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1. APPENDIX 1: LITERATURE SEARCH STRATEGIES

MEDLINE SEARCH STRATEGY

1. exp Coronary Disease/
2. Asthma/
3. exp Pulmonary Disease, Chronic Obstructive/
4. exp Diabetes Mellitus, Type 2/
5. exp Coronary Disease/
6. exp arthritis, rheumatoid/ or exp osteoarthritis/
7. exp Hypertension/
8. exp Hyperlipidemia/
9. exp Osteoporosis/
10. 2 or 3 or 4 or 5 or 6 or 7 or 8 or 9
11. exp Ambulatory Care/
12. exp Patient Care Management/
13. exp Patient Care Planning/
14. exp Patient Care Team/
15. exp "Continuity of Patient Care"/
16. exp Disease Management/
17. exp Comprehensive Health Care/
18. exp GUIDELINES/ or exp PRACTICE GUIDELINES/
19. exp Self Care/
20. exp Motivation/
21. exp Patient Participation/
22. exp Patient Education/
23. exp Reminder Systems/
24. exp Information Systems/
25. exp Decision Support Systems, Clinical/
26. exp Decision Making, Computer-Assisted/
27. exp Management Information Systems/
28. exp Ambulatory Care Information Systems/
29. exp "Quality of Health Care"/
30. exp REIMBURSEMENT, INCENTIVE/
31. exp Registries/
32. (self adj (monitor$ or manage$)).tw.
33. (care adj (plan$ or team$)).tw.
34. (share$ adj care).tw.
35. (disease$ adj register$).tw.
36. ((patient$ or practic$) adj guideline$).tw.
37. (recall adj2 system$).tw.
38. (integrate$ adj2 (care or service)).tw.
39. ((effect? or impact or evaluat$ or introduc$ or compare$) adj2 care program$).tw.
40. ((effect? or impact or evaluat$ or introduc$ or compara$) adj2 prevent$ program$).tw.
41. ((introduc$ or impact or effect? or implement$ or computer$) adj2 protocol?).tw.
42. community matron$.tw.
43. (step$ adj care).tw.
44. (disease adj manag$).tw.
45. exp Chronic Disease/
46. 11 or 12 or 13 or 14 or 15 or 16 or 17 or 18 or 19 or 20 or 21 or 22 or 23 or 24 or 25 or 26 or 27 or 28 or 29 or 30 or 31 or 32 or 33 or 34 or 35 or 36 or 37 or 38 or 39 or 40 or 41 or 42 or 43 or 44 or 45
47. 10 and 46
48. exp Primary Health Care/
49. exp Comprehensive Health Care/
50. exp Patient Care Management/
51. exp Family Practice/
52. exp Physicians, Family/
53. exp Community Health Services/
54. (primary adj1 (care or health)).tw.
55. (family adj1 (doct$ or medic$ or pract$ or physic$)).tw.
56. (general adj1 practi$).tw.
57. (gps or gp).tw.
58. 48 or 49 or 50 or 51 or 52 or 54 or 55 or 56 or 57
59. 47 and 58
60. randomized controlled trial.pt.
61. controlled clinical trial.pt.
62. intervention studies/
63. experiment$.tw.
64. (time adj1 series).tw.
65. random allocation/
66. impact.tw.
67. intervention?.tw.
68. change$.tw.
69. evaluation studies/
70. evaluat$.tw.
71. effect?.tw.
72. comparative studies/
73. animal/
74. human/
75. 73 not 74
76. 60 or 61 or 62 or 63 or 64 or 65 or 66 or 67 or 68 or 69 or 70 or 71 or 72
77. 76 not 75
78. 59 and 77
79. exp africa/ or exp caribbean region/ or exp central america/ or exp latin america/ or exp greenland/ or exp mexico/ or exp south america/ or exp antarctic regions/ or exp arctic regions/ or exp asia/ or exp atlantic islands/ or exp indian ocean islands/ or exp oceania/ or exp "oceans and seas"/ or exp melanesia/ or exp micronesia/ or exp polynesia/
80. 78 not 79
81. limit 80 to (humans and english language and "all adult (19 plus years)"
and yr="1990 - 2006")
82. exp Acute Disease/
83. 81 not 82
84. "Retrospective Studies"/
85. 83 not 84
86. exp Mass Screening/
87. 85 not 86
88. exp "clinical trial, phase i [publication type]"/ or exp "clinical trial, phase ii [publication type]"/ or exp "clinical trial, phase iii [publication type]"/ or exp "clinical trial, phase iv [publication type]"/
89. 87 not 88
90. exp Neoplasms/
91. 89 not 90
92. exp "Review [Publication Type]"/
93. 91 not 92

EMBASE SEARCH STRATEGY

1. exp Chronic Disease/
2. exp Asthma/
3. exp Chronic Obstructive Lung Disease/
4. exp Diabetes Mellitus/
5. exp heart disease/ or exp hypertension/
6. exp Hyperlipidemia/
7. exp Arthritis/
8. exp Osteoporosis/
9. 1 or 2 or 3 or 4 or 5 or 6 or 7 or 8
10. exp ambulatory care/
11. exp patient care/
12. exp ambulatory monitoring/ or exp blood glucose monitoring/ or exp blood pressure monitoring/ or exp home monitoring/ or exp self monitoring/
13. exp Disease Management/
14. exp long term care/
15. exp Self Care/
16. exp patient compliance/ or exp patient participation/
17. exp health promotion/ or exp patient education/
18. exp doctor nurse relation/ or exp doctor patient relation/ or exp medical decision making/
19. exp information system/
20. exp register/
21. exp "health care cost"/ or exp reimbursement/
22. health care quality/ or exp practice guideline/ or exp outcomes research/
23. (care adj (plan$ or team$)).tw.
24. (share$ adj care).tw.
25. (self adj (monitor$ or manage$)).tw.
27. ((patient$ or pract$) adj guideline$).tw.
28. (recall adj2 system$).tw.
29. (integrat$ adj2 (care or service)).tw.
30. ((effect? or impact or evaluat$ or introduc$ or compare$) adj2 care program$).tw.
31. ((introduc$ or impact or effect? or implement$ or computer$) adj2 protocol?).tw.
32. ((effect? or impact or evaluat$ or introduc$ or compara$) adj2 prevent$ program$).tw.
33. community matron$.tw.
34. (step$ adj care).tw.
35. (disease adj manag$).tw.
36. 10 or 11 or 12 or 13 or 14 or 15 or 16 or 17 or 18 or 19 or 20 or 21 or 22 or 23 or 24 or 25 or 26 or 27 or 28 or 29 or 30 or 31 or 32 or 33 or 34 or 35
37. 9 and 36
38. exp general practice/ or exp primary medical care/
39. exp general practitioner/
40. (general adj2 practi$).tw.
41. (gps or gp).tw.
42. (family adj2 physician$).tw.
43. exp primary health care/
44. (family adj2 doctor$).tw.
45. (family adj2 pract$).tw.
46. (primary adj2 care).tw.
47. primary health.tw.
48. family medicine.tw.
49. 38 or 39 or 40 or 41 or 42 or 43 or 44 or 45 or 46 or 47 or 48
50. 37 and 49
51. Randomized Controlled Trial/
52. (randomised or randomized).tw.
53. experiment$.tw.
54. (time adj series).tw.
55. (pre test or pretest or post test or posttest).tw.
56. impact.tw.
57. intervention?.tw.
58. chang$.tw.
59. evaluat$.tw.
60. effect?.tw.
61. compar$.tw.
62. 51 or 52 or 53 or 54 or 55 or 56 or 57 or 58 or 59 or 60 or 61
63. Nonhuman/
64. 62 not 63
65. 50 and 64
66. exp "arctic and antarctic"/ or exp africa/ or exp asia/ or exp oceanic regions/ or exp mexico/ or exp "south and central america"/
67. exp eastern europe/ or exp baltic states/
68. 66 or 67
69. 65 not 68
70. exp SCREENING/
71. 69 not 70
72. limit 71 to (human and english language and yr="1990 - 2006" and (adult <18 to 64 years> or aged <65+ years>))
73. exp PREVENTION/
74. 72 not 73

CINAHL SEARCH STRATEGY
1. exp Heart Diseases/
2. exp diabetes mellitus, insulin-dependent/ or exp diabetes mellitus, non-insulin-dependent/
3. exp asthma/ or exp lung diseases, obstructive/
4. exp arthritis, rheumatoid/ or exp osteoarthritis/
5. exp Hypertension/
6. exp Hyperlipidemia/
7. exp Osteoporosis/
8. 1 or 2 or 3 or 4 or 5 or 6 or 7
9. exp ambulatory care/ or exp cardiovascular care/ or exp long term care/
10. exp case management/ or exp "continuity of patient care"/ or exp
disease management/ or exp multidisciplinary care team/ or exp patient care
conferences/ or exp patient centered care/ or exp primary health care/ or
exp protocols/
11. exp Managed Care Programs/ or exp Patient Care Plans/
12. exp Self Care/
13. exp Practice Guidelines/
14. exp Patient Education/
15. exp Reminder Systems/
16. exp ambulatory care information systems/ or exp clinical information
systems/ or exp decision support systems, clinical/ or exp managed care
information systems/
17. exp "Quality of Health Care"/
18. exp Consumer Participation/
19. exp Motivation/
20. (self adj (monitor or manage$)).tw.
21. (care adj (plan$ or team$)).tw.
22. (share$ adj care).tw.
24. ((patient$ or practic$) adj guideline$).tw.
25. (recall adj2 system$).tw.
26. (integrat$ adj2 (care or service)).tw.
27. ((effect? or impact or evaluat$ or introduc$ or compar$) adj2 care
program$).tw.
28. ((effect? or impact or evaluat$ or introduc$ or compar$) adj2 prevent$program$).tw.
29. ((introduc$ or impact or effect? or implement$ or computer$) adj2
protocol$).tw.
30. community matron.tw.
32. (step$ adj care).tw.
33. (disease adj manage$).tw.
34. exp Chronic Disease/
35. 9 or 10 or 11 or 12 or 13 or 14 or 15 or 16 or 17 or 18 or 19 or 20 or 21
or 22 or 23 or 24 or 25 or 26 or 27 or 28 or 29 or 30 or 31 or 32 or 33 or 34
36. 8 and 35
37. exp Family Practice/
38. (general adj2 practic$).tw.
39. (gps or gp).tw.
40. exp Physicians, Family/
41. (family adj2 physician$).tw.
42. exp Primary Health Care/
43. (primary adj2 care).tw.
44. (primary adj2 practi$).tw.
45. primary health.tw.
46. family medicine.tw.
47. 37 or 38 or 39 or 40 or 41 or 42 or 43 or 44 or 45 or 46
48. 36 and 47
49. exp Clinical Trials/
50. (controlled adj (study or trial)).tw.
51. (randomised or randomized).tw.
52. (random$ adj1 (allocat$ or assign$)).tw.
53. exp Pretest-Posttest Design/
54. exp Quasi-Experimental Studies/
55. Comparative Studies/
56. time series.tw.
57. experiment$.tw.
58. impact.tw.
59. intervention?.tw.
60. evaluat$.tw.
61. effect?.tw.
62. 49 or 50 or 51 or 52 or 53 or 54 or 55 or 56 or 57 or 58 or 59 or 60 or 61
63. 48 and 62
64. limit 63 to (english and (adult <19 to 44 years> or middle age <45 to 64 years> or aged <65 to 79 years> or "aged <80 and over>")) and yr="1990 - 2006"
65. exp africa/ or exp antarctic regions/ or exp arctic regions/ or exp asia/ or exp atlantic islands/ or exp andorra/ or exp armenia/ or exp austria/ or exp azerbaijan/ or exp belgium/ or exp europe, eastern/ or exp france/ or exp "georgia (republic)/" or exp germany/ or exp gibraltar/ or exp greece/ or exp italy/ or exp liechtenstein/ or exp luxembourg/ or exp mediterranean region/ or exp monaco/ or exp portugal/ or exp san marino/ or exp spain/ or exp switzerland/ or exp indian ocean islands/
66. 64 not 65
67. from 66 keep 6-7,9,20,30,34,36,41,44,46,48,55,57,60,63,67,70,76-78,81,84,86,88,90,97,100-101,106-108,110,113,128-129,134-135,139
69. 67 or 68
70. limit 69 to commentary
71. 69 not 70

PSYCHLIT SEARCH STRATEGY

1. exp asthma/
2. exp heart disorders/
3. exp hypertension/
4. exp arthritis/
5. diabetes/ or exp diabetes mellitus/
6. exp chronic illness/
7. 1 or 2 or 3 or 4 or 5 or 6
8. exp "quality of care"/ or exp "continuum of care"/ or exp health care delivery/ or exp health care services/ or exp managed care/
9. exp interdisciplinary treatment approach/ or exp integrated services/ or exp multimodal treatment approach/
10. exp self monitoring/ or exp monitoring/ or exp self management/ 
11. exp treatment planning/ or exp case management/ or exp health care 
delivery/ or exp managed care/ or exp treatment guidelines/ 
12. decision making/ or exp decision support systems/ 
13. exp health care utilization/ 
14. exp client education/ 
15. (self adj (monitor or manage$)).tw. 
16. (care adj (plan$ or team$)).tw. 
17. (share$ adj care).tw. 
19. ((patient$ or practic$) adj guideline$).tw. 
20. (recall adj2 system$).tw. 
21. (integrate$ adj2 (care or service)).tw. 
22. ((effect? or impact or evaluat$ or introduc$ or compare$) adj2 care 
program$).tw. 
23. ((effect? or impact or evaluat$ or introduc$ or compare$) adj2 prevent$ 
program$).tw. 
24. ((introduc$ or impact or effect? or implement$ or computer$) adj2 
protocol$).tw. 
25. community matron.tw. 
27. (disease adj manag$).tw. 
28. 8 or 9 or 10 or 11 or 12 or 13 or 14 or 15 or 16 or 17 or 18 or 19 or 20 
or 21 or 22 or 23 or 24 or 26 or 27 
29. 7 and 28 
30. exp primary health care/ or exp health care delivery/ or exp integrated 
services/ or exp managed care/ 
31. exp family medicine/ or exp family physicians/ or exp general 
practitioners/ 
32. community services/ or exp health care services/ 
33. (primary adj1 (care or health$)).tw. 
34. (family adj1 (doct$ or medic$ or pract$ or physic$)).tw. 
35. (general adj1 practi$).tw. 
36. (gps or gp).tw. 
37. 30 or 31 or 32 or 33 or 34 or 35 or 36 
38. 29 and 37 
39. experimental design/ or exp clinical trials/ or exp followup studies/ or 
exp quasi experimental methods/ 
40. experiment$.tw. 
41. (time adj1 series).tw. 
42. impact.tw. 
43. intervention?.tw. 
44. change$.tw. 
45. evaluat$.tw. 
46. effect?.tw. 
47. exp ANIMALS/ 
48. 39 or 40 or 41 or 42 or 43 or 44 or 45 or 46 
49. 48 not 47 
50. 38 and 49 
51. exp PAIN/ 
52. 50 not 51
53. limit 52 to (peer reviewed journal and human and english language and "300 adulthood " and "0110 peer-reviewed journal" and original journal article and yr="1990 - 2006")
# APPENDIX 2: ORGANISATIONS WITH INTEREST IN CHRONIC DISEASE

<table>
<thead>
<tr>
<th>National</th>
<th>International</th>
</tr>
</thead>
<tbody>
<tr>
<td>Discipline of General Practice, University of Adelaide</td>
<td><a href="http://www.adelaide.edu.au/health/gp/">http://www.adelaide.edu.au/health/gp/</a></td>
</tr>
<tr>
<td>Menzies School of Health Research</td>
<td><a href="http://www.menzies.edu.au/">http://www.menzies.edu.au/</a></td>
</tr>
</tbody>
</table>
APPENDIX 3: EPOC TAXONOMY OF INTERVENTIONS

This review included interventions that fell under the EPOC headings of professional, financial and organisational interventions. Regulatory interventions were not included in this review.

PROFESSIONAL INTERVENTIONS

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

2. Educational meetings (Health care providers who have participated in conferences, lectures, workshops or traineeships.)

3. 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.)

4. 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).)

5. 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.)

6. 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.)

7. 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.)

8. 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.)

9. 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.)

10. Mass media
   - 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;
• Targeted at the population level.

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

FINANCIAL INTERVENTIONS

Provider Interventions
1. Fee-for-service (provider has been paid for number and type of service delivered)
2. Prepaid (no other description)
3. Capitation (provider was paid a set amount per patient for providing specific care)
4. Provider salaried service (provider received basic salary for providing specific care)
5. Prospective payment (provider was paid a fixed amount for health care in advance)
6. Provider incentives (provider received direct or indirect financial reward or benefit for doing specific action)
7. Institution incentives (institution or group of providers received direct or indirect financial rewards or benefits for doing specific action)
8. Provider grant/allowance (provider received direct or indirect financial reward or benefit not tied to specific action)
9. Institution grant/allowance (institution or group of providers received direct or indirect financial reward or benefit not tied to specific action)
10. Provider penalty (provider received direct or indirect financial penalty for inappropriate behaviour)
11. Institution penalty (institution or group of providers received direct or indirect financial penalty for inappropriate behaviour)
12. Formulary (added or removed from reimbursable available products)
13. Other (other categories to be agreed in consultation with the EPOC editorial team)

Patient Interventions
1. 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.)
2. Co-payment (Patient payment at the time of health care 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.)
3. User-fee (Patient payment at the time of health care delivery.)
4. Patient incentives (Patient received direct or indirect financial reward or benefit for doing or encouraging them to do specific action.)
5. Patient grant/allowance (Patient received direct or indirect financial reward or benefit not tied to specific action.)
6. Patient penalty (Patient received direct or indirect financial penalty for specified behaviour e.g. reimbursement limits on prescriptions.)
7. Other (other categories to be agreed in consultation with the EPOC editorial team)

ORGANISATIONAL INTERVENTIONS

Provider Orientated Interventions
1. 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.)
2. 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)
3. 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’)
4. Skill mix changes (changes in numbers, types or qualifications of staff)
5. Continuity of care (including one or many episodes of care for inpatients or outpatients)
   - Arrangements for follow-up.
   - Case management (including co-ordination of assessment, treatment and arrangement for referrals)
6. Satisfaction of providers with the conditions of work and the material and psychic rewards (e.g. interventions to ‘boost morale’)
7. 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)
8. Other (other categories to be agreed in consultation with the EPOC editorial team)

Patient Orientated Interventions
1. Mail order pharmacies (e.g. compared to traditional pharmacies)
2. Presence and functioning of adequate mechanisms for dealing with patients’ suggestions and complaints
3. Consumer participation in governance of health care organization
4. Other (other categories to be agreed in consultation with the EPOC editorial team)

STRUCTURAL INTERVENTIONS
1. Changes to the setting/site of service delivery (e.g. moving a family planning service from a hospital to a school)
2. 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.)
3. Changes in medical records systems (e.g. changing from paper to computerised records, patient tracking systems)
4. Changes in scope and nature of benefits and services
5. Presence and organisation of quality monitoring mechanisms
6. Ownership, accreditation, and affiliation status of hospitals and other facilities
7. Staff organization
8. Other (other categories to be agreed in consultation with the EPOC editorial team)
REGULATORY INTERVENTIONS

Any intervention that aims to change health services delivery or costs by regulation or law. (These interventions may overlap with organisational and financial interventions.)

1. Changes in medical liability
2. Management of patient complaints
3. Peer review
4. Licensure
5. Other (other categories to be agreed in consultation with the EPOC editorial team)

Reference

APPENDIX 4: STUDY VERIFICATION FORM

APHCRI Chronic Disease Management Review
Verification of study eligibility

Endnote Record Number
Author and year

Journal
Title
Name/code of reviewer

INSTRUCTION: Please tick the appropriate box(es)

1. General

Published in English
Yes □ No □ → Do not continue

Published in 1990 or later
Yes □ No □ → Do not continue

Countries
Australia □
Canada □
USA □
New Zealand □
Netherlands □
United Kingdom* □
Scandinavia** □

* England, Scotland, Wales, Northern Ireland
** Sweden, Norway, Denmark, Finland, Iceland

You should answer Yes to at least one of these seven countries. If not please do not continue.

2. Types of Studies

Study design

RCT □
CCT □
CBA □ → If Yes

Contemporaneous data collection? Done □ Not clear □ Not done □

Appropriate choice of control site? Done □ Not clear □ Not done □

CBA □ → If Yes

At least 3 data points before and 3 after the intervention? Done □ Not clear □ Not done □

ITS □ → If Yes

Clearly defined point in time when the intervention? Done □ Not clear □ Not done □

Other □ (please specify)

If you score "Not done" for any of above criteria, the study should not be included, except the study was undertaken in Australia.
Methodological inclusion criteria

Objective measurement of outcomes?
Refers to objective measurement of performance/behaviour of providers/patient outcome(s) in a clinical not test situation. Outcome measures such as provider satisfaction with work or patient satisfaction with care may be included if they are assessed using a tool with known reliability and validity.

Done ✅ Not clear ✗ Not done ✗

Relevant and interpretable data presented or obtainable?

Done ✅ Not clear ✗ Not done ✗

*If either of the above criteria as “Not done”, the study should not be included.*

3. Setting

- Hospital setting ☐
- Community setting ☑

4. Types of participants

**Patients**

<table>
<thead>
<tr>
<th>Sex</th>
<th>Male only</th>
<th>Female only</th>
<th>Both</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age</td>
<td>&lt;18 years</td>
<td>≥18 years</td>
<td></td>
</tr>
<tr>
<td>Condition</td>
<td>Asthma</td>
<td>Lipid disorders</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Heart disease</td>
<td>COPD</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Hypertension</td>
<td>Arthritis (OA or RA)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Diabetes</td>
<td>Osteoporosis</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Others</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Health care professionals**

- Doctors ☐
- Allied health professionals ☐
- Nurses ☐
- Lay health workers ☐
- Pharmacists ☐
- Administrative staff ☐
- Others (specify) ☐

5. Types of intervention

*The intervention to the patient must be delivered by non-hospital health professionals (including doctors, nurses, pharmacists, allied health professionals) or other non-hospital staff (lay health workers or administrative staff) in a primary or community care setting.*

*Interventions delivered by hospital health professionals to non-hospital health professionals will be included but only where the subsequent intervention to the patient is delivered by non-hospital health professionals.*

- Professional intervention ☐
- Patient intervention ☐
- Financial intervention ☐
- Organisational intervention ☐
### 6. Types of outcome measures

<table>
<thead>
<tr>
<th>Category</th>
<th>Yes</th>
<th>No</th>
</tr>
</thead>
<tbody>
<tr>
<td>Health professional performance</td>
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<td></td>
</tr>
<tr>
<td>Patient outcomes</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Self report measures with known validity and reliability</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Economic measures</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Others</td>
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</tbody>
</table>
APPENDIX 5: STUDY QUALITY ASSESSMENT FORM
– RCT & CCT

APHCRI Chronic Disease Management Review
Quality Assessment Scale
For Randomised Controlled Trials & Controlled Clinical Trials

Endnote Record Number

Author and year

Journal

Title

Name/code of reviewer

TOTAL SCORE

Scoring: DONE=2; NOT CLEAR=1; NOT DONE=0

Concealment of allocation (protection against selection bias)

<table>
<thead>
<tr>
<th>DONE</th>
<th>NOT CLEAR</th>
<th>NOT DONE</th>
</tr>
</thead>
</table>

DONE = Randomisation process is described explicitly, e.g. random number, coin flips, centralised randomisation scheme, an on-site computer system or sealed opaque envelopes.
NOT CLEAR = The unit of allocation is not described explicitly OR the unit of allocation was by patient or episode of care and the authors report using a ‘list’ or ‘table’, ’envelopes’ or ‘sealed envelopes’ for allocation.
NOT DONE = Allocation using date of birth, date of admission, hospital numbers or alternation.

Adequate follow-up (protection against exclusion bias)

<table>
<thead>
<tr>
<th>DONE</th>
<th>NOT CLEAR</th>
<th>NOT DONE</th>
</tr>
</thead>
</table>

DONE = Outcome measures obtained for 80-100% of subjects randomised.
NOT CLEAR = Not specified in the paper
NOT DONE = Outcome measures obtained for less than 80% of subjects randomised.

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

<table>
<thead>
<tr>
<th>DONE</th>
<th>NOT CLEAR</th>
<th>NOT DONE</th>
</tr>
</thead>
</table>

DONE = Primary outcome(s) were assessed blindly OR the outcome variables are objective, e.g. length of hospital stay.
NOT CLEAR = Not specified in the paper
NOT DONE = The outcome(s) 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 and label each outcome variable clearly.
Baseline measurement
DONE 2  NOT CLEAR 1  NOT DONE 0

DONE = Outcomes were measured prior to the intervention, and no substantial differences were present across study groups.
NOT CLEAR = Not reported, or if it is unclear whether baseline measures are substantially different across study groups.
NOT DONE = There are differences at baseline in main outcome measures likely to undermine the post intervention differences (e.g. are differences between the groups before the intervention similar to those found post intervention).

Reliable primary outcome measure(s)
DONE 2  NOT CLEAR 1  NOT DONE 0

DONE = Two or more raters with at least 90% agreement or kappa ≥0.8 OR the outcome is obtained from some automated system e.g. length of hospital stay, drug levels as assessed by a standardised test.
NOT CLEAR = reliability is not reported for outcome measures that are obtained by chart extraction or collected by an individual.
NOT DONE = Agreement is less than 90% or kappa is less than 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.

Protection against contamination
DONE 2  NOT CLEAR 1  NOT DONE 0

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

Methods of statistical analysis
DONE 2  NOT CLEAR 1  NOT DONE 0

The study should include a statement describing or giving references for all statistical procedures used.
APPENDIX 6: STUDY QUALITY ASSESSMENT FORM - CBAS

APHCRI Chronic Disease Management Review
Quality Assessment Scale
For Controlled Before and After Studies

<table>
<thead>
<tr>
<th>Endnote Record Number</th>
<th></th>
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<td>Author and year</td>
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<tr>
<td>Journal</td>
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<tr>
<td>Name/code of reviewer</td>
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</tbody>
</table>

TOTAL SCORE __________

Scoring: DONE=2; NOT CLEAR=1; NOT DONE=0

**Baseline measurement**

<table>
<thead>
<tr>
<th>DONE</th>
<th>NOT CLEAR</th>
<th>NOT DONE</th>
</tr>
</thead>
<tbody>
<tr>
<td>2</td>
<td>1</td>
<td>0</td>
</tr>
</tbody>
</table>

**DONE** = Outcomes were measured prior to the intervention, and no substantial differences were present across study groups.

**NOT CLEAR** = Not reported, or if it is unclear whether baseline measures are substantially different across study groups.

**NOT DONE** = There are differences at baseline in main outcome measures likely to undermine the post intervention differences (e.g. differences between the groups before the intervention similar to those found post intervention).

**Characteristics for studies using second site as control**

<table>
<thead>
<tr>
<th>DONE</th>
<th>NOT CLEAR</th>
<th>NOT DONE</th>
</tr>
</thead>
<tbody>
<tr>
<td>2</td>
<td>1</td>
<td>0</td>
</tr>
</tbody>
</table>

**DONE** = Characteristics of study and control providers are reported and similar.

**NOT CLEAR** = Not clear in the paper 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.

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

<table>
<thead>
<tr>
<th>DONE</th>
<th>NOT CLEAR</th>
<th>NOT DONE</th>
</tr>
</thead>
<tbody>
<tr>
<td>2</td>
<td>1</td>
<td>0</td>
</tr>
</tbody>
</table>

**DONE** = Primary outcome(s) were assessed blindly OR the outcome variables are objective, e.g. length of hospital stay.

**NOT CLEAR** = Not specified in the paper.

**NOT DONE** = The outcome(s) 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 and label each outcome variable clearly.
Protection against contamination (Studies using second site as control)
DONE 2 NOT CLEAR 1 NOT DONE 0
DONE = Allocation was by community, institution or practice and it is unlikely that the control received the intervention.
NOT CLEAR = Professionals were allocated within a clinic or practice and it is possible that communication between experimental and group professionals could have occurred.
NOT DONE = It is likely that the control group received the intervention (e.g. cross-over trials or if patients rather than professionals were randomised).

Reliable primary outcome measure(s)
DONE 2 NOT CLEAR 1 NOT DONE 0
DONE = Two or more raters with at least 90% agreement or kappa ≥0.8 OR the outcome is obtained from some automated system e.g. length of hospital stay, drug levels as assessed by a standardised test.
NOT CLEAR = reliability is not reported for outcome measures that are obtained by chart extraction or collected by an individual.
NOT DONE = Agreement is less than 90% or kappa is less than 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.

Adequate follow-up (protection against exclusion bias)
DONE 2 NOT CLEAR 1 NOT DONE 0
DONE = Outcome measures obtained for 80-100% of subjects randomised.
NOT CLEAR = Not specified in the paper
NOT DONE = Outcome measures obtained for less than 80% of subjects randomised.

Methods of statistical analysis
DONE 2 NOT CLEAR 1 NOT DONE 0
The study should include a statement describing or giving references for all statistical procedures used.
APPENDIX 7: STUDY QUALITY ASSESSMENT FORM - ITS

APHCRI Chronic Disease Management Review
Quality Assessment Scale
For Interrupted Time Series

Endnote Record
Number
Author and year
Journal
Title
Name/code of reviewer

TOTAL SCORE ____________

Scoring: DONE=2; NOT CLEAR=1; NOT DONE=0

Protection against secular changes (The intervention is independent of other changes)

DONE □ 2
NOT CLEAR □ 1
NOT DONE □ 0

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.

Data were analysed appropriately

DONE □ 2
NOT CLEAR □ 1
NOT DONE □ 0

DONE = If ARIMA models were used OR time series regression models were used to analyse the data and serial correlation was adjusted/tested for
NOT CLEAR = Not specified (will be treated as NOT DONE if information cannot be obtained from the authors).
NOT DONE = Neither of the conditions above not met.

Reason for the number of points pre and post intervention given

DONE □ 2
NOT CLEAR □ 1
NOT DONE □ 0

DONE = Rationale for the number of points stated (eg monthly data for 12 months post-intervention was used because the anticipated effect was expected to decay) OR sample size calculation performed.
NOT CLEAR = Not specified (will be treated as NOT DONE if information cannot be obtained from the authors).
NOT DONE = Neither of the conditions above not met.

Shape of the intervention effect was specified

DONE □ 2
NOT CLEAR □ 1
NOT DONE □ 0

DONE = Rational explanation for the shape of intervention effect was given by the author(s)
NOT CLEAR = Not specified (will be treated as NOT DONE if information cannot be obtained from the authors).
NOT DONE = Neither of the conditions above not met.
**Intervention unlikely to affect data collection (protection against detection bias)**

<table>
<thead>
<tr>
<th></th>
<th>DONE</th>
<th>NOT CLEAR</th>
<th>NOT DONE</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>2</td>
<td>1</td>
<td>0</td>
</tr>
</tbody>
</table>

**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 reported (will be treated as NOT DONE if information cannot be obtained from the authors).

**NOT DONE** = If the intervention itself was likely to affect data collection (e.g. any change in source or method of data collection reported).

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

<table>
<thead>
<tr>
<th></th>
<th>DONE</th>
<th>NOT CLEAR</th>
<th>NOT DONE</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>2</td>
<td>1</td>
<td>0</td>
</tr>
</tbody>
</table>

**DONE** = Primary outcome(s) were assessed blindly OR the outcome variables are objective, e.g. length of hospital stay.

**NOT CLEAR** = Not specified in the paper (will be treated as NOT DONE if information cannot be obtained from the authors).

**NOT DONE** = The outcome(s) 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 and label each outcome variable clearly.

**Completeness of data set**

<table>
<thead>
<tr>
<th></th>
<th>DONE</th>
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<th>NOT DONE</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>2</td>
<td>1</td>
<td>0</td>
</tr>
</tbody>
</table>

**DONE** = data set covers 80-100% of total number of participants or episodes of care.

**NOT CLEAR** = Not specified in the paper (will be treated as NOT DONE if information cannot be obtained from the authors).

**NOT DONE** = Data set covers less than 80% of total number of participants or episodes of care.

**Reliable primary outcome measure(s)**

<table>
<thead>
<tr>
<th></th>
<th>DONE</th>
<th>NOT CLEAR</th>
<th>NOT DONE</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>2</td>
<td>1</td>
<td>0</td>
</tr>
</tbody>
</table>

**DONE** = Two or more raters with at least 90% agreement or kappa ≥0.8 OR the outcome is obtained from some automated system e.g. length of hospital stay, drug levels as assessed by a standardised test.

**NOT CLEAR** = reliability is not reported for outcome measures that are obtained by chart extraction or collected by an individual.

**NOT DONE** = Agreement is less than 90% or kappa is less than 0.8.

In the event that some outcome variables were assessed in a reliable fashion and others were not, score each separately.
### APPENDIX 8: DATA EXTRACTION FORM

Endnote Record Number: 

Author and year  

Journal  

Title  

Name/code of reviewer  

**Instruction:** Please tick the appropriate box(es) and write in the space provided.

<table>
<thead>
<tr>
<th>STUDY DESIGN</th>
<th>LOCATION OF CARE</th>
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</thead>
<tbody>
<tr>
<td>RCT</td>
<td>Hospital</td>
</tr>
<tr>
<td>□</td>
<td>□</td>
</tr>
<tr>
<td>(including Cluster RCT)</td>
<td>Primary care</td>
</tr>
<tr>
<td>□</td>
<td>□</td>
</tr>
<tr>
<td>CCT</td>
<td>Community based care</td>
</tr>
<tr>
<td>□</td>
<td>□</td>
</tr>
<tr>
<td>CBA</td>
<td>Mixed</td>
</tr>
<tr>
<td>□</td>
<td>□</td>
</tr>
<tr>
<td>ITS</td>
<td>Other (specify)</td>
</tr>
<tr>
<td>□</td>
<td>□</td>
</tr>
<tr>
<td>Other (specify)</td>
<td>Other (specify)</td>
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<tr>
<td>□</td>
<td>□</td>
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</tbody>
</table>

Study undertaken in Australia? Yes □ No □

<table>
<thead>
<tr>
<th>DURATION OF STUDY</th>
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<table>
<thead>
<tr>
<th>UNIT OF ALLOCATION</th>
<th>UNIT OF ANALYSIS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Patient □</td>
<td>Patient □</td>
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</tbody>
</table>

26
Please identify the groups and complete the following for each group (If more than 3 groups, please add extra columns)

**PARTICIPANTS**

<table>
<thead>
<tr>
<th>Patients</th>
<th>Group 1</th>
<th>Group 2</th>
<th>Group 3</th>
<th>Group 4</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Total patients included in the study</strong></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td><strong>Sex</strong></td>
<td>M</td>
<td>F</td>
<td>M</td>
<td>F</td>
</tr>
<tr>
<td><strong>Age</strong></td>
<td>Mean ± SD</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Median</td>
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<tr>
<td></td>
<td>Range</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Ethnicity</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Conditions</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>□ Asthma</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>□ Heart disease</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>□ Hypertension</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>□ Diabetes</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>□ Lipid disorders</td>
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<td></td>
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<td></td>
</tr>
<tr>
<td>□ COPD</td>
<td></td>
<td></td>
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<td></td>
</tr>
<tr>
<td>Participants excluded from the study</td>
<td>Number:</td>
<td>Number:</td>
<td>Number:</td>
<td>Number:</td>
</tr>
<tr>
<td>-------------------------------------</td>
<td>---------</td>
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<td>---------</td>
<td>---------</td>
</tr>
<tr>
<td>Reasons:</td>
<td>Reasons:</td>
<td>Reasons:</td>
<td>Reasons:</td>
<td>Reasons:</td>
</tr>
<tr>
<td>Withdrawals</td>
<td>Number:</td>
<td>Number:</td>
<td>Number:</td>
<td>Number:</td>
</tr>
<tr>
<td>Reasons:</td>
<td>Reasons:</td>
<td>Reasons:</td>
<td>Reasons:</td>
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</tbody>
</table>

### Health care professionals (HCPs)

<table>
<thead>
<tr>
<th>Number of practices</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of HCPs per practice</td>
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<tr>
<td>Other</td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>Total HCPs included in the study</th>
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</thead>
</table>

<table>
<thead>
<tr>
<th>Sex</th>
<th>M</th>
<th>F</th>
<th>M</th>
<th>F</th>
<th>M</th>
<th>F</th>
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</table>

<table>
<thead>
<tr>
<th>Age</th>
<th>Mean ± SD</th>
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</thead>
<tbody>
<tr>
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<td>Median</td>
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<tr>
<td></td>
<td>Range</td>
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</table>

<table>
<thead>
<tr>
<th>Profession</th>
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<tbody>
<tr>
<td>Doctors</td>
</tr>
<tr>
<td>Nurses</td>
</tr>
<tr>
<td>Pharmacists</td>
</tr>
<tr>
<td>Allied health professionals</td>
</tr>
<tr>
<td>Category</td>
</tr>
<tr>
<td>--------------------------------</td>
</tr>
<tr>
<td>Participants excluded from the study</td>
</tr>
<tr>
<td>Withdrawals</td>
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</table>
## Interventions

Refer to EPOC data collection checklist for definitions of terms

<table>
<thead>
<tr>
<th>Interventions</th>
<th>Group 1</th>
<th>Group 2</th>
<th>Group 3</th>
<th>Group 4</th>
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</thead>
<tbody>
<tr>
<td><strong>Professional Intervention</strong></td>
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<td></td>
<td></td>
</tr>
<tr>
<td>☐ Implementation of evidence-based guidelines</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>☐ Distribution of educational materials</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>☐ Educational meetings</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>☐ Local consensus processes</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>☐ Educational outreach visits</td>
<td></td>
<td></td>
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<td></td>
</tr>
<tr>
<td>☐ Local opinion leaders</td>
<td></td>
<td></td>
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</tr>
<tr>
<td>☐ Patient-mediated interventions</td>
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<tr>
<td>☐ Audit and feedback</td>
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<tr>
<td>☐ Reminders</td>
<td></td>
<td></td>
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</tr>
<tr>
<td>☐ Marketing <em>(e.g. personal interviewing, focus groups, survey to identify barriers)</em></td>
<td></td>
<td></td>
<td></td>
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</tr>
<tr>
<td>☐ Mass media</td>
<td></td>
<td></td>
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<td></td>
</tr>
<tr>
<td>☐ Other (specify)</td>
<td></td>
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</tr>
<tr>
<td><strong>Patient oriented intervention</strong></td>
<td></td>
<td></td>
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<td></td>
</tr>
<tr>
<td>☐ Distribution of educational materials</td>
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</tr>
<tr>
<td>☐ Education sessions</td>
<td></td>
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</tr>
<tr>
<td>☐ Motivational counselling</td>
<td></td>
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<tr>
<td>☐ Brief intervention</td>
<td></td>
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<td></td>
</tr>
<tr>
<td>☐ Community programs</td>
<td></td>
<td></td>
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<td></td>
</tr>
<tr>
<td>Organisational intervention</td>
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<td></td>
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<tr>
<td>-----------------------------</td>
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<tr>
<td><strong>Provider orientated interventions</strong></td>
<td></td>
<td></td>
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<td></td>
</tr>
<tr>
<td>☐ Revision of professional roles</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>☐ Multidisciplinary teams</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>☐ Formal integration of services</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>☐ Skill mix changes</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>☐ Continuity of care</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>☐ Interventions to boost morale</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>☐ Communication and case discussion</td>
<td></td>
<td></td>
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<tr>
<td>☐ Mail order pharmacies (e.g. compared to traditional pharmacies)</td>
<td></td>
<td></td>
<td></td>
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</tr>
<tr>
<td>☐ Presence and functioning of adequate mechanisms for dealing with patients’ suggestions and complaints</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>☐ Consumer participation in governance of health care organisation</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>☐ Other (specify)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Structural interventions</strong></td>
<td></td>
<td></td>
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### OUTCOME AND RESULTS

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).

**For RCTs and CCTs**

a) State the main results of the main outcome(s), for each study group, in natural units.

b) For each available comparison, report the baseline and post intervention differences between study and control groups, in natural units. Include statistical significance if reported. Indicate if the unit of randomisation and analysis were different.

**For CBAs**

a) State the main results of the main outcome(s), for each study group, in natural units.

b) For each study group, report baseline and post intervention results. Calculate the pre-post intervention difference for each outcome in natural units (i.e. the post-intervention outcome minus the pre-intervention outcome).

c) For each available comparison, calculate the difference across study groups of the pre-post intervention change (i.e. if, for an outcome measure $\Delta E$ is the pre-post intervention change in the experimental/intervention group, and $\Delta C$ is the pre-post intervention change in the control group, this will be $\Delta E - \Delta C$). Include statistical significance if reported.

**For ITSs**

State the main results of the main outcome(s) in natural units.
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How were outcomes measured? State whether the tools were validated prior to use.

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* = Post intervention
Study Aims:

Authors conclusion

Implementation strategies:

Barriers identified:

Facilitators identified:

For ITS study, please report the following

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Comments
APPENDIX 9: REVIEWS VERIFICATION FORM

APHCRI Chronic Disease Management Review

Verification of review eligibility

Endnote Record Number

Author and year

Journal

Title

Name/code of reviewer

INSTRUCTION: Please tick the appropriate box(es)

General

Published in English Yes □ No □ → Do not continue

Published in 1990 or later Yes □ No □ → Do not continue

Countries

Australia □

Canada □

USA □

New Zealand □

Netherlands (Holland) □

United Kingdom* □

Scandinavia** □

* England, Scotland, Wales, Northern Ireland

** Sweden, Norway, Denmark, Finland, Iceland)

Types of Studies Included

Study design

RCT □

CCT □

CBA □

ITS □

Other □ (please specify)

Methodological inclusion criteria

Is the specific purpose of the review stated? Is the review question clearly and explicitly stated?

Done □ Not clear □ Not done □

Were comprehensive search methods used to locate studies? Was a thorough search done of appropriate databases and were other potentially important sources explored?

39
Were there clear inclusion / exclusion criteria for the studies stated?

Done □ Not clear □ Not done □

Was the validity of the studies assessed appropriately?

Done □ Not clear □ Not done □

Was the assessment of the studies reproducible?

Done □ Not clear □ Not done □

*If either of the above criteria as “Not done”, the review should not be included.*

**Setting**

Hospital setting □

Community setting □

**Types of participants**

**Patients**

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**Health care professionals**

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<td>Administrative staff □</td>
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**Types of intervention**

*The intervention to the patient must be delivered by non-hospital health professionals (including doctors, nurses, pharmacists, allied health professionals) or other non-hospital staff (lay health workers or administrative staff) in a primary or community care setting.*
Interventions delivered by hospital health professionals to non-hospital health professionals will be included but only where the subsequent intervention to the patient is delivered by non-hospital health professionals.

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**Types of outcome measures**

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<tr>
<td>Health professional performance</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Patient outcomes</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Self report measures with known validity and reliability</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Economic measures</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Others (specify)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Data synthesis**

How were the studies combined?

Meta-analysis?

- Done
- Not clear
- Not done

Narrative synthesis?

- Done
- Not clear
- Not done

Were the findings combined appropriately?

- Done
- Not clear
- Not done

Were the design and/or methods and/or topic of included studies broadly comparable?

- Done
- Not clear
- Not done

Were the same outcomes used to determine the effectiveness of the intervention being evaluated?

- Done
- Not clear
- Not done

Were reasons for the differences between the studies explored?

- Done
- Not clear
- Not done
# APPENDIX 10: BRIEF DESCRIPTION OF THE PRIMARY PAPERS INCLUDED IN THE REVIEW

<table>
<thead>
<tr>
<th>Reference ID</th>
<th>Source</th>
<th>Duration of Study</th>
<th>Group 1</th>
<th>Group 2</th>
<th>Intervention</th>
<th>Outcomes</th>
</tr>
</thead>
<tbody>
<tr>
<td>ID 6</td>
<td>Allen et al. (2002)</td>
<td>12 months</td>
<td>Lipid disorders, N = 115</td>
<td>Lipid disorders</td>
<td><strong>Group 1</strong> Standard discharge advice and education, Nurse practitioner review, Nurse practitioner and cardiologist, Lifestyle intervention, and plan for lipid management, Regular review, Nurse and cardiologist</td>
<td>Total cholesterol (mmol/l), LDL (mmol/l), Triglycerides (mmol/l), BMI, Risk behaviour</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td><strong>Group 2</strong> Standard discharge advice and education</td>
<td></td>
</tr>
<tr>
<td>ID 7</td>
<td>Allison et al. (1999)</td>
<td>18 months</td>
<td>Lipid disorders, N = 80</td>
<td>Lipid disorders, N = 72</td>
<td><strong>Group 1</strong> Anti-lipid medication guidelines developed by National Cholesterol Education Program, Provided by RN, Dietary and physical activity</td>
<td>Total Cholesterol (mg/dL), HDL (mg/dL), LDL (mg/dL), Triglycerides (mg/dL), Risk behaviour</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td><strong>Group 2</strong> Anti-lipid medication guidelines developed by National Cholesterol Edu Prog</td>
<td></td>
</tr>
<tr>
<td>ID 10</td>
<td>Anonymous (1994)</td>
<td>12 months</td>
<td>Asthma, N = 363</td>
<td>Asthma, N = 349</td>
<td><strong>Group 1</strong> Patient sent questionnaire re: asthma status and 3 monthly review by GP/specialist, GPs sent feedback re: pts' asthma status from hospital out-pt clinic, GPs provided suggestions from clinic specialist re: pt management</td>
<td>Patient adherence to treatment, QoL, Health status score, Patient satisfaction, Functional status</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td><strong>Group 2</strong> Patient sent questionnaire re: asthma status and 3 monthly review by GP/specialist</td>
<td></td>
</tr>
<tr>
<td>ID 16</td>
<td>Aucott et al. (1996)</td>
<td>21 months</td>
<td>Hypertension, N = 1273</td>
<td>Hypertension, N = 884</td>
<td><strong>Group 1</strong> Guidelines for cost-effective management of hypertension, Usual education on cost-effective management of hypertension</td>
<td>Adherence to disease specific guideline, Systolic BP (mmHg), Diastolic BP (mmHg)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td><strong>Group 2</strong> Guidelines for cost-effective management of hypertension</td>
<td></td>
</tr>
</tbody>
</table>
| Reference ID 22 | Baker et al. (2003) | **Usual education on cost-effective management of hypertension**  
Intensive guideline based education  
Intensive guidelines based supervision  
**Intervention**  
**Group 1**  
Practices provided with guidelines for asthma management developed by a national agency.  
**Group 2**  
Practices provided with guidelines for asthma management developed by a national agency.  
GPs provided with review criteria for them to assess to what extent they had adhered to the guideline  
**Group 3**  
Practices provided with guidelines for asthma management developed by a national agency.  
GPs provided with review criteria for them to assess to what extent they had adhered to the guideline  
Patient records reviewed and GPs provided feedback.  
**Outcomes**  
Adherence to disease specific guideline  
QoL |
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Reference ID 24</strong></td>
<td>Barbanel et al. (2003)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
**Usual education on cost-effective management of hypertension**  
Intensive guideline based education  
Intensive guidelines based supervision  
**Intervention**  
**Group 1**  
Pharmacist received education re: asthma self-management to educate patients  
Delivered by community pharmacist. Focus: review of inhaler technique and self-management plans.  
**Group 2**  
Usual care  
**Outcomes**  
QoL |
| **Reference ID 29** | Barlow et al. (2000) |  
**Usual education on cost-effective management of hypertension**  
Intensive guideline based education  
Intensive guidelines based supervision  
**Intervention**  
**Group 1**  
Usual care  
**Group 2**  
Arthritis Care trained lay community leaders to deliver Arthritis Self-management Plan to Patients  
ASMP sessions = 2hrs weekly for 6 week. ASMP topics: info re: arthritis, exercise, cognitive symptoms management, nutrition, communication etc.  
Intervention group given "The Arthritis Handbook".  
**Outcomes**  
Patient health service use  
Risk behaviour  
QoL  
Health status score  
Functional status |
<table>
<thead>
<tr>
<th>Reference ID 48</th>
<th>Bogden et al. (1997)</th>
<th>RCT</th>
<th>Primary Care</th>
<th>USA</th>
<th>Duration of study: 6 months</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Group 1</strong></td>
<td>Lipid disorders</td>
<td>N = 47</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Group 2</strong></td>
<td>Lipid disorders</td>
<td>N = 47</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Intervention</strong></td>
<td><strong>Group 1</strong></td>
<td>Usual care to patient from resident physicians and interns</td>
<td><strong>Group 2</strong></td>
<td>Usual care to patient from resident physicians and interns Pharmacist and doctor teamwork. Pharmacist made recommendations re: drug management of lipid. Pharmacist advised patients of drug management of lipid. NO DIETARY ADVICE GIVEN Pharmacists encouraged compliance to prescribed medications.</td>
<td></td>
</tr>
<tr>
<td><strong>Outcomes</strong></td>
<td>Total cholesterol (mmol/l)</td>
<td></td>
<td></td>
<td></td>
<td></td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>Reference ID 51</th>
<th>Bosworth et al. (2005)</th>
<th>RCT</th>
<th>Primary Care</th>
<th>USA</th>
<th>Duration of study: 24 months</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Group 1</strong></td>
<td>Hypertension</td>
<td>N = 294</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Group 2</strong></td>
<td>Hypertension</td>
<td>N = 294</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Intervention</strong></td>
<td><strong>Group 1</strong></td>
<td>RN called pt every 2 ms for 24 ms to educate pts on various aspect of hypertension and its management RN encourage pts on home monitoring of BP and to stick to regimen and attend PCP visits RN educated &amp; encouraged pts on management of hypertension and provided relevant information RN reminded pt of PCP visits</td>
<td><strong>Group 2</strong></td>
<td>Usual care</td>
<td></td>
</tr>
<tr>
<td><strong>Outcomes</strong></td>
<td>Patient knowledge Patient adherence to treatment Patient self-confidence with treatment</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Reference ID 53</th>
<th>Boulet et al. (1995)</th>
<th>CBA</th>
<th>Community based care</th>
<th>Canada</th>
<th>Duration of study: 12 months</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Group 1</strong></td>
<td>Asthma</td>
<td>N = 42</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Group 2</strong></td>
<td>Asthma</td>
<td>N = 42</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Intervention</strong></td>
<td><strong>Group 1</strong></td>
<td>Asthma educator provided 3 sessions to pts. Focus of sessions: asthma knowledge and its management, use of action plan and self-measurement of PEF Asthma educator taught pts re: self-management of asthma.</td>
<td><strong>Group 2</strong></td>
<td>Usual care</td>
<td></td>
</tr>
<tr>
<td><strong>Outcomes</strong></td>
<td>Patient service use QoL</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Reference ID 57</th>
<th>Bouvy et al. (2003)</th>
<th>RCT</th>
<th>Community based care</th>
<th>Netherlands</th>
<th>Duration of study: 6 months</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Group 1</strong></td>
<td>Heart disease</td>
<td>N = 74</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Group 2</strong></td>
<td>Heart disease</td>
<td>N = 78</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Intervention</strong></td>
<td><strong>Group 1</strong></td>
<td>Training of pharmacist on monthly follow-up of pts on the use of loop diuretics. Community pharmacist conducted monthly follow-up on pts on their use of loop diuretics</td>
<td><strong>Group 2</strong></td>
<td>Usual care</td>
<td></td>
</tr>
<tr>
<td><strong>Outcomes</strong></td>
<td>Patient adherence to treatment Patient health service use QoL</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Reference ID</td>
<td>Group 1</td>
<td>Group 2</td>
<td>Intervention</td>
<td>Outcomes</td>
<td></td>
</tr>
<tr>
<td>--------------</td>
<td>---------</td>
<td>---------</td>
<td>--------------</td>
<td>----------</td>
<td></td>
</tr>
<tr>
<td>65</td>
<td>Diabetes</td>
<td>Group 1</td>
<td>GP and Diabetes Educator team approach to assist patients with diabetes to achieve behaviour change in the areas of home monitoring of glucose, foot care, medication management, diet and exercise. Training of lay people as coaches who assisted patients with diabetes to achieve behaviour change</td>
<td>Patient health service use, QoL, Health status score</td>
<td></td>
</tr>
<tr>
<td>75</td>
<td>Lipid disorders</td>
<td>Group 1</td>
<td>CME intervention consisting of a series of three interactive audio-conferences re: management of adherence in patients with high cholesterol. E-reminders to GPs re: management of adherence in patients with high cholesterol.</td>
<td>Adherence to disease specific guideline</td>
<td></td>
</tr>
<tr>
<td>82</td>
<td>Diabetes</td>
<td>Group 1</td>
<td>Usual care</td>
<td>Adherence to disease specific guideline</td>
<td></td>
</tr>
<tr>
<td>83</td>
<td>Diabetes</td>
<td>Group 1</td>
<td>Clinical pharmacist teamed up with primary care physician and provided therapeutic recommendations.</td>
<td>Treatment, self-care, medications, and screening process for complications of diabetes.</td>
<td></td>
</tr>
<tr>
<td>87</td>
<td>Diabetes</td>
<td>Group 1</td>
<td>Weekly monitoring of diabetic pts' wounds through weekly camera images sent to care-coordinator. Care coordinator, looking at the photos, decided wound ie diabetes management at diabetes clinic.</td>
<td>HbA1c (%)</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Reference ID</th>
<th>Group 1</th>
<th>Group 2</th>
<th>Intervention</th>
<th>Outcomes</th>
</tr>
</thead>
<tbody>
<tr>
<td>65</td>
<td>Diabetes</td>
<td>N = 85</td>
<td></td>
<td></td>
</tr>
<tr>
<td>75</td>
<td>Lipid disorders</td>
<td>N =</td>
<td></td>
<td></td>
</tr>
<tr>
<td>82</td>
<td>Diabetes</td>
<td>N = 39</td>
<td></td>
<td></td>
</tr>
<tr>
<td>83</td>
<td>Diabetes</td>
<td>N = 197</td>
<td></td>
<td></td>
</tr>
<tr>
<td>87</td>
<td>Diabetes</td>
<td>N = 100</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Reference ID</td>
<td>Study Details</td>
<td>Group 1</td>
<td>Group 2</td>
<td>Intervention</td>
</tr>
<tr>
<td>--------------</td>
<td>---------------</td>
<td>---------</td>
<td>---------</td>
<td>-------------</td>
</tr>
<tr>
<td>88</td>
<td>Clancy et al. (2003) RCT Primary Care USA Duration of study: 6 months</td>
<td>Diabetes N = 59</td>
<td>Diabetes N = 61</td>
<td>Team work between PCP and diabetes educator to provide group visits to pts with diabetes. Group had monthly sessions run by PCP and DE for 6 months. Group session topics: nutrition, exercise, sick day management, &amp; stress management. Pts attended educational sessions in groups as described above.</td>
</tr>
<tr>
<td>93</td>
<td>Cole man et al. (2001) RCT Primary Care USA Duration of study: 24 months</td>
<td>Chronic Disease N = 146</td>
<td>Chronic Disease N = 149</td>
<td>A team of HCPs conducted monthly group session. Teams included: PCP, nurse, pharmacist, dietician, social worker &amp; physio. HCP team offered education on self-management of chronic disease Enhanced self-management through education, encouragement of self-care, peer and prof support, and attention to psychological aspect of living with chronic illness.</td>
</tr>
<tr>
<td>96</td>
<td>Cote et al. (2003) CBA Community based care Canada Duration of study: 9 months</td>
<td>Hypertension N = 41</td>
<td>Hypertension N = 59</td>
<td>A computer-assisted educational program run by community pharmacists. Focus: importance of adherence to medication for optimal BP control, reinforce use of non-pharmacological treatment, and optimise pharmacological treatment.</td>
</tr>
<tr>
<td>Reference ID 99</td>
<td>Cousins et al. (2003)</td>
<td>Asthma Heart disease Diabetes N = 1009</td>
<td>Intervention Group 1 Pts provided education materials in form of postcards, pamphlets, newsletters aiming at improving pts knowledge of disease, self-management skills, etc. Pts having access to 400 pre-recorded telephone messages on various health topics. Pts having access to 24 nurse line for disease information and advice. Pts called by nurses in order to develop intervention plan, enhanced pt self-management efforts, and monitor treatment plan compliance. Group 2 Usual care</td>
<td>Outcomes Economic measures</td>
</tr>
<tr>
<td>---</td>
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</tr>
<tr>
<td>Reference ID 104</td>
<td>Crutcher et al. (2004)</td>
<td>Diabetes N =</td>
<td>Intervention Group 1 Team work of endocrinologist, community pharmacist, family physician &amp; clinical psychologist. Educational sessions for HCP on diabetes management Group 2 Usual care</td>
<td>Outcomes Professional knowledge</td>
</tr>
<tr>
<td>Reference ID</td>
<td>Study Details</td>
<td>Group 1</td>
<td>Intervention</td>
<td>Group 2</td>
</tr>
<tr>
<td>--------------</td>
<td>---------------</td>
<td>---------</td>
<td>--------------</td>
<td>---------</td>
</tr>
<tr>
<td>Reference ID 107</td>
<td>Cupples et al. (1996)</td>
<td>Heart disease</td>
<td>Educational sessions in the form of one to one interview by a health visitor every 4 months for 2 years. The sessions was tailor-made for the pt and focussed on coronary risk factors, medication use, diet, exercise and other life-style issues.</td>
<td>Usual care</td>
</tr>
<tr>
<td>Reference ID 108</td>
<td>Dally et al. (2002)</td>
<td>OA</td>
<td>Condition-specific written education material and handbook</td>
<td>Usual care</td>
</tr>
<tr>
<td>Reference ID 110</td>
<td>Davidson et al. (2000)</td>
<td>Diabetes</td>
<td>Diabetologist and pharmacist teamwork in implementing treatment algorithms written by diabetologist. Pharmacist- run intervention to enhance glycaemic and lipid control in experimental group.</td>
<td>Usual care</td>
</tr>
<tr>
<td>Reference ID 122</td>
<td>Denver et al. (2003)</td>
<td>Hypertension</td>
<td>Implementation of guidelines for pharmacological and non-pharmacological management of hypertension developed by National Ins. Of Clinical Excellence in UK. Nurse-led hypertension clinic focussing on BP control through life-style advice and medication change through physician. Nurse-led intervention motivating pts for healthy-life style for more effective BP control. Nurse-led intervention educating pt re: importance of BP control.</td>
<td>Usual care</td>
</tr>
<tr>
<td>Reference ID 131</td>
<td>Ditusa et al. (2001)</td>
<td></td>
<td></td>
<td></td>
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<td>-----------------</td>
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<td></td>
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</tr>
<tr>
<td>CBA</td>
<td>Managed Care Organisation USA</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Reference ID 134</td>
<td>Domurat et al. (1999)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>CBA</td>
<td>Managed Care Organisation USA</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Reference ID 135</td>
<td>Donohue et al. (2000)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>RCT</td>
<td>Primary Care UK</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Reference ID 136</td>
<td>Dorr et al. (2005)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>CBA</td>
<td>Primary Care USA</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Group 1**
- Lipid disorders
- N = 300

**Group 2**
- Lipid disorders
- N = 150

**Intervention**
- **Group 1**
  - Implementation of cholesterol management guidelines developed by the National Cholesterol Education Program (NCEP) by pharmacist & doctor team.
  - Training sessions for pharmacist on the benefits of cholesterol management and NCEP guidelines and its implementation.
  - Pharmacist-doctor teamwork in cholesterol management via implementation of NCEP guidelines.
- **Group 2**
  - Usual care

**Outcomes**
- Adherence to disease specific guideline

---

**Group 1**
- Diabetes
- N = 386

**Group 2**
- Diabetes
- N = 287

**Intervention**
- **Group 1**
  - Diabetes care management prog: team approach to diabetes care involving endocrinologist, physician, nurse, and pharmacist. Pts seen and managed one or more team members as required. Computer software records all pt records for follow-up & review.
  - Usual care

**Outcomes**
- Adherence to disease specific guideline
- Patient health service use
- HbA1c (%)
- Systolic BP (mmHg)
- Diastolic BP (mmHg)

---

**Group 1**
- Diabetes
- N = 981

**Group 2**
- Diabetes
- N = 958

**Intervention**
- **Group 1**
  - GP-nurse-chiropodist teamwork for management of foot problems in diabetic pts
  - Distribution of foot care leaflet outlining pts' responsibility & roles.
  - Education of primary care team on recognition, examination & clinical management of "high risk foot" in primary care setting.
- **Group 2**
  - Continued current footcare arrangement.

**Outcomes**
- Patient knowledge & attitude towards foot care

---

**Group 1**
- Diabetes
- N = 1185

**Group 2**
- Diabetes
- N = 4740

**Intervention**
- **Group 1**
  - Care manager offered educational sessions to diabetes pts using advanced information technology applications.
  - Care manager offered motivational counselling to diabetes pts using advanced information technology applications.
  - Care manager offered information & motivation to pts on self-management aspects

**Outcomes**
- Adherence to disease specific guideline
- HbA1c (%)
- LDL (mg/dL)
<table>
<thead>
<tr>
<th>Reference ID</th>
<th>Study Details</th>
<th>Group 1</th>
<th>Intervention</th>
<th>Group 2</th>
<th>Outcomes</th>
</tr>
</thead>
<tbody>
<tr>
<td>140</td>
<td>East et al. (2003)</td>
<td>Diabetes N=82</td>
<td>Implementation of American Diabetes Association guidelines through a program called Health Disparities Collaborative Computer software allow PCP to enter pt clinical data and provides feedback on pt management based on ADA guidelines.</td>
<td>Diabetes N=63</td>
<td>Adherence to disease specific guideline</td>
</tr>
<tr>
<td>146</td>
<td>Emmett et al (2005)</td>
<td>Hypertension N=51</td>
<td>Patient ducation Pt received Video/leaflet on hypertension</td>
<td>Hypertension N=52</td>
<td>Decisional conflict scale</td>
</tr>
</tbody>
</table>
# Australian Primary Health Care Research Institute

| Reference ID 150 | Eastabrooks et al. (2005)  
|------------------|-----------------------------|
| **RCT** Community based care  
USA **Duration of study: 6 months** | **Group 4**  
Hypertension  
N = 59 | **Intervention**  
**Group 1**  
Diabetes  
N = 112 |  
**Group 2**  
Diabetes  
N = 100 |  
**Group 3**  
Diabetes  
N = 210 |  
**Outcomes**  
Risk behaviour |

| Group 1  
Diabetes  
N = 112 | **Intervention**  
**Group 1**  
Self-management action plan generated by a computer software based on pt's disease status and preferences. Pt's selected their own goal (reduce fat intake, increase veggie or increase pa) -- REDUCE FAT  
Care manager motivated pts so that they could achieve their goals |
| **Group 2**  
Diabetes  
N = 100 |  
**Group 2**  
Self-management action plan generated by a computer software based on pt's disease status and preferences. Pt's selected their own goal (reduce fat intake, increase veggie or increase pa) -- INCREASE VEG & FRUITS INTAKE  
Care manager motivated pts so that they could achieve their goals |
| **Group 3**  
Diabetes  
N = 210 |  
**Group 3**  
Self-management action plan generated by a computer software based on pt's disease status and preferences. Pt's selected their own goal (reduce fat intake, increase veggie or increase pa) -- INCREASED PHYSICAL ACTIVITY  
Care manager motivated pts so that they could achieve their goals |

| Reference ID 153 | Fanning et al. (2004)  
|------------------|-----------------------------|
| **RCT** Primary Care  
USA **Duration of study: 18 months** | **Group 1**  
Diabetes  
N = 106 | **Intervention**  
**Group 1**  
Implementation of a standardised treatment algorithm for management of hyperglycaemia, dyslipidemia, and hypertension among pts attending a community clinic. |
| **Group 2**  
Diabetes  
N = 170 |  
**Group 2**  
Implementation of a standardised treatment algorithm for management of hyperglycaemia, dyslipidemia, and hypertension among pts attending a University clinic. |
| **Group 3**  
Diabetes  
N = 82 |  
**Group 3**  
Usual care |  
**Outcomes**  
Adherence to disease specific guideline  
HbA1c (%)  
Fasting Glucose mg/dl  
LDL (mg/dL)  
Triglycerides (mg/dL) |

| Reference ID 158 | Fihn et al. (2004)  
|------------------|-----------------------------|
| **RCT** Primary Care | **Group 1**  
Heart disease COPD  
Diabetes Hypertension  
N = 5801 | **Intervention**  
**Group 1**  
Information of health & disease status of pts gathered from pt records and synthesised and feedback provided to primary care provider.  
**Group 2** |  
**Outcomes**  
Patient satisfaction  
SF-36 |
<table>
<thead>
<tr>
<th>Reference ID</th>
<th>Study Details</th>
<th>Group 1</th>
<th>Group 2</th>
<th>Intervention Details</th>
<th>Outcomes</th>
</tr>
</thead>
<tbody>
<tr>
<td>162</td>
<td>USA</td>
<td>Heart disease COPD Diabetes Hypertension N = 3218</td>
<td>Usual care</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Forstrom et al. (1990)</td>
<td>CBA</td>
<td>Hypertension N = 154</td>
<td>Hypertension N = 172</td>
<td><strong>Intervention</strong>&lt;br&gt;<strong>Group 1</strong>&lt;br&gt;Team: clinical pharmacist &amp; PCP. Pharmacist reviewed pt records &amp; made recommendation re: drug Rx of hypertension. PCP to view and take action if agreed. Focus of recommendation: current medication, pt compliance, BP status, Rx change and costs.&lt;br&gt;<strong>Group 2</strong> Usual care</td>
<td><strong>Outcomes</strong></td>
</tr>
<tr>
<td>163</td>
<td>USA</td>
<td>Heart disease N = 376</td>
<td>Heart disease N = 354</td>
<td><strong>Intervention</strong>&lt;br&gt;<strong>Group 1</strong>&lt;br&gt;Computerised and written provided to PCP to prescribe aspirin, beta-blockers, &amp; anti-lipids to pts with coronary artery disease if appropriate.&lt;br&gt;<strong>Group 2</strong> Usual care</td>
<td><strong>Outcomes</strong></td>
</tr>
<tr>
<td>167</td>
<td>Netherlands</td>
<td>Heart disease N = 62</td>
<td>Heart disease N = 62</td>
<td><strong>Intervention</strong>&lt;br&gt;<strong>Group 1</strong>&lt;br&gt;Facilitator visiting the practices provided recommendation to the PCP in case-management based on National Guidelines developed by Dutch College of General Practitioners. Practices visited by facilitators who make recommendation to PCP to improve performance. Facilitators looked at baseline performance data &amp; provided guidance, support, &amp; education materials to improve clinical decision making and PCP performance. Team approach between facilitators &amp; PCP to enhance PCP clinical performance.&lt;br&gt;<strong>Group 2</strong> Usual care</td>
<td><strong>Outcomes</strong></td>
</tr>
<tr>
<td>171</td>
<td>COPD</td>
<td><strong>Intervention</strong>&lt;br&gt;<strong>Group 1</strong></td>
<td></td>
<td><strong>Outcomes</strong></td>
<td>Patient health service</td>
</tr>
</tbody>
</table>
### Reference ID 177
**Gary et al. (2003)**
**RCT**
**Community based care**  
**USA**
**Duration of study:** 24 months

<table>
<thead>
<tr>
<th>Group</th>
<th>Diabetes</th>
<th>N</th>
<th>Intervention</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Diabetes</td>
<td>34</td>
<td>On-going care from own PCP and quarterly newsletter on diabetes</td>
</tr>
<tr>
<td>2</td>
<td>Diabetes</td>
<td>38</td>
<td>Nurse case manager coordinated pt care according to the American Diabetes Association guidelines</td>
</tr>
<tr>
<td>3</td>
<td>Diabetes</td>
<td>41</td>
<td>Community health worker (CHW) counselled pts in relation to treatment adherence. CHW provided education to pt re: preventive aspects of diabetes. CHW directed pts to social support system for diabetics PCP and CHW teamwork approach to diabetes management. CHW provided feedback to PCP on identifiable health issues of pts eg. high BP readings at home, dietary habits etc.</td>
</tr>
<tr>
<td>4</td>
<td>Diabetes</td>
<td>36</td>
<td>Combined Nurse Case Manager + CHW</td>
</tr>
</tbody>
</table>

### Outcomes
- HbA1c (%)
- BMI
- Risk behaviour

### Reference ID 180
**Glasgow et al. (2005)**
**RCT**
**Primary Care**  
**USA**

<table>
<thead>
<tr>
<th>Group</th>
<th>Diabetes</th>
<th>N</th>
<th>Intervention</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Diabetes</td>
<td>469</td>
<td>Computer-assisted intervention. Pts input health &amp; disease data using tough screen. Pt also input medical care data provided by PCP including blood tests, eye check etc. Also input health behaviour data. Software then generated ACTION PLAN.</td>
</tr>
</tbody>
</table>

### Outcomes
- Adherence to disease specific guideline
- Patient adherence to treatment
| Duration of study: 12 months | N = 417 | Care manager followed up on pts and reviewed medical care needs & reinforced goals set in the ACTION plan & suggested additional strategies to pts. **Group 2** Computer-assisted intervention. Pts input health & disease data using tough screen. Pt also input medical care data provided by PCP including blood tests, eye check etc. Also input health behaviour data. | HbA1c equal or < 9.5% (%)  
HbA1c (%)  
Total cholesterol (mmol/l)  
QoL |
|---|---|---|---|
| Reference ID 182  
Glasgow et al. (2000)  
RCT  
Primary Care  
USA  
Duration of study: months | **Group 1**  
Diabetes  
N = 80  
**Group 2**  
Diabetes  
N = 80  
**Group 3**  
Diabetes  
N = 80  
**Group 4**  
Diabetes  
N = 80 | **Intervention**  
**Group 1**  
A computer-generated tailor-made self-management action plan based on pt's blood test results, dietary habit & life-style behaviour. Key focus of intervention: tailor dietary fat reduction, increased fruits/vegs intake etc.  
**Group 2**  
A computer-generated tailor-made self-management action plan based on pt's blood test results, dietary habit & life-style behaviour. Key focus of intervention: tailor dietary fat reduction, increased fruits/vegs intake etc.  
Intervention reinforced by telephone calls by nurse/diabetes educator/dietician/psychologist. Phone calls focussed on personalised problem-solving training based on barriers to dietary self-care.  
**Group 3**  
A computer-generated tailor-made self-management action plan based on pt's blood test results, dietary habit & life-style behaviour. Key focus of intervention: tailor dietary fat reduction, increased fruits/vegs intake etc.  
Community support provided - 1. Indexed community resources (eating out, grocery shopping etc.), newsletters & goal setting for community nutrition activities.  
**Group 4**  
Combined - basic and telephone support+ community resources | **Outcomes**  
HbA1c (%)  
Total cholesterol (mg/dL)  
Weight (lbs)  
Total cholesterol: LDL ratio  
Risk behaviour  
QoL |
| Reference ID 192  
Goldstein et al. (2005)  
RCT  
Primary Care  
USA  
Duration of study: 6 months | **Group 1**  
Hypertension  
N = 19 (GPs)  
**Group 2**  
Hypertension  
N = 14 (GPs) | **Intervention**  
**Group 1**  
Implementation of a national guidelines for hypertension management. Educations of providers on guideline-based drug recommendations and goals for adequacy of BP control.  
**Group 2**  
Implementation of a national guidelines for hypertension management. Educations of providers on guideline-based drug recommendations and goals for adequacy of BP control.  
Provider sent printed individualised advisory at each pt visit indicating whether or not the pt's antihypertensive drug regimen was guideline concordant. | **Outcomes**  
Adherence to disease specific guideline  
Systolic BP (mmHg)  
Diastolic BP (mmHg) |
| Reference ID 195 | Goudswaard et al. (2004) | RCT | Community based care | Netherlands | Duration of study: 18 months | Group 1 | Diabetes | N = 28  |
| Reference ID 203 | Griffiths et al (2004)  | RCT | Primary Care | UK | Duration of study: 12 months | Group 1 | Asthma | N = 175 |
| Reference ID 205 | Groessl et al. (2000)  | RCT | Primary Care | USA | Duration of study: 36 months | Group 1 | OA | N =  |
| Reference ID 207 | Gruffydd et al. (2005)  | RCT | Community based care |  |  | Group 1 | Asthma | N = 97  |

### Reference ID 195
**Group 1**
- Diabetes
  - N = 28

**Group 2**
- Diabetes
  - N = 30

**Intervention**
**Group 1**
One-to-one educational session provided diabetes nurse. Program developed by the Dutch Foundn of Diabetes Nurse. Focus: general info on diabetes, reinforcing compliance with medications; importance of physical exercise; reducing body wt; & nutrition.

**Group 2**
Usual care provided by GPs as per Dutch guidelines on Type 2 diabetes.

### Outcomes
- HbA1c (%)
- HbA1c <7% (%)
- % of pt on insulin

### Reference ID 203
**Group 1**
- Asthma
  - N = 175

**Group 2**
- Asthma
  - N = 149

**Intervention**
**Group 1**
- Implementation of National Asthma Guidelines
  - Provided to practices by trained asthma nurse
  - Ongoing clinical support to practice staff by asthma nurse
  - Practice staff + asthma nurse teamwork to provide asthma care.
  - Pts checked for inhaler technique.
  - Asthma education to pts focussing on medication use in asthma.

**Group 2**
- Implementation of National Asthma Guidelines
  - Pts checked for inhaler technique.

**Outcomes**
- Patient adherence to treatment

### Reference ID 205
**Group 1**
- OA
  - N =

**Group 2**
- OA
  - N =

**Group 3**
- OA
  - N =

**Intervention**
**Group 1**
Educational sessions for pts on self-management of OA.

**Group 2**
Usual care

**Outcomes**
- Economic measures

### Reference ID 207
**Group 1**
- Asthma
  - N = 97

**Group 2**

**Intervention**
**Group 1**
Pts receive 6-monthly check-up via a dedicated asthma clinic appointment with a diploma-level asthma nurse. Symptoms scores, inhaler technique, and peak flow

**Outcomes**
- QoL
<table>
<thead>
<tr>
<th>Reference ID</th>
<th>Study Details</th>
<th>Study Design</th>
<th>Country</th>
<th>Duration of study</th>
<th>Group 1 &amp; 2 Details</th>
<th>Group 3 Details</th>
<th>Outcomes</th>
</tr>
</thead>
<tbody>
<tr>
<td>208</td>
<td>Asthma</td>
<td>Group 1: Ischaemic heart disease N = 277</td>
<td>USA</td>
<td>6 months</td>
<td>Group 1: Condition-specific written education material and handbook Group 2: Individualised written feedback in response to Qs filled in by pts</td>
<td></td>
<td>Professionals adherence to guidelines</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Group 2: Ischaemic heart disease N = 233</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>211</td>
<td>OA</td>
<td>Group 1: OA N = 37</td>
<td>USA</td>
<td>12 months</td>
<td>Group 1: Individualised physical activity advice from an exercise physiologist Group 2: The same exercise physiologist provided nutrition advice</td>
<td></td>
<td>Weight (kg) Systolic BP (mmHg) Diastolic BP (mmHg) Total cholesterol (mmol/l) LDL (mmol/l) Health status score</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Group 2: OA N = 32</td>
<td></td>
<td></td>
<td></td>
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<td></td>
</tr>
<tr>
<td>212</td>
<td>OA</td>
<td>Group 1: N = 113</td>
<td>Finland</td>
<td>6 months</td>
<td>Group 1: Implementation of Finnish BP guidelines among PCP Pt provided with fully automatic BP machine &amp; they recorded BP for 1 week at months 0, 2, 4 &amp; 6. PCP given education on the benefit of combination therapy in treating hypertension. Pt presented BP records to their physician who adjusted BP treatment accordingly. Group 2: Implementation of Finnish BP guidelines among PCP Pt provided with fully automatic BP machine &amp; they recorded BP for 1 week at months 0 &amp; 6. PCP given education on the benefit of combination therapy in treating hypertension. Group 3:</td>
<td></td>
<td>Systolic BP (mmHg) Diastolic BP (mmHg) Pulse Pressure</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Group 2: N = 119</td>
<td></td>
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<td></td>
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<td>Group 3: N =</td>
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<tr>
<td></td>
<td></td>
<td>Group 4: N =</td>
<td></td>
<td></td>
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<td></td>
</tr>
</tbody>
</table>

### Available References

- **Guadagnoli et al. (2004)**
  - **RCT**
  - Community based care
  - USA
  - Duration of study: 6 months
- **Halbert et al. (2001)**
  - **RCT**
  - Community based care
  - USA
  - Duration of study: 12 months
- **Halme et al. (2005)**
  - **RCT**
  - Community based care
  - Finland
  - Duration of study: 6 months

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**UK**
- Duration of study: 12 months
- Asthma N = 97
  - done & an action plan issued.
  - Group 2: Pt contacted by telephone at 6-monthly intervals by trained nurse. Nurse reviewed pts and formulated an individualised asthma action plan. Done 6-monthly.
| Reference ID 218 | Headrick et al. (1992) | RCT | Hospital | USA | Duration of study: 5 months | Group 1 | Other | N = 67 | Group 2 | Other | N = 79 | Group 3 | Other | N = 94 | Intervention | Group 1 | Lectures of the physician cholesterol education program. | Group 2 | Lectures of the physician cholesterol education program. Generic chart reminder for identifying and treating patients with high cholesterol. | Group 3 | Lectures of the physician cholesterol education program. Generic guidelines with patient specific chart reminder. | Group 4 | Lectures of the physician cholesterol education program. Generic guidelines with patient specific chart reminder. | Outcomes | Adherence to disease specific guideline |

| Reference ID 221 | Hermiz et al (2002) | RCT | Community based care | Australia | Duration of study: 10 months | Group 1 | COPD | N = 84 | Group 2 | COPD | N = 93 | Intervention | Group 1 | Home visits by a community nurse within a week of patients' discharge from hospital. Verbal and written education on the disease and advice to stop smoking, and self-management. | Group 2 | Usual care. | Outcomes | Patient adherence to treatment | Patient health service use | QoL |

| Reference ID 223 | Hesselink et al. (2004) | RCT | Primary Care | Netherlands | Duration of study: 24 months | Group 1 | Asthma COPD Other | N = 139 | Group 2 | Asthma COPD Other | N = 137 | Intervention | Group 1 | Tailored education conducted by a general practice assistant, focussing on a patient's technical skills and coping with the disease. | Group 2 | Usual care. | Outcomes | Patient adherence to treatment | QoL | Health status score |

<p>| Reference ID 226 | Group 1 | Intervention | Outcomes |</p>
<table>
<thead>
<tr>
<th>Reference ID</th>
<th>Study Details</th>
<th>Participants</th>
<th>Intervention</th>
<th>Outcomes</th>
</tr>
</thead>
<tbody>
<tr>
<td>227</td>
<td>Hetlevik et al. (2000)</td>
<td>Diabetes N = 499 Group 1 Diabetes N = 535</td>
<td>Group 1: Computer-based clinical decision support system was installed in practices. GPs received seminars about risk intervention in diabetes and hypertension. Group 2: Usual care practice</td>
<td>Adherence to disease specific guideline HbA1c (%) Systolic BP (mmHg) Diastolic BP (mmHg) Total cholesterol (mmol/l)</td>
</tr>
<tr>
<td>228</td>
<td>Reference ID 228</td>
<td>Group 1 OA N = 132 Group 2 OA N = 141</td>
<td>Intervention Group 1: 6 sessions of 2 hours each about self-management led by physiotherapists. Group 2: Usual care.</td>
<td>Outcomes QoL Functional status</td>
</tr>
<tr>
<td>230</td>
<td>Reference ID 230</td>
<td>Group 1 Diabetes N = 65 Group 2 Diabetes N = 44</td>
<td>Intervention Group 1: PCP received reminders for HbA1c and other diabetes related measurement Group 2: PCP received reminders for HbA1c and other diabetes related measurement A team of endocrinologist, internist, PCP, and pharmacist reviewed staged diabetes management (SDM) protocol and altered as required. Endocrinologist provided regular didactic teaching to PCP PCP provided regular feedback of HbA1c levels Send by pharmacist based on HbA1c level PCP calling endocrinologist for case discussion if required</td>
<td>Outcomes Patient adherence to treatment Patient health service use HbA1c (%)</td>
</tr>
<tr>
<td>233</td>
<td>Reference ID 233</td>
<td>Group 1 Diabetes N = 21 (practices) Group 2 Diabetes N = 4 (practices)</td>
<td>Intervention Group 1: Computer decision support software installed in intervention practice. Group 2: Usual care</td>
<td>Outcomes Prescribing activity Referral &amp; system usage</td>
</tr>
<tr>
<td></td>
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<tr>
<td>Reference ID</td>
<td>Study Details</td>
<td>Outcomes</td>
<td>Intervention</td>
<td>Group 1 Details</td>
</tr>
<tr>
<td>--------------</td>
<td>---------------</td>
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<td>--------------</td>
<td>-----------------</td>
</tr>
<tr>
<td>235</td>
<td>Sweden</td>
<td>BMI</td>
<td>Group sessions, focussing on patients’ understanding of illness.</td>
<td>Diabetes N = 60</td>
</tr>
<tr>
<td></td>
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</tr>
<tr>
<td>242</td>
<td>USA</td>
<td>Patient satisfaction</td>
<td>Group 1 Heart disease COPD Other N = 981</td>
<td>Group 2 Heart disease COPD Other N = 985</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
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</tr>
<tr>
<td>246</td>
<td>USA</td>
<td></td>
<td>In person education about diabetes by diabetes educators.</td>
<td>Diabetes N = 22</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>250</td>
<td>Netherlands</td>
<td>LDL</td>
<td>Identification of barriers, documentation, education, feedback, and peer review.</td>
<td>Asthma COPD N = 280</td>
</tr>
<tr>
<td></td>
<td></td>
<td>QoL</td>
<td></td>
<td></td>
</tr>
<tr>
<td>251</td>
<td>USA</td>
<td>PEF</td>
<td></td>
<td>Group 1 Asthma COPD N = 90</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Group 2 Asthma COPD N = 90</td>
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<td></td>
<td></td>
<td></td>
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<td>Group 4 N =</td>
</tr>
<tr>
<td>Reference ID</td>
<td>Study ID</td>
<td>Authors</td>
<td>Country</td>
<td>Duration of study</td>
</tr>
<tr>
<td>-------------</td>
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<td>---------</td>
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<tr>
<td>Reference ID 252</td>
<td></td>
<td>Jayasuria et al. (2000)</td>
<td>Other Australia</td>
<td>36 months</td>
</tr>
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<tr>
<td>Reference ID 262</td>
<td></td>
<td>Kastarinen et al. (2002)</td>
<td>Finland</td>
<td>24 months</td>
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<tr>
<td>Reference ID 267</td>
<td></td>
<td>Keyserling et al. (1997)</td>
<td>USA</td>
<td>24 months</td>
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<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Reference ID 268</td>
<td></td>
<td>Kiefe et al. (2001)</td>
<td></td>
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</tr>
</tbody>
</table>
### Reference ID 275
Kornhonen et al. (2003)  
RCT  
Primary Care  
Finland  
Duration of study: 24 months

<table>
<thead>
<tr>
<th>Group 1</th>
<th>Hypertension</th>
<th>N = 360</th>
</tr>
</thead>
<tbody>
<tr>
<td>Group 2</td>
<td>Hypertension</td>
<td>N = 355</td>
</tr>
</tbody>
</table>

**Intervention**  
**Group 1**  
Dietary counselling by local public health nurses.  
Feedback on 4 day food record by clinical nutritionist, focusing on diet changes to achieve the dietary goals.  
Two group sessions with physician and clinical nutritionist at 6 and 18 months.  
**Group 2**  
Usual care

**Outcomes**  
24h urinary Na (mmol)  
24h urinary Ka (mmol)  
Risk behaviour

### Reference ID 276  
Krein et al. (2004)  
RCT  
Managed Care Organisation  
USA  
Duration of study: 18 months

<table>
<thead>
<tr>
<th>Group 1</th>
<th>Diabetes</th>
<th>N = 123</th>
</tr>
</thead>
<tbody>
<tr>
<td>Group 2</td>
<td>Diabetes</td>
<td>N = 123</td>
</tr>
</tbody>
</table>

**Intervention**  
**Group 1**  
Home BP monitor, home BP monitoring guidelines, clinical guidelines and periodic study newsletters.  
Case managers (nurse practitioners) encourage self-management including diet and exercise, help with home glucose & BP monitoring, identify and initiate medication and dose changes if necessary.  
Screenings/tests reminders.  
Case manager/primary provider collaboration if medication changes required approval.  
**Group 2**  
Usual care

**Outcomes**  
Patient adherence to treatment  
Patient health service use  
HbA1c (%)  
LDL (mg/dL)  
Systolic BP (mmHg)  
Diastolic BP (mmHg)  
Patient satisfaction

### Reference ID 295  
Litaker et al. (2003)  
RCT  
Managed Care Organisation  
USA  
Duration of study: 12 months

<table>
<thead>
<tr>
<th>Group 1</th>
<th>Hypertension Diabetes</th>
<th>N = 79</th>
</tr>
</thead>
<tbody>
<tr>
<td>Group 2</td>
<td>Hypertension Diabetes</td>
<td>N = 78</td>
</tr>
</tbody>
</table>

**Intervention**  
**Group 1**  
Patient management flowcharts distributed to guide nurse practitioners  
Education on disease self-management strategies, regular monitoring and feedback by nurse practitioner  
Collaboration of nurse practitioner and primary care physician for treatment plan and telephonic management.  
**Group 2**  
Usual care provided by primary care physician

**Outcomes**  
Adherence to disease specific guideline  
Patient adherence to treatment  
HbA1c (%)  
Total cholesterol (mg/dL)  
BP control <130/85 mmHg (%)
<table>
<thead>
<tr>
<th>Reference ID</th>
<th>Study Details</th>
<th>Group Details</th>
<th>Intervention</th>
<th>Outcomes</th>
</tr>
</thead>
<tbody>
<tr>
<td>296</td>
<td>Little et al. (2004) RCT Primary Care UK Duration of study: 24 months</td>
<td>Group 1: Hypertension N = 152  Group 2: Hypertension N = 138  Group 3: Hypertension N = 145</td>
<td><strong>Intervention</strong>  <strong>Group 1</strong> Patients received booklet about BP and treatment.  <strong>Group 2</strong> Received low sodium salt and advice to use low sodium salt.  <strong>Group 3</strong> Received fatty food swap sheet list and fruit-vegetable-fibre daily prompt sheets.</td>
<td><strong>Outcomes</strong> HDL (mg/dL) Risk behaviour QoL</td>
</tr>
<tr>
<td>297</td>
<td>Lobo et al. (2004) RCT Primary Care Netherlands Duration of study: 21 months</td>
<td>Group 1: Diabetes N = 278  Group 2: Diabetes N = 259</td>
<td><strong>Intervention</strong>  <strong>Group 1</strong> Outreach visitors stimulated adequate practice organisation, registration, and task delegation to achieve optimal case finding and addressed appropriate diagnosis of cardiovascular risk factors and disease. GPs and staff encouraged to apply pharmacological and non-pharmacological treatments according to evidence-based guidelines.  <strong>Group 2</strong> Usual care practice</td>
<td><strong>Outcomes</strong> QoL</td>
</tr>
<tr>
<td>299</td>
<td>Long et al. (2005) RCT Primary Care England Duration of study: 12 months</td>
<td>Group 1: Diabetes N = 311  Group 2: Diabetes N = 157</td>
<td><strong>Intervention</strong>  <strong>Group 1</strong> Proactive call by telecarers to support and guide patients for best diabetes management  <strong>Group 2</strong> Usual care</td>
<td><strong>Outcomes</strong> QoL Patient satisfaction</td>
</tr>
<tr>
<td>315</td>
<td>Marshall et al. (2005) RCT Primary Care Australia Duration of study: 6 months</td>
<td>Group 1: Hypertension N = 246  Group 2: Hypertension N = 192  Group 3: Hypertension N = 145</td>
<td><strong>Intervention</strong>  <strong>Group 1</strong> Health promotion materials and advice encourage patients to be more active to protect/promote health  <strong>Group 2</strong> Active Prescription by physician  <strong>Group 3</strong> Usual care (health promotion)</td>
<td><strong>Outcomes</strong> Risk behaviour</td>
</tr>
</tbody>
</table>
## Hypertension

<table>
<thead>
<tr>
<th>Reference ID</th>
<th>Authors (Year)</th>
<th>Study Design</th>
<th>Setting</th>
<th>Duration of study</th>
<th>Group 1</th>
<th>Group 2</th>
<th>Intervention</th>
<th>Outcomes</th>
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<tbody>
<tr>
<td>316</td>
<td>Martensson et al. (2005)</td>
<td>RCT</td>
<td>Primary Care, Sweden</td>
<td>12 months</td>
<td>Hypertension Diabetes Heart disease N = 78</td>
<td>Hypertension Diabetes Heart disease N = 75</td>
<td>Education sessions offered to nurses and physicians to increase the competence for heart failure care. Education to the patient and the family in patient's home by practice nurses. Counselling to the patient and family in patient's home by practice nurses. Telephone follow up by the nurses.</td>
<td>QoL</td>
</tr>
<tr>
<td>319</td>
<td>Mattila et al. (2003)</td>
<td>RCT</td>
<td>Primary Care, Finland</td>
<td>12 months</td>
<td>Hypertension N = 356</td>
<td>Hypertension N = 347</td>
<td>Group sessions by multi principal team about causes, consequences of hypertension and CVD knowledge. Group dietary counselling by dietician. Reinforcement support and reminders about personal goals. Team care of physician, physiotherapist, psychologist and dietician.</td>
<td>Systolic BP (mmHg), Diastolic BP (mmHg), Total cholesterol (mmol/l), Urinary Na (mmol/L), Urinary K (mmol/L), Risk behaviour</td>
</tr>
<tr>
<td>324</td>
<td>Mazzuca et al. (2004)</td>
<td>RCT</td>
<td>Community based care, USA</td>
<td>12 months</td>
<td>OA N = 111</td>
<td>OA N = 75</td>
<td>Arthritis nurse, in consultation with the PCP, implemented a treatment algorithm. 18 weeks long algorithm included non-pharmacologic measures including: exercise, heat/cold application, wt loss, well-cushioned shoes.</td>
<td>QoL</td>
</tr>
<tr>
<td>327</td>
<td>McClean et al. (2003)</td>
<td></td>
<td></td>
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<td>Diabetes</td>
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<td>Adherence to disease</td>
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<tr>
<td>Reference ID</td>
<td>Study Details</td>
<td>Group 1</td>
<td>Group 2</td>
<td>Intervention</td>
<td>Outcomes</td>
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<tr>
<td>329</td>
<td>RCT Primary Care USA</td>
<td>Asthma</td>
<td>N = 147</td>
<td>Computer decision support software installed in intervention practice</td>
<td>Adherence to disease specific guideline Patient health service use</td>
<td></td>
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<tr>
<td></td>
<td>Duration of study: 6 months</td>
<td></td>
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<td>Group 1</td>
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<tr>
<td></td>
<td>N = 555 Diabetes</td>
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<td>Group 2</td>
<td>Usual practice</td>
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<tr>
<td></td>
<td>N = 921 Asthma</td>
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<td>N = 330</td>
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<tr>
<td>330</td>
<td>RCT Other Primary Care Australia</td>
<td>Diabetes</td>
<td>N = 555</td>
<td>Diabetes registers reviewed, clinic records audited, feedback sent to clinicians and managers. Provision of clinical guidelines and a clear management structure. Workshops and training</td>
<td>Adherence to disease specific guideline Patient adherence to treatment Patient health service use Weight (kg) HbA1c (%) Systolic BP (mmHg) Diastolic BP (mmHg)</td>
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<tr>
<td></td>
<td>Duration of study: 36 months</td>
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<td>Group 1</td>
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</tr>
<tr>
<td></td>
<td>N = 921 Diabetes</td>
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<td>Group 2</td>
<td>Usual care</td>
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<td>N = 38</td>
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<tr>
<td>337</td>
<td>RCT Primary Care USA</td>
<td>Diabetes</td>
<td>N = 38</td>
<td>Patients accessed online for PA level then led through planning process, and received individual tailored messages about achieving goals, suggestions and strategies to maintain newly acquired PA level from an occupational therapist. Patient accessed to personal physical activity database and communicate with other members in the group. The occupational therapist had access to endocrinologist, registered dietician and exercise physiologist for help.</td>
<td>Risk behaviour Patient satisfaction</td>
<td></td>
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<tr>
<td></td>
<td>Duration of study: 2 months</td>
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<td></td>
<td>Group 1</td>
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<td></td>
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<tr>
<td></td>
<td>N = 40 Diabetes</td>
<td></td>
<td></td>
<td>Group 2</td>
<td>Patients access to online diabetes articles Blood glucose tracking with graphic feedback.</td>
<td></td>
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</tr>
<tr>
<td>Reference ID</td>
<td>Group 1</td>
<td>Group 2</td>
<td>Group 3</td>
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<tr>
<td>ID 343</td>
<td>Diabetes</td>
<td>Diabetes</td>
<td>Hypertension</td>
<td>Hypertension</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Hospital USA</td>
<td>Duration of study: 12 months</td>
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</tr>
<tr>
<td><strong>Intervention</strong></td>
<td>Provision of web-based information management/clinical decision support tool.</td>
<td>Usual care practice</td>
<td></td>
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<tr>
<td><strong>Outcomes</strong></td>
<td>Adherence to disease specific guideline</td>
<td>Systolic BP (mmHg)</td>
<td>Diastolic BP (mmHg)</td>
<td>LDL (mg/dL)</td>
<td>HbA1c (%)</td>
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<table>
<thead>
<tr>
<th>Reference ID</th>
<th>Group 1</th>
<th>Group 2</th>
<th>Group 3</th>
<th>Group 4</th>
</tr>
</thead>
<tbody>
<tr>
<td>ID 364</td>
<td>Asthma</td>
<td>Asthma</td>
<td>Hypertension</td>
<td>Hypertension</td>
</tr>
<tr>
<td>Mundinger et al. (2000)</td>
<td>N = 1181</td>
<td>N = 800</td>
<td>N = 181</td>
<td>N = 180</td>
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<tr>
<td>Community based care USA</td>
<td>Duration of study: 24 months</td>
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</tr>
<tr>
<td><strong>Intervention</strong></td>
<td>Pts discharged from ED followed up by nurse practitioners (NP). NP had same authority as physician &amp; treated, prescribed, referred pts like physicians would do.</td>
<td>Pts discharged from ED followed up by physicians. Physicians treated, prescribed, referred pts as required.</td>
<td></td>
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</tr>
<tr>
<td><strong>Outcomes</strong></td>
<td>Pt service use</td>
<td>QoL</td>
<td>Pt satisfaction</td>
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<table>
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<tr>
<th>Reference ID</th>
<th>Group 1</th>
<th>Group 2</th>
<th>Group 3</th>
<th>Group 4</th>
</tr>
</thead>
<tbody>
<tr>
<td>ID 367</td>
<td>Hypertension</td>
<td>Hypertension</td>
<td>Hypertension</td>
<td>Hypertension</td>
</tr>
<tr>
<td>Primary Care USA</td>
<td>Duration of study: months</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Intervention</strong></td>
<td>Usual care</td>
<td>Care suggestion for hypertension identified by the workstation and viewed by pharmacist. Communication between pharmacist and physician about patients.</td>
<td>On visit physicians were given patient chart encounter form, active drug and reminder. Care suggestion for hypertension identified by the workstation and viewed by physician.</td>
<td>On visit physicians were given patient chart encounter form, active drug and reminder. Care suggestion for hypertension identified by the workstation and viewed by both pharmacist and physician. Communication between pharmacist and physician about patients.</td>
</tr>
<tr>
<td><strong>Outcomes</strong></td>
<td>Adherence to disease specific guideline</td>
<td>Patient adherence to treatment</td>
<td>Patient health service use</td>
<td>Systolic BP (mmHg)</td>
</tr>
</tbody>
</table>
### Reference ID 372
Naunton et al. (2004)  
CBA  
Primary Care  
Australia  
Duration of study: 12 months

**Group 1**  
Osteoporosis  
N = 

**Group 2**  
Osteoporosis  
N =

**Intervention**  
**Group 1**  
GP and pharmacists received educational material and locally produced guidelines on the prevention of corticosteroid-induced osteoporosis. The research pharmacist visited each GP and pharmacist and discussed the rationale of prescribing osteoporosis preventative therapies and treatment to patients receiving long term oral corticosteroids. Shelf makers at the pharmacy to remind pharmacist. Refrigerator magnets given to target patients by pharmacist.  
**Group 2**  
Usual care practice.

**Outcomes**  
Adherence to disease specific guideline

### Reference ID 373
Neil et al. (1995)  
RCT  
Primary Care  
England  
Duration of study: 6 months

**Group 1**  
Lipid disorders  
N = 103  

**Group 2**  
Lipid disorders  
N = 104  

**Group 3**  
Lipid disorders  
N = 102

**Intervention**  
**Group 1**  
Individual dietary advice given by a dietician.  
**Group 2**  
Individual dietary advice given by practice nurse. Practice nurse attended half day training.  
**Group 3**  
Leaflet with dietary guidance were posted twice.

**Outcomes**  
Total cholesterol (mmol/l)  
LDL (mmol/l)  
HDL (mmol/l)  
Triglycerides (mmol/l)  
BMI

### Reference ID 383
O’Connor et al. (2005)  
CBA  
Managed Care Organisation  
USA  
Duration of study: 60 months

**Group 1**  
Diabetes  
N = 57  

**Group 2**  
Diabetes  
N = 65  

**Intervention**  
**Group 1**  
Electronic medical record was introduced at the intervention clinic  
**Group 2**  
Usual care practice

**Outcomes**  
Adherence to disease specific guideline  
HbA1c (%)

### Reference ID 384
O’Connor et al. (2005)  
RCT  
Primary Care  
USA  
Duration of study: 42 months

**Group 1**  
Diabetes  
N = 428  

**Group 2**  
Diabetes  
N = 326

**Intervention**  
**Group 1**  
Education sessions to practice staff team including physician, nurse, and practice staff about 7 step Quality improvement. Via telephone and practice visit to provide consultations and monitor progress. Implementation of the 7 step QI change process, including identify opportunity for improvement, collect data, analyse data, choose an approach, develop concepts and processes, implement processes, and evaluate and improve processes.  
**Group 2**

**Outcomes**  
Adherence to disease specific guideline  
Patient adherence to treatment  
HbA1c (%)  
LDL (mg/dL)  
Systolic BP (mmHg)
<table>
<thead>
<tr>
<th>Reference ID 386</th>
<th>Usual care practice</th>
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</thead>
<tbody>
<tr>
<td>Odegard et al. (2005)</td>
<td></td>
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<tr>
<td>RCT Primary Care USA Duration of study: 12 months</td>
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<tr>
<td>Outcomes</td>
<td>Patient adherence to treatment HbA1c (%)</td>
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<tr>
<td>Reference ID 387</td>
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<tr>
<td>O'Hare et al. (2004)</td>
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<tr>
<td>RCT Primary Care England Duration of study: 12 months</td>
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<tr>
<td>Reference ID 396</td>
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<tr>
<td>Pearl et al. (2003)</td>
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<tr>
<td>RCT Primary Care New Zealand Duration of study: 12 months</td>
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<td>Reference ID 400</td>
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<tr>
<td>Pettitt et al. (2005)</td>
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<tr>
<td>RCT Primary Care USA Duration of study: 48 months</td>
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<td>Reference ID</td>
<td>Group 1</td>
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<td>--------------</td>
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</tr>
<tr>
<td>405</td>
<td>Asthma</td>
</tr>
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<td>410</td>
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<td>419</td>
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<td>Study Reference</td>
<td>Study Design</td>
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<td>Rea et al. (2004)</td>
<td>RCT</td>
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<td>Reference ID 426</td>
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<td>Reference ID 440</td>
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<td>443 Rothman et al. (2004)</td>
<td>Community based care USA Duration of study: 24 months</td>
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<tr>
<td>445 Rothman et al. (2005)</td>
<td>Primary Care USA Duration of study: 26 months</td>
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<td>457 Schermer et al. (2002)</td>
<td>Primary Care Netherlands Duration of study: 24 months</td>
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<td>459 Scisney-Matlock et al. (2004)</td>
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<td>Reference ID</td>
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<td>460</td>
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<tr>
<td>Reference ID 476</td>
<td>Sommers et al. (2000)</td>
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<tr>
<td>Group 1</td>
<td>Diabetes</td>
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<tr>
<td>Group 2</td>
<td>Diabetes</td>
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<tr>
<td>Intervention</td>
<td>Group 1</td>
</tr>
<tr>
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<td>Group 2</td>
</tr>
<tr>
<td>Outcomes</td>
<td>Adherence to disease specific guideline</td>
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<tr>
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<td>HbA1c (%)</td>
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<table>
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<tr>
<th>Reference ID 479</th>
<th>RCT</th>
<th>Primary Care USA</th>
<th>Duration of study :18 months</th>
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<tbody>
<tr>
<td>Group 1</td>
<td>Hypertension Heart disease Diabetes</td>
<td>N = 280</td>
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<td>Group 2</td>
<td>Hypertension Heart disease Diabetes</td>
<td>N = 263</td>
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<tr>
<td>Group 3</td>
<td>N =</td>
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<td></td>
</tr>
<tr>
<td>Group 4</td>
<td>N =</td>
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<tr>
<td>Intervention</td>
<td>Group 1</td>
<td>Collaboration between PCP, RN, social worker. Team met monthly to review each patient's status and revise care plan. Patient specific risk-reduction plan was developed after home visit by the RN or SW, then patient was followed up by RN/SW.</td>
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<tr>
<td></td>
<td>Group 2</td>
<td>Usual care</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Group 3</td>
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</tr>
<tr>
<td>Outcomes</td>
<td>Patient health service use</td>
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<td></td>
<td>QoL</td>
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<td>Health status score</td>
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<table>
<thead>
<tr>
<th>Reference ID 480</th>
<th>Sondergaard et al. (2002)</th>
<th>RCT</th>
<th>Primary Care Denmark</th>
</tr>
</thead>
<tbody>
<tr>
<td>Group 1</td>
<td>N = 47 (practices)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Group 2</td>
<td>N = 45 (practices)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Group 3</td>
<td>N =</td>
<td></td>
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</tr>
<tr>
<td>Intervention</td>
<td>Group 1</td>
<td>Feedback about detailed and clinically relevant data on asthma drug prescribing patterns and a guideline statement.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Group 2</td>
<td></td>
<td></td>
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<tr>
<td>Outcomes</td>
<td>Adherence to disease specific guideline</td>
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</tr>
</tbody>
</table>
| Reference ID 490 | Straka et al. (2005)  
Managed Care Organisation  
USA  
Duration of study: 6 months | **Group 1**  
Lipid disorders  
N = 331  
**Group 2**  
Lipid disorders  
N = 150  
**Group 3**  
N =  
**Group 4**  
N = | **Intervention**  
**Group 1**  
Team consist of a clinical pharmacist and PCP, develop a patient specific care plan to optimise hypercholesterolemia.  
Pharmacist may have involved prescribing drug therapy, adjusting dosage, and obtaining a fasting lipid panel.  
When appropriate patients were referred to resources such as smoking cessation and dietary consultation.  
**Group 2**  
Usual care practice | **Outcomes**  
LDL (mg/dL)  
HDL (mg/dL)  
Triglycerides (mg/dL)  
Total cholesterol (mg/dL) |
|---|---|---|---|---|
| Reference ID 500 | The CA Medi-Cal Study Gr  
RCT  
Primary Care  
USA  
Duration of study: 36 months | **Group 1**  
Diabetes  
N = 186  
**Group 2**  
Diabetes  
N = 172 | **Intervention**  
**Group 1**  
Collaboration of RN, dieticians, endocrinologist.  
Individualized education regarding use and data recording, diet, exercise, self-care.  
Case management  
**Group 2**  
Usual care | **Outcomes**  
Patient adherence to treatment  
HbA1c (%)  
Systolic BP (mmHg)  
Diastolic BP (mmHg)  
Total cholesterol (mg/dL)  
LDL (mg/dL)  
Risk behaviour |
| Reference ID 503 | Thomas et al. (2002)  
RCT  
Primary Care  
UK  
Duration of study: 24 months | **Group 1**  
OA  
N = 235  
**Group 2**  
OA  
N = 160  
**Group 3**  
OA  
N = 235  
**Group 4**  
OA | **Intervention**  
**Group 1**  
Patients received home-based exercise program.  
**Group 2**  
Monthly telephone contact to monitor symptoms and offer simple advice on knee pain management.  
**Group 3**  
Patients received home-based exercise program.  
Monthly telephone contact to monitor symptoms.  
**Group 4**  
No contact between assessment visits. | **Outcomes**  
Functional status |
RCT  
Primary Care  
Netherlands  
Duration of study: 6 months | **Group 1**  
Asthma  
N = 98  
**Group 2**  
Asthma  
N = 95 | **Intervention**  
**Group 1**  
Tailored educational sessions about asthma self-management by the GP.  
**Group 2**  
Usual care practice. | **Outcomes**  
Patient satisfaction |
|---|---|---|---|---|
| Reference ID 507 | Tierney et al. (2003)  
RCT  
Primary Care  
USA  
Duration of study: months | **Group 1**  
Heart disease  
N = 181  
**Group 2**  
Heart disease  
N = 158  
**Group 3**  
Heart disease  
N = 197  
**Group 4**  
Heart disease  
N = 170 | **Intervention**  
**Group 1**  
Usual care  
**Group 2**  
Care suggestion for hypertension identified by the workstation and viewed by pharmacist.  
Communication between pharmacist and physician about patients.  
**Group 3**  
On visit physicians were given patient chart encounter form, active drug and reminder.  
Care suggestion for hypertension identified by the workstation and viewed by physician.  
**Group 4**  
On visit physicians were given patient chart encounter form, active drug and reminder.  
Care suggestion for hypertension identified by the workstation and viewed by both pharmacist and physician.  
Communication between pharmacist and physician about patients. | **Outcomes**  
Adherence to disease specific guideline  
Patient health service use  
QoL  
Health status score |
| Reference ID 508 | Tierney et al. (2005)  
RCT  
Primary Care  
USA  
Duration of study: months | **Group 1**  
Asthma COPD  
N = 169  
**Group 2**  
Asthma COPD  
N = 161  
**Group 3**  
Asthma COPD  
N = 194  
**Group 4**  
Asthma COPD  
N = 182 | **Intervention**  
**Group 1**  
Usual care  
**Group 2**  
Care suggestion for hypertension identified by the workstation and viewed by pharmacist.  
Communication between pharmacist and physician about patients.  
**Group 3**  
On visit physicians were given patient chart encounter form, active drug and reminder.  
Care suggestion for hypertension identified by the workstation and viewed by physician.  
**Group 4**  
On visit physicians were given patient chart encounter form, active drug and reminder.  
Care suggestion for hypertension identified by the workstation and viewed by both pharmacist and physician.  
Communication between pharmacist and physician about patients. | **Outcomes**  
Adherence to disease specific guideline  
Patient health service use  
QoL  
Health status score  
Patient satisfaction |
<table>
<thead>
<tr>
<th>Reference ID</th>
<th>Study Details</th>
<th>Group 1</th>
<th>Group 2</th>
<th>Intervention</th>
<th>Group 1</th>
<th>Group 2</th>
<th>Outcomes</th>
</tr>
</thead>
<tbody>
<tr>
<td>511</td>
<td>Till et al (2003) CBA Primary Care USA Duration of study: months</td>
<td>Lipid disorders N = 47</td>
<td>Lipid disorders N = 41</td>
<td>Clinical pharmacist management. Pharmacist at the clinic was responsible for ordering, interpreting lab values and for prescribing and monitoring lipid-altering pharmacotherapy.</td>
<td>Usual care</td>
<td></td>
<td>LDL (mg/dL) HDL (mg/dL) Total cholesterol (mg/dL)</td>
</tr>
<tr>
<td>522</td>
<td>Tsuyuki et al. (1999) RCT Other USA Duration of study: months</td>
<td>Heart disease Diabetes N = 344</td>
<td>Heart disease Diabetes N = 331</td>
<td>Education on cardiovascular risk factors by the pharmacist. Risk factors identified during interview by the pharmacist. The pharmacist communicate with patient’s physician about patient’s risk factors, medication, laboratory test results, and suggestions for further testing or management.</td>
<td>Patient received patient booklet and general advice.</td>
<td></td>
<td>Patient adherence to treatment QoL Patient satisfaction</td>
</tr>
<tr>
<td>531</td>
<td>Van Sluijs et al. (2005) RCT Primary Care Netherlands</td>
<td>Hypertension Diabetes Lipid disorders N = 171</td>
<td></td>
<td>Patients received physician-based assessment and counselling for exercise by GP and telephone follow up by PA counsellor.</td>
<td></td>
<td></td>
<td>Risk behaviour</td>
</tr>
</tbody>
</table>
## AUSTRALIAN PRIMARY HEALTH CARE RESEARCH INSTITUTE

<table>
<thead>
<tr>
<th>Duration of study: months</th>
<th>Hypertension Diabetes Lipid disorders</th>
<th>Brief patient assessment and advice to become more physical active by GP.</th>
<th>Reference ID 543</th>
<th>Vrijhoef et al. (2001)</th>
<th>CBA Mixed Netherlands</th>
<th>Duration of study: 12 months</th>
<th>Group 1 Diabetes N = 52</th>
<th>Group 2 Diabetes N = 47</th>
<th>Intervention Group 1</th>
<th>Quarterly consultations from a nurse specialist in general practice and annual extensive check-up by the internist in the hospital</th>
<th>Group 2</th>
<th>Usual outpatient care: quarterly consultations from the internist in the hospital and education and self-management by the nurse specialist in the hospital.</th>
<th>Outcomes Patient adherence to treatment Patient health service use HbA1c (%) QoL</th>
</tr>
</thead>
<tbody>
<tr>
<td>Reference ID 544</td>
<td>Wagner et al. (2001)</td>
<td>RCT Primary Care USA</td>
<td>Duration of study: 24 months</td>
<td>Group 1 Diabetes N = 278</td>
<td>Group 2 Diabetes N = 429</td>
<td>Intervention Group 1</td>
<td>Group education of 6-10 by the practice nurse on self-management. Individual counselling on self-management.</td>
<td>Group 2</td>
<td>Usual care</td>
<td>Outcomes Adherence to disease specific guideline Patient health service use HbA1c (%) Total cholesterol (mg/dL) QoL Patient satisfaction</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Reference ID 560</td>
<td>Wolf et al. (2004)</td>
<td>RCT Managed Care Organisation USA</td>
<td>Duration of study: 12 months</td>
<td>Group 1 Diabetes N = 73</td>
<td>Group 2 Diabetes N = 71</td>
<td>Intervention Group 1</td>
<td>Case management consist of patient assessment, goal setting, education, monthly telephone support and discussion with PCP when appropriate. Six small group session</td>
<td>Group 2</td>
<td>Free to joint other weight management or diabetes care programs. Received educational material</td>
<td>Outcomes Weight (kg) Waist circumference (cm) HbA1c (%) Total cholesterol (mg/dL) LDL (mg/dL) QoL</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Reference ID 564</td>
<td>Woollard et al. (1995)</td>
<td>RCT Primary Care Australia</td>
<td>Group 1 Hypertension N = 48</td>
<td>Group 2 Hypertension N = 52</td>
<td>Intervention Group 1</td>
<td>Usual care</td>
<td>Group 2</td>
<td>Received educational manual about risk factor, goals, and behaviour modification strategies.</td>
<td>Outcomes Systolic BP (mmHg) Diastolic BP (mmHg) Risk behaviour</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
### Reference ID 565
**Wollard et al. (2003)**
**RCT Primary Care Australia**
**Duration of study: 18 months**

<table>
<thead>
<tr>
<th>Group</th>
<th>Hypertension Diabetes Heart disease N = 69</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Group 1</strong></td>
<td>Hypertension Diabetes Heart disease N = 69</td>
</tr>
<tr>
<td><strong>Group 2</strong></td>
<td>Hypertension Diabetes Heart disease N = 69</td>
</tr>
<tr>
<td><strong>Group 3</strong></td>
<td>Hypertension Diabetes Heart disease N = 74</td>
</tr>
</tbody>
</table>

#### Intervention
**Group 1**
Received health promotion literature

**Group 2**
Received educational manual about the cognitive behavioural approach. A single face-to-face and 12 monthly 15-min telephone counselling sessions by nurse counsellors.

**Group 3**
Received educational manual about the cognitive behavioural approach. 12 monthly 60 min face-to-face counselling sessions by nurse counsellors.

#### Outcomes
- Total cholesterol (mmol/l)
- HDL (mmol/l)
- LDL (mmol/l)
- Triglycerides (mmol/l)
- Risk behaviour

### Reference ID 601
**Cline et al. (1998)**
**RCT Primary Care Sweden**
**Duration of study: months**

<table>
<thead>
<tr>
<th>Group</th>
<th>Heart disease N = 80</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Group 1</strong></td>
<td>Heart disease N = 110</td>
</tr>
<tr>
<td><strong>Group 2</strong></td>
<td>Heart disease N = 80</td>
</tr>
</tbody>
</table>

#### Intervention
**Group 1**
Usual care and follow up at the outpatient clinic by private cardiologist or GPs

**Group 2**
Patients and families received an education program on heart failure, pathophysiology and treatment. Patients received guidelines for self management. Patients were followed up at an easy access, nurse directed, outpatient clinic.

#### Outcomes
- Patient health service use
- QoL

### Reference ID 602
**Glasgow et al. (1997)**
**RCT Primary Care USA**
**Duration of study: 12 months**

<table>
<thead>
<tr>
<th>Group</th>
<th>Diabetes N = 98</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Group 1</strong></td>
<td>Diabetes N = 108</td>
</tr>
</tbody>
</table>

#### Intervention
**Group 1**
Usual care and touch screen computer assessment without behavioural or psychological issues related to dietary behaviour.

**Group 2**
Touch screen dietary barriers assessment and brief intervention about goal setting and problem solving. Take-home video addressed strategies for barriers patients experienced.

#### Outcomes
- BMI
- Cholesterol
- HbA1c
- Risk behaviour
<table>
<thead>
<tr>
<th>Reference ID</th>
<th>Study Details</th>
<th>Group 1</th>
<th>Group 2</th>
<th>Intervention Group 1</th>
<th>Intervention Group 2</th>
<th>Outcomes</th>
</tr>
</thead>
<tbody>
<tr>
<td>603</td>
<td>Hiss et al. (2001)</td>
<td>Diabetes</td>
<td>Diabetes</td>
<td>Annotated report of patients evaluation sent to patients and their physicians by mail.</td>
<td>Annotated report of patients evaluation sent to physicians by mail. Individual educational and counselling sessions with the nurses to encourage the patients to consult their physicians about identified problems.</td>
<td>HbA1C (%) Systolic BP (mmHg) Diastolic BP (mmHg) Cholesterol (mmol/l)</td>
</tr>
<tr>
<td>604</td>
<td>Jerant et al. (2001)</td>
<td>Heart disease</td>
<td>Heart disease</td>
<td>Usual outpatient care by PCP</td>
<td>Education and assessment provided to patients via scheduled home video-based telecare visits.</td>
<td>Education and assessment provided to patients via scheduled phone calls from the nurses.</td>
</tr>
<tr>
<td>605</td>
<td>Lahdensuo et al. (1998)</td>
<td>Asthma</td>
<td>Asthma</td>
<td>Traditional treatment group received advice how to use inhalers and general information on asthma during routine visits to outpatient.</td>
<td>Patients received personal education and counselling sessions Guided asthma self management included daily morning peak flow measurements, symptom score recording.</td>
<td>Patient health service use QoL</td>
</tr>
<tr>
<td>606</td>
<td>Lorig et al (1999)</td>
<td>Heart disease OA Other</td>
<td>Heart disease OA Other</td>
<td>Usual care</td>
<td>Educational sessions about self-management by trained volunteer leader.</td>
<td>Patient health service use Risk behaviour Health status score</td>
</tr>
<tr>
<td>Reference ID 607</td>
<td>Montori et al. (2002)</td>
<td>CBA</td>
<td>Primary Care</td>
<td>USA</td>
<td>Duration of study: 24 months</td>
<td><strong>Group 1</strong></td>
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<tr>
<td><strong>Intervention</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td><strong>Group 1</strong></td>
</tr>
<tr>
<td><strong>Outcomes</strong></td>
<td></td>
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<td></td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>Reference ID 608</th>
<th>New et al. (2003)</th>
<th>RCT</th>
<th>Hospital</th>
<th>UK</th>
<th>Duration of study: months</th>
<th><strong>Group 1</strong></th>
<th>Hypertension</th>
<th>N = 508</th>
<th><strong>Group 2</strong></th>
<th>Hypertension</th>
<th>N = 506</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Intervention</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td><strong>Group 1</strong></td>
<td>Standard care</td>
<td></td>
<td><strong>Group 2</strong></td>
<td>Assessment and motivation counselling about lifestyle modification until targets were achieved.</td>
<td><strong>Outcomes</strong></td>
</tr>
<tr>
<td><strong>Outcomes</strong></td>
<td></td>
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<table>
<thead>
<tr>
<th>Reference ID 609</th>
<th>O’Reilley et al 1999</th>
<th>RCT</th>
<th>Primary Care</th>
<th>UK</th>
<th>Duration of study: 6 months</th>
<th><strong>Group 1</strong></th>
<th>OA</th>
<th>N = 72</th>
<th><strong>Group 2</strong></th>
<th>OA</th>
<th>N = 108</th>
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<tbody>
<tr>
<td><strong>Intervention</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td><strong>Group 1</strong></td>
<td>Patients received advices on the importance of losing weight, wearing training shoes/air filled soles and maintaining fitness by PA.</td>
<td><strong>Group 2</strong></td>
<td>Patients received advices on the importance of losing weight, wearing training shoes/air filled soles and maintaining fitness by PA. Graded exercise program at home and follow up visits by the metrologist.</td>
<td><strong>Outcomes</strong></td>
<td>Weight (kg)</td>
</tr>
<tr>
<td><strong>Outcomes</strong></td>
<td></td>
<td></td>
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<td></td>
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<table>
<thead>
<tr>
<th>Reference ID 611</th>
<th>Pritchard et al. 1999</th>
<th>RCT</th>
<th>Primary Care</th>
<th>Australia</th>
<th>Duration of study: months</th>
<th><strong>Group 1</strong></th>
<th>Hypertension, Diabetes</th>
<th>N = 91</th>
<th><strong>Group 2</strong></th>
<th>Hypertension, Diabetes</th>
<th>N = 93</th>
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<tbody>
<tr>
<td><strong>Intervention</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td><strong>Group 1</strong></td>
<td>Usual care patients received results of the initial assessments and advices to contact their GPs for any queries.</td>
<td><strong>Group 2</strong></td>
<td>Counselling sessions on principles of good nutrition and exercise by GPs and dietician</td>
<td><strong>Group 3</strong></td>
<td>Counselling sessions on principles of good nutrition and exercise by dietician</td>
</tr>
<tr>
<td><strong>Outcomes</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
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</tbody>
</table>
| Reference ID 615 | Stewart et al. (1998) RCT Community based care Australia Duration of study: 6 months | **Group 1** Heart disease N = 100 | **Intervention**  
**Group 1** Usual care  
**Group 2** Heart disease N = 100  
Patient received assessment, remedial counselling, strategies to improve treatment adherence, and simple exercise regime via structured home visits by cardiac nurse. Team of cardiac nurse, cardiologist, and GPs. | **Outcomes**  
Patient health service use  
QoL |
|---|---|---|---|---|
| Reference ID 616 | Stewart et al. (1998) RCT Community based care Australia Duration of study: months | **Group 1** Heart disease N = 48 | **Intervention**  
**Group 1** Usual care by PCP or cardiologist  
**Group 2** Counselling about complying with treatment regime and reporting any sign of clinical deterioration or acute worsening of the disease by the nurse before discharge. Medication assessment and support to comply with treatment by pharmacist via home visits. Communication between study nurse and PCPs for further remedial action or more intensive follow up. | **Outcomes**  
Patient health service use |
| Reference ID 617 | Stromberg et al. (2003) RCT Hospital Scotland Duration of study: 12 months | **Group 1** Heart disease N = 54 | **Intervention**  
**Group 1** Usual care  
**Group 2** Heart disease N = 52  
Patients and families were educated on heart failure, and self-care regime by cardiac nurses during visits to clinic. Psychologically supporting relationship between the nurse and the patient. | **Outcomes**  
Patient health service use  
Risk behaviour |
| Reference ID 618 | Taylor et al. (2003) RCT Primary Care USA Duration of study: 12 months | **Group 1** Diabetes N = 85 | **Intervention**  
**Group 1** Usual care by PCP  
**Group 2** Diabetes N = 84  
Group class about diabetes. Individualised goal setting and self-management plan development and follow up calls by the nurses. | **Outcomes**  
Patient adherence to treatment  
Patient health service use  
HbA1c <7.5% (%)  
Total cholesterol |
<table>
<thead>
<tr>
<th>Reference ID</th>
<th>Study Design</th>
<th>Setting</th>
<th>Duration of study</th>
<th>Group 1</th>
<th>Group 2</th>
<th>Intervention</th>
<th>Outcomes</th>
</tr>
</thead>
<tbody>
<tr>
<td>619</td>
<td>RCT</td>
<td>Primary care</td>
<td>24 months</td>
<td>Lipid disorders</td>
<td>Lipid disorders</td>
<td>Usual care</td>
<td>Group 1: Education sessions provided by pharmacist to primary care doctors at the health centre. Major focus: drug treatment of lipid disorders.</td>
</tr>
<tr>
<td>620</td>
<td>CBA</td>
<td>Community based care</td>
<td>12 months</td>
<td>COPD</td>
<td>COPD</td>
<td>Usual care</td>
<td>Group 1: Education sessions provided by pharmacist to primary care doctors at the health centre. Major focus: drug treatment of lipid disorders.</td>
</tr>
<tr>
<td>621</td>
<td>RCT</td>
<td>Community based care</td>
<td>12 months</td>
<td>Diabetes</td>
<td>Diabetes</td>
<td>Usual care</td>
<td>Group 1: Education sessions provided by pharmacist to primary care doctors at the health centre. Major focus: drug treatment of lipid disorders.</td>
</tr>
<tr>
<td>622</td>
<td>RCT</td>
<td>Community based care</td>
<td>36 months</td>
<td>Hypertension</td>
<td>Hypertension</td>
<td>Usual care</td>
<td>Group 1: Education sessions provided by pharmacist to primary care doctors at the health centre. Major focus: drug treatment of lipid disorders.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Reference ID</th>
<th>Study Design</th>
<th>Setting</th>
<th>Duration of study</th>
<th>Group 1</th>
<th>Group 2</th>
<th>Intervention</th>
<th>Outcomes</th>
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<tbody>
<tr>
<td>619</td>
<td>RCT</td>
<td>Primary care</td>
<td>24 months</td>
<td>Lipid disorders</td>
<td>Lipid disorders</td>
<td>Usual care</td>
<td>Group 1: Education sessions provided by pharmacist to primary care doctors at the health centre. Major focus: drug treatment of lipid disorders.</td>
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<tr>
<td>620</td>
<td>CBA</td>
<td>Community based care</td>
<td>12 months</td>
<td>COPD</td>
<td>COPD</td>
<td>Usual care</td>
<td>Group 1: Education sessions provided by pharmacist to primary care doctors at the health centre. Major focus: drug treatment of lipid disorders.</td>
</tr>
<tr>
<td>621</td>
<td>RCT</td>
<td>Community based care</td>
<td>12 months</td>
<td>Diabetes</td>
<td>Diabetes</td>
<td>Usual care</td>
<td>Group 1: Education sessions provided by pharmacist to primary care doctors at the health centre. Major focus: drug treatment of lipid disorders.</td>
</tr>
<tr>
<td>622</td>
<td>RCT</td>
<td>Community based care</td>
<td>36 months</td>
<td>Hypertension</td>
<td>Hypertension</td>
<td>Usual care</td>
<td>Group 1: Education sessions provided by pharmacist to primary care doctors at the health centre. Major focus: drug treatment of lipid disorders.</td>
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### Data Table

<table>
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<tr>
<th>Parameter</th>
<th>Reference ID 619</th>
<th>Reference ID 620</th>
<th>Reference ID 621</th>
<th>Reference ID 622</th>
</tr>
</thead>
<tbody>
<tr>
<td>Glucose fasting</td>
<td>&lt;200mg/dl (%)</td>
<td>Glucose fasting</td>
<td>&lt;110mg/dl (%)</td>
<td>Glucose fasting</td>
</tr>
<tr>
<td>BMI</td>
<td>BMI&lt;30 (%)</td>
<td>BMI&lt;30 (%)</td>
<td>BMI&lt;30 (%)</td>
<td>BMI&lt;30 (%)</td>
</tr>
<tr>
<td>Systolic BP</td>
<td>Systolic BP &lt;130mmHg (%)</td>
<td>Systolic BP &lt;130mmHg (%)</td>
<td>Systolic BP &lt;130mmHg (%)</td>
<td>Systolic BP &lt;130mmHg (%)</td>
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### Summary

<table>
<thead>
<tr>
<th>Study</th>
<th>Setting</th>
<th>Duration</th>
<th>Group 1</th>
<th>Group 2</th>
<th>Intervention</th>
<th>Outcomes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Diwan et al. (1995)</td>
<td>Primary care</td>
<td>24 months</td>
<td>Lipid disorders</td>
<td>Lipid disorders</td>
<td>Usual care</td>
<td>Group 1: Education sessions provided by pharmacist to primary care doctors at the health centre. Major focus: drug treatment of lipid disorders.</td>
</tr>
<tr>
<td>Ketelaars et al. (1998)</td>
<td>Community based care</td>
<td>12 months</td>
<td>COPD</td>
<td>COPD</td>
<td>Usual care</td>
<td>Group 1: Education sessions provided by pharmacist to primary care doctors at the health centre. Major focus: drug treatment of lipid disorders.</td>
</tr>
<tr>
<td>Whelton et al. (1998)</td>
<td>Community based care</td>
<td>36 months</td>
<td>Hypertension</td>
<td>Hypertension</td>
<td>Usual care</td>
<td>Group 1: Education sessions provided by pharmacist to primary care doctors at the health centre. Major focus: drug treatment of lipid disorders.</td>
</tr>
</tbody>
</table>
| Fulmer et al. (1999) | Heart disease  
N = 18  
**Group 2**  
Heart disease  
N = 15 | **Group 1**  
Usual care  
**Group 2**  
Daily Telephone reminder to take medications | Patient adherence to treatment |
APPENDIX 11: LIST OF THE INCLUDED PAPERS


218. Headrick LA, Speroff T, Pelecanos HI, Cebul RD. Efforts to improve compliance with the National Cholesterol Education Program guidelines. Results of a randomized controlled trial see comments. Archives of Internal Medicine 1992;152(12):2490.
223. Hesselink AE, Penninx B, Van Der Windt D, Van Duin BJ, De Vries P, Twisk JWR, et al. Effectiveness of an education programme by a general practice assistant for asthma and COPD patients: Results from


Treat and Control Hypertension and Hyperlipidemia in Diabetes (SPLINT): A Randomized Controlled Trial. Diabetes Care 26 (8): 2250-5.


APPENDIX 12: LIST OF THE EXCLUDED PAPERS


98. Contreras EM, Garcia OV, Claros NM, Guillen VG, de la Figuera von Wichmann M, Martinez JJC, et al. Efficacy of telephone and mail intervention in patient compliance with antihypertensive drugs in


112. De Grauw WJ, van Gerwen WH, van de Lisdonk EH, van den Hoogen HJ, van den Bosch WJ, van Weel C. Outcomes of audit-
126. Dickinson J, Hutton S, Atkin A. Implementing the British Thoracic Society's guidelines: the effect of a nurse-run asthma clinic on


165. Garis RIFKC. Examining costs of chronic conditions in a Medicaid population. Managed Care 2002;11(8):43.


176. Goff DC, Jr., Gu L, Cantley LK, Parker DG, Cohen SJ. Enhancing the quality of care for patients with coronary heart disease: the design and baseline results of the hastening the effective application of research through technology (HEART) trial. American Journal of Managed Care 2002; 8(12):1069-78.


205. Hillsdon M, Thorogood M, White I, Foster C. Advising people to take more exercise is ineffective: a randomized controlled trial of


288. Majeed A, Williams J, de Lusignan S, Chan T. Management of heart failure in primary care after implementation of the National


controlled trial of a home based, nurse led psychoeducational intervention for adults at risk of adverse asthma outcomes. Thorax 2005;60(12):1003-1011.


Ting S. Multicolored simplified asthma guideline reminder (MSAGR) for better adherence to national/global asthma guidelines. Annals of Allergy, Asthma, & Immunology 2002;88(3):326-30.

Toobert DJ, Strycker LA, Glasgow RE, Bagdade JD. If you build it, will they come?. Reach and Adoption associated with a comprehensive lifestyle management program for women with type 2 diabetes. Patient Education & Counseling 2002;48(2):99-105.


### APPENDIX 13: LIST OF THE INCLUDED SYSTEMATIC REVIEWS

<table>
<thead>
<tr>
<th>Barton 2003 (1)</th>
<th><strong>Purpose</strong></th>
<th>To evaluate the evidence from randomised controlled trials for the effectiveness of CME for GPs, in terms of health benefits for patients with asthma.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td><strong>Inclusion criteria</strong></td>
<td>RCT. Intervention included physician education. Patient outcomes reported.</td>
</tr>
<tr>
<td></td>
<td><strong>Search</strong></td>
<td>Medline, CINAHL, and ERIC databases were searched for articles published between 1966 to 10/2002. Further searches of Cochrane Database of Systematic Reviews and DARE. Search terms included asthma, education, general practice, family practice or primary care and asthma workshop or academic detailing. Reference lists were screened for further articles.</td>
</tr>
<tr>
<td></td>
<td><strong>Methodological quality</strong></td>
<td>Scoring scheme of Jadad et al 3/5</td>
</tr>
</tbody>
</table>
|                | **Intervention** | Education sessions using guidelines
Interactive education seminars |
|                | **Test for homogeneity** | |
|                | **Studies** | Number of studies = 3
Chronic disease
Asthma |
|                | **Study type (number of studies)** | RCT (3) |
|                | **Location of studies (number of studies)** | Primary Care / GP (3) |
|                | **Outcomes (n = number of studies)** | Adherence to disease guidelines
No smokers (n=1)
Patient outcomes
Symptoms (n=3) No signif diff
Health service utilisation
Hosp admissions (n=1) p = 0.03
Quality of life
QoL (n=1) No diff
Medication use
Knowledge
|
| Boulware 2001 (2) | **Purpose** | To assess the independent and incremental effects of three commonly used patient education based behavioural interventions on hypertension |
|                  | **Inclusion criteria** | Focus on counselling, structured training courses, patient BP self-monitoring. Hypertension. |
|                  | **Search** | Medline, PsychINFO, CINAHL, Healthstar, Sociologic Abstracts, EI Compendex and Current Contents. The reference lists of included articles were searched. |
|                  | **Methodological quality** | |
|                  | **Intervention** | Training course for BP management
Patient centred counselling by either a nurse, doctor, pharmacist, social worker |
|                  | **Studies** | Number of studies = 15
Chronic disease
Hypertension |
|                  | **Study type (number of studies)** | Counselling (9)
Monitoring (1)
C+M (1)
C+T (3)
C+M+T (1) |
|                  | **Location of studies (number of studies)** | Community based care (8)
Hospital (6) |
<table>
<thead>
<tr>
<th>Study</th>
<th>Purpose</th>
<th>Inclusion criteria</th>
<th>Search</th>
<th>Methodological quality</th>
<th>Intervention</th>
<th>Test for homogeneity</th>
</tr>
</thead>
<tbody>
<tr>
<td>Deakin 2005 (3)</td>
<td>To assess the effects of group-based, patient-centred training on clinical, lifestyle and psychosocial outcomes in people with type 2 diabetes.</td>
<td>RCT or CCT. Single group session or series of group sessions. Type 2 diabetes.</td>
<td>Cochrane Library, Medline, Embase, CINAHL, AMED, ASSIA, ERIC, LILACS, National Research Register, British Education Index, British Nursing Index, Science Citation Index, NHS EED, Web of Science and Digital Dissertation Abstracts all to February 2003. Reference lists were screened and personal communication with authors.</td>
<td>Schultz and Jadad</td>
<td>Group education by nurse, dietician, doctors, community workers</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Other (1)</th>
<th>Outcomes (n = number of studies)</th>
<th>Adherence to disease guidelines</th>
<th>Patient outcomes</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td>C vs Usual care - dias BP (n=2) 3.2 mmHg improvement in DBP (95% CI 1.2, 5.3)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>C vs Usual care - sys BP (n=2) 10 mm Hg improvement in DBP (95% CI 4.8, 15.6)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>SM vs UC, BP No difference</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>C + training, BP 4.7 mm Hg (95% CI 87, 99)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Health service utilisation</th>
<th>Quality of life</th>
<th>Medication use</th>
<th>Knowledge</th>
<th>Overall conclusion</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Counselling offers BP improvement over usual care and adding training courses to counselling may improve BP control further. Insufficient evidence to show whether training or self-monitoring alone offer improvement over counselling or usual care.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Studies</th>
<th>Number of studies = 11 studies (14 papers)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chronic disease</td>
<td>Diabetes</td>
</tr>
<tr>
<td>Study type (number of studies)</td>
<td>RCT (8)</td>
</tr>
<tr>
<td>CCT (3)</td>
<td></td>
</tr>
<tr>
<td>Location of studies (number of studies)</td>
<td>Primary Care / GP (7)</td>
</tr>
<tr>
<td>Community based care (5)</td>
<td></td>
</tr>
<tr>
<td>Outcomes (n = number of studies)</td>
<td>Adherence to disease guidelines</td>
</tr>
<tr>
<td>Patient outcomes</td>
<td>HBA1c (12-14 months) (n=7) WMD -0.82 (95% CI -0.99, -0.65)</td>
</tr>
<tr>
<td>HBA1c (2 yrs) (n=22) WMD -0.97 (95% CI -1.40, -0.54)</td>
<td></td>
</tr>
<tr>
<td>Weight (12-14 months) (n=5) WMD -1.61 (95% CI -2.97, -0.25)</td>
<td></td>
</tr>
<tr>
<td>Sys (4-6 months) BP (n=2) WMD -5.37 (95% CI -9.53, -1.21)</td>
<td></td>
</tr>
<tr>
<td>Health service utilisation</td>
<td></td>
</tr>
<tr>
<td>Quality of life</td>
<td>Medication use</td>
</tr>
<tr>
<td>Reduction diabetes medication (n=5) OR 11.79 (95% CI 5.17, 26.90)</td>
<td></td>
</tr>
</tbody>
</table>
| Faas 1997 (4) | **Purpose** | To determine the efficacy of self-monitoring of blood glucose in NIDDM patients.  
**Inclusion criteria**  
NIDDM patients using diet or diet with oral antidiabetic medication. RCT. Patient based studies.  
**Search**  
A Medline search from 1976 to February 1996. The reference lists of the included papers were searched. MeSH headings included diabetes mellitus non-insulin dependent and glucose self monitoring. Repeat Medline search using the diabetes mellitus non-insulin dep and blood glucose in combination with self care and patient education  
**Methodological quality**  
Deyo and Riet et al  
**Intervention**  
Education about how to use the glucose testing strips Diet and exercise education  
Glucose testing strips  
Feedback to patients from physician about the results of the glucose testing  
**Test for homogeneity** | **Knowledge**  
Diabetes knowledge (n=3) Std MD 0.95 (95% CI 0.72, 1.18)  
**Overall conclusion**  
Group based training for type 2 diabetes is effective by improving fasting glucose, HBA1c, knowledge, reduced systolic BP, weight and need for insulin.  
**Studies**  
Number of studies = 6  
**Chronic disease**  
Diabetes  
**Study type (number of studies)**  
RCT (6)  
**Location of studies (number of studies)**  
**Outcomes (n = number of studies)**  
**Adherence to disease guidelines**  
**Patient outcomes**  
HbA1c (n=6) 5 no difference  
HbA1c (mean change) −0.4% in SMBG and +0.5% in control (p<0.05)  
**Health service utilisation**  
**Quality of life**  
**Medication use**  
**Knowledge**  
**Overall conclusion**  
Efficacy of SMBG in NIDDM is questionable and further research is required |  
Fahey 2003 (5) | **Purpose** | To determine the effectiveness of interventions to improve the control of blood pressure in patients with elevated blood pressure. To evaluate the ability of reminders to improve the follow-up of patients with elevated blood pressure.  
**Inclusion criteria**  
RCT to evaluate different models of care for patients with hypertension. Adults with primary hypertension. Interventions aimed at improving blood pressure control: self monitoring, patient education, health professional education, health professional led care. Organisational interventions. Appointment reminder systems. .  
**Search**  
Cochrane Central Register of Controlled trials, Cochrane Library (2002), Medline, Embase (01/2000 to 11/2002). Reference lists were screened.  
**Outcomes (n = number of studies)** |
### Methodological quality

<table>
<thead>
<tr>
<th>Cochrane guidelines</th>
</tr>
</thead>
</table>

### Intervention

- Computer generated algorithms
- Colour coded cards / information
- Meetings with lead clinician
- Computer generated physician feedback
- Computer reminder to GP to check BP
- Self Management booklet
- With hypertension counsellor
- Use of home visits to motivate
- Self monitoring of BP
- Self management booklet
- Postal patient reminder
- Pharmacists, nurses, nurse run clinics
- Telemonitoring of BP
- Dosing devices
- Computer reminders
- Hand held records
- Levels of insurance, free visits

### Test for homogeneity

- Garg 2005 (6)

### Adherence to disease guidelines

<table>
<thead>
<tr>
<th>Appointment reminder (n=6)</th>
</tr>
</thead>
</table>

### Patient outcomes

- Self monitoring, BP control (n=4) OR 0.88 (95% CI 0.67, 1.15)
- Physician education, BP control (n=6) OR 0.85 (95% CI 0.80, 0.91)
- Protocol driven care, BP control (n=7) OR 0.43 (95% CI 0.40, 0.46)

### Health service utilisation

### Quality of life

### Knowledge

### Overall conclusion

An organised system of regular review linked to vigorous antihypertensive drug therapy was shown to reduce blood pressure and all cause mortality at 5 years follow-up. The results were dominated by one large RCT. Other interventions were variable: self-monitoring reduced diastolic BP slightly, appointment reminders increased the numbers who attended. Health professional education had mixed results and unlikely to be associated with reduction in BP. Health professional led care requires further evaluation.

### Garg 2005 (6)

### Purpose

To review controlled trials of computerized clinical decision support systems (CDSS) and to identify study characteristics predicting benefit.

### Inclusion criteria

- RCT, CCT. Studies that compared CDSS with usual care and performance outcomes or patient outcome.

### Search

Medline, Embase, Cochrane Library, ACP Journal, DARE and Inspec bibliographic databases from 1998 to 2004. The Science Citation Index, PubMed related articles and the reference lists of included articles were also searched.

### Methodological quality

<table>
<thead>
<tr>
<th>Cohen K</th>
</tr>
</thead>
</table>

### Intervention

- Computerised guidelines
- Computerised prompts

### Test for homogeneity

<table>
<thead>
<tr>
<th>Studies</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Chronic disease</th>
</tr>
</thead>
</table>

| Diabetes |
| CVD |

### Study type (number of studies)

| Other (8) |

### Location of studies (number of studies)

| Other (8) |

### Outcomes (n = number of studies)

<table>
<thead>
<tr>
<th>Adherence to disease guidelines</th>
</tr>
</thead>
</table>

| Practitioner performance (diabetes) (n=3) 1 |
| Practitioner performance, hypertension and CVD (n=5) 1 |

### Patient outcomes

| HbA1c (n=3) No improvement |
| Patient outcomes, hypertension and CVD (n=5) No improvement |

### Health service utilisation

### Quality of life

### Medication use

### Knowledge
<table>
<thead>
<tr>
<th>Griffin 1998 (7)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Purpose</strong></td>
</tr>
<tr>
<td>To assess the effects of involving primary care professionals in the routine review and surveillance for complications of people with established diabetes mellitus compared with secondary care specialist follow up.</td>
</tr>
<tr>
<td><strong>Inclusion criteria</strong></td>
</tr>
<tr>
<td>RCT. insulin or non-insulin dependent diabetes. Health professionals involved in the routine care of people with diabetes. Follow up or co-ordinated care involving hospitals or primary care.</td>
</tr>
<tr>
<td><strong>Search</strong></td>
</tr>
<tr>
<td>Medline, CINAHL, National Research Register, Psychlit, Healthstar, Embase, CRIB, Dissertation abstracts to 1996. Cochrane Diabetes Group trials register, Cochrane Library. The references lists of included studies were searched.</td>
</tr>
<tr>
<td><strong>Methodological quality</strong></td>
</tr>
<tr>
<td>Practice sent guidelines</td>
</tr>
<tr>
<td>Distribution of educational material (prof level) to GP education of GP about diabetes</td>
</tr>
<tr>
<td>individual treatment plan developed and sent to GP's Regular meetings with GP and hospital staff Discharge letter sent to GP Reminders from hospital to GP and patient Reminders to patient from hospital patient reminders regular review by the GP Shared care - nurse, GP and patient Computerised record system at hospital sent info to practices IT system to remind patients</td>
</tr>
<tr>
<td><strong>Test for homogeneity</strong></td>
</tr>
<tr>
<td>Studies</td>
</tr>
<tr>
<td>Number of studies = 5</td>
</tr>
<tr>
<td>Chronic disease</td>
</tr>
<tr>
<td>Diabetes</td>
</tr>
<tr>
<td><strong>Study type (number of studies)</strong></td>
</tr>
<tr>
<td>RCT (5)</td>
</tr>
<tr>
<td><strong>Location of studies (number of studies)</strong></td>
</tr>
<tr>
<td>Primary Care / GP (5)</td>
</tr>
<tr>
<td><strong>Outcomes (n = number of studies)</strong></td>
</tr>
<tr>
<td>Adherence to disease guidelines</td>
</tr>
<tr>
<td>All GP/shared care versus hospital care, No follow (n=4) OR 0.37 (95% CI 0.22, 0.61)</td>
</tr>
<tr>
<td>Prompted GP/shared care vs hospital care, no foloow up (n=3) OR 0.37 (95% CI 0.22, 0.61)</td>
</tr>
<tr>
<td>Routine unprompted GP/shared care vs hospital care, no follow up (n=2) OR 11.99 (95% CI 7.82, 18.38)</td>
</tr>
<tr>
<td><strong>Patient outcomes</strong></td>
</tr>
<tr>
<td>Mortality, all GP shared care v hospital care OR 1.75 (95% CI 1.11, 2.74) Mortality, prompted GP shared care vs hospital care Mortality, prompted GP shared care vs hospital care Mortality, routine unprompted GP shared care v hospital OR 2.55 (95% CI 1.40, 4.62)</td>
</tr>
<tr>
<td>All GP/shared care versus hospital care, HbA1c (n=4) WMD 0.00 (95% CI -0.26, 0.25)</td>
</tr>
<tr>
<td>All GP/shared care versus hospital care, HbA1c (n=3) WMD -0.28 (95% CI -0.59, 0.03)</td>
</tr>
<tr>
<td>Routine unprompted GP/shared care versus hospital care, HbA1c (n=2) WMD 0.19 (95% CI -0.17, 0.56)</td>
</tr>
<tr>
<td>Health service utilisation</td>
</tr>
<tr>
<td>All GP/shared care versus hospital care, hops admission (n=2) OR 0.83 (95% CI 0.53, 1.30)</td>
</tr>
<tr>
<td><strong>Quality of life</strong></td>
</tr>
<tr>
<td><strong>Medication use</strong></td>
</tr>
<tr>
<td><strong>Knowledge</strong></td>
</tr>
<tr>
<td><strong>Overall conclusion</strong></td>
</tr>
<tr>
<td>In those schemes featuring more intensive support through a prompting system for general practitioners and patients there was no difference in mortality</td>
</tr>
</tbody>
</table>

**Overall conclusion**
CDSS may improve some practitioner performance but there is little evidence of an improvement in patient outcomes.
### Griffin 1998 (8)

**Purpose**
To assess the effectiveness of care in general practice for people with diabetes.

**Inclusion criteria**
RCT. People with diabetes (NIDDM or IDDM). Randomly allocated to hospital, GP or shared care for their diabetes.

**Search**
Medline, National Research Register, CINAHL, PsychLit, Healthstar.

**Methodological quality**
- Individual management protocols sent to GP.
- Register recall systems
- Central computerised recall
- GP education sessions
- Hospital, GP and nurse teams

**Test for homogeneity**

**Studies**
Number of studies = 6 articles from 5 trials

**Chronic disease**
Diabetes

**Study type (number of studies)**
RCT (5)

**Location of studies (number of studies)**
Primary Care / GP (5)

**Outcomes (n = number of studies)**
- Adherence to disease guidelines
  - Refer to chirpody (n=2) OR 0.61 (95% CI 0.4, 0.92)
  - Refer to dietician (n=2) OR 0.61 (95% CI 0.4, 0.92)
- Freq of HbA1c test (pppy) (n=2) WMD 1.6 (95% CI 1.45, 1.75)
- Other
  - Mortality, prompted GP care with hospital care OR 1.06 (95% CI 0.53, 2.11)
  - HbA1c (n=3) WMD -0.28 (95% CI -0.59, 0.03)
  - Systolic BP (n=2) WMD 1.62 (95% CI -3.30, 6.53)
  - Diastolic BP (n=2) WMD 0.56 (95% CI -1.69, 2.80)

**Frequency of HbA1c test (pppy)**

**Patient outcomes**
- Mortality, prompted GP care with hospital care OR 1.06 (95% CI 0.53, 2.11)
- HbA1c (n=3) WMD -0.28 (95% CI -0.59, 0.03)
- Systolic BP (n=2) WMD 1.62 (95% CI -3.30, 6.53)
- Diastolic BP (n=2) WMD 0.56 (95% CI -1.69, 2.80)

**Health service utilisation**

**Quality of life**

**Medication use**

**Knowledge**

**Overall conclusion**
The evidence supports provision of regular prompted recall and review of selected people with diabetes by GPs. Computerised central recall, with prompting for patients and their GP, can achieve standards of care as good as or better than hospital outpatient care in the short term.

### Loveman 2003 (9)

**Purpose**
To assess the effects of diabetes specialist nurses / case manager in diabetes on the metabolic control of patients with type 1 and type 2 diabetes.

**Inclusion criteria**
RCT or CCT. Minimum trial duration of 6 months. Children and adults with type 1 or 2 diabetes. Specialist or paediatric nurse intervention in addition to routine care versus routine care...

**Search**
Medline, Cochrane Library, Embase, CINAHL, British Nursing Index, Royal College of Nursing Journals Database 1995-1996, Health STAR 1981-200,
BIOSIS, PsychInfo, Science Citation Index Social Science Index all up to 2002 unless otherwise indicated. National Research Register, Current Controlled Trials, Hand searching of diabetes journals and abstracts of diabetes meetings. The reference lists of included studies were searched.

**Methodological quality**

- **Intervention**
  - Guideline based care
  - Structured education, interactive self-education
  - Set targets to achieve Health promotion support
  - Self monitoring
  - follow - up telephone by nurse
  - Nurse educator, nurse coordinator
  - monthly home visits
  - Tele-glucometer automated telephone support

**Test for homogeneity**

---

<table>
<thead>
<tr>
<th>Loveman 2003 (part 1)(10)</th>
<th>Purpose</th>
<th>To evaluate the effectiveness of self-management education or patients with type 2 diabetes - general diabetes education.</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Inclusion criteria</strong></td>
<td>RCT, CCT. Specific educational program with usual care or other educational program. Type 2 diabetes. . . .</td>
<td></td>
</tr>
<tr>
<td><strong>Search</strong></td>
<td>Cochrane Library, National Research Register, Medline, PubMed, Embase, CINAHL, Web of Science, Science Citation Index, Psychinfo, ERIC, DARE, BIOSIS and BEI all to 2002. All reference lists of included papers were searched, personal contact with experts in the field and search of Diabetes UK website.</td>
<td></td>
</tr>
<tr>
<td><strong>Methodological quality</strong></td>
<td>CRD methodology</td>
<td></td>
</tr>
</tbody>
</table>
| **Intervention**          | Education materials to support intervention
  - Self management education sessions. Individual or group sessions
  - Behavioural program delivered by nurse
  - Specific ethic groups
  - SM education
  - SM education |
<p>| <strong>Test for homogeneity</strong>  | |</p>
<table>
<thead>
<tr>
<th>Study</th>
<th>Purpose</th>
<th>Inclusion criteria</th>
<th>Search</th>
<th>Methodological quality</th>
<th>Intervention</th>
<th>Test for homogeneity</th>
<th>Studies</th>
<th>Chronic disease</th>
<th>Patient outcomes</th>
<th>Health service utilisation</th>
<th>Quality of life</th>
<th>Medication use</th>
<th>Knowledge</th>
<th>Overall conclusion</th>
</tr>
</thead>
<tbody>
<tr>
<td>Loveman 2003 part 2 (10)</td>
<td>To evaluate the effectiveness of self-management education or patients with type 2 diabetes - specific diet diabetes education.</td>
<td>RCT, CCT. Specific educational program with usual care or other educational program. Type 2 diabetes.</td>
<td>Medline, PubMed, Embase, EED all to 2002. All reference lists of included papers were searched, personal contact with experts in the field and search of Diabetes UK website.</td>
<td>CRD methodology</td>
<td>Diet programs, Diet advice, Exercise education, Diet programs, behaviour modification, Self management focused on diet and exercise, Food records and contracts with patient, Team delivered education, Monetary deposit reimbursed at subsequent visits</td>
<td>Number of studies = 8</td>
<td>Diabetes</td>
<td>RCT (7), CCT (1)</td>
<td>Primary Care / GP (6), Other (2)</td>
<td>HbA1c Signif reduction with diet and education (1/8), BP NS diff (1/8), Signif reduction in diast BP (1/8), Weight 5/8 NS diff</td>
<td>QoL (n=1) Signif improvement</td>
<td></td>
<td>Generally these programs have a limited impact on outcomes that indicate control.</td>
<td></td>
</tr>
<tr>
<td>Norris 2001 (11)</td>
<td>To systematically review the effectiveness of self-management training in type 2 diabetes.</td>
<td>RCT. Type 2 diabetes more than 18 years old. Interventions in all settings. Education delivered by any provider.</td>
<td>English language papers published between January 1980 and December 1999</td>
<td></td>
<td></td>
<td>Number of studies = 84 from 72 studies</td>
<td>Diabetes</td>
<td>RCT (72)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Medication use**

**Knowledge**

Diabetes knowledge (n=2) Signif improvement

**Overall conclusion**

The results of educational interventions aimed at patients with type 2 diabetes are difficult to interpret. It is impossible on the basis of the limited significant intervention effects to determine which specific characteristics of diabetes education will be reliably effective.
**Purpose**
To evaluate the effectiveness and economic efficiency of disease management and case management for people with diabetes. 

### Inclusion criteria
Primary investigations of interventions selected for evaluation. Conducted in Market Economy. Outcomes on one or more outcome of interest. Meet minimum quality standards. RCT, CCT, CBA. 

### Search
Medline, ERIC, CINAHL, and Healthstar were searched for articles published between 1966 to 12/2000. Further searches of Cochrane Database of Systematic Reviews and DAER. Search terms included diabetes, case management, disease management, care model, shared care, primary health care, medical specialties, primary or specialist. Reference lists were screened for further articles. 

### Methodological quality
Community Guide's methods for assessing quality 

### Intervention
Guidelines for treatment and education
Physician and support staff education 2/52
Education using guidelines
Diet and ex reinforcement
Patient reminders and telephone follow up
Disease registers
Nurse case management
Team or community team care

### Adherence to disease guidelines

<table>
<thead>
<tr>
<th>Patient outcomes</th>
<th>SME vs control, HbA1c (n=54) Improved in 14</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>SME vs control, HbA1c (n=54) Both groups improved in 15</td>
</tr>
<tr>
<td></td>
<td>HbA1c (6 months) (n=54) Greater improvement at 6 months, 8 studies</td>
</tr>
</tbody>
</table>

### Health service utilisation

- Patient outcomes
- Medication use
- Knowledge

- Diabetes knowledge (n=17) Signif improvement in 11

### Overall conclusion
Evidence supports the effectiveness of self-management training in type 2 diabetes especially in the short term. More evidence is required to assess the effectiveness of SM training on long term glycemic control, CVD risk factors

### Norris 2002 (part 1) (12)

<table>
<thead>
<tr>
<th>Studies</th>
<th>Number of studies = 27</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chronic disease</td>
<td>Diabetes</td>
</tr>
<tr>
<td>Study type (number of studies)</td>
<td>RCT (5)</td>
</tr>
<tr>
<td></td>
<td>CCT (1)</td>
</tr>
<tr>
<td></td>
<td>CBA (13)</td>
</tr>
<tr>
<td></td>
<td>Other (6)</td>
</tr>
<tr>
<td></td>
<td>ITS (1)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Location of studies (number of studies)</th>
<th>Hospital (4)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Primary Care / GP (10)</td>
</tr>
<tr>
<td></td>
<td>Other (13)</td>
</tr>
</tbody>
</table>

### Outcomes (n = number of studies)

<table>
<thead>
<tr>
<th>Adherence to disease guidelines</th>
<th>HbA1c done (n=15) +26.5% (IQ 10.9 to 54%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Foot exam done (n=9) +26.5% (IQ 10.9 to 54%)</td>
<td></td>
</tr>
</tbody>
</table>

### Patient outcomes

<table>
<thead>
<tr>
<th>HbA1c (n=19) -0.5% (IQ -1.35 to –0.1%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Health service utilisation</td>
</tr>
<tr>
<td>Hospital admission (n=5) -31% (IQ -82.3 to +11.4%)</td>
</tr>
<tr>
<td>No visits (n=4) -5.6% (IQ -12.9 to +25.8%)</td>
</tr>
<tr>
<td>Quality of life</td>
</tr>
<tr>
<td>QoL (n=1) Improved</td>
</tr>
</tbody>
</table>
Inclusion criteria | Primary investigations of interventions selected for evaluation. Conducted in Market Economy. Outcomes on one or more outcome of interest. Meet minimum quality standard. RCT, CCT, CBA.  
Search | Medline, PubMed, Embase, EED all to 2002. All reference lists of included papers were searched, personal contact with experts in the field and search of Diabetes UK website.  
Methodological quality | Community Guide’s methods for assessing quality  
Intervention | Guidelines for treatment and education  
Physician and support staff education  
Education using guidelines  
Diet and ex reinforcement  
Patient reminders and telephone follow up  
Disease registers  
Nurse case management  
Team or community team care  
Improved planning & Coordination  
Continuous across disease severity  
Test for homogeneity |  
Medication use  
Knowledge | Diabetes knowledge (n=1) Signif improvement  
Overall conclusion | Case management is effective both when delivered with one or more additional educational, reminder or support interventions.  
| Norris 2002 (13) | Purpose | To evaluate the effectiveness of diabetes self management in community settings  
Search |  
Studies | Number of studies = 15  
Chronic disease | Diabetes  
Study type (number of studies) | RCT (9)  
CBA (4)  
Location of studies (number of studies) | Hospital (2)  
Primary Care / GP (7)  
Other (6)  
Outcomes (n = number of studies) | Adherence to disease guidelines  
HbA1c done (n=5) +54% and +84%  
Foot exam done (n=2) +54% and +84%  
Patient outcomes | HbA1c (n=3) -0.4% (IQ –0.6 to –0.16)  
Health service utilisation | Hospital admission (n=4) -18% (IQ -82 to –18%)  
Quality of life | QoL (n=2) Signif improvement  
Medication use  
Knowledge  
Overall conclusion | Case management is effective both when delivered with one or more additional educational, reminder or support interventions.
### Methodological quality

**Intervention**
- Videos and booklets
- Diet and exercise session. Self care education
- Motivational videos (home)
- Computerised self management education
- Education by community health volunteers
- Follow-up telephone calls
- Residential diet and exercise course

**Test for homogeneity**

### Other (1)

**Location of studies (number of studies)**
- Community based care (8)
- Other (7)

**Outcomes (n = number of studies)**

#### Adherence to disease guidelines

**Patient outcomes**
- Community gathering places, GHB% (n=4) Pooled estimate −1.9 (95% CI −2.4, −1.4)
- SME in the home, GHB% (n=2) Pooled estimate −0.5 (95% CI −1.1, 0.1)
- Community gathering places, weight (lbs) (n=6) −5.2 (95% CI −9.0, 1.6)
- SME in the home, weight (lbs) (n=3) −2.3 (95% CI −4.5, 0)

**Health service utilisation**

#### Quality of life
- Medication use
- Knowledge
- Community gathering places, knowledge (n=1) Improved
- SME in the home, knowledge (n=5) Improved

**Overall conclusion**
- There is evidence that DSME is effective in community gathering places but not the home for adults with type 2 diabetes.

---

### Oakeshott 2003 (14)

**Purpose**
- To determine the effectiveness of nurse led hypertension management in primary care.

**Inclusion criteria**
- RCT. Nurse-led clinics in UK general practice. Interventions for hypertension conducted by nurses.

#### Search
- Medline, Embase, CINAHL, Cochrane Library, UK HTA reports all searched from 1990 to 2001. Reference lists of included papers were searched

**Methodological quality**
- Jadad 3

**Intervention**
- Use of BP guidelines
- Specialist nurses teach local nurses
- Nurse delivered health promotion
- Behavioural counselling for hypertension
- Nurse delivered care versus GP care
- Practice nurse and cardias nurse shared care

**Test for homogeneity**

---

### Studies

**Number of studies = 10**

**Chronic disease**
- Hypertension

**Study type (number of studies)**
- RCT (10)

**Location of studies (number of studies)**
- Primary Care / GP (10)

**Outcomes (n = number of studies)**

#### Adherence to disease guidelines

**Patient outcomes**
- Dias BP (n=10) 1 improved with nurse, 9.1 (p<0.001)

**Health service utilisation**

#### Quality of life
- Medication use
- Antihypertensives (n=3) No difference

**Knowledge**

**Overall conclusion**
- Compared with general practice care, nurse led care may benefit from more
<table>
<thead>
<tr>
<th>Purpose</th>
<th>Studies</th>
</tr>
</thead>
<tbody>
<tr>
<td>What is the effectiveness of nurse-led cardiac clinics in adult patients with a diagnosis of CHD.</td>
<td>Number of studies = 5</td>
</tr>
</tbody>
</table>

**Inclusion criteria**
- RCT, CCT, CBA. Adults aged 18 years or over presenting to cardiac nurse led clinic. Interventions by the nurse to include education, assessment, consultation, referral, administrative structures or models. . . .

**Search**
- Medline, CINAHL, Current Contents, Cochrane library, DARE, Expanded Academic Index, Electronic Collections Online, TRIP database, Rural, Dissertation Abstracts International, Proceedings First all to August 2002. The reference lists of relevant articles were searched

**Methodological quality**

**Intervention**
- Use of guideline based care
- Register recall systems
- The Angina Plan workbook and relaxation programme
- Structured interview
- Motivational interviews
- Regular follow up
- Nurse led care
- GP led care
- Cardiac and GP nurses or health visitor
- Continuity of care between hospital and GPs
- Home visits and GP practice

**Test for homogeneity**

**Studies**
- Number of studies = 5
- **Chronic disease**
- Heart disease

**Study type (number of studies)**
- RCT (5)

**Location of studies (number of studies)**
- GP (5)

**Outcomes (n = number of studies)**
- **Adherence to disease guidelines**
- Nurse led care vs usual care, smoking cessation 13.1% vs. 11.2% p=0.05
- Cardiac nurse vs GP, smoking cessation 13.1% vs. 11.2% p=0.05

**Cardiac nurse vs GP, follow up**
- Cardiac nurse > GP p<0.001

**Patient outcomes**
- Nurse led care vs usual care, dias BP -6mmHg vs. +3mmHg p0.048
- Nurse led care vs usual care, sys BP -9mmHg vs. 0mmHg p=0.000
- Cardiac care vs GP, angina pain on exercise cardiac nurse >GP p=0.05

**At 4 months**
- Not clear at 12 months

**Health service utilisation**
- Nurse led care vs usual care, SF-36 All domains significantly improved with nurse led care

**Medication use**
- Cardiac nurse vs GP, medications No diff

**Knowledge**

**Overall conclusion**
- Although not all outcomes obtained statistical significance, nurse-led clinics were at least as effective as GP clinic for most outcomes. Nurse led clinics increased attendance and follow-up and are recommend for those who need lifestyle modification.

---

<table>
<thead>
<tr>
<th>Purpose</th>
<th>Studies</th>
</tr>
</thead>
<tbody>
<tr>
<td>Is optimisation of asthma control through the use of inhaled corticosteroid treatment, by regular medical review, equivalent to optimisation of asthma control by an individualised written self-management plan in improving health outcomes?</td>
<td>Number of studies = 15 (data from priamry care used)</td>
</tr>
</tbody>
</table>

**Inclusion criteria**
- RCT. Asthma education and self management on health outcomes. Adults (>16 years) with asthma. . . .

**Study type (number of studies)**
- RCT (15)

**Location of studies (number of studies)**
- Hospital (9)
**Search**
Cochrane Airways Group Trial Register derived from Medline, Embase and CINAHL. Hand search of respiratory journals and meeting abstracts and reference lists of included studies.

**Methodological quality**
Jadad 4

**Intervention**
Provider orientate interventions
Education sessions on written SM Dr or nurse run
Written self management
Telephone reminders, regular review

**Test for homogeneity**

**Ram 2002 (17)**

**Purpose**
To determine the effectiveness of organised asthma via primary care based asthma clinics

**Inclusion criteria**
RCT. Patients with asthma who must be participants in primary care led, organised and structured asthma clinic. Primary care practice with proactive systems of care by organised clinic. Doctor or nurse could deliver care.

**Search**
Cochrane Airways Group register and Cochrane Controlled Trials register. Medline, CINAHL and Embase. Reference lists were screened.

**Methodological quality**
Jadad score 2

**Intervention**
Nurse education
Patient counselling
self management education
Regular review

**Test for homogeneity**

<table>
<thead>
<tr>
<th>Primary Care / GP (6)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Outcomes (n = number of studies)</strong></td>
</tr>
<tr>
<td>Adherence to disease guidelines</td>
</tr>
<tr>
<td>PEF vs Dr review, mean FEV1 (n=3) SMD 0.10 [-0.05, 0.25]</td>
</tr>
<tr>
<td>PEF vs Dr review, mean PEF (n=3) SMD 0.16 (95% CI 0.01, 0.31)</td>
</tr>
</tbody>
</table>

**Health service utilisation**
PEF vs symptom SM, hospital admissions (n=4) R Risk 1.17 (95% CI 0.44, 3.12)
PEF vs symptom SM, ER visits (n=5)

**Quality of life**
Medication use
PEF vs symptom SM, oral steroids (n=2) R Risk 1.53 (95% CI 0.82, 2.87)

**Knowledge**

**Overall conclusion**
Self-management and doctor review of treatment gave equivalent effects for hospitalisation, ER visits, unscheduled DR visits and nocturnal asthma. Self-management with PEF and symptoms were found to be equivalent. Reducing the intensity of the self-management education or level of clinical review may reduce its effectiveness.

<table>
<thead>
<tr>
<th>Studies</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of studies = 1</td>
</tr>
<tr>
<td>Chronic disease</td>
</tr>
<tr>
<td>Asthma</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Study type (number of studies)</th>
</tr>
</thead>
<tbody>
<tr>
<td>RCT (1)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Location of studies (number of studies)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Primary Care / GP (1)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Outcomes (n = number of studies)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Adherence to disease guidelines</td>
</tr>
<tr>
<td>Have PEF meter (n=1)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Patient outcomes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Night waking (n=1) R Risk 0.36 (95% CI 0.16, 0.81)</td>
</tr>
<tr>
<td>Morning waking - asthma (n=1) R Risk 0.66 (95% CI 0.41, 1.06)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Health service utilisation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hospital admission (n=1) R Risk 0.39 (95% CI 0.08, 1.95)</td>
</tr>
</tbody>
</table>

| GP home visits (n=1) R Risk 0.97 (95% CI 0.06, 15.27) |

<table>
<thead>
<tr>
<th>Quality of life</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Medication use</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rescue b2 (n=1) R Risk 0.98 (95% CI 0.92, 1.04)</td>
</tr>
<tr>
<td>Preventer use (n=1) R Risk 1.03 (95% CI 0.91, 1.17)</td>
</tr>
</tbody>
</table>
| Renders 2000 (18) | **Purpose** | To assess the different interventions targeted at health professionals or the structure in which they deliver care, on the management of patients with diabetes in primary care, outpatients and community settings.  
**Inclusion criteria**  
RCT, CCT, CBA or ITS. Analysis of professional, financial and organisational strategies to improve care for diabetes. Health care professionals taking care of non-hospitalised patients with diabetes. . . .  
**Search**  
Medline, Embase, CINAHL, Cochrane Diabetes Group register, EPOC register all to 1999. Reference lists were screened.  
**Methodological quality**  
EPOC quality checklist  
**Intervention**  
Yes  
Distribution of educational material (prof level)  
Educational meetings (prof level)  
Local consensus process (prof level)  
Educational outreach visits (prof level)  
Audit and feedback (prof level)  
Patient education booklets  
Patient education  
Learner centred counselling approach  
Revision of professional roles - nurse, pharmacists  
Case discussion  
Formal integration of services (org level)  
Nurses treating patients  
Regular follow - up  
New building  
Modem and download glucose results  
Change to medical records system  
**Test for homogeneity** | **Knowledge**  
**Overall conclusion**  
There is limited evidence of benefit for primary care based asthma clinics. More trials are needed. More patients in the intervention group had PEF meters and fewer woke with nocturnal asthma. | **Studies**  
Number of studies = 41  
**Chronic disease**  
Diabetes  
**Study type (number of studies)**  
RCT (27)  
CCT (12)  
ITS (2)  
**Location of studies (number of studies)**  
Primary Care / GP ()  
Community based care ()  
**Outcomes (n = number of studies)**  
Adherence to disease guidelines  
Prof intervention vs usual care, HbA1c (n=7) 2 improved, 1 unclear  
Organisation intervention vs usual care, HbA1c (n=14) 2 improved, 1 unclear  
Prof and org intervention vs usual care, HbA1c (n=20) 4 improved, 1 unclear  
**Patient outcomes**  
Prof intervention vs usual care, HbA1c (n=7) 1 improved, 2 unclear  
Organisation intervention vs usual care, HbA1c (n=14) 2 improved, 1 unclear  
Prof & org interventions vs usual care (n=20) 9 improved  
**Health service utilisation**  
**Quality of life**  
**Medication use**  
**Knowledge**  
**Overall conclusion**  
Multifaceted interventions can enhance performance of health professionals in managing patients. Regular recall and review of patients can also improve management. Introduction of patient orientated interventions can improve health outcomes. Nurses have an important role. |
| Taylor 2005 (19) | **Purpose** | To determine the effectiveness of innovations in management of chronic disease involving nurses for patients with COPD. | **Studies**  
Number of studies = 9  
**Chronic disease** |
### COPD

**Inclusion criteria**
Clinical service interventions or packages of care aimed at improving the management of patients with COPD. Inpatient, outpatient or community base interventions either nurse led, nurse coordinated or largely delivered by nurses. Outcomes were survival, use of healthcare resources, ADL, HRQoL or carers QoL.

**Search**
Review of English and Dutch language papers. 16 English language databases from Jan 1980 to Jan 2005 and 8 Dutch language databases and hand search conference proceedings for 7 respiratory associations.

**Methodological quality**
Delphi and Jadad criteria

**Intervention**
- Use of COPD guidelines
- COPD and smoking cessation education
- One month post discharge
- COPD self management, early identification of exacerbation
- Telephone follow-up
- Fitness program
- Integrate system
- Nurse providing continuity of care
- Case management
- Home visits by nurse

**Test for homogeneity**

**Purpose**
To determine whether the provision of a written asthma self-management plan increases adherence and improves outcome.

**Inclusion criteria**
RCT. Management plans for patients with asthma. The individualised written asthma plan contains regular management and the actions to take in the event of an exacerbation.

**Search**
Cochrane Airways Group trials register, Cochrane Central Register of Controlled trials to June 2004.

**Methodological quality**

**Intervention**
- Self management information
- Self management
- PEF or symptom self management

**Studies**
Number of studies = 7
Main results reported from primary care

**Chronic disease**
Asthma

**Study type (number of studies)**
RCT ()

**Location of studies (number of studies)**
Community based care (5)
Hospital (4)
Primary Care / GP ()

**Outcomes (n = number of studies)**

**Patient outcomes**
Mortality No effect
Lung function (long term) No effect
Symptoms (long term) No effect

**Respiratory readmission (long term)** No effect

**Days in hospital (long term)** Equivocal evidence of effect

**GP visits**

**Quality of life**
QoL (brief or long term) No effect

**Medication use**

**Knowledge**

**Overall conclusion**
Little evidence to support the widespread implementation of nurse led management interventions for COPD

---

Toelle 2004

**Purpose**
To determine whether the provision of a written asthma self-management plan increases adherence and improves outcome.

**Inclusion criteria**
RCT. Management plans for patients with asthma. The individualised written asthma plan contains regular management and the actions to take in the event of an exacerbation.

**Search**
Cochrane Airways Group trials register, Cochrane Central Register of Controlled trials to June 2004.

**Methodological quality**

**Intervention**
- Self management information
- Self management
- PEF or symptom self management

**Studies**
Number of studies = 7
Main results reported from primary care

**Chronic disease**
Asthma

**Study type (number of studies)**
RCT ()

**Location of studies (number of studies)**
Community based care (5)
Hospital (4)
Primary Care / GP ()

**Outcomes (n = number of studies)**

**Patient outcomes**
Mortality No effect
Lung function (long term) No effect
Symptoms (long term) No effect

**Respiratory readmission (long term)** No effect

**Days in hospital (long term)** Equivocal evidence of effect

**GP visits**

**Quality of life**
QoL (brief or long term) No effect

**Medication use**

**Knowledge**

**Overall conclusion**
Little evidence to support the widespread implementation of nurse led management interventions for COPD
### Purpose
To assess the efficacy of action plans in the management of COPD.

### Inclusion criteria
- RCTs. Patients all COPD diagnosed by health practitioner. Action plan, use of guidelines which outline self management in response to alteration in state of COPD.

### Search
- Cochrane Airways Group Register of RCTs, CENTRAL, Medline, CINAHL, National Research Register of Ongoing Trials. Reference lists of included studies were searched.

### Methodological quality
- Jadad score 3

### Intervention
- Use of guideline that outline self-initiated interventions
- Individualised action plan & info booklet
- Nurse education sessions
- Self-management booklet and prescription of steroids or Abs
- Structural interventions
- Nurse education

### Test for homogeneity

<table>
<thead>
<tr>
<th>Studies</th>
<th>Number of studies = 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chronic disease</td>
<td></td>
</tr>
<tr>
<td>COPD</td>
<td></td>
</tr>
<tr>
<td>Study type (number of studies)</td>
<td></td>
</tr>
<tr>
<td>RCT (3)</td>
<td></td>
</tr>
<tr>
<td>Location of studies (number of studies)</td>
<td></td>
</tr>
<tr>
<td>Primary Care / GP (3)</td>
<td></td>
</tr>
<tr>
<td>Outcomes (n = number of studies)</td>
<td></td>
</tr>
<tr>
<td>Adherence to disease guidelines</td>
<td></td>
</tr>
<tr>
<td>Patient outcomes</td>
<td></td>
</tr>
<tr>
<td>Mortality Peto OR at 12 months 1.01 (95% CI 0.32, 3.24)</td>
<td></td>
</tr>
<tr>
<td>FEV1 % pred (6 months) (n=2) WMD 1.83% (95% CI -1.05, 5.89)</td>
<td></td>
</tr>
<tr>
<td>FEV1 % pred (12 months) (n=1) MD 2.00 (95% CI -1.89, 5.89)</td>
<td></td>
</tr>
<tr>
<td>Health service utilisation</td>
<td></td>
</tr>
<tr>
<td>Hospital admission (n=2) WMD 0.16 (95% CI –0.09, –0.42)</td>
<td></td>
</tr>
<tr>
<td>Healthcare utilisation (n=1) WMD -0.01 (95% CI -0.12, - 0.1)</td>
<td></td>
</tr>
<tr>
<td>Quality of life</td>
<td></td>
</tr>
<tr>
<td>SGRQ 6 months (n=2) WMD-1.91 ( 95% CI -5.46, -1.63)</td>
<td></td>
</tr>
<tr>
<td>SGRQ 12 months (n=2) WMD-0.32 (95% CI -3.34, -2.70)</td>
<td></td>
</tr>
<tr>
<td>Medication use</td>
<td></td>
</tr>
<tr>
<td>ABs 6 months (n=1) MD 6.00 days 95%CI 1.4 to 10.6</td>
<td></td>
</tr>
<tr>
<td>Knowledge</td>
<td></td>
</tr>
<tr>
<td>Recognition of stable health (n=1) MD 1.10 (95% CI 0.46, 1.74)</td>
<td></td>
</tr>
<tr>
<td>Recognition of early exac (n=1) MD 1.80 (95% CI 0.75, 2.85)</td>
<td></td>
</tr>
<tr>
<td>Recognition of severe exac (n=1) MD 2.50 (95% CI 1.04, 3.96)</td>
<td></td>
</tr>
<tr>
<td>How to act stable health (n=1) MD 0.5 (95% CI 0.21, 0.79)</td>
<td></td>
</tr>
<tr>
<td>How to act early exac (n=1) MD 2.3 (95% CI 0.96, 3.64)</td>
<td></td>
</tr>
</tbody>
</table>
| van Dam 2003 (22) | **Purpose** | How to act severe exac (n=1) MD 1.50 (95% CI 0.62, 2.38)  
Overall conclusion  
There was evidence of a positive effect of action plans on knowledge and initiation of antibiotics. There was no evidence of an effect on healthcare utilisation, health related QoL, lung function, functional capacity, symptom scores, mortality, anxiety or depression. |
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Inclusion criteria</strong></td>
<td>Type 2 diabetes. Experimental modification of provider-patient interaction, provider consulting style. RCT, CCT. Patient outcomes. . .</td>
<td></td>
</tr>
<tr>
<td><strong>Search</strong></td>
<td>Medline Advanced, Embase, Psychinfo, Cochrane Library all to 2001. The reference lists of the included papers were searched.</td>
<td></td>
</tr>
<tr>
<td><strong>Methodological quality</strong></td>
<td>Van tu Ider 17</td>
<td></td>
</tr>
</tbody>
</table>
| **Intervention** | GP booklets  
Provider training – GPs and practice nurses  
Educational interventions aimed at HCP to improve patient care  
Prompts for HCP before pt visits  
Feedback reports  
Patient booklets for HCP to give out and leaflet about complications  
Interactive dietary education. 6 weekly education sessions  
Group consultations with doctor  
Automated telephone calls to patients with patient responses  
Regular follow up  
HC assistant reviews medical notes and prepares list of problems for doctor |
| **Test for homogeneity** | |
| **Studies** | Number of studies = 8 |
| **Chronic disease** | Diabetes |
| **Study type (number of studies)** | RCT (8) |
| **Location of studies (number of studies)** | Community based care (8) |
| **Outcomes (n = number of studies)** | Provider intervention on provider outcome (n=4)  
Patient outcomes  
Provider behaviour intervention, effect on patient (n=4) Improved in 4  
Provider behaviour intervention, effect on patient (n=4) 1 improved |
| **Health service utilisation** | |
| **Quality of life** | Provider behaviour intervention, pyschosocial effect on patient (n=4) 3 unclear  
Patient behaviour intervention, pyschosocial effect on patient (n=4) 3 improved, 1 unclear |
| **Medication use** | |
| **Knowledge** | |
| **Overall conclusion** | The tentative conclusion is that focusing on patient behaviour directly enhancing patient participation is more effective than focusing on provider behaviour to change their consulting style into a more patient centred one |

| Warsi 2003 (23) | **Purpose** | To evaluate the effects arthritis self management education program on pain and disability, using meta-analytic techniques that take into account the heterogeneity of data.  
**Inclusion criteria** | intervention contained an arthritis self management education component.. a concurrent control group was studied. pain and / or disability outcomes were measured. . . |
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<td><strong>Studies</strong></td>
<td>Number of studies = 17</td>
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| **Chronic disease** | OA  
RA  
OA+RA |
| **Other** | |
| **Study type (number of studies)** | |
**Search**
Medline, HealthSTAR were searched for English-language literature published from 1964 to 15/10/1998. Key words included: self-management, self care, demand management, patient education, self efficacy, arthritis, osteoarthritis, rheumatoid arthritis. Reference lists were screened.

**Methodological quality**

**Intervention**
Education booklets and videos
Series of education sessions, many use Arthritis Self Help course
Based on referenced behavioural therapy or CBT
Group sessions
Self management education
Telephone calls
Lay educators, nurses, physiotherapists, OTs, health educators

**Test for homogeneity**

**RCT** (14)
**CCT** (3)

**Location of studies (number of studies)**
Community based care (14)
Other (3)

**Outcomes (n = number of studies)**
Adherence to disease guidelines
Patient outcomes
SM effect on pain (n=12) Effect size 0.12 (95% CI 0.00, 0.24)
SM effect on disability (n=12) 0.07 (95% CI 0.00, 0.15)

**Health service utilisation**
Quality of life
Medication use
Knowledge

**Overall conclusion**
Arthritis self management education programs result in small reductions in pain and disability.
APPENDIX 14: REFERENCES FOR INCLUDED SYSTEMATIC REVIEWS


17. Ram FSF, Jones A, Fay JK. Primary care based clinics for asthma. Cochrane Database of Systematic Reviews 2002(Issue 1).


20. Toelle BG, Ram FSF. Written individualised management plans for asthma in children and adults. Cochrane Database of Systematic Reviews 2004(Issue 1).


APPENDIX 15: REFERENCES FOR EXCLUDED SYSTEMATIC REVIEWS


