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APPENDICES ONLY

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Effectiveness and efficiency of guideline dissemination and implementation strategies

JM Grimshaw, RE Thomas, G MacLennan, C Fraser, CR Ramsay, L Vale, P Whitty, MP Eccles, L Matowe, L Shirran, M Wensing, R Dijkstra and C Donaldson

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Appendix 1

Statistical considerations

Rationale for study designs included in the review

This section contains brief descriptions of the study designs included in the review. For further details on these designs see Grimshaw and colleagues[43] or Cook and Campbell.[12]

Patient randomised controlled trials (P-RCTs)

Individual patients are randomised to an intervention or a control group. The benefit of randomisation is that patients in each group should differ only in their exposure to the treatment; all other measurable and non-measurable effects should be distributed equally between the groups. Although the P-RCT design is considered the most robust method of health technology assessment, it may be suboptimal for many comparisons that evaluate guideline dissemination and implementation strategies. If P-RCTs are used for evaluating guideline dissemination and implementation strategies, there is a danger that the treatment offered to control patients will be contaminated by healthcare professionals' experiences of applying the intervention to patients receiving the experimental management, resulting in an underestimate of the true effects of strategies.

Cluster randomised controlled trials (C-RCTs)

C-RCTs overcome this contamination by randomising professionals or groups of professionals to different interventions, and represent the optimal design when evaluating dissemination and implementation strategies.[43] However, adopting a C-RCT design has implications for the design, conduct and analysis of a trial. A fundamental assumption of the standard statistical methods used to analyse P-RCTs is that the outcome for an individual patient is completely unrelated to that for any other patient: they are said to be 'independent'. This assumption is violated, however, in C-RCTs, because patients within any one cluster are more likely to respond in a similar manner. For example, the management of patients in a single hospital is more likely to be consistent than management across a number of hospitals. The primary consequence of adopting a C-RCT is that it is not as statistically efficient and has lower statistical power than a P-RCT of equivalent size.[44] Because of this lack of independence, sample sizes need to be inflated to adjust for the clustering effect, and analysis should be undertaken at the cluster level or using special analytical techniques, such as generalised estimating equations.[45]

Controlled clinical trials (C-CCTs, P-CCTs)

CCTs are patient or cluster trials that had quasi-random allocation of patients or clusters to the intervention and control groups.

Controlled before and after studies (CBAs)

CBAs incorporate a non-randomised control group that it is hoped will experience the same secular and sudden changes as the intervention group. Data are collected on the control and intervention groups before the intervention is introduced and then further data are collected after the intervention has been introduced. The reliability of the estimate of effect is questionable because the effect cannot be attributed solely to the intervention. For example, there may be intangible differences between the patients in each group that cannot be assumed to be evenly distributed between the groups (as is assumed when randomisation is used).

Interrupted time series (ITS) designs

It is sometimes difficult to randomise or identify a control group when evaluating area-wide interventions; for example, national mailing of asthma guidelines to general practitioners. ITS designs provide the most robust method of measuring the effect of an intervention in this instance. Multiple data points are collected before and after the intervention. It is then possible to detect whether an intervention has had an effect significantly greater than the underlying trend (*Figure 7*). Again, although this design increases confidence with the estimate of effect, it still does not provide protection against events that occurred at the same time as the study intervention.

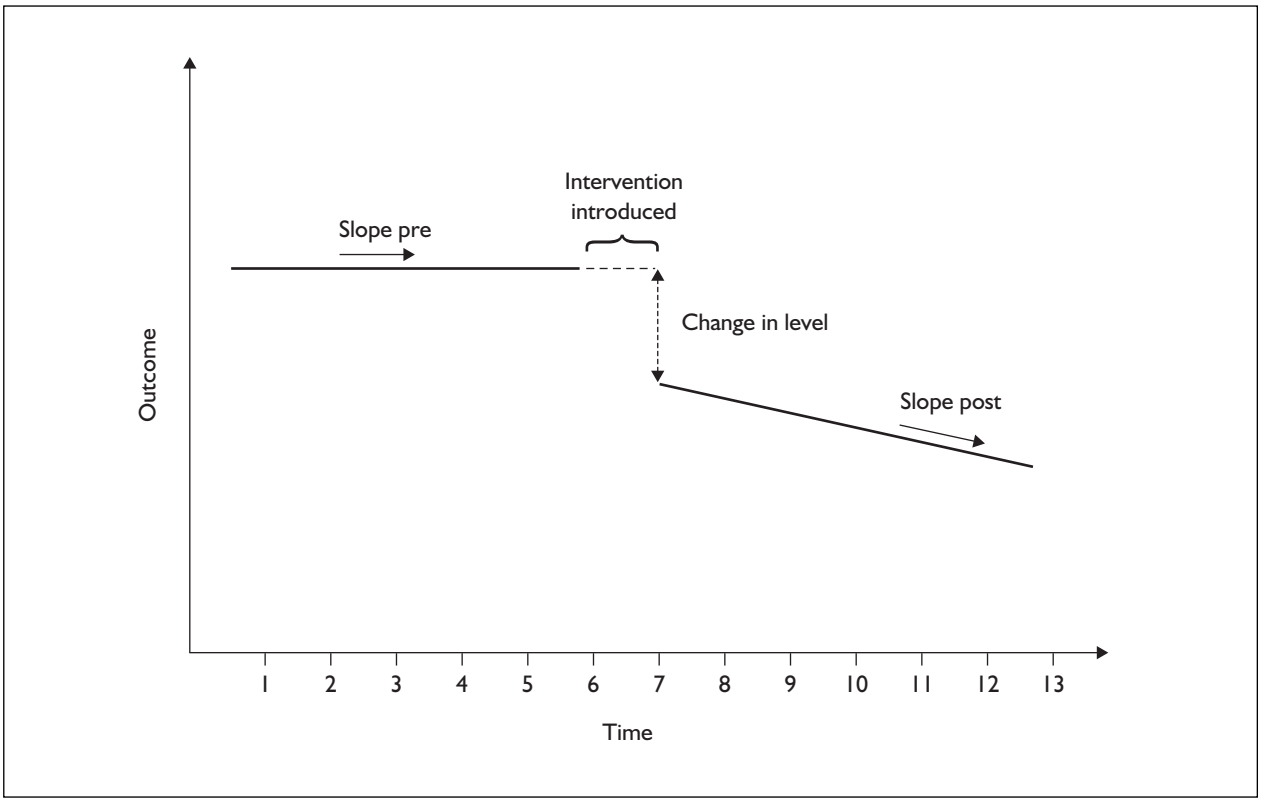

FIGURE 7 *Key attributes of an ITS design*

Common methodological problems in included studies

Unit of analysis errors

In many C-RCT comparisons, practitioners were randomised but during the statistical analyses the individual patient data were analysed as if there was no clustering within practitioner. C-RCT comparisons that do not account for clustering during analysis have 'potential unit of analysis errors'[14] resulting in artificially extreme *p*-values and over-narrow confidence intervals.[15] In the present review, the comparisons that had unit of analysis errors were reported and, where appropriate, the results presented in the original paper were reanalysed (see Reanalysis of study results, below). The unit of analysis error may have occurred with all the results in the comparison or may have occurred on only the outcomes that were abstracted. These scenarios are described in the 'Details of included studies' table (Appendix 5). Note that P-RCTs could also have had unit of analysis errors. For example, the patient was randomised and multiple test results were collected on each patient. If the analysis looked at the total test results and not the rate per patient then it has a unit of analysis error.

Baseline imbalance

Randomisation seeks to minimise selection bias in a study. In comparisons with small numbers of allocated units, there is the possibility that randomisation may be unable to balance the groups on important prognostic factors (such as baseline performance). It is possible that any difference between the groups at baseline could overestimate or underestimate treatment effects. Baseline imbalance may provide evidence of a less than adequate design. With controlled before and after study comparisons, the threat of imbalance at baseline is even greater because the groups are not subjected to randomisation. Preintervention performance has been reported, where possible, for all studies.

Within-group comparisons

In some comparisons, investigators measure performance before and after the introduction of an intervention in study and control groups, and undertake a within-group analysis. This is a statistically inefficient method of analysing the comparison. The analysis should have compared the difference *between* the groups statistically, not the difference *within* the groups (especially so for an RCT). Again, where possible, comparisons that

incorrectly compared within-group estimates were reanalysed.

ITS studies analysed as before and after studies

Many of the ITS comparisons were analysed as uncontrolled before and after study comparisons. For example, several serial measurements were taken before and after the intervention but the results were combined into a mean before and a mean after intervention and a *t*-test was performed. This is an inappropriate method of analysis for two reasons. First, it ignores any secular trend in the preintervention data and, second, it ignores any serial correlation (autocorrelation) between the data points. Serial correlation is the extent to which points collected close together in time are correlated with each other. Ignoring this correlation can lead to spuriously significant effects.

Calculation of effect sizes for RCTs, CCTs and CBAs

A comparison could report one or all of the following end-points: dichotomous process of care variable, continuous process of care variable, dichotomous outcome of care and continuous outcome of care. Data on each type of end-point were abstracted. Where studies reported more than one measure of each end-point, the primary measure (as defined by the authors of the study) or the median measure was abstracted. For example, if the comparison reported five dichotomous process of care variables and none of them was denoted the primary variable, then the effect sizes for the five variables were ranked and the median value was taken.

Dichotomous process of care measures were used as the primary effect size for each comparison, for two pragmatic reasons. First, they were reported considerably more frequently in the studies and, second, continuous process of care measures were less stable. For example, a relative percentage change in a continuous measure depends on the scale being used: a comparison that shifts from a mean of 1 to 2 will show the same relative improvement as one that shifts from 25 to 50. To counter this, SMDs were calculated where possible, but there were rarely enough data presented in the paper to do this.

The hypothesised direction of effect differed between studies, with some studies expecting an increase in outcome and others expecting a decrease. In all cases the effect size has been standardised so that a positive difference between postintervention percentages or means was a good outcome.

To derive the effect size of each comparison, the following notation is presented.

Dichotomous measure

	Preintervention %	Postintervention %
Control	$C\%_{pre}$	$C\%_{post}$
Study	$S\%_{pre}$	$S\%_{post}$

The figures presented in the results table for dichotomous measures are:

- preintervention percentages: $S\%_{pre}$ versus $C\%_{pre}$
- postintervention percentages: $S\%_{post}$ versus $C\%_{post}$
- difference between postintervention percentages: $S\%_{post} - C\%_{post}$
- significance of difference in postintervention percentages: *p*-value.*
  * If $p < 0.05$ then the exact *p*-value was reported (where possible) and if $p > 0.05$ then 'NS' was reported. If there was a potential unit of analysis error, then no *p*-value was quoted. If the comparison was reanalysed, then the *p*-value was quoted and annotated with 'reanalysed'.

Continuous measure

	Preintervention Mean (sd)	Postintervention Mean (sd)
Control	$Cmean_{pre}$ (Csd_{pre})	$Cmean_{post}$ (Csd_{post})
Study	$Smean_{pre}$ (Ssd_{pre})	$Smean_{post}$ (Ssd_{post})

The figures presented in the results table for continuous measures are:

- preintervention mean number: $Smean_{pre}$ versus $Cmean_{pre}$
- postintervention mean number: $Smean_{post}$ versus $Cmean_{post}$
- difference between postintervention means: $Smean_{post} - Cmean_{post}$
- relative percentage change postintervention: $\frac{(Smean_{post} - Cmean_{post})}{Cmean_{post}} \times 100\%$
- SMD: $\frac{(Smean_{post} - Cmean_{post})}{Csd_{pre}}$
- significance of difference in postintervention percentages: *p*-value as described above.

Calculation of effect sizes for ITS designs

The data were considered to be continuous for all ITS designs (even if percentages were reported at each timepoint). Where possible, the ITS designs were reanalysed using time series regression methods and this resulted in two effect sizes for each comparison: a change in level and a change in slope (see *Figure* 7). In addition, the following data were reported for each ITS comparison:

- preintervention mean: mean pre
- postintervention mean: mean post
- preintervention trend: Yes/no/not clear
- difference between post- and preintervention means: mean post – mean pre
- relative percentage change pre- to postintervention:

$$\frac{(\text{mean}_{\text{post}} - \text{mean}_{\text{pre}})}{\text{mean}_{\text{pre}}} \times 100\%$$

- SMD pre- to postintervention:

$$\frac{(\text{mean}_{\text{post}} - \text{mean}_{\text{pre}})}{\text{sd}_{\text{pre}}}$$

The above results are those that would be obtained from the data if the comparison was analysed as an uncontrolled before and after study. As discussed earlier, this can be misleading, so the correct analysis of ITS designs was also reported in terms of changes in level and slope where reanalysis was possible:

- change in level: mean change in level and *p*-value
- change in slope: mean change in slope and *p*-value.

Reanalyses of study results

Unit of analysis errors

Many of the C-RCTs and CBAs (and a few of the P-RCTs) had unit of analysis errors. Where possible, attempts were made to reanalyse these trials at the cluster level. For reanalysis to be feasible, the comparison had to report event rates for each of the clusters in the intervention and control groups. If this was reported, a *t*-test was applied to the event rates.[15] For example, if the comparison randomised four GPs (two to intervention and two to control) then the paper would have to give the rates for the four GPs in the following format:

GP1: 55% compliance
GP2: 59% compliance
GP3: 76% compliance
GP4: 83% compliance.

For an example of this method see A229.

Baseline imbalance

Many of the comparisons were analysed as within-group comparisons. This can be misleading if there was baseline imbalance (especially if the study was a non-randomised CBA). Therefore, the pre- and postintervention comparisons were presented to enable the reader to judge whether baseline imbalance was a potential problem and to enable the study to be reported on a common metric with all the other comparisons in the review (namely postintervention comparison).

Within-group comparisons

As discussed previously, some of the comparisons incorrectly compared results within groups instead of between intervention and control groups. If the measurement concerned was dichotomous and the number of patients (or clusters) in the postintervention control and treatment groups could be abstracted, then the comparison was reanalysed using a chi-squared test. For an example of this see A34.

Similarly, if the outcome was continuous and both the standard deviations and the numbers of patients from both groups were known, then the trial was reanalysed with a *t*-test using a pooled estimate of the standard deviation.

ITS comparisons analysed as before and after studies

Time series regression was used to reanalyse each comparison (where possible). The best fit preintervention and postintervention lines were estimated using linear regression, and autocorrelation was adjusted for using the Cochrane–Orcutt method where appropriate.[46] First order autocorrelation was tested for statistically using the Durbin–Watson statistic, and higher order autocorrelations were investigated using the autocorrelation and partial autocorrelation function.

If the ITS comparison was reanalysed, then two effect sizes were estimated (see *Figure* 7). First, a change in the level of outcome immediately after the introduction of the intervention was estimated. This was performed by extrapolating the preintervention regression line to the first point postintervention. The difference between this extrapolated point and the postintervention regression estimate for the same point gave the

change in level estimate. Further mathematical details are available from the authors. Second, a change in the slopes of the regression lines was estimated (calculated as postintervention minus preintervention slope). Both of these estimates are necessary for interpreting the results of each comparison. For example, there could have been no change in the level immediately after the intervention, but there could have been a significant change in slope. The direction of effect was standardised so that a positive level or slope estimate was considered a good outcome and a negative estimate was a poor outcome.

Analytical framework used in this review

Given the extreme expected heterogeneity within the review, the authors did not plan to undertake formal meta-analysis. In addition, to undertake a meta-analysis of studies requires the investigator to have an estimate of the standard error of the effect size in each study. Many of the studies had a potential unit of analysis error in the results reported. The implications were that the quoted standard deviations (and therefore standard errors) were overly precise. If these values of the standard errors had been used in a meta-analysis, this would have given more weight to the results of the studies with unit of analysis errors than to those without.

Previous qualitative systematic reviews of implementation strategies have largely used vote-counting methods that add up the number of positive and negative comparisons and conclude whether the interventions were effective on this basis.[2,16] Vote-counting can count either the number of comparisons with a positive direction of effect (irrespective of statistical significance) or the number of comparisons with statistically significant effects. These approaches suffer from a number of weaknesses. Vote-counting comparisons with a positive direction fail to provide an estimate of the effect size of an intervention (giving equal weight to comparisons that show a 1% change or a 50% change) and ignore the precision of the estimate from the primary comparisons (giving equal weight to comparisons with 100 or 1000 participants). Vote-counting comparisons with statistically significant effects suffer similar problems; in addition, comparisons with potential unit of analysis errors need to be excluded because of the uncertainty about their statistical significance, and underpowered comparisons observing clinically significant but statistically insignificant effects would be counted as 'no effect comparisons'. A more explicit analytical framework was used for this review.

The results for all comparisons are presented in Appendix 6, using a standard method of presentation where possible (see above). The authors synthesised the effects of single interventions compared with no-intervention controls (i.e. usual care or control groups that did not receive any interventions), single interventions compared with intervention controls (i.e. control groups that did receive an intervention), multifaceted interventions compared with no-intervention controls and multifaceted interventions compared with intervention controls. The effects were synthesised of multifaceted interventions including either educational outreach or local opinion leaders and the effects of any multifaceted interventions evaluated in four or more comparisons. The study explored whether the effectiveness of multifaceted interventions increased with the number of interventions (see below). Results of dichotomous process measures, continuous process measures, dichotomous outcome measures and continuous outcomes measures were reported separately. For C-RCT, P-RCT, CCT and CBA comparisons, the following were reported (separately for each study design):

- the number of comparisons showing a positive direction of effect
- the median effect size across all comparisons
- the median effect size across comparisons without unit of analysis errors
- the number of comparisons showing statistically significant effects.

This allows the reader to assess the consistency of effects across different study designs and across comparisons where the statistical significance is known.

For dichotomous process measures in RCTs, CCTs and CBAs, stacked bar charts were constructed of single interventions compared with a no-intervention control group (*Figure 8*). These charts plotted the number of comparisons against observed effect size. The 'stacks' were used to distinguish between comparisons reporting significant effects, non-significant effects and comparisons with unit of analysis errors (statistical significance uncertain). Presentation of the results in this manner allows the reader to assess the median and range of effect sizes across all comparisons.

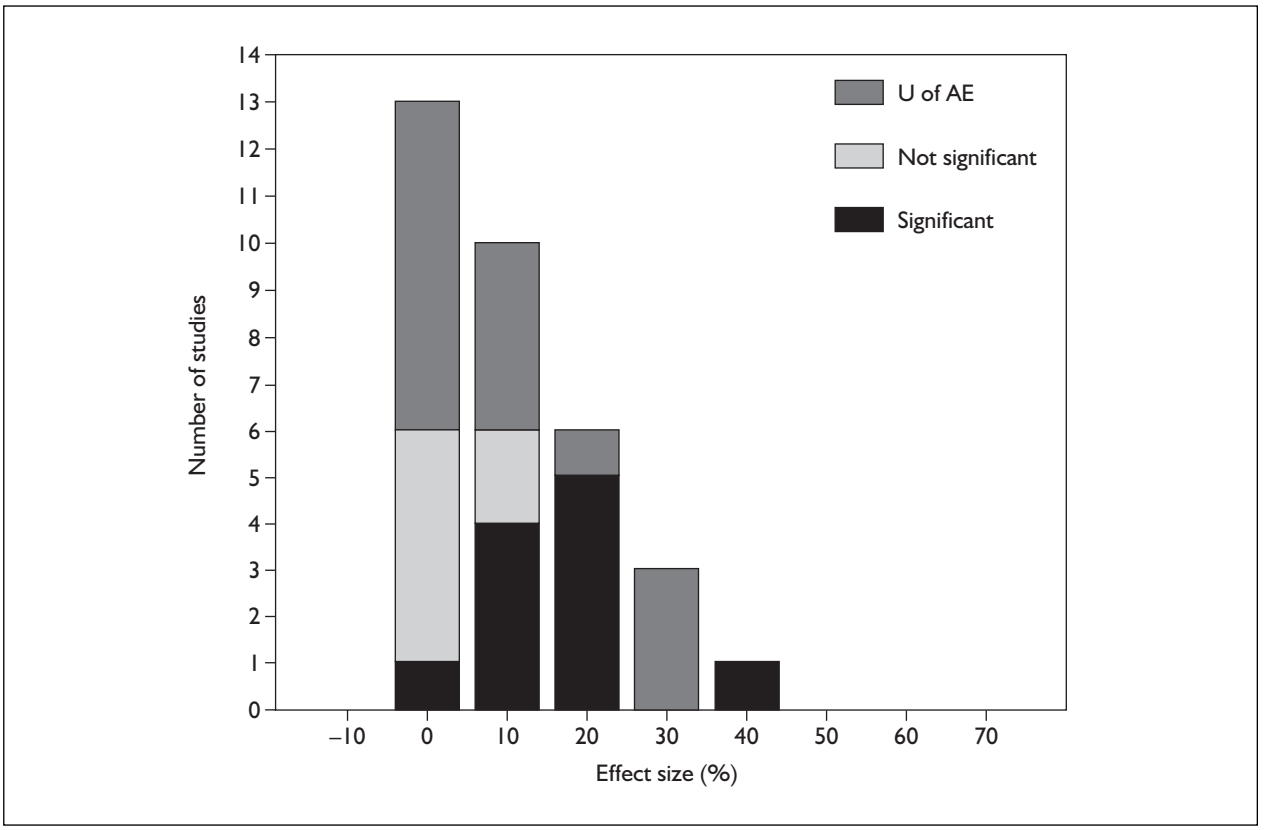

FIGURE 8 *Stacked bar charts for the presentation of process dichotomous data*

For ITS comparisons, the significance of changes in level and slope was reported.

Other statistical analyses

A Kruskall–Wallis test was used to determine whether there was an increasing effect with increasing numbers of interventions. Although the original plan was to undertake a meta-regression analysis to estimate the effects of different interventions, the number of different combinations of multifaceted interventions evaluated proved problematic. If one assumed that the effects of the various interventions were additive, then a meta-regression using dummy variables for each intervention was possible. For example, if the effect of educational materials was 5% and the effect of reminders was 10%, then the effect of a multifaceted intervention using educational materials and reminders was 15%. This assumption was unrealistic. Owing to the large number (15) of additional variables required to estimate even two-way interaction effects (increasing probability of type I errors), the authors decided not to pursue the modelling further. In addition, some combinations of the interventions were highly correlated (e.g. reminders and patient-directed interventions tended to be part of the same multifaceted intervention), so attempting to model these interventions simultaneously in a meta-regression was not possible.

Appendix 2

Development of search strategies

A strategy was developed to maximise the sensitivity (percentage of gold standard articles retrieved by the search) and precision (percentage of total retrieved that were gold standard articles) of the searches. The aim was to identify search terms to identify the relevant study designs and the interventions within the scope of the review. In this appendix, the development and testing of the search strategies used in the review are described.

Development of gold standard set of studies

Evaluations of guideline dissemination and implementation strategies are widely dispersed across general and specialist journals. Key journals were handsearched to develop a gold standard set of studies that met the inclusion criteria. The Cochrane EPOC group had already undertaken limited handsearching of *Medical Care* (from 1969 to 1995, yielding 168 articles) and the *British Medical Journal* (from 1992 to 1994). These searches were supplemented by on-screen searching of four general journals (*British Medical Journal*, *Lancet*, *Journal of the American Medical Association* and *Annals of Internal Medicine*) from Ovid's Biomedical Core Collection for 1995–6. In total, 249 studies were identified. The annual yield of these journals was low, ranging from 5.9% for *Medical Care* to 0.2% for the *Lancet*.

Identification of search terms for included study designs

Initially, the highly sensitive search strategy to identify RCTs and CCTs developed within the Cochrane Collaboration[47] was tested. This identified 95.7% of trials from the gold standard, but only 55.6% of ITS and 67.2% of CBAs were similarly found. The MEDLINE records of articles in the gold standard that had not been picked up were examined for appropriate text word terms or indexed terms which denoted the study design. *Table 23* details the search terms included in the Cochrane strategy and the additional terms that were identified for possible inclusion.

The authors experimented with four approaches to develop the most precise strategy:

A. Using the Cochrane highly sensitive strategy with additional search terms.
B. Selecting only the terms from the Cochrane strategy and the additional terms which had highest sensitivity with reasonable precision (sensitivity greater than 20% and precision higher than 5%).
C. Selecting only the terms with highest precision (greater than 10%).
D. Selecting terms by the process of stepwise inclusion. Beginning with the term with the highest precision, the subsequent criterion for inclusion was the highest precision of the increment, i.e. the added term would include the most hits with fewest redundant articles.

Table 24 details the resulting performances of these approaches. Strategies A and D were the most sensitive, with search D having the higher precision. While strategy C gave the highest precision, sensitivity was unacceptably low. Search strategy D was finally adopted.

Identification of search terms for included interventions

The scope of the review included any professional, financial, organisational and regulatory intervention to disseminate and implement guidelines. An extensive list of indicative MeSH and text words was identified from the MEDLINE records of the gold standard articles and assessed in terms of sensitivity and precision. Those with precision greater than 5% were retained for possible inclusion in the final strategy. The strategy was developed using the stepwise method of inclusion and resulted in 36 MeSH terms and 142 text words or phrases being included. In total, 237 out of the 249 gold standard studies were identified, giving a sensitivity of 95.2% and precision of 8.6%.

TABLE 23 *Search terms used in the development of the strategy*

Cochrane strategy	Additional terms
Randomized controlled trial.pt. Controlled clinical trial.pt. Random allocation.sh. Randomized controlled trials.sh. double blind method.sh. single blind method.sh. clinical trial.pt. exp clinical trials/ (clin$ adj25 trial$).ti,ab. ((singl$ or doubl$ or trebl$ or tripl$) adj25 (blind$ or mask$)).ti,ab. Placebos.sh. Placebo$.ti,ab. Random$.ti,ab. Research design.sh. Comparative study.sh. exp evaluation studies/ follow-up studies.sh. prospective studies.sh. (control$ or prospectiv$ or volunteer$).ti,ab.	Intervention studies/ (pre test or pretest or post test or posttest).tw (time adj series).tw experiment$.tw intervention?.tw impact.tw effect?.tw evaluat$.tw chang$.tw (base or baseline).tw
Key Exp, exploded MeSH term (to include all subsidiary MeSH terms); *, major MeSH term; / or sh, MeSH term; tw, textword (in title or abstract field); ti, in title field; ab, in abstract; pt, in publication type field; ?, wildcard denoting inclusion of one additional character or none; $, unlimited truncation; adj2, inclusion of terms within two characters of each other, in any order.	

TABLE 24 *Summary of precision and sensitivity of different search strategies*

Search strategy	Sensitivity trials (%)	Sensitivity ITS (%)	Sensitivity CBA (%)	Sensitivity total (%)	Precision (%)	Total retrieved
Cochrane	95.7	55.6	67.2	85.1	4.1	5194
A	100.0	83.3	91.0	96.4	3.6	6606
B	98.2	72.2	89.6	90.4	4.4	5292
C	92.7	33.3	40.3	74.3	8.9	2089
D	100.0	83.3	91.0	96.4	5.2	4632

Development of the search strategy

The final strategy (see below) was achieved by combining the resultant sets from the two sections. In total, 230 gold standard studies were identified, giving a sensitivity of 92.4% with a precision of 18.5%.

Search strategies used

Search strategy used to search MEDLINE and HealthSTAR

This strategy was adapted for the Cochrane Controlled Clinical Trials register and EMBASE

1. randomized controlled trial.pt.
2. controlled clinical trial.pt.
3. intervention studies/
4. experiment$.tw.
5. (time adj series).tw.
6. (pre test or pretest or (posttest or post test)).tw.
7. random allocation/
8. impact.tw.
9. intervention?.tw.
10. chang$.tw.
11. evaluation studies/
12. evaluat$.tw.
13. effect?.tw.
14. comparative studies/
15. animal/

16. human/
17. 15 not 16
18. or/1-14
19. 18 not 17
20. exp *education,continuing/
21. (education$ adj2 (program$ or intervention? or meeting? or session? or strateg$ or workshop? or visit?)).tw.
22. (behavio?r$ adj2 intervention?).tw.
23. *pamphlets/
24. (leaflet? or booklet? or poster or posters).tw.
25. ((written or printed or oral) adj information).tw.
26. (information$ adj2 campaign).tw.
27. (education$ adj1 (method? or material?)).tw.
28. outreach.tw.
29. (opinion adj1 leader?).tw.
30. facilitator?.tw.
31. group detailing.tw.
32. consensus conference?.tw.
33. practice guideline?.tw.
34. (guideline? adj2 (introduc$ or issu$ or impact or effect? or disseminat$ or distribut$)).tw.
35. ((effect? or impact or evaluat$ or introduc$ or compar$) adj2 training program$).tw.
36. *reminder systems/
37. reminder?.tw.
38. (recall adj2 system$).tw.
39. (prompter? or prompting).tw.
40. algorithm?.tw.
41. *feedback/
42. feedback.tw.
43. chart review$.tw.
44. ((effect? or impact or records or chart?) adj2 audit).tw.
45. *patient education/
46. counsel$.tw.
47. compliance.tw.
48. marketing.tw.
49. exp *reimbursement mechanisms/
50. fee for service.tw.
51. *capitation fee/
52. *"deductibles and coinsurance"/
53. cost shar$.tw.
54. (copayment? or co payment?).tw.
55. (prepay$ or prepaid or prospective payment?).tw.
56. *hospital charges/
57. formular$.tw.
58. fundhold$.tw.
59. *medicaid/
60. *medicare/
61. blue cross.tw.
62. *nurse clinicians/
63. *nurse midwives/
64. *nurse practitioners/
65. (nurse adj (rehabilitator? or clinician? or practitioner? or midwi$)).tw.
66. *pharmacists/
67. clinical pharmacist?.tw.
68. paramedic?.tw.
69. *patient care team/
70. (team adj2 (care or treatment)).tw.
71. (integrat$ adj2 (care or service?)).tw.
72. (care adj2 (coordinat$ or program$ or continuity)).tw.
73. (case adj1 management).tw.
74. exp *ambulatory care facilities/
75. *ambulatory care/
76. *home care services/
77. *hospices/
78. *nursing homes/
79. *office visits/
80. *day care/
81. *aftercare/
82. *community health nursing/
83. (chang$ adj1 location?).tw.
84. domiciliary.tw.
85. (home adj1 treat$).tw.
86. day surgery.tw.
87. *medical records/
88. *medical records systems, computerized/
89. (information adj2 (management or system?)).tw.
90. *peer review/
91. *utilization review/
92. *physician's practice patterns/
93. quality assurance.tw.
94. *process assessment (health care)/
95. *program evaluation/
96. *length of stay/
97. (early adj1 discharg$).tw.
98. offset.tw.
99. triage.tw.
100. near patient testing.tw.
101. *medical history taking/
102. *telephone/
103. (physician patient adj (interaction? or relationship?)).tw.
104. *health maintenance organizations/
105. managed care.tw.
106. (hospital? adj1 merg$).tw.
107. ((standard or usual or routine or regular or traditional or conventional or pattern) adj2 care).tw.
108. (program$ adj2 (reduc$ or increas$ or decreas$ or chang$ or improv$ or modify$ or monitor$ or care)).tw.
109. (program$ adj1 (health or care or intervention?)).tw.
110. ((effect? or impact or evaluat$ or introduc$ or compar$) adj2 treatment program$).tw.
111. ((effect? or impact or evaluat$ or introduc$ or compar$) adj2 care program$).tw.

112. ((effect? or impact or evaluat$ or introduc$ or compar$) adj2 screening program$).tw.
113. ((effect? or impact or evaluat$ or introduc$ or compara$) adj2 prevent$ program$).tw.
114. (computer$ adj2 (dosage or dosing or diagnosis or therapy or decision?)).tw.
115. ((introduc$ or impact or effect? or implement$ or computer$) adj2 protocol?).tw.
116. ((effect? or impact or introduc$) adj2 (legislation or regulations)).tw.
117. or/20-116
118. 19 and 117

See *Table 23* for the key to search terms.

Search strategy used to search SIGLE

consensus(w)statement# or health(S)guidelines#
health(w)service#(w)research
medical(w)audit or quality(s)assurance(s)health
reference(w)standard#
clinical(w)(standard# or guideline# or protocol#)
practice(w)(guideline# or standard# or protocol#)

Appendix 3

HTA guidelines data abstraction checklist

Reviewer: _____ Study ID: _____

THE DATA COLLECTION CHECKLIST

Jan 1999

DATA COLLECTION
Once potentially relevant studies have been identified for a review (check inclusion criteria Appendix I if unsure about inclusion of the study) the following data should be extracted **independently** by two reviewers.

Please record your name and the Study ID (number on front of paper, first author and year of publication) in the space provided on this page and on any page(s) that may be separated from the main checklist, e.g. Results section.

Reviewers are advised to indicate the source page numbers against each item recorded in the left margin: this facilitates later comparisons of extracted data. Any other comments can also be recorded in the left margin.

Data that is missing or 'NOT CLEAR' in a published report should be marked clearly on the data collection form.

Items that are clearly not applicable to the study in question should be marked accordingly.

Following data extraction, reviewers should reach agreement for each item on the checklist before submitting their completed data records to RT or JMG.

Decisions that cannot be resolved easily should be referred to RT or JMG.

Reviewer: _____ Study ID: _____

1 Methods

1.1 Units of allocation and analysis (RCTs, CCTs & CBAs only):

a) **Unit of allocation** (i.e. who or what was allocated to study groups)
Patient / Episode of care / Clinic day / Provider / Firm / Practice / Institution / Community / Other _____ / NOT CLEAR

b) **Unit of analysis** (e.g. results analysed as events per practice)
Patient / Episode of care / Clinic day / Provider / Firm / Practice / Institution / Community / Other _____ / NOT CLEAR

1.2 Power calculation:

DONE	study has sufficient statistical power to detect clinically important effects as statistically significant
NOT CLEAR	
NOT DONE	no power calculation

1.3 Quality criteria:

1.3.1 Quality criteria for randomised controlled trials (RCTs) and controlled clinical trials (CCTs):

a) **Concealment of allocation**:

DONE	unit of allocation was institution, team or professional and any random process explicitly described, e.g. use of random number tables, OR unit of allocation was patient or episode of care and some form of centralised randomisation scheme, an on-site computer system or sealed opaque envelopes used
NOT CLEAR	allocation procedure not described explicitly OR unit of allocation was patient or episode of care and reported use of 'list' or 'table', 'envelopes' or 'sealed envelopes' for allocation
NOT DONE	use of alternation, such as reference to case record numbers, dates of birth, day of the week or any other such approach OR unit of allocation was patient or episode of care and reported use of any allocation process that is entirely transparent before assignment, such as an open list of random numbers or assignments OR allocation was altered by investigators, professionals or patients

b) **Follow-up of professionals**: (protection against exclusion bias)

DONE	outcome measures for ≥ 80% of professionals randomised [Do not assume 100% follow-up unless stated explicitly]
NOT CLEAR	not specified
NOT DONE	outcome measures for < 80% of professionals randomised

c) **Follow-up of patients or episodes of care**:

DONE	outcome measures for ≥ 80% of patients randomised or patients who entered the trial [Do not assume 100% follow-up unless stated explicitly]
NOT CLEAR	not specified
NOT DONE	outcome measures for < 80% of patients randomised or patients who entered the trial

d) **Blinded assessment of primary outcome(s)*** (protection against detection bias):

DONE	stated explicitly that primary outcome variables were assessed blindly OR outcome variables are objective, e.g. length of hospital stay, drug levels assessed by a standardised test
NOT CLEAR	not specified
NOT DONE	outcomes not assessed blindly

Primary outcome(s) are those variables that correspond to the primary hypothesis or question as defined by the authors. In the event that some of the primary outcome variables were assessed in a blind fashion and others were not, score each separately on the back of the form and label each outcome variable clearly

Reviewer: _____ Study ID: _____

e) **Baseline measurement**:

DONE	performance or patient outcomes measured prior to the intervention, and no substantial differences present across study groups
NOT CLEAR	baseline measures not reported, or unclear whether baseline measures are different across study groups
NOT DONE	differences at baseline in main outcome measures likely to undermine the postintervention differences, e.g. differences between groups before the intervention similar to those found postintervention

f) **Reliable primary outcome measure(s)**:*

DONE	two or more raters with agreement ≥ 90% or kappa ≥ 0.8 OR outcome assessment is objective, e.g. length of hospital stay, drug levels assessed by a standardised test
NOT CLEAR	reliability not reported for outcome measures obtained by chart extraction or collected by an individual
NOT DONE	two or more raters with agreement < 90% or kappa < 0.8

In the event that some outcome variables were assessed in a reliable fashion and others were not, score each separately on the back of the form and label each outcome variable clearly

g) **Protection against contamination**:

DONE	allocation by community, institution or practice and unlikely that control group received the intervention
NOT CLEAR	professionals allocated within a clinic or practice and possible that communication between experimental and control group professionals could have occurred
NOT DONE	likely that control group received the intervention, e.g. cross-over trials or if patients rather than professionals were randomised

1.3.2 Quality criteria for controlled before and after (CBA) designs

a) **Baseline measurement**:

DONE	performance or patient outcomes measured prior to the intervention, and no substantial differences present across study groups
NOT CLEAR	baseline measures not reported, or unclear whether baseline measures are different across study groups
NOT DONE	differences at baseline in main outcome measures likely to undermine the postintervention differences, e.g. differences between groups before the intervention similar to those found postintervention

b) **Characteristics of study and control**:

DONE	characteristics of study and control providers are reported and similar
NOT CLEAR	it is not clear, e.g. characteristics are mentioned in the text but no data are presented
NOT DONE	there is no report of characteristics either in the text or a table OR if baseline characteristics are reported and there are differences between study and control providers

c) **Blinded assessment of primary outcome(s)*** (protection against detection bias)

DONE	stated explicitly that primary outcome variables were assessed blindly OR outcome variables are objective, e.g. length of hospital stay, drug levels assessed by a standardised test
NOT CLEAR	not specified
NOT DONE	outcomes were not assessed blindly

Primary outcome(s) are those variables that correspond to the primary hypothesis or question as defined by the authors. In the event that some of the primary outcome variables were assessed in a blind fashion and others were not, score each separately on the back of the form and label each outcome variable clearly

Reviewer: _____ Study ID: _____

d) **Protection against contamination**:

DONE	allocation by community, institution or practice and unlikely that control group received the intervention
NOT CLEAR	professionals allocated within a clinic or practice and possible that communication between experimental and control group professionals could have occurred
NOT DONE	likely that control group received the intervention, e.g. cross-over trials or if patients rather than professionals were randomised

e) **Reliable primary outcome measure(s)***

DONE	two or more raters with agreement ≥ 90% or kappa ≥ 0.8 OR outcome assessment is objective, e.g. length of hospital stay, drug levels assessed by a standardised test
NOT CLEAR	reliability not reported for outcome measures obtained by chart extraction or collected by an individual
NOT DONE	two or more raters with agreement < 90% or kappa < 0.8

In the event that some outcome variables were assessed in a reliable fashion and others were not, score each separately on the back of the form and label each outcome variable clearly

f) **Follow-up of professionals** (protection against exclusion bias):

DONE	outcome measures for ≥ 80% of professionals randomised [Do not assume 100% follow-up unless stated explicitly]
NOT CLEAR	not specified
NOT DONE	outcome measures for < 80% of professionals randomised

g) **Follow-up of patients**:

DONE	outcome measures for ≥ 80% of patients randomised or patients who entered the trial [Do not assume 100% follow-up unless stated explicitly]
NOT CLEAR	not specified
NOT DONE	outcome measures for < 80% of patients randomised or patients who entered the trial

1.3.3 Quality criteria for interrupted time series (ITSs)

Protection against secular changes

a) **The intervention is independent of other changes**:

DONE	the intervention occurred independently of other changes over time
NOT CLEAR	not specified (will be treated as NOT DONE if information cannot be obtained from the authors)
NOT DONE	reported that intervention was not independent of other changes in time

b) **There are sufficient data points to enable reliable statistical inference:**

DONE	at least twenty points are recorded before the intervention AND the authors have done a traditional time series analysis (ARIMA model) (*or a post hoc analysis can be done*) **OR** at least 3 points are recorded pre- and postintervention AND the authors have done a repeated measures analysis (*or a post hoc analysis can be done*) **OR** at least 3 points are recorded pre- and postintervention AND the authors have used ANOVA or multiple t-tests (*or a post hoc analysis can be done*) AND there are at least 30 observations per data point
NOT CLEAR	not specified, e.g. number of discrete data points not mentioned in text or tables (treated as NOT DONE if information cannot be obtained from the authors)
NOT DONE	any of the conditions above are unmet

c) **Formal test for trend**. Complete this section if authors have used ANOVA modelling:

DONE	formal test for change in trend using appropriate method is reported (e.g. see Cook & Campbell 1979[1]) (or can be re-done)

[1] Cook TD, Campbell DT. Quasi-experimentation: design and analysis issues for field settings. Chicago, IL: Rand Nally; 1979.[12]

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NOT CLEAR not specified (will be treated as NOT DONE if information cannot be obtained from the authors)
NOT DONE formal test for change in trend has not been done

Protection against detection bias

d) **Intervention unlikely to affect data collection**:
DONE reported that intervention itself was unlikely to affect data collection (e.g. sources and methods of data collection were the same before and after the intervention)
NOT CLEAR not specified (treated as NOT DONE if information cannot be obtained from the authors)
NOT DONE intervention itself was likely to affect data collection (for example, any change in source or method of data collection reported)

e) **Blinded assessment of primary outcome(s)***
DONE stated explicitly that primary outcome variables were assessed blindly OR outcome variables are objective, e.g. length of hospital stay, drug levels assessed by a standardised test
NOT CLEAR not specified (treated as NOT DONE if information cannot be obtained from the authors)
NOT DONE outcomes were not assessed blindly

Primary outcome(s) are those variables that correspond to the primary hypothesis or question as defined by the authors. In the event that some of the primary outcome variables were assessed in a blind fashion and others were not, score each separately on the back of the form and label each outcome variable clearly

f) **Completeness of data set**:
DONE data set covers 80–100% of total number of participants or episodes of care in the study
NOT CLEAR not specified (will be treated as NOT DONE if information cannot be obtained from the authors)
NOT DONE data set covers less than 80% of the total number of participants or episodes of care in the study

g) **Reliable primary outcome measure(s)***:
DONE two or more raters with agreement ≥ 90% or kappa ≥ 0.8 OR outcome assessment is objective, e.g. length of hospital stay, drug levels assessed by a standardised test
NOT CLEAR reliability not reported for outcome measures obtained by chart extraction or collected by an individual (will be treated as NOT DONE if information cannot be obtained from the authors)
NOT DONE two or more raters with agreement < 90% or kappa < 0.8

In the event that some outcome variables were assessed in a reliable fashion and others were not, score each separately on the back of the form and label each outcome variable clearly

2 Participants

2.1 Characteristics of participating providers:

a) **Profession** (circle all appropriate):
Physicians / Nurses / Pharmacists / Physiotherapists / Dentists / Psychologists /
Other (specify _____) / NOT CLEAR

b) **Clinical speciality** (circle all appropriate):
General practice or family medicine / Internal medicine / Surgery / Psychiatry / Paediatrics /
Obstetrics & gynaecology / Laboratory medicine / Radiology /
Other (specify _____) / Not applicable / NOT CLEAR

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c) **Level of training**: (circle all appropriate):
In training (House Officer/Intern, Registrar/Resident) / Fully trained (Consultant/Attending) / Mixed / NOT CLEAR

d) **Age**:
Mean age: _____ / NOT CLEAR (information not available)

e) **Years since graduation or in practice**:
Mean: _____ / NOT CLEAR (information not available)

f) **Proportion of eligible providers (or allocation units) who participated in the evaluation**:
Report or calculate the percentage of providers in target population who were allocated to study groups: _____ / NOT CLEAR (information not available)

2.2 Characteristics of participating patients:

a) **Clinical problem**:
Clinical problem / disease that the intervention targets (e.g. hypertension, oncology, preventive services, etc.) _____ / NOT CLEAR (information not available)

Other characteristics:

b) **Age**:
Mean _____ / Range _____ / NOT CLEAR (information not available)

c) **Gender**:
_____ / NOT CLEAR (information not available)

d) **Ethnicity**:
_____ / NOT CLEAR (information not available)

e) **Other** (specify) _____ / NOT CLEAR (information not available)

2.3 The number included in the trial (i.e. all those who actually entered the study):

a) **Episodes of care**:
_____ / NOT CLEAR (information not available)

b) **Patients**:
_____ / NOT CLEAR (information not available)

c) **Providers**:
_____ / NOT CLEAR (information not available)

d) **Practices**:
_____ / NOT CLEAR (information not available)

e) **Hospitals**:
_____ / NOT CLEAR (information not available)

f) **Communities or regions**:
_____ / NOT CLEAR (information not available)

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3 Setting

a) **Reimbursement system**:
Fee for service (provider paid for number and type of services delivered) / Capitation (provider paid set amount per patient for providing specific care) / Prospective payment / Global budget / Mixed / Other (specify_____) / NOT CLEAR

b) **Setting of care**:
Inpatient / Outpatient (e.g. ambulatory care provided by hospitals, specialists etc.) / General practice or community-based / Mixed / NOT CLEAR

c) **Academic status**:
University (teaching) hospital / Non-teaching or university affiliated / Mixed / NOT CLEAR

d) **Country**:
USA / Canada / UK / Australia / Netherlands / Other (specify _____) / NOT CLEAR (information not available)

4 Interventions

4.1 Characteristics of clinical guidelines*

If the intervention involves more than one set of guidelines complete the following questions for each set of guidelines.

a) **Source of clinical guidelines** (circle one)
Local clinicians or local expert body
National professional expert body or national government expert body
International professional expert body or international government expert body
Other (specify _____) NOT CLEAR

b) **Composition of guideline development group**
Unidisciplinary / multidisciplinary / Other (specify _____) NOT CLEAR

c) **Evidence base of recommendation**

DONE	recommendations appear to be based on good evidence (e.g. there is clear reference to a systematic review or at least one randomised controlled trial)
NOT CLEAR	not specified
NOT DONE	if explicitly not evidence based

d) **Purpose of recommendations** (Circle all appropriate)
Appropriate management / Cost containment / Other (specify_____) / NOT CLEAR

e) **Nature of desired change** (Circle all appropriate)
I. Initiation of new management (i.e. the introduction of a new technology)
II. Stopping introduction of new management
III. Reduction of established management
IV. Increase established management
V. Cessation of established management
VI. Modification of established management (e.g. increased management in one activity, reduction in another)
VII. NOT CLEAR

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5 Gap analysis (Davis, 1995[13]) **and barriers to change**

5.1 **How was the 'gap' or need for behaviour change identified** (circle appropriate)?

a) Paper provides references in clinical care and identified general area requiring change
b) Already developed clinical guidelines generally approved by national body
c) Consensus process to achieve agreement on the part of local health professionals
d) Formal gap analysis (focus groups/surveys)
e) Not done

5.2 **Investigators identified specific barriers to change in the target population, which were addressed by the intervention** (circle all appropriate)
Information management / Clinical uncertainty / Sense of competence / Perceptions of liability / Patient expectations / Standards of practice / Financial disincentives / Administrative constraints / Other (specify_____) / NOT DONE / NOT CLEAR

6 Type of intervention

6.1 **Study group(s)**: complete for each study group if more than one comparison

a) **Type of intervention** what intervention/method was used to introduce the guidelines into practice (use EPOC classification in Appendix 1)? If multifaceted identify all interventions

b) **Format** (for each intervention circle the medium employed):
Interpersonal / Paper / Audio/visual / Computer/interactive / Multiple media used / Other (specify _____) NOT CLEAR

c) **Source** (circle one)
Local clinicians / local expert body / national professional expert body / national government expert body / international professional expert body / international government expert body / Other (specify _____) NOT CLEAR

Recipient

d) **State who received the intervention** (e.g. profession) _____

_____

e) **Circle whether the intervention was delivered to**:
Individual / Group / NOT CLEAR

f) **How many people received the intervention**? _____

g) **Deliverer** ((circle who (or what) delivered the intervention (score all relevant)):
Local expert (state profession) / Research worker / Management representative / Pharmacist / Computer system / Other (specify) / NOT CLEAR

h) **Timing** For each intervention, state the following (for each score NOT CLEAR if information is not available):

I. Proximity to clinical decision-making (this item may be particularly relevant to audit and feedback and reminder interventions) _____ NOT CLEAR

II. Frequency/number of intervention events _____ NOT CLEAR

III. Duration of intervention _____ NOT CLEAR

IV. Time interval between events _____ NOT CLEAR

Reviewer: _____ Study ID: _____

i) **Setting of intervention** (circle one)
In practice setting / Not in practice setting / NOT CLEAR

6.2 **Control group(s)**: complete for control group

a) **Type of control** (circle one)
No intervention / 'Standard practice' / Other intervention
If control intervention is described then use EPOC classification in Appendix 1. If multifaceted identify all interventions. Notes:

b) **Format** (for each intervention circle the medium employed):
Interpersonal / Paper / Audio/visual / Computer/interactive / Multiple media used / Other (specify)/ NOT CLEAR

c) **Source** (circle one)
Local clinicians / local expert body / national professional expert body / national government expert body / international professional expert body / international government expert body / Other (specify _____) NOT CLEAR

Recipient

d) **State who received the intervention** (e.g. profession) _____

_____

e) **Circle whether the intervention was delivered to**:
Individual / Group / NOT CLEAR

f) **How many people received the intervention**? _____

g) **Deliverer** ((circle who (or what) delivered the intervention (score all relevant)):
Local expert (state profession) / Research worker / Management representative / Pharmacist / Computer system / Other (specify) / NOT CLEAR

h) **Timing** For each intervention, state the following (for each score NOT CLEAR if information is not available):

I. Proximity to clinical decision-making (this item may be particularly relevant to audit and feedback and reminder interventions) _____ NOT CLEAR

II. Frequency/number of intervention events _____ NOT CLEAR

III. Duration of intervention _____ NOT CLEAR

IV. Time interval between events _____ NOT CLEAR

i) **Setting of intervention** (circle one)
In practice setting / Not in practice setting / NOT CLEAR

7 Type(s) of targeted behaviour: Circle all appropriate (e.g. clinical prevention services may involve procedures, prescribing and test ordering, etc.)
Clinical prevention services / Diagnosis / Test ordering / Referrals / Procedures / Prescribing / General management of a problem (e.g. the treatment of hypertension) / Patient education/advice / Professional – patient communication / Record keeping / Financial (resource use) / Discharge planning / Other (specify_____) / NOT CLEAR

Reviewer: _____ Study ID: _____

8 Outcomes

8.1 **Description of the main outcome measure(s)**: Report all the main outcomes described by the authors, in table incl. how measured – self-report, chart abstraction, other objective, major or minor outcome

a) **Health professional outcomes/process measures** (e.g. the number of drugs prescribed)

Outcome/process (description)	**How measured** (e.g. self-report, chart abstraction)
1.	
2.	
3.	
4.	
5.	
6.	

b) **Patient outcomes or accepted surrogates for outcome** (e.g. number of adverse drug events or glycosylated haemoglobin in diabetes)

Outcome/process (description)	**How measured** (e.g. self-report, chart abstraction)
1.	
2.	
3.	
4.	
5.	
6.	

8.2 Economic variables:

a) **Were costs of the intervention reported?**
DONE describe costs
NOT DONE not reported

b) **Were changes in direct healthcare costs as a result of the intervention reported** (e.g. drugs, hospital stays)?
DONE describe costs
NOT DONE not reported

c) **Were changes in non-healthcare costs as a result of the intervention reported** (e.g. patient travel or time off work for hospital visits)?
DONE describe costs
NOT DONE not reported

d) **Were costs associated with the intervention linked with provider or patient outcomes in an economic evaluation** (e.g. net cost per unit change in rate of prescribing, or cost per life year saved)?
DONE describe ratio
NOT CLEAR not adequately described in the paper
NOT DONE no economic evaluation reported

e) **For how long were outcomes measured after initiation of the intervention**?

Length of time _____

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f) **Postintervention follow-up period**:
DONE reported in the paper
Length of follow-up: _____
NOT CLEAR
NOT DONE not reported in the paper

g) **Has a possible ceiling effect been identified**? (e.g. there was little room for improvement in provider performance, because it was adequate without the intervention, based on baseline measurements or control group performance)
Identified by investigator
YES
NO
NOT CLEAR

Identified by reviewer
YES
NO
NOT CLEAR

9 Results
Record results on table. Use extra forms for additional outcomes and/or comparisons. State the results as they will be entered in the review, and describe how calculated (e.g. relative percentage differences attributable to the intervention).

For each outcome, reviewer needs to identify whether this is a major or minor outcome. Major outcomes are those directly targeted by the intervention, minor outcomes are those which although not directly targeted could change as a result of the intervention

For RCTs, CCTs and CBAs:
a) Report preintervention data for study and control groups in natural units (if given)

_____

b) Report *p*-values or 95% confidence intervals for preintervention study versus control comparison; (if no unit of analysis error) _____

_____

c) Report postintervention data for study and control groups in natural units (if given)

_____

d) Report *p*-values or 95% confidence intervals for postintervention study versus control comparison; (if no unit of analysis error) _____

_____

e) Report percentage absolute change in natural units based on postintervention data study versus control comparison include statistical significance if reported (if no unit of analysis error)

_____

f) Report percentage relative change based on postintervention data study versus control comparison include statistical significance if reported (if no unit of analysis error)

_____

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g) Report all statistical tests used _____

h) Indicate if there is a unit of analysis _____

In all cases, report a more favourable provider/patient outcome in the more active intervention group as a positive (+) finding (i.e. where differences in the groups are in the intended direction).

Notes: did you have to do any reanalysis? If yes, we'll check it.

For interrupted time series:

State the main results of the main outcome(s) in natural units

a) Report pre- and postintervention means _____

b) Report absolute change in natural units _____

c) Report percentage relative change _____

d) Report the model used and statistical significance _____

e) Is information on the value of individual observations over time only reported graphically in the original paper?
YES / NO

In all cases, report a more favourable provider/patient outcome in the more active intervention group as a positive (+) finding (i.e. where differences in the groups are in the intended direction).

Notes: did you have to do any reanalysis? If yes, we'll check it.

Results form

1. Study ID _____ 2. Comparison No _____

Process Measure – Categorical

3. Outcome med/prim: _____

4. Outcome min: _____

5. Outcome max: _____

6. Median ☐ (tick = yes) 7. Primary ☐ (tick = yes) 8. No of Outcomes _____

Tick boxes below for outcomes where –ve difference means positive result

Preintervention	9. Minimum ☐	10. Med/primary ☐	11. Maximum ☐
Study %	12. _____	13. _____	14. _____
Con %	15. _____	16. _____	17. _____
Postintervention	Minimum	Med/primary	Maximum
Study %	18. _____	19. _____	20. _____
Con %	21. _____	22. _____	23. _____

24. % Absolute difference _____

25. Significance (post int across group) _____

26. Other (comments) _____

_____

Process Measure – Continuous

27. Outcome med/prim: _____ 28. Units measured _____

29. Outcome min: _____ 30. Units measured _____

31. Outcome max: _____ 32. Units measured _____

33. Median ☐ (tick = yes) 34. Primary ☐ (tick = yes) 35. No of Outcomes _____

Preintervention

Tick boxes below for outcomes where –ve difference means positive result

	36. Minimum ☐		37. Med/primary ☐		38. Maximum ☐	
	Mean	SD	Mean	SD	Mean	SD
Study	39. _____	40. _____	41. _____	42. _____	43. _____	44. _____
Con	45. _____	46. _____	47. _____	48. _____	49. _____	50. _____

Postintervention

	Minimum		Median/primary		Maximum	
	Mean	SD	Mean	SD	Mean	SD
Study	51. _____	52. _____	53. _____	54. _____	55. _____	56. _____
Con	57. _____	58. _____	59. _____	60. _____	61. _____	62. _____

63. % Relative difference _____

64. Standardised mean difference _____

65. Significance (post int across group) _____

66. Other (comments) _____

_____

Results form

1. Study ID _____ 2. Comparison No _____

Patient Outcome Measures – Categorical

67. Outcome med/prim: _____

68. Outcome min: _____

69. Outcome max: _____

70. Median ☐ (tick = yes) 71. Primary ☐ (tick = yes) 72. No of Outcomes _____

Tick boxes below for outcomes where –ve difference means positive result

Preintervention	73. Minimum ☐	74. Med/primary ☐	75. Maximum ☐
Study %	76. _____	77. _____	78. _____
Con %	79. _____	80. _____	81. _____

Postintervention	Minimum	Med/primary	Maximum
Study %	82. _____	83. _____	84. _____
Con %	85. _____	86. _____	87. _____

88. % Absolute difference _____

89. Significance (post int across group) _____

90. Other (comments) _____

_____

Patient Outcome Measures – Continuous

91. Outcome med/prim: _____ 92. Units measured _____

93. Outcome min: _____ 94. Units measured _____

95. Outcome max: _____ 96. Units measured _____

97. Median ☐ (tick = yes) 98. Primary ☐ (tick = yes) 99. No of Outcomes _____

Preintervention

Tick boxes below for outcomes where –ve difference means positive result

100. Minimum ☐ 101. Med/primary ☐ 102. Maximum ☐

	Mean	SD	Mean	SD	Mean	SD
Study	103. _____	104. _____	105. _____	106. _____	107. _____	108. _____
Con	109. _____	110. _____	111. _____	112. _____	113. _____	114. _____

Postintervention

	Minimum		Median/primary		Maximum	
	Mean	SD	Mean	SD	Mean	SD
Study	115. _____	116. _____	117. _____	118. _____	119. _____	120. _____
Con	121. _____	122. _____	123. _____	124. _____	125. _____	126. _____

127. % Relative difference _____

128. Standardised mean difference _____

129. Significance (post int across group) _____

130. Other (comments) _____

_____

Reviewer: _____ Study ID: _____

Appendix I

1 Inclusion criteria

1.1 Study design (circle appropriate design):

Randomised control trial (RCT) explicit statement of prospective random allocation and/or description of mathematical randomisation technique, such as random number tables. If quasi-random process, e.g. alternation, patient numbers, day of week etc., described, use CCT below

Controlled clinical trial (CCT) no explicit statement of randomisation but description of prospective quasi-random allocation, e.g. alternation, patient numbers, day of week

Controlled before and after study (CBA) intervention controlled by comparable second site or activity, with measurement of main outcomes before and after introduction of intervention

There are two minimum criteria for inclusion of CBAs in EPOC reviews:

a) **Contemporaneous data collection**:

DONE	pre- and postintervention periods for study activities or sites the same as for control
NOT CLEAR	[discuss the paper with RT or JMG before beginning data extraction]
NOT DONE	pre- and postintervention periods for study activities or sites different from control

b) **Appropriate choice of control site/activity**:

DONE	study and control sites comparable with respect to dominant reimbursement system, level of care, setting of care and academic status
NOT CLEAR	[discuss the paper with RT or JMG before beginning data extraction]
NOT DONE	study and control sites not comparable

Interrupted time series (ITS) a change in trend attributable to the intervention

There are two minimum criteria for inclusion of ITS designs in EPOC reviews:

a) **Clearly defined point in time when the intervention occurred**

DONE	intervention occurred at a clearly defined point in time
NOT CLEAR	[discuss the paper with RT or JMG before beginning data extraction]
NOT DONE	intervention did not occur at a clearly defined point in time

b) **At least three data points before and three after the intervention**

DONE	≥ 3 data points before and ≥ 3 data points after the intervention
NOT CLEAR	not specified, e.g. number of discrete data points not mentioned in text or tables [will be treated as NOT DONE if information cannot be obtained from the authors]
NOT DONE	< 3 data points before or after intervention

If the study is not any of the above designs, it should not be included in the review. If you scored NOT DONE for any of the inclusion criteria above, the study should not be included.

If you are unsure of the study design, discuss the paper with RT or JMG before beginning data extraction.

1.2 Methodological inclusion criteria (across all study designs):

1.2.1 Objective measurement of provider performance/behaviour or patient outcome(s) *in a clinical not test situation*:

DONE	e.g. drug levels assessed by test, performance of providers against pre-set criteria, number of tests ordered, diastolic blood pressure, number of Caesarean sections, etc.
NOT CLEAR	[discuss the paper with RT or JMG before beginning data extraction]
NOT DONE	e.g. aggregate self-report data – *check with examples in review protocol*–, measures of attitudes or beliefs or perceptions or satisfaction

Reviewer: _____ Study ID: _____

1.2.2 Relevant and interpretable data presented or obtainable:

DONE	data is presented or obtainable
NOT CLEAR	[discuss the paper with RT or JMG before beginning data extraction]
NOT DONE	relevant data are not presented and are clearly unobtainable

If you scored NOT DONE for either of the above criteria in item 1.2, the study should not be included in the review.

1.3 EPOC scope:

The effect(s) of a behavioural/educational, financial, organisational or regulatory intervention(s) is evaluated [Refer to EPOC scope and Appendix II for examples of the types of interventions addressed by EPOC reviews]:

DONE	the effect of intervention(s) described in section 5.1.1 or Appendix is evaluated
NOT CLEAR	the intervention does not appear to be described in Appendix [discuss the paper with RT or JMG before beginning data extraction]
NOT DONE	

If you scored NOT DONE for item 1.3, the study should not be included in an EPOC review. A study must meet the minimum criteria for design, methodology and EPOC scope for inclusion in EPOC reviews. If it does not, COLLECT NO FURTHER DATA.

1.4 Guidelines review scope:

a) **Does the study evaluate the introduction of clinical guidelines?**

DONE	
NOT CLEAR	the intervention does not appear to fit the definition [discuss the paper with RT, or JMG before beginning data extraction]
NOT DONE	the intervention clearly does NOT evaluate the introduction of clinical guidelines

If you scored NOT DONE for item 1.4a but the study still falls within EPOC scope, COLLECT NO FURTHER DATA and pass details on to RT or JMG.

b) **Which health professionals/providers are targeted by the intervention?** (circle all appropriate):
Physicians or Doctors / Nurses / Pharmacists / Physiotherapists / Dentists/
Other (specify _____) / NOT CLEAR

If physicians/doctors is NOT circled in 1.4b then COLLECT NO FURTHER DATA; if NOT CLEAR is circled then consult with RT or JMG before abstracting further data

Reviewer: _____ Study ID: _____

Appendix II

2 Types of intervention:

2.1 Professional interventions

a) **Distribution of educational materials** (Distribution of published or printed recommendations for clinical care, including clinical practice guidelines, audiovisual materials and electronic publications. The materials may have been delivered personally or through mass mailings.)

b) **Educational meetings** (Healthcare providers who have participated in conferences, lectures, workshops or traineeships.)

c) **Local consensus processes** (Inclusion of participating providers in discussion to ensure that they agreed that the chosen clinical problem was important and the approach to managing the problem was appropriate.)

d) **Educational outreach visits** (Use of a trained person who met with providers in their practice settings to give information with the intent of changing the provider's practice. The information given may have included feedback on the performance of the provider(s).)

e) **Local opinion leaders** (Use of providers nominated by their colleagues as 'educationally influential'. The investigators must have explicitly stated that their colleagues identified the opinion leaders.)

f) **Patient-mediated interventions** (New clinical information (not previously available) collected directly from patients and given to the provider, e.g. depression scores from an instrument.)

g) **Audit and feedback** (Any summary of clinical performance of health care over a specified period of time. The summary may also have included recommendations for clinical action. The information may have been obtained from medical records, computerised databases, or observations from patients.)

The following interventions are excluded:

- Provision of new clinical information not directly reflecting provider performance which was collected from patients, e.g. scores on a depression instrument, abnormal test results. These interventions should be described as patient mediated.
- Feedback of individual patients' health record information in an alternative format (e.g. computerised). These interventions should be described as organisational.

h) **Reminders** (Patient or encounter specific information, provided verbally, on paper or on a computer screen, which is designed or intended to prompt a health professional to recall information. This would usually be encountered through their general education; in the medical records or through interactions with peers, and so remind them to perform or avoid some action to aid individual patient care. Computer-aided decision support and drugs dosage are included.)

i) **Marketing** (Use of personal interviewing, group discussion ('focus groups'), or a survey of targeted providers to identify barriers to change and subsequent design of an intervention that addresses identified barriers.)

j) **Mass media** ((i) Varied use of communication that reached great numbers of people including television, radio, newspapers, posters, leaflets, and booklets, alone or in conjunction with other interventions; (ii) targeted at the population level.)

k) **Other** (Other categories to be agreed in consultation with the EPOC editorial team.)

Reviewer: _____ Study ID: _____

2.2 Financial interventions

2.2.1 Provider interventions

a) **Fee-for-service** (provider has been paid for number and type of service delivered)

b) **Prepaid** (no other description)

c) **Capitation** (provider was paid a set amount per patient for providing specific care)

d) **Provider salaried service** (provider received basic salary for providing specific care)

e) **Prospective payment** (provider was paid a fixed amount for healthcare in advance)

f) **Provider incentives** (provider received direct or indirect financial reward or benefit for doing specific action)

g) **Institution incentives** (institution or group of providers received direct or indirect financial rewards or benefits for doing specific action)

h) **Provider grant/allowance** (provider received direct or indirect financial reward or benefit not tied to specific action)

i) **Institution grant/allowance** (institution or group of providers received direct or indirect financial reward or benefit not tied to specific action)

j) **Provider penalty** (provider received direct or indirect financial penalty for inappropriate behaviour)

k) **Institution penalty** (institution or group of providers received direct or indirect financial penalty for inappropriate behaviour)

l) **Formulary** (added or removed from reimbursable available products)

m) **Other** (other categories to be agreed in consultation with the EPOC editorial team)

2.2.2 Patient interventions

a) **Premium** (Patient payment for health insurance. It is important to determine if the patient paid the entire premium, or if the patient's employer paid some of it. This includes different types of insurance plans.)

b) **Co-payment** (Patient payment at the time of healthcare delivery in addition to health insurance, e.g. in many insurance plans that cover prescription medications the patient may pay 5 dollars per prescription, with the rest covered by insurance.)

c) **User-fee** (Patient payment at the time of healthcare delivery.)

d) **Patient incentives** (Patient received direct or indirect financial reward or benefit for doing or encouraging them to do specific action.)

e) **Patient grant/allowance** (Patient received direct or indirect financial reward or benefit not tied to specific action.)

f) **Patient penalty** (Patient received direct or indirect financial penalty for specified behaviour, e.g. reimbursement limits on prescriptions.)

g) **Other** (other categories to be agreed in consultation with the EPOC editorial team)

Reviewer: _____ Study ID: _____

2.3 Organisational interventions

2.3.1 Provider orientated interventions

a) **Revision of professional roles** (Also known as 'professional substitution', 'boundary encroachment' and includes the shifting of roles among health professionals. For example, nurse midwives providing obstetrical care; pharmacists providing drug counselling that was formerly provided by nurses and physicians; nutritionists providing nursing care; physical therapists providing nursing care. Also includes expansion of role to include new tasks.)

b) **Clinical multidisciplinary teams** (creation of a new team of health professionals of different disciplines or additions of new members to the team who work together to care for patients)

c) **Formal integration of services** (bringing together of services across sectors or teams or the organisation of services to bring all services together at one time also sometimes called 'seamless care')

d) **Skill mix changes** (changes in numbers, types or qualifications of staff)

e) **Continuity of care** (including one or many episodes of care for inpatients or outpatients)
- Arrangements for follow-up.
- Case management (including coordination of assessment, treatment and arrangement for referrals)

f) **Satisfaction of providers** with the conditions of work and the material and psychic rewards (e.g. interventions to 'boost moral')

g) **Communication and case discussion** between distant health professionals (e.g. telephone links; telemedicine; there is a television/video link between specialist and remote nurse practitioners)

h) **Other** (other categories to be agreed in consultation with the EPOC editorial team)

2.3.2 Patient orientated interventions

a) **Mail order pharmacies** (e.g. compared to traditional pharmacies)

b) **Presence and functioning of adequate mechanisms for dealing with patients' suggestions and complaints**

c) **Consumer participation in governance of healthcare organisation**

d) **Other** (other categories to be agreed in consultation with the EPOC editorial team)

2.3.3 Structural interventions

a) **Changes to the setting/site of service delivery** (e.g. moving a family planning service from a hospital to a school)

b) **Changes in physical structure, facilities and equipment** (e.g. change of location of nursing stations, inclusion of equipment where technology in question is used in a wide range of problems and is not disease specific, for example an MRI scanner)

c) **Changes in medical records systems** (e.g. changing from paper to computerised records, patient tracking systems)

d) **Changes in scope and nature of benefits and services**

Reviewer: _____ Study ID: _____

e) **Presence and organisation of quality monitoring mechanisms**

f) **Ownership, accreditation, and affiliation** status of hospitals and other facilities

g) **Staff organisation**

h) **Other** (other categories to be agreed in consultation with the EPOC editorial team)

Appendix 4

Bibliographic details of included papers

A1 Anderson (1994)
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Appendix 5

Details of included studies

Study details	Quality criteria	Clinical area	Setting	Intervention groups
A1 Anderson (1994)	**Design**: Cluster RCT **Unit of allocation**: Groups of hospitals **Quality criteria**: Randomisation concealment: D Protection against contamination: D Blinded assessment: NC Reliable outcomes: D Baseline measurement: ND Follow-up: Providers: NC Patients: NC Potential unit of analysis error in main analysis	**Area of interest**: Patients at risk from venous thromboembolism **Targeted behaviour**: Prevention; general management; prescribing; procedures; patient education/advice	**Country**: USA **Setting**: Inpatient **Speciality**: All physicians **Level of training**: NC **Proportion of eligible target population taking part**: NC **Number of allocation units in study groups**: G1=1, G2=1, G3C=1, groups of hospitals, G1=5, G2=5, G3C=5 hospitals	**Group 1** Distribution of educational materials, Educational meetings, Reminders, Audit and feedback, 'telephone hotline for consultation' **Group 2 CME** Distribution of educational materials, Educational meetings, Reminders, 'telephone hotline for consultation' **Group 3 control** Usual care/no intervention
A2 Anonymous (1992)	**Design**: Cluster RCT Before and after balanced incomplete block design (replicated Latin square) with 5 childhood conditions, 5 levels of intervention and 10 study groups **Unit of allocation**: Groups of trainer GPs practising in same locality **Quality criteria**: Randomisation concealment: NC Protection against contamination: D Blinded assessment: NC Reliable outcomes: NC Baseline measurement: NC Follow-up: Providers: D Patients: D Potential unit of analysis error in main analysis	**Area of interest**: Acute cough; acute vomiting; bed wetting; itchy rash; recurrent wheezy chest **Targeted behaviour**: General management; procedures	**Country**: UK **Setting**: Family/general practice/community **Speciality**: General practice/family medicine **Level of training**: Fully trained **Proportion of eligible target population taking part**: 86% started, 79% completed **Number of allocation units in study groups**: NC, 219 providers, 62 practices	**Group 1** Distribution of educational materials, Audit and feedback, Local consensus process **Group 2 control** Distribution of educational materials, Audit and feedback

continued

Study details	Quality criteria	Clinical area	Setting	Intervention groups
A3 Anonymous (1994)	**Design**: RCT Stratified by treatment **Unit of allocation**: Patient **Quality criteria**: Randomisation concealment: NC Protection against contamination: NC Blinded assessment: NC Reliable outcomes: NC Baseline measurement: D Follow-up: Providers: NC Patients: D	**Area of interest**: Diabetes **Targeted behaviour**: Prevention; general management; prescribing; patient education/advice	**Country**: UK **Setting**: Mixed, general practice, specialist outpatient clinic, (integrated care) **Speciality**: General practice/family medicine; diabetes specialists **Level of training**: NC **Proportion of eligible target population taking part**: NC **Number of allocation units in study groups**: Integrated care G1 = 139, conventional care G2C = 135	**Group 1** Distribution of educational materials, Reminders, Patient reminders, Formal integration of services, Changes to the site and setting of service delivery, Changes in medical record systems **Group 2 control** Usual care/no intervention
A4 Anonymous (1996)	**Design**: Cluster CBA **Unit of allocation**: Practice site **Quality criteria**: Characteristics of study and control: NC Protection against contamination: D Baseline measurement: ND Blinded assessment: NC Reliable outcomes: D Follow-up: Providers: NC Patients: NC Potential unit of analysis error in main analysis	**Area of interest**: Benign prostatic hyperplasia **Targeted behaviour**: Test ordering; general management	**Country**: USA **Setting**: Mixed; multispeciality organisations; ambulatory and inpatient **Speciality**: General practice/family medicine; internal medicine; urology **Level of training**: Fully trained **Proportion of eligible target population taking part**: NC **Number of allocation units in study groups**: 4 PROs, G1 = 1, G2 = 1, G3 = 1, G4C = 1 multispeciality clinics/group practices/sites, 128 providers	**Group 1** Distribution of educational materials, Reminders, Local consensus process, Revision of professional roles, Site liaison physician, Presence and organisation of quality monitoring mechanisms **Group 2** Distribution of educational materials, Reminders, Local opinion leaders, Revision of professional roles, Site liaison physician **Group 3** Distribution of educational materials, Reminders, Revision of professional roles, Site liaison physician **Group 4 control** Distribution of educational materials, Reminders, Revision of professional roles, Site liaison physician

Appendix 5 cont'd *Details of included studies*

Study details	Quality criteria	Clinical area	Setting	Intervention groups
A5 Aubin (1994)	**Design**: Cluster CBA **Unit of allocation**: Family medicine centre **Quality criteria**: Characteristics of study and control: D Protection against contamination: NC Baseline measurement: D Blinded assessment: NC Reliable outcomes: NC Follow-up: Providers: NC Patients: NC Potential unit of analysis error in main analysis	**Area of interest**: Hypertension **Targeted behaviour**: Prevention; general management; prescribing; patient education/advice	**Country**: Canada **Setting**: Family/general practice/community **Speciality**: General practice/family medicine **Level of training**: NC **Proportion of eligible target population taking part**: NC **Number of allocation units in study groups**: 2 family medicine centres, pre-intervention G1=6, G2C= 7, post-intervention G1=9, G2C=12 providers	**Group 1** Distribution of of educational materials, Educational meetings, Reminders, Continuity of care, Changes in medical record systems **Group 2 control** Usual care/no intervention
A6 Aucott (1996)	**Design**: Cluster RCT **Unit of allocation**: Firm **Quality criteria**: Randomisation concealment: D Protection against contamination: NC Blinded assessment: NC Reliable outcomes: NC Baseline measurement: D Follow-up: Providers: NC Patients: NC Potential unit of analysis error in main analysis	**Area of interest**: Hypertension **Targeted behaviour**: General management; financial	**Country**: USA **Setting**: Outpatient/ambulatory **Speciality**: Internal medicine; others **Level of training**: Mixed **Proportion of eligible target population taking part**: NC **Number of allocation units in study groups**: G1=1, G2C=1	**Group 1** Distribution of educational materials, Educational meetings, Audit and feedback, Local opinion leaders, Revision of professional roles **Group 2 control** Distribution of educational materials

Study details	Quality criteria	Clinical area	Setting	Intervention groups
A7 Auleley (1997)	**Design**: Cluster RCT **Unit of allocation**: Hospital **Quality criteria**: Randomisation concealment: NC Protection against contamination: D Blinded assessment: NC Reliable outcomes: NC Baseline measurement: D Follow-up: Providers: NC Patients: NC	**Area of interest**: Radiography for ankle/midfoot injury **Targeted behaviour**: Test ordering; general management	**Country**: France **Setting**: Emergency department **Speciality**: Surgical emergency medicine **Level of training**: Mixed **Proportion of eligible target population taking part**: ?42% **Number of allocation units in study groups**: G1=2, G2C=3	**Group 1** Distribution of educational materials, Educational meetings, Reminders **Group 2 control** Preprinted data collection forms
A8 Avorn (1988)	**Design**: ITS **Quality criteria**: Independent intervention: NC Data collection unbiased: D Blinded assessment: D Reliable outcomes: D Completeness of data: NC Analysed appropriately: D	**Area of interest**: Antibiotic prescribing **Targeted behaviour**: Prescribing	**Country**: USA **Setting**: Inpatient **Speciality**: NC **Level of training**: NC **Proportion of eligible target population taking part**: NC **Number of data points**: Preintervention: 25 Postintervention: 14 **Data point interval**: 4 weeks	**Group 1** Distribution of educational materials, Educational meetings

Appendix 5 cont'd *Details of included studies*

Study details	Quality criteria	Clinical area	Setting	Intervention groups
A9 Avorn (1992)	**Design**: Cluster RCT Random allocation of matched pairs **Unit of allocation**: Nursing home **Quality criteria**: Randomisation concealment: NC Protection against contamination: D Blinded assessment: NC Reliable outcomes: NC Baseline measurement: D Follow-up: Providers: NC Patients: D	**Area of interest**: Psychoactive drug use in nursing homes **Targeted behaviour**: Prescribing	**Country**: USA **Setting**: Nursing home **Speciality**: NC **Level of training**: NC **Proportion of eligible target population taking part**: NC **Number of allocation units in study groups**: G1=6, G2C=6	**Group 1** Distribution of educational materials, Educational meetings, Educational outreach visits, Marketing **Group 2 control** Usual care/no intervention
A10 Banks (1988)	**Design**: Cluster RCT Before and after balanced incomplete block design [2 conditions, 1 intervention, 2 study groups (each an intervention and control for one of the conditions)] **Unit of allocation**: Provider **Quality criteria**: Randomisation concealment: NC Protection against contamination: NC Blinded assessment: NC Reliable outcomes: NC Baseline measurement: NC Follow-up: Providers: NC Patients: NC	**Area of interest**: Screening for colorectal, breast and cervical cancer **Targeted behaviour**: Prevention; diagnosis; test ordering; prescribing; patient education/advice	**Country**: USA **Setting**: Outpatient/ambulatory **Speciality**: Ambulatory medicine **Level of training**: NC **Proportion of eligible target population taking part**: NC **Number of allocation units in study groups**: 16	**Group 1** Reminders **Group 2 control** Usual care/no intervention

Study details	Quality criteria	Clinical area	Setting	Intervention groups
A11 Bareford (1990)	**Design**: ITS **Quality criteria**: Independent intervention: NC Data collection unbiased: D Blinded assessment: D Reliable outcomes: D Completeness of data: NC Analysed appropriately: NC	**Area of interest**: Haematological tests **Targeted behaviour**: Test ordering	**Country**: UK **Setting**: Mixed, hospital inpatient/outpatient **Speciality**: Surgery medicine (all divisions) **Level of training**: Mixed **Proportion of eligible target population taking part**: NC **Number of data points**: Preintervention: 8 Postintervention: 26 **Data point interval**: 1 month	**Group 1** Distribution of educational materials, Educational meetings, Audit and feedback
A12 Barnett (1978)	**Design**: ITS **Quality criteria**: Independent intervention: NC Data collection unbiased: D Blinded assessment: D Reliable outcomes: D Completeness of data: NC Analysed appropriately: NC	**Area of interest**: Streptococcal pharyngitis **Targeted behaviour**: Prescribing	**Country**: USA **Setting**: Family/general practice/community **Speciality**: NC **Level of training**: NC **Proportion of eligible target population taking part**: NC **Number of data points**: Preintervention: 3 Postintervention: 37 **Data point interval**: 1 month	**Group 1** Reminders

Study details	Quality criteria	Clinical area	Setting	Intervention groups
A13 Barnett (1983)	**Design**: RCT Stratified by age and blood pressure **Unit of allocation**: Patient **Quality criteria**: Randomisation concealment: NC Protection against contamination: ND Blinded assessment: NC Reliable outcomes: NC Baseline measurement: NC Follow-up: Providers: NC Patients: NC	**Area of interest**: Hypertension **Targeted behaviour**: General management	**Country**: USA **Setting**: Family/general practice/community **Speciality**: Internal medicine **Level of training**: NC **Proportion of eligible target population taking part**: NC **Number of allocation units in study groups**: G1=63, G2C=52	**Group 1** Reminders **Group 2 control** Usual care/no intervention
A14 Battista (1991)	**Design**: Cluster CBA Groups balanced by type and location **Unit of allocation**: Family medicine teaching unit **Quality criteria**: Characteristics of study and control: ND Protection against contamination: D Baseline measurement: NC Blinded assessment: NC Reliable outcomes: D Follow-up: Providers: NC Patients: NC Potential unit of analysis error in main analysis	**Area of interest**: Preventive services **Targeted behaviour**: Prevention; test ordering; prescribing; patient education/advice	**Country**: Canada **Setting**: Family/general practice/community **Speciality**: General practice/family medicine **Level of training**: Mixed **Proportion of eligible target population taking part**: NC **Number of allocation units in study groups**: G1=2, G2=2, G3C=2	**Group 1** Distribution of educational materials, Educational meetings, Audit and feedback, Clinical multidisciplinary teams **Group 2** Distribution of educational materials, Educational meetings, Audit and feedback **Group 3 control** Distribution of educational materials, Educational meetings

Study details	Quality criteria	Clinical area	Setting	Intervention groups
A15 Bearcroft (1994)	**Design**: Cluster RCT **Unit of allocation**: Practice **Quality criteria**: Randomisation concealment: D Protection against contamination: D Blinded assessment: NC Reliable outcomes: NC Baseline measurement: NC Follow-up: Providers: NC Patients: D Potential unit of analysis error in main analysis	**Area of interest**: Chest radiography **Targeted behaviour**: Test ordering	**Country**: UK **Setting**: Family/general practice/community **Speciality**: General practice/family medicine **Level of training**: NC **Proportion of eligible target population taking part**: NC **Number of allocation units in study groups**: G1=33 G2C=? practices, G1=122, G2C=88 providers	**Group 1** Distribution of educational materials **Group 2 control** Usual care/no intervention
A16 Becker (1989)	**Design**: RCT **Unit of allocation**: Patient **Quality criteria**: Randomisation concealment: NC Protection against contamination: NC Blinded assessment: D Reliable outcomes: NC Baseline measurement: D Follow-up: Providers: NC Patients: D	**Area of interest**: Preventive services **Targeted behaviour**: Prevention; test ordering; prescribing; patient education/advice	**Country**: USA **Setting**: Outpatient/ambulatory **Speciality**: General medicine **Level of training**: Mixed **Proportion of eligible target population taking part**: NC **Number of allocation units in study groups**: G1=168, G2=203, G3C=193	**Group 1** Reminders, Patient reminders **Group 2** Reminders **Group 3 control** Usual care/no intervention

Appendix 5 cont'd *Details of included studies*

Study details	Quality criteria	Clinical area	Setting	Intervention groups
A17 Bejes (1992)	**Design**: Cluster RCT Stratified by level of experience **Unit of allocation**: Provider **Quality criteria**: Randomisation concealment: NC Protection against contamination: NC Blinded assessment: NC Reliable outcomes: NC Baseline measurement: NC Follow-up: Providers: NC Patients: NC Potential unit of analysis error in main analysis	**Area of interest**: Screening for colorectal cancer **Targeted behaviour**: Prevention; procedures	**Country**: USA **Setting**: Family/general practice/community **Speciality**: General practice/family medicine; NC **Level of training**: Mixed **Proportion of eligible target population taking part**: 100% **Number of allocation units in study groups**: 18	**Group 1** Educational meetings, Reminders, Patient education/reminder **Group 2** Educational meetings, Reminders, Patient education **Group 3 control** Usual care/no intervention
A18 Belcher (1990)	**Design**: RCT Stratified by eight criteria **Unit of allocation**: Patient **Quality criteria**: Randomisation concealment: NC Protection against contamination: ND Blinded assessment: D Reliable outcomes: D Baseline measurement: D Follow-up: Providers: NC Patients: NC	**Area of interest**: Preventive services **Targeted behaviour**: Prevention; prescribing; patient education/advice	**Country**: USA **Setting**: Outpatient/ambulatory **Speciality**: NC **Level of training**: NC **Proportion of eligible target population taking part**: NC **Number of allocation units in study groups**: G1=277, G2=273, G3=400, G4C=274	**Group 1** Educational meetings, Reminders, Audit and feedback **Group 2** Patient education/reminder **Group 3** Revision of professional roles, Continuity of care, Changes to the site and setting of service delivery **Group 4 control** Usual care/no intervention

Study details	Quality criteria	Clinical area	Setting	Intervention groups
A19 Berbatis (1982)	**Design**: ITS **Quality criteria**: Independent intervention: D Data collection unbiased: D Blinded assessment: NC Reliable outcomes: NC Completeness of data: NC Analysed appropriately: ND	**Area of interest**: Prescribing for pain relief **Targeted behaviour**: Prescribing	**Country**: Australia **Setting**: Inpatient **Speciality**: NC **Level of training**: NC **Proportion of eligible target population taking part**: NC **Number of data points**: Preintervention: 3 Postintervention: 4 **Data point interval**: 1 week	**Group 1** Distribution of educational materials
A20 Boekeloo (1990)	**Design**: Cluster RCT **Unit of allocation**: Provider **Quality criteria**: Randomisation concealment: NC Protection against contamination: NC Blinded assessment: NC Reliable outcomes: NC Baseline measurement: D Follow-up: Providers: NC Patients: NC	**Area of interest**: Management of blood cholesterol **Targeted behaviour**: General management	**Country**: USA **Setting**: Inpatient **Speciality**: Internal medicine **Level of training**: In training **Proportion of eligible target population taking part**: NC **Number of allocation units in study groups**: 29	**Group 1** Distribution of educational materials, Educational meetings, Reminders, Audit and feedback **Group 2** Distribution of educational materials, Educational meetings, Audit and feedback **Group 3** Distribution of educational materials, Educational meetings, Reminders **Group 4 control** Distribution of educational materials, Educational meetings

Appendix 5 cont'd *Details of included studies*

Study details	Quality criteria	Clinical area	Setting	Intervention groups
A21 Bogden (1997)	**Design**: RCT **Unit of allocation**: Patient allocated to 1 of 2 group practices, 1 practice is the control arm, the other the study arm **Quality criteria**: Randomisation concealment: NC Protection against contamination: NC Blinded assessment: NC Reliable outcomes: NC Baseline measurement: D Follow-up: Providers: NC Patients: D	**Area of interest**: Cholesterol levels **Targeted behaviour**: General management; prescribing	**Country**: USA **Setting**: Family/general practice/community **Speciality**: NC; primary care clinicians **Level of training**: Mixed **Proportion of eligible target population taking part**: NC **Number of allocation units in study groups**: G1=47, G2C=47 patients, G1=1, G2C=1 group practice	**Group 1** Reminders, Revision of professional roles, Clinical multidisciplinary teams **Group 2 control** Usual care/no intervention
A22 Boissel (1995)	**Design**: Cluster RCT **Unit of allocation**: Practice **Quality criteria**: Randomisation concealment: NC Protection against contamination: D Blinded assessment: NC Reliable outcomes: NC Baseline measurement: NC Follow-up: Providers: NC Patients: NC	**Area of interest**: Screening for breast and cervical cancer **Targeted behaviour**: Prevention; test ordering; prescribing; patient education/ advice	**Country**: France **Setting**: Family/general practice/community **Speciality**: General practice/family medicine **Level of training**: NC **Proportion of eligible target population taking part**: NC **Number of allocation units in study groups**: G1=139, G2C=139	**Group 1** Distribution of educational materials, Educational meetings **Group 2 control** Usual care/no intervention

Study details	Quality criteria	Clinical area	Setting	Intervention groups
A23 Brady (1988)	**Design**: Cluster RCT Stratified by training year, 3-arm trial for 2 conditions, 2 control groups, 1 intervention group **Unit of allocation**: Provider **Quality criteria**: Randomisation concealment: D Protection against contamination: NC Blinded assessment: NC Reliable outcomes: NC Baseline measurement: NC Follow-up: Providers: D Patients: NC Potential unit of analysis error in main analysis	**Area of interest**: Influenza vaccination and mammography ordering **Targeted behaviour**: Prevention; prescribing; patient education/advice	**Country**: USA **Setting**: Outpatient/ambulatory **Speciality**: Internal medicine **Level of training**: In training **Proportion of eligible target population taking part**: 98% **Number of allocation units in study groups**: G1=15, G2=15, G3C=15	**Group 1** Distribution of educational materials, Educational meetings, Audit and feedback **Group 3 control** Usual care/no intervention
A24 Brody (1990)	**Design**: Cluster RCT **Unit of allocation**: Clinic **Quality criteria**: Randomisation concealment: NC Protection against contamination: NC Blinded assessment: D Reliable outcomes: NC Baseline measurement: NC Follow-up: Providers: NC Patients: NC Potential unit of analysis error in main analysis	**Area of interest**: Mental health problems **Targeted behaviour**: General management; professional patient communication	**Country**: USA **Setting**: Outpatient/ambulatory **Speciality**: Internal medicine **Level of training**: In training **Proportion of eligible target population taking part**: NC **Number of allocation units in study groups**: G1=1, G2=1, G3C=2	**Group 1** Distribution of educational materials, Educational meetings, Reminders, Patient mediated **Group 2** Patient mediated **Group 3 control** Usual care/no intervention

Appendix 5 cont'd *Details of included studies*

Study details	Quality criteria	Clinical area	Setting	Intervention groups
A25 Brook (1976)	**Design**: ITS **Quality criteria**: Independent intervention: NC Data collection unbiased: D Blinded assessment: D Reliable outcomes: D Completeness of data: ND Analysed appropriately: D	**Area of interest**: Use of injections (various indications) **Targeted behaviour**: Prescribing	**Country**: USA **Setting**: Outpatient/ambulatory **Speciality**: General practice/family medicine; internal medicine; obstetrics/gynaecology; paediatrics; general surgery and other specialities **Level of training**: Mixed **Proportion of eligible target population taking part**: NC **Number of data points**: Preintervention: 5 Postintervention: 19 **Data point interval**: 1 month	**Group 1** Distribution of educational materials, Provider penalty, Peer review
A26 Brooks (1996)	**Design**: ITS **Quality criteria**: Independent intervention: NC Data collection unbiased: D Blinded assessment: NC Reliable outcomes: D Completeness of data: NC Analysed appropriately: ND	**Area of interest**: Diabetes **Targeted behaviour**: General management	**Country**: USA **Setting**: Family/general practice/community **Speciality**: General practice/family medicine **Level of training**: NC **Proportion of eligible target population taking part**: NC **Number of data points**: Preintervention: 30 Postintervention: 6 **Data point interval**: 1 month	**Group 1** Distribution of educational materials, Reminders, Patient-directed reminder

Study details	Quality criteria	Clinical area	Setting	Intervention groups
A27 Brownbridge (1986)	**Design**: Cluster CBA **Unit of allocation**: Site of practice **Quality criteria**: Characteristics of study and control: NC Protection against contamination: ND Baseline measurement: NC Blinded assessment: NC Reliable outcomes: NC Follow-up: Providers: NC Patients: NC	**Area of interest**: Hypertension **Targeted behaviour**: General management	**Country**: UK **Setting**: Family/general practice/community **Speciality**: General practice/family medicine **Level of training**: NC **Proportion of eligible target population taking part**: NC **Number of allocation units in study groups**: G1=1, G2C=1	**Group 1** Reminders, Changes in medical record systems or Changes in physical structure, facilities and equipment **Group 2 control** Usual care/no intervention
A28 Browner (1994)	**Design**: Cluster RCT **Unit of allocation**: Practice or physician **Quality criteria**: Randomisation concealment: D Protection against contamination: D Blinded assessment: D Reliable outcomes: NC Baseline measurement: NC Follow-up: Providers: D Patients: NC	**Area of interest**: Hypercholesterolaemia: screening and treatment **Targeted behaviour**: Test ordering; general management; prescribing	**Country**: USA **Setting**: Family/general practice/community **Speciality**: Internal medicine **Level of training**: NC **Proportion of eligible target population taking part**: ?65% of physicians contacted (not practices) **Number of allocation units in study groups**: G1=57, G2=55, G3C=62	**Group 1** Distribution of educational materials, Educational meetings, Educational outreach visits, patient interventions **Group 2** Distribution of educational materials, Educational meetings **Group 3 control** Usual care/no intervention

Appendix 5 cont'd *Details of included studies*

Study details	Quality criteria	Clinical area	Setting	Intervention groups
A29 Brufsky (1998)	**Design**: ITS **Quality criteria**: Independent intervention: D Data collection unbiased: D Blinded assessment: D Reliable outcomes: D Completeness of data: NC Analysed appropriately: D	**Area of interest**: Ulcers and reflux **Targeted behaviour**: Financial	**Country**: USA **Setting**: Mixed, 'Community health plan' ambulatory care (health centres) and independent medical groups **Speciality**: NC **Level of training**: NC **Proportion of eligible target population taking part**: NC **Number of data points**: Preintervention: 11 Postintervention: 15 **Data point interval**: 1 month	**Group 1** Distribution of educational materials, Audit and feedback, Formulary
A30 Bryce (1995)	**Design**: RCT Stratified by age, treatment, family member allocated to the same group **Unit of allocation**: Patient (siblings allocated to same group) **Quality criteria**: Randomisation concealment: NC Protection against contamination: ND Blinded assessment: D Reliable outcomes: NC Baseline measurement: D Follow-up: Providers: NC Patients: D	**Area of interest**: Asthma: diagnosis and treatment **Targeted behaviour**: Diagnosis; general management; referrals; prescribing	**Country**: UK **Setting**: Family/general Practice/community **Speciality**: General practice/family medicine **Level of training**: NC **Proportion of eligible target population taking part**: NC **Number of allocation units in study groups**: G1=1585, G2C=1563 (3373 entered trial)	**Group 1** Distribution of educational materials, Reminders, Audit facilitator **Group 2 control** Audit facilitator

Study details	Quality criteria	Clinical area	Setting	Intervention groups
A31 Buchsbaum (1993)	**Design**: Cluster RCT **Unit of allocation**: Provider **Quality criteria**: Randomisation concealment: NC Protection against contamination: NC Blinded assessment: NC Reliable outcomes: NC Baseline measurement: NC Follow-up: Providers: D Patients: D	**Area of interest**: Alcohol dependence **Targeted behaviour**: General management; patient education/advice	**Country**: USA **Setting**: Outpatient/ambulatory **Speciality**: Ambulatory medicine **Level of training**: In training **Proportion of eligible target population taking part**: NC **Number of allocation units in study groups**: G1=41, G2C=42	**Group 1** Reminders, Patient mediated **Group 2 control** Usual care/no intervention
A32 Buffington (1991)	**Design**: Cluster RCT Stratified by patient population **Unit of allocation**: Practice **Quality criteria**: Randomisation concealment: NC Protection against contamination: D Blinded assessment: D Reliable outcomes: D Baseline measurement: NC Follow-up: Providers: D Patients: NC Potential unit of analysis error in main analysis	**Area of interest**: Influenza vaccination **Targeted behaviour**: Prevention; prescribing; patient education/advice	**Country**: USA **Setting**: Family/general practice/community **Speciality**: Internal medicine **Level of training**: NC **Proportion of eligible target population taking part**: 80% **Number of allocation units in study groups**: 13 practices, G1=15, G2=13, G3C=17 providers	**Group 1** Reminders, Audit and feedback, Patient reminders **Group 2** Reminders, Audit and feedback **Group 3 control** Usual care/no intervention

Appendix 5 cont'd *Details of included studies*

Study details	Quality criteria	Clinical area	Setting	Intervention groups
A33 Burack (1994)	**Design**: RCT Stratified by age **Unit of allocation**: Patient **Quality criteria**: Randomisation concealment: NC Protection against contamination: ND Blinded assessment: NC Reliable outcomes: NC Baseline measurement: D Follow-up: Providers: NC Patients: NC	**Area of interest**: Preventive services: mammography **Targeted behaviour**: Prevention; test ordering; prescribing; patient education/advice	**Country**: USA **Setting**: Mixed, primary care practices, HMO sites and outpatient practice sites **Speciality**: General practice/family medicine; internal medicine; obstetrics/gynaecology **Level of training**: NC **Proportion of eligible target population taking part**: NC **Number of allocation units in study groups**: G1=2305, G2C=2307	**Group 1** Educational meetings, Reminders, Patient reminder, Patient incentive, Telephone appointment system and rescheduling system **Group 2 control** Educational meetings, Patient reminder, Patient incentive, Telephone appointment system
A34 Burack (1996)	**Design**: RCT Stratified by age, previous mammogram, physician intervention status; factorial design **Unit of allocation**: Patient **Quality criteria**: Randomisation concealment: NC Protection against contamination: ND Blinded assessment: NC Reliable outcomes: NC Baseline measurement: NC Follow-up: Providers: NC Patients: ND	**Area of interest**: Preventive services: mammography **Targeted behaviour**: Prevention; test ordering; prescribing; patient education/advice	**Country**: USA **Setting**: Family/general practice/community **Speciality**: General practice/family medicine; internal medicine; obstetrics/gynaecology **Level of training**: NC **Proportion of eligible target population taking part**: NC **Number of allocation units in study groups**: G1=590, G2=592, G3=590, G4C=596	**Group 1** Reminders, Patient reminders **Group 2** Reminders **Group 3** Patient reminders **Group 4 control** Usual care/no intervention

Study details	Quality criteria	Clinical area	Setting	Intervention groups
A35 Caggiula (1996)	**Design**: Cluster RCT **Unit of allocation**: Practice **Quality criteria**: Randomisation concealment: NC Protection against contamination: D Blinded assessment: NC Reliable outcomes: NC Baseline measurement: NC Follow-up: Providers: NC Patients: NC Potential unit of analysis error in main analysis	**Area of interest**: Treatment of hypercholesterolaemia **Targeted behaviour**: General management	**Country**: USA **Setting**: Family/general practice/community **Speciality**: General practice/family medicine; internal medicine; cardiology **Level of training**: NC **Proportion of eligible target population taking part**: NC **Number of allocation units in study groups**: 23 practices, G1=296, G2C=184 patients	**Group 1** Educational meetings, Patient incentive, Continuity of care **Group 2 control** Distribution of educational materials, Educational meetings
A36 Callahan (1994)	**Design**: Cluster RCT **Unit of allocation**: Practice session **Quality criteria**: Randomisation concealment: NC Protection against contamination: NC Blinded assessment: NC Reliable outcomes: NC Baseline measurement: NC Follow-up: Providers: NC Patients: D Potential unit of analysis error in main analysis	**Area of interest**: Late-life depression **Targeted behaviour**: Diagnosis; general management; referrals; prescribing	**Country**: USA **Setting**: Outpatient/ambulatory **Speciality**: Internal medicine; primary care clinicians/general medicine **Level of training**: Mixed **Proportion of eligible target population taking part**: NC **Number of allocation units in study groups**: 29 practice sessions, G1=100, G2C=75 patients	**Group 1** Distribution of educational materials, Educational meetings, Reminders, Patient mediated, Continuity of care **Group 2 control** Educational meetings

Appendix 5 cont'd *Details of included studies*

Study details	Quality criteria	Clinical area	Setting	Intervention groups
A37 Chambers (1989)	**Design**: RCT **Unit of allocation**: Patient **Quality criteria**: Randomisation concealment: D Protection against contamination: ND Blinded assessment: NC Reliable outcomes: NC Baseline measurement: D Follow-up: Providers: NC Patients: NC	**Area of interest**: Mammography **Targeted behaviour**: Prevention; test ordering; prescribing; patient education/advice	**Country**: USA **Setting**: Family/general practice/community **Speciality**: Family/general practice/community **Level of training**: Mixed **Proportion of eligible target population taking part**: NC **Number of allocation units in study groups**: G1=623, G2C=639	**Group 1** Reminders **Group 2 control** Usual care/no intervention
A38 Chambers (1991)	**Design**: Cluster RCT Stratified by level of training **Unit of allocation**: Provider and patient **Quality criteria**: Randomisation concealment: D Protection against contamination: NC Blinded assessment: NC Reliable outcomes: NC Baseline measurement: NC Follow-up: Providers: NC Patients: NC Potential unit of analysis error in main analysis	**Area of interest**: Influenza vaccination **Targeted behaviour**: Prevention; prescribing; patient education/advice	**Country**: USA **Setting**: Family/general practice/community **Speciality**: General practice/family medicine **Level of training**: mixed **Proportion of eligible target population taking part**: NC **Number of allocation units in study groups**: 686 patients, 30 providers	**Group 1** Always reminded Reminders **Group 2** Sometimes reminded Reminders **Group 3 control** Usual care/no intervention

Study details	Quality criteria	Clinical area	Setting	Intervention groups
A39 Chassin (1986)	**Design**: Cluster RCT Stratified by size, within two large PSROs, individual hospitals, randomly allocated, random allocation of matched pairs of smaller PSROs **Unit of allocation**: Hospital and PSRO **Quality criteria**: Randomisation concealment: NC Protection against contamination: D Blinded assessment: NC Reliable outcomes: D Baseline measurement: ND Follow-up: Providers: NC Patients: NC Potential unit of analysis error in main analysis	**Area of interest**: Pelvimetry **Targeted behaviour**: Test ordering	**Country**: USA **Setting**: Mixed, hospital-wide (inpatient/outpatient) **Speciality**: Obstetrics/gynaecology **Level of training**: NC **Proportion of eligible target population taking part**: NC **Number of allocation units in study groups**: G1=64, G2C=56 hospitals	**Group 1** Distribution of educational materials, Educational meetings, Audit and feedback **Group 2 control** Usual care/no intervention
A40 Cheney (1987)	**Design**: Cluster RCT Stratified by year and type of training **Unit of allocation**: Provider **Quality criteria**: Randomisation concealment: NC Protection against contamination: NC Blinded assessment: NC Reliable outcomes: NC Baseline measurement: NC Follow-up: Providers: NC Patients: D	**Area of interest**: Preventive services **Targeted behaviour**: Prevention; test ordering; prescribing; patient education/advice	**Country**: USA **Setting**: Outpatient/ambulatory **Speciality**: Internal medicine **Level of training**: In training **Proportion of eligible target population taking part**: 100% **Number of allocation units in study groups**: 75	**Group 1** Reminders **Group 2 control** Usual care/no intervention

Appendix 5 cont'd *Details of included studies*

Study details	Quality criteria	Clinical area	Setting	Intervention groups
A41 Clarke (1990)	**Design**: ITS **Quality criteria**: Independent intervention: NC Data collection unbiased: D Blinded assessment: NC Reliable outcomes: NC Completeness of data: NC Analysed appropriately: NC	**Area of interest**: Head injury (skull radiography) **Targeted behaviour**: Test ordering	**Country**: UK **Setting**: A&E **Speciality**: A&E **Level of training**: In training **Proportion of eligible target population taking part**: 100%? 6/6 casualty officers **Number of data points**: Preintervention: 12 Postintervention: 12 **Data point interval**: 1 month	**Group 1** Distribution of educational materials, Educational meetings
A42 Coe (1977)	**Design**: RCT **Unit of allocation**: Patient **Quality criteria**: Randomisation concealment: NC Protection against contamination: ND Blinded assessment: D Reliable outcomes: NC Baseline measurement: D Follow-up: Providers: NC Patients: NC	**Area of interest**: Hypertension **Targeted behaviour**: General management	**Country**: USA **Setting**: Outpatient hypertension clinic in hospital **Speciality**: NC; renal medicine **Level of training**: Mixed **Proportion of eligible target population taking part**: NC **Number of allocation units in study groups**: G1=56, G2C=60	**Group 1** Reminders **Group 2 control** Usual care/no intervention

Study details	Quality criteria	Clinical area	Setting	Intervention groups
A43 Cohen (1982)	**Design**: Cluster RCT **Unit of allocation**: Firm **Quality criteria**: Randomisation concealment: NC Protection against contamination: NC Blinded assessment: NC Reliable outcomes: NC Baseline measurement: NC Follow-up: Providers: NC Patients: NC Potential unit of analysis error in main analysis	**Area of interest**: Preventive services **Targeted behaviour**: Prevention; test ordering; prescribing; patient education/advice	**Country**: USA **Setting**: Outpatient/ambulatory **Speciality**: NC; general medicine **Level of training**: In training **Proportion of eligible target population taking part**: 75% **Number of allocation units in study groups**: G1=2, G2C=1	**Group 1** Educational meetings, Reminders **Group 2 control** Educational meetings
A44 Cohen (1985)	**Design**: Cluster RCT Before and after balanced incomplete block design [2 conditions, 1 intervention, 2 study groups (each an intervention and control for one of the conditions)] **Unit of allocation**: Clinic team **Quality criteria**: Randomisation concealment: NC Protection against contamination: NC Blinded assessment: NC Reliable outcomes: NC Baseline measurement: NC Follow-up: Providers: D Patients: NC Potential unit of analysis error in main analysis	**Area of interest**: Preventive services **Targeted behaviour**: prevention; prescribing; patient education/advice	**Country**: USA **Setting**: Outpatient/ambulatory **Speciality**: Internal medicine **Level of training**: In training **Proportion of eligible target population taking part**: 86% **Number of allocation units in study groups**: 1 medicine clinic, 32 clinic teams, 73 providers	**Group 1** Distribution of educational materials **Group 2 control** Usual care/no intervention

Appendix 5 cont'd *Details of included studies*

Study details	Quality criteria	Clinical area	Setting	Intervention groups
A45 Cohen (1987)	**Design**: Cluster RCT 4-arm trial but possibly could be factorial design on analysis **Unit of allocation**: Provider **Quality criteria**: Randomisation concealment: NC Protection against contamination: NC Blinded assessment: NC Reliable outcomes: NC Baseline measurement: NC Follow-up: Providers: NC Patients: ND	**Area of interest**: Smoking cessation **Targeted behaviour**: Prevention; prescribing; patient education/advice	**Country**: USA **Setting**: Outpatient/ambulatory **Speciality**: Internal medicine **Level of training**: Mixed **Proportion of eligible target population taking part**: NC **Number of allocation units in study groups**: 112	**Group 1** Distribution of educational materials, Educational meetings, Reminders, Patient incentive **Group 2** Distribution of educational materials, Educational meetings, Reminders **Group 3** Distribution of educational materials, Educational meetings, Reminders, Patient incentive **Group 4 control** Distribution of educational materials, Educational meetings
A46 Cowan (1992)	**Design**: Cluster CCT **Unit of allocation**: Alternate week/resident or clinic team **Quality criteria**: Randomisation concealment: ND Protection against contamination: NC Blinded assessment: D Reliable outcomes: ND Baseline measurement: NC Follow-up: Providers: NC Patients: D Potential unit of analysis error in main analysis	**Area of interest**: Preventive services **Targeted behaviour**: Prevention; test ordering; prescribing; patient education/advice	**Country**: USA **Setting**: Outpatient/ambulatory **Speciality**: General medicine **Level of training**: In training **Proportion of eligible target population taking part**: NC **Number of allocation units in study groups**: G1=16, G2C=13 providers, G1=1, G2C=1 clinic teams	**Group 1** Reminders **Group 2 control** Usual care/no intervention

Study details	Quality criteria	Clinical area	Setting	Intervention groups
A47 Danchaivijitr (1992)	**Design**: Cluster RCT **Unit of allocation**: Ward **Quality criteria**: Randomisation concealment: NC Protection against contamination: NC Blinded assessment: NC Reliable outcomes: NC Baseline measurement: NC Follow-up: Providers: NC Patients: NC Potential unit of analysis error in main analysis	**Area of interest**: Urethral catheterisation **Targeted behaviour**: Procedures	**Country**: Thailand **Setting**: Inpatient **Speciality**: Surgery **Level of training**: NC **Proportion of eligible target population taking part**: NC **Number of allocation units in study groups**: 65 wards, 13 hospitals	**Group 1** Reminders **Group 2 control** Usual care/no intervention
A48 de Burgh (1995)	**Design**: Cluster RCT **Unit of allocation**: Provider, practice, community dependent, whether city or country practice **Quality criteria**: Randomisation concealment: NC Protection against contamination: D Blinded assessment: NC Reliable outcomes: NC Baseline measurement: NC Follow-up: Providers: D Patients: NC	**Area of interest**: Benzodiazepine prescribing for insomnia/anxiety **Targeted behaviour**: Prescribing	**Country**: Australia **Setting**: Family/general practice/community **Speciality**: General practice/family medicine **Level of training**: Mixed **Proportion of eligible target population taking part**: 45% **Number of allocation units in study groups**: G1=142, G2C=144 providers, G1=5, G2C=5 towns	**Group 1** Distribution of educational materials, Educational outreach visits **Group 2 control** Usual care/no intervention

Appendix 5 cont'd *Details of included studies*

Study details	Quality criteria	Clinical area	Setting	Intervention groups
A49 De Santis (1994)	**Design**: Cluster CBA Allocation of matched locations (possibly RCT) **Unit of allocation**: Area **Quality criteria**: Characteristics of study and control: ND Protection against contamination: NC Baseline measurement: NC Blinded assessment: NC Reliable outcomes: NC Follow-up: Providers: ND Patients: NC Potential unit of analysis error in main analysis	**Area of interest**: Antibiotic prescribing for tonsillitis **Targeted behaviour**: Prescribing	**Country**: Australia **Setting**: Family/general practice/community **Speciality**: General practice/family medicine **Level of training**: NC **Proportion of eligible target population taking part**: 59% of GPs, 84% of pharmacists **Number of allocation units in study groups**: Areas NC, 8 Health Department regions, G1=104, G2C=78 providers	**Group 1** Distribution of educational materials, Educational outreach visits **Group 2 control** Usual care/no intervention
A50 Deeb (1988)	**Design**: Cluster CBA 'Matched' primary care centres **Unit of allocation**: Primary care centre **Quality criteria**: Characteristics of study and control: NC Protection against contamination: D Baseline measurement: ND Blinded assessment: NC Reliable outcomes: D Follow-up: Providers: NC Patients: NC Potential unit of analysis error in main analysis	**Area of interest**: Diabetes: prevention of complications **Targeted behaviour**: General management	**Country**: USA **Setting**: Family/general practice/community **Speciality**: General practice/family medicine; internal medicine; obstetrics/gynaecology **Level of training**: NC **Proportion of eligible target population taking part**: 22% **Number of allocation units in study groups**: G1=3, G2C= 3 (2 rural and 1 urban in each)	**Group 1** Distribution of educational materials, Educational meetings, Outreach visits or Communication and case discussion, Revision of professional roles **Group 2 control** Usual care/no intervention

Study details	Quality criteria	Clinical area	Setting	Intervention groups
A51 Del Mar (1995)	**Design**: Cluster RCT Random allocation of matched cities **Unit of allocation**: City **Quality criteria**: Randomisation concealment: NC Protection against contamination: D Blinded assessment: D Reliable outcomes: NC Baseline measurement: D Follow-up: Providers: NC Patients: NC Potential unit of analysis error in main analysis	**Area of interest**: Melanocytic lesions **Targeted behaviour**: Diagnosis; general management	**Country**: Australia **Setting**: Mixed, general practice mainly, some specialist practices **Speciality**: General practice/family medicine; surgery **Level of training**: Mixed **Proportion of eligible target population taking part**: NC **Number of allocation units in study groups**: G1=1, G2C=1 cities, G1=52, G2C=53 providers	**Group 1** Distribution of educational materials, Provision of camera for photographing lesions **Group 2 control** Usual care/no intervention
A52 Dempsey (1995)	**Design**: ITS **Quality criteria**: Independent intervention: NC Data collection unbiased: NC Blinded assessment: NC Reliable outcomes: NC Completeness of data: NC Analysed appropriately: NC	**Area of interest**: Pneumonia **Targeted behaviour**: General management	**Country**: USA **Setting**: Inpatient **Speciality**: Medicine: emergency and inpatient **Level of training**: NC **Proportion of eligible target population taking part**: NC **Number of data points**: Preintervention: 4 Postintervention: 8 **Data point interval**: 1 month	**Group 1** Distribution of educational materials, Educational meetings, Reminders, Audit and feedback, Agreement with area nursing homes

Appendix 5 cont'd *Details of included studies*

Study details	Quality criteria	Clinical area	Setting	Intervention groups
A53 Dennis (1988)	**Design**: RCT **Unit of allocation**: Patient **Quality criteria**: Randomisation concealment: NC Protection against contamination: ND Blinded assessment: NC Reliable outcomes: NC Baseline measurement: NC Follow-up: Providers: NC Patients: D	**Area of interest**: Acute myocardial infarction (uncomplicated) **Targeted behaviour**: General management	**Country**: USA **Setting**: Mixed, family practice, specialist practices and ambulatory care **Speciality**: General practice/family medicine; internal medicine; cardiology **Level of training**: NC **Proportion of eligible target population taking part**: 79% **Number of allocation units in study groups**: G1=99, G2C=102	**Group 1** Patient mediated, Communication between professionals re guidelines **Group 2 control** Usual care/no intervention
A54 Dickey (1992)	**Design**: Cluster CBA **Unit of allocation**: Practice group **Quality criteria**: Characteristics of study and control: NC Protection against contamination: NC Baseline measurement: D Blinded assessment: ND Reliable outcomes: NC Follow-up: Providers: NC Patients: NC Potential unit of analysis error in main analysis	**Area of interest**: Preventive services **Targeted behaviour**: Prevention; prescribing; patient education/advice	**Country**: USA **Setting**: Family/general practice/community **Speciality**: General practice/family medicine **Level of training**: Mixed **Proportion of eligible target population taking part**: NC **Number of allocation units in study groups**: G1=2, G2C=1	**Group 1** Reminders, Patient reminders, Formal integration of services, Changes in medical record systems **Group 2 control** Usual care/no intervention

Study details	Quality criteria	Clinical area	Setting	Intervention groups
A55 Dietrich (1992)	**Design**: Cluster RCT Factorial design **Unit of allocation**: Practice as represented by one physician **Quality criteria**: Randomisation concealment: NC Protection against contamination: D Blinded assessment: NC Reliable outcomes: NC Baseline measurement: NC Follow-up: Providers: NC Patients: D	**Area of interest**: Early detection and prevention of cancer **Targeted behaviour**: Prevention; test ordering; referrals; prescribing; procedures; patient education/advice	**Country**: USA **Setting**: Ambulatory care **Speciality**: Family/general practice/community **Level of training**: NC **Proportion of eligible target population taking part**: 25% **Number of allocation units in study groups**: G1=26, G2=24, G3=24, G4C=24	**Group 1** Distribution of educational materials, Educational meetings, Audit and feedback, Educational outreach visits **Group 2** Distribution of educational materials, Educational meetings **Group 3** Audit and feedback, Educational outreach visits **Group 4 control** Usual care/no intervention
A56 Diwan (1995)	**Design**: Cluster RCT Random allocation of matched pairs **Unit of allocation**: Health centre **Quality criteria**: Randomisation concealment: NC Protection against contamination: NC Blinded assessment: D Reliable outcomes: D Baseline measurement: NC Follow-up: Providers: D Patients: NC	**Area of interest**: Management of raised cholesterol **Targeted behaviour**: Diagnosis; test ordering; general management	**Country**: Sweden **Setting**: Family/general practice/community **Speciality**: General practice/family medicine **Level of training**: NC **Proportion of eligible target population taking part**: NC **Number of allocation units in study groups**: G1=60, G2C=56	**Group 1** Distribution of educational materials, Educational outreach visits **Group 2 control** Usual care/no intervention

Appendix 5 cont'd *Details of included studies*

Study details	Quality criteria	Clinical area	Setting	Intervention groups
A57 Dranitsaris (1995)	**Design**: Cluster RCT Stratified by type of practice **Unit of allocation**: Provider **Quality criteria**: Randomisation concealment: NC Protection against contamination: NC Blinded assessment: NC Reliable outcomes: NC Baseline measurement: NC Follow-up: Providers: NC Patients: NC Potential unit of analysis error in main analysis	**Area of interest**: Oncology **Targeted behaviour**: Prescribing	**Country**: Canada **Setting**: Inpatient **Speciality**: Oncology **Level of training**: NC **Proportion of eligible target population taking part**: 100% **Number of allocation units in study groups**: Providers NC, 127 episodes of care, 1 hospital	**Group 1** Distribution of educational materials, Audit and feedback **Group 2 control** Distribution of educational materials
A58 Elam (1997)	**Design**: ITS **Quality criteria**: Independent intervention: NC Data collection unbiased: D Blinded assessment: D Reliable outcomes: D Completeness of data: NC Analysed appropriately: D	**Area of interest**: Low back pain **Targeted behaviour**: Test ordering; financial	**Country**: USA **Setting**: Inpatient **Speciality**: Surgery **Level of training**: NC **Proportion of eligible target population taking part**: NC **Number of data points**: Preintervention: 22 Postintervention: 50 **Data point interval**: 1 month	**Group 1** Distribution of educational materials, Institution penalty

Study details	Quality criteria	Clinical area	Setting	Intervention groups
A59 Elliott (1997)	**Design**: Cluster RCT Random allocation of matched pairs **Unit of allocation**: Community **Quality criteria**: Randomisation concealment: NC Protection against contamination: D Blinded assessment: ND Reliable outcomes: D Baseline measurement: D Follow-up: Providers: D Patients: D	**Area of interest**: Cancer pain management **Targeted behaviour**: General management	**Country**: USA **Setting**: Mixed, community trial, specialist and generalists in various settings **Level of training**: NC **Proportion of eligible target population taking part**: NC **Number of allocation units in study groups**: G1=3, G2C=3	**Group 1** Educational meetings, Educational outreach visits, Local opinion leaders, Number of OL activities **Group 2 control** Usual care/no intervention
A60 Emslie (1993)	**Design**: Cluster RCT Stratified by location **Unit of allocation**: Practice **Quality criteria**: Randomisation concealment: NC Protection against contamination: D Blinded assessment: ND Reliable outcomes: NC Baseline measurement: ND Follow-up: Providers: NC Patients: D Potential unit of analysis error in main analysis	**Area of interest**: Infertility **Targeted behaviour**: General management; referrals	**Country**: UK **Setting**: Family/general practice/community **Speciality**: General practice/family medicine **Level of training**: NC **Proportion of eligible target population taking part**: 95% **Number of allocation units in study groups**: 82 practices, G1=100, G2C=100 couples	**Group 1** Distribution of educational materials **Group 2 control** Usual care/no intervention

Appendix 5 cont'd *Details of included studies*

Study details	Quality criteria	Clinical area	Setting	Intervention groups
A61 Evans (1996)	**Design**: Cluster RCT Stratified by year of training **Unit of allocation**: Provider **Quality criteria**: Randomisation concealment: NC Protection against contamination: NC Blinded assessment: NC Reliable outcomes: NC Baseline measurement: NC Follow-up: Providers: NC Patients: NC	**Area of interest**: Cholesterolaemia **Targeted behaviour**: Prevention; patient education/advice	**Country**: USA **Setting**: Mixed, continuity care clinics at community and university health centres **Speciality**: Internal medicine; paediatrics; psychiatry **Level of training**: In training **Proportion of eligible target population taking part**: NC **Number of allocation units in study groups**: G1=35, G2=29, G3=31, G4C=35	**Group 1** Distribution of educational materials, Educational meetings, Reminders, Patient mediated **Group 2** Reminders, Patient mediated **Group 3** Distribution of educational materials, Educational meetings **Group 4 control** Educational meetings
A62 Evans (1997)	**Design**: Cluster RCT **Unit of allocation**: Panel of clinics **Quality criteria**: Randomisation concealment: D Protection against contamination: D Blinded assessment: NC Reliable outcomes: NC Baseline measurement: D Follow-up: Providers: NC Patients: NC	**Area of interest**: Childhood asthma **Targeted behaviour**: Prevention; diagnosis; prescribing; patient education/advice	**Country**: USA **Setting**: Family/general practice/community **Speciality**: Paediatrics **Level of training**: NC **Proportion of eligible target population taking part**: NC **Number of allocation units in study groups**: G1=1, G2C=1 panels of clinics, G1=11, G2C=11 clinics	**Group 1** Distribution of educational materials, Educational meetings, Educational outreach visits, Formulary, Communication and case discussion between distant health professionals **Group 2 control** Distribution of educational materials, Formulary

Study details	Quality criteria	Clinical area	Setting	Intervention groups
A63 Everitt (1990)	**Design**: ITS **Quality criteria**: Independent intervention: D Data collection unbiased: D Blinded assessment: NC Reliable outcomes: NC Completeness of data: NC Analysed appropriately: D	**Area of interest**: Caesarean section **Targeted behaviour**: Prescribing	**Country**: USA **Setting**: Inpatient **Speciality**: Obstetrics/gynaecology **Level of training**: Mixed **Proportion of eligible target population taking part**: NC **Number of data points**: Preintervention: 10 Postintervention: 24 **Data point interval**: 1 month	**Group 1** Distribution of educational materials, Educational meetings, Operating room stocked with first choice drug
A64 Feder (1995)	**Design**: Cluster RCT Stratified by five criteria. Before and after balanced incomplete block design [2 conditions, 1 intervention, 2 study groups (each an intervention and control for one of the conditions)] **Unit of allocation**: Practice **Quality criteria**: Randomisation concealment: NC Protection against contamination: D Blinded assessment: NC Reliable outcomes: D Baseline measurement: D Follow-up: Providers: D Patients: NC	**Area of interest**: Asthma and diabetes **Targeted behaviour**: General management; prescribing; record keeping; patient education/advice	**Country**: UK **Setting**: Family/general practice/community **Speciality**: General practice/family medicine **Level of training**: Fully trained **Proportion of eligible target population taking part**: 55% **Number of allocation units in study groups**: G1=24, G2C=24, 24 in total (12 practices received intervention for condition 1, 12 practices received intervention for condition 2)	**Group 1** Audit and feedback, Educational outreach visits **Group 2 control** Usual care/no intervention

Appendix 5 cont'd *Details of included studies*

Study details	Quality criteria	Clinical area	Setting	Intervention groups
A65 Fender (1999)	**Design**: Cluster RCT **Unit of allocation**: Practice **Quality criteria**: Randomisation concealment: D Protection against contamination: D Blinded assessment: NC Reliable outcomes: NC Baseline measurement: NC Follow-up: Providers: NC Patients: NC Potential unit of analysis error in main analysis	**Area of interest**: Menorrhagia **Targeted behaviour**: Referrals	**Country**: UK **Setting**: Family/general practice/community **Speciality**: General practice/family medicine **Level of training**: Fully trained **Proportion of eligible target population taking part**: 33% **Number of allocation units in study groups**: G1=54, G2C=46	**Group 1** Distribution of educational materials, Educational meetings, Educational outreach visits **Group 2 control** Usual care/no intervention
A66 Fletcher (1993)	**Design**: Cluster CBA 'Matched' communities **Unit of allocation**: Community **Quality criteria**: Characteristics of study and control: D Protection against contamination: D Baseline measurement: D Blinded assessment: NC Reliable outcomes: NC Follow-up: Providers: D Patients: NC Potential unit of analysis error in main analysis	**Area of interest**: Preventive services: mammography **Targeted behaviour**: Prevention; prescribing; patient education/advice	**Country**: USA **Setting**: Family/general practice/community **Speciality**: General practice/family medicine; internal medicine; obstetrics/gynaecology **Level of training**: NC **Proportion of eligible target population taking part**: NC **Number of allocation units in study groups**: G1=1, G2C=1 (counties)	**Group 1** Distribution of educational materials, Educational meetings, Audit and feedback, Mass media, Reduced patient charges, Patient incentive **Group 2 control** Usual care/no intervention

Study details	Quality criteria	Clinical area	Setting	Intervention groups
A67 Flynn (1997)	**Design**: Cluster RCT Random allocation of two matched sets of communities **Unit of allocation**: Set/group of communities **Quality criteria**: Randomisation concealment: NC Protection against contamination: D Blinded assessment: NC Reliable outcomes: NC Baseline measurement: NC Follow-up: Providers: NC Patients: ND Potential unit of analysis error in main analysis	**Area of interest**: Preventive services: mammography **Targeted behaviour**: Prevention; prescribing; patient education/advice	**Country**: USA **Setting**: Family/general practice/community **Speciality**: General practice/family medicine **Level of training**: NC **Proportion of eligible target population taking part**: NC **Number of allocation units in study groups**: G1=1, G2C=1 set of communities, G1=6, G2C=7 communities	**Group 1** Distribution of educational materials, Educational meetings, Community OLs giving educational materials and holding meetings, Patient education, Changes to the site and setting of service delivery **Group 2 control** Changes to the site and setting of service delivery
A68 Fowkes (1984)	**Design**: ITS **Quality criteria**: Independent intervention: D Data collection unbiased: D Blinded assessment: NC Reliable outcomes: NC Completeness of data: NC Analysed appropriately: ND	**Area of interest**: Head injury (skull radiography) **Targeted behaviour**: Test ordering	**Country**: UK **Setting**: A&E **Speciality**: A&E **Level of training**: Mixed **Proportion of eligible target population taking part**: NC **Number of data points**: Preintervention: 4 Postintervention: 8 **Data point interval**: 1 month	**Group 1** Distribution of educational materials, Educational meetings, Presence and organisation of quality monitoring mechanisms

Appendix 5 cont'd *Details of included studies*

Study details	Quality criteria	Clinical area	Setting	Intervention groups
A69 Fowkes (1986)	**Design**: Cluster CBA **Unit of allocation**: Hospital **Quality criteria**: Characteristics of study and control: NC Protection against contamination: D Baseline measurement: NC Blinded assessment: NC Reliable outcomes: NC Follow-up: Providers: NC Patients: NC Potential unit of analysis error in main analysis	**Area of interest**: Use of preoperative chest X-ray **Targeted behaviour**: Test ordering; procedures	**Country**: UK **Setting**: Inpatient **Speciality**: Surgery; obstetrics/gynaecology; radiology **Level of training**: Mixed **Proportion of eligible target population taking part**: NC **Number of allocation units in study groups**: G1=1, G2=1, G3=1, G4=1, G5C=1	**Group 1** Distribution of educational materials, Reminders, Presence and organisation of quality monitoring mechanisms **Group 2** Distribution of educational materials, Audit and feedback **Group 3** Distribution of educational materials, Reminders **Group 4** Distribution of educational materials, Revision of professional roles, Presence and organisation of quality monitoring mechanisms **Group 5 control** Usual care/no intervention
A70 Fowkes (1986)	**Design**: ITS **Quality criteria**: Independent intervention: NC Data collection unbiased: D Blinded assessment: NC Reliable outcomes: NC Completeness of data: NC Analysed appropriately: ND	**Area of interest**: Myocardial infarction, overdose, haematemesis and melaena, pneumonia, congestive cardiac failure, stroke, deep vein thrombosis and pulmonary embolism, diarrhoea, urinary tract infection, lower gastrointestinal bleeding, exacerbation of chronic bronchitis **Targeted behaviour**: Test ordering	**Country**: UK **Setting**: Inpatient **Speciality**: Laboratory medicine; radiology **Level of training**: In training **Proportion of eligible target population taking part**: NC **Number of data points**: Preintervention: 6 Postintervention: 10 **Data point interval**: 1 week	**Group 1** Distribution of educational materials, Educational meetings, Audit and feedback

Study details	Quality criteria	Clinical area	Setting	Intervention groups
A71 Fox (1985)	**Design**: Cluster CBA **Unit of allocation**: Class of resident (year group) **Quality criteria**: Characteristics of study and control: ND Protection against contamination: D Baseline measurement: D Blinded assessment: D Reliable outcomes: D Follow-up: Providers: NC Patients: NC	**Area of interest**: Preventive services: mammography **Targeted behaviour**: Prevention; test ordering; referrals; prescribing; patient education/advice	**Country**: USA **Setting**: Family/general practice/community **Speciality**: Family/general practice/community **Level of training**: In training **Proportion of eligible target population taking part**: 100% **Number of allocation units in study groups**: G1=1, G2C=1 year groups from resident training programme	**Group 1** Distribution of educational materials, Educational meetings, Local consensus process, One week data log by doctors **Group 2 control** Usual care/no intervention
A72 Frame (1994)	**Design**: Cluster RCT Stratified by 32 criteria **Unit of allocation**: Family **Quality criteria**: Randomisation concealment: NC Protection against contamination: ND Blinded assessment: NC Reliable outcomes: NC Baseline measurement: D Follow-up: Providers: NC Patients: NC Potential unit of analysis error in main analysis	**Area of interest**: Preventive services **Targeted behaviour**: Prevention; diagnosis; test ordering; prescribing; patient education/advice	**Country**: USA **Setting**: Family/general practice/community **Speciality**: General practice/family medicine **Level of training**: NC **Proportion of eligible target population taking part**: NC **Number of allocation units in study groups**: G1=829, G2C= 836 (but 1008 families in total)	**Group 1** Reminders, Patient reminders, Changes in medical record systems **Group 2 control** Reminders, Patient reminders

Appendix 5 cont'd *Details of included studies*

Study details	Quality criteria	Clinical area	Setting	Intervention groups
A73 Fraser (1996)	**Design**: ITS **Quality criteria**: Independent intervention: D Data collection unbiased: D Blinded assessment: D Reliable outcomes: D Completeness of data: D Analysed appropriately: ND	**Area of interest**: Heart problems/defects; monitoring digoxin therapy **Targeted behaviour**: Test ordering	**Country**: USA **Setting**: Inpatient **Speciality**: Surgery; medical staff **Level of training**: NC **Proportion of eligible target population taking part**: NC **Number of data points**: Preintervention: 5 Postintervention: 9 **Data point interval**: 3 months	**Group 1** Educational meetings; Audit and feedback, Changes in medical record systems
A74 Freeborn (1997)	**Design**: Cluster CBA **Unit of allocation**: Administrative area **Quality criteria**: Characteristics of study and control: ND Protection against contamination: NC Baseline measurement: D Blinded assessment: D Reliable outcomes: D Follow-up: Providers: NC Patients: NC Potential unit of analysis error in main analysis	**Area of interest**: Radiological investigation of back pain **Targeted behaviour**: Test ordering; general management	**Country**: USA **Setting**: Family/general practice/community **Speciality**: General practice/family medicine; internal medicine **Level of training**: Fully trained **Proportion of eligible target population taking part**: 100% **Number of allocation units in study groups**: G1=1, G2C=1 HMO administrative areas	**Group 1** Distribution of educational materials, Educational meetings, Audit and feedback **Group 2 control** Usual care/no intervention

Study details	Quality criteria	Clinical area	Setting	Intervention groups
A75 Gama (1992)	**Design**: ITS **Quality criteria**: Independent intervention: NC Data collection unbiased: D Blinded assessment: NC Reliable outcomes: NC Completeness of data: NC Analysed appropriately: ND	**Area of interest**: Acute myocardial infarction **Targeted behaviour**: Test ordering	**Country**: UK **Setting**: Inpatient **Speciality**: Geriatics **Level of training**: NC **Proportion of eligible target population taking part**: NC **Number of data points**: Preintervention: 6 Postintervention: 12 **Data point interval**: 1 month	**Group 1** Audit and feedback
A76 Gans (1994)	**Design**: RCT **Unit of allocation**: Patient **Quality criteria**: Randomisation concealment: NC Protection against contamination: NC Blinded assessment: NC Reliable outcomes: NC Baseline measurement: NC Follow-up: Providers: NC Patients: D	**Area of interest**: High cholesterol **Targeted behaviour**: Prevention; prescribing; patient education/advice	**Country**: USA **Setting**: Family/general practice/community **Speciality**: Personal physician **Level of training**: NC **Proportion of eligible target population taking part**: NC **Number of allocation units in study groups**: G1=47, G2=39, G3=42, G4C=45	**Group 1** Distribution of educational materials, Patient reminders **Group 2** Distribution of educational materials **Group 3** Patient reminders **Group 4 control** Usual care/no intervention

Appendix 5 cont'd *Details of included studies*

Study details	Quality criteria	Clinical area	Setting	Intervention groups
A77 Gemson (1995)	**Design**: Cluster CBA 'Matched' clinics/hospitals **Unit of allocation**: Hospital **Quality criteria**: Characteristics of study and control: D Protection against contamination: D Baseline measurement: NC Blinded assessment: ND Reliable outcomes: NC Follow-up: Providers: D Patients: D Potential unit of analysis error in main analysis	**Area of interest**: Preventive services **Targeted behaviour**: Prevention; prescribing; patient education/advice	**Country**: USA **Setting**: Outpatient/ambulatory **Speciality**: NC **Level of training**: Mixed **Proportion of eligible target population taking part**: NC **Number of allocation units in study groups**: G1=1, G2C=1	**Group 1** Distribution of educational materials, Educational meetings, Reminders, Patient education, Changes in medical record systems **Group 2 control** Usual care/no intervention
A78 Girotti (1990)	**Design**: Cluster CBA **Unit of allocation**: Surgical service **Quality criteria**: Characteristics of study and control: ND Protection against contamination: NC Baseline measurement: NC Blinded assessment: NC Reliable outcomes: NC Follow-up: Providers: NC Patients: NC Potential unit of analysis error in main analysis	**Area of interest**: Prescription of perioperative drugs **Targeted behaviour**: Prescribing	**Country**: Canada **Setting**: Inpatient **Speciality**: Surgery **Level of training**: Mixed **Proportion of eligible target population taking part**: NC **Number of allocation units in study groups**: G1=3, G2C=2	**Group 1** Distribution of educational materials **Group 2 control** Reminders

Study details	Quality criteria	Clinical area	Setting	Intervention groups
A79 Goldberg (1998)	**Design**: Cluster RCT **Unit of allocation**: Firms and small group practices **Quality criteria**: Randomisation concealment: D Protection against contamination: NC Blinded assessment: NC Reliable outcomes: NC Baseline measurement: D Follow-up: Providers: NC Patients: NC	**Area of interest**: Depression and hypertension **Targeted behaviour**: General management	**Country**: USA **Setting**: Mixed, primary care clinics at hospital, HMO, Veterans Affairs medical centre **Speciality**: Internal medicine **Level of training**: Mixed **Proportion of eligible target population taking part**: NC **Number of allocation units in study groups**: 15 small group practice/firms, G1=37, G2=18, G3C=23 (95 in total) providers	**Group 1** Distribution of educational materials, Educational meetings, Audit and Feedback, Local consensus process, Revision of professional roles, Presence and organisation of quality monitoring mechanisms **Group 2** Distribution of educational materials, Educational meetings, Audit and feedback, Revision of professional roles **Group 3 control** Distribution of educational materials
A80 Gomez (1996)	**Design**: RCT **Unit of allocation**: Patient **Quality criteria**: Randomisation concealment: NC Protection against contamination: NC Blinded assessment: NC Reliable outcomes: NC Baseline measurement: NC Follow-up: Providers: NC Patients: D	**Area of interest**: Evaluation of chest pain **Targeted behaviour**: Diagnosis; general management	**Country**: USA **Setting**: Inpatient **Speciality**: Cardiology **Level of training**: NC **Proportion of eligible target population taking part**: NC **Number of allocation units in study groups**: G1=50, G2C=50	**Group 1** Rapid rule-out protocol **Group 2 control** Usual care/no intervention

Appendix 5 cont'd *Details of included studies*

Study details	Quality criteria	Clinical area	Setting	Intervention groups
A81 Gonzalez (1989)	**Design**: Cluster RCT **Unit of allocation**: Provider **Quality criteria**: Randomisation concealment:NC Protection against contamination: D Blinded assessment: ND Reliable outcomes: NC Baseline measurement: D Follow-up: Providers: NC Patients: NC Potential unit of analysis error in main analysis	**Area of interest**: Health promotion and disease prevention measures **Targeted behaviour**: Prevention; prescribing; patient education/advice	**Country**: USA **Setting**: Outpatient/ambulatory **Speciality**: General practice/family medicine **Level of training**: In training **Proportion of eligible target population taking part**: NC **Number of allocation units in study groups**: G1=7, G2=7	**Group 1** Reminders **Group 2 control** Usual care/no intervention
A82 Gortmaker (1988)	**Design**: ITS **Quality criteria**: Independent intervention: NC Data collection unbiased: D Blinded assessment: D Reliable outcomes: D Completeness of data: NC Analysed appropriately: D	**Area of interest**: Test ordering for a range problems **Targeted behaviour**: Test ordering	**Country**: USA **Setting**: Mixed, community hospital, inpatient and possibly outpatient **Speciality**: All specialities in community general hospital **Level of training**: NC **Proportion of eligible target population taking part**: NC **Number of data points**: Preintervention: 11 Postintervention: 7 **Data point interval**: 3 months	**Group 1** Educational meetings, audit and feedback, Local consensus process

Study details	Quality criteria	Clinical area	Setting	Intervention groups
A83 Gorton (1995)	**Design**: Cluster CBA **Unit of allocation**: Area health education centre **Quality criteria**: Characteristics of study and control: NC Protection against contamination: NC Baseline measurement: NC Blinded assessment: NC Reliable outcomes: NC Follow-up: Providers: D Patients: NC Potential unit of analysis error in main analysis	**Area of interest**: Asthma **Targeted behaviour**: General management	**Country**: USA **Setting**: Family/general practice/community **Speciality**: General practice/family medicine; internal medicine **Level of training**: Fully trained **Proportion of eligible target population taking part**: NC **Number of allocation units in study groups**: G1=1, G2=1, G3=1, G4C=1 Area Health Education Centres	**Group 1** Distribution of educational materials, Educational meetings **Group 2** Distribution of educational materials, Educational meetings **Group 3** Distribution of educational materials, Educational meetings, Reminders **Group 4 control** Usual care/no intervention
A84 Grady (1997)	**Design**: Cluster RCT **Unit of allocation**: Practice **Quality criteria**: Randomisation concealment: NC Protection against contamination: D Blinded assessment: NC Reliable outcomes: NC Baseline measurement: D Follow-up: Providers: D Patients: D	**Area of interest**: Preventive services: mammography **Targeted behaviour**: Prevention; test ordering; referrals; prescribing; patient education/advice	**Country**: USA **Setting**: Family/general practice/community **Speciality**: General practice/family medicine; internal medicine **Level of training**: Fully trained **Proportion of eligible target population taking part**: NC **Number of allocation units in study groups**: G1=21, G2=21, G3C=23	**Group 1** Distribution of educational materials, Educational meetings, Reminders, Audit and feedback, Provider incentive **Group 2** Distribution of educational materials, Educational meetings, Reminders **Group 3 control** Distribution of educational materials, Educational meetings

Appendix 5 cont'd *Details of included studies*

Study details	Quality criteria	Clinical area	Setting	Intervention groups
A85 Grimshaw (1996)	**Design**: Cluster RCT Before and after balanced incomplete block design [2 conditions, 1 intervention, 2 study groups (each an intervention and control for one of the conditions)] **Unit of allocation**: Hospital **Quality criteria**: Randomisation concealment: NC Protection against contamination: D Blinded assessment: NC Reliable outcomes: NC Baseline measurement: ND Follow-up: Providers: D Patients: D	**Area of interest**: Menorrhagia; urinary incontinence **Targeted behaviour**: General management	**Country**: UK **Setting**: Mixed, hospital inpatient and outpatient (specialist) **Speciality**: Obstetrics/gynaecology **Level of training**: Mixed **Proportion of eligible target population taking part**: NC **Number of allocation units in study groups**: G1=4, G2C=4, 4 in total (2 hospitals receive intervention for condition 1, 2 hospitals receive intervention for condition 2)	**Group 1** Distribution of educational materials, Educational meetings, Reminders, Local consensus process **Group 2 control** Usual care/no intervention
A86 Grimshaw (1998)	**Design**: Cluster RCT Balanced incomplete block design, 4 conditions, 2 interventions, 4 study groups (combination of interventions for conditions re factorial). Groups receiving both interventions for a condition allocated further (factorial) to 2 more interventions **Unit of allocation**: Provider and practice **Quality criteria**: Randomisation concealment: D Protection against contamination: D Blinded assessment: NC Reliable outcomes: D Baseline measurement: NC Follow-up: Providers: NC Patients: D	**Area of interest**: Low back pain; menorrhagia; suspected peptic ulcer; varicose veins **Targeted behaviour**: General management; referrals	**Country**: UK **Setting**: Family/general practice/community **Speciality**: General practice/family medicine **Level of training**: Mixed **Proportion of eligible target population taking part**: 96.4% **Number of allocation units in study groups**: 114 providers, 51 practices	**Group 1** Audit and feedback **Group 2** Educational meetings **Group 3** Distribution of educational materials **Group 4** Interviews with GPs about outpatient referrals **Group 5** Usual care/no intervention

Study details	Quality criteria	Clinical area	Setting	Intervention groups
A87 Gurwitz (1992)	**Design**: ITS **Quality criteria**: Independent intervention: D Data collection unbiased: D Blinded assessment: D Reliable outcomes: D Completeness of data: NC Analysed appropriately: D	**Area of interest**: Gastrointestinal conditions **Targeted behaviour**: Prescribing	**Country**: USA **Setting**: Long-term care facility **Speciality**: Internists **Level of training**: NC **Proportion of eligible target population taking part**: NC **Number of data points**: Preintervention: 20 Postintervention: 12 **Data point interval**: 1 month	**Group 1** Distribution of educational materials, Educational meetings, List of patients, Formulary
A88 Hammond (1995)	**Design**: ITS **Quality criteria**: Independent intervention: NC Data collection unbiased: D Blinded assessment: NC Reliable outcomes: NC Completeness of data: NC Analysed appropriately: ND	**Area of interest**: Tardive dyskinesia **Targeted behaviour**: General management	**Country**: USA **Setting**: Mixed, hospital inpatient and outpatient **Speciality**: Psychiatry **Level of training**: NC **Proportion of eligible target population taking part**: NC **Number of data points**: Preintervention: 5 Postintervention: 16 **Data point interval**: 3 months	**Group 1** Reminders, Use of automated reminder system, Use of coloured paper for reminder

Appendix 5 cont'd *Details of included studies*

Study details	Quality criteria	Clinical area	Setting	Intervention groups
A89 Hartmann (1995)	**Design**: Cluster CBA **Unit of allocation**: Area **Quality criteria**: Characteristics of study and control: NC Protection against contamination: NC Baseline measurement: NC Blinded assessment: NC Reliable outcomes: NC Follow-up: Providers: NC Patients: D Potential unit of analysis error in main analysis	**Area of interest**: Diabetes **Targeted behaviour**: General management	**Country**: Germany **Setting**: Family/general practice/community **Speciality**: General practice/family medicine **Level of training**: Fully trained **Proportion of eligible target population taking part**: NC **Number of allocation units in study groups**: G1=1, G2C=1 areas, G1=10, G2C= 7 providers, G1=239, G2C=164 patients	**Group 1** Educational meetings, Audit and feedback **Group 2 control** Audit and feedback
A90 Hay (1997)	**Design**: CCT Alternate intervention/control month design **Unit of allocation**: Alternate months **Quality criteria**: Randomisation concealment: ND Protection against contamination: ND Blinded assessment: D Reliable outcomes: NC Baseline measurement: NC Follow-up: Providers: NC Patients: NC	**Area of interest**: Gastrointestinal bleeding **Targeted behaviour**: General management; discharge planning; financial	**Country**: USA **Setting**: Inpatient **Speciality**: NC **Level of training**: NC **Proportion of eligible target population taking part**: NC **Number of allocation units in study groups**: G1=101, G2C=108 patients	**Group 1** Reminders **Group 2 control** Usual care/no intervention

Study details	Quality criteria	Clinical area	Setting	Intervention groups
A91 Hazard (1997)	**Design**: RCT **Unit of allocation**: Patient **Quality criteria**: Randomisation concealment: NC Protection against contamination: ND Blinded assessment: ND Reliable outcomes: NC Baseline measurement: NC Follow-up: Providers: NC Patients: D	**Area of interest**: Low back injuries **Targeted behaviour**: General management	**Country**: USA **Setting**: Family/general practice/community **Speciality**: NC **Level of training**: NC **Proportion of eligible target population taking part**: NC **Number of allocation units in study groups**: G1=30, G2C=29	**Group 1** Distribution of educational materials **Group 2 control** Usual care/no intervention
A92 Headrick (1992)	**Design**: Cluster RCT **Unit of allocation**: Patient and resident **Quality criteria**: Randomisation concealment: NC Protection against contamination: D Blinded assessment: D Reliable outcomes: NC Baseline measurement: D Follow-up: Providers: NC Patients: NC	**Area of interest**: Cholesterol management **Targeted behaviour**: General management	**Country**: USA **Setting**: Outpatient/ambulatory **Speciality**: NC **Level of training**: In training **Proportion of eligible target population taking part**: NC **Number of allocation units in study groups**: G1=94, G2=79, G3C=67 patients, G1=13, G2=12, G3C=8 providers, G1=1, G2=1, G3C=1 practices	**Group 1** Specific and generic reminder Educational meetings, Reminders **Group 2** Generic reminder, Educational meetings, Reminders **Group 3 control** Educational meetings

Appendix 5 cont'd *Details of included studies*

Study details	Quality criteria	Clinical area	Setting	Intervention groups
A93 Herfindal (1983)	**Design**: Cluster CBA 'Matched' hospital **Unit of allocation**: Hospital (one service within it) **Quality criteria**: Characteristics of study and control: NC Protection against contamination: D Baseline measurement: NC Blinded assessment: D Reliable outcomes: NC Follow-up: Providers: NC Patients: NC Potential unit of analysis error in main analysis	**Area of interest**: Postoperative prophylactic antibiotics **Targeted behaviour**: Prescribing	**Country**: USA **Setting**: Inpatient **Speciality**: Orthopaedics (surgery) **Level of training**: Mixed **Proportion of eligible target population taking part**: NC **Number of allocation units in study groups**: G1=1, G2C=1 hospitals, G1=1, G2C=1 surgical services	**Group 1** Revision of professional roles **Group 2 control** Usual care/no intervention
A94 Herman (1994)	**Design**: Cluster RCT **Unit of allocation**: Firm or group practice **Quality criteria**: Randomisation concealment: NC Protection against contamination: D Blinded assessment: NC Reliable outcomes: ND Baseline measurement: ND Follow-up: Providers: NC Patients: D Potential unit of analysis error in main analysis	**Area of interest**: Preventive services: immunisation for influenza and pneumonia, breast cancer **Targeted behaviour**: Prevention; prescribing; patient education/advice	**Country**: USA **Setting**: Outpatient/ambulatory **Speciality**: Internal medicine **Level of training**: In training **Proportion of eligible target population taking part**: NC **Number of allocation units in study groups**: G1=1, G2=1, G3C=1	**Group 1** Distribution of educational materials, Educational meetings, Patient education, Revision of professional roles **Group 2** Distribution of educational materials, Educational meetings, Patient education **Group 3 control** Distribution of educational materials, Educational meetings

Study details	Quality criteria	Clinical area	Setting	Intervention groups
A95 Hillman (1998)	**Design**: Cluster RCT Stratified by practice type **Unit of allocation**: Primary care site **Quality criteria**: Randomisation concealment: NC Protection against contamination: D Blinded assessment: NC Reliable outcomes: NC Baseline measurement: D Follow-up: Providers: NC Patients: NC	**Area of interest**: Preventive services: cancer screening **Targeted behaviour**: Prevention; prescribing; patient education/advice	**Country**: USA **Setting**: Family/general practice/community **Speciality**: General practice/family medicine; internal medicine **Level of training**: NC **Proportion of eligible target population taking part**: NC **Number of allocation units in study groups**: G1=26, G2C=26	**Group 1** Audit and feedback, Institution incentive **Group 2 control** Usual care/no intervention
A96 Hobbs (1996)	**Design**: Cluster RCT **Unit of allocation**: Practice **Quality criteria**: Randomisation concealment: NC Protection against contamination: D Blinded assessment: NC Reliable outcomes: NC Baseline measurement: NC Follow-up: Providers: ND Patients: NC Potential unit of analysis error in main analysis	**Area of interest**: Management of hyperlipidaemia **Targeted behaviour**: Test ordering; general management; referrals	**Country**: UK **Setting**: Family/general practice/community **Speciality**: General practice/family medicine **Level of training**: NC **Proportion of eligible target population taking part**: 10% **Number of allocation units in study groups**: G1=21, G2C=4	**Group 1** Educational meetings, Reminders **Group 2 control** Usual care/no intervention

Appendix 5 cont'd *Details of included studies*

Study details	Quality criteria	Clinical area	Setting	Intervention groups
A97 Hopkins (1980)	**Design**: Cluster CCT **Unit of allocation**: On-call service **Quality criteria**: Randomisation concealment: NC Protection against contamination: ND Blinded assessment: NC Reliable outcomes: NC Baseline measurement: NC Follow-up: Providers: NC Patients: D Potential unit of analysis error in main analysis	**Area of interest**: Resuscitation in acute emergencies **Targeted behaviour**: Diagnosis; test ordering; general management; procedures	**Country**: USA **Setting**: Emergency department **Speciality**: Surgery **Level of training**: In training **Proportion of eligible target population taking part**: NC **Number of allocation units in study groups**: G1=1, G2C=3	**Group 1** Distribution of educational materials, Educational meetings **Group 2 control** Usual care/no intervention
A98 Hueston (1994)	**Design**: RCT **Unit of allocation**: Patient **Quality criteria**: Randomisation concealment: NC Protection against contamination: ND Blinded assessment: NC Reliable outcomes: NC Baseline measurement: NC Follow-up: Providers: NC Patients: D	**Area of interest**: Preventive services: screening tests **Targeted behaviour**: Prevention; test ordering; prescribing; patient education/advice	**Country**: USA **Setting**: Family/general practice/community **Speciality**: General practice/family medicine; Internal medicine **Level of training**: Fully trained **Proportion of eligible target population taking part**: NC **Number of allocation units in study groups**: G1=114, G2C= 86	**Group 1** Reminders **Group 2 control** Usual care/no intervention

Study details	Quality criteria	Clinical area	Setting	Intervention groups
A99 Hulscher (1997)	**Design**: Cluster CBA Assigned using criteria; type of practice, list size, vocational training and employment of practice nurse. Also had another control group with 'after' data only **Unit of allocation**: Practice **Quality criteria**: Characteristics of study and control: D Protection against contamination: D Baseline measurement: D Blinded assessment: NC Reliable outcomes: NC Follow-up: Providers: D Patients: NC	**Area of interest**: Prevention of cardiovascular disease **Targeted behaviour**: Prevention; general management; prescribing; record keeping; patient education/advice	**Country**: Netherlands **Setting**: Family/general practice/community **Speciality**: General practice/family medicine **Level of training**: NC **Proportion of eligible target population taking part**: NC **Number of allocation units in study groups**: G1=33, G2C=31 (C=31)	**Group 1** Audit and feedback, Educational outreach visits **Group 2 control** Audit and feedback
A100 Jones (1993)	**Design**: Cluster RCT Stratified by location, premises, size and training/research involvement **Unit of allocation**: Practice **Quality criteria**: Randomisation concealment: D Protection against contamination: D Blinded assessment: NC Reliable outcomes: NC Baseline measurement: D Follow-up: Providers: NC Patients: NC Potential unit of analysis error in main analysis	**Area of interest**: Dyspepsia **Targeted behaviour**: General management; referrals; procedures	**Country**: UK **Setting**: Family/general practice/community **Speciality**: General practice/family medicine **Level of training**: NC **Proportion of eligible target population taking part**: 70% **Number of allocation units in study groups**: G1=21, G2C=24	**Group 1** Distribution of educational materials, Local consensus process **Group 2 control** Usual care/no intervention

Appendix 5 cont'd *Details of included studies*

Study details	Quality criteria	Clinical area	Setting	Intervention groups
A101 Jones (1996)	**Design**: Cluster CBA **Unit of allocation**: Medical centre and primary care clinic **Quality criteria**: Characteristics of study and control: NC Protection against contamination: D Baseline measurement: NC Blinded assessment: NC Reliable outcomes: NC Follow-up: Providers: NC Patients: NC Potential unit of analysis error in main analysis	**Area of interest**: Prescription NSAIDs **Targeted behaviour**: Financial	**Country**: USA **Setting**: Military medical centre and affiliated primary care clinics **Speciality**: Primary care clinicians **Level of training**: Mixed **Proportion of eligible target population taking part**: NC **Number of allocation units in study groups**: G1=1, G2C=1 medical centres, G3C=2 affiliated primary care clinics	**Group 1** Distribution of educational materials, Educational meetings, Patient/public education/information, Revision of professional roles, Presence and organisation of quality monitoring mechanisms **Group 2** Reminders **Group 3 control** Usual care/no intervention
A102 Karuza (1995)	**Design**: Cluster RCT Stratified by type, control group received placebo intervention **Unit of allocation**: HMO suite **Quality criteria**: Randomisation concealment: NC Protection against contamination: D Blinded assessment: NC Reliable outcomes: D Baseline measurement: D Follow-up: Providers: D Patients: D	**Area of interest**: Influenza vaccination **Targeted behaviour**: Prevention; prescribing; patient education/advice	**Country**: USA **Setting**: Mixed, HMO site, university-based clinic, office practice, hospital-based clinic, community clinic **Speciality**: General practice/family medicine; internal medicine **Level of training**: NC **Proportion of eligible target population taking part**: 78% **Number of allocation units in study groups**: G1=7, G2C=6 practice groups/HMO suites, G1=23, G2C=28 providers	**Group 1** Educational meetings, Audit and feedback, Local consensus process **Group 2 control** Usual care/no intervention

Study details	Quality criteria	Clinical area	Setting	Intervention groups
A103 Katon (1992)	**Design**: RCT **Unit of allocation**: Patient **Quality criteria**: Randomisation concealment: NC Protection against contamination: ND Blinded assessment: D Reliable outcomes: NC Baseline measurement: NC Follow-up: Providers: NC Patients: D	**Area of interest**: Depression **Targeted behaviour**: General management	**Country**: USA **Setting**: Family/general practice/community **Speciality**: General practice/family medicine; internal medicine; psychiatry **Level of training**: Fully trained **Proportion of eligible target population taking part**: 74% **Number of allocation units in study groups**: G1=124, G2C=127	**Group 1** Distribution of educational materials, Formal integration of services **Group 2 control** Usual care/no intervention
A104 Katon (1995)	**Design**: RCT **Unit of allocation**: Patient **Quality criteria**: Randomisation concealment: D Protection against contamination: ND Blinded assessment: D Reliable outcomes: NC Baseline measurement: D Follow-up: Providers: NC Patients: D	**Area of interest**: Depression **Targeted behaviour**: General management	**Country**: USA **Setting**: Family/general practice/community **Speciality**: General practice/family medicine; psychiatry **Level of training**: Fully trained **Proportion of eligible target population taking part**: 90% **Number of allocation units in study groups**: G1=49 (major depression), 59 (minor depression), G2C= 42 (major depression), 67 (minor depression)	**Group 1** Educational meetings, Patient education/information, Clinical multidisciplinary teams **Group 2 control** Educational meetings

Appendix 5 cont'd *Details of included studies*

Study details	Quality criteria	Clinical area	Setting	Intervention groups
A105 Katon (1996)	**Design**: RCT **Unit of allocation**: Patient **Quality criteria**: Randomisation concealment: NC Protection against contamination: ND Blinded assessment: D Reliable outcomes: D Baseline measurement: NC Follow-up: Providers: NC Patients: NC	**Area of interest**: Depression **Targeted behaviour**: General management	**Country**: USA **Setting**: Family/general practice/community **Speciality**: General practice/family medicine; psychiatry **Level of training**: Fully trained **Proportion of eligible target population taking part**: 84% **Number of allocation units in study groups**: G1=31(major depression), 46 (minor depression), G2C= 34 (major depression), 42 (minor depression)	**Group 1** Distribution of educational materials, Educational meetings, Patient education/information, Clinical multidisciplinary teams **Group 2 control** Distribution of educational materials, Educational meetings
A106 Keyserling (1997)	**Design**: Cluster RCT **Unit of allocation**: Provider **Quality criteria**: Randomisation concealment: NC Protection against contamination: NC Blinded assessment: NC Reliable outcomes: NC Baseline measurement: D Follow-up: Providers: NC Patients: D	**Area of interest**: High blood cholesterol levels **Targeted behaviour**: Referrals	**Country**: USA **Setting**: Family/general practice/community **Speciality**: Primary care clinicians **Level of training**: NC **Proportion of eligible target population taking part**: 86% **Number of allocation units in study groups**: G1=22, G2C=20	**Group 1** Distribution of educational materials Educational meetings, Reminders, Patient education/information, Skill mix changes **Group 2 control** Usual care/no intervention

Study details	Quality criteria	Clinical area	Setting	Intervention groups
A107 Kong (1987)	**Design**: ITS **Quality criteria**: Independent intervention: D Data collection unbiased: D Blinded assessment: D Reliable outcomes: D Completeness of data: NC Analysed appropriately: ND	**Area of interest**: Gastroenterological problems **Targeted behaviour**: Prescribing	**Country**: USA **Setting**: Mixed, inpatient/outpatient **Speciality**: Surgery; adult medicine **Level of training**: NC **Proportion of eligible target population taking part**: NC **Number of data points**: Preintervention: 12 Postintervention: 40 **Data point interval**: 5 days	**Group 1** Distribution of educational materials, Educational meetings, Audit and feedback, Formal integration of services
A108 Kong (1997)	**Design**: CCT Alternate intervention/control month design **Unit of allocation**: Alternate months **Quality criteria**: Randomisation concealment: ND Protection against contamination: ND Blinded assessment: D Reliable outcomes: NC Baseline measurement: NC Follow-up: Providers: NC Patients: NC	**Area of interest**: COPD **Targeted behaviour**: Discharge planning	**Country**: USA **Setting**: Inpatient **Speciality**: NC **Level of training**: NC **Proportion of eligible target population taking part**: NC **Number of allocation units in study groups**: G1=16, G2C=11 patients	**Group 1** Distribution of educational materials, Reminders **Group 2 control** Distribution of educational materials

Appendix 5 cont'd *Details of included studies*

Study details	Quality criteria	Clinical area	Setting	Intervention groups
A109 Landefeld (1992)	**Design**: RCT Stratified by risk category **Unit of allocation**: Patient **Quality criteria**: Randomisation concealment: D Protection against contamination: ND Blinded assessment: D Reliable outcomes: D Baseline measurement: NC Follow-up: Providers: NC Patients: D	**Area of interest**: Prevention of anticoagulant-related bleeding **Targeted behaviour**: General management	**Country**: USA **Setting**: Inpatient **Speciality**: Surgery; internal medicine; obstetrics/gynaecology; general surgery, medicine; neurology; urology; vascular surgery **Level of training**: Mixed **Proportion of eligible target population taking part**: NC **Number of allocation units in study groups**: G1=46, G2C=55	**Group 1** Distribution of educational materials, Educational meetings **Group 2 control** Usual care/no intervention
A110 Landgren (1988)	**Design**: Cluster CBA Matched pair cross-over design **Unit of allocation**: Hospital **Quality criteria**: Characteristics of study and control: NC Protection against contamination: D Baseline measurement: NC Blinded assessment: NC Reliable outcomes: NC Follow-up: Providers: NC Patients: NC	**Area of interest**: Antibiotic agents for prophylaxis in surgery **Targeted behaviour**: Prescribing	**Country**: Australia **Setting**: Inpatient **Speciality**: Surgery; anaesthetics **Level of training**: Mixed **Proportion of eligible target population taking part**: NC **Number of allocation units in study groups**: G1=6, G2C=6	**Group 1** Distribution of educational materials, Educational meetings, Audit and feedback, Educational outreach visits **Group 2 control** Usual care/no intervention

Study details	Quality criteria	Clinical area	Setting	Intervention groups
A111 Landis (1992)	**Design**: Cluster RCT Physicians allocated to one of two groups and then patients within those groups allocated to one of two groups **Unit of allocation**: Provider and patient **Quality criteria**: Randomisation concealment: NC Protection against contamination: NC Blinded assessment: NC Reliable outcomes: NC Baseline measurement: NC Follow-up: Providers: NC Patients: NC Potential unit of analysis error in main analysis	**Area of interest**: Preventive services: mammography **Targeted behaviour**: Prevention; test ordering; prescribing; patient education/advice	**Country**: USA **Setting**: Family/general practice/community **Speciality**: General practice/family medicine **Level of training**: Mixed **Proportion of eligible target population taking part**: 92% **Number of allocation units in study groups**: G1=24, G2=14, G3=41, G4C=43 patients, 24 providers	**Group 1** Reminders, Letter to patient **Group 2** Reminders **Group 3** Letter to patient **Group 4 control** Usual care/no intervention
A112 Lee (1995)	**Design**: CCT Cross-over design (6 × 14-week cycles: 5 intervention weeks, 2 washout weeks, 5 control weeks, 2 washout weeks) **Unit of allocation**: Weeks (5-week periods) **Quality criteria**: Randomisation concealment: ND Protection against contamination: ND Blinded assessment: NC Reliable outcomes: NC Baseline measurement: NC Follow-up: Providers: NC Patients: NC	**Area of interest**: Acute chest pain **Targeted behaviour**: General management	**Country**: USA **Setting**: Mixed, inpatient mainly (decision to admit from emergency consultation) **Speciality**: NC **Level of training**: NC **Proportion of eligible target population taking part**: NC **Number of allocation units in study groups**: G1=924, G2=997 patients	**Group 1** Reminders **Group 2 control** Usual care/no intervention

Appendix 5 cont'd *Details of included studies*

Study details	Quality criteria	Clinical area	Setting	Intervention groups
A113 Legorreta (1997)	**Design**: ITS **Quality criteria**: Independent intervention: NC Data collection unbiased: D Blinded assessment: D Reliable outcomes: D Completeness of data: NC Analysed appropriately: ND	**Area of interest**: Diabetes **Targeted behaviour**: General management	**Country**: USA **Setting**: Family/general practice/community **Speciality**: General practice/family medicine **Level of training**: NC **Proportion of eligible target population taking part**: NC **Number of data points**: Preintervention: 30 Postintervention: 6 **Data point interval**: 1 month	**Group 1** Distribution of educational materials, Reminders, Patient education
A114 Leviton (1999)	**Design**: Cluster RCT Stratified by affiliation/network membership **Unit of allocation**: Hospital **Quality criteria**: Randomisation concealment: D Protection against contamination: D Blinded assessment: NC Reliable outcomes: NC Baseline measurement: D Follow-up: Providers: NC Patients: NC	**Area of interest**: Antenatal corticosteroids for preterm delivery **Targeted behaviour**: General management	**Country**: USA **Setting**: Inpatient **Speciality**: Obstetrics/gynaecology **Level of training**: Mixed **Proportion of eligible target population taking part**: 90% **Number of allocation units in study groups**: G1=13, G2C=14	**Group 1** Distribution of educational materials, Educational meetings, Reminders, Audit and feedback, Educational outreach visits, Local opinion leaders, Local consensus process **Group 2 control** Distribution of educational materials

Study details	Quality criteria	Clinical area	Setting	Intervention groups
A115 Lin (1997)	**Design**: Cluster CBA **Unit of allocation**: Clinic **Quality criteria**: Characteristics of study and control: ND Protection against contamination: D Baseline measurement: NC Blinded assessment: NC Reliable outcomes: NC Follow-up: Providers: NC Patients: NC Potential unit of analysis error in main analysis	**Area of interest**: Depression **Targeted behaviour**: General management	**Country**: USA **Setting**: Family/general practice/community **Speciality**: General practice/family medicine **Level of training**: Fully trained **Proportion of eligible target population taking part**: NC **Number of allocation units in study groups**: Clinics NC, preintervention G1=168, G2C=391, during first 6 months of intervention G1=226, G2C=460, during second 6 months of intervention G1=193, G2C=480, postintervention G1=213, G2C=526 patients	**Group 1** Distribution of educational materials, Educational meetings, Formal integration of services **Group 2 control** Usual care/no intervention
A116 Linn (1980)	**Design**: Cluster RCT **Unit of allocation**: Hospital **Quality criteria**: Randomisation concealment: D Protection against contamination: D Blinded assessment: NC Reliable outcomes: NC Baseline measurement: NC Follow-up: Providers: NC Patients: D Potential unit of analysis error in main analysis	**Area of interest**: Burn care **Targeted behaviour**: General management	**Country**: USA **Setting**: Mixed, inpatient and outpatient emergency room **Speciality**: A&E and other **Level of training**: NC **Proportion of eligible target population taking part**: 95% **Number of allocation units in study groups**: 20 hospitals, G1=1345, G2C=1147 treated and released, G1=100, G2C=72 (admitted) patients	**Group 1** Distribution of educational materials, Educational meetings, Audit and feedback, Communication and case discussion between distant health professionals **Group 2 control** Usual care/no intervention

Appendix 5 cont'd *Details of included studies*

Study details	Quality criteria	Clinical area	Setting	Intervention groups
A117 Litzelman (1993)	**Design**: Cluster RCT **Unit of allocation**: Primary care team **Quality criteria**: Randomisation concealment: NC Protection against contamination: D Blinded assessment: D Reliable outcomes: NC Baseline measurement: NC Follow-up: Providers: NC Patients: D Potential unit of analysis error in main analysis	**Area of interest**: Diabetes **Targeted behaviour**: Prevention; general management; prescribing; patient education/advice	**Country**: USA **Setting**: Outpatient/ambulatory **Speciality**: NC **Level of training**: Mixed **Proportion of eligible target population taking part**: NC **Number of allocation units in study groups**: G1=2, G2C=2	**Group 1** Distribution of educational materials, Reminders, Patient education/reminder **Group 2 control** Usual care/no intervention
A118 Litzelman (1993)	**Design**: Cluster RCT **Unit of allocation**: Practice session **Quality criteria**: Randomisation concealment: NC Protection against contamination: D Blinded assessment: NC Reliable outcomes: NC Baseline measurement: NC Follow-up: Providers: NC Patients: NC Potential unit of analysis error in main analysis	**Area of interest**: Preventive services **Targeted behaviour**: Prevention; test ordering; prescribing; patient education/advice	**Country**: USA **Setting**: Outpatient/ambulatory **Speciality**: Internal medicine; general medicine **Level of training**: Mixed **Proportion of eligible target population taking part**: NC **Number of allocation units in study groups**: G1=16, G2C=16	**Group 1** Reminders **Group 2 control** Reminders

Study details	Quality criteria	Clinical area	Setting	Intervention groups
A119 Lobach (1994)	**Design**: Cluster RCT **Unit of allocation**: Provider **Quality criteria**: Randomisation concealment: NC Protection against contamination: NC Blinded assessment: ND Reliable outcomes: D Baseline measurement: D Follow-up: Providers: ND Patients: NC	**Area of interest**: Diabetes **Targeted behaviour**: Prevention; test ordering; general management; prescribing; patient education/advice	**Country**: USA **Setting**: Family/general practice/community **Speciality**: General practice/family medicine; general internist **Level of training**: Mixed **Proportion of eligible target population taking part**: NC **Number of allocation units in study groups**: G1=29, G2C=29 (G1=16, G2C=14 used in analysis)	**Group 1** Reminders **Group 2 control** Usual care/no intervention
A120 Lobach (1996)	**Design**: Cluster RCT Stratified by level of training **Unit of allocation**: Provider **Quality criteria**: Randomisation concealment: NC Protection against contamination: NC Blinded assessment: NC Reliable outcomes: D Baseline measurement: NC Follow-up: Providers: ND Patients: NC	**Area of interest**: Diabetes **Targeted behaviour**: Prevention; test ordering; general management; prescribing; patient education/advice	**Country**: USA **Setting**: Family/general practice/community **Speciality**: General practice/family medicine **Level of training**: Mixed **Proportion of eligible target population taking part**: 100% **Number of allocation units in study groups**: G1=22, G2C=23	**Group 1** Reminders, Audit and feedback **Group 2 control** Reminders

Appendix 5 cont'd *Details of included studies*

Study details	Quality criteria	Clinical area	Setting	Intervention groups
A121 Lomas (1989)	**Design**: ITS **Quality criteria**: Independent intervention: D Data collection unbiased: D Blinded assessment: D Reliable outcomes: D Completeness of data: NC Analysed appropriately: D	**Area of interest**: Caesarean section **Targeted behaviour**: Procedures	**Country**: Canada **Setting**: Inpatient **Speciality**: Obstetrics/gynaecology **Level of training**: NC **Proportion of eligible target population taking part**: NC **Number of data points**: Preintervention: 48 Postintervention: 24 **Data point interval**: 1 month	**Group 1** Distribution of educational materials
A122 Lomas (1991)	**Design**: Cluster RCT **Unit of allocation**: County then hospital **Quality criteria**: Randomisation concealment: NC Protection against contamination: D Blinded assessment: NC Reliable outcomes: D Baseline measurement: D Follow-up: Providers: NC Patients: NC	**Area of interest**: Delivery after previous Caesarean section **Targeted behaviour**: General management	**Country**: Canada **Setting**: Inpatient **Speciality**: Obstetrics/gynaecology **Level of training**: NC **Proportion of eligible target population taking part**: 31% hospitals, 66% counties, 20% community hospital births **Number of allocation units in study groups**: G1=4, G2=4, G3C=8 counties, G1=4, G2=4, G3C=8 hospitals	**Group 1** Distribution of educational materials, Educational meetings, Local opinion leaders **Group 2** Audit and feedback, Local consensus process Group 3 control Distribution of educational materials

Study details	Quality criteria	Clinical area	Setting	Intervention groups
A123 MacCosbe (1985)	**Design**: RCT **Unit of allocation**: Order for antibiotics **Quality criteria**: Randomisation concealment: NC Protection against contamination: ND Blinded assessment: NC Reliable outcomes: NC Baseline measurement: NC Follow-up: Providers: NC Patients: ND	**Area of interest**: Antibiotic prescribing **Targeted behaviour**: Financial	**Country**: USA **Setting**: Inpatient **Speciality**: NC **Level of training**: In training **Proportion of eligible target population taking part**: NC **Number of allocation units in study groups**: G1=156, G2C=183	**Group 1** Audit and feedback, Monitoring provider behaviour **Group 2 control** Usual care/no intervention
A124 Maclure (1998)	**Design**: ITS **Quality criteria**: Independent intervention: D Data collection unbiased: D Blinded assessment: D Reliable outcomes: D Completeness of data: NC Analysed appropriately: NC	**Area of interest**: Hypertension **Targeted behaviour**: Prescribing	**Country**: Canada **Setting**: Mixed, community trial various settings **Speciality**: General practice/family medicine; other physicians NC speciality **Level of training**: NC **Proportion of eligible target population taking part**: NC **Number of data points**: Preintervention: 11 Postintervention: 25 **Data point interval**: 1 month	**Group 1** Distribution of educational materials, Mass media, Drug benefits programme and substitution

Appendix 5 cont'd *Details of included studies*

Study details	Quality criteria	Clinical area	Setting	Intervention groups
A125 Mandel (1985)	**Design**: Cluster RCT **Unit of allocation**: Provider **Quality criteria**: Randomisation concealment: NC Protection against contamination: NC Blinded assessment: D Reliable outcomes: NC Baseline measurement: NC Follow-up: Providers: NC Patients: NC Potential unit of analysis error in main analysis	**Area of interest**: Preventive services **Targeted behaviour**: Prevention; test ordering; prescribing	**Country**: USA **Setting**: NC, probably family practice **Speciality**: NC **Level of training**: In training **Proportion of eligible target population taking part**: NC **Number of allocation units in study groups**: 12	**Group 1** Audit and feedback **Group 2 control** Usual care/no intervention
A126 Manfredi (1998)	**Design**: Cluster RCT Random allocation of matched pairs **Unit of allocation**: Practice **Quality criteria**: Randomisation concealment: NC Protection against contamination: D Blinded assessment: NC Reliable outcomes: NC Baseline measurement: NC Follow-up: Providers: NC Patients: NC Potential unit of analysis error in main analysis	**Area of interest**: Preventive services: clinical breast examination, mammography, Papanicolaou smear, faecal occult blood test **Targeted behaviour**: Prevention; test ordering; prescribing; patient education/advice	**Country**: USA **Setting**: Family/general practice/community **Speciality**: General practice/family medicine; internal medicine obstetrics/gynaecology **Level of training**: NC **Proportion of eligible target population taking part**: 98% **Number of allocation units in study groups**: 47	**Group 1** Distribution of educational materials, Educational meetings, Reminders, Audit and feedback, Educational outreach visits, Patient education/information, Presence and organisation of quality monitoring mechanisms **Group 2 control** Distribution of educational materials

Study details	Quality criteria	Clinical area	Setting	Intervention groups
A127 Marciniak (1998)	**Design**: Cluster CBA **Unit of allocation**: State/PRO **Quality criteria**: Characteristics of study and control: ND Protection against contamination: D Baseline measurement: D Blinded assessment: NC Reliable outcomes: NC Follow-up: Providers: NC Patients: NC Potential unit of analysis error in main analysis	**Area of interest**: Acute myocardial infarction **Targeted behaviour**: General management	**Country**: USA **Setting**: Inpatient **Speciality**: NC; cardiology **Level of training**: NC **Proportion of eligible target population taking part**: NC **Number of allocation units in study groups**: G1=4, G2C=rest of US states	**Group 1** Distribution of educational materials, Educational meetings, Audit and feedback **Group 2 control** Usual care/no intervention
A128 Margolis (1992)	**Design**: Cluster RCT Before and after balanced incomplete block design, 6 conditions, 1 intervention, 6 study groups, (each an intervention and control for one of the conditions) **Unit of allocation**: Provider **Quality criteria**: Randomisation concealment: NC Protection against contamination: NC Blinded assessment: NC Reliable outcomes: NC Baseline measurement: NC Follow-up: Providers: NC Patients: NC Potential unit of analysis error in main analysis	**Area of interest**: Paediatric problems: upper respiratory infection, pharyngitis, otitis media, fever, pneumonia, gastroenteritis **Targeted behaviour**: General management	**Country**: Israel **Setting**: Family/general practice/community **Speciality**: Paediatrics **Level of training**: Fully trained **Proportion of eligible target population taking part**: NC **Number of allocation units in study groups**: 6	**Group 1** Reminders **Group 2 control** Usual care/no intervention

Appendix 5 cont'd *Details of included studies*

Study details	Quality criteria	Clinical area	Setting	Intervention groups
A129 Marton (1985)	**Design**: Cluster RCT **Unit of allocation**: Provider **Quality criteria**: Randomisation concealment: NC Protection against contamination: NC Blinded assessment: NC Reliable outcomes: NC Baseline measurement: D Follow-up: Providers: D Patients: NC	**Area of interest**: General medical: test ordering, patients attending as outpatients with general medical problems **Targeted behaviour**: Test ordering	**Country**: USA **Setting**: Outpatient/ambulatory **Speciality**: General medicine **Level of training**: In training **Proportion of eligible target population taking part**: ?100% **Number of allocation units in study groups**: G1=14, G2=14, G3=15, G4C=14	**Group 1** Distribution of educational materials, Educational meetings, Audit and feedback **Group 2** Audit and feedback **Group 3** Distribution of educational materials, Educational meetings Group 4 control Usual care/no intervention
A130 Mayefsky (1993)	**Design**: Cluster RCT **Unit of allocation**: Provider **Quality criteria**: Randomisation concealment: NC Protection against contamination: D Blinded assessment: NC Reliable outcomes: D Baseline measurement: D Follow-up: Providers: D Patients: NC	**Area of interest**: Well child care **Targeted behaviour**: General management; professional patient communication	**Country**: USA **Setting**: Outpatient/ambulatory **Speciality**: Paediatrics **Level of training**: In training **Proportion of eligible target population taking part**: NC **Number of allocation units in study groups**: G1=19, G2C=9	**Group 1** Audit and feedback **Group 2 control** Usual care/no intervention

Study details	Quality criteria	Clinical area	Setting	Intervention groups
A131 Mazzuca (1990)	**Design**: Cluster CBA **Unit of allocation**: Clinic area **Quality criteria**: Characteristics of study and control: NC Protection against contamination: NC Baseline measurement: D Blinded assessment: D Reliable outcomes: NC Follow-up: Providers: NC Patients: NC Potential unit of analysis error in main analysis	**Area of interest**: Diabetes **Targeted behaviour**: Test ordering; general management	**Country**: USA **Setting**: Outpatient/ambulatory **Speciality**: Internal medicine **Level of training**: Mixed **Proportion of eligible target population taking part**: NC **Number of allocation units in study groups**: G1=1, G2=1, G3=1, G4C=1	**Group 1** Distribution of educational materials, Educational meetings, Reminders, Patient education service, Consumable clinical materials **Group 2** Distribution of educational materials, Educational meetings, Reminders, Consumable clinical materials **Group 3** Distribution of educational materials, Educational meetings, Reminders **Group 4 control** Distribution of educational materials, Educational meetings
A132 McAlister (1986)	**Design**: Cluster RCT Stratified by number of partners and ethnicity **Unit of allocation**: Provider and practice **Quality criteria**: Randomisation concealment: D Protection against contamination: NC Blinded assessment: NC Reliable outcomes: NC Baseline measurement: NC Follow-up: Providers: D Patients: NC	**Area of interest**: Hypertension **Targeted behaviour**: Diagnosis; general management	**Country**: Canada **Setting**: Family/general practice/community **Speciality**: General practice/family medicine **Level of training**: NC **Proportion of eligible target population taking part**: NC **Number of allocation units in study groups**: G1=25, G2C=25 practices	**Group 1** Educational meetings, Audit and feedback, Patient reminders **Group 2 control** Distribution of educational materials

Appendix 5 cont'd *Details of included studies*

Study details	Quality criteria	Clinical area	Setting	Intervention groups
A133 McDonald (1976)	**Design**: RCT **Unit of allocation**: Patient **Quality criteria**: Randomisation concealment: D Protection against contamination: ND Blinded assessment: NC Reliable outcomes: NC Baseline measurement: NC Follow-up: Providers: NC Patients: NC Potential unit of analysis error in main analysis	**Area of interest**: Diabetes **Targeted behaviour**: Test ordering; general management	**Country**: USA **Setting**: Outpatient/ambulatory **Speciality**: Internal medicine **Level of training**: Mixed **Proportion of eligible target population taking part**: NC **Number of allocation units in study groups**: G1=119, G2C=107	**Group 1** Reminders **Group 2 control** Usual care/no intervention
A134 McDonald (1980)	**Design**: Cluster RCT Cross-over trial with random assignment to order of receiving intervention **Unit of allocation**: Provider **Quality criteria**: Randomisation concealment: NC Protection against contamination: ND Blinded assessment: NC Reliable outcomes: NC Baseline measurement: NC Follow-up: Providers: NC Patients: NC	**Area of interest**: General medical (prescriptions mainly) **Targeted behaviour**: Prevention; test ordering; general management; prescribing; procedures; patient education/advice	**Country**: USA **Setting**: Outpatient/ambulatory **Speciality**: General medicine **Level of training**: Mixed **Proportion of eligible target population taking part**: NC **Number of allocation units in study groups**: 31	**Group 1** Reminders **Group 2 control** Usual care/no intervention

Study details	Quality criteria	Clinical area	Setting	Intervention groups
A135 McDonald (1984)	**Design**: Cluster RCT **Unit of allocation**: Practice team **Quality criteria**: Randomisation concealment: NC Protection against contamination: D Blinded assessment: NC Reliable outcomes: NC Baseline measurement: NC Follow-up: Providers: NC Patients: NC	**Area of interest**: General medical including preventive care **Targeted behaviour**: Prevention; test ordering; prescribing; patient education/advice	**Country**: USA **Setting**: Outpatient/ambulatory **Speciality**: General medicine **Level of training**: Mixed (only results for residents presented) **Proportion of eligible target population taking part**: NC **Number of allocation units in study groups**: 1 clinic, 27 practice teams, 130 providers	**Group 1** Reminders **Group 2 control** Usual care/no intervention
A136 McPhee (1989)	**Design**: Cluster RCT Residents in each arm randomised into 2 further groups (patient education and no patient education) for 2 preventive measures **Unit of allocation**: Provider **Quality criteria**: Randomisation concealment: NC Protection against contamination: NC Blinded assessment: NC Reliable outcomes: D Baseline measurement: D Follow-up: Providers: NC Patients: NC	**Area of interest**: Screening for cancer **Targeted behaviour**: Prevention; test ordering; prescribing; patient education/advice	**Country**: USA **Setting**: Outpatient/ambulatory **Speciality**: Internal medicine **Level of training**: In training **Proportion of eligible target population taking part**: NC **Number of allocation units in study groups**: G1= 20, G2=21, G3C=21 for breast examination and mammography further allocated G1a= 10, G1b=10, G2a=11, G2b=10, G3Ca=10, G3Cb=11	**Group 1** Audit and feedback, Patient education **Group 2** Reminders, Patient education **Group 3 control** Patient education

Appendix 5 cont'd *Details of included studies*

Study details	Quality criteria	Clinical area	Setting	Intervention groups
A137 McPhee (1991)	**Design**: Cluster RCT **Unit of allocation**: Provider **Quality criteria**: Randomisation concealment: NC Protection against contamination: D Blinded assessment: NC Reliable outcomes: NC Baseline measurement: D Follow-up: Providers: D Patients: NC	**Area of interest**: Preventive services **Targeted behaviour**: Test ordering; general management	**Country**: USA **Setting**: Family/general practice/community **Speciality**: General practice/family medicine **Level of training**: Mixed **Proportion of eligible target population taking part**: NC **Number of allocation units in study groups**: G1=20, G2C=20	**Group 1** Distribution of educational materials, Reminders, Patient reminders **Group 2 control** Usual care/no intervention
A138 Meador (1997)	**Design**: Cluster RCT Random allocation of matched pairs **Unit of allocation**: Nursing home **Quality criteria**: Randomisation concealment: NC Protection against contamination: D Blinded assessment: NC Reliable outcomes: NC Baseline measurement: D Follow-up: Providers: D Patients: D	**Area of interest**: Antipsychotic drug use **Targeted behaviour**: Prescribing	**Country**: USA **Setting**: Nursing home **Speciality**: NC **Level of training**: NC **Proportion of eligible target population taking part**: 67% **Number of allocation units in study groups**: G1=6, G2C=6	**Group 1** Distribution of educational materials, Educational meetings, Educational outreach visits **Group 2 control** Usual care/no intervention

Study details	Quality criteria	Clinical area	Setting	Intervention groups
A139 Messimer (1989)	**Design**: Cluster RCT ?Stratified by projected deliveries **Unit of allocation**: Practice **Quality criteria**: Randomisation concealment: D Protection against contamination: D Blinded assessment: NC Reliable outcomes: NC Baseline measurement: D Follow-up: Providers: NC Patients: D Potential unit of analysis error in main analysis	**Area of interest**: Smoking cessation during pregnancy **Targeted behaviour**: General management	**Country**: USA **Setting**: Family/general practice/community **Speciality**: General practice/family medicine; obstetrics/gynaecology **Level of training**: Mixed **Proportion of eligible target population taking part**: NC **Number of allocation units in study groups**: 11 practices, G1=67, G2C=70 patients	**Group 1** Distribution of educational materials, Educational meetings **Group 2 control** Educational meetings
A140 Mesters (1994)	**Design**: Cluster RCT Stratified by practice type, number of GPs per practice and patients per GP. Has a 2nd control group not randomly allocated **Unit of allocation**: Practice **Quality criteria**: Randomisation concealment: NC Protection against contamination: D Blinded assessment: NC Reliable outcomes: NC Baseline measurement: D Follow-up: Providers: D Patients: NC	**Area of interest**: Childhood asthma **Targeted behaviour**: General management	**Country**: Netherlands **Setting**: Family/general practice/ community **Speciality**: General practice/family medicine; surgery **Level of training**: NC **Proportion of eligible target population taking part**: Practices randomised not GP, but for GPs, 67/637 = 11% **Number of allocation units in study groups**: Practices NC, G1=35, G2C=32 providers	**Group 1** Distribution of educational materials **Group 2 control** Usual care/no intervention **Group 3 control** Usual care/no intervention

Appendix 5 cont'd *Details of included studies*

Study details	Quality criteria	Clinical area	Setting	Intervention groups
A141 Moore (1997)	**Design**: Cluster RCT Random allocation of matched pairs **Unit of allocation**: Practice **Quality criteria**: Randomisation concealment: D Protection against contamination: D Blinded assessment: NC Reliable outcomes: D Baseline measurement: D Follow-up: Providers: NC Patients: D Potential unit of analysis error in main analysis	**Area of interest**: Screening in the elderly **Targeted behaviour**: Prevention; general management; prescribing; patient education/advice	**Country**: USA **Setting**: Family/general practice/community **Speciality**: General practice/family medicine; internal medicine **Level of training**: NC **Proportion of eligible target population taking part**: NC **Number of allocation units in study groups**: 26 practices, G1= 112, G2C=149 patients	**Group 1** Distribution of educational materials, Reminders, Educational outreach visits, Patient mediated **Group 2 control** Usual care/no intervention
A142 Morgan (1978)	**Design**: CCT **Unit of allocation**: Patient **Quality criteria**: Randomisation concealment: ND Protection against contamination: ND Blinded assessment: NC Reliable outcomes: NC Baseline measurement: NC Follow-up: Providers: NC Patients: NC	**Area of interest**: Prenatal care **Targeted behaviour**: Test ordering; general management	**Country**: USA **Setting**: Outpatient/ambulatory **Speciality**: Obstetrics/gynaecology **Level of training**: NC **Proportion of eligible target population taking part**: NC **Number of allocation units in study groups**: 279	**Group 1** Reminders **Group 2 control** Usual care/no intervention

Study details	Quality criteria	Clinical area	Setting	Intervention groups
A143 Morrison (1993)	**Design**: ITS **Quality criteria**: Independent intervention: D Data collection unbiased: D Blinded assessment: D Reliable outcomes: NC Completeness of data: NC Analysed appropriately: NC	**Area of interest**: Blood transfusion within obstetrics and gynaecology **Targeted behaviour**: Procedures	**Country**: USA **Setting**: Inpatient **Speciality**: Obstetrics/gynaecology **Level of training**: Mixed **Proportion of eligible target population taking part**: NC **Number of data points**: Preintervention: 10 Postintervention: 10 **Data point interval**: 1 month	**Group 1** Educational meetings, Reminders, Audit and feedback, Blood transfusion form, Presence and organisation of quality monitoring mechanisms
A144 Morrison (1999)	**Design**: Cluster RCT Stratified by number of partners and location **Unit of allocation**: Practice **Quality criteria**: Randomisation concealment: D Protection against contamination: D Blinded assessment: NC Reliable outcomes: NC Baseline measurement: NC Follow-up: Providers: NC Patients: D	**Area of interest**: Infertility **Targeted behaviour**: Test ordering; general management; referrals	**Country**: UK **Setting**: Family/general practice/community **Speciality**: General practice/family medicine **Level of training**: NC **Proportion of eligible target population taking part**: 96% **Number of allocation units in study groups**: < 221	**Group 1** Educational meetings, Educational outreach visits **Group 2 control** Usual care/no intervention

Appendix 5 cont'd *Details of included studies*

Study details	Quality criteria	Clinical area	Setting	Intervention groups
A145 Morrissey (1995)	**Design**: RCT Stratified by age and gender **Unit of allocation**: Patient **Quality criteria**: Randomisation concealment: NC Protection against contamination: ND Blinded assessment: D Reliable outcomes: NC Baseline measurement: NC Follow-up: Providers: NC Patients: D	**Area of interest**: Preventive screening in the elderly **Targeted behaviour**: Prevention; test ordering; prescribing; patient education/advice	**Country**: USA **Setting**: Mixed, outpatient/ambulatory care clinic, community health centres and family practice **Speciality**: General practice/family medicine; internal medicine **Level of training**: NC **Proportion of eligible target population taking part**: 45% **Number of allocation units in study groups**: G1=954, G2C=960	**Group 1** Reminders Capitation, Revision of professional roles, Training of nurses, Changes in medical record systems **Group 2 control** Usual care/no intervention
A146 Nalven (1997)	**Design**: Cluster RCT Stratified by postgraduate year **Unit of allocation**: Provider **Quality criteria**: Randomisation concealment: D Protection against contamination: NC Blinded assessment: NC Reliable outcomes: NC Baseline measurement: NC Follow-up: Providers: D Patients: D	**Area of interest**: Developmental delay in children **Targeted behaviour**: Diagnosis; general management	**Country**: USA **Setting**: Outpatient/ambulatory **Speciality**: Paediatrics **Level of training**: In training **Proportion of eligible target population taking part**: NC **Number of allocation units in study groups**: G1=28, G2C=26	**Group 1** Reminders **Group 2 control** Usual care/no intervention

Study details	Quality criteria	Clinical area	Setting	Intervention groups
A147 Nattinger (1989)	**Design**: Cluster CBA **Unit of allocation**: Teams of residents **Quality criteria**: Characteristics of study and control: D Protection against contamination: NC Baseline measurement: D Blinded assessment: NC Reliable outcomes: NC Follow-up: Providers: NC Patients: NC Potential unit of analysis error in main analysis	**Area of interest**: Mammography screening **Targeted behaviour**: Test ordering	**Country**: USA **Setting**: Outpatient/ambulatory **Speciality**: Internal medicine **Level of training**: In training **Proportion of eligible target population taking part**: NC **Number of allocation units in study groups**: G1=2, G2=2, G3C=3	**Group 1** Audit and feedback **Group 2** Reminders, Patient education **Group 3 control** Usual care/no intervention
A148 Nilasena (1995)	**Design**: Cluster RCT Stratified by site and level of training **Unit of allocation**: Provider **Quality criteria**: Randomisation concealment: NC Protection against contamination: NC Blinded assessment: NC Reliable outcomes: NC Baseline measurement: D Follow-up: Providers: NC Patients: NC	**Area of interest**: Diabetes (type 1 or 2) **Targeted behaviour**: General management	**Country**: USA **Setting**: Outpatient/ambulatory **Speciality**: Internal medicine **Level of training**: In training **Proportion of eligible target population taking part**: 97% **Number of allocation units in study groups**: G1=17, G2C=18	**Group 1** Educational meetings, Reminders **Group 2 control** Educational meetings

Appendix 5 cont'd *Details of included studies*

Study details	Quality criteria	Clinical area	Setting	Intervention groups
A149 Norton (1985)	**Design**: Cluster RCT Before and after balanced incomplete block design, 2 conditions, 1 intervention, 2 study groups (each an intervention and control for one of the conditions) **Unit of allocation**: Provider **Quality criteria**: Randomisation concealment: NC Protection against contamination: NC Blinded assessment: D Reliable outcomes: NC Baseline measurement: NC Follow-up: Providers: NC Patients: NC Potential unit of analysis error in main analysis	**Area of interest**: Vaginitis and cystitis **Targeted behaviour**: General management	**Country**: Canada **Setting**: NC, probably general practice **Speciality**: General practice/family medicine **Level of training**: NC **Proportion of eligible target population taking part**: NC **Number of allocation units in study groups**: 6	**Group 1** Audit and feedback, Set personal criteria **Group 2 control** Usual care/no intervention
A150 Novich (1985)	**Design**: ITS **Quality criteria**: Independent intervention: NC Data collection unbiased: D Blinded assessment: NC Reliable outcomes: D Completeness of data: NC Analysed appropriately: ND	**Area of interest**: Coagulation testing, leucocyte testing **Targeted behaviour**: Test ordering	**Country**: USA **Setting**: Mixed, hospital inpatient and outpatient **Speciality**: NC **Level of training**: NC **Proportion of eligible target population taking part**: NC **Number of data points**: Preintervention: 7 Postintervention: 12 **Data point interval**: 1 week	**Group 1** Distribution of educational materials, Presence and organisation of quality monitoring mechanisms

Study details	Quality criteria	Clinical area	Setting	Intervention groups
A151 Oakeshott (1994)	**Design**: Cluster RCT Stratified by number of partners and radiography examination requests **Unit of allocation**: Practice **Quality criteria**: Randomisation concealment: NC Protection against contamination: D Blinded assessment: D Reliable outcomes: NC Baseline measurement: D Follow-up: Providers: NC Patients: NC	**Area of interest**: Diagnostic radiology **Targeted behaviour**: Test ordering	**Country**: UK **Setting**: Family/general practice/community **Speciality**: General practice/family medicine **Level of training**: NC **Proportion of eligible target population taking part**: NC **Number of allocation units in study groups**: G1=30, G2C=32	**Group 1** Distribution of educational materials **Group 2 control** Usual care/no intervention
A152 Ockene (1994)	**Design**: Cluster RCT **Unit of allocation**: Provider **Quality criteria**: Randomisation concealment: NC Protection against contamination: NC Blinded assessment: NC Reliable outcomes: NC Baseline measurement: NC Follow-up: Providers: NC Patients: D Potential unit of analysis error in main analysis	**Area of interest**: Smoking **Targeted behaviour**: Prevention; prescribing; patient education/advice	**Country**: USA **Setting**: Outpatient/ambulatory **Speciality**: Internal medicine **Level of training**: Mixed **Proportion of eligible target population taking part**: NC **Number of allocation units in study groups**: 50	**Group 1** Educational meetings, Reminders **Group 2 control** Educational meetings

Appendix 5 cont'd *Details of included studies*

Study details	Quality criteria	Clinical area	Setting	Intervention groups
A153 Ockene (1996)	**Design**: Cluster RCT **Unit of allocation**: Site of physician practice groups **Quality criteria**: Randomisation concealment: NC Protection against contamination: D Blinded assessment: NC Reliable outcomes: NC Baseline measurement: NC Follow-up: Providers: NC Patients: NC	**Area of interest**: Hyperlipidaemia **Targeted behaviour**: General management; procedures; record keeping	**Country**: USA **Setting**: Family/general practice/community **Speciality**: General practice/family medicine **Level of training**: NC **Proportion of eligible target population taking part**: NC **Number of allocation units in study groups**: G1= 4, G2=4, G3C=4 Patient care units (sites), G1=14, G2=17, G3C=14 providers	**Group 1** Distribution of educational materials, Educational meetings, Reminders, Educational outreach visits, Patient mediated, Patient education **Group 2** Distribution of educational materials, Educational meetings, Educational outreach visits **Group 3 control** Distribution of educational materials
A154 Onion (1997)	**Design**: Cluster RCT Minimisation on practice variables: singlehandedness, fundholding status, training status, location, prescribing characteristics **Unit of allocation**: Practice **Quality criteria**: Randomisation concealment: D Protection against contamination: D Blinded assessment: D Reliable outcomes: D Baseline measurement: ND Follow-up: Providers: NC Patients: NC Potential unit of analysis error in main analysis	**Area of interest**: Management of infection **Targeted behaviour**: Test ordering; general management; prescribing	**Country**: UK **Setting**: Family/general practice/community **Speciality**: General practice/family medicine **Level of training**: Mixed **Proportion of eligible target population taking part**: 99% **Number of allocation units in study groups**: G1=23, G2=23, G3C=22	**Group 1** Distribution of educational materials, Educational outreach visits **Group 2** Distribution of educational materials, Educational meetings **Group 3 control** Usual care/no intervention

Study details	Quality criteria	Clinical area	Setting	Intervention groups
A155 Ornstein (1991)	**Design**: Cluster RCT **Unit of allocation**: Practice group **Quality criteria**: Randomisation concealment: NC Protection against contamination: NC Blinded assessment: NC Reliable outcomes: D Baseline measurement: NC Follow-up: Providers: NC Patients: NC Potential unit of analysis error in main analysis	**Area of interest**: Preventive services **Targeted behaviour**: Prevention; test ordering; prescribing; patient education/advice	**Country**: USA **Setting**: Family/general practice/community **Speciality**: General practice/family medicine **Level of training**: Mixed **Proportion of eligible target population taking part**: NC **Number of allocation units in study groups**: Practice groups NC, G1=13, G2=14, G3=12, G4C=10 providers	**Group 1** Educational meetings, Reminders, Audit and feedback, Patient reminders **Group 2** Educational meetings, Reminders, Audit and feedback **Group 3** Educational meetings, Reminders, Audit and feedback, Patient reminders **Group 4 control** Educational meetings, Reminders, Audit and feedback
A156 Overhage (1996)	**Design**: Cluster RCT **Unit of allocation**: Medical service **Quality criteria**: Randomisation concealment: NC Protection against contamination: NC Blinded assessment: NC Reliable outcomes: NC Baseline measurement: NC Follow-up: Providers: NC Patients: NC Potential unit of analysis error in main analysis	**Area of interest**: Preventive services **Targeted behaviour**: Prevention; prescribing; patient education/advice	**Country**: USA **Setting**: Inpatient **Speciality**: Internal medicine; general medicine **Level of training**: Mixed **Proportion of eligible target population taking part**: NC **Number of allocation units in study groups**: 1 ward, G1= 3, G2C=3 services, G1=12, G2C=12 physician teams	**Group 1** Reminders **Group 2 control** Usual care/no intervention

Study details	Quality criteria	Clinical area	Setting	Intervention groups
A157 Overhage (1997)	**Design**: Cluster RCT **Unit of allocation**: Medical service/team **Quality criteria**: Randomisation concealment: NC Protection against contamination: NC Blinded assessment: NC Reliable outcomes: NC Baseline measurement: NC Follow-up: Providers: D Patients: D	**Area of interest**: Inpatient medicine corollary orders **Targeted behaviour**: Test ordering	**Country**: USA **Setting**: Inpatient **Speciality**: General medicine **Level of training**: Mixed **Proportion of eligible target population taking part**: NC **Number of allocation units in study groups**: G1= 3, G2=3	**Group 1** Distribution of educational materials, Reminders **Group 2 control** Distribution of educational materials
A158 Palmer (1985)	**Design**: Cluster RCT Before and after balanced incomplete block design, 8 conditions, 2 groups of 4, 1 intervention, 2 study groups (each an intervention and control for one of group of 4 conditions) **Unit of allocation**: Groups of practices or group practice/site **Quality criteria**: Randomisation concealment: D Protection against contamination: D Blinded assessment: NC Reliable outcomes: D Baseline measurement: NC Follow-up: Providers: NC Patients: D	**Area of interest**: Eight ambulatory care tasks **Targeted behaviour**: Prevention; test ordering; general management; prescribing; patient education/advice	**Country**: USA **Setting**: Mixed, primary care, practices/ambulatory clinics in hospitals and health centres **Speciality**: Internal medicine **Level of training**: Mixed **Proportion of eligible target population taking part**: NC **Number of allocation units in study groups**: G1=2, G2C=2 groups of practices, G1=16, G2C=16 group practice sites, 16 in total (8 allocation units for one set of 4 conditions, 8 for the other)	**Group 1** Distribution of educational materials, Educational meetings, Audit and feedback **Group 2 control** Usual care/no intervention

Study details	Quality criteria	Clinical area	Setting	Intervention groups
A159 Pearce (1997)	**Design**: ITS **Quality criteria**: Independent intervention: NC Data collection unbiased: D Blinded assessment: D Reliable outcomes: D Completeness of data: NC Analysed appropriately: NC	**Area of interest**: Prescribing (various) **Targeted behaviour**: Prescribing	**Country**: New Zealand **Setting**: Inpatient **Speciality**: All hospital specialities **Level of training**: NC **Proportion of eligible target population taking part**: NC **Number of data points**: Preintervention: 4 Postintervention: 5 **Data point interval**: 1 year	**Group 1** Distribution of educational materials, Educational meetings, Audit and feedback, Revision of professional roles
A160 Perez-Cuevas (1996)	**Design**: Cluster CBA **Unit of allocation**: Provider **Quality criteria**: Characteristics of study and control: NC Protection against contamination: D Baseline measurement: NC Blinded assessment: NC Reliable outcomes: NC Follow-up: Providers: D Patients: NC	**Area of interest**: Rhinopharyngitis **Targeted behaviour**: Prescribing	**Country**: Mexico **Setting**: Family/general practice/community **Speciality**: General practice/family medicine **Level of training**: NC **Proportion of eligible target population taking part**: NC **Number of allocation units in study groups**: G1=65, G2C=54	**Group 1** Educational meetings, Audit and feedback, Local consensus process **Group 2 control** Usual care/no intervention

Appendix 5 cont'd *Details of included studies*

Study details	Quality criteria	Clinical area	Setting	Intervention groups
A161 Peterson (1996)	**Design**: Cluster CBA **Unit of allocation**: Community **Quality criteria**: Characteristics of study and control: ND Protection against contamination: D Baseline measurement: ND Blinded assessment: NC Reliable outcomes: NC Follow-up: Providers: NC Patients: NC Potential unit of analysis error in main analysis	**Area of interest**: NSAIDs in rheumatic disorders **Targeted behaviour**: Prescribing	**Country**: Australia **Setting**: Family/general practice/community **Speciality**: General practice/family medicine **Level of training**: NC **Proportion of eligible target population taking part**: NC **Number of allocation units in study groups**: G1=1, G2C=2	**Group 1** Distribution of educational materials, Educational outreach visits **Group 2 control** Usual care/no intervention
A162 Pierce (1996)	**Design**: Cluster CBA 'Matched' communities **Unit of allocation**: Public health clinic/site **Quality criteria**: Characteristics of study and control: ND Protection against contamination: D Baseline measurement: ND Blinded assessment: NC Reliable outcomes: NC Follow-up: Providers: NC Patients: NC	**Area of interest**: Paediatric immunisation **Targeted behaviour**: Prevention; prescribing; patient education/advice	**Country**: Australia **Setting**: Family/general practice/community **Speciality**: General practice/family medicine **Level of training**: NC **Proportion of eligible target population taking part**: NC **Number of allocation units in study groups**: G1=1, G2C=2	**Group 1** Distribution of educational materials, Patient education, Changes in physical structure, facilities and equipment, Changes in medical record systems, Presence and organisation of quality monitoring mechanisms, Staff organisation **Group 2 control** Distribution of educational materials, Patient education

Study details	Quality criteria	Clinical area	Setting	Intervention groups
A163 Pilote (1992)	**Design**: RCT Balanced allocation within each medical centre **Unit of allocation**: Patient **Quality criteria**: Randomisation concealment: NC Protection against contamination: ND Blinded assessment: NC Reliable outcomes: NC Baseline measurement: NC Follow-up: Providers: NC Patients: D	**Area of interest**: Uncomplicated acute myocardial infarction **Targeted behaviour**: General management	**Country**: USA **Setting**: Mixed, inpatient and primary care practice interface **Speciality**: Primary care clinicians **Level of training**: NC **Proportion of eligible target population taking part**: 88% **Number of allocation units in study groups**: G1=95, G2C=92	**Group 1** Educational meetings, Revision of professional roles, Communication between professionals over guidelines for return to work **Group 2 control** Usual care/no intervention
A164 Poma (1998)	**Design**: ITS **Quality criteria**: Independent intervention: NC Data collection unbiased: D Blinded assessment: NC Reliable outcomes: NC Completeness of data: NC Analysed appropriately: ND	**Area of interest**: Caesarean section **Targeted behaviour**: Procedures	**Country**: USA **Setting**: Inpatient **Speciality**: Obstetrics/gynaecology **Level of training**: Mixed **Proportion of eligible target population taking part**: NC **Number of data points**: Preintervention: 36 Postintervention: 36 **Data point interval**: 1 month	**Group 1** Audit and feedback, Staff organisation

Appendix 5 cont'd *Details of included studies*

Study details	Quality criteria	Clinical area	Setting	Intervention groups
A165 Prislin (1986)	**Design**: CCT **Unit of allocation**: Patient **Quality criteria**: Randomisation concealment: ND Protection against contamination: ND Blinded assessment: NC Reliable outcomes: NC Baseline measurement: NC Follow-up: Providers: NC Patients: NC	**Area of interest**: Preventive services **Targeted behaviour**: Prevention; prescribing; patient education/advice	**Country**: USA **Setting**: Family/general practice/community **Speciality**: General practice/family medicine **Level of training**: Mixed **Proportion of eligible target population taking part**: NC **Number of allocation units in study groups**: G1=41, G2C= 36	**Group 1** Educational meetings, Reminders **Group 2 control** Educational meetings
A166 Putnam (1985)	**Design**: Cluster RCT **Unit of allocation**: Provider **Quality criteria**: Randomisation concealment: NC Protection against contamination: NC Blinded assessment: NC Reliable outcomes: D Baseline measurement: NC Follow-up: Providers: NC Patients: NC	**Area of interest**: Management of otitis media, hypertension, acute bronchitis, headache, urinary tract infection **Targeted behaviour**: General management	**Country**: Canada **Setting**: Family/general practice/community **Speciality**: General practice/family medicine **Level of training**: NC **Proportion of eligible target population taking part**: NC **Number of allocation units in study groups**: G1=8, G2C=8	**Group 1** Distribution of educational materials, Audit and feedback, Educational outreach visits, Local consensus process **Group 2 control** Audit and feedback, Educational outreach visits

Study details	Quality criteria	Clinical area	Setting	Intervention groups
A167 Putnam (1989)	**Design**: Cluster CBA **Unit of allocation**: Provider **Quality criteria**: Characteristics of study and control: ND Protection against contamination: NC Baseline measurement: NC Blinded assessment: D Reliable outcomes: NC Follow-up: Providers: D Patients: NC Potential unit of analysis error in main analysis	**Area of interest**: Hypertension **Targeted behaviour**: General management	**Country**: Canada **Setting**: Family/general practice/community **Speciality**: General practice/family medicine **Level of training**: NC **Proportion of eligible target population taking part**: NC **Number of allocation units in study groups**: G1= 15, G2= 15, G3C=10	**Group 1** Distribution of educational materials, Audit and feedback, Local consensus process **Group 2** Distribution of educational materials **Group 3 control** Usual care/no intervention
A168 Rabin (1994)	**Design**: Cluster RCT Stratified by region and speciality **Unit of allocation**: Provider **Quality criteria**: Randomisation concealment: D Protection against contamination: NC Blinded assessment: D Reliable outcomes: NC Baseline measurement: NC Follow-up: Providers: ND Patients: NC	**Area of interest**: Preventive services, sexually transmitted diseases **Targeted behaviour**: Prevention; prescribing; patient education/advice	**Country**: USA **Setting**: Family/general practice/community **Speciality**: General practice/family medicine; internal medicine; obstetrics/gynaecology **Level of training**: Fully trained **Proportion of eligible target population taking part**: 47% **Number of allocation units in study groups**: G1=321, G2=317, G3C=323	**Group 1** Distribution of educational materials, Simulated patient investigator **Group 2** Distribution of educational materials **Group 3 control** Usual care/no intervention

Appendix 5 cont'd *Details of included studies*

Study details	Quality criteria	Clinical area	Setting	Intervention groups
A169 Raisch (1990)	**Design**: Cluster RCT Also has a 2nd control group not randomly allocated **Unit of allocation**: Provider **Quality criteria**: Randomisation concealment: D Protection against contamination: NC Blinded assessment: D Reliable outcomes: D Baseline measurement: D Follow-up: Providers: D Patients: NC	**Area of interest**: Antiulcer agent prescribing **Targeted behaviour**: Prescribing	**Country**: USA **Setting**: Outpatient/ambulatory **Speciality**: General practice/family medicine; internal medicine **Level of training**: NC **Proportion of eligible target population taking part**: NC **Number of allocation units in study groups**: G1=8, G2C=8	**Group 1** Vivid Distribution of educational materials, Educational outreach visits **Group 2 control** Non-vivid Distribution of educational materials, Educational outreach visits
A170 Ratnaike (1993)	**Design**: ITS **Quality criteria**: Independent intervention: NC Data collection unbiased: D Blinded assessment: D Reliable outcomes: NC Completeness of data: NC Analysed appropriately: NC	**Area of interest**: Chest pain **Targeted behaviour**: Test ordering	**Country**: Australia **Setting**: Inpatient **Speciality**: NC **Level of training**: NC **Proportion of eligible target population taking part**: NC **Number of data points**: Preintervention: 5 Postintervention: 11 **Data point interval**: 1 month	**Group 1** Distribution of educational materials

Study details	Quality criteria	Clinical area	Setting	Intervention groups
A171 Ray (1986)	**Design**: Cluster CBA **Unit of allocation**: Region **Quality criteria**: Characteristics of study and control: ND Protection against contamination: D Baseline measurement: D Blinded assessment: NC Reliable outcomes: NC Follow-up: Providers: D Patients: NC Potential unit of analysis error in main analysis	**Area of interest**: Prescription of diazepam **Targeted behaviour**: Prescribing	**Country**: USA **Setting**: Family/general practice/community **Speciality**: Office practice **Level of training**: NC **Proportion of eligible target population taking part**: NC **Number of allocation units in study groups**: G1=1, G2C= 2 regions, 1 state	**Group 1** Distribution of educational materials, Educational outreach visits **Group 2 control** Usual care/no intervention
A172 Ray (1987)	**Design**: Cluster CBA **Unit of allocation**: Region **Quality criteria**: Characteristics of study and control: NC Protection against contamination: D Baseline measurement: ND Blinded assessment: NC Reliable outcomes: NC Follow-up: Providers: D Patients: NC Potential unit of analysis error in main analysis	**Area of interest**: Antipsychotic drug prescribing in nursing-home patients **Targeted behaviour**: Prescribing	**Country**: USA **Setting**: Nursing home **Speciality**: Clear **Level of training**: NC **Proportion of eligible target population taking part**: NC **Number of allocation units in study groups**: G1=1, G2C= 2 regions, 1 state	**Group 1** Distribution of educational materials, Educational outreach visits **Group 2 control** Usual care/no intervention

Appendix 5 cont'd *Details of included studies*

Study details	Quality criteria	Clinical area	Setting	Intervention groups
A173 Ray (1993)	**Design**: Cluster CBA Matched controls **Unit of allocation**: Nursing home **Quality criteria**: Characteristics of study and control: D Protection against contamination: D Baseline measurement: D Blinded assessment: NC Reliable outcomes: NC Follow-up: Providers: D Patients: D	**Area of interest**: Antipsychotic drug prescribing in nursing-home patients **Targeted behaviour**: General management; other	**Country**: USA **Setting**: Nursing home **Speciality**: Psychiatry; NC **Level of training**: NC **Proportion of eligible target population taking part**: NC **Number of allocation units in study groups**: G1=2, G2C=2	**Group 1** Distribution of educational materials, Educational meetings, Educational outreach visits **Group 2 control** Usual care/no intervention
A174 Restuccia (1982)	**Design**: RCT Stratified by hospital? **Unit of allocation**: Patient **Quality criteria**: Randomisation concealment: NC Protection against contamination: ND Blinded assessment: NC Reliable outcomes: NC Baseline measurement: NC Follow-up: Providers: NC Patients: NC	**Area of interest**: Medical and surgical, Medicare inpatient length of stay **Targeted behaviour**: Discharge planning	**Country**: USA **Setting**: Inpatient **Speciality**: Surgery; internal medicine **Level of training**: NC **Proportion of eligible target population taking part**: NC **Number of allocation units in study groups**: 1456	**Group 1** Direct Audit and feedback **Group 2** Indirect Audit and feedback **Group 3** Judgemental Audit and feedback **Group 4** control Usual care/no intervention

Study details	Quality criteria	Clinical area	Setting	Intervention groups
A175 Robie (1988)	**Design**: Cluster CBA **Unit of allocation**: Clinic day **Quality criteria**: Characteristics of study and control: ND Protection against contamination: NC Baseline measurement: D Blinded assessment: NC Reliable outcomes: NC Follow-up: Providers: D Patients: D Potential unit of analysis error in main analysis	**Area of interest**: Preventive services **Targeted behaviour**: Prevention; prescribing; patient education/advice	**Country**: USA **Setting**: Outpatient/ambulatory **Speciality**: Internal medicine **Level of training**: In training **Proportion of eligible target population taking part**: NC **Number of allocation units in study groups**: clinic day NC, G1=21, G2C=20 providers	**Group 1** Educational meetings, Reminders **Group 2 control** Usual care/no intervention
A176 Robinson (1996)	**Design**: Cluster CBA **Unit of allocation**: Hospital **Quality criteria**: Characteristics of study and control: NC Protection against contamination: D Baseline measurement: ND Blinded assessment: NC Reliable outcomes: NC Follow-up: Providers: NC Patients: NC Potential unit of analysis error in main analysis	**Area of interest**: Intravenous thrombolysis in suspected acute myocardial infarction **Targeted behaviour**: NC	**Country**: UK **Setting**: Inpatient **Speciality**: Clear **Level of training**: NC **Proportion of eligible target population taking part**: 36% **Number of allocation units in study groups**: G1=1, G2=1, G3=1, G4=1, G5C=1	**Group 1** Distribution of educational materials, Audit and feedback, Local consensus process **Group 2** Distribution of educational materials, Reminders, Audit and feedback **Group 3** Distribution of educational materials, Reminders, Audit and feedback **Group 4** Distribution of educational materials, Audit and feedback **Group 5 control** Usual care/no intervention

Appendix 5 cont'd *Details of included studies*

Study details	Quality criteria	Clinical area	Setting	Intervention groups
A177 Rogers (1982)	**Design**: RCT **Unit of allocation**: Patient and provider **Quality criteria**: Randomisation concealment: NC Protection against contamination: ND Blinded assessment: D Reliable outcomes: NC Baseline measurement: NC Follow-up: Providers: NC Patients: D	**Area of interest**: Hypertension, obesity and renal disease **Targeted behaviour**: General management	**Country**: USA **Setting**: Outpatient; cardiac, pulmonary and renal clinics **Speciality**: NC; cardiology; renal medicine **Level of training**: NC **Proportion of eligible target population taking part**: NC **Number of allocation units in study groups**: G1=241, G2C=238 patients, providers NC	**Group 1** Reminders, Changes in medical record systems **Group 2 control** Usual care/no intervention
A178 Rokstad (1995)	**Design**: Cluster CBA **Unit of allocation**: Community **Quality criteria**: Characteristics of study and control: D Protection against contamination: D Baseline measurement: NC Blinded assessment: NC Reliable outcomes: NC Follow-up: Providers: D Patients: NC Potential unit of analysis error in main analysis	**Area of interest**: Insomnia and acute cystitis **Targeted behaviour**: General management	**Country**: Norway **Setting**: Family/general practice/community **Speciality**: General practice/family medicine **Level of training**: Mixed **Proportion of eligible target population taking part**: NC **Number of allocation units in study groups**: G1=1, G2C=1	**Group 1** Distribution of educational materials, Audit and feedback **Group 2 control** Usual care/no intervention

Study details	Quality criteria	Clinical area	Setting	Intervention groups
A179 Rosser (1991)	**Design**: Cluster RCT Also has a 2nd control group not randomly allocated **Unit of allocation**: Family **Quality criteria**: Randomisation concealment: D Protection against contamination: ND Blinded assessment: NC Reliable outcomes: NC Baseline measurement: D Follow-up: Providers: NC Patients: NC Potential unit of analysis error in main analysis	**Area of interest**: Preventive services: influenza vaccine, Papanicolaou smears, blood pressure screening, tetanus vaccine, smoking status **Targeted behaviour**: Prevention; test ordering; prescribing; patient education/advice	**Country**: Canada **Setting**: Family/general practice/community **Speciality**: General practice/family medicine **Level of training**: Mixed **Proportion of eligible target population taking part**: ?66–69% **Number of allocation units in study groups**: G1=1112, G2=1104, G3=1168, G4C=1056 families, G1=1471, G2=1468, G3=1541, G4C=1403 individual patients	**Group 1** Reminders **Group 2** Telephone reminder to patient **Group 3** Reminder letter to patient **Group 4 control** Usual care/no intervention
A180 Rossi (1997)	**Design**: Cluster RCT Stratified by profession/position **Unit of allocation**: Provider **Quality criteria**: Randomisation concealment: D Protection against contamination: NC Blinded assessment: D Reliable outcomes: NC Baseline measurement: D Follow-up: Providers: NC Patients: NC	**Area of interest**: Hypertension **Targeted behaviour**: Prescribing	**Country**: USA **Setting**: Outpatient/ambulatory **Speciality**: Internal medicine **Level of training**: Mixed **Proportion of eligible target population taking part**: NC **Number of allocation units in study groups**: G1=36, G2C=35	**Group 1** Reminders **Group 2 control** Usual care/no intervention

Appendix 5 cont'd *Details of included studies*

Study details	Quality criteria	Clinical area	Setting	Intervention groups
A181 Rutten (1990)	**Design**: Cluster RCT Random allocation of matched pairs **Unit of allocation**: Practice **Quality criteria**: Randomisation concealment: NC Protection against contamination: D Blinded assessment: NC Reliable outcomes: NC Baseline measurement: NC Follow-up: Providers: NC Patients: D Potential unit of analysis error in main analysis	**Area of interest**: Diabetes **Targeted behaviour**: General management; referrals	**Country**: Netherlands **Setting**: Family/general practice/community **Speciality**: General practice/family medicine **Level of training**: NC **Proportion of eligible target population taking part**: ?14% **Number of allocation units in study groups**: 8 practices, G1= 66, G2C=83 patients	**Group 1** Continuity of care **Group 2 control** Usual care/no intervention
A182 Safran (1995)	**Design**: Cluster RCT **Unit of allocation**: Team/site practice **Quality criteria**: Randomisation concealment: D Protection against contamination: NC Blinded assessment: D Reliable outcomes: D Baseline measurement: NC Follow-up: Providers: D Patients: D Potential unit of analysis error in main analysis	**Area of interest**: HIV infection **Targeted behaviour**: Test ordering; general management; referrals	**Country**: USA **Setting**: Outpatient/ambulatory **Speciality**: Primary care clinicians **Level of training**: Mixed **Proportion of eligible target population taking part**: NC **Number of allocation units in study groups**: G1=2, G2C=3 primary care teams, G1=65, G2C=61 providers	**Group 1** Reminders **Group 2 control** Usual care/no intervention

Study details	Quality criteria	Clinical area	Setting	Intervention groups
A183 Sanazaro (1978)	**Design**: Cluster RCT Stratified by PSRO area **Unit of allocation**: Hospital **Quality criteria**: Randomisation concealment: ND Protection against contamination: D Blinded assessment: NC Reliable outcomes: D Baseline measurement: NC Follow-up: Providers: NC Patients: NC	**Area of interest**: Acute myocardial infarction, bacterial pneumonia, bacterial urinary tract infection, paediatric gastroenteritis, massive acute upper gastrointestinal bleeding, acute appendicitis **Targeted behaviour**: Diagnosis; test ordering; general management; record keeping; other	**Country**: USA **Setting**: Mixed, hospital inpatient and outpatient **Speciality**: NC **Level of training**: NC **Proportion of eligible target population taking part**: NC **Number of allocation units in study groups**: G1=24, G2C=26	**Group 1** Reminders, Audit and feedback, Presence and organisation of quality monitoring mechanisms **Group 2 control** Usual care/no intervention
A184 Santerre (1996)	**Design**: ITS **Quality criteria**: Independent intervention: NC Data collection unbiased: D Blinded assessment: D Reliable outcomes: D Completeness of data: NC Analysed appropriately: D	**Area of interest**: Vaginal delivery after Caesarean section **Targeted behaviour**: Procedures	**Country**: USA **Setting**: Mixed, country-wide variety of settings **Speciality**: Obstetrics/gynaecology **Level of training**: NC **Proportion of eligible target population taking part**: NC **Number of data points**: Preintervention: 3 Postintervention: 6 **Data point interval**: 1 year	**Group 1** Distribution of educational materials

Appendix 5 cont'd *Details of included studies*

Study details	Quality criteria	Clinical area	Setting	Intervention groups
A185 Schectman (1991)	**Design**: Cluster CBA 'Matched' clinics **Unit of allocation**: Practice group **Quality criteria**: Characteristics of study and control: NC Protection against contamination: NC Baseline measurement: D Blinded assessment: NC Reliable outcomes: NC Follow-up: Providers: NC Patients: NC Potential unit of analysis error in main analysis	**Area of interest**: Thyroid function test ordering **Targeted behaviour**: Test ordering	**Country**: USA **Setting**: Family/general practice/community **Speciality**: General practice/family medicine; internal medicine **Level of training**: Fully trained (NC for physician's assistant and nurse practitioners involved) **Proportion of eligible target population taking part**: NC **Number of allocation units in study groups**: G1=1, G2C=1	**Group 1** Distribution of educational materials, Audit and feedback **Group 2 control** Distribution of educational materials
A186 Schmidt (1998)	**Design**: Cluster RCT Random allocation of matched pairs **Unit of allocation**: Nursing home **Quality criteria**: Randomisation concealment: NC Protection against contamination: D Blinded assessment: NC Reliable outcomes: NC Baseline measurement: D Follow-up: Providers: NC Patients: NC Potential unit of analysis error in main analysis	**Area of interest**: Psychotropic prescribing in nursing homes **Targeted behaviour**: Prescribing	**Country**: Sweden **Setting**: Nursing home **Speciality**: Geriatics **Level of training**: NC **Proportion of eligible target population taking part**: 5% of all nursing homes **Number of allocation units in study groups**: G1=15, G2C=18	**Group 1** Educational outreach visits, Revision of professional roles, Clinical multidisciplinary teams **Group 2 control** Usual care/no intervention

Study details	Quality criteria	Clinical area	Setting	Intervention groups
A187 Schreiner (1988)	**Design**: Cluster CBA **Unit of allocation**: Clinic **Quality criteria**: Characteristics of study and control: NC Protection against contamination: NC Baseline measurement: D Blinded assessment: NC Reliable outcomes: NC Follow-up: Providers: NC Patients: NC Potential unit of analysis error in main analysis	**Area of interest**: Preventive services **Targeted behaviour**: Prevention; prescribing; patient education/advice	**Country**: USA **Setting**: Outpatient/ambulatory **Speciality**: Internal medicine **Level of training**: In training **Proportion of eligible target population taking part**: NC **Number of allocation units in study groups**: G1=1, G2C=1	**Group 1** Reminders **Group 2 control** Usual care/no intervention
A188 Sherman (1992)	**Design**: ITS **Quality criteria**: Independent intervention: NC Data collection unbiased: D Blinded assessment: D Reliable outcomes: D Completeness of data: NC Analysed appropriately: D	**Area of interest**: Prostate cancer **Targeted behaviour**: General management; procedures	**Country**: USA **Setting**: Mixed, country-wide variety of settings **Speciality**: Surgery, NC **Level of training**: NC **Proportion of eligible target population taking part**: NC **Number of data points**: Preintervention: 18 Postintervention: 10 **Data point interval**: 3 months	**Group 1** Distribution of educational materials

Appendix 5 cont'd *Details of included studies*

Study details	Quality criteria	Clinical area	Setting	Intervention groups
A189 Shojania (1998)	**Design**: Cluster CCT **Unit of allocation**: Provider **Quality criteria**: Randomisation concealment: ND Protection against contamination: NC Blinded assessment: D Reliable outcomes: D Baseline measurement: NC Follow-up: Providers: NC Patients: NC	**Area of interest**: Use of vancomycin **Targeted behaviour**: Prescribing	**Country**: USA **Setting**: Inpatient **Speciality**: Surgery; Obstetrics/gynaecology; anaesthetics, emergency medicine, general medicine, neurology, orthopaedics **Level of training**: Mixed **Proportion of eligible target population taking part**: NC **Number of allocation units in study groups**: G1=198, G2C=198	**Group 1** Reminders **Group 2 control** Usual care/no intervention
A190 Shorr (1994)	**Design**: ITS **Quality criteria**: Independent intervention: D Data collection unbiased: D Blinded assessment: D Reliable outcomes: D Completeness of data: D Analysed appropriately: D	**Area of interest**: Antipsychotic drug use **Targeted behaviour**: Prescribing	**Country**: USA **Setting**: Nursing home **Speciality**: NC **Level of training**: NC **Proportion of eligible target population taking part**: NC **Number of data points**: Preintervention: 7 Postintervention: 23 **Data point interval**: 1 month	**Group 1** Federal legislation, Omnibus Budget Reconciliation Act

Study details	Quality criteria	Clinical area	Setting	Intervention groups
A191 Smeele (1999)	**Design**: Cluster RCT **Unit of allocation**: Group of providers **Quality criteria**: Randomisation concealment: NC Protection against contamination: D Blinded assessment: NC Reliable outcomes: ND Baseline measurement: D Follow-up: Providers: D Patients: NC Potential unit of analysis error in main analysis	**Area of interest**: Asthma, COPD **Targeted behaviour**: Diagnosis; procedures	**Country**: Netherlands **Setting**: Family/general practice/community **Speciality**: General practice/family medicine **Level of training**: NC **Proportion of eligible target population taking part**: 65% **Number of allocation units in study groups**: G1=1, G2C=1 groups of providers, G1=17, G2C=17 providers	**Group 1** Educational meetings **Group 2 control** Usual care/no intervention
A192 Smith (1998)	**Design**: Cluster RCT **Unit of allocation**: Patients with related prescribers and pharmacies **Quality criteria**: Randomisation concealment: NC Protection against contamination: D Blinded assessment: D Reliable outcomes: D Baseline measurement: D Follow-up: Providers: NC Patients: NC	**Area of interest**: Insomnia **Targeted behaviour**: Prescribing	**Country**: USA **Setting**: Mixed, non-inpatient/institutionalised setting **Speciality**: NC **Level of training**: NC **Proportion of eligible target population taking part**: NC **Number of allocation units in study groups**: G1=99, G2C=89 clusters of patients and providers	**Group 1** Distribution of educational materials, Audit and feedback **Group 2 control** Usual care/no intervention

Appendix 5 cont'd *Details of included studies*

Study details	Quality criteria	Clinical area	Setting	Intervention groups
A193 Somkin (1997)	**Design**: RCT **Unit of allocation**: Patient **Quality criteria**: Randomisation concealment: NC Protection against contamination: ND Blinded assessment: NC Reliable outcomes: NC Baseline measurement: NC Follow-up: Providers: NC Patients: D	**Area of interest**: Mammography and Papanicolaou smear **Targeted behaviour**: Prevention; test ordering; prescribing; patient education/advice	**Country**: USA **Setting**: Family/general practice/community **Speciality**: General practice/family medicine; internal medicine; obstetrics/gynaecology; radiology; NC **Level of training**: NC **Proportion of eligible target population taking part**: NC **Number of allocation units in study groups**: G1=1171, G2=1171, G3C=1171 mammography, G1=1188, G2=1188, G3C=1188 Papanicolaou smears	**Group 1** Educational meetings, Reminders, Patient reminders **Group 2** Educational meetings, Patient reminders **Group 3 control** Educational meetings
A194 Sommers (1984)	**Design**: Cluster RCT Stratified by hospital and number of low-haemoglobin patients **Unit of allocation**: Provider **Quality criteria**: Randomisation concealment: NC Protection against contamination: NC Blinded assessment: NC Reliable outcomes: NC Baseline measurement: D Follow-up: Providers: NC Patients: NC Potential unit of analysis error in main analysis	**Area of interest**: Low haemoglobin levels **Targeted behaviour**: General management	**Country**: USA **Setting**: Inpatient **Speciality**: General practice/family medicine; surgery; internal medicine; NC **Level of training**: Fully trained **Proportion of eligible target population taking part**: 40% (30% phase 2) **Number of allocation units in study groups**: G1=39, G2=37, G3C=37	**Group 1** Audit and feedback, Local consensus process **Group 2** Audit and feedback **Group 3 control** Usual care/no intervention

Study details	Quality criteria	Clinical area	Setting	Intervention groups
A195 Soumerai (1987)	**Design**: ITS **Quality criteria**: Independent intervention: D Data collection unbiased: D Blinded assessment: D Reliable outcomes: D Completeness of data: NC Analysed appropriately: D	**Area of interest**: Prescribing for pain relief (propoxyphene) **Targeted behaviour**: Prescribing	**Country**: USA **Setting**: Mixed, across all healthcare settings **Speciality**: NC **Level of training**: NC **Proportion of eligible target population taking part**: NC **Number of data points**: Preintervention: 4 Postintervention: 6 **Data point interval**: 1 year	**Group 1** Distribution of educational materials, Educational outreach visits
A196 Soumerai (1993)	**Design**: Cluster RCT Random allocation of matched pairs (random selection of pairs) **Unit of allocation**: Medical/surgical service **Quality criteria**: Randomisation concealment: NC Protection against contamination: D Blinded assessment: NC Reliable outcomes: D Baseline measurement: D Follow-up: Providers: NC Patients: NC Potential unit of analysis error in main analysis	**Area of interest**: Blood transfusion **Targeted behaviour**: Procedures	**Country**: USA **Setting**: Inpatient **Speciality**: Surgery **Level of training**: Fully trained **Proportion of eligible target population taking part**: NC **Number of allocation units in study groups**: G1=2 (1 medical, 1 surgical), G2C= 2 (1 medical, 1 surgical) services	**Group 1** Distribution of educational materials, Educational meetings, Educational outreach visits **Group 2 control** Usual care/no intervention

Appendix 5 cont'd *Details of included studies*

Study details	Quality criteria	Clinical area	Setting	Intervention groups
A197 Soumerai (1998)	**Design**: Cluster RCT Stratified by size (those outside cities), or clustered by city (those within cities) **Unit of allocation**: Hospital **Quality criteria**: Randomisation concealment: NC Protection against contamination: D Blinded assessment: D Reliable outcomes: D Baseline measurement: NC Follow-up: Providers: NC Patients: NC	**Area of interest**: Acute myocardial infarction **Targeted behaviour**: Prescribing	**Country**: USA **Setting**: Inpatient **Speciality**: A&E, cardiology, general medicine **Level of training**: NC **Proportion of eligible target population taking part**: 82% **Number of allocation units in study groups**: G1=20, G2C=17	**Group 1** Distribution of educational materials, Educational meetings, Local opinion leaders, Different educational interventions by OLs **Group 2 control** Distribution of educational materials
A198 Steffensen (1997)	**Design**: Cluster CBA **Unit of allocation**: County **Quality criteria**: Characteristics of study and control: D Protection against contamination: D Baseline measurement: ND Blinded assessment: NC Reliable outcomes: NC Follow-up: Providers: NC Patients: NC Potential unit of analysis error in main analysis	**Area of interest**: Anticoagulant therapy to prevent stroke in atrial fibrillation **Targeted behaviour**: Prescribing	**Country**: Denmark **Setting**: General practice/community based **Speciality**: General practice/family medicine **Level of training**: NC **Proportion of eligible target population taking part**: NC **Number of allocation units in study groups**: G1=1, G2C=1 counties, G1=149, G2C=166 providers	**Group 1** Distribution of educational materials **Group 2 control** Usual care/no intervention

Study details	Quality criteria	Clinical area	Setting	Intervention groups
A199 Struewing (1991)	**Design**: Cluster CCT Factorial design **Unit of allocation**: Clinic day **Quality criteria**: Randomisation concealment: NC Protection against contamination: NC Blinded assessment: NC Reliable outcomes: NC Baseline measurement: NC Follow-up: Providers: NC Patients: D Potential unit of analysis error in main analysis	**Area of interest**: Colorectal cancer screening **Targeted behaviour**: Prevention; prescribing; patient education/advice	**Country**: USA **Setting**: Outpatient/ambulatory **Speciality**: Internal medicine **Level of training**: Mixed **Proportion of eligible target population taking part**: NC **Number of allocation units in study groups**: Clinic day NC, 5 clinic teams, 1 clinic	**Group 1** Educational meetings, Reminders, Faecal occult blood testing kits to patients, Revision of professional roles **Group 2 control** Educational meetings, Faecal occult blood testing kits to patients, Revision of professional roles **Group 3** Educational meetings, Reminders, Faecal occult blood testing kits to patients, Revision of professional roles **Group 4 control** Reminders, Faecal occult blood testing kits to patients, Revision of professional roles
A200 Stuart (1997)	**Design**: ITS **Quality criteria**: Independent intervention: NC Data collection unbiased: NC Blinded assessment: NC Reliable outcomes: D Completeness of data: NC Analysed appropriately: D	**Area of interest**: Urinary tract infections **Targeted behaviour**: Test ordering; general management; financial	**Country**: USA **Setting**: NC, group health cooperative hospital/clinic/primary care **Speciality**: NC **Level of training**: NC **Proportion of eligible target population taking part**: NC **Number of data points**: Preintervention: 14 Postintervention: 13 **Data point interval**: 1 month	**Group 1** Distribution of educational materials, Educational meetings, Reminders, Educational outreach visits, Patient education/information, Revision of professional roles

Appendix 5 cont'd *Details of included studies*

Study details	Quality criteria	Clinical area	Setting	Intervention groups
A201 Studnicki (1997)	**Design**: ITS **Quality criteria**: Independent intervention: NC Data collection unbiased: D Blinded assessment: NC Reliable outcomes: NC Completeness of data: NC Analysed appropriately: D	**Area of interest**: Caesarean section **Targeted behaviour**: Procedures	**Country**: USA **Setting**: Inpatient **Speciality**: Obstetrics/gynaecology **Level of training**: NC **Proportion of eligible target population taking part**: NC **Number of data points**: Preintervention: 12 Postintervention: 4 **Data point interval**: 3 months	**Group 1** Distribution of educational materials, Legislatively imposed guidelines
A202 Sulmasy (1994)	**Design**: Cluster RCT **Unit of allocation**: Firm **Quality criteria**: Randomisation concealment: NC Protection against contamination: NC Blinded assessment: NC Reliable outcomes: D Baseline measurement: D Follow-up: Providers: NC Patients: NC Potential unit of analysis error in main analysis	**Area of interest**: Do not resuscitate orders **Targeted behaviour**: General management; professional patient communication	**Country**: USA **Setting**: Inpatient **Speciality**: NC **Level of training**: In training **Proportion of eligible target population taking part**: NC **Number of allocation units in study groups**: G1=1, G2=1, G3C=2	**Group 1** Educational meetings, Clinical ethicist is attending physician **Group 2** Educational meetings **Group 3 control** Usual care/no intervention

Study details	Quality criteria	Clinical area	Setting	Intervention groups
A203 Suwangool (1991)	**Design**: ITS **Quality criteria**: Independent intervention: NC Data collection unbiased: D Blinded assessment: D Reliable outcomes: D Completeness of data: D Analysed appropriately: NC	**Area of interest**: Common infections **Targeted behaviour**: Prescribing	**Country**: Thailand **Setting**: Mixed, hospital (inpatient and possibly outpatient) **Speciality**: Medical department **Level of training**: NC **Proportion of eligible target population taking part**: NC **Number of data points**: Preintervention: 6 Postintervention: 12 **Data point interval**: 1 month	**Group 1** Distribution of educational materials, Formulary, Presence and organisation of quality monitoring mechanisms
A204 Szilagyi (1996)	**Design**: RCT Allocated according to factorial design at one site but collapsed into simple RCT as no intervention differences for analysis **Unit of allocation**: Patient **Quality criteria**: Randomisation concealment: NC Protection against contamination: ND Blinded assessment: D Reliable outcomes: NC Baseline measurement: NC Follow-up: Providers: NC Patients: NC	**Area of interest**: Childhood immunisation **Targeted behaviour**: Prevention; prescribing	**Country**: USA **Setting**: Mixed, outpatient clinic and community clinic **Speciality**: Paediatrics **Level of training**: NC **Proportion of eligible target population taking part**: NC **Number of allocation units in study groups**: G1=430, G2C=448, G3=473, G4C=438	**Group 1** Clinic Reminders **Group 2 control** Clinic control Usual care/no intervention **Group 3** Neighbourhood health centre Reminders, Patient education, Reduced consent form **Group 4** Neighbourhood health centre control Patient education, Reduced consent form

Study details	Quality criteria	Clinical area	Setting	Intervention groups
A205 Tape (1993)	**Design**: Cluster CCT Alternate week design (different groups of providers on alternate weeks) **Unit of allocation**: Resident/week **Quality criteria**: Randomisation concealment: ND Protection against contamination: ND Blinded assessment: NC Reliable outcomes: NC Baseline measurement: NC Follow-up: Providers: NC Patients: D Potential unit of analysis error in main analysis	**Area of interest**: Preventive services **Targeted behaviour**: Prevention; prescribing; patient education/advice	**Country**: USA **Setting**: Outpatient/ambulatory **Speciality**: Internal medicine **Level of training**: Mixed **Proportion of eligible target population taking part**: NC **Number of allocation units in study groups**: 49 providers	**Group 1** Reminders, Changes in medical record systems **Group 2 control** Reminders
A206 Thamer (1998)	**Design**: ITS **Quality criteria**: Independent intervention: D Data collection unbiased: D Blinded assessment: D Reliable outcomes: D Completeness of data: NC Analysed appropriately: D	**Area of interest**: Peptic ulcer **Targeted behaviour**: Prescribing	**Country**: USA **Setting**: Mixed, inpatient and outpatient settings **Speciality**: General practice/family medicine; internal medicine; gastroenterology and others **Level of training**: NC **Proportion of eligible target population taking part**: NC **Number of data points**: Preintervention: 12 Postintervention: 26 **Data point interval**: 1 month	**Group 1** Distribution of educational materials

Study details	Quality criteria	Clinical area	Setting	Intervention groups
A207 Thomas (1983)	**Design**: RCT Stratified by diabetes, hypertension, obesity and diabetic control **Unit of allocation**: Patient **Quality criteria**: Randomisation concealment: NC Protection against contamination: ND Blinded assessment: NC Reliable outcomes: NC Baseline measurement: NC Follow-up: Providers: NC Patients: ND Potential unit of analysis error in main analysis	**Area of interest**: Diabetes, hypertension, obesity **Targeted behaviour**: Diagnosis; test ordering; general management; referrals	**Country**: USA **Setting**: Outpatient/ambulatory **Speciality**: Primary care clinicians **Level of training**: Mixed **Proportion of eligible target population taking part**: NC **Number of allocation units in study groups**: G1=85, G2C=100	**Group 1** Reminders **Group 2 control** Usual care/no intervention
A208 Thomas (1998)	**Design**: Cluster RCT Stratified by location and fundholding status, before and after balanced incomplete block design, 2 conditions, 1 intervention, 2 study groups (each an intervention and control for one of the conditions) **Unit of allocation**: Practice **Quality criteria**: Randomisation concealment: D Protection against contamination: D Blinded assessment: NC Reliable outcomes: NC Baseline measurement: D Follow-up: Providers: NC Patients: D	**Area of interest**: Benign prostatic hyperplasia and microscopic haematuria **Targeted behaviour**: Test ordering; general management; referrals	**Country**: UK **Setting**: Mixed, general practice/hospital outpatient interface **Speciality**: General practice/family medicine **Level of training**: Mixed **Proportion of eligible target population taking part**: 73% **Number of allocation units in study groups**: G1=66, G2C=66, 66 in total (30 practices for condition 1, 36 practices for condition 2)	**Group 1** Distribution of educational materials, Educational meetings, Open-access clinic **Group 2 control** Usual care/no intervention

Appendix 5 cont'd *Details of included studies*

Study details	Quality criteria	Clinical area	Setting	Intervention groups
A209 Tierney (1986)	**Design**: Cluster RCT Balanced incomplete block design, 2 sets of conditions, 2 interventions, 4 study groups (receiving interventions for each of set of conditions re 2 × 2 factorial) **Unit of allocation**: Clinic session **Quality criteria**: Randomisation concealment: NC Protection against contamination: NC Blinded assessment: NC Reliable outcomes: NC Baseline measurement: NC Follow-up: Providers: NC Patients: NC Potential unit of analysis error in main analysis	**Area of interest**: Preventive services **Targeted behaviour**: Prevention; test ordering; prescribing; patient education/advice	**Country**: USA **Setting**: Outpatient/ambulatory **Speciality**: Internal medicine **Level of training**: In training **Proportion of eligible target population taking part**: NC **Number of allocation units in study groups**: 32 clinic sessions, 1 clinic, G1=68, G2=67, G3=67, G4C=68 residents, 135 residents in total	**Group 1** Reminders, Audit and feedback **Group 2** Reminders **Group 3** Audit and feedback **Group 4 control** Usual care/no intervention
A210 Turner (1989)	**Design**: Cluster CBA **Unit of allocation**: Clinic day **Quality criteria**: Characteristics of study and control: ND Protection against contamination: NC Baseline measurement: D Blinded assessment: ND Reliable outcomes: NC Follow-up: Providers: NC Patients: NC Potential unit of analysis error in main analysis	**Area of interest**: Preventive services **Targeted behaviour**: Prevention; prescribing; patient education/advice	**Country**: USA **Setting**: Outpatient/ambulatory **Speciality**: Internal medicine **Level of training**: In training **Proportion of eligible target population taking part**: NC **Number of allocation units in study groups**: Clinic day NC, G1=9, G2=14, G3C=16 providers, G1=1, G2=2, G3C=2 clinic teams, 1 clinic	**Group 1** Reminders, Patient mediated **Group 2** Reminders **Group 3 control** Patient mediated

Study details	Quality criteria	Clinical area	Setting	Intervention groups
A211 Turner (1990)	**Design**: Cluster CCT **Unit of allocation**: Clinic day **Quality criteria**: Randomisation concealment: ND Protection against contamination: NC Blinded assessment: NC Reliable outcomes: NC Baseline measurement: NC Follow-up: Providers: NC Patients: NC Potential unit of analysis error in main analysis	**Area of interest**: Preventive services **Targeted behaviour**: Prevention; prescribing; patient education/advice	**Country**: USA **Setting**: Outpatient/ambulatory **Speciality**: Internal medicine **Level of training**: In training **Proportion of eligible target population taking part**: NC **Number of allocation units in study groups**: Clinic day NC, G1=12, G2C=12 Providers, 1 clinic	**Group 1** Reminders, Patient reminder (health maintenance card) **Group 2 control** Reminders
A212 Turner (1994)	**Design**: Cluster RCT **Unit of allocation**: Provider **Quality criteria**: Randomisation concealment: NC Protection against contamination: NC Blinded assessment: NC Reliable outcomes: NC Baseline measurement: D Follow-up: Providers: D Patients: NC	**Area of interest**: Preventive services **Targeted behaviour**: Prevention; prescribing; patient education/advice; other	**Country**: USA **Setting**: Family/general practice/community **Speciality**: General practice/family medicine **Level of training**: Fully trained **Proportion of eligible target population taking part**: 29% **Number of allocation units in study groups**: G1=18, G2C=22	**Group 1** Reminders, Computer and software **Group 2 control** Patient health card given to patient to prompt physicians

Appendix 5 cont'd *Details of included studies*

Study details	Quality criteria	Clinical area	Setting	Intervention groups
A213 Urban (1995)	**Design**: Cluster CBA 'Matched' communities **Unit of allocation**: Community **Quality criteria**: Characteristics of study and control: NC Protection against contamination: D Baseline measurement: D Blinded assessment: NC Reliable outcomes: NC Follow-up: Providers: NC Patients: ND Potential unit of analysis error in main analysis	**Area of interest**: Breast cancer screening **Targeted behaviour**: Prevention; prescribing; patient education/advice	**Country**: USA **Setting**: Family/general practice/community **Speciality**: Internal medicine **Level of training**: NC **Proportion of eligible target population taking part**: NC **Number of allocation units in study groups**: G1=1, G2=1, G3C=2	**Group 1** Distribution of educational materials, Educational meetings 'Community organisation' approach **Group 2** Distribution of educational materials, Educational meetings 'Community organisation' approach **Group 3 control** Usual care/no intervention
A214 Vadher (1997)	**Design**: RCT **Unit of allocation**: Patient **Quality criteria**: Randomisation concealment:ND Protection against contamination: ND Blinded assessment: NC Reliable outcomes: NC Baseline measurement: NC Follow-up: Providers: NC Patients: NC	**Area of interest**: Oral anticoagulation **Targeted behaviour**: General management	**Country**: UK **Setting**: Mixed, hospital inpatient and outpatient **Speciality**: Acute medicine and surgery **Level of training**: In training **Proportion of eligible target population taking part**: NC **Number of allocation units in study groups**: G1=72, G2C=76	**Group 1** Distribution of educational materials, Reminders **Group 2 control** Distribution of educational materials

Study details	Quality criteria	Clinical area	Setting	Intervention groups
A215 Van der Weijden (1999)	**Design**: Cluster RCT Stratified by type and size of practice and computerised medical information system **Unit of allocation**: Practice **Quality criteria**: Randomisation concealment: NC Protection against contamination: D Blinded assessment: D Reliable outcomes: NC Baseline measurement: D Follow-up: Providers: D Patients: NC	**Area of interest**: Cholesterol level management **Targeted behaviour**: Prevention; prescribing; patient education/advice	**Country**: Netherlands **Setting**: Family/general practice/community **Speciality**: General practice/family medicine **Level of training**: NC **Proportion of eligible target population taking part**: NC **Number of allocation units in study groups**: G1=10, G2=10	**Group 1** Distribution of educational materials, Educational meetings, audit and feedback, Educational outreach visits **Group 2 control** Distribution of educational materials
A216 van Essen (1997)	**Design**: Cluster CBA **Unit of allocation**: Community **Quality criteria**: Characteristics of study and control: ND Protection against contamination: D Baseline measurement: NC Blinded assessment: D Reliable outcomes: D Follow-up: Providers: D Patients: NC Potential unit of analysis error in main analysis	**Area of interest**: Influenza vaccination **Targeted behaviour**: prevention; prescribing; record keeping; patient education/advice	**Country**: Netherlands **Setting**: Family/general practice/community **Speciality**: General practice/family medicine **Level of training**: NC **Proportion of eligible target population taking part**: NC **Number of allocation units in study groups**: G1=1, G2C=1	**Group 1** Distribution of educational materials, Educational meetings, Audit and feedback, Changes in physical structure, facilities and equipment **Group 2 control** Usual care/no intervention

Appendix 5 cont'd *Details of included studies*

Study details	Quality criteria	Clinical area	Setting	Intervention groups
A217 van Walraven (1998)	**Design**: ITS **Quality criteria**: Independent intervention: D Data collection unbiased: D Blinded assessment: D Reliable outcomes: D Completeness of data: NC Analysed appropriately: D	**Area of interest**: Renal dysfunction, iron stores, thyroid dysfunction, ESR (test ordering) **Targeted behaviour**: Test ordering	**Country**: Canada **Setting**: Mixed, general practice and probably some outpatient (not very clear) **Speciality**: NC **Level of training**: NC **Proportion of eligible target population taking part**: NC **Number of data points**: Preintervention: 37 Postintervention: 33 **Data point interval**: 1 month	**Group 1** Distribution of educational materials, Change in scope of test requests covered, Changes in the scope and nature of benefits and services, Changes in requisition forms
A218 Vincent (1995)	**Design**: ITS **Quality criteria**: Independent intervention: ND Data collection unbiased: D Blinded assessment: D Reliable outcomes: D Completeness of data: NC Analysed appropriately: ND	**Area of interest**: Preventive services **Targeted behaviour**: Prevention; test ordering; prescribing; patient education/advice	**Country**: USA **Setting**: Family/general practice/community **Speciality**: General practice/family medicine **Level of training**: Mixed **Proportion of eligible target population taking part**: NC **Type of data**: NC **Number of data points**: Preintervention: 17 Postintervention: 22 **Data point interval**: 1 month	**Group 1** Reminders, Patient reminders

Study details	Quality criteria	Clinical area	Setting	Intervention groups
A219 Vinicor (1987)	**Design**: Cluster RCT Factorial design **Unit of allocation**: Resident clinic team **Quality criteria**: Randomisation concealment: NC Protection against contamination: NC Blinded assessment: D Reliable outcomes: NC Baseline measurement: NC Follow-up: Providers: NC Patients: ND Potential unit of analysis error in main analysis	**Area of interest**: Diabetes **Targeted behaviour**: General management	**Country**: USA **Setting**: Outpatient/ambulatory **Speciality**: Internal medicine **Level of training**: In training **Proportion of eligible target population taking part**: NC **Number of allocation units in study groups**: Resident clinic teams NC, 1 clinic, 1 medical centre	**Group 1** Distribution of educational materials, Educational meetings, Reminders, Audit and feedback, Patient education, Consultation facility, telephone hotline **Group 2** Distribution of educational materials, Educational meetings, Reminders, Audit and feedback, Consultation facility, telephone hotline **Group 3** Patient education **Group 4 control** Usual care/no intervention
A220 Vissers (1996)	**Design**: Cluster RCT Cross-over trial **Unit of allocation**: Provider **Quality criteria**: Randomisation concealment: D Protection against contamination: ND Blinded assessment: NC Reliable outcomes: NC Baseline measurement: NC Follow-up: Providers: D Patients: D	**Area of interest**: Fracture **Targeted behaviour**: Diagnosis; general management	**Country**: Netherlands **Setting**: Emergency department **Speciality**: A&E **Level of training**: In training **Proportion of eligible target population taking part**: NC **Number of allocation units in study groups**: 8	**Group 1** Distribution of educational materials, Reminders **Group 2 control** Distribution of educational materials

Appendix 5 cont'd *Details of included studies*

Study details	Quality criteria	Clinical area	Setting	Intervention groups
A221 Watson (1998)	**Design**: Cluster RCT Stratified by size and fundholding status **Unit of allocation**: Practice **Quality criteria**: Randomisation concealment: D Protection against contamination: D Blinded assessment: D Reliable outcomes: D Baseline measurement: D Follow-up: Providers: NC Patients: NC	**Area of interest**: Prescribing of NSAIDs for musculoskeletal disorders in general practice **Targeted behaviour**: Prescribing	**Country**: UK **Setting**: Family/general practice/community **Speciality**: General practice/family medicine **Level of training**: Mixed **Proportion of eligible target population taking part**: 39.2% **Number of allocation units in study groups**: G1=7, G2=6, G3C=7	**Group 1** Distribution of educational materials, Audit and feedback, Educational outreach visits **Group 2** Distribution of educational materials, Audit and feedback **Group 3 control** Audit and feedback
A222 Weingarten (1989)	**Design**: CCT **Unit of allocation**: Patient **Quality criteria**: Randomisation concealment: ND Protection against contamination: ND Blinded assessment: NC Reliable outcomes: NC Baseline measurement: NC Follow-up: Providers: D Patients: D	**Area of interest**: Preventive services **Targeted behaviour**: Prevention; test ordering; prescribing; patient education/advice	**Country**: Israel **Setting**: Family/general practice/community **Speciality**: General practice/family medicine **Level of training**: Fully trained **Proportion of eligible target population taking part**: NC **Number of allocation units in study groups**: G1=112, G2C=93	**Group 1** Reminders **Group 2 control** Usual care/no intervention

Study details	Quality criteria	Clinical area	Setting	Intervention groups
A223 Weingarten (1990)	**Design**: CCT Alternate month design (intervention month then control month × 3) **Unit of allocation**: Alternate months **Quality criteria**: Randomisation concealment: ND Protection against contamination: ND Blinded assessment: NC Reliable outcomes: NC Baseline measurement: NC Follow-up: Providers: NC Patients: NC	**Area of interest**: Chest pain **Targeted behaviour**: General management	**Country**: USA **Setting**: Inpatient **Speciality**: Internal medicine; cardiology and other non-cardiology speciality **Level of training**: Mixed **Proportion of eligible target population taking part**: NC **Number of allocation units in study groups**: G1 = 186, G2C = 218 patients	**Group 1** Reminders **Group 2 control** Usual care/no intervention
A224 Weingarten (1994)	**Design**: CCT Alternate month design (control month, 3 day washout, then intervention month × 6) **Unit of allocation**: Alternate months **Quality criteria**: Randomisation concealment: ND Protection against contamination: ND Blinded assessment: NC Reliable outcomes: NC Baseline measurement: NC Follow-up: Providers: NC Patients: D	**Area of interest**: Chest pain **Targeted behaviour**: General management	**Country**: USA **Setting**: Inpatient **Speciality**: Cardiology **Level of training**: Mixed **Proportion of eligible target population taking part**: NC **Number of allocation units in study groups**: G1 = 183, G2C = 192 patients	**Group 1** Reminders **Group 2 control** Usual care/no intervention

Appendix 5 cont'd *Details of included studies*

Study details	Quality criteria	Clinical area	Setting	Intervention groups
A225 Weingarten (1994)	**Design**: CCT Alternate month design (control month, 3 day washout, then intervention month × 9) **Unit of allocation**: Alternate months **Quality criteria**: Randomisation concealment: ND Protection against contamination: ND Blinded assessment: NC Reliable outcomes: NC Baseline measurement: NC Follow-up: Providers: NC Patients: NC	**Area of interest**: Congestive heart failure or pulmonary oedema **Targeted behaviour**: General management	**Country**: USA **Setting**: Inpatient **Speciality**: NC **Level of training**: NC **Proportion of eligible target population taking part**: NC **Number of allocation units in study groups**: G1=45, G2C=45 patients	**Group 1** Reminders **Group 2 control** Usual care/no intervention
A226 Weingarten (1996)	**Design**: CCT Alternate month design (control month, then intervention month × 11) **Unit of allocation**: Alternate months **Quality criteria**: Randomisation concealment: ND Protection against contamination: ND Blinded assessment: NC Reliable outcomes: NC Baseline measurement: NC Follow-up: Providers: NC Patients: D	**Area of interest**: Pneumonia **Targeted behaviour**: Discharge planning	**Country**: USA **Setting**: Inpatient **Speciality**: NC **Level of training**: NC **Proportion of eligible target population taking part**: NC **Number of allocation units in study groups**: G1=68, G2C=78 patients	**Group 1** Reminders **Group 2 control** Usual care/no intervention

Study details	Quality criteria	Clinical area	Setting	Intervention groups
A227 Wilson (1988)	**Design**: Cluster RCT **Unit of allocation**: Practice **Quality criteria**: Randomisation concealment: NC Protection against contamination: D Blinded assessment: NC Reliable outcomes: NC Baseline measurement: NC Follow-up: Providers: NC Patients: NC	**Area of interest**: Smoking **Targeted behaviour**: General management	**Country**: Canada **Setting**: Family/general practice/community **Speciality**: General practice/family medicine **Level of training**: NC **Proportion of eligible target population taking part**: 18% **Number of allocation units in study groups**: G1=23, G2=24, G2C=23	**Group 1** Distribution of educational materials, Educational meetings, Provision of gum **Group 2** Provision of gum **Group 3 control** Usual care/no intervention
A228 Winickoff (1984)	**Design**: Cluster RCT Stratified by performance, cross-over design (6 month) **Unit of allocation**: Provider **Quality criteria**: Randomisation concealment: NC Protection against contamination: ND Blinded assessment: D Reliable outcomes: D Baseline measurement: D Follow-up: Providers: NC Patients: NC Potential unit of analysis error in main analysis	**Area of interest**: Colorectal cancer screening **Targeted behaviour**: Prevention; test ordering; prescribing; patient education/advice	**Country**: USA **Setting**: Family/general practice/community **Speciality**: Internal medicine **Level of training**: NC **Proportion of eligible target population taking part**: NC **Number of allocation units in study groups**: G1=8, G2C=8	**Group 1** Audit and feedback **Group 2 control** Usual care/no intervention

Appendix 5 cont'd *Details of included studies*

Study details	Quality criteria	Clinical area	Setting	Intervention groups
A229 Winickoff (1985)	**Design**: Cluster CCT **Unit of allocation**: Nurse/physician team **Quality criteria**: Randomisation concealment: ND Protection against contamination: NC Blinded assessment: NC Reliable outcomes: NC Baseline measurement: D Follow-up: Providers: NC Patients: NC Potential unit of analysis error in main analysis	**Area of interest**: Hypertension **Targeted behaviour**: Test ordering; general management	**Country**: USA **Setting**: Family/general practice/community **Speciality**: NC **Level of training**: NC **Proportion of eligible target population taking part**: NC **Number of allocation units in study groups**: 16 physician/nurse teams	**Group 1** Reminders, Audit and feedback, Local consensus process **Group 2 control** Local consensus process
A230 Wirtschafter (1986)	**Design**: Cluster RCT Stratified by factors affecting low-birth weight neonatal mortality **Unit of allocation**: Hospital **Quality criteria**: Randomisation concealment: NC Protection against contamination: D Blinded assessment: NC Reliable outcomes: NC Baseline measurement: NC Follow-up: Providers: NC Patients: NC Potential unit of analysis error in main analysis	**Area of interest**: Neonatal services **Targeted behaviour**: Test ordering; general management; referrals, procedures	**Country**: USA **Setting**: Inpatient **Speciality**: Radiology; paediatrics; neonatal care **Level of training**: NC **Proportion of eligible target population taking part**: NC **Number of allocation units in study groups**: G1=13, G2=15, G3C=12	**Group 1** Distribution of educational materials, Educational meetings **Group 2** Distribution of educational materials, Educational meetings **Group 3 control** Distribution of educational materials

Study details	Quality criteria	Clinical area	Setting	Intervention groups
A231 Wong (1983)	**Design**: ITS **Quality criteria**: Independent intervention: NC Data collection unbiased: NC Blinded assessment: NC Reliable outcomes: NC Completeness of data: NC Analysed appropriately: NC	**Area of interest**: Thyroid function, myocardial infarction **Targeted behaviour**: Test ordering	**Country**: USA **Setting**: Mixed, hospital-wide (inpatient/outpatient) **Speciality**: NC **Level of training**: NC **Proportion of eligible target population taking part**: NC **Number of data points**: Preintervention: 10 Postintervention: 7 **Data point interval**: 1 month	**Group 1** Distribution of educational materials, Educational meetings, Reminders, Changes in test ordering form
A232 Worrall (1999)	**Design**: Cluster RCT **Unit of allocation**: Provider **Quality criteria**: Randomisation concealment: D Protection against contamination: D Blinded assessment: NC Reliable outcomes: NC Baseline measurement: D Follow-up: Providers: NC Patients: NC Potential unit of analysis error in main analysis	**Area of interest**: Depression **Targeted behaviour**: General management; referrals	**Country**: Canada **Setting**: Family/general practice/community **Speciality**: General practice/family medicine **Level of training**: NC **Proportion of eligible target population taking part**: 41% **Number of allocation units in study groups**: G1=22, G2C=20	**Group 1** Educational meetings, Communication and case discussion between distant health professionals **Group 2 control** Distribution of educational materials

Appendix 5 cont'd *Details of included studies*

Study details	Quality criteria	Clinical area	Setting	Intervention groups
A233 Zapka (1993)	**Design**: Cluster CBA 'Matched' communities **Unit of allocation**: Community **Quality criteria**: Characteristics of study and control: D Protection against contamination: D Baseline measurement: D Blinded assessment: NC Reliable outcomes: NC Follow-up: Providers: NC Patients: NC Potential unit of analysis error in main analysis	**Area of interest**: Breast cancer screening **Targeted behaviour**: Prevention; prescribing; patient education/advice	**Country**: USA **Setting**: Mixed, community trial, variety of setting/locations **Speciality**: General practice/family medicine; internal medicine; obstetrics/gynaecology; radiology **Level of training**: NC **Proportion of eligible target population taking part**: NC **Number of allocation units in study groups**: G1=1, G2C=1 communities, G1=3, G2C=3 towns, G1=1, G2C=1 cities	**Group 1** Distribution of educational materials, Educational meetings, Reminders, Educational outreach visits, Mass media, Patient education/information **Group 2 control** Mass media
A234 Zehr (1998)	**Design**: ITS **Quality criteria**: Independent intervention: NC Data collection unbiased: D Blinded assessment: D Reliable outcomes: NC Completeness of data: NC Analysed appropriately: NC	**Area of interest**: Lung or oesophageal resection **Targeted behaviour**: Procedures; financial	**Country**: USA **Setting**: Inpatient **Speciality**: Surgery **Level of training**: NC **Proportion of eligible target population taking part**: NC **Number of data points**: Preintervention: 3 Postintervention: 4 **Data point interval**: 1 year	**Group 1** Distribution of educational materials

Study details	Quality criteria	Clinical area	Setting	Intervention groups
A235 Zenni (1996)	**Design**: Cluster RCT Before and after balanced incomplete block design, 2 conditions, 1 intervention, 2 study groups (each an intervention and control for one of the conditions) **Unit of allocation**: House staff continuity clinic team **Quality criteria**: Randomisation concealment: NC Protection against contamination: NC Blinded assessment: NC Reliable outcomes: ND Baseline measurement: D Follow-up: Providers: D Patients: NC Potential unit of analysis error in main analysis	**Area of interest**: Childhood developmental milestones, preventive care **Targeted behaviour**: Prevention; general management; prescribing; patient education/advice	**Country**: USA **Setting**: Outpatient/ambulatory **Speciality**: Paediatrics **Level of training**: In training **Proportion of eligible target population taking part**: NC **Number of allocation units in study groups**: 1 clinic, G1=10, G2C=10 clinic teams, 10 in total (5 clinic teams for condition 1, 5 clinic teams for condition 2)	**Group 1** Reminders, Changes in medical record systems **Group 2 control** Usual care/no intervention

A&E, accident and emergency; COPD, chronic obstructive pulmonary disease; D, done; ESR, erythrocyte sedimentation rate; HIV, human immunodeficiency virus; HMO, health maintenance organisation; NC, not clear; ND, not done; NHC, neighbourhood health centre; NSAID, non-steroidal anti-inflammatory drug; PRO, peer review organisation; PSRO, professional standards review organisation.

Appendix 6

Results table

Study details	Comparison	Process of care results	Outcome of care results
A1 Anderson (1994)	**Comparison 1** **Group 1**: Edmat, Edmeet, Rem, A&F, 'telephone hotline for consultation' vs **Group 3 control**: Usual care/no intervention	**Dichotomous measure** **Primary measure**: % of patients received any prophylaxis for venous thromboembolism **Preintervention %**: 21.00 vs 40.00 **Postintervention %**: 49.00 vs 51.00 **Difference between postintervention study and control**: –2.00 **Significance**: Potential unit of analysis error	
A1 Anderson (1994)	**Comparison 2** **Group 2**: Edmat, Edmeet, Rem, 'telephone hotline for consultation' vs **Group 3 control**: Usual care/no intervention	**Dichotomous measure** **Primary measure**: % of patients received any prophylaxis for venous thromboembolism **Preintervention %**: 57.00 vs 40.00 **Postintervention %**: 55.00 vs 51.00 **Difference between postintervention study and control**: +4.00 **Significance**: Potential unit of analysis error	
A2 Anonymous (1992)	**Comparison 1** **Group 1**: Edmat, A&F, LCP vs **Group 2 control**: Edmat, A&F	**Dichotomous measure** **Median measure**: Adjusted % of children recorded as being prescribed a therapeutic drug for acute cough at first consultation **Postintervention %**: 19.00 vs 13.70 **Difference between postintervention study and control**: +5.30 **Significance**: Potential unit of analysis error	
A3 Anonymous (1994)	**Comparison 1** **Group 1**: Edmat, Rem, Patmed, Formal integration of services, Changes to the site and setting of service delivery, Changes in medical record systems vs **Group 2 control**: Usual care/no intervention	**Dichotomous measure** **Median measure**: % of patients no record of assessment of glycated haemoglobin **Postintervention %**: 0.00 vs 24.00 **Difference between postintervention study and control**: +24.00 **Significance**: $p < 0.05$	

continued

Study details	Comparison	Process of care results	Outcome of care results
A4 Anonymous (1996)	**Comparison 1** **Group 1**: Edmat, Rem, LCP, Revision of professional roles, Site liaison physician, Presence and organisation of quality monitoring mechanisms vs **Group 4 control**: Edmat, Rem, Revision of professional roles, Site liaison physician	**Dichotomous measure** **Median measure**: % of patients treatment appropriate to benign prostatic hyplasia severity **Preintervention %**: 88.00 vs 74.00 **Postintervention %**: 88.00 vs 81.00 **Difference between postintervention study and control**: +7.00 **Significance**: Potential unit of analysis error	
A4 Anonymous (1996)	**Comparison 2** **Group 2**: Edmat, Rem, OL, Revision of professional roles, Site liaison physician vs **Group 4 control**: Edmat, Rem, Revision of professional roles, Site liaison physician	**Dichotomous measure** **Median measure**: % of patients history taken using American Urological Association symptom score form **Preintervention %**: 3.00 vs 17.00 **Postintervention %**: 37.00 vs 35.00 **Difference between postintervention study and control**: +2.00 **Significance**: Potential unit of analysis error	
A4 Anonymous (1996)	**Comparison 3** **Group 3**: Edmat, Rem, Revision of professional roles, Site liaison physician vs **Group 4 control**: Edmat, Rem Revision of professional roles, Site liaison physician	**Dichotomous measure** **Median measure**: % of patients urinalysis done **Preintervention %**: 81.00 vs 84.00 **Postintervention %**: 84.00 vs 71.00 **Difference between postintervention study and control**: +13.00 **Significance**: Potential unit of analysis error	
A5 Aubin (1994)	**Comparison 1** **Group 1**: Edmat, Edmeet, Rem, Continuity of care, Changes in medical record systems vs **Group 2 control**: Usual care/no intervention	**Dichotomous measure** **Primary measure**: % of patients blood pressure measured (hypertension screen) **Preintervention %**: 59.80 vs 71.90 **Postintervention %**: 78.70 vs 59.10 **Difference between postintervention study and control**: +19.60 **Significance**: Potential unit of analysis error	

Appendix 6 cont'd *Results table*

Study details	Comparison	Process of care results	Outcome of care results
A6 Aucott (1996)	**Comparison 1** **Group 1**: Edmat, Edmeet, A&F, OL, Revision of professional roles vs **Group 2 control**: Edmat	**Dichotomous measure** **Median measure**: % of patients antenolol initiated **Postintervention %**: 7.20 vs 4.70 **Difference between postintervention study and control**: +2.50 **Significance**: Potential unit of analysis error	**Continuous measure** **Median measure**: Systolic blood pressure; **Units**: mmHg **Preintervention mean number**: 153.90 vs 151.40 **Postintervention mean number**: 154.80 vs 166.30 **Difference between postintervention study and control**: +11.50 **Relative % change postintervention**: +6.10 **SMD postintervention (SD)**: Standard deviation not given **Significance**: Potential unit of analysis
A7 Auleley (1997)	**Comparison 1** **Group 1**: Edmat, Edmeet, Rem vs **Group 2 control**: Preprinted data collection forms	**Dichotomous measure** **Primary measure**: % of patients radiography requested for ankle and midfoot injuries **Preintervention %**: 98.00 vs 98.50 **Postintervention %**: 76.00 vs 99.00 **Difference between postintervention study and control**: +23.00 **Significance**: $p = 0.03$	**Dichotomous measure** **Primary measure**: % of patients satisfied with care **Postintervention %**: 96.00 vs 98.00 **Difference between postintervention study and control**: –2.00 **Significance**: NS, reanalysed

Appendix 6 cont'd *Results table*

Study details	Comparison	Process of care results	Outcome of care results
A8 Avorn (1988)	**Comparison 1** **Group 1**: Edmat, Edmeet	**Continuous measure** **Median measure**: % Cefazolin doses kinetically incorrect **Study reanalysed**: Yes **Preintervention mean**: 60.5 **Postintervention mean**: 12.9 **Preintervention trend**: No trend **Difference between postintervention and preintervention means**: +47.6 **Relative % change preintervention to postintervention**: +78.68 **SMD preintervention to postintervention (SD)**: +3.75 **Change in level**: +14.3; **Significance**: $p = 0.11$ **Change in slope**: +1.5; **Significance**: $p = 0.096$	
A9 Avorn (1992)	**Comparison 1** **Group 1**: Edmat, Edmeet, Outreach, Marketing vs **Group 2 control**: Usual care/no intervention	**Dichotomous measure** **Median measure**: Mean % of residents per nursing home use of non-recommended antidepressants **Preintervention %**: 5.30 vs 7.60 **Postintervention %**: 4.80 vs 7.00 **Difference between postintervention study and control**: +2.20 **Significance**: Comparison not analysed **Continuous measure** **Primary measure**: Psychoactive drug use score; **Units**: points assigned for use of non-recommended drug, high doses or both (lower score indicates more appropriate prescribing) **Preintervention mean number**: 1.87 vs 1.74 **Postintervention mean number**: 1.36 vs 1.60 **Difference between postintervention study and control**: +0.24 **Relative % change postintervention**: + 15.00 **SMD postintervention (SD)**: Standard deviation not given **Significance**: Comparison not analysed	**Dichotomous measure** **Median measure**: % of patients receiving antipsychotics whose 'behaviour' deteriorated **Postintervention %**: 45.00 vs 38.00 **Difference between postintervention study and control**: –7.00 **Significance**: Potential unit of analysis error

Appendix 6 cont'd *Results table*

Study details	Comparison	Process of care results	Outcome of care results
A10 Banks (1988)	**Comparison 1** **Group 1**: Rem vs **Group 2 control**: Usual care/no intervention	Complex design (balanced incomplete block) analysed using logistic regression with providers as a random effect Non-significant change in overall compliance, but noted a significant change in providers that actively used the system. Possible unit of analysis error	
A11 Bareford (1990)	**Comparison 1** **Group 1**: Edmat, Edmeet, A&F	**Continuous measure** **Primary measure**: Number of 'out of hours' haematology laboratory test requests from division of medicine **Study reanalysed**: Yes **Preintervention mean**: 450.7 **Postintervention mean**: 303.5 **Preintervention trend**: No trend **Difference between postintervention and preintervention means**: +147.2 **Relative % change preintervention to postintervention**: +32.66 **SMD preintervention to postintervention (SD)**: +2.04 **Change in level**: +154.1; **Significance**: $p = 0.001$ **Change in slope**: –4.9; **Significance**: $p = 0.2$	
A12 Barnett (1978)	**Comparison 1** **Group 1**: Rem	**Continuous measure** **Primary measure**: % of patients records did not contain documentation of treatment with appropriate antibiotic **Study reanalysed**: Yes **Preintervention mean**: 10.7 **Postintervention mean**: 1.4 **Preintervention trend**: Increasing **Difference between postintervention and preintervention means**: +9.3 **Relative % change preintervention to postintervention**: +86.92 **SMD preintervention to postintervention (SD)**: +2.38 **Change in level**: +11.9; **Significance**: $p < 0.0001$ **Change in slope**: +0.4; **Significance**: $p = 0.028$	

Study details	Comparison	Process of care results	Outcome of care results
A13 Barnett (1983)	**Comparison 1** **Group 1**: Rem vs **Group 2 control**: Usual care/no intervention	**Dichotomous measure** **Median measure**: % of patients repeat blood pressure recorded **Postintervention %**: 70.00 vs 52.00 **Difference between postintervention study and control**: +18.00 **Significance**: $p < 0.01$	
A14 Battista (1991)	**Comparison 1** **Group 1**: Edmat, Edmeet, A&F, Clinical multidisciplinary teams vs **Group 3 control**: Edmat, Edmeet	Not enough information was provided to extract specific results. A median increase of 3.9% in the use of health charts was reported but the statistical significance of this was unclear	
A14 Battista (1991)	**Comparison 2** **Group 2**: Edmat, Edmeet, A&F vs **Group 3 control**: Edmat, Edmeet	Not enough information was provided to extract specific results. A median increase of 3.9% in the use of health charts was reported but the statistical significance of this was unclear	
A15 Bearcroft (1994)	**Comparison 1** **Group 1**: Edmat vs **Group 2 control**: Usual care/no intervention	**Dichotomous measure** **Median measure**: % of requests smoking history recorded in request letter **Postintervention %**: 28.00 vs 24.40 **Difference between postintervention study and control**: +3.60 **Significance**: Potential unit of analysis error	
A16 Becker (1989)	**Comparison 1** **Group 1**: Rem, Patmed vs **Group 3 control**: Usual care/no intervention	**Dichotomous measure** **Median measure**: % of patients (necessary recommendations) ocular pressure check done **Postintervention %**: 17.20 vs 11.20 **Difference between postintervention study and control**: +6.00 **Significance**: NS	

Appendix 6 cont'd *Results table*

Study details	Comparison	Process of care results	Outcome of care results
A16 Becker (1989)	**Comparison 2** **Group 2**: Rem vs **Group 3 control**: Usual care/no intervention	**Dichotomous measure** **Median measure**: % of patients (necessary recommendations) Papanicolaou smear done **Postintervention %**: 23.10 vs 18.40 **Difference between postintervention study and control**: +4.70 **Significance**: NS	
A17 Bejes (1992)	**Comparison 1** **Group 1**: Edmeet, Rem, Patmed/Rem vs **Group 3 control**: Usual care/no intervention	**Dichotomous measure** **Median measure**: % of patients sigmoidoscopy completed **Postintervention %**: 22.00 vs 2.00 **Difference between postintervention study and control**: +20.00 **Significance**: Potential unit of analysis error	
A17 Bejes (1992)	**Comparison 2** **Group 2**: Edmeet, Rem, Patmed vs **Group 3 control**: Usual care/no intervention	**Dichotomous measure** **Median measure**: % of patients sigmoidoscopy completed **Postintervention %**: 31.00 vs 2.00 **Difference between postintervention study and control**: +27.00 **Significance**: Potential unit of analysis error	
A18 Belcher (1990)	**Comparison 1** **Group 1**: Edmeet, Rem, A&F vs **Group 4 control**: Usual care/no intervention	**Dichotomous measure** **Median measure**: % of patients influenza vaccinations done **Preintervention %**: 15.00 vs 16.00 **Postintervention %**: 40.00 vs 42.00 **Difference between postintervention study and control**: –2.00 **Significance**: Comparison not analysed	
A18 Belcher (1990)	**Comparison 2** **Group 2**: Patmed/rem vs **Group 4 control**: Usual care/no intervention	**Dichotomous measure** **Median measure**: % of patients faecal occult blood test completed **Preintervention %**: 26.00 vs 21.00 **Postintervention %**: 18.00 vs 17.00 **Difference between postintervention study and control**: +1.00 **Significance**: Comparison not analysed	

Study details	Comparison	Process of care results	Outcome of care results
A18 Belcher (1990)	**Comparison 3** **Group 3**: Revision of professional roles, Continuity of care, Changes to the site and setting of service delivery vs **Group 4 control**: Usual care/no intervention	**Dichotomous measure** **Median measure**: % of patients smoking status recorded **Preintervention %**: 21.00 vs 28.00 **Postintervention %**: 73.00 vs 28.00 **Difference between postintervention study and control**: +45.00 **Significance**: Comparison not analysed	
A19 Berbatis (1982)	**Comparison 1** **Group 1**: Edmat	**Continuous measure** **Primary measure**: % of inpatients prescribed propoxyphene for minor/moderate pain **Study reanalysed**: Yes **Preintervention mean**: 60 **Postintervention mean**: 36.3 **Preintervention trend**: No trend **Difference between postintervention and preintervention means**: +23.7 **Relative % change preintervention to postintervention**: +39.50 **SMD preintervention to postintervention (SD)**: Standard deviation not given **Change in level**: +36.3; **Significance**: $p = 0.03$ **Change in slope**: –3.3; **Significance**: $p = 0.38$	
A20 Boekeloo (1990)	**Comparison 1** **Group 1**: Edmat, Edmeet, Rem, A&F vs **Group 4 control**: Edmat, Edmeet	**Dichotomous measure** **Median measure**: % of patients documented low-fat hospital diet **Preintervention %**: 7.90 vs 11.40 **Postintervention %**: 6.90 vs 16.50 **Difference between postintervention study and control**: –9.60 **Significance**: Potential unit of analysis error	

Appendix 6 cont'd *Results table*

Study details	Comparison	Process of care results	Outcome of care results
A20 Boekeloo (1990)	**Comparison 2** **Group 2**: Edmat, Edmeet, A&F vs **Group 4 control**: Edmat, Edmeet	**Dichotomous measure** **Median measure**: % of patients documented nutritionist consult **Preintervention %**: 22.70 vs 22.90 **Postintervention %**: 37.30 vs 34.20 **Difference between postintervention study and control**: +3.10 **Significance**: Potential unit of analysis error	
A20 Boekeloo (1990)	**Comparison 3** **Group 3**: Edmat, Edmeet, Rem vs **Group 4 control**: Edmat, Edmeet	**Dichotomous measure** **Median measure**: % of patients documented nutritionist consult **Preintervention %**: 0.00 vs 11.40 **Postintervention %**: 13.80 vs 16.50 **Difference between postintervention study and control**: –2.70 **Significance**: Potential unit of analysis error	
A21 Bogden (1997)	**Comparison 1** **Group 1**: Rem, Revision of professional roles, Clinical multidisciplinary teams vs **Group 2 control**: Usual care/no intervention		**Dichotomous measure** **Primary measure**: % of patients achieved National Cholesterol Education Programme goals **Postintervention %**: 43.00 vs 21.00 **Difference between postintervention study and control**: +21.00 **Significance**: $p < 0.05$
A22 Boissel (1995)	**Comparison 1** **Group 1**: Edmat, Edmeet vs **Group 2 control**: Usual care/no intervention	Continuous measure **Median measure**: Smear tests done for women over 56 (median per practice); **Units**: number of tests **Postintervention mean number**: 4.50 vs 6.80 **Difference between postintervention study and control**: +2.30 **Relative % change postintervention**: + 33.80 **SMD postintervention (SD)**: Standard deviation not given **Significance**: Comparison not analysed	

Appendix 6 cont'd *Results table*

Study details	Comparison	Process of care results	Outcome of care results
A23 Brady (1988)	**Comparison 1** **Group 1**: Edmat, Edmeet, A&F vs **Group 3 control**: Usual care/no intervention	**Dichotomous measure** **Median measure**: % of patients (indicated recommendations) influenza vaccination ordered **Postintervention %**: 62.00 vs 59.00 **Difference between postintervention study and control**: +3.00 **Significance**: Potential unit of analysis error	
A24 Brody (1990)	**Comparison 1** **Group 1**: Edmat, Edmeet, Rem, Patmed vs **Group 3 control**: Usual care/no intervention	**Continuous measure** **Median measure**: Rating of time spent counselling (physician questionnaire); **Units**: 5 minute intervals, 1 = no time to 5 > 15 minutes **Postintervention mean number**: 1.60 vs 1.30 **Difference between postintervention study and control**: +0.30 **Relative % change postintervention**: + 23.10 **SMD postintervention (SD)**: +1.50 **Significance**: Potential unit of analysis error	
A24 Brody (1990)	**Comparison 2** **Group 2**: Patmed vs **Group 3 control**: Usual care/no intervention	**Continuous measure** **Median measure**: Counselling items received (physician questionnaire); **Units**: number of items **Postintervention mean number**: 2.00 vs 2.20 **Difference between postintervention study and control**: –0.20 **Relative % change postintervention**: –9.10 **SMD postintervention (SD)**: –0.67 **Significance**: Potential unit of analysis error	**Continuous measure** **Median measure**: Patient attitude to amount of stress; **Units**: compared to previsit stress (1 much more stress, 5 much less stress); higher score is better **Postintervention mean number**: 3.80 vs 3.20 **Difference between postintervention study and control**: +0.60 **Relative % change postintervention**: +9.30 **SMD postintervention (SD)**: +6.00 **Significance**: Potential unit of analysis error

Appendix 6 cont'd *Results table*

Study details	Comparison	Process of care results	Outcome of care results
A25 Brook (1976)	**Comparison 1** **Group 1**: Edmat, Provider penalty, Peer review	**Continuous measure** **Primary measure**: Number of injections billed per 1000 ambulatory visits **Study reanalysed**: Yes **Preintervention mean**: 41.2 **Postintervention mean**: 25.4 **Preintervention trend**: No trend **Difference between postintervention and preintervention means**: +15.8 **Relative % change preintervention to postintervention**: +38.35 **SMD preintervention to postintervention (SD)**: +4.79 **Change in level**: +8.4; **Significance**: $p = 0.003$ **Change in slope**: +2.3; **Significance**: $p = 0.019$	
A26 Brooks (1996)	**Comparison 1** **Group 1**: Edmat, Rem, Patmed	**Continuous measure** **Primary measure**: % of diabetic patients receiving eye examinations **Study reanalysed**: No **Preintervention mean**: 36.4 **Postintervention mean**: 44.8 **Preintervention trend**: Increasing **Difference between postintervention and preintervention means**: +8.4 **Relative % change preintervention to postintervention**: +23.08 **SMD preintervention to postintervention (SD)**: Standard deviation not given	
A27 Brownbridge (1986)	**Comparison 1** **Group 1**: Rem, Changes in medical record systems or Changes in physical structure, facilities and equipment vs **Group 2 control**: Usual care/no intervention	Continuous measure **Median measure**: Information given by patients on events included in protocol; **Units**: occurrences per consultation **Preintervention mean number**: 0.41 vs 0.42 **Postintervention mean number**: 1.60 vs 0.57 **Difference between postintervention study and control**: +1.03 **Relative % change postintervention**: + 180.70 **SMD postintervention (SD)**: Standard deviation not given **Significance**: Comparison not analysed	

Study details	Comparison	Process of care results	Outcome of care results
A28 Browner (1994)	**Comparison 1** **Group 1**: Edmat, Edmeet, Outreach, Patient interventions vs **Group 3 control**: Usual care/no intervention	**Dichotomous measure** **Median measure**: Adjusted % of patients management compliant with National Cholesterol Education Programme Expert Panel guidelines **Postintervention %**: 33.00 vs 37.00 **Difference between postintervention study and control**: –4.00 **Significance**: NS	
A28 Browner (1994)	**Comparison 2** **Group 2**: Edmat, Edmeet vs **Group 3 control**: Usual care/no intervention	**Dichotomous measure** **Median measure**: Adjusted % of patients management compliant with National Cholesterol Education Programme Expert Panel guidelines **Postintervention %**: 34.00 vs 37.00 **Difference between postintervention study and control**: –3.00 **Significance**: NS	
A29 Brufsky (1998)	**Comparison 1** **Group 1**: Edmat, A&F, Formulary	**Continuous measure** **Primary measure**: % of market share of histamine-2 receptor antagonists: cimetidine prescriptions **Study reanalysed**: No **Preintervention trend**: NC **Change in level**: +53.8; **Significance**: $p < 0.0001$ **Change in slope**: +1.1; **Significance**: $p < 0.0001$	
A30 Bryce (1995)	**Comparison 1** **Group 1**: Edmat, Rem, Audit facilitator vs **Group 2 control**: Audit facilitator	**Dichotomous measure** **Median measure**: % of patients patient-initiated consultations **Postintervention %**: 18.67 vs 16.00 **Difference between postintervention study and control**: +2.60 **Significance**: NS	
A31 Buchsbaum (1993)	**Comparison 1** **Group 1**: Rem, Patmed vs **Group 2 control**: Usual care/no intervention	**Dichotomous measure** **Primary measure**: % of patients receiving physician counselling **Postintervention %**: 50.00 vs 33.00 **Difference between postintervention study and control**: +17.00 **Significance**: Potential unit of analysis error	

Appendix 6 cont'd *Results table*

Study details	Comparison	Process of care results	Outcome of care results
A32 Buffington (1991)	**Comparison 1** **Group 1**: Rem, A&F, Patmed vs **Group 3 control**: Usual care/no intervention	**Dichotomous measure** **Primary measure**: % of patients influenza immunisation done **Postintervention %**: 67.30 vs 50.40 **Difference between postintervention study and control**: +16.90 **Significance**: Potential unit of analysis error	
A32 Buffington (1991)	**Comparison 2** **Group 2**: Rem, A&F vs **Group 3 control**: Usual care/no intervention	**Dichotomous measure** **Primary measure**: % of patients influenza immunisation done **Postintervention %**: 66.10 vs 54.00 **Difference between postintervention study and control**: +15.70 **Significance**: Potential unit of analysis error	
A33 Burack (1994)	**Comparison 1** **Group 1**: Edmeet, Rem, Patmed, Patient incentive, Telephone appointment system and rescheduling system vs **Group 2 control**: Edmeet, Patmed, Patient incentive, Telephone appointment system	**Dichotomous measure** **Primary measure**: % of patients mammography completed **Preintervention %**: 21.00 vs 22.00 **Postintervention %**: 53.00 vs 41.00 **Difference between postintervention study and control**: +12.00 **Significance**: Comparison not analysed	
A34 Burack (1996)	**Comparison 1** **Group 1**: Rem, Patmed vs **Group 4 control**: Usual care/no intervention	**Dichotomous measure** **Median measure**: % of patients visit to a primary care site **Postintervention %**: 59.00 vs 57.70 **Difference between postintervention study and control**: +1.30 **Significance**: NS, reanalysed	
A34 Burack (1996)	**Comparison 2** **Group 2**: Rem vs **Group 4 control**: Usual care/no intervention	**Dichotomous measure** **Median measure**: % of patients visit to a primary care site **Postintervention %**: 60.50 vs 57.70 **Difference between postintervention study and control**: +2.80 **Significance**: NS, reanalysed	

Study details	Comparison	Process of care results	Outcome of care results
A34 Burack (1996)	**Comparison 3** **Group 3**: Patmed vs **Group 4 control**: Usual care/no intervention	**Dichotomous measure** **Median measure**: % of patients mammography done **Postintervention %**: 26.30 vs 25.50 **Difference between postintervention study and control**: +0.80 **Significance**: NS, reanalysed	
A35 Caggiula (1996)	**Comparison 1** **Group 1**: Edmeet, Patient incentive, Continuity of care vs **Group 2 control**: Edmat, Edmeet		**Continuous measure** **Median measure**: Patient satisfaction: I need more encouragement to make dietary changes; **Units**: Likert scale: strongly agree = 1, strongly disagree = 7 **Postintervention mean number**: 3.00 vs 3.90 **Difference between postintervention study and control**: +0.90 **Relative % change postintervention**: +21.30 **SMD postintervention (SD)**: Standard deviation not given **Significance**: Potential unit of analysis error

Appendix 6 cont'd *Results table*

Study details	Comparison	Process of care results	Outcome of care results
A36 Callahan (1994)	**Comparison 1** **Group 1**: Edmat, Edmeet, Rem, Patmed, Continuity of care vs **Group 2 control**: Edmeet	**Dichotomous measure** **Median measure**: % of patients receiving new actions: stopped target drug **Postintervention %**: 23.00 vs 22.00 **Difference between postintervention study and control**: –1.00 **Significance**: Potential unit of analysis error	**Continuous measure** **Median measure**: Sickness Impact Profile scores at 6 months; **Units**: the greater the score the worse the functional disability **Preintervention mean number**: 32.50 vs 30.00 **Postintervention mean number**: 30.00 vs 25.00 **Difference between postintervention study and control**: –5.00 **Relative % change postintervention**: –20.00 **SMD postintervention (SD)**: Standard deviation not given **Significance**: Potential unit of analysis error
A37 Chambers (1989)	**Comparison 1** **Group 1**: Rem vs **Group 2 control**: Usual care/no intervention	**Dichotomous measure** **Primary measure**: % of patients mammography ordered **Postintervention %**: 26.60 vs 20.60 **Difference between postintervention study and control**: +6.10 **Significance**: $p = 0.011$	
A38 Chambers (1991)	**Comparison 1** **Group 1**: All patients Rem vs **Group 3 control**: Usual care/no intervention	**Dichotomous measure** **Primary measure**: % of patients influenza vaccination **Postintervention %**: 50.60 vs 29.80 **Difference between postintervention study and control**: +20.70 **Significance**: Potential unit of analysis error	

Study details	Comparison	Process of care results	Outcome of care results
A38 Chambers (1991)	**Comparison 2** **Group 2**: Some patients Rem vs **Group 3 control**: Usual care/no intervention	**Dichotomous measure** **Primary measure**: % of patients influenza vaccination **Postintervention %**: 28.80 vs 29.80 **Difference between postintervention study and control**: –1.00 **Significance**: Potential unit of analysis error	
A39 Chassin (1986)	**Comparison 1** **Group 1**: Edmat, Edmeet, A&F vs **Group 2 control**: Usual care/no intervention	**Dichotomous measure** **Primary measure**: Mean % of deliveries X-ray pelvimetry used (rate per 100 deliveries) **Preintervention %**: 7.34 vs 7.68 **Postintervention %**: 1.06 vs 3.64 **Difference between postintervention study and control**: +2.58 **Significance**: Potential unit of analysis error	
A40 Cheney (1987)	**Comparison 1** **Group 1**: Rem vs **Group 2 control**: Usual care/no intervention	**Dichotomous measure** **Primary measure**: Mean % compliance with recommended measures for 10 preventive healthcare measures **Postintervention %**: 52.00 vs 39.00 **Difference between postintervention study and control**: +13.00 **Significance**: $p < 0.002$	
A41 Clarke (1990)	**Comparison 1** **Group 1**: Edmat, Edmeet	**Continuous measure** **Primary measure**: Number of skull X-rays per 1000 attenders **Study reanalysed**: Yes **Preintervention mean**: 93.9 **Postintervention mean**: 66.1 **Preintervention trend**: No trend **Difference between postintervention and preintervention means**: +27.8 **Relative % change preintervention to postintervention**: +29.61 **SMD preintervention to postintervention (SD)**: +2.67 **Change in level**: +12.2 **Significance**: $p = 0.24$ **Change in slope**: –1.29 **Significance**: $p = 0.56$	

Appendix 6 cont'd *Results table*

Study details	Comparison	Process of care results	Outcome of care results
A42 Coe (1977)	**Comparison 1** **Group 1**: Rem vs **Group 2 control**: Usual care/no intervention		Study designed to test equivalence. Results indicated similar results for computer- and physician-managed patients. Possible unit of analysis error
A43 Cohen (1982)	**Comparison 1** **Group 1**: Edmeet, Rem vs **Group 2 control**: Edmeet	**Dichotomous measure** **Median measure**: % of patients influenza vaccination done **Postintervention %**: 36.00 vs 4.00 **Difference between postintervention study and control**: +32.00 **Significance**: Potential unit of analysis error	
A44 Cohen (1985)	**Comparison 1** **Group 1**: Edmat vs **Group 2 control**: Usual care/no intervention	Results were reported as regression coefficients or correlations. Authors reported a failure of specifically targeted educational intervention to alter physicians' preventive care behaviour (NS result)	
A45 Cohen (1987)	**Comparison 1** **Group 1**: Edmat, Edmeet, Rem, Patient incentive vs **Group 4 control**: Edmat, Edmeet	**Dichotomous measure** **Median measure**: % of patients asked by physician about setting a quit date **Postintervention %**: 58.00 vs 2.00 **Difference between postintervention study and control**: +56.00 **Significance**: Potential unit of analysis error **Continuous measure** **Primary measure**: Length of time physician spent talking to patient about smoking; **Units**: minutes **Postintervention mean number**: 5.20 vs 1.40 **Difference between postintervention study and control**: +3.80 **Relative % change postintervention**: + 307.10 **SMD postintervention (SD)**: +1.87 **Significance**: $p < 0.05$	**Dichotomous measure** **Primary measure**: % of patients stopped smoking at 12 months **Postintervention %**: 5.20 vs 1.50 **Difference between postintervention study and control**: +3.70 **Significance**: Comparison not analysed

Study details	Comparison	Process of care results	Outcome of care results
A45 Cohen (1987)	**Comparison 2** **Group 2**: Edmat, Edmeet, Rem vs **Group 4 control**: Edmat, Edmeet	**Dichotomous measure** **Median measure**: % of patients asked by physician about smoking **Postintervention %**: 75.00 vs 41.00 **Difference between postintervention study and control**: +34.00 **Significance**: Potential unit of analysis error **Continuous measure** **Primary measure**: Length of time physician spent talking to patient about smoking; **Units**: minutes **Postintervention mean number**: 3.60 vs 1.40 **Difference between postintervention study and control**: +2.20 **Relative % change postintervention**: + 157.10 **SMD postintervention (SD)**: +0.95 **Significance**: $p < 0.05$	**Dichotomous measure** **Primary measure**: % of patients stopped smoking at 12 months **Postintervention %**: 7.90 vs 1.50 **Difference between postintervention study and control**: +6.40 **Significance**: Comparison not analysed
A45 Cohen (1987)	**Comparison 3** **Group 3**: Edmat, Edmeet, Rem, Patient incentive vs **Group 4 control**: Edmat, Edmeet	**Dichotomous measure** **Median measure**: % of patients asked by physician advised to quit **Postintervention %**: 61.00 vs 27.00 **Difference between postintervention study and control**: +34.00 **Significance**: Potential unit of analysis error **Continuous measure** **Primary measure**: Length of time physician spent talking to patient about smoking; **Units**: minutes **Postintervention mean number**: 4.30 vs 1.40 **Difference between postintervention study and control**: +2.90 **Relative % change postintervention**: + 207.10 **Standardised mean difference postintervention (SD)**: +1.26 **Significance**: $p < 0.05$	**Dichotomous measure** **Primary measure**: % of patients stopped smoking at 12 months **Postintervention %**: 4.70 vs 1.50 **Difference between postintervention study and control**: +3.20 **Significance**: Comparison not analysed
A46 Cowan (1992)	**Comparison 1** **Group 1**: Rem vs **Group 2 control**: Usual care/no intervention	**Dichotomous measure** **Median measure**: % of patients cholesterol level measured **Postintervention %**: 7.00 vs 2.70 **Difference between postintervention study and control**: +4.30 **Significance**: Potential unit of analysis error	

Appendix 6 cont'd *Results table*

Study details	Comparison	Process of care results	Outcome of care results
A47 Danchaivijitr (1992)	**Comparison 1** **Group 1**: Rem vs **Group 2 control**: Usual care/no intervention	**Dichotomous measure** **Primary measure**: % of patients catheterised **Postintervention %**: 8.60 vs 7.80 **Difference between postintervention study and control**: –0.80 **Significance**: Potential unit of analysis error	
A48 de Burgh (1995)	**Comparison 1** **Group 1**: Edmat, Outreach vs **Group 2 control**: Usual care/no intervention	**Dichotomous measure** **Median measure**: Number per 100 diagnoses (%) benzodiazepine prescription for insomnia **Preintervention %**: 94.50 vs 92.40 **Postintervention %**: 87.40 vs 88.50 **Difference between postintervention study and control**: +1.10 **Significance**: Potential unit of analysis error	
A49 De Santis (1994)	**Comparison 1** **Group 1**: Edmat, Outreach vs **Group 2 control**: Usual care/no intervention	**Dichotomous measure** **Primary measure**: Median % of prescriptions for tonsillitis by provider, either penicillin or erythromycin **Preintervention %**: 78.30 vs 61.90 **Postintervention %**: 100.00 vs 86.90 **Difference between postintervention study and control**: +13.10 **Significance**: Potential unit of analysis error	
A50 Deeb (1988)	**Comparison 1** **Group 1**: Edmat, Edmeet, Outreach or Communication, Revision of professional roles vs **Group 2 control**: Usual care/no intervention	**Dichotomous measure** **Median measure**: % of patients referred for retinopathy **Preintervention %**: 9.00 vs 21.00 **Postintervention %**: 43.00 vs 33.00 **Difference between postintervention study and control**: +10.00 **Significance**: Potential unit of analysis error	

Study details	Comparison	Process of care results	Outcome of care results
A51 Del Mar (1995)	**Comparison 1** **Group 1**: Edmat, Provision of camera for photographing lesions vs **Group 2 control**: Usual care/no intervention	**Dichotomous measure** **Primary measure**: % of excised lesions neither invasive nor potentially malignant lesions **Preintervention %**: 93.60 vs 94.00 **Postintervention %**: 88.80 vs 93.80 **Difference between postintervention study and control**: +5.00 **Significance**: Potential unit of analysis error	
A52 Dempsey (1995)	**Comparison 1** **Group 1**: Edmat, Edmeet, Rem, A&F, Agreement with area nursing homes	**Continuous measure** **Primary measure**: Length of hospital stay (days) **Study reanalysed**: Yes **Preintervention mean**: 8.8 **Postintervention mean**: 7.2 **Preintervention trend**: No trend **Difference between postintervention and preintervention means**: +1.6 **Relative % change preintervention to postintervention**: +18.18 **SMD preintervention to postintervention (SD)**: +4.00 **Change in level**: +0.45; **Significance**: $p = 0.75$ **Change in slope**: –0.31; **Significance**: $p = 0.61$	
A53 Dennis (1988)	**Comparison 1** **Group 1**: Patmed, Communication between professionals re guidelines vs **Group 2 control**: Usual care/no intervention		Continuous measure **Primary measure**: Median time until return to full-time work; **Units**: days **Postintervention mean number**: 51.00 vs 75.00 **Difference between postintervention study and control**: +24.00 **Relative % change postintervention**: +32.00 **SMD postintervention (SD)**: Standard deviation not given **Significance**: $p < 0.02$

Appendix 6 cont'd *Results table*

Study details	Comparison	Process of care results	Outcome of care results
A54 Dickey (1992)	**Comparison 1** **Group 1**: Rem, Patmed, Formal integration of services, Changes in medical record systems vs **Group 2 control**: Usual care/no intervention	**Dichotomous measure** **Primary measure**: Mean patient % compliance with recommended preventive measures at 18 months **Preintervention %**: 62.50 vs 64.70 **Postintervention %**: 69.70 vs 60.80 **Difference between postintervention study and control**: +8.90 **Significance**: Potential unit of analysis error	
A55 Dietrich (1992)	**Comparison 1** **Group 1**: Edmat, Edmeet, A&F, Outreach vs **Group 4 control**: Usual care/no intervention	**Dichotomous measure** **Median measure**: Mean % of patients per practice receiving digital rectal examination **Preintervention %**: 58.00 vs 54.00 **Postintervention %**: 63.00 vs 57.00 **Difference between postintervention study and control**: +6.00 **Significance**: NS	
A55 Dietrich (1992)	**Comparison 2** **Group 2**: Edmat, Edmeet vs **Group 4 control**: Usual care/no intervention	**Dichotomous measure** **Median measure**: Mean % of patients per practice receiving digital rectal examination **Preintervention %**: 60.00 vs 54.00 **Postintervention %**: 60.00 vs 57.00 **Difference between postintervention study and control**: +3.00 **Significance**: NS	
A55 Dietrich (1992)	**Comparison 3** **Group 3**: A&F, Outreach vs **Group 4 control**: Usual care/no intervention	**Dichotomous measure** **Median measure**: Mean % of patients per practice receiving cervical cytology **Preintervention %**: 58.00 vs 63.00 **Postintervention %**: 71.00 vs 61.00 **Difference between postintervention study and control**: +10.00 **Significance**: NS	

Study details	Comparison	Process of care results	Outcome of care results
A56 Diwan (1995)	**Comparison 1** **Group 1**: Edmat, Outreach vs **Group 2 control**: Usual care/no intervention	**Dichotomous measure** **Median measure**: Mean % of patients per health centre patients with more than one other risk factor receiving diet information **Postintervention %**: 88.00 vs 77.00 **Difference between postintervention study and control**: +11.00 **Significance**: $p = 0.23$ **Continuous measure** **Median measure**: Prescriptions per month per health centre for lipid-lowering drugs – nicotinic acid **Preintervention mean number**: 0.11 vs 0.11 **Postintervention mean number**: 0.06 vs 0.05 **Difference between postintervention study and control**: +0.01 **Relative % change postintervention**: + 20.00 **SMD postintervention (SD)**: Standard deviation not given **Significance**: Comparison not analysed	
A57 Dranitsaris (1995)	**Comparison 1** **Group 1**: Edmat, A&F vs **Group 2 control**: Edmat	**Dichotomous measure** **Primary measure**: % ondansetron orders meeting hospital guidelines **Postintervention %**: 76.20 vs 51.60 **Difference between postintervention study and control**: +24.60 **Significance**: Potential unit of analysis error	
A58 Elam (1997)	**Comparison 1** **Group 1**: Edmat, Institution penalty	Continuous measure **Primary measure**: Number of lumbar fusion operations per 100 000 population **Study reanalysed**: No **Preintervention trend**: NC	

Appendix 6 cont'd *Results table*

Study details	Comparison	Process of care results	Outcome of care results
A59 Elliott (1997)	**Comparison 1** **Group 1**: Edmeet, Outreach, OL, Number of OL activities vs **Group 2 control**: Usual care/no intervention	**Continuous measure** **Primary measure**: Pain management index; **Units**: range –3, patient with severe pain receiving no analgesics, to + 3, patient receiving morphine reporting no pain (higher score better management) **Preintervention mean number**: 0.81 vs 0.86 **Postintervention mean number**: 0.86 vs 0.85 **Difference between postintervention study and control**: +0.02 **Relative % change postintervention**: + 1.70 **SMD postintervention (SD)**: Standard deviation not given **Significance**: NS	**Dichotomous measure** **Primary measure**: % of patients reporting pain due to cancer or its treatment in 3 months before interview (pain prevalence) **Preintervention %**: 42.00 vs 36.00 **Postintervention %**: 39.00 vs 39.10 **Difference between postintervention study and control**: +0.10 **Significance**: NS **Continuous measure** **Primary measure**: Pain score; **Units**: 10 questions, responses = 0, no pain to 10 = worst pain imaginable, summed 0–40 lower score less pain **Preintervention mean number**: 9.94 vs 11.10 **Postintervention mean number**: 10.90 vs 11.20 **Difference between postintervention study and control**: +0.30 **Relative % change postintervention**: +2.68 **SMD postintervention (SD)**: Standard deviation not given **Significance**: NS

Study details	Comparison	Process of care results	Outcome of care results
A60 Emslie (1993)	**Comparison 1** **Group 1**: Edmat vs **Group 2 control**: Usual care/no intervention	**Dichotomous measure** **Median measure**: % male partners seen by GP **Postintervention %**: 50.00 vs 33.00 **Difference between postintervention study and control**: +17.00 **Significance**: Potential unit of analysis error	
A61 Evans (1996)	**Comparison 1** **Group 1**: Edmat, Edmeet, Rem, Patmed vs **Group 4 control**: Edmeet	**Dichotomous measure** **Primary measure**: % of providers counselling during follow-up visit **Postintervention %**: 58.00 vs 25.00 **Difference between postintervention study and control**: +33.00 **Significance**: Potential unit of analysis error	**Dichotomous measure** **Median measure**: % of patients knew cholesterol was > 200 mg/dl at follow-up interview **Postintervention %**: 36.00 vs 12.00 **Difference between postintervention study and control**: +24.00 **Significance**: Potential unit of analysis error
A61 Evans (1996)	**Comparison 2** **Group 2**: Rem, Patmed vs **Group 4 control**: Edmeet	**Dichotomous measure** **Primary measure**: % of providers counselling during follow-up visit **Postintervention %**: 36.00 vs 25.00 **Difference between postintervention study and control**: +11.00 **Significance**: Potential unit of analysis error	**Dichotomous measure** **Median measure**: % of patients knew cholesterol was >200 mg/dl at follow-up interview **Postintervention %**: 32.00 vs 12.00 **Difference between postintervention study and control**: +20.00 **Significance**: Potential unit of analysis error

Appendix 6 cont'd *Results table*

Study details	Comparison	Process of care results	Outcome of care results
A61 Evans (1996)	**Comparison 3** **Group 3**: Edmat, Edmeet vs **Group 4 control**: Edmeet	**Dichotomous measure** **Primary measure**: % of providers counselling during follow-up visit **Postintervention %**: 24.00 vs 25.00 **Difference between postintervention study and control**: –1.00 **Significance**: Potential unit of analysis error	**Dichotomous measure** **Median measure**: % of patients knew cholesterol was > 200 mg/dl at follow-up interview **Postintervention %**: 11.00 vs 12.00 **Difference between postintervention study and control**: –1.00 **Significance**: Potential unit of analysis error
A62 Evans (1997)	**Comparison 1** **Group 1**: Edmat, Edmeet, Outreach, Formulary, Communication and case discussion between distant health professionals vs **Group 2 control**: Edmat, Formulary	**Dichotomous measure** **Median measure**: Mean % of families per clinic educated by physician on side-effects **Postintervention %**: 65.00 vs 51.00 **Difference between postintervention study and control**: +14.00 **Significance**: $p < 0.05$ **Continuous measure** **Median measure**: Newly identified patients per clinic **Preintervention mean number**: 20.00 vs 14.60 **Postintervention mean number**: 39.60 vs 15.90 **Difference between postintervention study and control**: +23.70 **Relative % change postintervention**: + 149.10 **SMD postintervention (SD)**: +4.94 **Significance**: $p < 0.001$	

Study details	Comparison	Process of care results	Outcome of care results
A63 Everitt (1990)	**Comparison 1** **Group 1**: Edmat, Edmeet, Operating room stocked with first choice drug	**Continuous measure** **Primary measure**: % of caesarean section deliveries receiving <5 g cefazolin **Study reanalysed**: No **Preintervention mean**: 1 **Postintervention mean**: 60 **Preintervention trend**: No trend **Difference between postintervention and preintervention means**: +59 **Relative % change preintervention to postintervention**: +5900.00 **SMD preintervention to postintervention (SD)**: Standard deviation not given	
A64 Feder (1995)	**Comparison 1** **Group 1**: A&F, Outreach vs **Group 2 control**: Usual care/no intervention	**Dichotomous measure** **Median measure**: Mean % of patients per practice blood glucose recorded (diabetes) **Preintervention %**: 56.80 vs 57.80 **Postintervention %**: 75.20 vs 57.80 **Difference between postintervention study and control**: +17.40 **Significance**: $p < 0.05$	**Dichotomous measure** **Median measure**: % of patients with acceptable inhaler technique **Preintervention %**: 52.00 vs 44.00 **Postintervention %**: 63.00 vs 60.00 **Difference between postintervention study and control**: +3.00 **Significance**: Potential unit of analysis error **Continuous measure** **Primary measure**: HbA_1 (%) **Preintervention mean number**: 10.30 vs 9.50 **Postintervention mean number**: 10.30 vs 10.30 **Difference between postintervention study and control**: +0.00 **Relative % change postintervention**: +0.00 **SMD postintervention (SD)**: +0.00 **Significance**: Potential unit of analysis error

Appendix 6 cont'd *Results table*

Study details	Comparison	Process of care results	Outcome of care results
A65 Fender (1999)	**Comparison 1** **Group 1**: Edmat, Edmeet, Outreach vs **Group 2 control**: Usual care/no intervention	**Dichotomous measure** **Median measure**: % of patients referred for menorrhagia **Postintervention %**: 20.60 vs 29.00 **Difference between postintervention study and control**: +8.40 **Significance**: Potential unit of analysis error	
A66 Fletcher (1993)	**Comparison 1** **Group 1**: Edmat, Edmeet, A&F, MM, Reduced patient charges, Patient incentive vs **Group 2 control**: Usual care/no intervention	**Dichotomous measure** **Primary measure**: % of women reporting mammography use **Preintervention %**: 35.00 vs 30.00 **Postintervention %**: 55.00 vs 40.00 **Difference between postintervention study and control**: +15.00 **Significance**: Potential unit of analysis error	**Dichotomous measure** **Median measure**: % of women ever heard of mammogram **Preintervention %**: 91.00 vs 89.00 **Postintervention %**: 98.00 vs 95.00 **Difference between postintervention study and control**: +3.00 **Significance**: Potential unit of analysis error
A67 Flynn (1997)	**Comparison 1** **Group 1**: Edmat, Edmeet, Community-OLs, educational materials and meetings, Mobile van, Patmed, Changes to the site and setting of service delivery vs **Group 2 control**: Changes to the site and setting of service delivery	**Dichotomous measure** **Median measure**: % of women ever had mammography **Postintervention %**: 89.00 vs 80.00 **Difference between postintervention study and control**: +9.00 **Significance**: Potential unit of analysis error	
A68 Fowkes (1984)	**Comparison 1** **Group 1**: Edmat, Edmeet, Presence and organisation of quality monitoring mechanisms	**Continuous measure** **Primary measure**: Number of skull X-rays per 1000 new attenders **Study reanalysed**: No **Preintervention trend**: NC	

Appendix 6 cont'd *Results table*

Study details	Comparison	Process of care results	Outcome of care results
A69 Fowkes (1986)	**Comparison 1** **Group 1**: Edmat, Rem, Presence and organisation of quality monitoring mechanisms vs **Group 5 control**: Usual care/no intervention	**Dichotomous measure** **Primary measure**: % of operations preoperative chest X-ray **Preintervention %**: 30.00 vs 23.30 **Postintervention %**: 10.00 vs 21.10 **Difference between postintervention study and control**: +11.10 **Significance**: Potential unit of analysis error	
A69 Fowkes (1986)	**Comparison 2** **Group 2**: Edmat, A&F vs **Group 5 control**: Usual care/no intervention	**Dichotomous measure** **Primary measure**: % of operations preoperative chest X-ray **Preintervention %**: 31.10 vs 23.30 **Postintervention %**: 13.30 vs 21.10 **Difference between postintervention study and control**: +7.80 **Significance**: Potential unit of analysis error	
A69 Fowkes (1986)	**Comparison 3** **Group 3**: Edmat, Rem vs **Group 5 control**: Usual care/no intervention	**Dichotomous measure** **Primary measure**: % of operations preoperative chest X-ray **Preintervention %**: 24.40 vs 23.30 **Postintervention %**: 20.00 vs 21.10 **Difference between postintervention study and control**: +1.10 **Significance**: Potential unit of analysis error	
A69 Fowkes (1986)	**Comparison 4** **Group 4**: Edmat, Revision of professional roles, Presence and organisation of quality monitoring mechanisms vs **Group 5 control**: Usual care/no intervention	**Dichotomous measure** **Primary measure**: % of operations preoperative chest X-ray **Preintervention %**: 33.30 vs 23.30 **Postintervention %**: 18.90 vs 21.10 **Difference between postintervention study and control**: +2.20 **Significance**: Potential unit of analysis error	

Appendix 6 cont'd *Results table*

Study details	Comparison	Process of care results	Outcome of care results
A70 Fowkes (1986)	**Comparison 1** **Group 1**: Edmat, Edmeet, A&F	**Continuous measure** **Median measure**: Number of biochemical test requests per week **Study reanalysed**: Yes **Preintervention mean**: 157.5 **Postintervention mean**: 73.9 **Preintervention trend**: Increasing **Difference between postintervention and preintervention means**: +83.6 **Relative % change preintervention to postintervention**: +53.08 **SMD preintervention to postintervention** (SD): +5.61 **Change in level**: +135.6; **Significance**: $p < 0.0001$ **Change in slope**: –2.6; **Significance**: $p = 0.36$	
A71 Fox (1985)	**Comparison 1** **Group 1**: Edmat, Edmeet, LCP, One week data log by Doctors vs **Group 2 control**: Usual care/no intervention	**Dichotomous measure** **Primary measure**: Mean % of women per provider mammography referrals at 6 months **Preintervention %**: 3.60 vs 2.30 **Postintervention %**: 9.40 vs 3.40 **Difference between postintervention study and control**: +6.00 **Significance**: $p < 0.05$	
A72 Frame (1994)	**Comparison 1** **Group 1**: Rem, Patmed, Changes in medical record systems vs **Group 2 control**: Rem, Patmed	**Dichotomous measure** **Median measure**: % of patients provider compliant: Clinical breast examination **Preintervention %**: 49.00 vs 47.00 **Postintervention %**: 57.00 vs 47.00 **Difference between postintervention study and control**: +10.00 **Significance**: Potential unit of analysis error	

Appendix 6 cont'd *Results table*

Study details	Comparison	Process of care results	Outcome of care results
A73 Fraser (1996)	**Comparison 1** **Group 1**: Edmeet, A&F, Changes in medical record systems	**Continuous measure** **Primary measure**: Number of digoxin assays per digoxin day **Study reanalysed**: Yes **Preintervention mean**: 0.178 **Postintervention mean**: 0.155 **Preintervention trend**: No trend **Difference between postintervention and preintervention means**: +0.023 **Relative % change preintervention to postintervention**: +12.92 **SMD preintervention to postintervention (SD)**: +4.60 **Change in level**: +0.011; **Significance**: $p = 0.51$ **Change in slope**: +0.006; **Significance**: $p = 0.44$	
A74 Freeborn (1997)	**Comparison 1** **Group 1**: Edmat, Edmeet, A&F vs **Group 2 control**: Usual care/no intervention	**Continuous measure** **Median measure**: Lumbar spine imaging tests-X-ray scans ordered (internal medical physicians); **Units**: tests per 1000 visits of patients **Preintervention mean number**: 8.07 vs 7.94 **Postintervention mean number**: 8.66 vs 7.66 **Difference between postintervention study and control**: –1.00 **Relative % change postintervention**: –13.10 **SMD postintervention (SD)**: –0.21 **Significance**: Potential unit of analysis error	
A75 Gama (1992)	**Comparison 1** **Group 1**: A&F	Continuous measure **Median measure**: Number of creatine kinase requests per patient investigated for acute myocardial infarction **Study reanalysed**: Yes **Preintervention mean**: 1.57 **Postintervention mean**: 0.33 **Preintervention trend**: No trend **Difference between postintervention and preintervention means**: +1.24 **Relative % change preintervention to postintervention**: +78.98 **SMD preintervention to postintervention (SD)**: +3.35 **Change in level**: +1.34; **Significance**: $p = 0.0008$ **Change in slope**: –0.06; **Significance**: $p = 0.48$	

Appendix 6 cont'd *Results table*

Study details	Comparison	Process of care results	Outcome of care results
A76 Gans (1994)	**Comparison 1** **Group 1**: Edmat, Patmed vs **Group 4 control**: Usual care/no intervention	**Dichotomous measure** **Median measure**: % of patients complied with dietary recommendations **Postintervention %**: 74.50 vs 66.70 **Difference between postintervention study and control**: +7.80 **Significance**: NS, reanalysed	
A76 Gans (1994)	**Comparison 2** **Group 2**: Edmat vs **Group 4 control**: Usual care/no intervention	**Dichotomous measure** **Median measure**: % of patients complied with referral **Postintervention %**: 53.90 vs 62.20 **Difference between postintervention study and control**: –8.30 **Significance**: NS, reanalysed	
A76 Gans (1994)	**Comparison 3** **Group 3**: Patmed vs **Group 4 control**: Usual care/no intervention	**Dichotomous measure** **Median measure**: % of patients complied with lifestyle recommendations **Postintervention %**: 35.70 vs 26.70 **Difference between postintervention study and control**: +9.00 **Significance**: NS, reanalysed	
A77 Gemson (1995)	**Comparison 1** **Group 1**: Edmat, Edmeet, Rem, Patmed, Changes in medical record systems vs **Group 2 control**: Usual care/no intervention	**Continuous measure** **Primary measure**: Change in mean score of preventive services received by patients from preintervention to postintervention **Postintervention mean number**: 0.05 vs 0.00 **Difference between postintervention study and control**: +0.05 **SMD postintervention (SD)**: +2.50 **Significance**: Potential unit of analysis error	

Study details	Comparison	Process of care results	Outcome of care results
A78 Girotti (1990)	**Comparison 1** **Group 1**: Edmat vs **Group 2 control**: Rem	**Dichotomous measure** **Primary measure**: % of charts compliant with recommended regimens for prophylactic antibiotic prescribing **Preintervention %**: 11.00 vs 17.00 **Postintervention %**: 18.00 vs 78.00 **Difference between postintervention study and control**: –67.00 **Significance**: Potential unit of analysis error	
A79 Goldberg (1998)	**Comparison 1** **Group 1**: Edmat, Edmeet, A&F, LCP, Revision of professional roles, Presence and organisation of quality monitoring mechanisms vs **Group 3 control**: Edmat	**Dichotomous measure** **Median measure**: % of patients prescribed 2nd generation tricyclics **Preintervention %**: 20.00 vs 18.90 **Postintervention %**: 16.90 vs 14.70 **Difference between postintervention study and control**: +2.20 **Significance**: Potential unit of analysis error	**Dichotomous measure** **Median measure**: % of patients blood pressure controlled **Preintervention %**: 67.80 vs 66.90 **Postintervention %**: 71.70 vs 76.50 **Difference between postintervention study and control**: –4.80 **Significance**: Potential unit of analysis error **Continuous measure** **Primary measure**: Hopkins symptom checklist (SCL); **Units**: 20-item scale scored 0 to 4: ≥ 1.10 indicates depression, ≥ 1.75 severe depression **Preintervention mean number**: 1.53 vs 1.48 **Postintervention mean number**: 1.61 vs 1.58 **Difference between postintervention study and control**: +0.03 **Relative % change postintervention**: +1.90 **SMD postintervention (SD)**: Standard deviation not given **Significance**: Potential unit of analysis error

Appendix 6 cont'd *Results table*

Study details	Comparison	Process of care results	Outcome of care results
A79 Goldberg (1998)	**Comparison 2** **Group 2**: Edmat, Edmeet, A&F, Revision of professional roles vs **Group 3 control**: Edmat	**Dichotomous measure** **Median measure**: % of patients prescribed calcium channel blockers **Preintervention %**: 42.90 vs 46.10 **Postintervention %**: 40.60 vs 41.45 **Difference between postintervention study and control**: +0.90 **Significance**: Potential unit of analysis error	**Dichotomous measure** **Median measure**: % of patients blood pressure controlled **Preintervention %**: 64.30 vs 66.90 **Postintervention %**: 72.50 vs 76.50 **Difference between postintervention study and control**: –4.00 **Significance**: Potential unit of analysis error **Continuous measure** **Primary measure**: Hopkins symptom checklist (SCL); **Units**: 20-item scale scored 0 to 4: ≥ 1.10 indicates depression, ≥ 1.75 severe depression **Preintervention mean number**: 1.45 vs 1.48 **Postintervention mean number**: 1.49 vs 1.58 **Difference between postintervention study and control**: –0.09 **Relative % change postintervention**: –5.70 **SMD postintervention (SD)**: Standard deviation not given **Significance**: Potential unit of analysis
A80 Gomez (1996)	**Comparison 1** **Group 1**: Rapid rule-out protocol vs **Group 2 control**: Usual care/no intervention	Continuous measure **Primary measure**: Length of stay; **Units**: hours **Postintervention mean number**: 15.40 vs 54.60 **Difference between postintervention study and control**: +39.20 **Relative % change postintervention**: + 71.80 **SMD postintervention (SD)**: +0.31 **Significance**: $p = 0.001$	

Study details	Comparison	Process of care results	Outcome of care results
A81 Gonzalez (1989)	**Comparison 1** **Group 1**: Rem vs **Group 2 control**: Usual care/no intervention	**Dichotomous measure** **Median measure**: % of patients stool guaiac test ordered **Preintervention %**: 46.00 vs 40.00 **Postintervention %**: 74.00 vs 41.00 **Difference between postintervention study and control**: +33.00 **Significance**: Potential unit of analysis error	
A82 Gortmaker (1988)	**Comparison 1** **Group 1**: Edmeet, A&F, LCP	**Continuous measure** **Primary measure**: Number of laboratory tests per patient **Study reanalysed**: Yes **Preintervention mean**: 13.7 **Postintervention mean**: 9.9 **Preintervention trend**: Decreasing **Difference between postintervention and preintervention means**: +3.8 **Relative % change preintervention to postintervention**: +27.74 **SMD preintervention to postintervention (SD)**: +4.75 **Change in level**: +2.1; **Significance**: $p = 0.01$ **Change in slope**: +0.04; **Significance**: $p = 0.72$	
A83 Gorton (1995)	**Comparison 1** **Group 1**: Edmat, Edmeet vs **Group 4 control**: Usual care/no intervention	Multivariate analysis using generalised linear models. Reported results were adjusted means. Comparison 1: NS increase in oral B_2 antagonist use, significant ($p < 0.05$) increase in peak flow monitoring	
A83 Gorton (1995)	**Comparison 2** **Group 2**: Edmat, Edmeet vs **Group 4 control**: Usual care/no intervention	Multivariate analysis using generalised linear models. Reported results were adjusted means. Comparison 2: NS increase in oral B_2 antagonist use, significant ($p < 0.05$) increase in peak flow monitoring	

Appendix 6 cont'd *Results table*

Study details	Comparison	Process of care results	Outcome of care results
A83 Gorton (1995)	**Comparison 3** **Group 3**: Edmat, Edmeet, Rem vs **Group 4 control**: Usual care/no intervention	Multivariate analysis using generalised linear models. Reported results were adjusted means. Comparison 3: significant increase in oral B_2 antagonist use, NS increase in peak flow monitoring	
A84 Grady (1997)	**Comparison 1** **Group 1**: Edmat, Edmeet, Rem, A&F, Provider incentive vs **Group 3 control**: Edmat, Edmeet	**Dichotomous measure** **Median measure**: Mean % of women per practice mammography completion **Preintervention %**: 12.60 vs 11.20 **Postintervention %**: 40.80 vs 34.60 **Difference between postintervention study and control**: +6.20 **Significance**: $p < 0.05$	
A84 Grady (1997)	**Comparison 2** **Group 2**: Edmat, Edmeet, Rem vs **Group 3 control**: Edmat, Edmeet	**Dichotomous measure** **Median measure**: Mean % of women per practice mammography completion **Preintervention %**: 17.70 vs 11.20 **Postintervention %**: 47.90 vs 34.60 **Difference between postintervention study and control**: +13.30 **Significance**: $p < 0.05$	
A85 Grimshaw (1996)	**Comparison 1** **Group 1**: Edmat, Edmeet, Rem, LCP vs **Group 2 control**: Usual care/no intervention	Complex design (balanced incomplete block). Analysed using generalised linear models (adjusted means reported). NS effects of intervention	Complex design (balanced incomplete block). Analysed using generalised linear models (adjusted means reported). NS effects of intervention
A86 Grimshaw (1998)	**Comparison 1** **Group 1**: A&F vs **Group 5 control**: Usual care/no intervention	Complex design (balanced incomplete block) analysed using generalised linear models. Reported results were adjusted means. Possible unit of analysis error. NS effects of intervention detected	

Study details	Comparison	Process of care results	Outcome of care results
A86 Grimshaw (1998)	**Comparison 2** **Group 2**: Edmeet vs **Group 5 control**: Usual care/no intervention	Complex design (balanced incomplete block) analysed using generalised linear models. Reported results were adjusted means. Possible unit of analysis error. NS effects of intervention detected	
A86 Grimshaw (1998)	**Comparison 3** **Group 3**: Edmat vs **Group 5 control**: Usual care/no intervention	Complex design (balanced incomplete block) analysed using generalised linear models. Reported results were adjusted means. Possible unit of analysis error. NS effects of intervention detected	
A86 Grimshaw (1998)	**Comparison 4** **Group 4**: Interviews with GPs about outpatient referrals vs **Group 5 control**: Usual care/no intervention	Complex design (balanced incomplete block) analysed using generalised linear models. Reported results were adjusted means. Possible unit of analysis error. NS effects of intervention detected	
A87 Gurwitz (1992)	**Comparison 1** **Group 1**: Edmat, Edmeet, List of patients, Formulary	**Continuous measure** **Primary measure**: Number of patients receiving Histamine-2 receptor antagonist therapy **Study reanalysed**: No **Preintervention trend**: NC	

Appendix 6 cont'd *Results table*

Study details	Comparison	Process of care results	Outcome of care results
A88 Hammond (1995)	**Comparison 1** **Group 1**: Rem, Use of automated reminder system, use of coloured paper for reminder	**Continuous measure** **Primary measure**: % of patients/charts monitored for abnormal involuntary movement **Study reanalysed**: Yes **Preintervention mean**: 54.5 **Postintervention mean**: 91.4 **Preintervention trend**: No trend **Difference between postintervention and preintervention means**: +36.9 **Relative % change preintervention to postintervention**: +67.71 **SMD preintervention to postintervention (SD)**: +14.76 **Change in level**: +25.2; **Significance**: $p = 0.0006$ **Change in slope**: +0.1; **Significance**: $p = 0.93$	
A89 Hartmann (1995)	**Comparison 1** **Group 1**: Edmeet, A&F vs **Group 2 control**: A&F	**Dichotomous measure** **Median measure**: % of patients high-density lipoprotein cholesterol documented **Preintervention %**: 4.60 vs 21.90 **Postintervention %**: 14.30 vs 8.50 **Difference between postintervention study and control**: +5.80 **Significance**: Potential unit of analysis error	

Appendix 6 cont'd *Results table*

Study details	Comparison	Process of care results	Outcome of care results
A90 Hay (1997)	**Comparison 1** **Group 1**: Rem vs **Group 2 control**: Usual care/no intervention	**Dichotomous measure** **Primary measure**: % of patients guidelines on length of stay complied with **Postintervention %**: 70.00 vs 30.00 **Difference between postintervention study and control**: +40.00 **Significance**: $p < 0.001$ **Continuous measure** **Median measure**: Day of hospital stay that initial endoscopy performed; **Units**: days **Postintervention mean number**: 1.40 vs 1.50 **Difference between postintervention study and control**: +0.10 **Relative % change postintervention**: + 6.67 **SMD postintervention (SD)**: +0.11 **Significance**: NS	**Dichotomous measure** **Median measure**: % of patients 30-day readmission **Postintervention %**: 7.20 vs 9.10 **Difference between postintervention study and control**: +1.90 **Significance**: NS **Continuous measure** **Median measure**: Short Form-36 health status measure; Mental health; **Units**: 1–100, 100=best rating **Postintervention mean number**: 76.00 vs 74.00 **Difference between postintervention study and control**: +2.00 **Relative % change postintervention**: +7.20 **SMD postintervention (SD)**: +0.11 **Significance**: NS
A91 Hazard (1997)	**Comparison 1** **Group 1**: Edmat vs **Group 2 control**: Usual care/no intervention		**Dichotomous measure** **Primary measure**: % of patients 3-month absence from work **Postintervention %**: 28.60 vs 24.00 **Difference between postintervention study and control**: –4.60 **Significance**: NS

Appendix 6 cont'd *Results table*

Study details	Comparison	Process of care results	Outcome of care results
A92 Headrick (1992)	**Comparison 1** **Group 1**: Patient-specific and generic reminder: Edmeet, Rem vs **Group 3 control**: Edmeet	**Dichotomous measure** **Primary measure**: % of patients total compliance with National Cholesterol Education Programme guidelines **Preintervention %**: 36.20 vs 37.30 **Postintervention %**: 46.80 vs 41.80 **Difference between postintervention study and control**: +7.00 **Significance**: Potential unit of analysis error	
A92 Headrick (1992)	**Comparison 2** **Group 2 Generic reminder**: Edmeet, Rem vs **Group 3 control**: Edmeet	**Dichotomous measure** **Primary measure**: % of patients total compliance with National Cholesterol Education Programme guidelines **Preintervention %**: 43.00 vs 37.30 **Postintervention %**: 50.60 vs 41.80 **Difference between postintervention study and control**: +8.80 **Significance**: Potential unit of analysis error	
A93 Herfindal (1983)	**Comparison 1** **Group 1**: Revision of professional roles vs **Group 2 control**: Usual care/no intervention	**Continuous measure** **Median measure**: Doses per patient day for all drugs **Postintervention mean number**: 6.53 vs 5.62 **Difference between postintervention study and control**: –0.91 **Relative % change postintervention**: –16.20 **SMD postintervention (SD)**: –0.21 **Significance**: Potential unit of analysis error	
A94 Herman (1994)	**Comparison 1** **Group 1**: Edmat, Edmeet, Patmed, Revision of professional roles vs **Group 3 control**: Edmat, Edmeet	**Dichotomous measure** **Median measure**: % of patients received pneumococcal vaccination **Preintervention %**: 18.90 vs 30.70 **Postintervention %**: 21.60 vs 3.40 **Difference between postintervention study and control**: +18.20 **Significance**: Potential unit of analysis error	

Appendix 6 cont'd *Results table*

Study details	Comparison	Process of care results	Outcome of care results
A94 Herman (1994)	**Comparison 2** **Group 2**: Edmat, Edmeet, Patmed vs **Group 3 control**: Edmat, Edmeet	**Dichotomous measure** **Median measure**: % of patients offered influenza vaccination **Postintervention %**: 3.40 vs 65.00 **Difference between postintervention study and control**: +2.80 **Significance**: Potential unit of analysis error	
A95 Hillman (1998)	**Comparison 1** **Group 1**: A&F, Institution incentive vs **Group 2 control**: Usual care/no intervention	**Dichotomous measure** **Median measure**: Mean % of patients/charts per site compliant with guidelines: colorectal **Preintervention %**: 14.90 vs 10.80 **Postintervention %**: 43.70 vs 37.00 **Difference between postintervention study and control**: +6.70 **Significance**: NS	
A96 Hobbs (1996)	**Comparison 1** **Group 1**: Edmeet, Rem vs **Group 2 control**: Usual care/no intervention	No specific results were reported. Paired *t*-test of changes in test ordering pre- to postintervention was NS	
A97 Hopkins (1980)	**Comparison 1** **Group 1**: Edmat, Edmeet vs **Group 2 control**: Usual care/no intervention	**Dichotomous measure** **Median measure**: % of patients secondary operation **Postintervention %**: 9.00 vs 19.00 **Difference between postintervention study and control**: +10.00 **Significance**: Potential unit of analysis error **Continuous measure** **Median measure**: Days in intensive care unit **Postintervention mean number**: 6.10 vs 10.20 **Difference between postintervention study and control**: +4.10 **Relative % change postintervention**: + 40.20 **SMD postintervention (SD)**: +0.15 **Significance**: Potential unit of analysis error	**Dichotomous measure** **Median measure**: % of patients deaths **Postintervention %**: 20.00 vs 33.00 **Difference between postintervention study and control**: +13.00 **Significance**: Potential unit of analysis error

Appendix 6 cont'd *Results table*

Study details	Comparison	Process of care results	Outcome of care results
A98 Hueston (1994)	**Comparison 1** **Group 1**: Rem vs **Group 2 control**: Usual care/no intervention	**Dichotomous measure** **Median measure**: % of patients screening test: serum cholesterol **Postintervention %**: 33.00 vs 34.00 **Difference between postintervention study and control**: –1.00 **Significance**: NS	
A99 Hulscher (1997)	**Comparison 1** **Group 1**: A&F, Outreach vs **Group 2 control**: A&F	**Dichotomous measure** **Median measure**: % of practices presence of risk factor entries: weight **Preintervention %**: 15.00 vs 12.00 **Postintervention %**: 20.00 vs 14.00 **Difference between postintervention study and control**: +6.00 **Significance**: Potential unit of analysis error	
A100 Jones (1993)	**Comparison 1** **Group 1**: Edmat, LCP vs **Group 2 control**: Usual care/no intervention	**Continuous measure** **Median measure**: Referrals for upper gastrointestinal symptoms; **Units**: referrals per doctor **Preintervention mean number**: 4.50 vs 3.92 **Postintervention mean number**: 3.95 vs 2.85 **Difference between postintervention study and control**: –1.10 **Relative % change postintervention**: –38.60 **SMD postintervention (SD)**: Standard deviation not given **Significance**: Potential unit of analysis error	
A101 Jones (1996)	**Comparison 1** **Group 1**: Edmat, Edmeet, Patient/public education/information, Revision of professional roles, Presence and organisation of quality monitoring mechanisms vs **Group 3 control**: Usual care/no intervention	**Dichotomous measure** **Primary measure**: % all NSAID prescriptions that were expensive NSAID **Preintervention %**: 34.20 vs 47.00 **Postintervention %**: 21.00 vs 41.30 **Difference between postintervention study and control**: +24.30 **Significance**: Potential unit of analysis error	

Study details	Comparison	Process of care results	Outcome of care results
A101 Jones (1996)	**Comparison 2** **Group 2**: Rem vs **Group 3 control**: Usual care/no intervention	**Dichotomous measure** **Primary measure**: % all NSAID prescriptions that were expensive NSAID **Preintervention %**: 45.80 vs 47.00 **Postintervention %**: 42.20 vs 45.80 **Difference between postintervention study and control**: +3.60 **Significance**: Potential unit of analysis error	
A102 Karuza (1995)	**Comparison 1** **Group 1**: Edmeet, A&F, LCP vs **Group 2 control**: Usual care/no intervention	**Dichotomous measure** **Primary measure**: Mean % of patients per provider influenza vaccinations done **Preintervention %**: 47.65 vs 46.50 **Postintervention %**: 62.78 vs 46.07 **Difference between postintervention study and control**: +16.71 **Significance**: $p < 0.01$	
A103 Katon (1992)	**Comparison 1** **Group 1**: Edmat, Formal integration of services vs **Group 2 control**: Usual care/no intervention	**Dichotomous measure** **Median measure**: % of patients filling three or more antidepressant prescriptions **Postintervention %**: 34.80 vs 22.70 **Difference between postintervention study and control**: +12.10 **Significance**: $p = 0.04$	
A104 Katon (1995)	**Comparison 1** **Group 1**: Edmeet, Patmed/Rem, Clinical multidisciplinary teams vs **Group 2 control**: Edmeet	**Dichotomous measure** **Median measure**: % of patients with major depression receiving antidepressant dose at or above recommended level for at least 30 days **Postintervention %**: 87.80 vs 57.00 **Difference between postintervention study and control**: +30.70 **Significance**: $p < 0.01$ **Continuous measure** **Primary measure**: Primary care visits for depression for 6 months **Postintervention mean number**: 4.50 vs 3.70 **Difference between postintervention study and control**: +0.80 **Relative % change postintervention**: + 21.60 **SMD postintervention (SD)**: +0.33 **Significance**: NS	**Dichotomous measure** **Median measure**: % of patients with major depression rating antidepressant medication as helping somewhat to a great deal **Postintervention %**: 81.80 vs 61.40 **Difference between postintervention study and control**: +20.40 **Significance**: $p < 0.02$

Appendix 6 cont'd *Results table*

Study details	Comparison	Process of care results	Outcome of care results
A105 Katon (1996)	**Comparison 1** **Group 1**: Edmat, Edmeet, Patmed/Rem, Clinical multidisciplinary teams vs **Group 2 control**: Edmat, Edmeet	**Dichotomous measure** **Median measure**: % of patients with major depression receiving antidepressant dose at or above recommended level for at least 30 days **Postintervention %**: 66.70 vs 57.60 **Difference between postintervention study and control**: +9.10 **Significance**: NS **Continuous measure** **Primary measure**: Primary care visits for depression for 6 months **Postintervention mean number**: 4.60 vs 4.00 **Difference between postintervention study and control**: +0.60 **Relative % change postintervention**: +12.20 **SMD postintervention (SD)**: +0.25 **Significance**: NS	**Dichotomous measure** **Median measure**: % of patients with major depression rating antidepressant medication as helping somewhat to a great deal **Postintervention %**: 80.00 vs 58.30 **Difference between postintervention study and control**: +21.70 **Significance**: NS
A106 Keyserling (1997)	**Comparison 1** **Group 1**: Edmat, Edmeet, Rem, Patmed/Rem, Skill mix changes vs **Group 2 control**: Usual care/no intervention		Analysed using mixed models (adjusted means reported). NS effects of intervention on reducing cholesterol levels
A107 Kong (1987)	**Comparison 1** **Group 1**: Edmat, Edmeet, A&F, Formal integration of services	**Continuous measure** **Primary measure**: Number of intravenous cimetidine doses per 5 days **Study reanalysed**: No **Preintervention mean**: 118 **Postintervention mean**: 26 **Preintervention trend**: ND **Difference between postintervention and preintervention means**: +58 **Relative % change preintervention to postintervention**: +49.00 **SMD preintervention to postintervention (SD)**: +2.23	

Study details	Comparison	Process of care results	Outcome of care results
A108 Kong (1997)	**Comparison 1** **Group 1**: Edmat, Rem vs **Group 2 control**: Edmat	**Continuous measure** **Primary measure**: Length of stay; **Units**: days **Postintervention mean number**: 3.70 vs 4.30 **Difference between postintervention study and control**: +0.60 **Relative % change postintervention**: + 14.00 **SMD postintervention (SD)**: Standard deviation not given **Significance**: NS	**Continuous measure** **Median measure**: Short Form-36 health status measure; Vitality/Energy; **Units**: 1–100, 100=best rating **Postintervention mean number**: 41.00 vs 49.00 **Difference between postintervention study and control**: –8.00 **Relative % change postintervention**: –16.30 **SMD postintervention (SD)**: –0.32 **Significance**: NS
A109 Landefeld (1992)	**Comparison 1** **Group 1**: Edmat, Edmeet vs **Group 2 control**: Usual care/no intervention	**Continuous measure** **Primary measure**: Length of stay; **Units**: days **Postintervention mean number**: 13.40 vs 12.90 **Difference between postintervention study and control**: –0.50 **Relative % change postintervention**: + 3.70 **SMD postintervention (SD)**: Standard deviation not given **Significance**: NS	**Dichotomous measure** **Median measure**: % of patients rehospitalisation **Postintervention %**: 19.00 vs 29.00 **Difference between postintervention study and control**: +10.00 **Significance**: NS
A110 Landgren (1988)	**Comparison 1** **Group 1**: Edmat, Edmeet, A&F, Outreach vs **Group 2 control**: Usual care/no intervention	Significant ($p < 0.05$) improvement in the use of antibiotic agents for prophylaxis in surgery	

Appendix 6 cont'd *Results table*

Study details	Comparison	Process of care results	Outcome of care results
A111 Landis (1992)	**Comparison 1** **Group 1**: Rem, Letter to patient vs **Group 4 control**: Usual care/no intervention	**Dichotomous measure** **Primary measure**: % of patients received mammogram **Postintervention %**: 25.00 vs 5.00 **Difference between postintervention study and control**: +20.00 **Significance**: Potential unit of analysis error	
A111 Landis (1992)	**Comparison 2** **Group 2**: Rem vs **Group 4 control**: Usual care/no intervention	**Dichotomous measure** **Primary measure**: % of patients received mammogram **Postintervention %**: 7.00 vs 5.00 **Difference between postintervention study and control**: +2.00 **Significance**: Potential unit of analysis error	
A111 Landis (1992)	**Comparison 3** **Group 3**: Letter to patient vs **Group 4 control**: Usual care/no intervention	**Dichotomous measure** **Primary measure**: % of patients received mammogram **Postintervention %**: 15.00 vs 5.00 **Difference between postintervention study and control**: +10.00 **Significance**: Potential unit of analysis error	
A112 Lee (1995)	**Comparison 1** **Group 1**: Rem vs **Group 2 control**: Usual care/no intervention	**Dichotomous measure** **Median measure**: % of patients admitted to coronary care unit **Postintervention %**: 10.00 vs 10.00 **Difference between postintervention study and control**: +0.00 **Significance**: NS **Continuous measure** **Median measure**: Total length of stay; **Units**: days **Postintervention mean number**: 4.90 vs 4.90 **Difference between postintervention study and control**: +0.00 **Relative % change postintervention**: + 0.00 **SMD postintervention (SD)**: +0.00 **Significance**: NS	

Appendix 6 cont'd *Results table*

Study details	Comparison	Process of care results	Outcome of care results
A113 Legorreta (1997)	**Comparison 1** **Group 1**: Edmat, Rem, Patmed	**Continuous measure** **Primary measure**: % of total diabetic population receiving retinal examination per month **Study reanalysed**: Yes **Preintervention mean**: 2.74 **Postintervention mean**: 3.65 **Preintervention trend**: No trend **Difference between postintervention and preintervention means**: +0.91 **Relative % change preintervention to postintervention**: +33.21 **SMD preintervention to postintervention (SD)**: +2.76 **Change in level**: +0.23; **Significance**: $p = 0.58$ **Change in slope**: +0.1; **Significance**: $p = 0.41$	
A114 Leviton (1999)	**Comparison 1** **Group 1**: Edmat, Edmeet, Rem, A&F, Outreach, OL, LCP vs **Group 2 control**: Edmat	**Dichotomous measure** **Primary measure**: Mean % of women per hospital receiving antenatal corticosteroids **Preintervention %**: 32.60 vs 34.20 **Postintervention %**: 69.40 vs 57.40 **Difference between postintervention study and control**: +12.00 **Significance**: Comparison not analysed	
A115 Lin (1997)	**Comparison 1** **Group 1**: Edmat, Edmeet, Formal integration of services vs **Group 2 control**: Usual care/no intervention	**Dichotomous measure** **Primary measure**: % of patients prescribed imipramine **Preintervention %**: 22.50 vs 20.00 **Postintervention %**: 22.50 vs 16.25 **Difference between postintervention study and control**: +6.25 **Significance**: Potential unit of analysis error	

Appendix 6 cont'd *Results table*

Study details	Comparison	Process of care results	Outcome of care results
A116 Linn (1980)	**Comparison 1** **Group 1**: Edmat, Edmeet, A&F, Communication and case discussion between distant health professionals vs **Group 2 control**: Usual care/no intervention	**Dichotomous measure** **Median measure**: % of times provider deviated from algorithms: antibiotics for systemic effect (treated and released patients) **Postintervention %**: 3.00 vs 5.00 **Difference between postintervention study and control**: +2.00 **Significance**: Potential unit of analysis error **Continuous measure** **Median measure**: Average number of deviations from algorithms for admitted patients; **Units**: higher value the greater the number of deviations **Postintervention mean number**: 3.26 vs 4.81 **Difference between postintervention study and control**: +1.55 **Relative % change postintervention**: + 32.20 **SMD postintervention (SD)**: Standard deviation not given **Significance**: Potential unit of analysis error	**Continuous measure** **Median measure**: 3-month functional status for admitted patients; **Units**: 5 items from Rapid Disability Rating scale (rated 0–4); higher score less favourable **Postintervention mean number**: 0.42 vs 0.44 **Difference between postintervention study and control**: +0.02 **Relative % change postintervention**: +0.05 **SMD postintervention (SD)**: Standard deviation not given **Significance**: Potential unit of analysis
A117 Litzelman (1993)	**Comparison 1** **Group 1**: Edmat, Rem, Patmed/Rem vs **Group 2 control**: Usual care/no intervention	**Dichotomous measure** **Median measure**: % of patients referred to podiatry clinic **Postintervention %**: 10.60 vs 5.00 **Difference between postintervention study and control**: +5.60 **Significance**: Potential unit of analysis error	**Dichotomous measure** **Median measure**: Dry, cracked skin Multivariate analysis adjusting for baseline prevalence was used. Odds ratio = 0.62; *p*-value = 0.04
A118 Litzelman (1993)	**Comparison 1** **Group 1**: Rem vs **Group 2 control**: Rem	**Dichotomous measure** **Median measure**: % of times providers complied with reminders for mammography **Postintervention %**: 54.00 vs 47.00 **Difference between postintervention study and control**: +7.00 **Significance**: Potential unit of analysis error	

Study details	Comparison	Process of care results	Outcome of care results
A119 Lobach (1994)	**Comparison 1** **Group 1**: Rem vs **Group 2 control**: Usual care/no intervention	**Dichotomous measure** **Primary measure**: Median % compliance per provider with recommendations for care of diabetes mellitus **Preintervention %**: 21.20 vs 18.00 **Postintervention %**: 32.00 vs 15.60 **Difference between postintervention study and control**: +16.40 **Significance**: $p = 0.02$	
A120 Lobach (1996)	**Comparison 1** **Group 1**: Rem, A&F vs **Group 2 control**: Rem	**Dichotomous measure** **Primary measure**: Median % compliance per provider with computer-assisted management protocol guideline recommendations **Postintervention %**: 35.30 vs 6.10 **Difference between postintervention study and control**: +29.20 **Significance**: $p < 0.01$	
A121 Lomas (1989)	**Comparison 1** **Group 1**: Edmat	**Continuous measure** **Primary measure**: Caesarean section (per 100 deliveries) Time series regression analysis used **Study reanalysed**: No **Preintervention trend**: Increasing **Change in slope**: +0.069 **Significance**: $p < 0.01$	
A122 Lomas (1991)	**Comparison 1** **Group 1**: Edmat, Edmeet, OL vs **Group 3 control**: Edmat	**Dichotomous measure** **Median measure**: Mean % of cases per provider vaginal birth (after previous caesarian section) **Postintervention %**: 25.30 vs 14.50 **Difference between postintervention study and control**: +10.80 **Significance**: Potential unit of analysis error	

Appendix 6 cont'd *Results table*

Study details	Comparison	Process of care results	Outcome of care results
A122 Lomas (1991)	**Comparison 2** **Group 2**: A&F, LCP vs **Group 3 control**: Edmat	**Dichotomous measure** **Median measure**: Mean % of cases per provider vaginal birth (after previous caesarean section) **Postintervention %**: 11.80 vs 14.50 **Difference between postintervention study and control**: –2.70 **Significance**: Potential unit of analysis error	
A123 MacCosbe (1985)	**Comparison 1** **Group 1**: A&F, Monitoring provider behaviour vs **Group 2 control**: Usual care/no intervention	**Dichotomous measure** **Primary measure**: % of recommendations changes to recommended antibiotic (compliance) **Postintervention %**: 78.00 vs 10.00 **Difference between postintervention study and control**: +68.00 **Significance**: $p < 0.005$	
A124 Maclure (1998)	**Comparison 1** **Group 1**: Edmat, MM, Drug benefits programme and substitution	**Continuous measure** **Primary measure**: % of newly treated patients prescribed calcium channel blockers as first-line therapy **Study reanalysed**: Yes **Preintervention mean**: 22 **Postintervention mean**: 17.5 **Preintervention trend**: No trend **Difference between postintervention and preintervention means**: +4.5 **Relative % change preintervention to postintervention**: +20.45 **SMD preintervention to postintervention (SD)**: +2.65 **Change in level**: +1.8; **Significance**: $p = 0.21$ **Change in slope**: +0.43; **Significance**: $p = 0.029$	
A125 Mandel (1985)	**Comparison 1** **Group 1**: A&F vs **Group 2 control**: Usual care/no intervention	Not enough information was provided to extract specific results. NS differences due to screening behaviour were reported	Not enough information was provided to extract specific results. NS differences due to screening behaviour were reported

Study details	Comparison	Process of care results	Outcome of care results
A126 Manfredi (1998)	**Comparison 1** **Group 1**: Edmat, Edmeet, Rem, A&F, Outreach, Patmed/Rem, Presence and organisation of quality monitoring mechanisms vs **Group 2 control**: Edmat	**Dichotomous measure** **Median measure**: % of patients chart documented faecal occult blood testing (HMO members) **Preintervention %**: 3.20 vs 9.20 **Postintervention %**: 12.50 vs 4.40 **Difference between postintervention study and control**: +8.10 **Significance**: Potential unit of analysis error	
A127 Marciniak (1998)	**Comparison 1** **Group 1**: Edmat, Edmeet, A&F vs **Group 2 control**: Usual care/no intervention		**Dichotomous measure** **Median measure**: % of patients 1-year mortality **Preintervention %**: 32.90 vs 33.20 **Postintervention %**: 30.40 vs 31.40 **Difference between postintervention study and control**: +1.00 **Significance**: Potential unit of analysis error
A128 Margolis (1992)	**Comparison 1** **Group 1**: Rem vs **Group 2 control**: Usual care/no intervention	**Dichotomous measure** **Median measure**: % antibiotic orders for otitis media incorrect **Postintervention %**: 12.00 vs 46.00 **Difference between postintervention study and control**: +34.00 **Significance**: Potential unit of analysis error	

Appendix 6 cont'd *Results table*

Study details	Comparison	Process of care results	Outcome of care results
A129 Marton (1985)	**Comparison 1** **Group 1**: Edmat, Edmeet, A&F vs **Group 4 control**: Usual care/no intervention	**Dichotomous measure** **Median measure**: % of patients serum glucose test ordered **Preintervention %**: 45.00 vs 42.00 **Postintervention %**: 36.00 vs 45.00 **Difference between postintervention study and control**: +9.00 **Significance**: Potential unit of analysis error **Continuous measure** **Primary measure**: Tests per patient per visit **Postintervention mean number**: 1.31 vs 1.63 **Difference between postintervention study and control**: +0.32 **Relative % change postintervention**: + 19.60 **SMD postintervention (SD)**: +0.45 **Significance**: Potential unit of analysis error	
A129 Marton (1985)	**Comparison 2** **Group 2**: A&F vs **Group 4 control**: Usual care/no intervention	**Dichotomous measure** **Median measure**: % of patients serum digoxin test ordered **Preintervention %**: 6.00 vs 10.00 **Postintervention %**: 7.00 vs 14.00 **Difference between postintervention study and control**: +7.00 **Significance**: Potential unit of analysis error **Continuous measure** **Primary measure**: Tests per patient per visit **Postintervention mean number**: 1.49 vs 1.63 **Difference between postintervention study and control**: +0.14 **Relative % change postintervention**: + 8.50 **SMD postintervention (SD)**: +0.20 **Significance**: Potential unit of analysis error	

Appendix 6 cont'd *Results table*

Study details	Comparison	Process of care results	Outcome of care results
A129 Marton (1985)	**Comparison 3** **Group 3**: Edmat, Edmeet vs **Group 4 control**: Usual care/no intervention	**Dichotomous measure** **Median measure**: % of patients serum digoxin test ordered **Preintervention %**: 12.00 vs 10.00 **Postintervention %**: 9.00 vs 14.00 **Difference between postintervention study and control**: +5.00 **Significance**: Potential unit of analysis error **Continuous measure** **Primary measure**: Tests per patient per visit **Postintervention mean number**: 1.61 vs 1.63 **Difference between postintervention study and control**: +0.02 **Relative % change postintervention**: + 1.20 **SMD postintervention (SD)**: +0.03 **Significance**: Potential unit of analysis error	
A130 Mayefsky (1993)	**Comparison 1** **Group 1**: A&F vs **Group 2 control**: Usual care/no intervention	**Dichotomous measure** **Median measure**: Mean % compliance per record, per provider: present history recorded **Preintervention %**: 63.00 vs 58.00 **Postintervention %**: 73.00 vs 60.00 **Difference between postintervention study and control**: +13.00 **Significance**: $p < 0.05$	
A131 Mazzuca (1990)	**Comparison 1** **Group 1**: Edmat, Edmeet, Rem, Patient education service, Consumable clinical materials vs **Group 4 control**: Edmat, Edmeet	**Dichotomous measure** **Median measure**: Mean % of patients per provider recommendations followed for home-monitored blood glucose **Postintervention %**: 14.00 vs 6.00 **Difference between postintervention study and control**: +8.00 **Significance**: Potential unit of analysis error	

Appendix 6 cont'd *Results table*

Study details	Comparison	Process of care results	Outcome of care results
A131 Mazzuca (1990)	**Comparison 2** **Group 2**: Edmat, Edmeet, Rem, Consumable clinical materials vs **Group 4 control**: Edmat, Edmeet	**Dichotomous measure** **Median measure**: Mean % of patients per provider recommendations followed for oral hypoglycaemic agents **Postintervention %**: 26.00 vs 20.00 **Difference between postintervention study and control**: +6.00 **Significance**: Potential unit of analysis error	
A131 Mazzuca (1990)	**Comparison 3** **Group 3**: Edmat, Edmeet, Rem vs **Group 4 control**: Edmat, Edmeet	**Dichotomous measure** **Median measure**: Mean % of patients per provider recommendations followed for oral hypoglycaemic agents **Postintervention %**: 24.00 vs 20.00 **Difference between postintervention study and control**: +4.00 **Significance**: Potential unit of analysis error	
A132 McAlister 1986	**Comparison 1** **Group 1**: Edmeet, A&F, Patmed vs **Group 2 control**: Edmat	**Dichotomous measure** **Primary measure**: Mean % of patients per practice treated with drugs **Postintervention %**: 95.40 vs 95.70 **Difference between postintervention study and control**: –0.30 **Significance**: NS	**Dichotomous measure** **Primary measure**: Mean % of patients per practice diastolic pressure of 90 mmHg or less on last visit **Postintervention %**: 88.90 vs 87.50 **Difference between postintervention study and control**: +1.40 **Significance**: NS **Continuous measure** **Primary measure**: Days with diastolic pressure 90 mmHg or less per patient year; **Units**: days (mean of practice medians) **Postintervention mean number**: 215.60 vs 202.60 **Difference between postintervention study and control**: +13.00 **Relative % change postintervention**: +6.40 **SMD postintervention (SD)**: Standard deviation not given **Significance**: NS

Appendix 6 cont'd *Results table*

Study details	Comparison	Process of care results	Outcome of care results
A133 McDonald (1976)	**Comparison 1** **Group 1**: Rem vs **Group 2 control**: Usual care/no intervention	**Dichotomous measure** **Median measure**: % of events provider complied with: test ordering suggestions **Postintervention %**: 36.90 vs 11.20 **Difference between postintervention study and control**: +25.70 **Significance**: Potential unit of analysis error	
A134 McDonald (1980)	**Comparison 1** **Group 1**: Rem vs **Group 2 control**: Usual care/no intervention	**Dichotomous measure** **Median measure**: Mean % of reminders per provider compliance (across all suggestion types) (residents) **Postintervention %**: 40.00 vs 20.00 **Difference between postintervention study and control**: +20.00 **Significance**: $p < 0.006$	
A135 McDonald (1984)	**Comparison 1** **Group 1**: Rem vs **Group 2 control**: Usual care/no intervention	**Dichotomous measure** **Primary measure**: Mean % of patients by provider positive response to indications for action for preventive care **Postintervention %**: 49.00 vs 29.00 **Difference between postintervention study and control**: +20.00 **Significance**: $p < 0.001$	
A136 McPhee (1989)	**Comparison 1** **Group 1**: A&F, Patmed vs **Group 3 control**: Patmed	**Dichotomous measure** **Median measure**: Mean % of patients per provider rectal examination done **Preintervention %**: 51.30 vs 61.80 **Postintervention %**: 69.00 vs 60.00 **Difference between postintervention study and control**: +9.00 **Significance**: NS	

Appendix 6 cont'd *Results table*

Study details	Comparison	Process of care results	Outcome of care results
A136 McPhee (1989)	**Comparison 2** **Group 2**: Rem, Patmed vs **Group 3 control**: Patmed	**Dichotomous measure** **Median measure**: Mean % of patients per provider mammography done **Preintervention %**: 30.10 vs 33.60 **Postintervention %**: 66.00 vs 45.00 **Difference between postintervention study and control**: +21.00 **Significance**: $p < 0.05$	
A137 McPhee (1991)	**Comparison 1** **Group 1**: Edmat, Rem, Patmed vs **Group 2 control**: Usual care/no intervention	**Dichotomous measure** **Median measure**: Mean % of patients per provider compliance with recommendations for pelvic examination **Preintervention %**: 43.60 vs 41.10 **Postintervention %**: 54.80 vs 41.40 **Difference between postintervention study and control**: +13.40 **Significance**: $p < 0.006$	
A138 Meador (1997)	**Comparison 1** **Group 1**: Edmat, Edmeet, Outreach vs **Group 2 control**: Usual care/no intervention	**Continuous measure** **Primary measure**: Days per 100 of antipsychotic drug use; **Units**: days **Preintervention mean number**: 25.30 vs 26.20 **Postintervention mean number**: 19.70 vs 26.00 **Difference between postintervention study and control**: +6.30 **Relative % change postintervention**: + 24.00 **SMD postintervention (SD)**: Standard deviation not given **Significance**: $p = 0.14$	
A139 Messimer (1989)	**Comparison 1** **Group 1**: Edmat, Edmeet vs **Group 2 control**: Edmeet		**Dichotomous measure** **Primary measure**: % of pregnant smokers quit smoking **Postintervention %**: 28.00 vs 14.00 **Difference between postintervention study and control**: +14.00 **Significance**: Potential unit of analysis error

Appendix 6 cont'd *Results table*

Study details	Comparison	Process of care results	Outcome of care results
A140 Mesters (1994)	**Comparison 1**: C-RCT comparison **Group 1**: Edmat vs **Group 2 control**: Usual care/no intervention		**Continuous measure** **Median measure**: Attitude; **Units**: 24 questions on 5-point bipolar rating scale (–2 to +2); higher score = better attitude **Preintervention mean number**: 23.32 vs 27.93 **Postintervention mean number**: 34.66 vs 29.60 **Difference between postintervention study and control**: +5.06 **Relative % change postintervention**: +17.10 **SMD postintervention (SD)**: +0.86 **Significance**: $p < 0.05$
A140 Mesters (1994)	**Comparison 2** CBA comparison **Group 1**: Edmat vs **Group 3 control**: Usual care/no intervention	**Continuous measure** **Median measure**: Emergency visits **Preintervention mean number**: 0.71 vs 0.44 **Postintervention mean number**: 0.12 vs 0.45 **Difference between postintervention study and control**: +0.33 **Relative % change postintervention**: + 77.30 **SMD postintervention (SD)**: +0.53 **Significance**: Potential unit of analysis error	

Appendix 6 cont'd *Results table*

Study details	Comparison	Process of care results	Outcome of care results
A141 Moore (1997)	**Comparison 1** **Group 1**: Edmat, Rem, Outreach, Patmed vs **Group 2 control**: Usual care/no intervention	**Dichotomous measure** **Median measure**: % of patients physician detected: depression **Postintervention %**: 6.00 vs 8.00 **Difference between postintervention study and control**: –2.00 **Significance**: Potential unit of analysis error	**Dichotomous measure** **Median measure**: % of patients improvement in incontinence **Postintervention %**: 17.00 vs 24.00 **Difference between postintervention study and control**: –7.00 **Significance**: Potential unit of analysis error **Continuous measure** **Median measure**: Short Form-36 health status measure; General health; **Units**: 1–100, 100=best rating **Preintervention mean number**: 61.00 vs 57.00 **Postintervention mean number**: 69.00 vs 70.00 **Difference between postintervention study and control**: –1.00 **Relative % change postintervention**: –1.40 **SMD postintervention (SD)**: Standard deviation not given **Significance**: Potential unit of analysis
A142 Morgan (1978)	**Comparison 1** **Group 1**: Rem vs **Group 2 control**: Usual care/no intervention	**Dichotomous measure** **Median measure**: % of women blood group and type tested **Postintervention %**: 99.20 vs 95.30 **Difference between postintervention study and control**: +3.90 **Significance**: $p < 0.05$	

Study details	Comparison	Process of care results	Outcome of care results
A143 Morrison (1993)	**Comparison 1** **Group 1**: Edmeet, Rem, A&F, Blood transfusion form, Presence and organisation of quality monitoring mechanisms	**Continuous measure** **Primary measure**: Number of patients transfused per month **Study reanalysed**: Yes **Preintervention mean**: 33.6 **Postintervention mean**: 14.4 **Preintervention trend**: No trend **Difference between postintervention and preintervention means**: +19.2 **Relative % change preintervention to postintervention**: +57.14 **SMD preintervention to postintervention (SD)**: +1.48 **Change in level**: –4.8; **Significance**: $p = 0.65$ **Change in slope**: +0.1; **Significance**: $p = 0.95$	
A144 Morrison (1999)	**Comparison 1** **Group 1**: Edmeet, Outreach vs **Group 2 control**: Usual care/no intervention	**Dichotomous measure** **Median measure**: % of referrals advice on folic acid supplement given **Postintervention %**: 57.00 vs 50.00 **Difference between postintervention study and control**: +7.00 **Significance**: Potential unit of analysis error	**Dichotomous measure** **Median measure**: % of patients satisfied (Very happy, happy or neutral) with time from first seeing GP until referral **Postintervention %**: 79.00 vs 80.00 **Difference between postintervention study and control**: –1.00 **Significance**: Comparison not analysed

Appendix 6 cont'd *Results table*

Study details	Comparison	Process of care results	Outcome of care results
A145 Morrissey (1995)	**Comparison 1** **Group 1**: Rem, Capitation, Revision of professional roles, Training of nurses, Changes in medical record systems vs **Group 2 control**: Usual care/no intervention	**Dichotomous measure** **Median measure**: % of patients Papanicolaou tests **Preintervention %**: 46.00 vs 57.00 **Postintervention %**: 85.00 vs 31.00 **Difference between postintervention study and control**: +54.00 **Significance**: $p < 0.05$ **Continuous measure** **Median measure**: Admissions per enrollee **Postintervention mean number**: 0.73 vs 0.79 **Difference between postintervention study and control**: +0.06 **Relative % change postintervention**: + 7.60 **SMD postintervention (SD)**: +0.04 **Significance**: NS, reanalysed	**Continuous measure** **Median measure**: Perceived quality of life; **Units**: 0=very dissatisfied, 100=very satisfied **Postintervention mean number**: 81.82 vs 79.93 **Difference between postintervention study and control**: +1.89 **Relative % change postintervention**: +2.00 **SMD postintervention (SD)**: Standard deviation not given **Significance**: $p < 0.01$
A146 Nalven (1997)	**Comparison 1** **Group 1**: Rem vs **Group 2 control**: Usual care/no intervention	Analysed using repeated measures analysis of variance. Not enough information was provided to extract specific results	
A147 Nattinger (1989)	**Comparison 1** **Group 1**: A&F vs **Group 3 control**: Usual care/no intervention	**Dichotomous measure** **Primary measure**: % of women mammography **Preintervention %**: 22.10 vs 19.80 **Postintervention %**: 61.80 vs 29.20 **Difference between postintervention study and control**: +32.60 **Significance**: Potential unit of analysis error	
A147 Nattinger (1989)	**Comparison 2** **Group 2**: Rem, Patmed vs **Group 3 control**: Usual care/no intervention	**Dichotomous measure** **Primary measure**: % of women mammography **Preintervention %**: 24.40 vs 19.80 **Postintervention %**: 54.30 vs 29.20 **Difference between postintervention study and control**: +25.10 **Significance**: Potential unit of analysis error	

Study details	Comparison	Process of care results	Outcome of care results
A148 Nilasena (1995)	**Comparison 1** **Group 1**: Edmeet, Rem vs **Group 2 control**: Edmeet	**Dichotomous measure** **Primary measure**: Mean % per patient per provider recommendations in compliance with diabetes preventive care guidelines **Preintervention %**: 38.00 vs 34.60 **Postintervention %**: 54.90 vs 51.00 **Difference between postintervention study and control**: +3.90 **Significance**: Comparison not analysed	
A149 Norton (1985)	**Comparison 1** **Group 1**: A&F, Set personal criteria vs **Group 2 control**: Usual care/no intervention	**Continuous measure** **Median measure**: Compliance score (compliance with criteria) per audit; vaginitis; **Units**: 1–100, 100 = better score **Preintervention mean number**: 22.60 vs 42.20 **Postintervention mean number**: 31.30 vs 37.80 **Difference between postintervention study and control**: –6.50 **Relative % change postintervention**: –17.20 **SMD postintervention (SD)**: Standard deviation not given **Significance**: Potential unit of analysis error	
A150 Novich (1985)	**Comparison 1** **Group 1**: Edmat, Presence and organisation of quality monitoring mechanisms	**Continuous measure** **Primary measure**: Number of prothrombin and partial prothrombin time tests per week **Study reanalysed**: Yes **Preintervention mean**: 477 **Postintervention mean**: 276 **Preintervention trend**: Decreasing **Difference between postintervention and preintervention means**: +201 **Relative % change preintervention to postintervention**: +42.14 **SMD preintervention to postintervention (SD)**: +3.87 **Change in level**: +116; **Significance**: $p = 0.0065$ **Change in slope**: –13; **Significance**: $p = 0.11$	

Appendix 6 cont'd *Results table*

Study details	Comparison	Process of care results	Outcome of care results
A151 Oakeshott (1994)	**Comparison 1** **Group 1**: Edmat vs **Group 2 control**: Usual care/no intervention	**Dichotomous measure** **Primary measure**: Mean % per practice radiology requests conforming to guidelines **Preintervention %**: 73.30 vs 79.90 **Postintervention %**: 83.50 vs 73.20 **Difference between postintervention study and control**: +10.30 **Significance**: Comparison not analysed **Continuous measure** **Primary measure**: Examination requests per practice **Preintervention mean number**: 12.30 vs 15.30 **Postintervention mean number**: 8.10 vs 12.40 **Difference between postintervention study and control**: +4.30 **Relative % change postintervention**: + 34.70 **SMD postintervention (SD)**: +0.25 **Significance**: NS, reanalysed	
A152 Ockene (1994)	**Comparison 1** **Group 1**: Edmeet, Rem vs **Group 2 control**: Edmeet	**Continuous measure** **Primary measure**: Smoking cessation counselling score (patient exit interview); **Units**: 0 = no intervention steps used, 10 = all intervention steps used **Postintervention mean number**: 4.88 vs 4.94 **Difference between postintervention study and control**: –0.06 **Relative % change postintervention**: –1.20 **SMD postintervention (SD)**: Standard deviation not given **Significance**: Potential unit of analysis error	

Study details	Comparison	Process of care results	Outcome of care results
A153 Ockene (1996)	**Comparison 1** **Group 1**: Edmat, Edmeet, Rem, Outreach, Patmed, Patmed vs **Group 3 control**: Edmat	**Dichotomous measure** **Median measure**: % of patients MD discussed making dietary change **Postintervention %**: 13.00 vs 13.00 **Difference between postintervention study and control**: +0.00 **Significance**: Potential unit of analysis error **Continuous measure** **Primary measure**: Counselling steps used by physician (patient exit interview); **Units**: score of 0 to 10 (sum of possible 10 steps used, higher score better) **Postintervention mean number**: 6.28 vs 4.09 **Difference between postintervention study and control**: +2.19 **Relative % change postintervention**: –1.00 **SMD postintervention (SD)**: Standard deviation not given **Significance**: Comparison not analysed	
A153 Ockene (1996)	**Comparison 2** **Group 2**: Edmat, Edmeet, Outreach vs **Group 3 control**: Edmat	**Dichotomous measure** **Median measure**: % of patients MD discussed making dietary change **Postintervention %**: 33.70 vs 13.00 **Difference between postintervention study and control**: +24.30 **Significance**: Potential unit of analysis error **Continuous measure** **Primary measure**: Counselling steps used by physician (patient exit interview); **Units**: score of 0 to 10 (sum of possible 10 steps used, higher score better) **Postintervention mean number**: 4.05 vs 4.09 **Difference between postintervention study and control**: –0.04 **Relative % change postintervention**: + 34.90 **SMD postintervention (SD)**: Standard deviation not given **Significance**: Comparison not analysed	

Appendix 6 cont'd *Results table*

Study details	Comparison	Process of care results	Outcome of care results
A154 Onion (1997)	**Comparison 1** **Group 1**: Edmat, Outreach vs **Group 3 control**: Usual care/no intervention	**Dichotomous measure** **Median measure**: % of prescriptions trimethoprim **Preintervention %**: 5.50 vs 4.70 **Postintervention %**: 6.30 vs 4.90 **Difference between postintervention study and control**: +1.40 **Significance**: Potential unit of analysis error	
A154 Onion (1997)	**Comparison 2** **Group 2**: Edmat, Edmeet vs **Group 3 control**: Usual care/no intervention	**Dichotomous measure** **Median measure**: % of prescriptions trimethoprim **Preintervention %**: 5.40 vs 4.70 **Postintervention %**: 5.80 vs 4.90 **Difference between postintervention study and control**: +0.80 **Significance**: Potential unit of analysis error	
A155 Ornstein (1991)	**Comparison 1** **Group 1**: Edmeet, Rem, A&F, Patmed vs **Group 4 control**: Edmeet, Rem, A&F	**Dichotomous measure** **Median measure**: % of patients faecal occult blood test according to recommendations **Preintervention %**: 9.30 vs 10.70 **Postintervention %**: 27.00 vs 18.80 **Difference between postintervention study and control**: +6.20 **Significance**: Potential unit of analysis error	
A155 Ornstein (1991)	**Comparison 2** **Group 2**: Edmeet, Rem, A&F vs **Group 4 control**: Edmeet, Rem, A&F	**Dichotomous measure** **Median measure**: % of patients faecal occult blood test according to recommendations **Preintervention %**: 18.10 vs 10.70 **Postintervention %**: 23.20 vs 18.80 **Difference between postintervention study and control**: +4.40 **Significance**: Potential unit of analysis error	

Study details	Comparison	Process of care results	Outcome of care results
A155 Ornstein (1991)	**Comparison 3** **Group 3**: Edmeet, Rem, A&F, Patmed vs **Group 4 control**: Edmeet, Rem, A&F	**Dichotomous measure** **Median measure**: % of patients cholesterol testing according to recommendations **Preintervention %**: 17.50 vs 19.20 **Postintervention %**: 31.10 vs 28.30 **Difference between postintervention study and control**: +2.80 **Significance**: Potential unit of analysis error	
A156 Overhage (1996)	**Comparison 1** **Group 1**: Rem vs **Group 2 control**: Usual care/no intervention	**Dichotomous measure** **Median measure**: % of patients providers compliant with preventive care actions **Postintervention %**: 23.00 vs 24.00 **Difference between postintervention study and control**: –1.00 **Significance**: Potential unit of analysis error	
A157 Overhage (1997)	**Comparison 1** **Group 1**: Edmat, Rem vs **Group 2 control**: Edmat	**Dichotomous measure** **Median measure**: Mean % per provider compliance at 24 hours with suggested corollary orders **Postintervention %**: 50.40 vs 29.00 **Difference between postintervention study and control**: +21.40 **Significance**: $p < 0.0001$ **Continuous measure** **Primary measure**: Length of stay; **Units**: days **Postintervention mean number**: 7.62 vs 8.12 **Difference between postintervention study and control**: +0.50 **Relative % change postintervention**: + 6.20 **SMD postintervention (SD)**: Standard deviation not given **Significance**: Potential unit of analysis error	

Appendix 6 cont'd *Results table*

Study details	Comparison	Process of care results	Outcome of care results
A158 Palmer (1985)	**Comparison 1** **Group 1**: Edmat, Edmeet, A&F vs **Group 2 control**: Usual care/no intervention	**Continuous measure** **Median measure**: Digoxin; **Units**: change in practice's baseline mean case variant score (% of applicable criteria that were variant for a case, i.e. non-compliant) **Postintervention mean number**: 2.50 vs 0.50 **Difference between postintervention study and control**: +2.00 **Relative % change postintervention**: + 400.00 **SMD postintervention (SD)**: Standard deviation not given **Significance**: Comparison not analysed	
A159 Pearce (1997)	**Comparison 1** **Group 1**: Edmat, Edmeet, A&F, Revision of professional roles	**Continuous measure** **Primary measure**: Local drug costs (million $) **Study reanalysed**: No **Preintervention trend**: ND	
A160 Perez-Cuevas (1996)	**Comparison 1** **Group 1**: Edmeet, A&F, LCP vs **Group 2 control**: Usual care/no intervention	**Dichotomous measure** **Primary measure**: Average % drugs correctly prescribed for rhinopharyngitis **Postintervention %**: 52.20 vs 19.00 **Difference between postintervention study and control**: +33.20 **Significance**: Comparison not analysed	
A161 Peterson (1996)	**Comparison 1** **Group 1**: Edmat, Outreach vs **Group 2 control**: Usual care/no intervention	**Continuous measure** **Primary measure**: Ratio of NSAID prescribed to paracetamol prescribed **Preintervention mean number**: 3.00 vs 3.16 **Postintervention mean number**: 2.59 vs 2.92 **Difference between postintervention study and control**: +0.33 **Relative % change postintervention**: + 11.30 **SMD postintervention (SD)**: Standard deviation not given **Significance**: Potential unit of analysis error	

Study details	Comparison	Process of care results	Outcome of care results
A162 Pierce (1996)	**Comparison 1** **Group 1**: Edmat, Patmed, Changes in physical structure, facilities and equipment, Changes in medical record systems, Presence and organisation of quality monitoring mechanisms, Staff organisation vs **Group 2 control**: Edmat, Patmed	**Dichotomous measure** **Median measure**: % of children age appropriate immunisation coverage at 7 months old **Preintervention %**: 26.60 vs 19.10 **Postintervention %**: 45.30 vs 20.30 **Difference between postintervention study and control**: +25.00 **Significance**: Potential unit of analysis error	
A163 Pilote (1992)	**Comparison 1** **Group 1**: Edmeet, Revision of professional roles, Communication between professionals over guidelines for return to work vs **Group 2 control**: Usual care/no intervention		**Dichotomous measure** **Median measure**: % of patients death **Postintervention %**: 2.10 vs 1.10 **Difference between postintervention study and control**: –1.00 **Significance**: NS, reanalysed **Continuous measure** **Primary measure**: Median number of days until return to work; **Units**: days **Postintervention mean number**: 54.00 vs 67.00 **Difference between postintervention study and control**: +13.00 **Relative % change postintervention**: +19.40 **SMD postintervention (SD)**: Standard deviation not given **Significance**: $p = 0.38$

Appendix 6 cont'd *Results table*

Study details	Comparison	Process of care results	Outcome of care results
A164 Poma (1998)	**Comparison 1** **Group 1**: A&F, Staff organisation	**Continuous measure** **Primary measure**: Caesarean section rate (% of all deliveries per year) **Study reanalysed**: Yes **Preintervention mean**: 22 **Postintervention mean**: 17.4 **Preintervention trend**: No trend **Difference between postintervention and preintervention means**: +4.6 **Relative % change preintervention to postintervention**: +20.91 **SMD preintervention to postintervention (SD)**: +3.83 **Change in level**: +3.1; **Significance**: $p = 0.15$ **Change in slope**: +0.65; **Significance**: $p = 0.5$	
A165 Prislin (1986)	**Comparison 1** **Group 1**: Edmeet, Rem vs **Group 2 control**: Edmeet	**Dichotomous measure** **Median measure**: % of patients stool occult blood test performed **Postintervention %**: 54.00 vs 30.00 **Difference between postintervention study and control**: +24.00 **Significance**: NS, reanalysed	
A166 Putnam (1985)	**Comparison 1** **Group 1**: Edmat, A&F, Outreach, LCP vs **Group 2 control**: A&F, Outreach	Analysed using analysis of variance adjusted for a number of covariates (adjusted means reported). Mainly NS results, although the effect of participation in patient care appraisal was significant ($p < 0.01$)	
A167 Putnam (1989)	**Comparison 1** **Group 1**: Edmat, A&F, LCP vs **Group 3 control**: Usual care/no intervention	No specific results were reported. NS effect of intervention stated	
A167 Putnam (1989)	**Comparison 2** **Group 2**: Edmat vs **Group 3 control**: Usual care/no intervention	No specific results were reported. NS effect of intervention stated	

Study details	Comparison	Process of care results	Outcome of care results
A168 Rabin (1994)	**Comparison 1** **Group 1**: Edmat, Simulated patient investigator vs **Group 3 control**: Usual care/no intervention	**Dichotomous measure** **Median measure**: % of physicians observed to provide advice on limiting number of sexual partners **Postintervention %**: 52.00 vs 44.00 **Difference between postintervention study and control**: +12.00 **Significance**: NS	
A168 Rabin (1994)	**Comparison 2** **Group 2**: Edmat vs **Group 3 control**: Usual care/no intervention	**Dichotomous measure** **Median measure**: % of physicians observed to provide advice on condom use **Postintervention %**: 26.00 vs 20.00 **Difference between postintervention study and control**: +6.00 **Significance**: NS	
A169 Raisch (1990)	**Comparison 1** **Group 1**: Vivid Edmat, Outreach vs **Group 2 control**: Non-vivid: Edmat, Outreach	**Dichotomous measure** **Primary measure**: Mean % per provider inappropriate prescriptions of antiulcer agents **Preintervention %**: 76.50 vs 62.50 **Postintervention %**: 31.90 vs 26.70 **Difference between postintervention study and control**: –5.20 **Significance**: NS; reanalysed	
A170 Ratnaike (1993)	**Comparison 1** **Group 1**: Edmat	**Continuous measure** **Primary measure**: Number of biochemistry laboratory tests per admission **Study reanalysed**: Yes **Preintervention mean**: 44.2 **Postintervention mean**: 19.5 **Preintervention trend**: Decreasing **Difference between postintervention and preintervention means**: +24.7 **Relative % change preintervention to postintervention**: +55.88 **SMD preintervention to postintervention (SD)**: +4.26 **Change in level**: +16.5; **Significance**: $p = 0.006$ **Change in slope**: –2.9; **Significance**: $p = 0.03$	

Appendix 6 cont'd *Results table*

Study details	Comparison	Process of care results	Outcome of care results
A171 Ray (1986)	**Comparison 1** **Group 1**: Edmat, Outreach vs **Group 2 control**: Usual care/no intervention	**Dichotomous measure** **Median measure**: % of patients long-term diazepam users **Preintervention %**: 4.90 vs 3.50 **Postintervention %**: 3.60 vs 3.10 **Difference between postintervention study and control**: –0.50 **Significance**: Potential unit of analysis error	
A172 Ray (1987)	**Comparison 1** **Group 1**: Edmat, Outreach vs **Group 2 control**: Usual care/no intervention	**Dichotomous measure** **Median measure**: % of patients new antipsychotic drug users **Preintervention %**: 6.20 vs 12.80 **Postintervention %**: 11.10 vs 5.50 **Difference between postintervention study and control**: -5.60 **Significance**: Potential unit of analysis error	
A173 Ray (1993)	**Comparison 1** **Group 1**: Edmat, Edmeet, Outreach vs **Group 2 control**: Usual care/no intervention	**Dichotomous measure** **Primary measure**: % of days antipsychotic drug use **Preintervention %**: 29.20 vs 28.60 **Postintervention %**: 8.20 vs 24.60 **Difference between postintervention study and control**: +16.40 **Significance**: Potential unit of analysis error	**Continuous measure** **Primary measure**: Nursing Home Behaviour Problem scale **Units**: higher score=greater observed frequency of behavioural problems **Preintervention mean number**: 13.10 vs 14.70 **Postintervention mean number**: 11.80 vs 13.70 **Difference between postintervention study and control**: +1.90 **Relative % change postintervention**: +13.90 **SMD postintervention (SD)**: +2.38 **Significance**: Potential unit of analysis error

Study details	Comparison	Process of care results	Outcome of care results
A174 Restuccia (1982)	**Comparison 1** **Group 1**: Direct A&F vs **Group 4 control**: Usual care/no intervention	**Continuous measure** **Primary measure**: Inappropriate days in hospital; **Units**: days **Postintervention mean number**: 2.75 vs 3.25 **Difference between postintervention study and control**: +0.50 **Relative % change postintervention**: + 15.40 **SMD postintervention (SD)**: Standard deviation not given **Significance**: Comparison not analysed	
A174 Restuccia (1982)	**Comparison 2** **Group 2**: Indirect A&F vs **Group 4 control**: Usual care/no intervention	**Continuous measure** **Primary measure**: Inappropriate days in hospital; **Units**: days **Postintervention mean number**: 3.25 vs 3.25 **Difference between postintervention study and control**: +0.00 **Relative % change postintervention**: + 0.00 **SMD postintervention (SD)**: Standard deviation not given **Significance**: Comparison not analysed	
A174 Restuccia (1982)	**Comparison 3** **Group 3**: Judgemental A&F vs **Group 4 control**: Usual care/no intervention	**Continuous measure** **Primary measure**: Inappropriate days in hospital; **Units**: days **Postintervention mean number**: 2.59 vs 3.25 **Difference between postintervention study and control**: +0.66 **Relative % change postintervention**: + 20.30 **SMD postintervention (SD)**: Standard deviation not given **Significance**: Comparison not analysed	
A175 Robie (1988)	**Comparison 1** **Group 1**: Edmeet, Rem vs **Group 2 control**: Usual care/no intervention	**Dichotomous measure** **Median measure**: % of patients rectal examination with Stool Guaiac Test **Preintervention %**: 56.00 vs 54.00 **Postintervention %**: 40.00 vs 46.00 **Difference between postintervention study and control**: +15.00 **Significance**: Potential unit of analysis error	

Appendix 6 cont'd *Results table*

Study details	Comparison	Process of care results	Outcome of care results
A176 Robinson (1996)	**Comparison 1** **Group 1**: Edmat, A&F, LCP vs **Group 5 control**: Usual care/no intervention	**Dichotomous measure** **Primary measure**: % of patients received intravenous thrombolytic therapy **Preintervention %**: 94.00 vs 53.00 **Postintervention %**: 86.00 vs 68.00 **Difference between postintervention study and control**: +18.00 **Significance**: Potential unit of analysis error	
A176 Robinson (1996)	**Comparison 2** **Group 2**: Edmat, Rem, A&F vs **Group 5 control**: Usual care/no intervention	**Dichotomous measure** **Primary measure**: % of patients received intravenous thrombolytic therapy **Preintervention %**: 60.00 vs 53.00 **Postintervention %**: 93.00 vs 68.00 **Difference between postintervention study and control**: +25.00 **Significance**: Potential unit of analysis error	
A176 Robinson (1996)	**Comparison 3** **Group 3**: Edmat, Rem, A&F vs **Group 5 control**: Usual care/no intervention	**Dichotomous measure** **Primary measure**: % of patients received intravenous thrombolytic therapy **Preintervention %**: 58.00 vs 53.00 **Postintervention %**: 95.00 vs 68.00 **Difference between postintervention study and control**: +27.00 **Significance**: Potential unit of analysis error	
A176 Robinson (1996)	**Comparison 4** **Group 4**: Edmat, A&F vs **Group 5 control**: Usual care/no intervention	**Dichotomous measure** **Primary measure**: % of patients received intravenous thrombolytic therapy **Preintervention %**: 57.00 vs 53.00 **Postintervention %**: 77.00 vs 68.00 **Difference between postintervention study and control**: +7.00 **Significance**: Potential unit of analysis error	

Appendix 6 cont'd *Results table*

Study details	Comparison	Process of care results	Outcome of care results
A177 Rogers (1982)	**Comparison 1** **Group 1**: Rem, Changes in medical record systems vs **Group 2 control**: Usual care/no intervention	**Dichotomous measure** **Median measure**: % of patients potassium tests not done (hypertensive patients) **Postintervention %**: 6.10 vs 14.10 **Difference between postintervention study and control**: +8.00 **Significance**: $p = 0.012$ **Continuous measure** **Primary measure**: Length of stay per patient per year; **Units**: days **Postintervention mean number**: 11.60 vs 19.50 **Difference between postintervention study and control**: +7.90 **Relative % change postintervention**: + 0.41 **SMD postintervention (SD)**: +1.23 **Significance**: $p < 0.005$, reanalysed	**Dichotomous measure** **Median measure**: % of renal disease patients tested normal urine culture **Postintervention %**: 68.20 vs 35.70 **Difference between postintervention study and control**: +32.50 **Significance**: $p = 0.028$ **Continuous measure** **Median measure**: Systolic blood pressure (males); **Units**: mmHg **Preintervention mean number**: 147.90 vs 149.10 **Postintervention mean number**: 145.00 vs 148.20 **Difference between postintervention study and control**: +3.20 **Relative % change postintervention**: +2.16 **SMD postintervention (SD)**: +0.36 **Significance**: NS
A178 Rokstad (1995)	**Comparison 1** **Group 1**: Edmat, A&F vs **Group 2 control**: Usual care/no intervention	**Continuous measure** **Median measure**: DDDs prescribed per patient: short-acting benzodiazepine hypnotics; **Units**: defined daily doses **Preintervention mean number**: 60.01 vs 53.88 **Postintervention mean number**: 56.48 vs 55.96 **Difference between postintervention study and control**: –0.52 **Relative % change postintervention**: + 0.00 **SMD postintervention (SD)**: Standard deviation not given **Significance**: Potential unit of analysis error	

Appendix 6 cont'd *Results table*

Study details	Comparison	Process of care results	Outcome of care results
A179 Rosser (1991)	**Comparison 1** **Group 1**: Rem vs **Group 4 control**: Usual care/no intervention	**Dichotomous measure** **Median measure**: % of patients influenza vaccination administered **Postintervention %**: 22.90 vs 9.80 **Difference between postintervention study and control**: +13.10 **Significance**: Potential unit of analysis error	
A179 Rosser (1991)	**Comparison 2** **Group 2**: Telephone reminder to patient vs **Group 4 control**: Usual care/no intervention	**Dichotomous measure** **Median measure**: % of patients tetanus vaccination administered **Postintervention %**: 24.00 vs 3.20 **Difference between postintervention study and control**: +20.80 **Significance**: Potential unit of analysis error	
A179 Rosser (1991)	**Comparison 3** **Group 3**: Reminder letter to patient vs **Group 4 control**: Usual care/no intervention	**Dichotomous measure** **Median measure**: % of patients influenza vaccination administered **Postintervention %**: 35.20 vs 9.80 **Difference between postintervention study and control**: +25.40 **Significance**: Potential unit of analysis error	
A180 Rossi (1997)	**Comparison 1** **Group 1**: Rem vs **Group 2 control**: Usual care/no intervention	**Dichotomous measure** **Primary measure**: % of patients prescription changed from (taken off) calcium channel blockers **Postintervention %**: 11.30 vs 0.10 **Difference between postintervention study and control**: +11.20 **Significance**: Potential unit of analysis error	

Appendix 6 cont'd *Results table*

Study details	Comparison	Process of care results	Outcome of care results
A181 Rutten (1990)	**Comparison 1** **Group 1**: Continuity of care vs **Group 2 control**: Usual care/no intervention		**Continuous measure** **Median measure**: HbA_1 (%) **Preintervention mean number**: 9.70 vs 8.90 **Postintervention mean number**: 9.20 vs 9.40 **Difference between postintervention study and control**: +0.20 **Relative % change postintervention**: +2.10 **SMD postintervention (SD)**: Standard deviation not given **Significance**: Potential unit of analysis
A182 Safran (1995)	**Comparison 1** **Group 1**: Rem vs **Group 2 control**: Usual care/no intervention	**Dichotomous measure** **Median measure**: % of patients complete blood count done by 3 months (when suggested) **Postintervention %**: 89.00 vs 74.00 **Difference between postintervention study and control**: +15.00 **Significance**: Potential unit of analysis error **Continuous measure** **Median measure**: Median number of visits to primary care physician/nurse practitioner per patient per year **Postintervention mean number**: 7.63 vs 6.54 **Difference between postintervention study and control**: +1.09 **Relative % change postintervention**: + 16.67 **SMD postintervention (SD)**: Standard deviation not given **Significance**: Potential unit of analysis error	**Dichotomous measure** **Primary measure**: % of patients surviving at 1-year **Postintervention %**: 91.00 vs 88.00 **Difference between postintervention study and control**: +3.00 **Significance**: Potential unit of analysis error
A183 Sanazaro (1978)	**Comparison 1** **Group 1**: Rem, A&F, Presence and organisation of quality monitoring mechanisms vs **Group 2 control**: Usual care/no intervention	**Dichotomous measure** **Median measure**: Mean % per hospital adherence to treatment criteria pooled across 4 diagnoses **Postintervention %**: 88.50 vs 87.50 **Difference between postintervention study and control**: +1.50 **Significance**: Comparison not analysed	**Dichotomous measure** **Primary measure**: % of cases attaining all expected intermediate outcomes **Postintervention %**: 52.50 vs 54.70 **Difference between postintervention study and control**: –2.20 **Significance**: Potential unit of analysis error

Appendix 6 cont'd *Results table*

Study details	Comparison	Process of care results	Outcome of care results
A184 Santerre (1996)	**Comparison 1** **Group 1**: Edmat	**Continuous measure** **Primary measure**: % vaginal births after caesarean section (% of all deliveries per year) **Study reanalysed**: Yes **Preintervention mean**: 8.3 **Postintervention mean**: 21 **Preintervention trend**: No trend **Difference between postintervention and preintervention means**: +12.7 **Relative % change preintervention to postintervention**: +153.01 **SMD preintervention to postintervention (SD)**: +7.94 **Change in level**: +3.59; **Significance**: $p = 0.32$ **Change in slope**: +0.99; **Significance**: $p = 0.51$	
A185 Schectman (1991)	**Comparison 1** **Group 1**: Edmat, A&F vs **Group 2 control**: Edmat	**Dichotomous measure** **Primary measure**: % of patients compliance with suggested testing strategy for thyroid function **Preintervention %**: 64.00 vs 68.00 **Postintervention %**: 64.00 vs 81.00 **Difference between postintervention study and control**: –17.00 **Significance**: Potential unit of analysis error	

Study details	Comparison	Process of care results	Outcome of care results
A186 Schmidt (1998)	**Comparison 1** **Group 1**: Outreach, Revision of professional roles, Clinical multidisciplinary teams vs **Group 2 control**: Usual care/no intervention	**Dichotomous measure** **Median measure**: % of patients prescribed non-recommended antidepressants **Preintervention %**: 11.40 vs 10.40 **Postintervention %**: 4.70 vs 6.90 **Difference between postintervention study and control**: +2.20 **Significance**: Potential unit of analysis error **Continuous measure** **Primary measure**: Pyschotropic drugs prescribed per resident with any pyschotropic drug **Preintervention mean number**: 2.07 vs 2.06 **Postintervention mean number**: 2.08 vs 2.20 **Difference between postintervention study and control**: +0.12 **Relative % change postintervention**: + 5.50 **SMD postintervention (SD)**: Standard deviation not given **Significance**: Potential unit of analysis error	
A187 Schreiner (1988)	**Comparison 1** **Group 1**: Rem vs **Group 2 control**: Usual care/no intervention	**Dichotomous measure** **Median measure**: % of patients breast examination done as indicated **Preintervention %**: 36.00 vs 30.00 **Postintervention %**: 42.00 vs 32.00 **Difference between postintervention study and control**: +10.00 **Significance**: Potential unit of analysis error	

Appendix 6 cont'd *Results table*

Study details	Comparison	Process of care results	Outcome of care results
A188 Sherman (1992)	**Comparison 1** **Group 1**: Edmat	**Continuous measure** **Primary measure**: % of localised prostate cancers treated with radical prostatectomy or radiation **Study reanalysed**: Yes **Preintervention mean**: 35.1 **Postintervention mean**: 43.6 **Preintervention trend**: Increasing **Difference between postintervention and preintervention means**: +8.5 **Relative % change preintervention to postintervention**: +24.22 **SMD preintervention to postintervention (SD)**: +1.04 **Change in level**: –2.1; **Significance**: $p = 0.6$ **Change in slope**: –0.39; **Significance**: $p = 0.52$	
A189 Shojania (1998)	**Comparison 1** **Group 1**: Rem vs **Group 2 control**: Usual care/no intervention	**Continuous measure** **Median measure**: Total orders for vancomycin per prescriber **Postintervention mean number**: 11.30 vs 16.70 **Difference between postintervention study and control**: +5.40 **Relative % change postintervention**: + 32.00 **SMD postintervention (SD)**: +0.15 **Significance**: NS	
A190 Shorr (1994)	**Comparison 1** **Group 1**: Federal legislation, Omnibus Budget Reconciliation Act	**Continuous measure** **Primary measure**: Number of days' use of antipsychotic drugs per 100 days of residence **Study reanalysed**: Yes **Preintervention mean**: 23.7 **Postintervention mean**: 20.3 **Preintervention trend**: No trend **Difference between postintervention and preintervention means**: +3.4 **Relative % change preintervention to postintervention**: +14.35 **SMD preintervention to postintervention (SD)**: +11.33 **Change in level**: -0.23; **Significance**: $p = 0.6$ **Change in slope**: +0.35; **Significance**: $p < 0.0001$	

Appendix 6 cont'd *Results table*

Study details	Comparison	Process of care results	Outcome of care results
A191 Smeele (1999)	**Comparison 1** **Group 1**: Edmeet vs **Group 2 control**: Usual care/no intervention	**Dichotomous measure** **Median measure**: % of providers adherence to guidelines: prescription of inhalation treatment only **Preintervention %**: 98.00 vs 95.00 **Postintervention %**: 100.00 vs 99.00 **Difference between postintervention study and control**: +1.00 **Significance**: Potential unit of analysis error	**Continuous measure** **Primary measure**: Quality of life; **Units**: 1 = no impairment at all of quality of life, 7= very much impairment **Preintervention mean number**: 1.97 vs 1.98 **Postintervention mean number**: 1.90 vs 1.97 **Difference between postintervention study and control**: –0.07 **Relative % change postintervention**: –3.60 **SMD postintervention (SD)**: Standard deviation not given **Significance**: Potential unit of analysis error
A192 Smith (1998)	**Comparison 1** **Group 1**: Edmat, A&F vs **Group 2 control**: Usual care/no intervention	**Continuous measure** **Median measure**: Triazolam mg equivalents per patient **Preintervention mean number**: 29.40 vs 28.40 **Postintervention mean number**: 21.30 vs 26.00 **Difference between postintervention study and control**: +4.70 **Relative % change postintervention**: +18.10 **SMD postintervention (SD)**: +0.23 **Significance**: Potential unit of analysis error	
A193 Somkin (1997)	**Comparison 1** **Group 1**: Edmeet, Rem, Patmed vs **Group 3 control**: Edmeet	**Dichotomous measure** **Median measure**: % of women Papanicolaou smear test **Postintervention %**: 22.80 vs 9.10 **Difference between postintervention study and control**: +13.70 **Significance**: $p < 0.001$	

Appendix 6 cont'd *Results table*

Study details	Comparison	Process of care results	Outcome of care results
A193 Somkin (1997)	**Comparison 2** **Group 2**: Edmeet, Patmed vs **Group 3 control**: Edmeet	**Dichotomous measure** **Median measure**: % of women Papanicolaou smear test **Postintervention %**: 19.40 vs 9.10 **Difference between postintervention study and control**: +10.30 **Significance**: $p < 0.001$	
A194 Sommers (1984)	**Comparison 1** **Group 1**: A&F, LCP vs **Group 3 control**: Usual care/no intervention	**Dichotomous measure** **Primary measure**: % of patients care complies with preset criteria **Preintervention %**: 33.00 vs 38.00 **Postintervention %**: 26.00 vs 35.00 **Difference between postintervention study and control**: –9.00 **Significance**: Potential unit of analysis error	
A194 Sommers (1984)	**Comparison 2** **Group 2**: A&F vs **Group 3 control**: Usual care/no intervention	**Dichotomous measure** **Primary measure**: % of patients care complies with preset criteria **Preintervention %**: 37.00 vs 38.00 **Postintervention %**: 51.00 vs 35.00 **Difference between postintervention study and control**: +16.00 **Significance**: Potential unit of analysis error	
A195 Soumerai (1987)	**Comparison 1** **Group 1**: Edmat, Outreach	**Continuous measure** **Primary measure**: Number of propoxyphene prescriptions per million population per year **Study reanalysed**: No **Preintervention trend**: Decreasing **Change in slope**: –12 499 **Significance**: $p < 0.05$	

Appendix 6 cont'd *Results table*

Study details	Comparison	Process of care results	Outcome of care results
A196 Soumerai (1993)	**Comparison 1** **Group 1**: Edmat, Edmeet, Outreach vs **Group 2 control**: Usual care/no intervention	**Dichotomous measure** **Primary measure**: Mean % of transfusions per provider (red blood cells) compliant with guidelines **Preintervention %**: 22.00 vs 29.00 **Postintervention %**: 43.00 vs 32.00 **Difference between postintervention study and control**: +11.00 **Significance**: Potential unit of analysis error	
A197 Soumerai (1998)	**Comparison 1** **Group 1**: Edmat, Edmeet, OL, Different educational interventions by OLs vs **Group 2 control**: Edmat	**Dichotomous measure** **Median measure**: Median % of patients per hospital receiving β-blockers **Preintervention %**: 79.00 vs 60.00 **Postintervention %**: 80.00 vs 78.00 **Difference between postintervention study and control**: +2.00 **Significance**: Comparison not analysed	
A198 Steffensen (1997)	**Comparison 1** **Group 1**: Edmat vs **Group 2 control**: Usual care/no intervention	**Continuous measure** **Primary measure**: DDD of anticoagulants (warfarin and phenprocoumen) per 1000 inhabitants; **Units**: WHO defined daily dose (warfarin 7.5 mg, phenprocoumen 3 mg) **Preintervention mean number**: 325.00 vs 165.00 **Postintervention mean number**: 537.90 vs 268.60 **Difference between postintervention study and control**: +269.30 **Relative % change postintervention**: + 100.30 **SMD postintervention (SD)**: Standard deviation not given **Significance**: Potential unit of analysis error	
A199 Struewing (1991)	**Comparison 1** **Group 1**: Edmeet Rem, Faecal occult blood testing kits to patients, Revision of professional roles vs **Group 2 control**: Edmeet, Faecal occult blood testing kits to patients, Revision of professional roles	**Dichotomous measure** **Median measure**: % of patients receiving screening sigmoidoscopy **Preintervention %**: 5.30 vs 4.80 **Postintervention %**: 4.70 vs 3.20 **Difference between postintervention study and control**: +1.50 **Significance**: Potential unit of analysis error	

Appendix 6 cont'd *Results table*

Study details	Comparison	Process of care results	Outcome of care results
A199 Struewing (1991)	**Comparison 2** **Group 3**: Edmeet Rem, Faecal occult blood testing kits to patients, Revision of professional roles vs **Group 4 control**: Rem, Faecal occult blood testing kits to patients, Revision of professional roles	**Dichotomous measure** **Median measure**: % of patients receiving digital rectal examination **Preintervention %**: 68.60 vs 70.20 **Postintervention %**: 68.80 vs 75.40 **Difference between postintervention study and control**: –5.70 **Significance**: Potential unit of analysis error	
A200 Stuart (1997)	**Comparison 1** **Group 1**: Edmat, Edmeet, Rem, Outreach, Patmed/Rem, Revision of professional roles	**Continuous measure** **Primary measure**: Number of visits for dysuria per 1000 female enrollees (patients) **Study reanalysed**: No **Preintervention trend**: No trend	Results were displayed as control charts for the number of dysuria visits. Significant changes were reported but no quantification was given
A201 Studnicki (1997)	**Comparison 1** **Group 1**: Edmat, Legislatively imposed guidelines	**Continuous measure** **Primary measure**: Caesarean section rate (% of all deliveries per quarter) **Study reanalysed**: Yes **Preintervention mean**: 25.7 **Postintervention mean**: 24.1 **Preintervention trend**: Decreasing **Difference between postintervention and preintervention means**: +1.6 **Relative % change preintervention to postintervention**: +6.23 **SMD preintervention to postintervention (SD)**: +2.29 **Change in level**: +0.15; **Significance**: $p = 0.69$ **Change in slope**: +0.08; **Significance**: $p = 0.52$	

Appendix 6 cont'd *Results table*

Study details	Comparison	Process of care results	Outcome of care results
A202 Sulmasy (1994)	**Comparison 1** **Group 1**: Edmeet, Clinical ethicist is attending physician vs **Group 3 control**: Usual care/no intervention	**Continuous measure** **Primary measure**: Concurrent care concerns per do not resuscitate order **Preintervention mean number**: 0.90 vs 1.90 **Postintervention mean number**: 3.80 vs 1.10 **Difference between postintervention study and control**: +2.70 **Relative % change postintervention**: + 245.00 **SMD postintervention (SD)**: Standard deviation not given **Significance**: Potential unit of analysis error	
A202 Sulmasy (1994)	**Comparison 2** **Group 2**: Edmeet vs **Group 3 control**: Usual care/no intervention	**Continuous measure** **Primary measure**: Concurrent care concerns per do not resuscitate order **Preintervention mean number**: 0.50 vs 1.90 **Postintervention mean number**: 1.40 vs 1.10 **Difference between postintervention study and control**: +0.30 **Relative % change postintervention**: +27.00 **SMD postintervention (SD)**: Standard deviation not given **Significance**: Potential unit of analysis error	
A203 Suwangool (1991)	**Comparison 1** **Group 1**: Edmat, Formulary, Presence and organisation of quality monitoring mechanisms	**Continuous measure** **Primary measure**: Cost of antibiotics prescribed per month (in bahts) **Study reanalysed**: Yes **Preintervention mean**: 379,437 **Postintervention mean**: 328,060 **Preintervention trend**: No trend **Difference between postintervention and preintervention means**: +51,377 **Relative % change preintervention to postintervention**: +13.54 **SMD preintervention to postintervention (SD)**: +0.30 **Change in level**: +238,253; **Significance**: $p = 0.054$ **Change in slope**: +51,498; **Significance**: $p = 0.07$	

Appendix 6 cont'd *Results table*

Study details	Comparison	Process of care results	Outcome of care results
A204 Szilagyi (1996)	**Comparison 1** **Group 1**: Clinic: Rem vs **Group 2**: Clinic control: Usual care/no intervention	**Dichotomous measure** **Primary measure**: % immunisations up to date **Postintervention %**: 68.00 vs 65.00 **Difference between postintervention study and control**: +3.00 **Significance**: NS	
A204 Szilagyi (1996)	**Comparison 2** **Group 3**: NHC: Rem, Patmed, Reduced consent form vs **Group 4**: NHC control: Patmed, Reduced consent form	**Dichotomous measure** **Primary measure**: % immunisations up to date **Postintervention %**: 60.00 vs 62.00 **Difference between postintervention study and control**: +2.00 **Significance**: NS	
A205 Tape (1993)	**Comparison 1** **Group 1**: Rem, Changes in medical record systems vs **Group 2 control**: Rem	**Dichotomous measure** **Median measure**: % of patients faecal occult blood test **Postintervention %**: 28.10 vs 25.30 **Difference between postintervention study and control**: +2.80 **Significance**: Potential unit of analysis error	
A206 Thamer (1998)	**Comparison 1** **Group 1**: Edmat	**Continuous measure** **Primary measure**: % of patient with peptic ulcer disease prescribed omeprazole **Study reanalysed**: Yes **Preintervention mean**: 13.8 **Postintervention mean**: 21.1 **Preintervention trend**: Increasing **Difference between postintervention and preintervention means**: +7.3 **Relative % change preintervention to postintervention**: +52.90 **SMD preintervention to postintervention (SD)**: +2.52 **Change in level**: –2; **Significance**: $p = 0.21$ **Change in slope**: +0.24; **Significance**: $p = 0.18$	

Appendix 6 cont'd *Results table*

Study details	Comparison	Process of care results	Outcome of care results
A207 Thomas (1983)	**Comparison 1** **Group 1**: Rem vs **Group 2 control**: Usual care/no intervention	**Dichotomous measure** **Primary measure**: % of ambulatory care suggestions followed **Postintervention %**: 50.25 vs 37.30 **Difference between postintervention study and control**: +12.95 **Significance**: $p < 0.01$ **Continuous measure** **Primary measure**: Days hospitalised; **Units**: days **Postintervention mean number**: 9.80 vs 14.50 **Difference between postintervention study and control**: –4.70 **Relative % change postintervention**: –3.32 **SMD postintervention (SD)**: –0.28 **Significance**: Comparison not analysed	
A208 Thomas (1998)	**Comparison 1** **Group 1**: Edmat, Edmeet, Open-access clinic vs **Group 2 control**: Usual care/no intervention	Complex design (balanced incomplete block) analysed using generalised linear models. Reported results were adjusted means. Significant ($p < 0.05$) reduction in waiting times of 75%	Complex design (balanced incomplete block) analysed using generalised linear models. Reported results were adjusted means. No differences in patient outcome were reported
A209 Tierney (1986)	**Comparison 1** **Group 1**: Rem, A&F vs **Group 4 control**: Usual care/no intervention	**Dichotomous measure** **Median measure**: Mean % of patients per provider compliant: tuberculosis skin testing **Postintervention %**: 6.70 vs 4.00 **Difference between postintervention study and control**: +2.70 **Significance**: Potential unit of analysis error	
A209 Tierney (1986)	**Comparison 2** **Group 2**: Rem vs **Group 4 control**: Usual care/no intervention	**Dichotomous measure** **Median measure**: Mean % of patients per provider compliant: cervical cytology **Postintervention %**: 31.90 vs 28.60 **Difference between postintervention study and control**: +3.30 **Significance**: Potential unit of analysis error	

Appendix 6 cont'd *Results table*

Study details	Comparison	Process of care results	Outcome of care results
A209 Tierney (1986)	**Comparison 3** **Group 3**: A&F vs **Group 4 control**: Usual care/no intervention	**Dichotomous measure** **Median measure**: Mean % of patients per provider compliant: tuberculosis skin testing **Postintervention %**: 5.30 vs 4.00 **Difference between postintervention study and control**: +1.30 **Significance**: Potential unit of analysis error	
A210 Turner (1989)	**Comparison 1** **Group 1**: Rem, Patmed vs **Group 3 control**: Patmed	**Dichotomous measure** **Median measure**: Mean % of patients per provider, performance of stool guaiac test **Preintervention %**: 29.70 vs 32.60 **Postintervention %**: 46.10 vs 42.50 **Difference between postintervention study and control**: +3.60 **Significance**: Potential unit of analysis error	
A210 Turner (1989)	**Comparison 2** **Group 2**: Rem vs **Group 3 control**: Patmed	**Dichotomous measure** **Median measure**: Mean % of patients per provider, performance of Papanicoloau smear test **Preintervention %**: 20.30 vs 29.40 **Postintervention %**: 33.10 vs 27.50 **Difference between postintervention study and control**: +5.60 **Significance**: Potential unit of analysis error	
A211 Turner (1990)	**Comparison 1** **Group 1**: Rem, Patmed (health maintenance card) vs **Group 2 control**: Rem	**Dichotomous measure** **Median measure**: % of patients Papanicolaou smear test done **Postintervention %**: 29.80 vs 19.90 **Difference between postintervention study and control**: +9.90 **Significance**: Potential unit of analysis error	

Study details	Comparison	Process of care results	Outcome of care results
A212 Turner (1994)	**Comparison 1** **Group 1**: Rem, Computer and software vs **Group 2 control**: Patient health card given to patient to prompt physicans	**Dichotomous measure** **Median measure**: % of patients influenza vaccination **Preintervention %**: 20.00 vs 17.00 **Postintervention %**: 26.00 vs 24.00 **Difference between postintervention study and control**: +2.00 **Significance**: NS	
A213 Urban (1995)	**Comparison 1** **Group 1**: Edmat, Edmeet, 'Community organisation' approach vs **Group 3 control**: Usual care/no intervention	**Dichotomous measure** **Median measure**: % of women receiving biennial mammography **Preintervention %**: 42.10 vs 35.80 **Postintervention %**: 62.90 vs 61.90 **Difference between postintervention study and control**: +1.00 **Significance**: Potential unit of analysis error	
A213 Urban (1995)	**Comparison 2** **Group 2**: Edmat, Edmeet, 'Community organisation' approach vs **Group 3 control**: Usual care/no intervention	**Dichotomous measure** **Median measure**: % of women receiving biennial mammography **Preintervention %**: 26.10 vs 35.80 **Postintervention %**: 62.30 vs 61.90 **Difference between postintervention study and control**: +0.40 **Significance**: Potential unit of analysis error	

Appendix 6 cont'd *Results table*

Study details	Comparison	Process of care results	Outcome of care results
A214 Vadher (1997)	**Comparison 1** **Group 1**: Edmat, Rem vs **Group 2 control**: Edmat		**Dichotomous measure** **Median measure**: % of days in anticoagulant therapeutic range (inpatients) **Postintervention %**: 59.00 vs 52.00 **Difference between postintervention study and control**: +7.00 **Significance**: Comparison not analysed **Continuous measure** **Median measure**: Time to reach therapeutic range; **Units**: days **Postintervention mean number**: 3.00 vs 3.00 **Difference between postintervention study and control**: +0.00 **Relative % change postintervention**: +0.00 **SMD postintervention (SD)**: +0.00 **Significance**: NS
A215 Van der Weijden (1999)	**Comparison 1** **Group 1**: Edmat, Edmeet, A&F, Outreach vs **Group 2 control**: Edmat	**Dichotomous measure** **Median measure**: Median % of patients for whom GP performed repeat testing to diagnose hypercholesterolaemia **Postintervention %**: 0.00 vs 0.00 **Difference between postintervention study and control**: +0.00 **Significance**: NS	
A216 van Essen (1997)	**Comparison 1** **Group 1**: Edmat, Edmeet, A&F, Changes in physical structure, facilities and equipment vs **Group 2 control**: Usual care/no intervention	**Dichotomous measure** **Primary measure**: % of patients influenza vaccination **Postintervention %**: 9.30 vs 9.00 **Difference between postintervention study and control**: +0.30 **Significance**: Potential unit of analysis error	

Study details	Comparison	Process of care results	Outcome of care results
A217 van Walraven (1998)	**Comparison 1** **Group 1**: Edmat, Change in scope of test requests covered, Changes in the scope and nature of benefits and services, Changes in requisition forms	**Continuous measure** **Primary measure**: ESR tests per 100 000 persons (% reduction) **Study reanalysed**: No **Preintervention trend**: NC **Change in level**: +58; **Significance**: $p < 0.001$	
A218 Vincent (1995)	**Comparison 1** **Group 1**: Rem, Patmed	**Continuous measure** **Median measure**: % of patient visits oral polio immunisations given (× 100) **Study reanalysed**: Yes **Preintervention mean**: 1.84 **Postintervention mean**: 2.55 **Preintervention trend**: No trend **Difference between postintervention and preintervention means**: +0.71 **Relative % change preintervention to postintervention**: +38.59 **SMD preintervention to postintervention (SD)**: +0.75 **Change in level**: +0.08; **Significance**: $p = 0.89$ **Change in slope**: –0.02; **Significance**: $p = 0.71$	
A219 Vinicor (1987)	**Comparison 1** **Group 1**: Edmat, Edmeet, Rem, A&F, Patmed, Consultation facility, telephone hotline vs **Group 4 control**: Usual care/no intervention		**Continuous measure** **Median measure**: HbA_1 (%) **Preintervention mean number**: 11.34 vs 10.19 **Postintervention mean number**: 10.42 vs 10.74 **Difference between postintervention study and control**: +0.32 **Relative % change postintervention**: +3.00 **SMD postintervention (SD)**: +0.10 **Significance**: Potential unit of analysis error

Appendix 6 cont'd *Results table*

Study details	Comparison	Process of care results	Outcome of care results
A219 Vinicor (1987)	**Comparison 2** **Group 2**: Edmat, Edmeet, Rem, A&F, Consultation facility, telephone hotline vs **Group 4 control**: Usual care/no intervention		**Continuous measure** **Median measure**: HbA_1 (%) **Preintervention mean number**: 10.51 vs 10.19 **Postintervention mean number**: 10.64 vs 10.74 **Difference between postintervention study and control**: +0.10 **Relative % change postintervention**: +0.90 **SMD postintervention (SD)**: +0.03 **Significance**: Potential unit of analysis error
A219 Vinicor (1987)	**Comparison 3** **Group 3**: Patmed vs **Group 4 control**: Usual care/no intervention		**Continuous measure** **Median measure**: Fasting plasma glucose; **Units**: mg/dl **Preintervention mean number**: 213.80 vs 201.10 **Postintervention mean number**: 197.90 vs 208.70 **Difference between postintervention study and control**: +10.80 **Relative % change postintervention**: +5.10 **SMD postintervention (SD)**: +0.09 **Significance**: Potential unit of analysis
A219 Vinicor (1987)	**Comparison 4** **Groups 1 and 2**: Edmat, Edmeet, Rem, A&F, Patmed, Consultation facility, telephone hotline vs **Groups 3 and 4**: Patmed	**Dichotomous measure** **Median measure**: % of patients having foot examined **Postintervention %**: 92.00 vs 87.00 **Difference between postintervention study and control**: +5.00 **Significance**: Potential unit of analysis error	

Appendix 6 cont'd *Results table*

Study details	Comparison	Process of care results	Outcome of care results
A220 Vissers (1996)	**Comparison 1** **Group 1**: Edmat, Rem vs **Group 2 control**: Edmat	**Dichotomous measure** **Primary measure**: % final treatment plans identical to protocol **Postintervention %**: 49.00 vs 30.00 **Difference between postintervention study and control**: +19.00 **Significance**: Potential unit of analysis error	
A221 Watson (1998)	**Comparison 1** **Group 1**: Edmat, A&F, Outreach vs **Group 3 control**: A&F	**Dichotomous measure** **Primary measure**: Mean % per practice recommended NSAIDs prescribed (of total NSAIDs prescribed) **Preintervention %**: 78.10 vs 79.00 **Postintervention %**: 82.70 vs 81.20 **Difference between postintervention study and control**: +1.50 **Significance**: $p = 0.15$	
A221 Watson (1998)	**Comparison 2** **Group 2**: Edmat, A&F vs **Group 3 control**: A&F	**Dichotomous measure** **Primary measure**: Mean % per practice recommended NSAIDs prescribed (of total NSAIDs prescribed) **Preintervention %**: 77.00 vs 79.00 **Postintervention %**: 80.30 vs 81.20 **Difference between postintervention study and control**: +0.90 **Significance**: NS	
A222 Weingarten (1989)	**Comparison 1** **Group 1**: Rem vs **Group 2 control**: Usual care/no intervention	**Dichotomous measure** **Median measure**: % of patients breast examination recorded **Postintervention %**: 71.00 vs 56.00 **Difference between postintervention study and control**: +15.00 **Significance**: $p < 0.05$	

Appendix 6 cont'd *Results table*

Study details	Comparison	Process of care results	Outcome of care results
A223 Weingarten (1990)	**Comparison 1** **Group 1**: Rem vs **Group 2 control**: Usual care/no intervention	**Continuous measure** **Median measure**: Length of stay in intermediate care unit; **Units**: days **Postintervention mean number**: 1.77 vs 2.77 **Difference between postintervention study and control**: +1.00 **Relative % change postintervention**: + 36.00 **SMD postintervention (SD)**: Standard deviation not given **Significance**: $p = 0.002$	
A224 Weingarten (1994)	**Comparison 1** **Group 1**: Rem vs **Group 2 control**: Usual care/no intervention	**Dichotomous measure** **Primary measure**: % of patients physicians complied with practice guidelines for patients with chest pain **Postintervention %**: 69.00 vs 50.00 **Difference between postintervention study and control**: +19.00 **Significance**: $p < 0.001$ **Continuous measure** **Primary measure**: Length of stay; **Units**: days **Postintervention mean number**: 2.63 vs 3.54 **Difference between postintervention study and control**: +0.91 **Relative % change postintervention**: +25.70 **SMD postintervention (SD)**: +0.22 **Significance**: $p = 0.02$	**Dichotomous measure** **Median measure**: % of patients iatrogenic complications **Postintervention %**: 2.80 vs 3.20 **Difference between postintervention study and control**: +6.80 **Significance**: NS **Continuous measure** **Median measure**: Short Form-36 health status measure; summary health status item; **Units**: lower score indicates better health status **Postintervention mean number**: 3.04 vs 3.10 **Difference between postintervention study and control**: +0.06 **Relative % change postintervention**: +1.94 **SMD postintervention (SD)**: +0.05 **Significance**: NS

Study details	Comparison	Process of care results	Outcome of care results
A225 Weingarten (1994)	**Comparison 1** **Group 1**: Rem vs **Group 2 control**: Usual care/no intervention	**Dichotomous measure** **Primary measure**: % of patients, physicians complied with practice guidelines for patients with congestive heart failure **Postintervention %**: 33.00 vs 25.00 **Difference between postintervention study and control**: +8.00 **Significance**: NS **Continuous measure** **Median measure**: Total length of stay; **Units**: days **Postintervention mean number**: 6.71 vs 4.73 **Difference between postintervention study and control**: –1.98 **Relative % change postintervention**: –41.80 **SMD postintervention (SD)**: –0.81 **Significance**: $p = 0.03$	**Dichotomous measure** **Median measure**: % of patients difficulty walking ten steps **Postintervention %**: 67.00 vs 68.00 **Difference between postintervention study and control**: +1.00 **Significance**: NS **Continuous measure** **Median measure**: Specific activity score; **Units**: lower score is better **Postintervention mean number**: 3.09 vs 3.06 **Difference between postintervention study and control**: –0.03 **Relative % change postintervention**: –2.00 **SMD postintervention (SD)**: –0.07 **Significance**: NS
A226 Weingarten (1996)	**Comparison 1** **Group 1**: Rem vs **Group 2 control**: Usual care/no intervention	**Dichotomous measure** **Primary measure**: % of patients, physicians complied with pneumonia guidelines **Postintervention %**: 76.00 vs 64.00 **Difference between postintervention study and control**: +12.00 **Significance**: NS **Continuous measure** **Primary measure**: Length of stay; **Units**: days **Postintervention mean number**: 4.00 vs 4.20 **Difference between postintervention study and control**: +0.20 **Relative % change postintervention**: + 4.80 **SMD postintervention (SD)**: +0.14 **Significance**: NS	

Appendix 6 cont'd *Results table*

Study details	Comparison	Process of care results	Outcome of care results
A227 Wilson (1988)	**Comparison 1** **Group 1**: Edmat, Edmeet, Provision of gum vs **Group 3 control**: Usual care/no intervention	**Dichotomous measure** **Median measure**: % of patients physician suggested quitting **Postintervention %**: 84.40 vs 24.40 **Difference between postintervention study and control**: +60.00 **Significance**: Potential unit of analysis error	**Dichotomous measure** **Primary measure**: Mean % of patients per practice ceased smoking (1-year prevalence) **Postintervention %**: 10.90 vs 7.10 **Difference between postintervention study and control**: +3.80 **Significance**: Comparison not analysed
A227 Wilson (1988)	**Comparison 2** **Group 2**: Provision of gum vs **Group 3 control**: Usual care/no intervention	**Dichotomous measure** **Median measure**: % of patients physician said anything **Postintervention %**: 70.20 vs 31.10 **Difference between postintervention study and control**: +39.10 **Significance**: Potential unit of analysis error	**Dichotomous measure** **Primary measure**: Mean % of patients per practice ceased smoking (1-year prevalence) **Postintervention %**: 7.60 vs 7.10 **Difference between postintervention study and control**: +0.50 **Significance**: Comparison not analysed
A228 Winickoff (1984)	**Comparison 1** **Group 1**: A&F vs **Group 2 control**: Usual care/no intervention	**Dichotomous measure** **Primary measure**: Mean % of patients by provider stool tests done **Preintervention %**: 62.40 vs 62.70 **Postintervention %**: 70.50 vs 81.00 **Difference between postintervention study and control**: +5.20 **Significance**: NS, reanalysed	
A229 Winickoff (1985)	**Comparison 1** **Group 1**: Rem, A&F, LCP vs **Group 2 control**: LCP	**Dichotomous measure** **Median measure**: % of patients laboratory tests performed **Preintervention %**: 85.80 vs 84.20 **Postintervention %**: 87.10 vs 86.60 **Difference between postintervention study and control**: +0.50 **Significance**: Potential unit of analysis error	

Appendix 6 cont'd *Results table*

Study details	Comparison	Process of care results	Outcome of care results
A230 Wirtschafter (1986)	**Comparison 1** **Group 1**: Edmat, Edmeet vs **Group 3 control**: Edmat	**Dichotomous measure** **Median measure**: % of infants chest roentgenogram obtained **Postintervention %**: 49.00 vs 40.00 **Difference between postintervention study and control**: +9.00 **Significance**: Potential unit of analysis error	**Dichotomous measure** **Primary measure**: % of infants mortality **Postintervention %**: 16.00 vs 13.00 **Difference between postintervention study and control**: –3.00 **Significance**: Potential unit of analysis error
A230 Wirtschafter (1986)	**Comparison 2** **Group 2**: Edmat, Edmeet vs **Group 3 control**: Edmat	**Dichotomous measure** **Median measure**: % of infants blood pressure monitored **Postintervention %**: 2.00 vs 7.00 **Difference between postintervention study and control**: –5.00 **Significance**: Potential unit of analysis error	**Dichotomous measure** **Primary measure**: % of infants mortality **Postintervention %**: 14.00 vs 13.00 **Difference between postintervention study and control**: –1.00 **Significance**: Potential unit of analysis error
A231 Wong (1983)	**Comparison 1** **Group 1**: Edmat, Edmeet, Rem, Changes in test ordering form	**Continuous measure** **Primary measure**: Number of thyrotropin tests ordered per month **Study reanalysed**: Yes **Preintervention mean**: 930 **Postintervention mean**: 543 **Preintervention trend**: No trend **Difference between postintervention and preintervention means**: +387 **Relative % change preintervention to postintervention**: +41.61 **SMD preintervention to postintervention (SD)**: +5.16 **Change in level**: +360; **Significance**: $p = 0.0005$ **Change in slope**: –18; **Significance**: $p = 0.38$	

Appendix 6 cont'd *Results table*

Study details	Comparison	Process of care results	Outcome of care results
A232 Worrall (1999)	**Comparison 1** **Group 1**: Edmeet, Communication and case discussion between distant health professionals vs **Group 2 control**: Edmat	**Dichotomous measure** **Median measure**: % of patients took antidepressants for full 6 months **Postintervention %**: 46.20 vs 37.60 **Difference between postintervention study and control**: +8.70 **Significance**: Potential unit of analysis error **Continuous measure** **Median measure**: DSM-IV minor criteria used per patient **Postintervention mean number**: 4.60 vs 4.20 **Difference between postintervention study and control**: +0.40 **Relative % change postintervention**: +9.50 **SMD postintervention (SD)**: +0.27 **Significance**: Potential unit of analysis error	**Continuous measure** **Median measure**: Physician rating of patients depression at 6 months; **Units**: 4-point ordinal scale (4= severe depression, 1= absence of depressive symptoms) **Preintervention mean number**: 2.90 vs 2.70 **Postintervention mean number**: 1.80 vs 2.00 **Difference between postintervention study and control**: +0.20 **Relative % change postintervention**: +10.00 **SMD postintervention (SD)**: +0.28 **Significance**: Potential unit of analysis error
A233 Zapka (1993)	**Comparison 1** **Group 1**: Edmat, Edmeet, Rem, Outreach, Patmed/Rem, Mass media vs **Group 2 control**: Mass media	**Dichotomous measure** **Median measure**: % of patients clinical breast examination in the last year **Preintervention %**: 58.10 vs 59.80 **Postintervention %**: 59.70 vs 60.90 **Difference between postintervention study and control**: –1.20 **Significance**: Potential unit of analysis error	**Dichotomous measure** **Median measure**: % of participants believing that a woman does not need to get a mammogram unless she develops symptoms **Preintervention %**: 31.30 vs 24.60 **Postintervention %**: 18.80 vs 15.20 **Difference between postintervention study and control**: –3.60 **Significance**: Potential unit of analysis error

Study details	Comparison	Process of care results	Outcome of care results
A234 Zehr (1998)	**Comparison 1** **Group 1**: Edmat	**Continuous measure** **Median measure**: Length of hospital stay (days) **Study reanalysed**: Yes **Preintervention mean**: 29.7 **Postintervention mean**: 18.8 **Preintervention trend**: Decreasing **Difference between postintervention and preintervention means**: +10.9 **Relative % change preintervention to postintervention**: +36.70 **SMD preintervention to postintervention (SD)**: +1.98 **Change in level**: –2.4; **Significance**: $p = 0.05$ **Change in slope**: –3.6; **Significance**: $p = 0.004$	
A235 Zenni (1996)	**Comparison 1** **Group 1**: Rem, Changes in medical record systems vs **Group 2 control**: Usual care/no intervention	**Dichotomous measure** **Median measure**: Mean (of two raters scores) % appropriate recommendations for health supervision covered: personal–social development **Postintervention %**: 48.00 vs 31.00 **Difference between postintervention study and control**: +17.00 **Significance**: Potential unit of analysis error	**Continuous measure** **Median measure**: Parent satisfaction with explanation of side-effects; **Units**: 1–5, poor to excellent **Postintervention mean number**: 4.00 vs 4.13 **Difference between postintervention study and control**: –0.13 **Relative % change postintervention**: –3.00 **SMD postintervention (SD)**: –0.13 **Significance**: Potential unit of analysis error

DDD, defined daily dose; DSM-IV, Diagnostic and Statistical Manual of Mental Disorders-IV; ESR, erythrocyte sedimentation rate; HbA_1, glycosylated haemoglobin; WHO, World Health Organization.

Appendix 7

Interview brief: interventions to implement clinical guidelines

Estimating the resource use

On the following pages are broad descriptions and examples of six types of intervention used to implement clinical guidelines.

Consider each of the examples of interventions within the three settings (below):

1 Primary Care Group
2 Teaching Hospital (acute)
3 District General Hospital

Consider for discussion the questions below for each of the examples of the six interventions (and settings)

Q1 Do you think each of the interventions appears feasible in the UK within current resources?
Q2 Are there resources that could be redeployed to undertake the interventions?
Q3 Estimate the relative resource use of the six types of interventions (rank most resource intensive to least resource intensive).

Intervention 1

Distribution of educational materials

Description

Distribution of published or printed recommendations for clinical care, including audiovisual materials and electronic publications. The materials may have been delivered personally or through mass mailings.

Factors that may influence resource use

- Format of educational materials (e.g. printed, audiovisual).
- Method of distribution (e.g. by mail, personally delivered).
- The number of copies of a given set of guidelines, the number of sets of guidelines and the number of times they are distributed.

Examples for you to consider (in each setting if possible)

1 Plasticised, single two-sided sheet, guidelines sent to all relevant practitioners, with an introductory letter.
2 Guidelines mailed to all members of relevant specialist society and consumers' associations, and published in national medical journals and speciality bulletins.
3 Educational video given to relevant sites/specialists.

Examples from the review

1 Guidelines printed verbatim on two sides of a sheet of A4 paper and plasticised. They were mailed along with an introductory letter to every practitioner in each of 30 practices (intervention group). (Oakeshott, 1994 [A151])
2 The guidelines were disseminated extensively. Copies of guidelines were mailed to all obstetricians on the mailing list of the national specialty society and all hospitals with more than 50 beds. They were also published in the national medical journal and the bulletin of the society and copies were mailed to numerous associations of consumers and providers. (Lomas, 1989 [A121])
3 A video on various aspects of the condition was left by the pharmacist at each of 67 health centres for later viewing by the practitioner. (Wahlstrom, 1997 [A56])

Intervention 2

Educational meetings

Description

Providers participating in conferences, lectures, workshops or traineeships, outside their practice setting.

Factors that may influence resource use

- Location, frequency and length of meetings.
- Format of meetings (large didactic lecture, small interactive workshops).

Examples for you to consider

1 A series of 1-hour departmental lectures for the relevant practitioners.
2 One half-day conference for the relevant practitioners, hosted by a local 'expert'.
3 Several intensive group educational sessions (over 2 hours), for small groups of relevant practitioners.
4 One didactic 2-hour meeting for relevant practitioners (given a choice of several sessions being run at different venues) with presentations from a local expert and peers involved in developing the guidelines of interest.

Examples from the review

1 One hour, departmental lectures were given to 21 residents of one outpatient department over 6 weeks on the rationale and frequency of recommendations. (Robie, 1988 [A175])
2 Thirty-eight physicians from two area health education centres were invited to attend one half-day conference held at a nearby resort where university experts reviewed the recommendations. (Gorton, 1995 [A83])
3 Four intensive, interactive group educational sessions, each lasting 2 hours, were organised for two small groups of GPs (eight and nine). They were supervised by an experienced GP. They involved lectures, role playing, skills training, peer review of performance, discussion and problem solving of hypothetical situations involving patients. (Smeele, 1999 [A191])
4 All GPs from the 78 practices were invited to attend one of the four guideline dissemination meetings (two held in a hotel in the city, the other two in a hotel in a rural location). The meetings were didactic, lasting about 2 hours, with presentations by the hospital consultant and local GPs who had been members of the development group, with time for discussion and questions afterwards. (Thomas, 1998 [A208])

Intervention 3

Educational outreach visits

Description

Use of a trained person who meets providers in their practice settings to give information with the intent of changing the provider's practice. The information given may have included feedback on the performance of the provider(s).

The meeting may be with an individual provider, or groups of providers.

Factors that may influence resource use

- Location, frequency and length of outreach visits (i.e. do they visit all GPs in a practice at one meeting, do they visit consultants one by one?).
- Number of outreach workers.

Examples for you to consider

1 One-to-one visits by pharmacists (community or hospital as relevant to the setting) who had been trained as educators (> 2 days' training). No more than two brief (less than half an hour) visits to all relevant practitioners.
2 Visits to clinical or practice teams by a nurse trained as an educator (> 2 days' training). Meetings last at least an hour and occur several times.
3 A doctor trained as an educator (> 2 days' training). The doctor presents guidelines and specific educational messages at 1-hour presentations to services or groups of practices. In inpatient settings, could be supplemented by participation of the doctor-educator on ward rounds.

Examples from the review

1 Three community pharmacists received 20 hours training in the guideline development process and recommendations as well as interpersonal skills. Each pharmacist made two, one to one visits of no longer than 10 minutes to 35 GPs (7 practices) over 6 months. These visits were to discuss guideline recommendations, and the GPs' opinion of the guidelines and attitude to the pharmacist and educational visit. (Watson, 1998 [A221])
2 Six practice nurses were selected and trained to carry out the facilitator's role. They visited 33 practices (68 family physicians) and met

with the practice team. They applied a four-step model in each practice designed to overcome organisational problems (orientation, insight, acceptance and change) in implementing the guidelines. On average visits involved 30 hours of meetings for practice staff. Each practice was visited 25 times on average over a period of 18 months, and mean duration of the visits was 73 minutes. (Hulscher, 1997 [A99])

3 Five half-day sessions were spent with the physician educator (a specialist in the field) on the principles and techniques of interactive communication and persuasion. The physician educator conducted rounds with the medical and surgical services at each of two hospitals consisting of a 60-minute session presenting the clinical guidelines and specific educational messages. (Soumerai, 1993 [A196])

Intervention 4

Local opinion leaders

Description

Use of providers nominated by their colleagues as 'educationally influential'. The investigators must have explicitly stated that their colleagues identified the opinion leaders.

Factors that may influence resource use

- Opinion leader (OL) activities (e.g. meetings, visits).
- Number of opinion leaders.

Examples for you to consider

In both examples, colleagues nominate several peers as OLs:

1 Small number of OLs who undergo a short period of training (< 1 day). Activities they carry out are:
   - providing covering letters for guidelines mailed to colleagues
   - hosting an educational meeting
   - committing to enhancing their ongoing educational contacts with colleges.

2 Large number of OLs who undergo a substantial period of training (minimum 2 days). Activities they carry out are:
   - establishing and leading task forces
   - activities of task forces vary according to local need but would include educational activities and outreach programmes.

Examples from the review

1 All relevant physicians in each of four hospitals were asked to nominate (postal questionnaire), the local colleague(s) who best matched set descriptions of an educationally influential opinion leader. Four were identified and attended a half-day workshop on evidence for practice guidelines and principles of behaviour change. They agreed to: carry out two mailings with covering letters from themselves of the guidelines, detailing sheets and information binder; host a meeting in the community with an expert speaker on the guidelines topic; maintain and enhance their formal and informal educational contact with colleagues. (Lomas, 1993 [A122])

2 Opinion leaders (OL) were selected by the recommendations of their community peers. The 27 community opinion leaders attended a 2-day mini-fellowship to provide knowledge and skills and promote appropriate attitudes and behaviours. The mini fellowship consisted of didactic presentations, clinical preceptorships with experiential clinical rounds in inpatient units and hospital home visits, lectures, small group discussions, case studies and practicums. During the 15 months following the mini fellowship the OLs formed community based task forces to promote study activities and raise awareness. They conducted community didactic programmes and community outreach programmes. OLs were encouraged to tailor their activities, as individuals, and through their task forces to fit the needs and culture of their community. (Elliott, 1997 [A59])

Intervention 5

Audit and feedback

Description

A summary of clinical performance over a specified period given to a provider. The summary may include recommendations for clinical action. The information may have been obtained from medical records, computerised databases or observations from patients.

The feedback may include summaries of the clinical performance at the level of the individual provider, a group of providers, the practice, the institution or region.

The recipient of the feedback may be the individual provider, a group of providers, the practice, the institution or region.

Factors that may influence resource use

- Frequency of the audit and feedback (e.g. every 6 months).
- Method of audit, related to data needed to measure the behaviour (e.g. manual audit of sample of medical records, use of routinely collected computerised data, PACT).
- Format of feedback, produced by whom (printed report to individual/institution, meeting/briefing at individual level to institutional level).

Examples for you to consider

1 Regular, frequent (minimum weekly) electronic mail messages to practitioners containing computer-generated reports on compliance with guidelines over the previous recent weeks.
2 Monthly paper reports to practitioners containing data on compliance with guidelines and a comparison of performance with anonymous peers. Data generated from electronic medical records.
3 Monthly seminars where individual practitioners are given paper reports containing: personal performance in complying with guidelines; comparison of performance with anonymous peers; and a commentary from a 'local expert'. Data obtained from (manual) medical record audits.
4 Quarterly departmental meetings where departmental compliance with guidelines is presented to the department, with commentary from an external group. Data obtained from (manual) medical record audits.

Examples from the review

1 Twenty-two primary care clinicians at a university affiliated primary care clinic received a twice-weekly electronic mail message consisting of a computer generated report summarising his/her compliance with care guideline recommendations for patients seen during the previous 2 weeks (a total of 229 encounters over 12 weeks). (Lobach, 1996 [A120])
2 Monthly feedback was given to each of 16 physicians in one health centre on their individual provider compliance rate compared to that of (anonymous) peers. It was sent to each physician in the form of a paper report, generated by the fully automated medical record information system. (Winickoff, 1984 [A228])
3 A monthly didactic programme (5 monthly seminars over luncheon) provided 20 internal medicine residents in a general internal medicine group practice with individual feedback regarding their performance. The feedback was based on data derived from audits of a sample of their patients' medical records over the previous 9 months. It was summarised in handouts listing each resident's performance scores during the preceding 9-month period, permitting residents to compare their own rates with those of others, with guideline recommendations, and group means (blinded to the identity codes of others). At each monthly meeting, residents received updated performance scores reviewed by a faculty member. (McPhee, 1989 [A136])
4 Every 3 months meetings of the entire department (in each of four hospitals) were held for feedback and discussion of audit results. Chart audits were performed in each hospital; organised either by the physicians themselves or by the study team using agreed criteria. The meetings were facilitated by the departmental chair and feedback was at departmental level as opposed to individual physician level, given by the research team. (Lomas, 1991 [A122])

Intervention 6

Reminders

Description

Patient- or encounter-specific information provided verbally, on paper or on a computer screen, which is designed or intended to prompt a health professional to recall information. This would usually be encountered through their general education, in the medical records or through interactions with peers, and so remind them to perform or avoid some action to aid individual patient care.

Factors that may influence resource use

- Frequency and number of reminders/prompts.
- Format and method of reminders/prompts (e.g. computer-generated printed checklist attached to patient medical records by clerking staff, online prompt during patient encounter).

Examples for you to consider

1 Stickers (with spaces for recording appropriate clinical management actions) placed on medical records by administrative staff. Additional brightly coloured 'spots' added by administrative staff to records of patients meeting criteria that indicate a specific intervention is due or required.
2 Computer-generated reports sent annually to clinicians by a central administrative system, detailing interventions/procedures undertaken during the previous year and those apparently overdue. Space for clinicians to complete missing information in procedures done during the year, to be returned to the administrator.
3 In the context of a computerised tracking and/or electronic record system, computer-generated 'alerts' and 'messages' to clinicians, derived from management guidelines. 'Alerts' would be sent to clinicians every time a relevant event happened to one of his/her patients; a 'message' would be a prompt to appropriate management action when the clinician opens that patient's electronic record.

Examples from the review

1 Chart stickers with spaces for recording three referrals and completions with a bright orange dot placed at the top of each sticker for recording when the next preventative measure was due. The dot was intended to provide a specific action cue for the physician. Office staff, in 42 practices (62 physicians), were asked to place these stickers on the charts of all women age 50 and over, when the charts were pulled for appointments. (Grady, 1997 [A84])
2 To use the health maintenance tracking system, providers enter health maintenance data on the patient encounter form screen along with billing and diagnostic data during patient visits. The system produces a health maintenance status report, once a year, in the month of the patient's birth and this is placed on the front of the patient's chart. It clearly shows when procedures were done and what procedures are overdue. Providers indicate on the form any procedures done at visits between the generation of the reports. Trialled in 829 patients from one group practice with five offices. (Frame, 1994 [A72])
3 The hospital is served by an integrated clinical computing system. This system is heavily used by clinicians and information is available from over 2000 terminals in inpatient and outpatient settings. Physicians can use the system to look up laboratory data, send and receive email and perform various decision support tasks. Ten staff physicians, 55 residents, and 5 nurse practitioners from two primary care teams in the general medicine practice received on-line messages (303 alerts and 432 reminders for 191 patents) in relation to management guidelines. An alert is a message delivered by computer that informs a clinician about an important event concerning a patient; a reminder is a message delivered by computer that occurs only when the clinician looks at the patient's record on-line. The alerts and reminders were only shown on screen, not printed out. (Safran, 1995 [A182])

Feedback

The HTA Programme and the authors would like to know your views about this report.

The Correspondence Page on the HTA website (http://www.ncchta.org) is a convenient way to publish your comments. If you prefer, you can send your comments to the address below, telling us whether you would like us to transfer them to the website.

We look forward to hearing from you.

The National Coordinating Centre for Health Technology Assessment,
Mailpoint 728, Boldrewood,
University of Southampton,
Southampton, SO16 7PX, UK.
Fax: +44 (0) 23 8059 5639 Email: hta@soton.ac.uk
http://www.ncchta.org

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