Overview of Evidence Relating to
Shifting the Balance of Care:
A Contribution to the
Knowledge Base
OVERVIEW OF EVIDENCE RELATING TO SHIFTING THE BALANCE OF CARE: A CONTRIBUTION TO THE KNOWLEDGE BASE

Lucy Johnston, Clare Lardner and Ruth Jepson

Scottish Government Social Research
2008
This report is available on the Scottish Government Social Research website only [www.scotland.gov.uk/socialresearch](http://www.scotland.gov.uk/socialresearch).

The views expressed in this report are those of the researcher and do not necessarily represent those of the Scottish Government or Scottish Ministers.

© Crown Copyright 2008
Limited extracts from the text may be produced provided the source is acknowledged. For more extensive reproduction, please write to the Chief Researcher at Office of Chief Researcher, 4th Floor West Rear, St Andrew's House, Edinburgh EH1 3DG
## CONTENTS PAGE

<table>
<thead>
<tr>
<th>Section</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>EXECUTIVE SUMMARY</td>
<td>3</td>
</tr>
<tr>
<td>CHAPTER ONE INTRODUCTION</td>
<td>5</td>
</tr>
<tr>
<td>BACKGROUND</td>
<td>5</td>
</tr>
<tr>
<td>CHAPTER TWO THE REVIEW METHODOLOGY</td>
<td>8</td>
</tr>
<tr>
<td>LITERATURE REVIEW</td>
<td>8</td>
</tr>
<tr>
<td>WEBSITE SEARCH</td>
<td>10</td>
</tr>
<tr>
<td>REQUEST FOR INFORMATION</td>
<td>10</td>
</tr>
<tr>
<td>RESULTS OF THE SEARCH STRATEGY</td>
<td>10</td>
</tr>
<tr>
<td>CHAPTER THREE THE REVIEW PROCESS</td>
<td>11</td>
</tr>
<tr>
<td>SCREENING THE EVIDENCE</td>
<td>11</td>
</tr>
<tr>
<td>CATEGORISING THE EVIDENCE</td>
<td>11</td>
</tr>
<tr>
<td>REPORTING THE EVIDENCE</td>
<td>12</td>
</tr>
<tr>
<td>SCOTTISH STUDIES</td>
<td>13</td>
</tr>
<tr>
<td>CHAPTER FOUR SHIFTING THE FOCUS OF CARE</td>
<td>15</td>
</tr>
<tr>
<td>CARE/CASE MANAGEMENT APPROACHES</td>
<td>16</td>
</tr>
<tr>
<td>DISEASE MANAGEMENT</td>
<td>18</td>
</tr>
<tr>
<td>INTEGRATED CARE</td>
<td>20</td>
</tr>
<tr>
<td>REHABILITATION</td>
<td>22</td>
</tr>
<tr>
<td>MULTI-DISCIPLINARY WORKING</td>
<td>25</td>
</tr>
<tr>
<td>PREVENTATIVE INTERVENTIONS</td>
<td>28</td>
</tr>
<tr>
<td>ASSESSMENT AND MANAGEMENT OF OLDER PEOPLE</td>
<td>28</td>
</tr>
<tr>
<td>CHAPTER FIVE SHIFTING THE LOCATION OF CARE</td>
<td>30</td>
</tr>
<tr>
<td>DIFFERENT TYPES OF HOSPITALS</td>
<td>32</td>
</tr>
<tr>
<td>DISCHARGE INTERVENTIONS</td>
<td>36</td>
</tr>
<tr>
<td>LOCATION OF CLINICS</td>
<td>40</td>
</tr>
<tr>
<td>CARE AT HOME</td>
<td>41</td>
</tr>
<tr>
<td>HOME VISITS</td>
<td>43</td>
</tr>
<tr>
<td>MANAGING DEMAND FOR HOSPITAL SERVICES</td>
<td>43</td>
</tr>
<tr>
<td>HOME MODIFICATION AND PROVISION OF EQUIPMENT</td>
<td>44</td>
</tr>
<tr>
<td>HOUSING</td>
<td>45</td>
</tr>
<tr>
<td>CHAPTER SIX SHIFTING THE BALANCE OF ROLES</td>
<td>47</td>
</tr>
<tr>
<td>CHAPTER SEVEN SHIFTING THE BALANCE OF RESPONSIBILITY</td>
<td>53</td>
</tr>
<tr>
<td>USE OF TECHNOLOGY</td>
<td>53</td>
</tr>
<tr>
<td>SELF CARE</td>
<td>54</td>
</tr>
<tr>
<td>CHAPTER EIGHT EVIDENCE MAPS</td>
<td>56</td>
</tr>
<tr>
<td>CHAPTER NINE CONCLUSION</td>
<td>59</td>
</tr>
<tr>
<td>APPENDIX 1 INCLUSION CRITERIA</td>
<td>61</td>
</tr>
<tr>
<td>APPENDIX 2 ASSESSMENT CRITERIA</td>
<td>62</td>
</tr>
<tr>
<td>LEVELS OF EVIDENCE</td>
<td>62</td>
</tr>
<tr>
<td>LEVEL OF RELEVANCE TO REVIEW AIMS AND CONTEXT</td>
<td>62</td>
</tr>
<tr>
<td>REFERENCE LIST</td>
<td>64</td>
</tr>
</tbody>
</table>
EXECUTIVE SUMMARY

1. This report presents the findings of a short review of evidence. The aim was to provide an overview of evidence to contribute to the debate on, and inform the development of, the policy on shifting the balance of care a key theme within health and community care policy which is intended to bring about improvements in service delivery and health outcomes. Shifting the balance of care is a term used to describe change at a number of levels, for example, shifting the location of care towards more community-based facilities, shifting the focus of care towards long term conditions and changing the roles and responsibilities of patients and professionals.

2. The search for evidence identified 4,900 items. These were screened for relevance and quality and 601 items remained. Of these, 205 were high level evidence (e.g. systematic reviews) and are briefly summarised here. The remaining 396 primary research studies are mapped to indicate coverage of relevant topics and gaps in the evidence. All 601 studies included in the review can be found on the Shifting the Balance of Care website: www.shiftingthebalance.scot.nhs.uk.

3. The high level evidence suggests that the following interventions could contribute to shifting the balance of care:

Shifting the focus of care via:
- Assessment of older people (especially as a prelude to case management)
- Multi-disciplinary working (less conclusive in relation to palliative care)
- Integrated care for older people, people with LTC, Alzheimer’s and people with HIV/AIDS
- Disease management (especially in relation to long term conditions)
- Early supported discharge with community-based rehabilitation for stroke and other patients
- Rehabilitation in the community for a range of conditions

Shifting the location of care via:
- Housing adaptations and equipment
- Supported discharge for older people and for people after a stroke
- Early supported discharge for older people and people after a stroke
- Care at home and hospital at home interventions
- Community hospitals
- Day hospitals

Changing roles via:
- Substitution of roles
- Respite and day care services to support unpaid carers

Shifting responsibilities via:
- Telephone support services
- Telephone consultation
- Self care support
- Self monitoring of long term conditions
4. Significant gaps in the evidence available were identified. The major ones are as follows.

   In relation to shifting the focus of care:
   - The potential of preventative and assessment-based interventions

   In relation to shifting the location of care:
   - The important role the provision of suitable housing (including housing with care
     or support) can play in sustaining people in the community

   In relation to changing roles:
   - The impact on carers of shifting the balance of care.
   - The role of social workers and unpaid carers – especially in relation to long term
     care and end of life services.

5. The gaps in evidence identified in this review do not mean that other work
   contributing to a shift in the balance of care is not being conducted. However the time-
   limited review carried out here and the broad search terms used means that this work was not
   necessarily captured.

6. Much of the evidence included in the review is international in nature, with 16
   Scottish studies identified as meeting the quality and relevance review criteria. The review
   may, though, provide the high level context for further work, using different search criteria,
   identifying and reviewing the findings of Scottish or UK research in specific service areas.
CHAPTER ONE INTRODUCTION

1.1 This report sets out the process and findings of a 12 week review of available evidence on the policy of shifting the balance of care. The project was carried out by Lucy Johnston, Clare Lardner and Ruth Jepson. The review used both quality and relevance criteria to screen evidence. This report provides brief summaries of the highest level of evidence found, which was in the form of systematic reviews, meta-analyses, randomised controlled trials, and narrative/rapid reviews. Much of this high level evidence is international. The report also provides a ‘map’ of the lower level evidence found, which was mainly in the form of peer-reviewed primary research studies.

Background

1.2 Shifting the Balance of Care (SBC) has been a key theme in the work of the Scottish Government Health Directorates for a number of years. Previous policy documents, in particular, Delivering for Health (2004) and the Better Health, Better Care Action Plan (2007), raised the profile of shifting the balance of care in Scotland, which is intended to bring about improvements in service delivery and health outcomes.

1.3 Shifting the Balance of Care is a term used to describe change at a number of levels\(^i\) such as:

**Focus** - shifting the emphasis towards preventative medicine and more care in the community, based on a fundamental change in the way we tackle the causes of ill health and by providing care which is quicker, more personal and closer to home. It also means shifting the focus away from services geared toward acute conditions to providing systematic support for people with long term conditions with a strong emphasis on continuous, integrated care rather than disconnected episodic care.

**Location** - shifting the location of services and care in order to improve access to treatment and support. This involves the wider provision of diagnostic procedures and access to specialist services embedded into communities through Community Health Partnerships. This means less acute hospital-centred activity and more services and support provided in community hospitals, other local facilities and at home. Services and care should increasingly be provided in locations that are easily accessible for users with greater consideration given to transport requirements. This will enable care providers to get a better balance between planned and unplanned care.

**Responsibility** - shifting the current view of patients/clients as passive recipients of care towards full partnership in the management of their conditions. This involves providing more support for people to look after themselves and remain as independent as possible using new technologies for telemedicine and telecare to help people to manage their conditions and stay longer in their own homes.

\(^i\) [http://www.scotland.gov.uk/Topics/Health/care/VAUnit/BalofCareFAQ](http://www.scotland.gov.uk/Topics/Health/care/VAUnit/BalofCareFAQ)
Professional Roles - shifting the emphasis away from the independence of individual practices and professionals towards a more extended primary and community care team approach. This means developing professional and staff roles, skills, expertise and responsibilities, with a greater focus on teams delivering integrated care pathways involving a wider range of partners, including patients and carers.

Aims of the review

1.4 The overall aim of this review was, therefore, to provide evidence to inform further development in this broad policy area. The purpose of the review was to:
- provide an overview of the range of evidence available
- highlight areas of consensus and divergence
- distil key learning points
- identify gaps in evidence

1.5 Specifically, the review sought to identify evidence relating to the costs and benefits of initiatives designed to “shift the balance of care” (in whatever way), and the impact – positive or negative – on patients/service users and carers and on services themselves.

1.6 The project is only intended to provide an overview of available evidence. The limited time available for the review means that the search terms were restricted in order to make the task manageable, and it is possible that the inclusion of additional search terms would have identified further relevant work.

1.7 The quality criteria adopted mean that most of the evidence is international in nature. There are likely to be additional UK or Scottish based primary studies which do not feature in the review as they did not come to light through the search strategy or did not meet the necessary quality criteria. The findings of such studies will, however, still be of interest to policy makers because of their service relevance and possible transferability of findings. This review may, though, provide a high level context for further work considering the findings of a wider range of UK primary studies and, as such, can be seen as providing a useful contribution to the evidence in this area and a starting point for further work.

The report

1.8 This report covers:
- the review process
- how the evidence was screened and prioritised
- brief summaries of findings reported within “high level” literature, defined as systematic reviews, narrative reviews and the results of randomised controlled trials
- two evidence maps, identifying the evidence coverage and illustrating the evidence gaps in:
  o the high level evidence
  o the primary research studies identified by the review
- concluding comments
1.9 Separate electronic bibliographies are available which provide further details of all the 601 studies included in the review. These can be found on the Shifting the Balance of Care website: www.shiftingthebalance.scot.nhs.uk
CHAPTER TWO  THE REVIEW METHODOLOGY

2.1 This review involved:
- a literature review of academic and economic journals, papers and publications – encompassing UK-based findings, and those from other relevant countries. The project specification noted the US, Canada, Australia/NZ and Europe, with a particular focus on Scandinavia and the Netherlands as possible sources of evidence.
- e-mail requests for evidence to local authorities; health agencies; Community Health Partnerships and voluntary sector organisations, initially via their umbrella bodies.
- a search of relevant organisations’ websites, including a review of relevant publications by central and local government.

Literature review

2.2 The search for this review of literature was developed to produce a strategy specific enough to be manageable within the time available, but also sensitive enough to identify the main evidence.

2.3 The original search strategy used is shown in Table 2.1. It describes a search for studies related to:
- Balance of care
- Community care
- Primary care
- Remaining or staying at home
- Patient admission
- Patient discharge

Table 2.1: Original search strategy

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>balance of care.mp.</td>
</tr>
<tr>
<td>2.</td>
<td>community care.mp.) or Community Health Services/ or Community Mental Health Services/ or community care.mp. or Community Health Nursing/</td>
</tr>
<tr>
<td>3.</td>
<td>primary care.mp. or Primary Health Care/</td>
</tr>
<tr>
<td>4.</td>
<td>2 or 3</td>
</tr>
<tr>
<td>5.</td>
<td>Patient Admission/ or hospital admission.mp and 5</td>
</tr>
<tr>
<td>6.</td>
<td>4 and 5</td>
</tr>
<tr>
<td>7.</td>
<td>limit 6 to yr=&quot;2000 - 2008&quot;</td>
</tr>
<tr>
<td>8.</td>
<td>remove duplicates from 7</td>
</tr>
<tr>
<td>9.</td>
<td>(remain$ or stay$) and home).mp.</td>
</tr>
<tr>
<td>10.</td>
<td>4 and 9</td>
</tr>
<tr>
<td>11.</td>
<td>limit 10 to yr=&quot;2000 - 2008&quot;</td>
</tr>
<tr>
<td>12.</td>
<td>remove duplicates from 11</td>
</tr>
</tbody>
</table>
2.4 Single, specific interventions such as, for example, telemedicine or telephone follow up, were not used as key words within the search strategy. It would have been impossible to avoid bias as to the choice of such key words. Moreover the time available for this review meant that priority had to be given to producing a robust overview of the range of evidence available. Only literature from 2000 onwards was included.

2.5 This original search identified 4,023 items. On completion of this search, a further search for studies relevant to ‘home care’ was carried out. This used the terms shown in Table 2.1 supplemented by a search for references with the word ‘home’ adjacent to ‘care’. This produced a further 733 references after de-duplication.

2.6 The electronic databases included in the search strategy are shown in Table 2.2.

Table 2.2: Electronic databases included in the search

<table>
<thead>
<tr>
<th>Database Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>AARP Ageline</td>
</tr>
<tr>
<td>ASSIA</td>
</tr>
<tr>
<td>British Nursing Index (BNI)</td>
</tr>
<tr>
<td>C2-SPECTR &amp; C2RIPE (Register of Interventions and Policy Evaluations)</td>
</tr>
<tr>
<td>CINAHL</td>
</tr>
<tr>
<td>Econlit</td>
</tr>
<tr>
<td>EMBASE</td>
</tr>
<tr>
<td>International Bibliography of the Social Sciences (IBSS)</td>
</tr>
<tr>
<td>MEDLINE</td>
</tr>
<tr>
<td>Psychinfo</td>
</tr>
<tr>
<td>Social Care Online</td>
</tr>
<tr>
<td>Social Science Citation Index (includes ReSearch Web)</td>
</tr>
<tr>
<td>Social Work Abstracts</td>
</tr>
<tr>
<td>Sociological abstracts and social services abstracts</td>
</tr>
<tr>
<td>All EBM Reviews - Cochrane DSR, ACP Journal Club, DARE, CCTR and NHS</td>
</tr>
<tr>
<td>Economic Evaluation and Health Technology Assessment Databases</td>
</tr>
</tbody>
</table>
Website Search

2.7 The websites of the organisations listed in Table 2.3 were searched for papers and reports relevant to shifting the balance of care. Most of these websites were suggested by the reviewers as key potential sources. Others were added by the commissioners of the review. This part of the search identified 140 additional items that met the review criteria.

Table 2.3: Websites included in the search

<table>
<thead>
<tr>
<th>Organisation</th>
<th>Website Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>Audit Commission</td>
<td>Joseph Rowntree Foundation</td>
</tr>
<tr>
<td>Audit Scotland</td>
<td>The King's Fund</td>
</tr>
<tr>
<td>The Care Commission</td>
<td>National Audit Office</td>
</tr>
<tr>
<td>Carers Scotland</td>
<td>NHS Health Scotland/ Scotland’s Health on the Web</td>
</tr>
<tr>
<td>Communities Scotland</td>
<td>NHS Quality Improvement Scotland</td>
</tr>
<tr>
<td>Community Care Magazine</td>
<td>National Institute for Clinical Excellence</td>
</tr>
<tr>
<td>Community Care Providers Scotland</td>
<td>The Nuffield Trust</td>
</tr>
<tr>
<td>Department of Health</td>
<td>Personal Social Services Research Unit</td>
</tr>
<tr>
<td>Economic and Social Research Council</td>
<td>Research Institute for Consumer Affairs</td>
</tr>
<tr>
<td>European Commission Employment, Social Affairs and Equal Opportunities (EQUAL)</td>
<td>Scottish Government</td>
</tr>
<tr>
<td>European Institute for Design &amp; Disability</td>
<td>Scottish Telecare Centre</td>
</tr>
<tr>
<td>Health Management Information Consortium</td>
<td>Service and Delivery Organisation</td>
</tr>
<tr>
<td>Improvement and Development Agency</td>
<td>Social Care Institute for Excellence</td>
</tr>
<tr>
<td>Institute for Innovation &amp; Improvement</td>
<td>Swedish Institute of Assistive Technology</td>
</tr>
<tr>
<td>Institute for Public Policy Research</td>
<td>UK Home Care Association</td>
</tr>
<tr>
<td>Joint Improvement Team</td>
<td>University Research Departments</td>
</tr>
</tbody>
</table>

Request for information

2.8 All Health Boards, Local Authorities, Community Healthcare Partnerships and voluntary sector providers, via their umbrella bodies, were sent an email requesting research/evaluation reports for inclusion in the review. Two organisations sent reports, of which five met the review criteria. Further information on this process is provided in Chapter 3.

Results of the search strategy

2.9 Overall, therefore, the search identified a total of 4,900 relevant studies:

- 4,022 from original literature review
- 733 when home care search was added
- 140 from website search
- 5 additional studies from a request for information
CHAPTER THREE  THE REVIEW PROCESS

Screening the evidence

3.1 Using the title and available abstracts, all 4,900 items were screened using inclusion criteria developed for the review. These criteria focused upon the purpose of the review and are presented in Appendix One.

3.2 Studies were included only if they met the original criteria. This included a requirement to present actual evidence and findings as a result of review, evaluation, audit or research. References that provided conclusions in the form of data, cost analysis, examples, literature review and analysis were prioritised. References that merely discussed or commented upon issues relating to service interventions or innovations were excluded. References that merely described a service without reference to findings were also excluded.

3.3 A decision, based on the time available, was made to exclude references relating to the use of drug based interventions (including nutritional supplements) and health promotion interventions such as smoking cessation campaigns. The inclusion of these research areas would have made this review unmanageable in the time available (12 weeks).

3.4 The screening process resulted in 601 studies being included within this review.

Categorising the evidence

3.5 The second stage of the review process focused upon categorising the levels of evidence. A set of ‘quality’ and ‘review relevance’ levels was developed specifically for this review. The quality levels are shown below. The relevance levels are shown in Appendix Two.

Table 3.1: Levels of evidence

<table>
<thead>
<tr>
<th>Level A</th>
<th>Meta analysis/systematic review [73]</th>
</tr>
</thead>
<tbody>
<tr>
<td>Level A/RCT</td>
<td>Randomised controlled trials including economic evaluations [95]</td>
</tr>
<tr>
<td>Level B</td>
<td>Narrative and rapid reviews [37]</td>
</tr>
<tr>
<td>Level C</td>
<td>Primary research studies [396]</td>
</tr>
</tbody>
</table>
3.6 A total of 73 meta analysis studies/systematic reviews and 95 randomised controlled trials were identified. These are high quality research studies or systematic, critical reviews of methods and resulting findings. Many of the level A/RCT studies found were from the Cochrane Library, which provides systematic, up-to-date reviews in health care, based mainly on randomised controlled trials from across the world, irrespective of language. Unless otherwise specified, all the systematic, narrative and rapid reviews cited in this report should be regarded as being international in origin.

3.7 Thirty-seven (37) narrative or rapid reviews are included. Narrative or rapid reviews often gather evidence to inform broad areas such as ‘people with long term conditions or ‘care of older people’. Such reviews present ‘evidence’ across a broad range of interventions relevant to the theme of the review. This report has, as far as possible, distilled intervention-specific evidence relevant to shifting the balance of care from these reviews. Readers should, however, note that within this report it was not possible to present all the evidence and conclusions from such reviews. Eleven narrative reviews covered numerous interventions and readers are advised to look at the reference list to identify further specific areas of interest.

3.8 The high level studies have more robust methodologies (for example being based upon randomised controlled trials) than the lower level studies, or have been subjected to a critical review process. Categorising the evidence in this way ensures that the significance of the vast number of individual primary research studies is not overstated by presenting their findings alongside those of systematic reviews and randomised controlled trials.

**Reporting the evidence**

3.9 This report indicates where main clusters of evidence exist. It identifies gaps and provides a starting point for the evidence base for the policy of shifting the balance of care.

3.10 Only the findings of the 205 high level studies are summarised within this report and, due to time constraints on the review, our summaries are drawn from abstracts and not the full research reports. Readers should refer back to the full articles for more detailed information on the findings.

3.11 The 396 lower level primary research studies are presented only via an evidence map. The majority of the primary research studies mapped are from peer reviewed journals, both from the UK and other countries. There are nearly twice as many primary research studies of relevance available compared to high level studies, using the search terms for this review.

3.12 Readers should also note that the totality of evidence identified is based on a review strategy that did not pre-select specific named interventions or services as key words. It was time limited, providing a framework for further, targeted reviews of research that could be conducted in the future, on specific interventions that contribute to a ‘shift’ in the balance of care.
3.13 Two ‘evidence maps’ have been produced as an outcome of this review. These display where the identified high level and primary research evidence lies, in relation to types of intervention and population groups. The maps and accompanying electronic bibliographies can be used to access the review evidence in any cell of the map. The maps identify gaps in the evidence, indicating where more specific review/search criteria are required and the possible need for further research in certain areas.

3.14 Electronic bibliographies that include all the high level studies and the identified primary research studies have also been created and can be found on the Shifting the Balance of Care website: www.shiftingthebalance.scot.nhs.uk

3.15 The sections below present summarised evidence from the 205 high level studies only. As far as possible services and interventions have been grouped within these broad thematic areas:
- Shifting the focus of care
- Shifting the location of care
- Shifting roles
- Shifting responsibility

3.16 A number of studies report more than one service intervention, for example case management used with telemedicine, or discharge from hospital combined with rehabilitation services. Studies are reported within an area or grouping most relevant to their primary focus but a small number of studies are cited twice. Each specific intervention that may or may not contribute to a relevant ‘shift’ is underlined. Definitions of interventions are given to help the reader understand the evidence. However, it should be noted that, because much of the evidence is international and cross-cultural, not all studies which refer to a particular type of intervention will be based on precisely the same definition of that intervention.

Scottish studies

3.17 Two of the high level (A, B and RCT) studies and 14 of the level C studies are Scottish in origin. One of the high level studies was a long term follow-up of a RCT of nurse led prevention clinics for coronary heart disease\(^\text{ii}\). The other was a RCT of pharmacist led medication reviews of patients over 65\(^\text{iii}\).

3.18 The 14 level C primary research studies from Scotland looked at the following interventions:
- Nurse-led care (3 studies: Schofield, 2006; Scottish Executive, 2006; Seaton, 2005)
- Management of long term conditions (1 study: Audit Scotland, 2007)
- Palliative care (1 study: hlner-Elmqvist, 2004)
- Joint working (2 studies: Hubbard, 2005; Rees 2004)

\(^{\text{ii}}\) Effects of secondary prevention clinics on health status in patients with coronary heart disease: 4 year follow-up of a randomized trial in primary care. Murchie, P et al; Family Practice 21(5): 567-574
- Home detoxification (1 study: Madden, 2000)
- Rural issues (1 study: Farmer, 2003)
- Primary care out of hours services (3 studies: Audit Scotland, 2007; Salisbury, 2000; Scott, 2003)
- Hospital discharge (1 study: Carers Scotland, 2001)
- Sheltered housing (1 study: Croucher, 2008)

3.19 All of the above studies can be accessed via the Level C electronic bibliography. The initial search strategy identified 105 level C studies from Scotland but many of these were eliminated by the decision to screen out those from before 2000 (which was influenced by the time available for this review). It does, however, illustrate that there may be a lot more Scottish research from before 2000 which would be useful to readers.

3.20 The request to Scottish organisations for information elicited five studies (from three respondents) which met the relevance and quality criteria. There was, therefore, no response from most of the organisations we contacted. This might be partly due to the short timescale in which the request was made and possibly also due to the broad nature of our enquiry, i.e. ‘balance of care’ generally, rather than specific interventions. The five studies included are in the electronic bibliographies and were on the topics of:

- Training care givers of stroke patients (2 studies, both by Kalra, 2008)
- Support for carers after hospital discharge (Princess Royal Trust for Carers, 2007)
- Models of housing with care (Croucher, 2007)
- Supported discharge (NHS Greater Glasgow and Clyde, 2007)

3.21 Given the low response, it is possible that there may be much more unpublished research available than was sent to the review team by Scottish organisations. It may be that requesting information about specific, named interventions would elicit more studies, for example local service evaluations, which may not be published (or peer reviewed) but which nevertheless can provide useful information on ‘what works’.
CHAPTER FOUR        SHIFTING THE FOCUS OF CARE

4.1 Shifting the focus of care is about shifting the emphasis away from acute services and towards preventative medicine, more care in the community and more continuous and integrated care for people with long term conditions (LTC).

4.2 This section details the evidence relating to shifting the focus of care via:

- Care/case management
- Disease management
- Integrated Care (including multi disciplinary working)
- Preventative interventions
- Assessment of older people
- Rehabilitation

**Shifting the focus of care – Summary**

The interventions supported by strong evidence that could contribute to shifting the focus of care include:

- Assessment of older people (especially as a prelude to case management)
- Multi-disciplinary working (less conclusive in relation to palliative care)
- Integrated care for older people, people with LTC, Alzheimer’s and people with HIV/AIDS
- Disease management (especially in relation to long term conditions)
- Early supported discharge with community-based rehabilitation for stroke and other patients
- Rehabilitation in the community for a range of conditions

The high level evidence is less conclusive in relation to the following areas:

- The potential for case/care management for older people is strong, but less strong for other conditions especially for severe mental health. The research is not conclusive about which models of case management work best.
- The impact of preventative home visits

The evidence maps indicate gaps in high level and primary research level evidence relating to the potential of preventative and assessment based interventions in shifting the balance of care.
Care/case management approaches

4.3 Care or case management is the co-ordination of all aspects of the care of a patient with a complex condition, including evaluating the patient, planning treatment, referral and follow-up, so that care is continuous and comprehensive.

4.4 A range of studies provided evidence about interventions in relation to care management approaches. These mostly focus on the following population groups:
   - People with mental health problems
   - Older people
   - People with specific long term conditions

People with mental health problems

4.5 Three studies looked at case management approaches for people with severe mental health problems.

   • A Cochrane Review of assertive community treatment\(^iv\) (ACT) found ACT to be a clinically effective approach to managing the care of severely mentally ill people in the community and can, if correctly targeted on high users of in-patient care, substantially reduce the costs of hospital care whilst improving outcome and patient satisfaction\(^{12}\).

   • However, a UK-based RCT concluded that intensive case management with assertive community outreach for people with severe mental health problems had higher costs than non-specialist services for no apparent benefit\(^{13}\).

   • In addition, another Cochrane Review concluded that case management of people with severe mental health problems was an intervention of questionable value because it showed no significant advantages over standard care on any psychiatric or social variable, to the extent that it was doubtful whether it should be offered by community psychiatric services\(^{14}\).

4.6 Two studies looked at the effectiveness of case management among people with general (i.e. not severe) mental health problems:

   • A meta-analysis comparing assertive community treatment with clinical case management found that both types of case management led to small to moderate improvements in the effectiveness of mental health services and both led to reduced costs of care. The authors concluded that assertive community treatment had some demonstrable advantages over clinical case management in reducing hospitalisation\(^{15}\).

\(^{iv}\) In this review, ACT was defined as a team-based approach aiming at keeping ill people in contact with services, reducing hospital admissions and improving outcome, especially social functioning and quality of life.
• However, a systematic review of case management concluded that findings in its favour have weakened over time and that research is beset with problems of definition and methodology. The authors did conclude, however, that assertive types of case management (including assertive community treatment and intensive case management) are more effective than standard case management in reducing total number of days spent in hospital, improving engagement, compliance, independent living and patient satisfaction\(^\text{16}\).

**Older people**

4.7 A Hong Kong-based RCT of case management for frail elderly patients concluded that case management can significantly reduce hospital services utilisation\(^\text{17}\) and a Canadian RCT found that, when combined with enhanced access to geriatric assessment, case management can reduce or delay the need for long-term residential care\(^\text{18}\).

4.8 A Kings Fund review found some limited evidence that case management for older people with long term conditions can reduce their use of health services. However, the evidence that exists is drawn from studies of different populations of older people living in different settings and countries and the variety of case management arrangements under investigation makes it hard to generalise results to local NHS settings\(^\text{19}\).

4.9 There is some evidence that case management as an element of integrated care may be more effective. A systematic review of community-based integrated care projects for older people found that elements common to successful projects were case management, geriatric assessment, and multidisciplinary teams\(^\text{20}\).

**Patients with other conditions**

4.10 There were eight studies on case management for people in various groups: people with HIV/AIDS, people with heart failure, caregivers of people with Alzheimer’s Disease, patients with unspecified conditions, primary care patients, people with long term conditions and children with asthma. These studies report mixed effects of case management.

• A Cochrane Review of case management found that it may improve patient mortality and other outcomes among people with HIV/AIDS\(^\text{21}\).

• A Cochrane Review found there was insufficient evidence for the effectiveness of case management for people with heart failure\(^\text{22}\).

• A Canadian RCT of case management reported reduced hospital admissions among caregivers of people with Alzheimer’s disease but, in comparison to usual care, it did not reduce emergency department visits or Medicare payments\(^\text{23}\).

• A UK-based RCT found no significant difference in hospital admissions or bed days between (unspecified types of) patients receiving case management and a control group, although users were satisfied with the service and nurses cited several clinical stories implying benefits for individual patients\(^\text{24}\).
• An American RCT reported that, among primary care patients with a high use of inpatient services, a case management group showed an increase in clinic visits compared to a group receiving usual care. There were no differences reported in other outcomes including number of hospital admissions, emergency department visits and health outcomes\(^25\).

• An international review of evidence about improving care for people with long term conditions found evidence that broad managed care programmes may improve how people feel, their quality of care and how often they visit the doctor and hospital, but it is not clear what aspects of the programmes are most effective or transferable. This study also found conflicting evidence for case management, which might have some benefits for patients at greatest risk of hospitalisation but might not always be worthwhile for people with long term conditions\(^5\).

• There is some evidence from an international rapid review that primary care nurse case managers, such as Community Matrons and specialist nurses, can improve service use by people with long term conditions when implemented as part of an integrated programme of care\(^26\).

• An American RCT of two emergency department-based follow-up interventions to improve asthma outcomes in children concluded that emergency department-based attempts to improve primary care linkage or initiate case management were no more effective than standard emergency department care in improving subsequent asthma outcomes over a 6-month period\(^27\).

**Disease management**

4.11 The following studies investigated disease management interventions, relating to various chronic conditions. Disease management can be defined as integrated care which aims to improve the quality of life and/or reduce health care costs of people with chronic disease conditions.

**Disease management of people with chronic heart failure**

4.12 Two reviews found that disease management programmes could reduce hospitalisation:

• A systematic review found that, in patients with coronary heart disease, multidisciplinary disease management programmes increase prescription of efficacious drugs and reduce hospitalization but do not reduce recurrent myocardial infarction or all-cause mortality in the short term\(^28\).

• Further, an American RCT compared a community-based disease management programme for post-myocardial infarction compared with usual care. The authors concluded that a community-based disease management programme successfully reduced hospitalisation days for patients recovering from myocardial infarction compared with usual care\(^29\).
4.13 There is also evidence for the cost effectiveness of disease management in this population: an Italian RCT calculated cost/utility ratios in chronic heart failure for a heart failure management programme delivered by day-hospital compared with usual care. The authors conclude that the disease management strategy was cost-effective and has an equitable value from a societal point of view.

4.14 In terms of the components of a disease management programme, authors of a systematic review of disease management for patients with heart failure recommended that such programmes should involve patient education and specialised follow-up by a multidisciplinary team including home health care.

4.15 A literature review of cardiovascular disease management programmes found that the majority of interventions showed some type of improvement in measured outcomes and some cost benefit was reported in some chronic heart failure and hypertension studies.

**Disease management of people with other conditions**

4.16 Four studies looked at disease management for diabetes, asthma, cancer and chronic obstructive pulmonary disease (COPD) respectively. Three studies found this intervention to be beneficial and one found no benefit.

- A Cochrane Review of interventions to improve the management of diabetes mellitus in primary care, outpatient and community settings found that multifaceted professional interventions can enhance the performance of health professionals in managing patients with diabetes. Organisational interventions that improve regular prompted recall and review of patients (central computerised tracking systems or nurses who regularly contact the patient) can also improve diabetes management. The authors also found that the addition of patient-oriented interventions can lead to improved patient health outcomes and that nurses can play an important role in patient-oriented interventions, through patient education or facilitating adherence to treatment.

- A Swedish RCT of a primary healthcare intervention for older people with cancer found that their utilisation of specialist care may be reduced by intensified primary healthcare services.

- A New Zealand RCT examined whether a chronic disease management programme could reduce days in hospital for patients with chronic obstructive pulmonary disease (COPD). The authors conclude that a primary care chronic disease management programme for COPD patients that incorporated a variety of interventions, including pulmonary rehabilitation and implemented by primary care, reduced admissions and hospital bed days. Key elements were patient participation and information sharing among healthcare providers.
• The Better Respiratory Education and Asthma Treatment in Hinton and Edson (BREATHE) study was a randomized, controlled trial in high-risk asthma patients in Canada. The intervention included an educational program (with focus on development of a written action plan), assessment of asthma therapy, and referral to a respiratory therapist and primary care physician. The aim was that patients would be referred by community pharmacists. However, in the trial, compliance by community pharmacists was poor and no differences were found in asthma control between the usual care and intervention groups34.

4.17 Two reviews looked at models or frameworks for disease management but did not report benefits of any one particular model.

• A review of evidence about improving care for people with long-term conditions found evidence to support broad chronic care management models and integrated community and hospital care5.

• A review of UK and international frameworks for improving care of people with long term conditions found limited high quality evidence about the impact of any model. Although components of the Chronic Care Model have been studied extensively and a detailed evaluation has been undertaken in the US, it was still unclear whether this model was any more effective than others. The review found almost no evaluative information about any other broad chronic care framework. This review also included a survey of UK health authorities and primary care trusts, and found that a wide range of approaches have been adopted, including broad frameworks such as Wagner’s Chronic Care Model, and service delivery approaches such as the Kaiser triangle and EverCare. The majority of UK Strategic Health Authorities had based their decisions about which approach to adopt on pragmatic or experiential factors rather than research evidence. It was too early to say whether any of the models implemented were having an impact on chronic care37.

Integrated care

4.18 There are many different definitions of integrated care. However, the Alliance for Health and the Future defines it as follows: “integrated care seeks to close the traditional division between health and social care. It imposes the patient’s perspective as the organising principle of service delivery and makes redundant old supply-driven models of care provision. Integrated care enables health and social care provision that is flexible, personalised, and seamless”. Reviews which cross cultural and national boundaries are likely to include studies which use slightly different definitions of integrated care.

4.19 Collaborative care is a form of integrated care, which encompasses collaboration between health care professionals, and between doctor and patient.

v Integrated Care: A Guide for Policymakers; Lloyd, J and Wait, S; Alliance for Health and the Future, 2005
**Integrated care for older people**

4.20 Overall, the three reviews reported below found evidence that integrated care for older people can have a range of benefits without increasing costs.

- A USA RCT tested the hypothesis that a multi-component intervention, called Acute Care for Elders (ACE), would improve functional outcomes and the process of care in hospitalized older patients. The intervention included a specially designed environment (with, for example, carpeting and uncluttered hallways); patient-centred care, including nursing care plans for prevention of disability and rehabilitation; planning for patient discharge to home; and review of medical care to prevent iatrogenic illness. The authors concluded that ACE in a community hospital improved the process of care, and patient and provider satisfaction, without increasing hospital length of stay or costs\(^{38}\).

- A Canadian RCT looked at integrated care for older people with disabilities and found that integrated systems appear to be feasible and have the potential to reduce hospital and nursing home utilization without increasing costs\(^{39}\).

- A review of international experiments in integrated care for the elderly concluded that community-based integrated care systems for the frail elderly can reduce the rates of institutionalisation and the costs, but the cost-effectiveness of the project depends upon the specific system of care\(^{20}\).

**Integrated care for people with HIV/AIDS**

4.21 A review of literature on integrated HIV care found that, overall, the literature supported use of a wide range of primary and ancillary services delivered by a multidisciplinary team that employs a 'biopsychosocial'\(^{vi}\) approach. The authors concluded that, despite the lack of scientific knowledge regarding the effects of integrated HIV care, those wanting to optimize treatment for patients with multiple interacting disorders can gain useful and practical knowledge from this literature\(^{40}\).

4.22 Furthermore, one review reported that access to services could be improved by integrated care. This review found that a comprehensive, public health approach can enhance injecting drug users’ access to hepatitis C virus (HCV) prevention and care. The authors conclude that a holistic approach with integrated services, including for HCV-HIV co-infected injecting drug users is needed\(^{41}\).

**Integrated care for other conditions**

4.23 Four studies looked at different models of integrated care for COPD, stroke, cardiac conditions and Alzheimer’s Disease. From these reviews, the most effective interventions reported were shared care for COPD and collaborative forms of care for cardiac and Alzheimer’s disease.

\(^{vi}\) A biopsychosocial approach is one which assumes that psychological and social factors must be considered along with biological factors in understanding a person’s medical illness or disorder.
• A Spanish RCT demonstrated that a standardized integrated care intervention, based on shared care arrangements among different levels of the system, with support of information technologies, effectively prevents hospitalisations for exacerbations in COPD patients42.

• A Cochrane Review of in-hospital care pathways for stroke found that, in patients admitted to the hospital with acute stroke, care pathways reduce emergency department visits but also reduce patient satisfaction and quality of life. Care pathways do not reduce death or dependence. The authors concluded that there was insufficient supporting evidence to justify the routine implementation of care pathways for acute stroke management or stroke rehabilitation. 43.

• A USA RCT examined the effects of a collaborative peer advisor/advanced practice nurse intervention on cardiac rehabilitation participation and re-hospitalization in un-partnered older adults after a cardiac event. The intervention consisted of a home visit and three telephone calls from an advanced practice nurse and 12 weekly telephone calls from a peer adviser. The authors concluded a community-based collaborative peer advisor/advanced practice nurse intervention can play a role in promoting active participation in cardiac rehabilitation programmes and fewer re-hospitalisations in un-partnered older adults after a cardiac event44.

• Another American RCT looked at the effectiveness of collaborative care for older adults with Alzheimer’s disease in primary care. The authors concluded that collaborative care for the treatment of Alzheimer’s disease resulted in significant improvement in the quality of care and in behavioural and psychological symptoms of dementia among primary care patients and their caregivers. These improvements were achieved without significantly increasing the use of anti-psychotics or sedative-hypnotics45.

Rehabilitation

Rehabilitation for stroke patients

4.24 Four studies report that early supported discharge with community-based rehabilitation is cost effective for stroke patients, in that it reduced length of hospital stay or bed demands, without having an adverse outcome on patients.

• A Cochrane Review of services for reducing duration of hospital care for acute stroke patients found that appropriately resourced early supported discharge services with rehabilitation at home, provided for a selected group of stroke patients, can reduce long term dependency and admission to institutional care as well as reducing the length of hospital stay. No adverse impact was observed on the mood or subjective health status of patients or carers46.

---

vii Care pathways are structured care plans that are used by the different members of the multidisciplinary team and are usually implemented to manage more than one aspect of patient care (e.g. diagnosis, investigation, acute stroke treatment). A care pathway can take the form of a printed or electronic document, and it often replaces the patient’s case record for the duration of the hospital stay.
A Canadian RCT concluded that, among patients with acute stroke, early hospital discharge with home-based rehabilitation resulted in better physical health and reintegration into the community at 3 months than did usual discharge and referral to follow up services. Duration of initial hospital stay was also shorter.\(^\text{47}\)

A Swedish RCT concluded that 5 years after stroke, early supported discharge with continued rehabilitation at home was favourable with regard to resource use (measured in terms of length of hospitalisation and location of outpatient rehabilitation).\(^\text{48}\)

An Audit Commission Review of rehabilitation and remedial services for older people cites evidence that the benefits (in terms of mortality, morbidity and cost effectiveness) of organised stroke care, including rehabilitation, are well established\(^\text{1}\).

4.25 However one Norwegian RCT was less conclusive. It evaluated an extended stroke unit service with early supported discharge and co-ordination of further rehabilitation in co-operation with the primary health care system in three rural municipalities. The authors concluded that an extended stroke unit service with early supported discharge seems to have no positive effect on functional outcome for patients living in rural communities, but might give a trend towards better quality of life. There were no significant differences in length of hospital stay.\(^\text{49}\)

4.26 Two studies concluded that hospital provision is desirable. One was a review of rehabilitation in the community for patients with stroke, which found that admission to the hospital during the acute phase is the best option for the majority of patients with stroke; however, the inpatient stay may be shortened and effective rehabilitation provided in community settings in all phases of stroke.\(^\text{50}\)

4.27 In addition, a UK RCT of an early discharge rehabilitation service concluded that a mixed model of hospital-based and community-based rehabilitation services was likely to lead to increased patient choice and satisfaction and a potential reduction in bed demand for less severe stroke patients.\(^\text{51}\)

4.28 Three further studies were less conclusive.

- A UK review of home rehabilitation after stroke found that home rehabilitation was neither better nor worse than alternative treatment strategies at improving patients' ability to manage on their own or resume social activities. Depression and reduced quality of life were common in all groups of patients and caregivers, irrespective of the rehabilitation strategy. The authors concluded that the outcomes and costs of home rehabilitation after stroke seem to be comparable to alternative treatment strategies.\(^\text{52}\)

- A UK RCT of stroke rehabilitation after hospital discharge compared domiciliary and day-hospital care. It found no significant differences in the effectiveness of the two services. Neither of the services influenced patients' mental state and their social activity remained low. Total costs were similar. The authors concluded that a mixed model of day-hospital and domiciliary care may be most cost-effective for community stroke rehabilitation, but this required further evaluation.\(^\text{53}\)
• A UK RCT concluded that community therapy support for patients not admitted to hospital was feasible, but to determine whether it is cost- or clinically- effective would require trials of adequate size.\(^5^4\)

**Rehabilitation for older people**

4.29 An Audit Commission Review of rehabilitation and remedial services for older people in England and Wales, in addition to citing evidence (reported above) that the benefits of organised stroke care are well established, also describes how rehabilitation should be organised in four main service types: acute, intensive, intermediate and community-based, in a complex jigsaw of providers and settings. The authors reviewed provision in a number of areas and concluded there were gaps and failures to link services together. They also reviewed how care is provided, from assessment to delivery and concluded that there are failings in some areas in the management and organisation of care.\(^1\)

4.30 Three studies looked at the provision of rehabilitation in care homes or community hospitals. One study found that community hospital care may increase older people’s independence, another that care home rehabilitation merely changed the sector of care but did not reduce institutionalisation and the third study was inconclusive, as outlined below.

• A UK RCT of the effects of locality based community hospital care on independence in older people needing rehabilitation concluded that care in a locality-based community hospital was associated with greater independence for older people than care in wards for elderly people in a district general hospital\(^5^5\).

• A UK RCT of a care home rehabilitation service to reduce long-term institutionalisation for elderly people concluded that this service did not reduce institutionalisation, but diverted patients from the hospital to social services sector without major effects on activity levels or well-being\(^5^6\).

• A Cochrane Review of care home versus hospital and own home environments for rehabilitation of older people found insufficient evidence to compare the effects of care home environments, hospital environments and own home environments on older persons rehabilitation outcomes\(^5^7\).

• Finally, a UK economic analysis of an early discharge rehabilitation service for older people in Nottingham was found to be more cost effective than usual care\(^5^8\).

4.31 One study looked specifically at geriatric hip fracture programmes with early supported discharge. This Health Technology Assessment Report concluded that acute units managing hip fractures should retain access to assessment and rehabilitation services, in Geriatric Orthopaedic Rehabilitation Units or Mixed Assessment and Rehabilitation Units, for the more disabled but previously community-dwelling patients. The authors found insufficient evidence to recommend the introduction of formal clinical pathways in association with these practices, although there was weak evidence that they may be advantageous.\(^5^9\).
Rehabilitation for other people

4.32 Three studies investigated rehabilitation for particular conditions. Two reported positive results and one, a cost effectiveness study, no adverse outcomes.

- A Cochrane Review of multidisciplinary rehabilitation for adults with multiple sclerosis (MS) found that such programmes do not change the level of impairment, but can improve the experience of people with MS in terms of activity and participation\textsuperscript{60}.

- A Cochrane Review of pulmonary rehabilitation for chronic obstructive pulmonary disease found that in patients with chronic obstructive pulmonary disease, respiratory rehabilitation is more effective than conventional community care for improving health-related quality of life\textsuperscript{61}.

- The Birmingham Rehabilitation Uptake Maximisation Study (BRUM) compared cost-effectiveness and patient adherence of home-based with hospital-based cardiac rehabilitation in a multi-ethnic population. The authors concluded that for low- to moderate-risk patients following myocardial infarction, percutaneous transluminal coronary angioplasty or coronary artery bypass graft, a home-based cardiac rehabilitation programme does not produce inferior outcomes compared with the traditional centre-based programmes. The authors stated that, with the level of home visiting in this trial, the home-based programme was more costly to the health service, but with the difference in costs borne by patients attending centre-based programmes\textsuperscript{62}.

Multi-disciplinary working

4.33 The following studies examined interventions related to multi-disciplinary working. The studies covered a range of patient/client groups, including people with heart disease, HIV/AIDS, long term conditions or mental health problems, people requiring palliative care, people who had suffered a stroke and older people.

Multi-disciplinary working with people with heart disease

4.34 All five studies relating to people with heart disease reported positive results. Outcomes measured included hospital admission, mortality, life years, functional status and cost benefits.

- A systematic review found that a multidisciplinary team including medical input plus one or more of the following: specialist nurse, pharmacist, dietician, or social worker reduced both hospital admission and all cause mortality among patients with heart failure. The most effective interventions were delivered at least partly in the home\textsuperscript{63}.

- An Australian RCT with a ten year follow-up found that a nurse-led, multidisciplinary, home-based intervention (HBI) in a typically elderly cohort of patients with chronic heart failure was associated with 120 more life-years per 100 patients treated compared with usual care. The authors concluded that HBI was a cost- and time-effective strategy over the longer term\textsuperscript{64}. 

25
• A systematic review found that comprehensive multidisciplinary management programmes for congestive heart failure can improve functional status and reduce the risk of hospital admission and may lower medical costs. However, reviewers pointed out methodological limitations of the studies\textsuperscript{65}.

• An Irish RCT found that multi-disciplinary care of heart failure patients remains cost-beneficial when combined with optimal, medical care. The authors conclude that the significant clinical and cost-benefits of this intensive approach to multi-disciplinary care and medical management suggest that this should become the standard of care for heart failure\textsuperscript{66}.

**Multi-disciplinary working with people with HIV/AIDS**

4.35 A review of literature on integrated care found that, overall, the literature supported use of a wide range of primary and ancillary services delivered by a multidisciplinary team that employs a 'bio-psychosocial' approach\textsuperscript{40}.

**Multi-disciplinary working with people with long term conditions**

4.36 Two reviews of multi-disciplinary working among people with long term conditions also found positive effects.

• A Cochrane Review found that multi-disciplinary rehabilitation programmes do not change the level of impairment, but can improve the experience of people with multiple sclerosis in terms of activity and participation\textsuperscript{60}.

• A rapid review of which staff can improve the care of people with long term conditions found that there is evidence that GPs and nurses working together in primary care, and teams made up of workers from primary and secondary care, can improve outcomes and service use\textsuperscript{67}.

**Multi-disciplinary working with people with mental health problems**

4.37 Evidence from the mental health field is also positive.

• A National Audit Office review of Crisis Resolution and Home Treatment (CRHT) found that the evidence base suggested that when used appropriately and safely, CRHT brings clinical benefits and increased patient satisfaction. It can also reduce the stigma and social exclusion frequently faced by people suffering from acute mental illness. There was further scope to maximise its impact and improve value-for-money by ensuring CRHT teams are properly resourced, fully functional and integrated within local mental health services\textsuperscript{68}.
• A Cochrane Review of community mental health teams (CMHTs) for people with severe mental illnesses and disordered personality found community mental health team management is not inferior to non-team standard care in any important respects and is superior in promoting greater acceptance of treatment. It may also be superior in reducing hospital admission and avoiding death by suicide. However, the authors stated that the evidence was insubstantial, considering the massive drive towards community care69.

Multi-disciplinary working with older people

4.38 A synthesis of evidence from international experiments in integrated care for the elderly found that elements common to successful projects were case management, geriatric assessment, and multidisciplinary teams. The one unsuccessful project did not use a multidisciplinary team and geriatric services were either weak or not present20.

Multi-disciplinary working with people requiring palliative care

4.39 Evidence of multi-disciplinary working in palliative care found less clear-cut benefits.

• A UK RCT evaluated a multi-disciplinary palliative care team compared with limited telephone advice for clinicians caring for patients dying of cancer and other chronic diseases in an acute hospital environment. The authors found no significant differences between the two models of service delivery and concluded that the data reflected a high standard of care in both models70.

• A Norwegian RCT of multi-disciplinary palliative care concluded that the palliative care intervention enabled more patients to die at home. More resources for care in the home (palliative care training and staff) and an increased focus on use of nursing homes would be necessary, however, to increase time at home and reduce hospital admissions71.

Multi-disciplinary working with stroke patients

4.40 For stroke patients, two RCTs found a range of benefits of multi-disciplinary teams over other models of care – ranging from cost effectiveness to patient satisfaction.

• A UK RCT compared alternative strategies in stroke care. These were (a) a stroke unit providing both inpatient 24-hour care provided by a specialist multi-disciplinary team and rehabilitation (b) a stroke team involving management on general wards with specialist team support and (c) domiciliary care providing management at home under the supervision of a GP and stroke specialist with support from a specialist team and community services. The authors found that stroke units were more effective than a specialist stroke team or specialist domiciliary care in reducing mortality, institutionalisation and dependence after stroke. In the authors’ opinion, a role for specialist domiciliary services for acute stroke was not supported. The stroke unit intervention was less costly per patient day alive and more effective than the stroke team intervention. The stroke unit was more effective and of equivalent cost compared with home care. Hence, the stroke unit was reported to be a more cost-effective intervention than either the stroke team or home care72.
A Belfast RCT of an early discharge rehabilitation scheme, provided by a multi-disciplinary team, found no statistically significant differences in hospital stay duration, costs, or outcome measures at baseline and 12 months except for higher satisfaction reported by the patients in the community group. Overall, both groups recorded improvement in most domains over time. Carers reported a high level of satisfaction, although the level of strain among carers was cause for concern in both models. The authors conclude that a mixed model of hospital-based and community-based rehabilitation services is likely to lead to increased patient choice and satisfaction and a potential reduction in bed demand for less severe stroke patients51.

Preventative interventions

4.41 Four studies looked at prevention in relation to home safety, three among older people and one among children. They found no conclusive evidence for the effectiveness of the interventions.

- One RCT in the Netherlands looked at multi-factorial home visits involving five home visits by a community nurse over a period of one year. Visits consisted of screening for medical, environmental, and behavioural factors causing falls and impairments in mobility, followed by specific advice, referrals, and other actions aimed at dealing with the observed hazards. The authors found that the intervention had no effects on falls and impairments in mobility in elderly people at risk who were living in the community73.

- A systematic review completed by the Netherlands RCT team above found that there was no clear evidence in favour of the effectiveness of preventive home visits to elderly people living in the community74.

- A Danish RCT evaluated the cost effectiveness of preventive home visits to older people by health visitors and GPs with geriatric training which focused on early signs of disability, physical activity, and interdisciplinary follow-up, compared with usual preventive home visits. The study did not provide conclusive evidence on the cost effectiveness of the programmes under consideration75.

- A Cochrane Review of home safety education and provision of home safety equipment in relation to children concluded that the interventions, particularly when provided in combination, were effective in increasing a range of safety practices but there was a lack of evidence regarding its impact on child injury rates. There was no consistent evidence that home safety education, with or without the provision of safety equipment, was less effective in those at greater risk of injury76.

Assessment and management of older people

4.42 Two American based studies report evidence that geriatric evaluation and management:
- significantly reduced admissions to nursing homes77
- slowed functional decline78.
4.43 Furthermore, an American RCT of a rapid response community programme offering enhanced access to geriatric assessment and case management found that it reduced or delayed the need for long-term residential care\textsuperscript{18}.

4.44 However, a UK RCT comparing assessment strategies and subsequent referral to outpatient geriatric services with referral for management in primary care found that universal in-depth health assessments did not significantly reduce mortality rates or admission to hospital/care institutions compared with targeted assessments following brief screening. The authors conclude that there are no benefits to mortality rates and care admissions of a universal in-depth annual assessment of the elderly, compared with brief screening and a more targeted approach\textsuperscript{79}.

4.45 For carers, a UK RCT reported improved outcomes for the carers of older people at risk of admission to a care home when provided with a specialist assessment, and that the carers of the older people who experienced depressive symptoms received the greatest benefit from the specialist assessment\textsuperscript{80}.

**Conclusion**

4.46 In conclusion, this chapter shows that there is a large body of high level evidence (approximately 70 studies) about interventions that seek to shift the focus of care from acute/hospital based care to preventative and community based care. The interventions which could potentially contribute to this shift are:
- Care/case management
- Disease management
- Integrated Care (including multi disciplinary working)
- Preventative interventions
- Assessment of older people
- Rehabilitation

4.47 Many of these interventions involve better integrated or co-ordinated care and multi-disciplinary working. We found strong evidence to support these types of interventions overall.

4.48 There was a gap in evidence about whether and how preventative interventions and assessment-based interventions can contribute to shifting the balance of care.
CHAPTER FIVE SHIFTING THE LOCATION OF CARE

5.1 Shifting the location of care involves the wider provision of diagnostic procedures and access to specialist services in communities. It means less acute hospital-centred activity and more services and support provided in community hospitals, other local facilities and at home. This section details the high level evidence relating to shifting the location of care by:

- Using different types of hospitals
- Discharge interventions
- Changing the location of clinics
- Care at home
- Home visits
- Managing the demand for hospital services
- Home modifications/equipment
- Housing

Shifting the location of care – Summary

There is a large quantity of high level evidence relating to the broad areas of reducing the demand for hospital based services, including effective discharge from hospital.

The interventions supported by strong evidence that could contribute to shifting the location of care are:

- Housing adaptations and equipment
- Supported discharge for older people and for people after a stroke
- Early supported discharge for older people and people after a stroke
- Care at home and hospital at home interventions
- Community hospitals
- Day hospitals

There is evidence that waiting times in A&E could be reduced through:

- Fast tracking systems
- Point-of-care testing (as it is faster than centralised laboratory testing)
- Increased numbers/different deployment of senior staff

In relation to reducing attendance at A&E departments:

- Case management for chronic disease and high service users can reduce demand, as can home support and specialist nurses
- Triaging out of the emergency department can reduce usage but its safety is not known
- Primary care gate-keeping can reduce attendance numbers
- Patient education is of unproven advantage in reducing attendances
- The benefits of diverting cases away from emergency department by the ambulance service are not proven

There is some evidence that the following may reduce length of stay in hospital:

- Self-management education
- Telecare
- Multidisciplinary teams in hospital
- Discharge planning
- Home hospitalisation
- Educating professionals.

And that the following interventions may reduce the length of subsequent hospital stays:
- Targeting people at high risk
- Self-management education
- Telemonitoring
- Multidisciplinary teams in hospital
- Multidisciplinary teams after discharge
- Nurse-led clinics and nurse-led follow-up
- Assertive case management
- Home visits.

There is some evidence to suggest that unplanned hospitalisations and readmission can be reduced through:
- Self-management education
- Self-monitoring
- Group visits to primary care
- Broad managed care programmes
- Integrating social and health care
- Multidisciplinary teams in hospital
- Discharge planning
- Multidisciplinary teams after discharge
- Care from specialist nurses
- Nurse-led clinics
- Telecare
- Telemonitoring.

Less well researched is the important role the provision of suitable housing (including housing with care or support) can play in reducing the demand for inpatient or residential care and sustaining people in the community. The high level evidence map indicates housing as a major research gap.

In looking at shifting the location of care, the impact on carers is a key issue that warrants further investigation. In addition single interventions such as supported discharge are most effective as part of a whole systems approach and not isolated interventions.

The high level evidence is less conclusive in relation to:
- Changing the location of clinics
- The impact of home visits

There is also some evidence relating to the potential for care at home for children and babies.
Different types of hospitals

Care at home compared to care in hospital

5.2 Eight studies compared care provided at home to services in hospital for very specific conditions or treatments. These were:
- mental health problems – where the evidence was inconclusive for home treatment but favourable for crisis home care
- haemodialysis for people with end stage renal failure – which found lower costs for home care
- deep vein thrombosis – which found that home care is cost effective
- community-acquired pneumonia – where the evidence showed that it can be effectively managed by primary care teams or outpatient care
- chronic heart failure – which found that home care can lead to longer survival and reduced hospitalization
- COPD – where the evidence showed home care can be cost effective

- A Health Technology Assessment review of 22 studies looked at home treatment for mental health problems. It concluded that the benefit of home treatment over admission in terms of days in hospital was clear, but over other community-based alternatives was inconclusive. There was consensus that caseloads of under 25 for individual practitioners and flexible working hours over 7 days were important, but little support for caseloads under 15 or for 24-hour services, and consensus that home visiting was essential, but not on teams being 'explicitly dedicated' to home treatment. Services that visit patients at home regularly and those that take responsibility for both health and social care are likely to reduce time spent in hospital. Psychiatrists surveyed in this review also considered support for carers to be essential. The evidence from this review, however, was that few services currently have protocols for meeting carers' needs.

- A Cochrane review found that crisis/home care for people with mental health problems may help avoid repeat admissions, reduce family burden and is a more satisfactory form of care for both patients and families. No differences in death or mental state outcomes were found.

- An international NICE systematic review of the effectiveness and cost-effectiveness of home versus hospital or satellite unit haemodialysis for people with end stage renal failure reports lower total costs for home haemodialysis than for hospital dialysis, with treatment costs of satellite unit haemodialysis lower than hospital dialysis and higher than home dialysis. The principal cost saving is the lack of requirement for nursing staff, as unpaid relatives or friends in the main aid the patient before, during and after dialysis.

- A Cochrane Review of home versus in-patient treatment for deep vein thrombosis suggests that home management is cost effective and preferred by patients.

- A New Zealand based RCT concluded that mild to moderately severe community-acquired pneumonia can be managed effectively in the community by primary care teams.
• A Spanish RCT concludes that in selected patients who had community-acquired pneumonia, outpatient care was as safe and effective as hospitalisation and provided greater patient satisfaction.

• An Australian RCT comparing usual care to a home-based intervention for chronic heart failure concluded home-based care contributes to prolonged survival and reduced frequency of recurrent hospitalisation. The authors present figures suggesting home-based care is associated with 120 more life-years per 100 patients treated compared with usual care (405 versus 285 years) at a cost of $1729 per additional life-year gained.

• A Spanish RCT reported on the impact of a hospital-based home-care programme for the management of COPD patients receiving long-term oxygen therapy. Cost analysis shows a total saving of 8.1 million pesetas ($46,823) in the home care group, mainly due to a decrease in the use of hospital resources. There was no difference in pulmonary function, gas exchange, quality of life, and survival.

Hospital at home for older people

5.3 Among older people, one economic study and two RCTs reported benefits of “hospital at home”. Hospital at home can be defined as a service that provides active treatment in the patient’s home of a condition that otherwise would require acute hospital in-patient care.

• A UK economic study concluded that for elderly patients assessed as needing no more than 14 days of hospital care, hospital at home care is cost saving to health and social care agencies when compared with conventional inpatient care.

• A New Zealand RCT comparing care of patients aged 55 years or over being treated for an acute medical problem in a hospital at home programme with usual acute hospital inpatient care found that the hospital at home programme was found to be more acceptable and as effective and safe as inpatient care. While caring for patients at home was significantly more costly than standard inpatient care, this was largely due to the hospital at home programme not operating at full capacity.

• An Australian RCT concluded that a hospital at home scheme providing home rehabilitation for frail elderly after acute hospitalisation is a viable option for selected patients and is associated with a lower risk of delirium, greater patient satisfaction, lower cost and more efficient hospital bed use.

Hospital at home for children

5.4 Two linked studies of hospital at home for children reported benefits of this type of care for certain conditions and found that parents preferred it.

• A UK RCT comparing an acute paediatric hospital at home scheme with conventional hospital care concluded that hospital at home is a clinically acceptable form of care for certain groups of acute paediatric illness. Readmission rates within three months failed to show any advantage in terms of parental coping, but parents and patients expressed a strong preference for hospital at home.
A linked qualitative study of users’ views found that hospital at home is an acceptable alternative to hospital care where there are essentially nursing needs. Parents’ preferences for hospital at home was based on a perception that their child’s illness was not serious or life threatening and therefore could be managed at home with appropriate support from health professionals. The social and financial costs, to the parents/carers, of hospital care compared with hospital at home were the other main factors driving their preference, rather than a comparison of the quality of nursing care of their child.

**Hospital at home for people with chronic obstructive pulmonary disease (COPD)**

5.5 Three studies found that hospital at home was effective for selected people with COPD.

- A UK RCT of hospital at home versus hospital care in patients with exacerbations of COPD concluded that hospital at home care was a practical alternative to emergency admission in selected patients.

- A Cochrane Review of hospital at home for acute exacerbations of chronic obstructive pulmonary disease found that, for patients not requiring obligatory admission, hospital at home care is as effective as hospital inpatient care for preventing hospital readmission and mortality at 2 to 3 months of follow-up.

- A Spanish RCT of home hospitalisation of exacerbated COPD patients concluded that a comprehensive home care intervention in selected cases appears as cost effective and generates better outcomes at lower costs than conventional care.

**Hospital at home for other people**

5.6 Four reviews of hospital at home care for other groups found less clear-cut benefits.

- An international review of the evidence of health and cost effects of substituting home care for inpatient acute care concluded that home care had no notable effects on patients’ or caregivers’ health, that cost effects were mixed, and that hip fracture was the only condition for which internally valid evidence provided some support for acute home care.

- A UK cost effectiveness comparison of hospital at home versus inpatient care for joint replacement patients found that the hospital at home intervention was more effective in improving patient and carer satisfaction and in reducing joint stiffness, and that costs were reduced and savings were observed from the perspective of the patients' carers, but not the health service providers.
• A Cochrane Review of hospital at home versus in-patient hospital care found that allocation to hospital at home resulted in a small reduction in hospital length of stay, but hospital at home increased overall length of care. Patients allocated to hospital at home expressed greater satisfaction with care than those in hospital, while the views of carers were mixed. The review provided insufficient objective evidence of economic benefit and the authors concluded that more rigorous research was needed98.

• A literature review of innovations in the nursing care of the chronically ill noted that innovations in hospital at home care and advanced nursing practice are primarily implemented in primary care-orientated countries. The authors found that, whether nursing innovations positively influence the quality of care, costs of care or patients' use of health care facilities remained rather unclear99.

• However, for people with a terminal illness, a UK RCT to investigate the impact of hospice at home on caregiver bereavement outcome concluded that home deaths were associated with both better bereavement response and better physical health post-bereavement than were inpatient deaths100.

Community hospitals

5.7 Three studies investigated community hospital care for older people. Two found benefits of community hospital care and the other found that this type of intervention was as cost-effective as care in a district general hospital.

• A UK RCT found that care in a locality based community hospital is associated with greater independence for older people than care in wards for elderly people in a district general hospital55.

• A Norwegian RCT looked at the efficacy of intermediate care for older people at a community hospital compared to standard prolonged care at a general hospital. The authors concluded that intermediate care at a community hospital significantly decreased the number of readmissions for the same disease to general hospital, and a significantly higher number of patients were independent of community care after 26 weeks of follow-up, without any increase in mortality and number of days in institutions101.

• A UK RCT examined the cost effectiveness of post-acute care of older people in a locality based community hospital compared with a department for care of elderly people in a district general hospital. The authors concluded both interventions offered similar levels of cost effectiveness102.

Day hospitals

5.8 Three studies examined day hospital provision for people with mental health problems. Two of these found that acute day hospital care can improve patient outcome and reduce costs (in certain circumstances).
• A Cochrane Review found that, for people with acute psychiatric disorders, care in acute day hospitals can achieve substantial reductions in the numbers of people needing inpatient care, whilst improving patient outcome.\textsuperscript{103}

• A systematic review of the effectiveness of different types of day care for people with severe mental disorders found that four of five trials demonstrated that day hospital care was cheaper than inpatient care. There were some inconclusive data on costs suggesting that day care centres could be more expensive than outpatient care. The authors concluded that acute day hospitals are an attractive option in situations where demand for inpatient care is high and facilities exist that are suitable for conversion.\textsuperscript{104}

5.9 However, the third study, a UK RCT comparing day hospital with inpatient care for psychiatric patients, concluded that extending the remit of an acute day hospital to provide 24-hour care and a choice of treatment location is associated with an increase in the severity of illness treated. The impact on costs was unclear and the total cost of the new service may not be significantly less than in-patient care. The authors noted that the results need to be interpreted with caution because of differences in recruitment methods to the study.\textsuperscript{105}

5.10 Among older people, a cost-utility study comparing day hospital with usual care for people with chronic heart failure concluded that a heart failure outpatient management programme delivered by a day hospital can reduce mortality and morbidity.\textsuperscript{30}

Discharge interventions

5.11 A number of studies looked at interventions related to discharge from inpatient care. These included:
- Early discharge with follow-up
- Supported discharge
- Discharge planning
- Measures to tackle delayed discharge

5.12 The studies are summarised by patient group rather than by intervention. The discharge interventions reviewed were for older people, patients who had suffered a stroke, maternity patients, people who had heart failure and mixed groups of patients.

Discharging older people

5.13 Five studies examined discharge interventions for older people and older people with hip fracture.

5.14 An economic evaluation of an early discharge rehabilitation service for older people in Nottingham was found to be more cost effective than usual care. In addition, an Australian RCT of post-acute care programme was found to be beneficial in the transition from hospital to the community in older patients.\textsuperscript{106}

5.15 However, a systematic review of the effects of supporting discharge in older people found that supporting discharge was of value but that there was an absence of rigorous research data on functional status, patient and carer satisfaction.\textsuperscript{107}
5.16 A Health Technology Assessment review found that arrangements for discharge of older people can have beneficial effects on subsequent re-admissions but does not affect mortality or length of stay. In terms of the specifics of the intervention, no evidence was found to support the general adoption of discharge planning protocols, geriatric assessment processes or discharge support schemes as means of improving discharge outcomes. However, a Department of Health study on ways to tackle delayed discharge found that effective discharge planning (involving multi-disciplinary decision making, well-defined and documented patient pathways, prompt auditing of delays, siting of discharge planning staff together, using common patient records and having a key worker) is one of a range of interventions that works.

5.17 For patients with hip fracture, a Health Technology Assessment review of geriatric hip fracture programmes with early supported discharge found that they are effective in reducing the average length of hospital stay and are associated with significantly increased rates of return to previous residential status. However, early supported discharge is not suitable for the more disabled patients.

5.18 Furthermore, evidence from a Netherlands-based RCT looked at the effects of early discharge of older patients with hip fracture on health outcomes and costs and found no differences in mortality, Activities of Daily Living level, complications, quality of life, and type of residence. Early discharge from hospital did not substantially reduce the total costs but merely shifted them from the hospital to the nursing home.

Discharging stroke patients

5.19 Overall, the following six studies of early supported discharge among stroke patients report positive effects. However, one study notes that strain on carers might be increased.

- A Cochrane Review found that appropriately resourced early supported discharge (ESD) programmes can reduce long-term dependency and admission to institutional care and reduce hospital length of stay. The greatest benefits were seen in the trials evaluating a coordinated ESD team and in stroke patients with mild to moderate disability. Improvements were also seen in patients' extended Activities of Daily Living scores and satisfaction with services but no statistically significant differences were seen in carers' subjective health status, mood or satisfaction with services.

- A meta-analysis found that, in patients hospitalized with stroke, an early supported discharge service with rehabilitation at home reduces death and disability more than conventional in-hospital care.

---

viii This report on the work of the Health and Social Care Change Agent Team states that, over the 12 months from May 2002, the 25 sites the team was working with achieved an average 24% reduction in the numbers of people delayed in hospital. The findings cited here appear to be based on the range of interventions which have contributed to this reduction.
A Canadian RCT found that, among patients with acute stroke, early hospital discharge (ESD) with home-based rehabilitation resulted in better physical health and reintegration into community at 3 months than did usual discharge and referral to follow-up services; duration of initial hospital stay was also shorter. The groups did not differ on measures of impairment and disability.

A Belfast RCT of an early discharge rehabilitation scheme, provided by a multidisciplinary team, found no statistically significant differences in hospital stay duration, costs, or outcome measures at baseline and 12 months except for higher satisfaction reported by the patients in the community group. Overall, both groups recorded improvement in most domains over time. Carers reported a high level of satisfaction although the level of strain among carers was cause for concern. The authors conclude that a mixed model of hospital-based and community-based rehabilitation services is likely to lead to increased patient choice and satisfaction and a potential reduction in bed demand for less severe stroke patients.

A five year follow-up of a Swedish RCT found that early supported discharge with continued rehabilitation at home has shown a beneficial effect on extended activities of daily living 5 years after stroke. The authors concluded that 5 years after stroke, the ESD service was favourable with regard to resource use.

A Norwegian RCT found that an extended stroke unit service with early supported discharge seems to have no positive effect on functional outcome for patients living in rural communities, but might give a trend toward better quality of life. There were no significant differences in length of stay.

**Discharging people with heart disease**

5.20 Among older patients with chronic heart failure, a Hong Kong RCT found that a community nurse-supported post-discharge programme was effective in preserving independence and was probably effective in reducing the number of unplanned readmissions. The cost benefits to public health care were not significant.

5.21 Among patients who have had elective percutaneous coronary intervention (PCI) a Netherlands RCT found that same-day discharge is feasible and safe in the majority (80%) of patients selected for day-case PCI. Same-day discharge does not lead to additional complications compared with overnight stay.

**Discharging new mothers and babies and children**

5.22 A Swiss RCT of the cost-effectiveness of early postnatal discharge with community midwifery support found that it significantly reduces costs without compromising the health and wellbeing of the mother and infant. However, a Cochrane Review of early postnatal discharge from hospital for healthy mothers and term infants found no evidence of adverse outcomes associated with policies of early postnatal discharge, but methodological limitations of included studies meant that adverse outcomes could not be ruled out.
5.23 A Cochrane Review of early discharge with home support of gavage feeding for stable preterm infants who have not established full oral feeds found that the evidence was limited to one quasi-RCT. In this study, infants in the early supported discharge programme had reduced length of hospital stay and a lower risk of clinical infection than those in the control group. The authors concluded that further high quality trials are needed\textsuperscript{116}.

5.24 A Health Technology Assessment review of the costs and effectiveness of different models of paediatric home care found that the evidence base was weak, as were methods. However, the authors did find evidence that, for children with diabetes and asthma, early discharge with home care after diagnosis may reduce parents' costs, largely by reducing children's initial length of hospital stay\textsuperscript{117}.

**Discharging other patients**

5.25 Two reviews looked at discharge planning.

5.26 A Scottish research review found that discharge planning can reduce the length of hospital stay, increase patient satisfaction, and reduce the number of patients experiencing a delay. The research review found evidence that 'hospital at home' schemes, sometimes called 'early supported discharge', have contributed towards tackling delayed discharge for some people. However, they are also associated with lower carer satisfaction and increases in overall length of care. The authors found gaps in the research evidence on the role of different professionals in delayed discharge and on the views of patients and carers. They found some evidence that a whole systems approach that follows four key inter-connected stages may be most effective overall in tackling the problem of delayed discharges. These stages are: identify the main causes for delayed discharges in the local care system; develop initiatives to tackle these causes; evaluate the impact of these initiatives; and monitor the extent to which the delayed discharges are being successfully tackled\textsuperscript{118}.

5.27 However, in contrast to this, a Cochrane Review of discharge planning found that its impact on readmission rates, hospital length of stay, health outcomes and cost was uncertain. However, the study was limited by differences in measure of outcomes\textsuperscript{119}.

5.28 Other interventions for patients included telephone follow-up, brief intervention\textsuperscript{ix} and nursing interventions. The evidence was inconclusive for telephone follow-up and mixed for brief intervention and nursing interventions.

- A Cochrane Review of telephone follow-up after hospital discharge found that studies were of low methodological quality and, overall, there was inconclusive evidence about the effects of telephone follow up\textsuperscript{120}.

\textsuperscript{ix} Brief interventions may include verbal advice, information materials, brief counselling or use of motivational techniques to help the patient self manage their condition.
• An Australian RCT of home based care of patients with COPD disease evaluated the usefulness of limited community based care for patients after discharge from hospital. The authors concluded that this brief intervention after acute care improved patients' knowledge and some aspects of quality of life. However, it failed to prevent presentation and readmission to hospital\textsuperscript{121}.

• An American RCT looked at the efficacy of an in-home nursing intervention following short-stay breast cancer surgery. The findings suggest that a targeted nursing protocol may, at reasonable cost, improve quality of life and enhance health-related knowledge\textsuperscript{122}.

• A UK RCT included an economic evaluation of nurse led intermediate care versus standard acute care for post-acute medical patients. The authors concluded that acute hospitals may not be cost effective settings for nurse led intermediate care. Both inpatient and total costs were significantly higher for nurse led care than for standard care of post-acute medical patients, suggesting that this model of care should not be pursued unless clinical or organisational benefits justify the increased investment\textsuperscript{123}.

• A Cochrane Review of the effectiveness of intermediate care in nursing-led in-patient units found there was some evidence that patients discharged from a nurse-led unit are better prepared for discharge but it was unclear if this was simply a product of an increased length of inpatient stay. No statistically significant adverse effects were noted but the possibility of increased early mortality could not be discounted\textsuperscript{124}.

**Location of clinics**

5.29 An international review of specialised outreach clinics found that simple 'shifted outpatients' styles of specialist outreach clinics, which simply changed the location of clinics from hospital to local areas to improve access, showed no evidence of impact on health outcomes. However, where specialist outreach was part of more complex multifaceted interventions involving collaboration with primary care, education or other services, it was associated with improved health outcomes, more efficient and guideline-consistent care, and less use of inpatient services\textsuperscript{125}.

5.30 A Cochrane Review found limited evidence of the benefit of primary care based asthma clinics and the authors stated that firm conclusions could not be formed until more good quality trials had been carried out\textsuperscript{126}.

5.31 A review commissioned by the NHS Service Delivery Organisation Programme (SDO) in 2007 looked at the impact of transferring outpatient services to primary care. It reports that effective strategies that maintain quality include:
- primary care clinics for chronic diseases
- discharging hospital outpatients to no follow-up, patient-initiated follow-up or GP follow-up
- direct access by GPs to hospital-based diagnostic tests, investigations and treatments
- liaison between primary care and specialists, which may improve service quality but does not reduce outpatient attendance
- relocating specialists into community settings which does not reduce outpatient demand but may improve access in remote areas
- specialist educational outreach and structured referral sheets which reduce GP referrals.

5.32 The authors also report that GP minor surgery and financial incentives to reduce referrals may reduce quality of care. Ineffective interventions include passive dissemination of referral guidelines, audit-and-feedback of referral rates and discussion of referral rates with an independent medical advisor\textsuperscript{127}.

5.33 A systematic review looked at the effectiveness of compulsory treatment (involuntary outpatient treatment) among people with mental health problems. It found the evidence for involuntary out-patient treatment in reducing either admissions or bed-days was very limited\textsuperscript{128}.

**Care at home**

**Care at home for older people**

5.34 A UK based review of home care effectiveness and outcomes in 2000 reports:

- increased life satisfaction
- reduction in unmet needs in older people
- delays to long-term admission to an institution
- reduced functioning in some activities of daily living.

5.35 The authors of this review also found that providing formal support to vulnerable people will not impact on the willingness of informal caregivers to give care, with formal support generally being preferred for domestic tasks and informal support for personal care tasks\textsuperscript{129}.

5.36 More recent evidence from the Audit Commission supports the provision of day care and home care for older people to delay the use of residential care on effectiveness and cost-effectiveness grounds\textsuperscript{3}.

5.37 A Canadian review of literature on home care programmes found mixed evidence and recommends further research on the cost-effectiveness of home care programmes\textsuperscript{130}.

**Care at home for children**

5.38 A Cochrane review of specialist home-based nursing services for children with acute and chronic illnesses did not provide definitive support for specialist home-based nursing services in reducing access to hospital services or length of stay. However there is evidence of no adverse impact on physical health outcomes and improved satisfaction with home-based nursing care\textsuperscript{131}.

5.39 In relation to models of paediatric home care (PHC) a systematic review reports that:

- For low birth weight babies: PHC may be cheaper than the alternative, but the costing methods used were weak.
• For diabetes and asthma: early discharge with home care after diagnosis may reduce parents’ costs, largely by reducing children's initial length of hospital stay.
• For technology dependent children: PHC for technology-dependent children may be cheaper for the health service.
• For children with mental health problems: admission to residential care may also be lower, with reductions in social care costs.

5.40 A Cochrane Review of routine hospital admission versus out-patient or home care in children at diagnosis of type 1 diabetes mellitus, reported inconclusive results, stating that this intervention “does not lead to any disadvantages in terms of metabolic control, acute diabetic complications and hospitalisations, psychosocial variables and behaviour, or total costs”.

Care at home for natal and postnatal care

5.41 Two studies provided evidence about care at home during labour and three in relation to postnatal services.

• Compared to hospital settings, home-like settings for childbirth are associated with modest benefits, including reduced medical interventions and increased maternal satisfaction. The authors of this Cochrane review state that no firm conclusions could be drawn regarding the effects of staffing or organizational models.

• A Canadian RCT study focusing upon preterm labour concludes that home care management is an efficient and acceptable alternative to hospital care. The mean duration of the first stay in hospital for the women in the home group was 3.8 days compared to 6.1 days in the hospital group.

• A Swiss RCT found that early postnatal discharge combined with home midwifery support resulted in a significant reduction in postnatal hospital care costs (a saving of 1,221 francs per mother-infant dyad) without compromising the health and wellbeing of the mother and infant.

• Compared with standard hospital-based care, home support by nurse lactation consultants showed no statistically significant differences, in either time costs to the family, or total societal costs. The authors conclude that the cost of home lactation support programmes were comparable with the costs of hospital-based standard care.

• A Cochrane review of home based support for disadvantaged adult mothers showed no statistically significant differences for those receiving home visiting, either for maternal outcomes (maternal depression, anxiety, the stress associated with parenting, parenting skills, child abuse risk or potential or breastfeeding) or child outcomes (preventive health care visits, psychosocial health, language development, behaviour problems or accidental injuries). The authors report that the evidence about uptake of immunisations was mixed, and the data on child maltreatment difficult to interpret.
Home visits

5.42 A Cochrane review of the effectiveness of domiciliary health visiting found that health visiting can be associated with several positive outcomes related to parenting, child behaviour and development, breastfeeding, postnatal depression and unintentional injury but not with reduced hospital admissions or use of health services. Among frail, at risk elderly, however, it found evidence that health visiting was associated with reduced mortality and reduced admission to long term care but not that it led to reduced admission to hospital or other outcomes. The authors report that the findings suggest domiciliary health visiting could provide net cost savings and that non-professional home visiting may have a role, as long as it has the right professional support137.

5.43 An American review of nurse home visit programmes for older people reports that studies demonstrated lower overall health care costs with either improved or at least no change in clinical outcomes138.

5.44 A systematic review found no strong evidence to support the provision of preventative home visits to older people74.

5.45 Studies reporting evidence on home visits after surgery or hospitalisation studies on home visits by nurses as part of rehabilitation service are reported elsewhere 44.

Managing demand for hospital services

Reducing A & E waits and attendance

5.46 A UK National Coordinating Centre for NHS Service Delivery and Organisation Research and Development review in 2006 reported evidence that waiting times in A&E could be reduced through:

- fast tracking systems
- point-of-care testing (as it is faster than centralised laboratory testing)
- increased numbers/different deployment of senior staff.

5.47 In relation to reducing attendance at A&E departments it is reported that:

- case management for chronic disease and high service users can reduce demand, as can home support and specialist nurses
- triaging out of the emergency department can reduce usage but its safety is not known
- primary care gate-keeping can reduce attendance numbers
- patient education is of unproven advantage in reducing attendances
- the benefits of diverting cases away from emergency department by the ambulance service are not proven139.

Reducing length of hospital stay

5.48 A narrative review of literature in 2006 reported that there is some evidence that the following may reduce length of stay in hospital:

- self-management education
- telecare
- multidisciplinary teams in hospital
- discharge planning
- home hospitalisation
- educating professionals.

5.49 It also reported that the following interventions may reduce the length of subsequent hospital stays:
- targeting people at high risk
- self-management education
- telemonitoring
- multidisciplinary teams in hospital
- multidisciplinary teams after discharge
- nurse-led clinics and nurse-led follow-up
- assertive case management
- home visits\(^8\).

**Reducing unplanned admissions**

5.50 The same 2006 narrative review of literature relating to reducing unplanned hospital admissions reports that there is some evidence to suggest that unplanned hospitalisations and readmission can be reduced through:
- self-management education
- self-monitoring
- group visits to primary care
- broad managed care programmes
- integrating social and health care
- multidisciplinary teams in hospital
- discharge planning
- multidisciplinary teams after discharge
- care from specialist nurses
- nurse-led clinics
- telecare
- telemonitoring\(^8\).

**Home modification and provision of equipment**

5.51 Four studies looked at home modification and provision of equipment. The evidence is positive in relation to cost effectiveness, reducing hospital admissions and strain on carers and promoting social inclusion. However, two of the studies looked at impact on home safety and found less conclusive evidence.

- A 2007 review of international evidence relating to housing adaptations, modifications and equipment found that the provision of housing adaptations and equipment for disabled people produced savings to health and social care budgets. The savings related to reducing or removing an existing outlay or preventing an outlay that would otherwise be incurred. The review evidence indicated that better outcomes for the same expenditure are possible\(^{11}\).
• A UK Joseph Rowntree study in 2001 reported that adaptations, when successfully implemented in full consultation with the user and whole family, could keep people out of hospital, reduce strain on carers, and promote social inclusion. The authors concluded that spending on adaptations appears to be highly effective.

• A large Cochrane review of studies on the modification of the home environment for the reduction of injuries concluded that there is insufficient evidence to determine the effects of interventions to modify environmental home hazards. None of the studies that focused on children or older people reported a reduction in injuries due to hazard reduction. Two older people studies demonstrated a reduction in falls that could be due to hazard reduction.

• Home safety education, especially with the provision of safety equipment, is effective in increasing a range of safety practices but there is a lack of international evidence regarding its impact on child injury rates.

Housing

5.52 A literature review looking at empirical evidence relating to housing with care for later life found eleven UK studies. The author’s main findings were:

• Residents value the combination of independence and security.
• Housing with care offers opportunities for social interaction and companionship, and there is much evidence of mutual support and neighbourliness.
• In some circumstances housing with care can provide an alternative to residential care, but the evidence suggests that it is not always a substitute for these settings.
• Housing with care can have a positive impact on the health and well-being of residents, and it is beneficial to their quality of life. However, studies relied heavily on expressions of resident satisfaction/contentment in arriving at their assessments; more robust quality of life measures were lacking in the evidence base.
• The evidence on the cost-effectiveness of housing with care is particularly limited and sometimes contradictory.

5.53 A Cochrane review of evidence about supported housing for people with severe mental disorders concluded that there was an absence of reliable evidence and there was an urgent need for more research via a randomised controlled trial.

---

^Housing with care can be defined as a housing scheme for older people that combines independent living with relatively high levels of care. It differs from sheltered housing which generally provides warden-assisted housing with no extra care.
Conclusion

5.54 In conclusion, this chapter shows that there is a large body of high level evidence (approximately 80 studies) about interventions that seek to shift the location of care from acute/hospital based care to preventative care and care based in more easily-accessible community hospitals, other local facilities and at home. The interventions which could potentially contribute to this shift are:

- Using different types of hospitals
- Discharge interventions
- Changing the location of clinics
- Care at home
- Home visits
- Managing the demand for hospital services
- Home modifications/equipment
- Housing.

5.55 We found strong evidence that discharge interventions and interventions to provide adaptations, equipment or care in the home and care closer to home were effective in shifting the balance of care. In addition, a range of interventions aimed at reducing demand for hospital care, for example, multi-disciplinary working, case management, telecare and telemonitoring, nurse-led clinics and self management can be effective in reducing hospital admissions, readmissions or length of stay.

5.56 There was a gap in the high level evidence about whether and how housing (including housing with care or support) can contribute to shifting the balance of care. In looking at shifting the location of care, the impact on carers is also a key issue that warrants further investigation.
6.1 Shifting the balance of roles involves shifting the emphasis away from the independence of individual practices and professionals towards a more extended primary and community care team approach. This means developing professional and staff roles, skills, expertise and responsibilities, with a greater focus on teams delivering integrated care pathways involving a wider range of partners, including patients and carers. This section details evidence in relation to shifting the balance of roles by focusing upon:
- Primary care workloads and roles
- Role of nurses
- Role of pharmacists
- Role of Allied Health Professionals
- Role of carers

**Shifting the balance of roles - summary**

There is much less evidence about the potential for shifting roles than other levels of shifting the balance of care. The high level evidence does, though, demonstrate the potential for a range of roles to be developed or substituted.

The evidence maps illustrate the dearth of evidence on the impact of community based professionals on shifting the balance of care. Gaps are most evident in relation to research on the role of social workers and unpaid carers – especially in relation to long term care and end of life services.

Three reviews looked at enhanced roles for nurses in primary care. Both found evidence that suggested that these interventions may increase or improve use of services.

Six studies examined the role of nurses in the management and care of people with specific diseases: four looked at respiratory conditions, including COPD and one each focused on heart disease and diabetes. Three of the four relating to respiratory conditions reported benefits of nursing interventions and one reported no clinical differences but possible increased cost implications.

A further study reviewing literature on nursing interventions for chronic conditions reported that the majority of studies did not report statistically beneficial effects of the nursing intervention.

The evidence suggests that there is some potential to develop the role of allied health professionals, role of lay workers and outreach workers in primary care.

Evidence for the effectiveness of medication reviews by pharmacists found weak or inconclusive evidence. Three studies looked at other pharmacist interventions (two of which were for heart failure) of which two found clear benefits and one did not.

There is strong evidence in relation to the importance of respite and day care services for supporting and sustaining carers.
Primary care

6.2 Two studies looked at different types of primary care-based interventions.

- A Cochrane Review found that lay health workers in primary and community health care have potential in promoting immunisation uptake and improving outcomes for acute respiratory infections and malaria, when compared to usual care. However, the authors report that there is insufficient evidence to assess which training or intervention strategies are effective.\(^{144}\)

- A UK RCT concluded that the short-term health service workload associated with symptomatic homeless patients requiring medication was not reduced by the use of a Health Advocate for Homeless Families but outreach health advocacy was used successfully to address psychosocial issues and reduce the workload for primary care staff.\(^{145}\)

6.3 A further review examined evidence of increased general practice workload due to a primary care led National Health Service in the UK. It reported that relevant studies found negligible effects on the number of general practitioner (GP) visits. The authors of the review consider the studies may have under-estimated the effect on workload.\(^{146}\)

The role of nurses

6.4 Three reviews looked at enhanced roles for nurses in primary care. All found evidence that these interventions may increase or improve use of services.

- A Cochrane Review provided evidence about substituting nurses for doctors in primary care. Authors reported that no appreciable differences were found between doctors and nurses in health outcomes for patients, process of care, resource utilisation or cost. Doctors' workload may remain unchanged either because nurses are deployed to meet previously unmet patient need or because nurses generate demand for care where previously there was none. Patient satisfaction was higher for nurse led care.\(^{147}\)

- There is some evidence from an international rapid review that primary care nurse case managers, such as Community Matrons and specialist nurses, can improve service use when implemented as part of an integrated programme of care.\(^{148}\)

- A rapid review of international evidence of care of people with long term conditions found some evidence that primary care nurse case managers, such as Community Matrons and specialist nurses, improve service use when implemented as part of an integrated programme of care. There is also evidence to support using nurse led interventions in some areas.\(^{5}\)

6.5 A further international review of literature on nursing interventions for chronic conditions reported that, whilst patients benefited from multiple, individualised, follow-up visits by nurses, the majority of studies did not report statistically beneficial effects for the nursing intervention.\(^{143}\)
Six studies examined the role of nurses in the management and care of people with specific diseases: four looked at respiratory conditions, including COPD and one each focused on heart disease and diabetes. Three of the four relating to respiratory conditions reported benefits of nursing interventions and one reported no clinical differences but possible increased cost implications.

- A Cochrane review of home care by outreach nursing for chronic obstructive pulmonary disease reported that patients with moderate COPD may have mortality and health related quality of life gains from a nursing outreach programme and that one large study found no reduction in hospital admissions\(^\text{149}\).

- A Spanish RCT concluded that a comprehensive home care intervention by a specialist nurse in selected chronic obstructive pulmonary disease exacerbations appears to be cost effective, giving better outcomes at lower costs than conventional care\(^\text{95}\).

- An American RCT found that a time limited, nurse led intervention reduced asthma readmissions, hospital days, and total healthcare costs more than usual care in patients with asthma and a history of frequent admissions\(^\text{150}\).

- A Cochrane review of the role of nurse specialist care for bronchiectasis did not demonstrate significant differences in clinical outcomes between nurse led care and doctor led care within the setting of a specialist clinic, but reports that there may be increased cost implications\(^\text{151}\).

- A UK RCT reported significantly greater survival in attendees at nurse-led secondary prevention clinics of coronary heart disease in primary care. Improvements in health status achieved in the first year of the study were, however, found to be reduced at 4 years\(^\text{152}\).

- A UK RCT found diabetes specialist nurses are potentially cost saving by reducing hospital length of stay. This study found no evidence of an adverse effect of reduced length of stay on re-admissions, use of community resources, or patient perception of quality of care. When the reduced length of stay was accounted for a mean cost per admission of £436 lower than that of the control group resulted\(^\text{153}\).

**The role of Allied Health Professionals**

Two studies examined the role of allied health professionals. A Department of Health Service Delivery Organisation (SDO) review in 2006 looked at extending the practice of allied health professionals in the NHS and concluded that it may help to solve medical workforce shortages and reduce waiting lists\(^\text{154}\). An American RCT concluded that an occupational and physical therapy intervention to ameliorate functional difficulties may reduce mortality risk in older people in the community\(^\text{155}\).
The role of the pharmacist

6.8 Evidence for the effectiveness of medication reviews found weak or inconclusive evidence.

6.9 The results of an international systematic review and meta-analysis suggest that there is relatively weak evidence to indicate that pharmacist-led medication reviews are effective in reducing hospital admissions\textsuperscript{156}.

6.10 Two UK RCTs looked at the effectiveness of medication reviews for older people.

- One study concentrating on the high risk elderly population in primary care found a reduction in prescribing but no positive impact on clinical outcomes or quality of life\textsuperscript{157}.

- A 2001 study of pharmacist-led medication review in patients over 65 found no changes in medicine costs or health-related quality of life, with small increases in contacts with health-care professionals or slightly fewer hospital admissions among the intervention group (see Footnote 3).

6.11 Three studies looked at other pharmacist interventions (two of which were for heart failure), of which two found clear benefits and one did not.

- A review of community pharmacy-based provision of pharmaceutical care in 7 countries found significant improvements were achieved in patients in some countries. Intervention patients reported better control of their medical conditions and improved satisfaction and pharmaceutical care cost savings were observed in most countries\textsuperscript{158}.

- An American RCT investigated pharmacist intervention to improve medication adherence in heart failure. It reports a reduction in hospital admissions of nearly 20% and lower annual direct health care costs in the intervention group. The authors conclude the benefit requires constant intervention to ensure the effect does not dissipate when the intervention ceases\textsuperscript{159}.

- In 2006 a UK RCT looking at the effectiveness of visits from community pharmacists for patients with heart failure concluded that this intervention did not lead to reductions in hospital admissions. The authors report that this is in contrast to those found in trials of specialist nurse led interventions in heart failure\textsuperscript{160}.

The role of carers

6.12 A Health Technology Assessment review and an Audit Commission review provide evidence to support the provision of respite for carers of older people in order to reduce the psychological, mental or physical health burden of caring\textsuperscript{3,161}.
6.13 The location of respite service is an important factor if it is also to be an effective way of delaying admission to residential care. The two reviews cited above report on the lack of evidence on community based/in-house services. There is evidence, however, that institutional respite can be cost-effective in delaying admission to institutional care.

6.14 The evidence also supports the provision of day care and home care for older people in relation to delaying the use of residential care.

6.15 In addition, the evidence supports the provision of day care and social work/counselling to support carers. There is also evidence from a UK RCT of the positive impact for carers of specialist clinical assessment of vulnerable older people at risk of residential or nursing home placement.

6.16 An American RCT reported that the provision of education materials relating to patient behaviours and caregiver stress-coping may be effective in reducing caregiver distress and burden in the long-term management of the dementia patient. The authors conclude that interventions that focus only on care recipient behaviour, without addressing caregiving issues, may not be as adequate for reducing caregiver distress.

6.17 A Canadian RCT concluded that, in caregivers of people with Alzheimer's disease, case management reduced hospital admission of the carer.

6.18 A UK systematic review of the clinical networks in health and social care support found that interventions for carers of people with schizophrenia or dementia could clearly demonstrate beneficial effects and that there is some evidence of beneficial effects of care support networks for people with diabetes, arthritis/rheumatic diseases, bulimia nervosa, and depression. An Audit Commission Review found no evidence of effectiveness of carer support groups.

Conclusion

6.19 In conclusion, this chapter shows that there is a small body of high level evidence (approximately 25 studies) about interventions that seek to shift the balance of roles from the independence of individual practices and professionals towards a more extended primary and community care team approach. The interventions which could potentially contribute to this shift are those in relation to:

- Primary care workloads and roles
- Role of nurses
- Role of pharmacists
- Role of Allied Health Professionals
- Role of carers

6.20 We found evidence that there is potential for a range of roles to be developed or substituted, including those of nurses, allied health professionals and lay workers and outreach workers in primary care.
6.21 There was a gap in evidence on the impact of community-based professionals on shifting the balance of care. The gaps were most evident in relation to research on the role of social workers and unpaid carers – especially in relation to long term care and end of life services.
CHAPTER SEVEN    SHIFTING THE BALANCE OF RESPONSIBILITY

7.1 Shifting the balance of responsibility concerns moving away from the current view of patients/clients as passive recipients of care towards full partnership in the management of their conditions. This involves providing more support for people to look after themselves and remain as independent as possible using new technologies for telemedicine and telecare to help people to manage their conditions and stay longer in their own homes. This section summarises evidence in relation to shifting the balance of responsibility by:

- Use of technology, including telemedicine (the use of telecommunications technology for medical diagnosis and patient care), telephone support, tele-monitoring (monitoring of signs and symptoms using telecommunications technology) and internet-based support
- Self care

**Shifting the balance of responsibility – Summary**

There is high level evidence to support the development of:

- Telephone support services
- Telephone consultation
- Self care support
- Self monitoring of long term conditions.

The research illuminates the potential for telemedicine and tele-monitoring, with more research being required to establish the best use of these forms of technology within the whole system of health and social care.

**Use of technology**

7.2 A Cochrane systematic review of telemedicine reports that, although none of the studies showed any detrimental effects from the interventions, neither did they show unequivocal benefits and the findings did not constitute evidence of the safety of telemedicine. None of the studies included formal economic analysis. All the technological aspects of the interventions appear to have been reliable and to have been well accepted by patients.\(^{164}\)

7.3 Two systematic reviews examined tele-monitoring; and tele-monitoring and structured telephone support\(^{166}\) for the management of heart failure. The evidence in these reviews suggests positive outcomes, when tele-monitoring is part of wider strategies or care programmes, in relation to:

- Reducing hospital bed-days occupancy
- Reducing readmission
- Patient acceptance
- Patient compliance with tele-monitoring.
- Reductions in mortality
- Increased quality of life
- Reduced costs (not in all studies)\(^{165}\).
7.4 A different systematic review published in the BMJ found some evidence that telephone support reduces costs of care for people with chronic heart failure. A UK-based study found nurse telephone support reduced mean duration of hospital admissions and one-year mortality among patients with heart failure who were at high risk of hospitalization or death.

7.5 A UK RCT reported that nurse telephone consultation in out-of-hours primary care may reduce NHS costs in the long term by reducing demand for emergency admission to hospital. However, general practitioners currently bear most of the cost of nurse telephone consultation and benefit least from the savings associated with it.

7.6 Telephone consultation and triage appear to reduce the number of surgery contacts and out-of-hours visits by general practitioners. However, the review authors question its effect on service use.

7.7 A review reported that web-based interactive health communication applications (IHCAs) for people with chronic disease had positive effects on knowledge, social support and clinical outcomes and on self-efficacy (a person's belief in their capacity to carry out a specific action). The review authors reported, however, that it was not possible to determine the effects of IHCAs on emotional or economic outcomes.

Self care

7.8 In 2007 the Department of Health published “Research evidence on the effectiveness of self care support”. It reported that, overall, the evidence suggests that self care support can result in beneficial health outcomes for people and more appropriate use of health and social care services.

7.9 High level evidence (including both high level primary studies, e.g. RCTs, and review exercises) has been found to support self management education in the treatment of COPD, asthma, heart failure, ulcerative colitis and long term conditions/chronic illness in general.

7.10 Self management education has been related to:
- reduced hospitalisations
- reductions in A&E attendance
- reductions in unscheduled visits to the doctor

7.11 The author of a UK-based rapid review suggests that self management education resources and programmes must take account of local services and sociological circumstances and form part of a range of service responses.

7.12 E-mail reminders had a measurable impact on patients’ quality of life within an American RCT. The intervention was found to have a positive impact on medication knowledge, diet, and weight monitoring.
7.13 A review by the Social Care Institute for Excellence (SCIE) found that reminders, compliance aids and supervision are the most effective means of helping older people with cognitive impairments to take prescribed medication in their own home\textsuperscript{180}.

7.14 In relation to self care and shifting the balance of care there is also high level evidence to support the use of self monitoring of long term conditions\textsuperscript{5,172,174,181,182}.

Conclusion

7.15 In conclusion, this chapter shows that there is a small body of high level evidence (approximately 20 studies) about interventions that seek to shift the balance of responsibility from the patients/clients as passive recipients of care towards full partnership in the management of their conditions. The interventions which could potentially contribute to this shift are those in relation to:
- Greater use of technology, including telephone support, telemedicine and telemonitoring
- Self management education

7.16 We found evidence to support the development of telephone support services; telephone consultation; self care support and self monitoring of long term conditions. The evidence suggests that telemedicine and tele-monitoring have the potential to contribute to a shift in responsibility, with more research being required to establish the best use of these forms of technology within the whole system of health and social care.
CHAPTER EIGHT  EVIDENCE MAPS

8.1 The following maps illustrate the availability of evidence, as defined for this review, in relation to the thematic levels of shifting the balance of care, the types of intervention and the conditions, diseases, or issues of their focus.

8.2 Evidence map 1 shows the availability of high level evidence (from systematic reviews, randomised controlled trials and narrative/rapid reviews) identified by this review, by type of intervention and client group. This map does not show the number of studies as, within each systematic review, for example, numerous studies are included. In addition to the electronic bibliography a full reference list is detailed below. The largest body of high level evidence is in relation to shifting the focus and location of care.

8.3 Evidence map 1 shows that we found no high level evidence which met our relevance criteria and which evaluated interventions in relation to:
   - People with alcohol problems
   - Carers
   - Ethnic minority groups
   - People in rural areas

8.4 Evidence map 2 shows the number of primary research studies identified by this review. This map reports the actual number of studies found and included in the electronic bibliography. The map shows that, in terms of the type of ‘shift’ the largest body of evidence is in relation to shifting the location of care and the smallest body of evidence is in relation to shifting responsibilities. In terms of client group/condition, the largest body of evidence is in relation to interventions for older people.

8.5 Evidence map 2 shows that there was little primary research evidence which met our relevance criteria and which evaluated interventions in relation to:
   - People with alcohol problems
   - People with asthma
   - Mothers and babies
   - Ethnic minority groups

8.6 There were also fewer primary research studies in relation to rehabilitation, prevention and assessment; home visits, home modifications/equipment and housing; and the role of allied health professionals.
### Evidence map 1: Availability of high level evidence by intervention type and client group/condition

<table>
<thead>
<tr>
<th>Shifting the focus of care</th>
<th>Acute conditions</th>
<th>Alcohol problems</th>
<th>Carers</th>
<th>Children/Families</th>
<th>General/Not specific</th>
<th>Heart disease</th>
<th>LTC Asthma</th>
<th>LTC COPD</th>
<th>LTC Diabetes</th>
<th>LTC General</th>
<th>Mental health</th>
<th>Minority groups</th>
<th>Mothers/babies</th>
<th>Older people</th>
<th>Palliative/End of Life</th>
<th>Rural</th>
<th>Stroke</th>
<th>Other</th>
</tr>
</thead>
<tbody>
<tr>
<td>Care/case management</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Disease management</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Integrated care</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Rehabilitation</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Prevention</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Assessment</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Shifting the location of care</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Types of hospitals</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Demand for hospital services</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Discharging patients</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Location of outpatient/clinics</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Care at home</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Home visits</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Home modifications/equipment</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Housing</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Shifting roles</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Role of nurses</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Role of social workers</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Role of primary care</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Role of pharmacists</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Role of AHPs</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Role of carers</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Shifting responsibilities</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Use of technology</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Self care</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Other</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Evidence map 2: Number of primary research studies by type of intervention and client group/condition

<table>
<thead>
<tr>
<th>Shifting the focus of care – 90 studies</th>
<th>Acute conditions</th>
<th>Alcohol problems</th>
<th>Carers</th>
<th>Children/Families</th>
<th>General/Not specific</th>
<th>Heart disease</th>
<th>LTC Asthma</th>
<th>LTC COPD</th>
<th>LTC Diabetes</th>
<th>LTC General</th>
<th>Mental health</th>
<th>Minority groups</th>
<th>Mothers/babies</th>
<th>Older people</th>
<th>Palliative/End of Life</th>
<th>Rural</th>
<th>Stroke</th>
<th>Other</th>
</tr>
</thead>
<tbody>
<tr>
<td>Care/case management</td>
<td>1</td>
<td>2</td>
<td>2</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>3</td>
<td>1</td>
<td>19</td>
<td>1</td>
<td>2</td>
<td>1</td>
<td>2</td>
<td>1</td>
<td>2</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Disease management</td>
<td>1</td>
<td>2</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>11</td>
<td>1</td>
<td>2</td>
<td>1</td>
<td>2</td>
<td>1</td>
<td>2</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Integrated care</td>
<td>1</td>
<td>1</td>
<td>2</td>
<td>1</td>
<td>5</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>7</td>
<td>1</td>
<td>2</td>
<td>1</td>
<td>2</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Rehabilitation</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>2</td>
<td>4</td>
<td>1</td>
<td>1</td>
<td>2</td>
<td>1</td>
<td>2</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Prevention</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
<td>1</td>
<td></td>
<td>1</td>
<td>2</td>
<td>1</td>
<td>2</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Assessment</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>4</td>
<td>1</td>
<td></td>
<td>1</td>
<td>2</td>
<td>1</td>
<td>2</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Shifting the location of care – 210 studies</th>
<th>Acute conditions</th>
<th>Alcohol problems</th>
<th>Carers</th>
<th>Children/Families</th>
<th>General/Not specific</th>
<th>Heart disease</th>
<th>LTC Asthma</th>
<th>LTC COPD</th>
<th>LTC Diabetes</th>
<th>LTC General</th>
<th>Mental health</th>
<th>Minority groups</th>
<th>Mothers/babies</th>
<th>Older people</th>
<th>Palliative/End of Life</th>
<th>Rural</th>
<th>Stroke</th>
<th>Other</th>
</tr>
</thead>
<tbody>
<tr>
<td>Types of hospitals</td>
<td>1</td>
<td>2</td>
<td>2</td>
<td>11</td>
<td>1</td>
<td>1</td>
<td>2</td>
<td>4</td>
<td>3</td>
<td>2</td>
<td>5</td>
<td>3</td>
<td>1</td>
<td>2</td>
<td>2</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Demand for hospital services</td>
<td>4</td>
<td>19</td>
<td>6</td>
<td>2</td>
<td>7</td>
<td>2</td>
<td>1</td>
<td>1</td>
<td>2</td>
<td></td>
<td></td>
<td>1</td>
<td>2</td>
<td>1</td>
<td>2</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Discharging patients</td>
<td>2</td>
<td>2</td>
<td>5</td>
<td>2</td>
<td>2</td>
<td>3</td>
<td>1</td>
<td></td>
<td>6</td>
<td>2</td>
<td>1</td>
<td>4</td>
<td>1</td>
<td>2</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Location of outpatient/clinics</td>
<td>1</td>
<td>4</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>2</td>
<td>1</td>
<td>1</td>
<td></td>
<td></td>
<td>4</td>
<td>1</td>
<td>2</td>
<td>1</td>
<td>2</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Care at home</td>
<td>1</td>
<td>1</td>
<td>4</td>
<td>7</td>
<td>5</td>
<td>4</td>
<td>2</td>
<td>1</td>
<td>2</td>
<td>1</td>
<td>3</td>
<td>25</td>
<td>13</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Home visits</td>
<td>1</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>3</td>
<td></td>
<td></td>
<td>3</td>
<td>1</td>
<td>2</td>
<td>2</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Home modifications/equipment</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>3</td>
<td>1</td>
<td>2</td>
<td>1</td>
<td>2</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Housing</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>2</td>
<td></td>
<td></td>
<td>2</td>
<td>2</td>
<td>1</td>
<td>2</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Shifting roles – 85 studies</th>
<th>Acute conditions</th>
<th>Alcohol problems</th>
<th>Carers</th>
<th>Children/Families</th>
<th>General/Not specific</th>
<th>Heart disease</th>
<th>LTC Asthma</th>
<th>LTC COPD</th>
<th>LTC Diabetes</th>
<th>LTC General</th>
<th>Mental health</th>
<th>Minority groups</th>
<th>Mothers/babies</th>
<th>Older people</th>
<th>Palliative/End of Life</th>
<th>Rural</th>
<th>Stroke</th>
<th>Other</th>
</tr>
</thead>
<tbody>
<tr>
<td>Role of nurses</td>
<td>1</td>
<td>6</td>
<td>3</td>
<td>1</td>
<td>3</td>
<td>4</td>
<td>1</td>
<td>2</td>
<td>1</td>
<td></td>
<td></td>
<td>1</td>
<td>2</td>
<td>1</td>
<td>2</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Role of social workers</td>
<td>1</td>
<td>4</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>3</td>
<td>3</td>
<td>1</td>
<td>2</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Role of primary care</td>
<td>1</td>
<td>11</td>
<td>3</td>
<td>1</td>
<td>2</td>
<td>4</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td></td>
<td></td>
<td>1</td>
<td>2</td>
<td>1</td>
<td>2</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Role of pharmacists</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
<td>2</td>
<td>1</td>
<td>2</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Role of AHPs</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
<td>2</td>
<td>1</td>
<td>2</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Role of carers</td>
<td>2</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
<td>2</td>
<td>1</td>
<td>2</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Shifting responsibilities – 54 studies</th>
<th>Acute conditions</th>
<th>Alcohol problems</th>
<th>Carers</th>
<th>Children/Families</th>
<th>General/Not specific</th>
<th>Heart disease</th>
<th>LTC Asthma</th>
<th>LTC COPD</th>
<th>LTC Diabetes</th>
<th>LTC General</th>
<th>Mental health</th>
<th>Minority groups</th>
<th>Mothers/babies</th>
<th>Older people</th>
<th>Palliative/End of Life</th>
<th>Rural</th>
<th>Stroke</th>
<th>Other</th>
</tr>
</thead>
<tbody>
<tr>
<td>Use of technology</td>
<td>2</td>
<td>1</td>
<td>8</td>
<td>6</td>
<td>1</td>
<td>1</td>
<td>2</td>
<td>1</td>
<td>19</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>2</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Self care</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td></td>
<td>2</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>2</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

| Other - 13                                  | 1                | 1                |        |                   |                       |               |             |           |               |             | 1             | 1              | 5              | 3                | 1      |         |       |
CHAPTER NINE  CONCLUSION

9.1 The overall aim of this review was to provide an overview of evidence to inform further development in the broad policy area of shifting the balance of care. The purpose of the review was to:

- provide an overview of the range of evidence available
- highlight areas of consensus and divergence
- distil key learning points
- identify gaps in evidence

9.2 The methods used in this review were to search international academic literature, relevant UK and international databases and to e-mail requests for evidence to Scottish local authorities, community health partnerships and voluntary sector organisations. The search strategy led to the identification of 4900 studies of potential relevance.

9.3 Two sets of criteria were applied to screen evidence: inclusion criteria (based on relevance to the focus of the review on shifting the balance of care) and assessment criteria (based on the quality of evidence). As a result, 601 studies were identified, of which 205 were high level evidence (systematic reviews, meta-analyses, randomised controlled trials and narrative or rapid reviews) and 396 primary research studies were identified.

9.4 Due to the limited time available for the review, only the high level evidence was summarised, and this briefly, but evidence maps and electronic bibliographies were created for both the high level and secondary level evidence. The review criteria used meant that a large proportion of the studies were international in origin. Of over 100 Scottish studies found initially, only 16 met the review criteria.

9.5 A large proportion of the evidence found was in relation to shifting the location of care and shifting the focus of care. There was strong evidence about the potential for shifting the location of care via discharge interventions and interventions to provide adaptations, equipment or care in the home and care closer to home and for shifting the focus of care via multi-disciplinary, integrated and co-ordinated care management interventions. There was also strong evidence in relation to a range of interventions aimed at reducing demand for hospital care. In comparison, there was less evidence in relation to shifting roles and responsibilities for care. There were also gaps in evidence about preventative, assessment and housing interventions and those which investigated the views and roles of impact on carers.

9.6 The evidence maps illustrate these points and also highlight specific client groups about whom there were gaps in evidence. These were: people with alcohol problems, people from ethnic minority groups, people from rural areas and, additionally in the primary research evidence, fewer studies in relation to mothers and babies and people with asthma. The largest body of evidence at all levels was in relation to interventions for older people.
9.7 The key learning points from this review are that:

- There is a large number of studies that provide evidence about shifting the location and focus of care and there is strong evidence for the effectiveness of some interventions
- There is much less evidence in relation to shifting roles and responsibilities for care
- Much of the evidence is international in nature, although this was in part influenced by the assessment criteria used for the review
- This review can be used as a starting point for further searches, possibly using intervention-specific search terms (this was not feasible for this strictly time-limited review)
APPENDIX 1  INCLUSION CRITERIA

1. Studies, from and including the year 2000, and in the English language will be included in the review if:

The study is relevant directly to at least one of the reviews key questions:

1. What interventions contribute to a shift the balance of care? (what has been shown to work, how and why does it work e.g. have an impact on shifting focus, location, responsibility or professional roles)

2. What impact do interventions that contribute to a shift in the balance of care have on users and their carers?

3. What are the costs and benefits associated with interventions that contribute to a shift the balance of care?

4. What impact do interventions that contribute to a shift in the balance of care have on other services?

5. What approaches to resource allocation contribute to a shift in the balance of care?

6. What evidence is there on the impact of different organisational priorities, processes and charging systems?

OR

2. The aim and/or conceptual or theoretical focus of the study was primarily shifting the balance of care, but its relevance to the review’s key questions is limited.

AND

3. The article presents actual evidence and findings as a result of review, evaluation, audit or research. References that provide conclusions in the form of data, cost analysis, examples, literature review and analysis are to be prioritised.

4. References that merely discuss or comment upon issues relating to service interventions or innovations should be excluded. References that merely describe a service without reference to findings are also to be excluded.
APPENDIX 2  ASSESSMENT CRITERIA

Levels of evidence

1. **A. Systematic Review or Meta-analysis**
   A meta-analysis is a mathematical synthesis of the results of two or more primary studies that addressed the same hypothesis in the same way. A systematic review systematically examines and appraises the level of evidence provided by well-designed primary research studies. These studies typically focus on one question and tend to look at the effectiveness of interventions. They use systematic methods used to control bias and imprecision, use rigorous scientific methodology to search literature and can be replicated.

2. **A2 – Randomised controlled trials – (RCT) (Synonym: randomised clinical trial)**
   An experiment in which two or more interventions, possibly including a control intervention or no intervention, are compared by being randomly allocated to participants. In most trials, one intervention is assigned to each individual but sometimes assignment is to defined groups of individuals (for example, in a household) or interventions are assigned within individuals (for example, in different orders or to different parts of the body). (definition from Cochrane Collaboration http://www.cochrane.org/resources/glossary.htm)

3. **B. Narrative and Rapid review**
   Narrative and rapid reviews look across the information provided by a number of studies but do not systematically look at the level of evidence presented. These reviews commonly address a number of related questions or issues. They do not use explicit methods for searching literature or reporting results and cannot be replicated. They may be subject to bias.

4. **C. Primary research study – within a peer reviewed journal**
   Primary research studies including service evaluations and qualitative research projects that have been published after achieving set publication and related peer review quality standards.

5. **D. Primary research study – not peer reviewed**
   Primary research studies including service evaluations and qualitative research projects that are possibly in-house, conducted as part of a best value review, service commissioning project etc.

6. **E. User views and experiences**
   These provide data on the users' views of different aspects of treatment and care.

**Level of Relevance To Review Aims and Context**

**Level A Directly Relevant:** Has SBC as a primary focus; can be related directly to one of the reviews 6 key questions; is a Scottish/UK study
**Level B Probably Relevant:** Does not have SBC as a primary focus; can be related directly to one of the 6 review questions; is a Scottish/UK study.

**Level C Possibly Relevant:** Has SBC as a primary focus; can be related directly to one of the 6 review questions is NOT a Scottish UK study and/or the findings would be most likely to equally apply to Scottish settings

**Level D Not Relevant:** Does not have SBC as a primary focus; can be related directly to one of the 6 review questions, is NOT a Scottish/UK study and the applicability/transferability of findings is not clear/ immediately apparent. For example, there may be strong cultural or institutional differences that would have impact on the effectiveness of the intervention if applied in the UK
REFERENCE LIST


(5) HSMC. Transforming Chronic Care: evidence about improving care for people with long-term conditions. 1-1-2005. Birmingham, HSMC.


(9) HSMC. (20086) Making The Shift: Key success factors ; A Rapid review of best practice in shifting hospital care into the community.


(116) Collins CT, Makrides M, McPhee AJ. (2007) Early discharge with home support of gavage feeding for stable preterm infants who have not established full oral feeds. Cochrane Database of Systematic Reviews;(4).


(175) miz-Echevarria IB. (2007) Randomized controlled clinical trial of a home care unit intervention to reduce readmission and death rates in patients discharged from hospital following admission for heart failure. Revista espanola de cardiologia; 60(9):914-922.


