.
16. (fiscal or funding or financial or finance).ti,ab.
17. (cost$ adj (estimate or variable)).ti,ab.
18. (expenditure$ not energy).ti,ab.
19. (cost adj (effectiveness or utility or minimi$ation or benefit) adj analysis).ti,ab
20. or/1-19

CDSR, DARE, CENTRAL

1 cardiovascular disease$.ti,ab.
2 vascular disease$.ti,ab.
3 coronary disease$.ti,ab.
4 heart disease$.ti,ab.
5 CHD.ti,ab.
6 hypercholesterolaemia.ti,ab.
7 cholesterol.ti,ab.
8 hypertension.ti,ab.
9 blood pressure.ti,ab.
10 lipid$.ti,ab.
11 statin$.ti,ab.
12 coronary disease$.ti,ab.
13 cholesterol measurement.ti,ab.
14 (equity adj3 access).ti,ab.
15 (equity adj3 audit).ti,ab.
16 health impact assessment.ti,ab.
17 (case adj3 find$).ti,ab.
18 health action zone$.ti,ab.
19 ((service$ or programme$ or program$ or healthcare or treatment$) adj3 evaluation).ti,ab.
20 (barrier$ adj5 (delivery or service$ or uptake or access or healthcare or treatment)).ti,ab.
21 (outcome$ adj3 evaluat$).ti,ab.
22 (cessation adj3 outcome$).ti,ab.
23 ((unequal or equal) adj3 access).ti,ab.
24 ((early adj3 diagnosis) or health check).ti,ab.
25 (early adj3 detection).ti,ab.
26 (risk adj3 profile).ti,ab.
27 (risk indicator adj3 detect$).ti,ab.
28 ((screening or surveillance) adj3 (risk or diagnos$ or detect$)).ti,ab.
29 (risk adj3 (management or managing)).ti,ab.
30 (primary adj1 prevention).ti,ab.
31 (risk adj3 assess$).ti,ab.
32 (outcome$ adj3 evaluat$).ti,ab.
33 (access adj3 healthcare).ti,ab.
34 (patient compliance or high risk patient$).ti,ab.
35 (detect$ adj3 risk$).ti,ab.
36 (barrier$ adj3 statin$).ti,ab.
37 (access$ adj (service$ or programme$ or program$ or care or treatment)).ti,ab.
38 ((service$ or programme$ or program$ or treatment$) adj3 (uptake or provision or evaluation)).ti,ab.
39 ((retention or retain$) adj3 (people or patient$ or person$ or adult$)).ti,ab.
40 ((reach$ or target$ or find$ or recruit$ or identif$ or attract$) adj3 risk$).ti,ab.
41 (market$ adj3 (service$ or programme$ or program$ or treatment$)).ti,ab.
42 social marketing.ti,ab.
43 ((retention or retain$ or complying or compliance) adj3 (service$ or programme$ or program$ or treatment$)).ti,ab.
44 ((improv$ or promot$ or increas$ or enhanc$ or support$ or encourag$) adj3 (recruitment or retention or compliance or access)).ti,ab.
45 ((improv$ or promot$ or increas$ or enhanc$ or support$ or encourag$) adj3 (delivery or uptake) adj3 (care or service$ or programme$ or program$ or treatment$)).ti,ab.
46 (outreach adj3 (care or healthcare or service$ or programme$ or program$ or treatment$)).ti,ab.
47 (service adj3 (access$ or utilisation or availability or utilization or usage or provision or providing or uptake)).ti,ab.

48 health service utili#ation.ti,ab.
49 (service provision or health service provision).ti,ab.
50 health outcome$.ti,ab.
51 (equity or health service marketing).ti,ab.
52 access to health services.ti,ab.
53 health impact assessment.ti,ab.
54 health service evaluation.ti,ab.
55 health inequalit$.ti,ab.
56 (disadvant$ or low income or deprived or deprivation or minority group$ or vulnerable or pregnant or black or homeless or lone parent$ or ethnic minorit$ or underserved or benefit$ recipient$ or social welfare or itinerant$ or traveller$ or gyps$ or learning disability$ or mental health or mental disorder$ or mental illness or institutionali?ed).ti,ab.
57 (inequality or inequalities or inequity or equitable).ti,ab.
58 (poor or poorer or poorest).ti,ab.
59 ((low or lowest or lower) adj3 (socioeconomic or education or social class$)).ti,ab.
60 (debt$ or arrear$ or financial hardship$ or low pay$ or low paid or poverty).ti,ab.
61 (damp housing$ or poor housing$ or crowding$ or standard of living$).ti,ab.
62 (lone parent$ or divorce or marital separation or single parent$).ti,ab.
63 (social adversity or social disparit$).ti,ab.
64 unemploy$.ti,ab.
65 or/1-13
66 or/14-54
67 or/55-64
68 65 and 66 and 67
69 exp cholesterol/
70 exp coronary disease/
71 exp heart diseases/
72 exp cardiovascular diseases/
73 or/69-72
74 exp accessibility of health services/
75 risk assessment/
76 "outcome assessment (health care)"/
77 exp marketing/
78 exp marketing of health services/
79 exp preventive medicine/
80 or/74-79
81 minority groups/
82 medically underserved area/
83 social class/
84 poverty/
85 poverty areas/
86 psychosocial deprivation/
87 vulnerable populations/
88 socioeconomic factors/
89 public housing/
90 educational status/
91 or/81-90
92 91 and 80 and 73
93 92 or 68
94 limit 93 to yr="1995 - 2007" [Limit not valid in: DARE; records were retained]

'OR' with failsafe search
'AND' with Medline economic filter

1. exp ECONOMICS/
2. exp "Costs and Cost Analysis"/
3. exp "Cost Allocation"/

4. exp Cost-Benefit Analysis/
5. exp "Cost Control"/
6. exp "Cost Savings"/
7. exp "Cost of Illness"/
8. exp "Cost Sharing"/
9. exp "Deductibles and Coinsurance"/
10. exp Medical Savings Accounts/
11. exp Health Care Costs/
12. exp Direct Service Costs/
13. exp Drug Costs/
14. exp Employer Health Costs/
15. exp Hospital Costs/
16. exp Health Expenditures/
17. exp Capital Expenditures/
18. exp "Value of Life"/
19. exp "Quality of Life"/
20. exp Quality-Adjusted Life Years/
21. QALY.mp.
22. exp Economics, Hospital/
23. exp Economics, Medical/
24. exp Economics, Nursing/
25. exp Economics, Pharmaceutical/
26. exp BUDGETS/
27. exp "Value of Life"/
28. (econom$ or cost or costs or costly or costing or price or prices or pricing or pharmaeconomic$).ti,ab
29. budget$.ti,ab.
30. (value adj money).ti,ab.
31. ((low or high or health care) adj cost$).ti,ab.
32. (fiscal or funding or financial or finance).ti,ab.
33. (cost$ adj (estimate or variable)).ti,ab.
34. (expenditure$ not energy).ti,ab.
35. (cost adj (effectiveness or utility or minimization or minimisation or benefit) adj analysis).ti,ab.
36. or/1-35

Limit to: English language and 1995 to 2007

Econlit

S12 S8 and S11
S11 S9 or S10
S10 (((((ZW "HEART DISEASE")) or ((ZW "HYPERTENSION"))) or ((ZW "BLOOD PRESSURE"))))
S9 TX (cardiovascular disease* OR vascular disease* OR heart disease* or CHD OR hypercholesterolaemia OR cholesterol OR hypertension OR blood pressure OR lipid* OR statin or statins)
S8 (S1 or S2 or S3 or S4 or S5 or S6 or S7)
S7 (risk and (identif* or screen* or detect* or diagnos*))
S6 ((service* or program* or care or treatment*) and (evaluation or uptake or prov* or social marketing or access))
S5 TX (access or barrier or case finding)
S4 TX ((retention or retain* or compli*) and (service* or program* or treatment* or people or patient*))
S3 TX ((improv* or promot* or increas* or support* or encourag*) and (compli* or access or program*))

S2 TX (service* and (access or utili* or availab* or usage or provi* or uptake))
S1 ((((((((ZW "ACCESS") or (ZW "ACCESS TO HEALTH CARE")) or ((ZW "MARKETING"))) or ((ZW "HEALTH SERVICES UTILISATION"))) or ((ZW "HEALTH OUTCOMES"))) or ((ZW "EQUITY"))) or ((ZW "HEALTH IMPACT ASSESSMENT"))) or ((ZW "RISK ASSESSMENT")))

HEED

1. AX=cardiovascular disease or vascular disease or coronary disease
2. AX=heart disease or CHD or hypercholesterolaemia
3. AX=cholesterol or hypertension or blood pressure OR lipid* or statin*
4. KW=coronary heart disease
5. CS=1 or 2 or 3 or 4
6. AX=(retention or retain* or compli*) and (service* or program* or treatment* or people or patient*)
7. AX=(service* or program* or care or treatment*) and (evaluation OR UPTAKE OR PROVI* OR MARKET* OR ACcESS)
8. AX=(improv* or promot* or increas* or support* or encourag*) and (compli* or access or program*)
9. AX=service* and (access or utili* or availab* or usage or provi* or uptake)
10. AX=risk or access* or case finding or BARRIER*
11. CS= 6 or 7 or 8 or 9 or 10
12. AX=socioeconomic* or traveller* or gyps* or learning disability or mental or institutionali*
13. AX= lone parent or single parent or inequalit* or inequity or equit* OR poor* or divorce* or marital separation
14. AX=debt* or hardship or low paid or poverty or housing or crowding
15. AX=disadvant* or depriv* or ethni* or pregnant or homeless*
16. CS= 12 or 13 or 14 or 15
17. CS=5 and 11 and 16

failsafe

1. AB=cardiovascular disease or vascular disease or coronary disease
2. AB=heart disease or CHD or hypercholesterolaemia
3. AB=cholesterol or hypertension or blood pressure OR lipid* or statin*
4. CS=1 OR 2 OR 3
5. AB=(delivery or service* or uptake or access or healthcare OR TREATMENT) AND BARRIER*
6. AB=(retention or retaining or compli*) and (service* or program* or treatment* or people or patient*)
7. AB=(service* or program* or healthcare or treatment*) and (evaluation OR UPTAKE OR PROVISION OR MARKET* OR Access)
8. AB=(improv* or promot* or increas* or support* or encourag*) and (compli* or access or program*)
9. AB=service* and (access or utili* or availab* or usage or provi* or uptake)
10. AB=(Screen* or detect* or identif* or target*) and risk
11. AB=case and find*
12. AB= social marketing
13. CS=5 or 6 or 7 or 8 or 9 or 10 or 11 or 12
14. CS=4 and 13

NHS EED

#1 cardiovascular disease or vascular disease or coronary disease
#2 heart disease or CHD or hypercholesterolaemia
#3 cholesterol or hypertension or blood pressure OR lipid* or statin*
#4 coronary heart disease

#5 #1 or #2 or #3 or #4 or #5
#6 (retention or retain* or compli*) and (service* or program* or treatment* or people or patient*)
#7 (service* or program* or care or treatment*) and (evaluation OR UPTAKE OR PROVI* OR MARKET* OR ACcESS)
#8 (improv* or promot* or increas* or support* or encourag*) and (compli* or access or program*)
#9 service* and (access or utili* or availab* or usage or provi* or uptake)
#10 #6 or #7 or #8 or #9
#11 socioeconomic* or traveller* or gyps* or learning disability or mental or institutionali*
#12 lone parent or single parent or inequalit* or inequity or equit* OR poor* or divorce* or marital separation
#13 debt* or hardship or low paid or poverty or housing or crowding
#14 disadvant* or depriv* or ethni* or pregnant or homeless*
#15 #11 or #12 or #13 or #14
#16 #5 and #15 and #10
#17 cardiovascular disease or vascular disease or coronary disease:Ti
#18 heart disease or CHD or hypercholesterolaemia:Ti
19 cholesterol or hypertension or blood pressure OR lipid* or statin*:To
20 coronary heart disease:TI
#21 #17 or #18 or #19 or #20
#22 #21 and #10
#22 or #16