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Telephonic support to facilitate return to work: what works, how, and when? (Research report No 853)

Original Citation

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Department
for Work &
Pensions

Telephonic support to facilitate return to work: what works, how, and when?

December 2013

Research Report No 853

A report of research carried out on behalf of the Department for Work and Pensions

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First published 2013.

ISBN 978 1 909532 88 5

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Summary

There is wide acceptance that a timely return to work for people with health problems is a desirable goal. Telephonic approaches have much to offer in supporting work participation for people with common musculoskeletal and mental health problems. When well designed and implemented, and with suitable governance, they compare favourably with face-to-face approaches.

Telephonic approaches are not a replacement for standard clinical healthcare: they are a complement. Telephonic contact has a dual role: to identify clients' needs and then signpost them to the right intervention at the right time.

The evidence supporting telephonic approaches is generally robust, being based on a synthesis of academic, institutional and best practice sources.

There are several key aspects of telephonic approaches that facilitate early return-to-work outcomes. They have optimal effect when used in combination:

- **Assessment:** identifies the client's needs and their obstacles to return to work, which guide the return-to-work plan.
- **Triage:** allocates cases to the most appropriate rehabilitation pathway using a stepped-care model.
- **Advice and information:** fostering positive beliefs, setting expectations and giving self-management advice.
- **Case management:** managing the client's journey has cost benefits: telephonic approaches provide clear advantages through speed and ease of access, shorter waiting times, optimised referrals to face-to-face interventions, efficient use of resources.

A well-designed and delivered telephonic service can enable a substantial proportion of cases to entirely self-manage their health problem and work participation.

Provision should be made for a tiered component of the service that combines telephone and face-to-face contact in order to accommodate cases with more complex health problems or difficult obstacles to work participation.

The effectiveness of telephonic services in achieving positive work outcomes relies heavily on the training and skills of staff, and on the adoption of a strong work focus by all the key players, including support at the workplace.

There is robust evidence that, when properly implemented, telephonic case management approaches can aid early return to work and reduce overall case costs. Telephonic intervention by appropriately trained professionals has been shown to be safe and acceptable to users.

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Acknowledgements

The authors were commissioned by the Department for Work and Pensions to review the evidence on the effectiveness of telephonic support in aiding a timely return to work for people with common health problems.

We would like to thank the commissioning team for their constructive ideas and comments throughout the process. We would also like to thank the people who kindly shared their experience, contacts and data that enabled us to construct practice exemplars of telephonic support: Mark Armour, John Ballard, Clare Bamba, Steve Boorman CBE, Simon Calvert, Jean Challinor, Jennifer Christian, Di Eccleston, Nadine Foster, Monica Garcia, Ceri Goodrum, Rob Hampton, Ewan Macdonald, Chris Main, Phil Waterworth, Lucy Wright and Mary Wyatt.

We are most grateful to Debbie McStrafick for her administrative skills, including retrieving articles, archiving the data, managing references, and liaising with external contacts.

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Definitions

Common health problems

Common health problems (CHP) are the categories of health complaints that occur most frequently across the population. They are typified by symptoms more than pathology: objective evidence of injury, disease or impairment tends to be limited. Collectively they account for most loss of productivity, sickness absence, care seeking and health-related benefit claims. CHPs have several key features:

- Their ubiquity is consistently recognised by multiple players: workers, employers, and medical practitioners.
- They involve the report (e.g. to line manager, company occupational health services, a General Practitioner, or other healthcare professional) of one or more symptoms that often follow an episodic pattern.
- Management of symptomatic episodes should be achievable and long-term problems are not inevitable.
- Evidence for occupational causation is contentious, inconsistent or lacking, leading to ongoing debate. However, CHPs may temporarily reduce the person's ability to work: that is, they may be work-relevant but are not usually solely due to work.
- In occupational terms, the consequences are more important than any (assumed) pathology: with the right support, most people can remain active and stay at work or achieve early sustained return from sickness absence.

(CIPD, 2009; Cox *et al.*, 2006; HSE, 2009; Waddell and Atliward, 2010; Waddell and Burton, 2004, 2006)

For the purposes of this project, the predominant work-relevant CHPs are musculoskeletal and mild-to-moderate mental health illnesses (including stress complaints). The term 'common health problems' is used, rather than the phrase 'common health conditions' since the former acknowledges the importance of not only the medical condition, but also the challenges associated with context, and mechanisms for support.

Musculoskeletal problems

The primary complaint is local or regional pain or discomfort that may or may not be associated with apparent injury and may or may not result in limitation or disability. This definition includes a wide variety of diagnostic labels including age-related musculoskeletal changes. It excludes major trauma and serious disease states that may also result in discomfort and disability, and may require particular healthcare and workplace interventions.

(based on (Hanson *et al.*, 2006))

Mental health problems

Mental health refers to how we think, feel and behave. There are a variety of types of mental illness, each of which can occur with varying severity. The most common mental illnesses are depression, anxiety or a combination of the two. Severity ranges from mild distress (sub-clinical) to severe. When these problems are mild or moderate the individual may have short-term difficulties coping with everyday activities and work, but long-term consequences and disability are not expected. Mental health symptoms, in some form, are present in about a third of the working-age population at any point in time. About 17 per cent would meet diagnostic criteria, although only six per cent seek healthcare, indicating that the majority of cases self-manage. Most mild-to-moderate mental health problems are short term (with possible recurrence), and when healthcare is involved it is usually primary care services.

(Seymour and Grove, 2005; Waddell *et al.*, 2008)

Stress complaints

The subjective experience of a constellation of complaints that usually include, but are not limited to: physiological features, e.g. headaches, gastric upset; behavioural features, e.g. reduced activity, sickness absence; cognitive features, e.g. worry, being distracted or forgetful; emotional features, e.g. fear, low mood. The person usually associates these complaints with perception of adverse life and/or working conditions and feels unable to cope with them. This may be accompanied by a diminished sense of subjective wellbeing. This approach transcends ambiguity where the term 'stress' can refer to both cause and consequence. Yet, it is consistent with HSE's formal definition of work-related stress as: *'The adverse reaction people have to excessive pressures or other types of demand placed on them at work.'*

(Cox, 1978)

Telephonic support

Refers to delivery of the broad range of actions and materials that support the individual during the return-to-work process. This includes information and self-management advice, signposting and guidance.

Telephonic support incorporates:

- telephonic assessment and triage
- telephonic information and advice
- telephonic (non-clinical) intervention
- telephonic case management

Telephonic assessment and triage

Case managers in telephonic case management practice settings perform a number of different types of assessment. Telephonic assessment differs from clinical diagnosis. In general, the term refers to the process of evaluating progress to date and obstacles to progress in the future. This process involves gathering information using any suitable methods, and this might include obtaining existing employment and medical records, telephonic interview, administering online questionnaires, etc.

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Initial telephonic assessments serve two key purposes: (1) to establish the appropriateness of the case for the service and to accept the referral; and (2) to conduct an initial triage. This triage serves to ensure appropriate use of healthcare resources, and allocates such resources based on the needs of the individual to attain rehabilitation goals.

Follow-up telephonic assessments also serve two key purposes: (1) to objectively monitor progress toward rehabilitation goals; and (2) to provide information to support modifying or terminating a rehabilitation plan.

Telephonic assessments are considered to be a cost-effective and proactive method that dovetails well with a stepped care approach by facilitating access to the appropriate level of healthcare while maintaining a strong outcome and goal focus.

Triage is a common term in telephonic case management, and can be defined as sorting, selecting and classifying.

In the context of return to work, telephonic assessment includes the identification of obstacles to work participation for that individual at that time, which necessitates a biopsychosocial approach. The findings are then used to inform a timetabled plan of action for (early) return to work.

(Kendall *et al.*, 2009; Powell and Tahan, 2008; Strom *et al.*, 2009)

Telephonic information and advice

Provision of information about health conditions and their management is considered a fundamental aspect of informed decision-making and consent. Accurate information on health and work is recognised as having an important role in maintaining work participation when experiencing a health problem, yet is widely recognised as being a 'necessary but not sufficient' part of the process. Provision of advice will include general advice on the nature of obstacles, self-help techniques, work and signposting. While telephonic transaction is verbal, other forms of information (e.g. written, email, websites, etc.) can supplement this effectively. Websites may be interactive as well as informative, and can present information and advice with multimedia presentations. Examples include online questionnaires and videos demonstrating exercises or coping strategies. The role of providing high-quality information is also considered important to 'myth-busting'.

Telephonic intervention

Telephone or other forms of electronic communication can be used to deliver some, but not all, health and work interventions. Telephonic intervention can also consist of delivery of specific therapy (e.g. cognitive behavioural therapy) or review as well as the monitoring of specific health conditions. There is a burgeoning literature that includes a wide array of jargon referring to this approach, e.g. telehealth, telemedicine, telephone therapy, etc.

Telephonic case management

Telephonic case management is defined as the delivery of services to clients over the telephone or via the use of various forms of telecommunication methods such as; fax, email, or other forms of electronic communication methods. It has been most commonly used as an essential strategy for cost containment. Telephonic case management is known to apply two main strategies to ensure cost-effectiveness and the provision of healthcare in the most appropriate setting and by the most appropriate provider. The first of these is telephonic

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triage as a method of sorting out requests for services based on severity, urgency and complexity while maintaining a strong focus on the important outcome of return to activity and work. The second is demand management by focusing on the appropriate use of resources and services that will help to achieve work outcomes.

Telephonic case managers engage in a number of activities including but not limited to the following:

- Telephonic triage.
- Easing the access of clients to necessary services.
- Facilitating client access to the appropriate level of care, healthcare providers and services.
- Intervening in a timely manner and sharing real-time information.
- Empowering clients/family/employers to assume responsibility for self-care and health management.
- Identifying client health risk and instituting appropriate action or referral for services.
- Engaging in cost reduction activities by promoting access to health services that are appropriate to the client's condition, e.g. by preventing provision of care that is not warranted.
- Following-up clients to ensure safety and adherence to a rehabilitation plan.
- Coordinating and integrating services using evidence-based algorithms, protocols or guidelines, that include decision trees based on certain criteria or assessment cues/data.
- Assessing and evaluating the client's condition over the telephone, identifying problems and directing appropriate action. Assessment is guided by the relevant protocol and, depending on the findings, the case manager determines the urgency of the situation and decides on the necessary type of intervention or advice.
- Answering questions and providing health advice.

Telephonic case management tools include providing clients and other key players with information about common health problems, what can and cannot be done to help and desired goals and outcomes. A key telephonic case management intervention is encouragement and help in using self-management approaches. Telephonic case managers apply the same case management process, without a face-to-face interaction. Work outcomes rely principally on development of a return-to-work plan and assignment of responsibility for putting that plan into action.

(Hanson *et al.*, 2006; Powell and Tahan, 2008)

Glossary of terms

Assessment: Refers to the process of evaluating progress to date and obstacles to progress in the future. This process involves gathering information using suitable methods that might include obtaining existing employment and medical information, telephonic interview, administering online questionnaires, etc.

Biopsychosocial: Refers to the concept that biological, psychological and social factors combine to play a significant role in human functioning. The concept reflects interaction between biological aspects (of the health condition), the person (subjective experiences, beliefs, emotions, behaviour, etc.) and their social environment (significant others, healthcare providers, people at the workplace, funders, etc.) and how this influences their behaviour (what they do). The three components need to be treated or managed as interlinked systems.

(Burton *et al.*, 2008; Kendall *et al.*, 1997)

Barriers: See Obstacles.

Case coordination: Is a term that can be used interchangeably with case management. This is because it often refers to a role that is synonymous, but sometimes it differs. The term case coordinator refers to an individual assigned responsibility to coordinate the rehabilitation process, to eliminate gaps in service and to assist the client to navigate a range of health, employment and social situations in accordance with the action plan. This person may not hold responsibility for decisions regarding resource use, funding or referrals.

Case management: Refers to a coordinated process in which a case manager is designated to each individual, with responsibility to provide support and manage interventions (which includes providing information and advice, coordinating simultaneous interventions, making escalation decisions and handling multiple issues). The process, which may be delivered telephonically or in person, includes monitoring and evaluating the options and services required to meet the individual's health and employment needs, using communication and available resources.

Face-to-face services: Refers to physically meeting the client in any setting (clinic, home, workplace, etc.).

Information and advice: Provision of accurate information and advice intended to help the person understand and cope with their health problem and to maintain an appropriate level of participation. The information can be general or specific, or both (See also Myth busting).

Intervention: Actions intended to bring about changes in: (a) knowledge, attitude or behaviour at an individual level; (b) the work environment at the group level; and/or (c) systems and culture at the organisational level.

- **Active interventions:** Intervention that require the target audience to take action.
- **Passive interventions:** Interventions that affect knowledge/raise the awareness of the target audience without necessarily requiring them to take action.

Myth busting: Provision of accurate information and advice with the specific aim of correcting misconceptions and shifting beliefs to align with reality or truth. (See also Information and advice).

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Obstacles: (To work participation) are psychosocial factors that can act as impediments to returning to work (or staying at work) with a health problem. Three main categories have been described: aspects of the person; aspects of the workplace; and the context in which the person and workplace exist. Some obstacles are matters of perception while others are more tangible factors. The biopsychosocial model of disability underpins the concept of obstacles, which is operationalised in the Psychosocial Flags Framework.

(Kendall *et al.*, 2009)

- **Barriers:** The clinical literature more often describes these factors as 'obstacles', while the disability rights and social policy literatures describes them as 'barriers'. A barrier can be seen as something constructed to prevent access, whereas an obstacle is something that happens to be in the way: barriers need to be dismantled whilst obstacles can more readily be overcome. Workplace interventions are able to overcome obstacles; dismantling barriers may depend more on systems and society. The preferred term for the present project is obstacles.

(Waddell *et al.*, 2008).

Participation: Is involvement in a life situation and applies to the full spectrum of self-care, domestic, social, recreational, mobility, communication, productivity and work. Participation restrictions are problems an individual may experience in involvement in life situations. In contrast, activity is the execution of a task or action by an individual and activity limitations are difficulties an individual may have in executing activities. Both activity and participation are qualified by performance (describes what an individual does in his or her current environment) and capacity (describes an individual's ability to execute a task or an action). For common health problems, where there is little or no impairment present, the focus is on the overall level of function that includes activity and participation. Participation in work is an important activity with social, economic and health effects.

(WHO, 2001)

Players v stakeholders: The term 'players' is used to denote individuals or groups whose active involvement in the stay-at-work/return-to-work process is essential for its effectiveness. The term 'stakeholders' refers to individuals or groups who have an interest in the outcome of the process – but who may or may not be active players.

(Waddell *et al.*, 2008)

Prospective: Usually implies a cohort selected in the present and followed into the future, but this method can also be applied to existing longitudinal historical data, such as insurance or medical records.

(medical-dictionary.thefreedictionary.com)

Psychosocial: See Biopsychosocial.

Telephonic support to facilitate return to work: what works, how, and when?

Return to work v stay at work: (Good) work is beneficial and prolonged sickness absence is detrimental, so helping people stay at work or to achieve early return after sickness absence is desirable. The stay at work (SAW) philosophy is focused on helping the individual (or workforce) to remain at work when experiencing a health problem, with the aim of preventing unnecessary sickness absence (both present and future). Return to work (RTW) is the process of returning to the workplace following sickness absence, the goal being a sustained return to usual tasks in the same job (accepting that this will not always be possible). Whilst SAW is the conceptually preferred option, the RTW process should not be ignored. The psychosocial obstacles to both SAW and RTW have shared characteristics, so tools applicable for one will help with the other.

(HSE, 2004; Kendall *et al.*, 2009; Waddell *et al.*, 2008)

Stay at work: See Return to work v stay at work.

Stakeholders: See Players.

Stepped care: Is about providing only the care and support that is needed, when it's needed. It is a process of sequential evaluation and allocation of proportional resources, recognising that some people need less complex intervention than others and that difficulties increase over time. The first step will be relatively simple and inexpensive, with sequential escalation to more complex interventions only if earlier steps fail.

Support: Refers to delivery of the broad range of actions and materials that support the individual during the return-to-work process. These will include information and self-management advice, signposting and guidance. They may be delivered telephonically, in person or via electronic or paper media.

Triage: Refers to the first step in the case management process. It is designed to help allocate clients to the right healthcare, in the right amount, at the right time, for the right cost and to obtain desired outcomes. It involves sorting out requests for services based on severity, urgency and complexity. Triage differs from clinical assessment and traditional medical triage by not focusing on diagnosis – that is left to the treating clinician when there is one. The major advantages of telephonic triage are that it reduces waiting periods and cost per case, and has the potential to prevent or reduce over-medicalisation.

Work-relevant: Refers to health complaints/disorders that, irrespective of cause, are experienced at the workplace to a greater or lesser extent, and which in turn impact on the performance of a worker. Most available evidence pertains to paid work and employment; however the idea likely applies equally to all forms of productive activity. The term 'work-related' tends to be taken to imply a causal relationship between work and health that often may not be the case.

(Burton *et al.*, 2008)

Executive summary

Lead in

There is wide acceptance that work is (generally) good for our health and wellbeing, and that this is true for most working-age people, including those with health problems. A timely return to work for people with health problems, therefore, is a desirable goal.

The Government has proposed a new service to help people with (common) health problems to return to work in a timely manner. Telephonic contact is an attractive approach with the potential to provide targeted delivery of the right support to the right people at the right time, but that begs the question – do such approaches offer the desired advantages? While telephonic methods are increasingly used to deliver various health services, there are important questions around safety, effectiveness, acceptability and relative costs.

The aim of this review was to provide an evidence base for the use of telephonic assessment and support to facilitate timely return to work for people with common health problems.

Recognising that the academic literature on the topic may be limited, documentary evidence was also sought from professional practice and grey literature sources. Data from 83 peer-reviewed academic articles, 10 practice exemplars and 28 grey literature documents were extracted into evidence tables.

Using a best evidence synthesis, high-level evidence statements were developed and linked to the supporting evidence, which was graded to indicate the level of support. The evidence statements are organised to cover four pertinent areas of telephonic support: assessment and triage; case management; information and advice; return to work. The evidence on important aspects of implementation – safety, acceptability, timing, cost-benefits, required skills – was further explored and interpreted.

Findings

The main findings are summarised below, along with some interpretive commentary. The majority of the findings are supported by evidence both from academic research and from practice exemplars. It is particularly pertinent that the main findings apply to most, if not all, common health problems.

Assessment and triage

There is robust evidence that telephonic approaches can be suitable for assessing clients' needs and can compare favourably to face-to-face methods. The assessment can be used to make decisions about allocation to appropriate care through a triage process.

This means that telephonic methods can be used effectively to assess the clinical, work and participation needs of people with common health problems, and they can be as effective as face-to-face approaches in doing so.

In addition, telephonic methods can be used to allocate people with common health problems to occupational and clinical management pathways through a triage process that is both effective and efficient.

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Clearly, the approach used to assess and manage common health problems telephonically must complement the type of problem (e.g. musculoskeletal or mental health), but the underlying principles are the same for all.

When telephonic approaches yield inferior results, the most likely reasons are inadequate (training in) telephonic or clinical skills, poor service design and implementation, and poor adherence. It is crucial that the telephonic personnel (including clinically-trained staff) receive focused training and support that is reviewed on a regular basis, and facilitated by standardised protocols.

Case management

There is robust evidence that telephonic case management can support people with common health problems through care pathways, monitor progress and facilitate return to work. It can contain overall costs by reducing delays and optimising referrals.

The overall effectiveness of the case management process is well established in a variety of settings and for a range of clients, where telephonic first contact is the norm. Nevertheless, careful service design and practitioner training is required to avoid duplication of services through over-escalation to face-to-face assessments.

Specific advantages of telephonic case management include reducing delays, integrating intervention components, optimising referrals, coordinating stepped care and communicating between the key players. This fits well with a stepped-care model: delivering just what's needed, when it's needed.

Telephonic approaches are unsuitable for clients with communication problems and those with complex pre-existing medical conditions in addition to their current common health problem: assessment and triage can identify these cases and move them to a face-to-face approach.

Information and advice

There is adequate evidence that relevant information and advice, including self-management techniques, can be effectively delivered by telephone.

Information and advice in a case management context is seen as a necessary, but not sufficient, part of the overall intervention package. Although generally incorporated into the multifaceted case management process, it is capable of having a positive effect in isolation. In practice verbal advice and information is typically augmented by written information.

Delivery of relevant information by telephone contact can encourage and enhance self-management of common health (and other) problems. There are reports in the grey literature and practice exemplars that very early, carefully focused telephonic self-management intervention alone can be sufficient for a proportion of people to be able to self-manage their health problem, and that this is sustainable.

In respect of occupational outcomes, telephonic delivery of work-focused information and advice is useful to orient the person towards return to work, thus helping to set expectations and aiding decisions about how and when to return.

Telephonic support to facilitate return to work: what works, how, and when?

Return to work

There is robust evidence (notably from practice exemplars) that telephonic interventions can facilitate return to work. Effective approaches incorporate evidence-based concepts of vocational rehabilitation: identifying obstacles to work participation; developing a return-to-work plan; providing work-focused information; coordinating the key players (person – workplace – worker). These can all be facilitated telephonically.

The main aspects of telephonic services that have been shown to be effective for helping return to work are:

- ensuring return to work is asked about in every case;
- promoting self-management approaches as soon as appropriate;
- demedicalising common health problems wherever possible;
- having a monitoring process to avoid serial ineffective treatment;
- integrating line managers into the return-to work-plan;
- facilitating early referrals into the service.

Aspects of implementation

There is acceptable evidence that telephonic approaches can be delivered safely using personnel with appropriate skills, training and governance.

The safety issue is not so much to do with the telephonic process; rather it is to do with skills and training. While ethical and legal concerns do exist, there is a consensus that those concerns are common to healthcare in general.

There is natural concern that telephonic assessment may overlook serious medical conditions. This seems to arise from a misunderstanding that the telephonic process is intended to replace clinical examination and be diagnostic: it is not. Client safety can be assured if telephonic assessors are appropriately trained and work to a structured protocol.

There is robust evidence that telephonic approaches (if suitably conducted) are generally accepted by service users, and are associated with high levels of satisfaction that equal or exceed those for face-to-face approaches. In addition, telephonic approaches are generally acceptable to health professionals.

Little evidence is available about the extent that people at the workplace find telephonic contact acceptable. However, the practice exemplars indicated that line managers regularly participate in work-focused interventions, in some cases actually referring into the telephonic service. The main limitation of telephonic approaches is when clients have communication problems of any sort, and this limitation could also apply in communication with the workplace.

There is robust evidence that a biopsychosocial perspective is appropriate for managing common health problems, from both clinical and occupational perspectives. Telephonic approaches based on biopsychosocial principles can lead to cost-benefits and be cost-effective for clinical and occupational outcomes.

Telephonic support to facilitate return to work: what works, how, and when?

The key components for successful interventions directed at occupational outcomes that can be delivered telephonically are:

- early identification of obstacles to work participation;
- developing and coordinating a return-to-work plan;
- taking stepped action;
- getting all players onside.

There is robust evidence that timing is important to achieve desired occupational outcomes: early intervention is consistently associated with a timely return to work.

From the perspective of vocational rehabilitation, there is a window of opportunity from around four to twelve weeks after onset of a common health problem. It is clear that the use of telephonic contact can minimise delays in starting the process.

The evidence actually favours interventions that start sooner than the beginning of the vocational rehabilitation window. In the early days and weeks of absence a 'light touch' intervention may be all that is required, with the intervention being escalated if return to work is delayed. Telephonic case management is suitable to guide this sort of stepped intervention.

Conclusion

Telephonic approaches using assessment and triage, along with coordination of the key players, can be effective at reducing the number of sickness episodes, the number of days lost and the overall cost of a case/claim. Unnecessary healthcare can be reduced, without compromising client satisfaction. The important caveat is that this applies when services are well designed and implemented, and are staffed by professionals who have appropriate training and support.

Central to enhancing return-to-work outcomes is that work is seen as a health outcome, and that work participation is the principal focus for the service: every client is asked about their work to identify obstacles to early return; they are helped to devise a practical and feasible return-to-work plan; there is coordinated action with the workplace. The assembled evidence indicates that when all these components are put together in an efficient manner, with appropriately skilled staff, the service will facilitate timely return to work and demonstrate cost-benefits and cost-effectiveness.

Key words: absence; advice; assessment; biopsychosocial; case management; common health problems; evidence synthesis; healthcare; intervention; occupational health, policy; return to work; sickness leave; stepped care; support; telephonic; timing; triage; vocational rehabilitation; work; workplace.

Key messages

- Telephonic approaches are suitable for assessing clients' needs in many health conditions, including all types of common health problems, accepting that some individuals will need face-to-face intervention.
- The approach used to assess and manage common health problems needs to be matched to the type of problem (e.g. musculoskeletal or mental health), but the underlying principles are common to all.
- The effects of using telephonic approaches for assessment, triage and case management compare favourably to face-to-face methods, so long as they are well designed, with good governance, applied to the appropriate type of clients.
- The assessment can be used to make decisions about allocation to appropriate care through a triage process. This includes identifying 'red flag' symptoms to trigger escalation to urgent or more intensive investigation or intervention.
- To deliver effective assessment and triage processes, professional skills and training are fundamental. Inadequate training leads to unwanted effects and suboptimal outcomes.
- The overall effectiveness of case management is well established and delivering it telephonically can also: support people with common health problems through care pathways; monitor their progress; and facilitate return to work.
- Telephonic case management can contain overall costs by: (1) reducing delays and waiting times; (2) providing ease of access and comprehensive geographical coverage; (3) optimising referrals to face-to-face services; and (4) efficient use of resources.
- For common health problems, when contacted early, a substantial proportion of cases can be helped to self-manage their problem without healthcare input. If healthcare is required, the return-to-work process may still be managed telephonically, though some cases will require face-to-face workplace intervention.
- Advice and information, including fostering positive beliefs, setting expectations and promoting self-management techniques can be delivered effectively by telephone. This can be augmented with written client-centred information using a variety of media.
- Telephonic approaches can be used effectively to enhance return-to-work outcomes. The concepts of identifying obstacles, development of return-to-work plans, provision of work-focused information and coordination between the workplace and the worker can all be facilitated telephonically.
- The features of everyday practice that seem to contribute to effectiveness include: ensuring return to work is asked about in every case; adopting self-management approaches as soon as appropriate; demedicalising common health problems wherever feasible; having a monitoring process to avoid serial ineffective treatment; integrating line managers into the return-to-work plan; and facilitating early referrals into the service.
- Telephonic approaches by professionals with appropriate training and support can be used safely, and are largely acceptable to users.

1 Introduction

This rapid evidence review was commissioned by the Government's Health and Wellbeing Directorate to help quantify the effectiveness of telephonic support in aiding a timely return to work for people with common health problems. In particular, the findings of the research can inform the design approach to occupational health assessment and support in the planned new (provisionally titled) Health and Work Service.

Accepting that work is generally good for health and wellbeing (Waddell and Burton, 2006), a number of leading reviews have pointed to the importance of facilitating early return to work for people with common health problems (Black, 2008; Black and Frost, 2011; Waddell *et al.*, 2008). The Government has responded with a framework of initiatives to support continued connection and early return to work (Department for Work and Pensions, 2013).

The challenge of how early return to work may be achieved has been explored in considerable depth and the evidence strongly indicates that many people on sickness absence need help to achieve an early return, and that help involves a combination of work-focused healthcare and a supportive workplace (Dibben *et al.*, 2012; Kendall *et al.*, 2009; Waddell *et al.*, 2008). However, it has been found that for some people the current system and service provision falls short of the ideal at every stage of the journey (Black and Frost, 2011).

There is a clear need for more focused, evidence-based and coordinated services for people in the early stages of sickness absence who are struggling to return to work. Actually delivering such services in an efficient manner is a significant challenge, and a managed care model seems appropriate whereby responsibility for coordinating the process (including both healthcare and workplace actions) is taken by a case manager (Hanson *et al.*, 2006). Looking at the wider remit, recent developments have involved the use of telephone contact for triage, needs assessment, health monitoring, information delivery, treatment and case management (Bishop *et al.*, 2013; Car and Sheikh, 2003; Fisher-Owens *et al.*, 2011; Mansfield, 2005; Pandor *et al.*, 2013; Rollman *et al.*, 2005).

1.1 Telephonic health and work support

The use of the telephone in various aspects of healthcare is now part of normal practice, ranging from routine monitoring to treatment delivery (Royal College of Nursing, 2006; Stroetmann *et al.*, 2010). Proponents have emphasised ease of access, shortened waiting times and efficiency through higher caseloads (CSP, 2010; Powell and Tahan, 2008). On the other hand, detractors have pointed to ethical issues, though many of those concerns are common to medicine and healthcare in general (Stanberry, 2001).

It seems inevitable that telephonic approaches will continue to be developed and used in the occupational health field, and will also be used in various ways in return-to-work initiatives. The use of telephonic approaches within the National Health Service (NHS) has tended to focus on healthcare matters to date, but there are recent exemplars where the focus has shifted to return to work as a primary target (NHS North West, 2013; Trueland, 2008).

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Telephonic methods for managing sickness absence and return to work have also become common UK practice within large corporates' use of occupational health services and in the health insurance sector. They are also widely used by workers' compensation systems in several countries (Pillsbury, 2000, 2004; Pygall, 2004). The main emphasis for these approaches has been to help people stay at work or return to work: they are most often integrated into a case management approach of some type (Zydowicz, 2008). Naturally, an important driver has been the continuously present need for cost-containment while maintaining a competitive advantage through delivering a high-quality 'customer journey' and truly effective services. There are many parallels with the healthcare sector and it is likely that each has learned something from the other as the development of telephonic approaches has progressed.

Given the widespread adoption, and continued use, of telephonic methods by businesses, it is perhaps surprising that relatively little research has been done to date. However, there are two important things to note about this. First, conducting the type of research needed is exceptionally complex, especially within dynamic commercial environments. Secondly, telephonic methods continue to be widely adopted and used, strongly indicating that business and commerce consider that they are cost-effective when properly implemented and managed.

An existing body of research on telephonic approaches to maintaining work participation for people with health problems extends back over more than 25 years. A seminal study that investigated ways to reduce the duration of lost time claims due to back pain in a Canadian hospital found that telephonic contact giving supportive messages was the key component of a successful programme (Wood, 1987). More recently, a review of the topic concluded that telephonic injury triage has some very real and significant positive effects on workers' compensation, and these include faster reporting, leading to faster recovery and an earlier return to work with a decrease in lost productivity time (Kleeburg and Mader, 2008).

It needs to be acknowledged that there is a debate about the applicability of telephonic approaches for addressing work outcomes, with a spectrum of opinions. These range from those within the occupational health professions who point to the limitations of telephone consultations in dealing with the individual nature of peoples' health concerns, while others point to the efficiency with which occupational health advice and absence management can be delivered through call centres (Kyne and Urnes, 2006).

In view of the potential cost savings associated with telephonic approaches compared with face-to-face consultations (Pomaki *et al.*, 2010; Salisbury *et al.*, 2013a), it is reasonable to look to their inclusion when developing new services targeting occupational outcomes. However, there are numerous aspects of telephonic health and work support that should be examined before a new service is designed and put into practice. Important questions will concern safety, effectiveness, acceptability and relative costs. In addition, it is important to identify who does what and to whom, as well as identifying when and how they should do it. This review intends to shed light on such questions to help guide policy and decision making around the possible inclusion of telephonic elements in the Health and Work Service.

1.2 The approach and scope of the review

The review aims to identify published evidence, professional practice and grey literature that might be relevant to the complex principle question about telephone-based support: for people with common health problems, are telephonic occupational and related assessments effective in identifying biopsychosocial obstacles to work participation, and are telephonic interventions effective in overcoming those obstacles? The reviewers recognised early that this is an exceptionally complex area on which to conduct research, with very limited opportunity for controlled studies. For this reason, the search was extended to identify well-documented prospective studies of telephonic approaches as exemplars of current practice in the UK.

While the focus is on occupational outcomes (e.g. achieving a timely return to work), clinical outcomes are included. Other aspects of specific interest include safety, acceptability and estimates of cost-benefit.

Accepting that the available evidence will be heterogeneous in source, quantity and quality, the review approach is one of a best-evidence synthesis (Mays *et al.*, 2005; Slavin, 1995; Waddell *et al.*, 2008). The intention is to provide as robust and practical an answer to the research question as possible, taking account of the balance of the information provided by a disparate evidence base.

The findings are presented primarily in the form of high-level evidence statements, each of which is graded according to the nature of the supporting evidence (Table 2.1). Each statement is explicitly linked to the source(s) of the supportive evidence. Where appropriate, the text of the evidence statements is used to expand on the nature or limitations of the underlying evidence and to offer any caveats or cautions. In addition, brief narratives are used to discuss complex topics where pertinent to the review's questions.

2 The review

Appendix A gives a detailed description of the review methodology.

Throughout the review, broad and inclusive search strategies were used to retrieve as much material as possible, from which pertinent material for inclusion was selected by agreement between the reviewers within the project team.

A rigorous, yet pragmatic approach was used to grade the strength of the available evidence (Table 2.1, adapted from Waddell and Burton, 2006). For the purposes of this project, academic peer review was acknowledged as a measure of quality for published articles. While there was no formal attempt to further grade the individual articles, the project reviewers took account of their nature and quality in the synthesis of the evidence statements.

Table 2.1 Evidence grading system to support evidence-based statements about the effect of telephonic support

Evidence grade	Definition ¹
*** Robust	Generally consistent findings provided by multiple peer-reviewed studies or data from multiple well-documented prospective practice exemplars.
** Adequate	Findings provided by a single peer-reviewed study, evidence-based guidance, or data from a single well-documented prospective practice exemplar.
* Vulnerable	Based on limited data from a single practice exemplar, or on professional or commercial consensus, or on inconsistent findings provided by multiple peer-reviewed studies.
⁰ Indirect	Consistent findings provided by peer-reviewed studies of non-telephonic support that are conceptually transferable to the telephonic environment, or telephonic interventions beyond the anticipated scope of the service that are similarly transferable.

¹ The definitions represent minimum requirements.

In a review of this nature, some important issues are inappropriate for experimental study and may not have been subject to academic research. For these issues, it may be possible to construct a reasoned statement based on various other criteria, such as practice exemplars and evidence-based guidance. In appropriate cases this reasoned approach, which extends beyond (but may include) consensus, can produce statements that are arguably just as valid as those based on academic evidence (Waddell *et al.*, 2008).

For the purposes of this review, the content of the evidence statements was developed from the retrieved academic peer-reviewed material on telephonic approaches. Additional material, in the form of indirect evidence from other health conditions, was included because the telephonic methods applied were either relevant or logically could be extended to common health problems. In addition, documented practice exemplars were linked to the statements as supporting evidence where appropriate. Thus, the evidence statements are often supported by a variety of evidence sources, which are made explicit by linking them to the relevant evidence tables in Appendix B.

3 Evidence findings

The findings of the review are based on 83 peer-reviewed academic articles (Tables B.1 to B.6) that were considered to be directly or indirectly related to the topic of telephonic approaches in the context of an occupational health (OH) service to assist return to work. In addition, 28 items from the grey literature were included (Table B.7), together with data from 10 practice exemplars (Table B.8).

While there was an intention to focus solely on common health problems, the evidence around telephonic approaches comes from across the medical sphere so evidence is in respect of a range of other conditions, some of which are more serious, and are therefore only included when deemed appropriate. The intention to focus on occupational outcomes (return-to-work; stay-at-work) was limited to some extent by the available evidence. The wording of the evidence statements (ES) is used both to reflect these limitations and to indicate potential transferability. To keep the statements as uncluttered as possible, evidence garnered from a combination of peer-reviewed studies, evidence-based guidance and well-documented prospectively studied exemplars are listed together under each statement. The contribution of individual publications is given so that the sources of evidence used can be identified. Necessarily, there is considerable overlap between topics, and the division of evidence statements into sections is somewhat artificial. Therefore, narrative interpretation sections are used to further amplify specific areas, to disentangle complex topics and to combine evidence from disparate arenas. These sections also take account of any evidence of differences or similarities across health conditions.

3.1 Telephonic assessment

This section deals with the evidence on using telephonic communication to assess people with health problems. It includes assessment of needs and identification of obstacles (to recovery or participation) as well as triage, evaluation and monitoring using various information-gathering techniques.

3.1.1 Evidence statements

ES-1 *** There is robust evidence from numerous sources that telephonic methods can be used to assess the clinical and participation needs of people with common health problems, and can be as effective as face-to-face approaches: this applies to musculoskeletal and mental health problems (though the evidence relating to the latter should be rated as adequate) and is supported by evidence from other health conditions.

Table B.1: (Grant *et al.*, 2012; Kleeburg and Mader, 2008; Pinnock *et al.*, 2003; Richards *et al.*, 2004)

Table B.2: (Phillips *et al.*, 2012)

Table B.4: (Byrne *et al.*, 2007; Car and Sheikh, 2003)

Table B.5: (Wang *et al.*, 2007)

Table B.7: CSP, 2010)

Table B.8: (Atos Healthcare, 2013; Swiss Re, 2013)

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ES-2 *** There is robust evidence that telephonic methods can be used to allocate people with common health problems to appropriate occupational and clinical management pathways (triage). This applies both to musculoskeletal problems and mental health, and is supported by evidence from other health conditions.

Table B.1: (Marsden, 2000; McPherson *et al.*, 2010; Pulier *et al.*, 2003; Richards *et al.*, 2004; Salisbury *et al.*, 2013a)

Table B.4: (Byrne *et al.*, 2007; Car and Sheikh, 2003)

Table B.5: (Wang *et al.*, 2007)

Table B.7: (CSP, 2010; NHS, 2010; NHS London, 2012; Pillsbury, 2000)

Table B.8: (Isle of Wight Health Trust, 2013; NHS Lanarkshire/University of Glasgow, 2013; RehabWorks, 2013; Swiss Re, 2013)

3.1.2 Interpretation

The main finding of this section is that telephonic approaches are suitable for assessing clients' needs and the assessment can be used to make decisions about allocation to appropriate care through a triage process. It is important to appreciate that the evidence reviewed on assessment and triage is not about diagnosis, although there is intriguing evidence that indicates telephonic diagnosis can be comparable to face to face under certain circumstances (Russell *et al.*, 2010; Turner, 2009).

The telephonic assessment process is about determining suitability and identifying needs, while triage is about facilitating access to appropriate advice/services/treatment. When a telephonic service uses a semi-structured interview it is self-evident that this needs to be tailored to the health condition: musculoskeletal and mental health problems will need different interview schedules. The triage criteria for allocating cases to various pathways also needs to be tailored, as does any treatment package and the return-to-work planning process. That is, the approach used to assess and manage common health problems telephonically clearly needs to be matched to the type of problem, but the underlying principles are the same for all.

This main finding applies to common health problems in general, although the available evidence is slightly stronger for musculoskeletal problems than for mental health; this seems to relate to assessment and triage having attracted less academic interest in the mental health field, though it is not absent (e.g. (Wang *et al.*, 2007)). Nevertheless, there is robust evidence that psychological therapies such as cognitive behavioural therapy (CBT) can be delivered very effectively by telephone (Bee *et al.*, 2010; Hammond *et al.*, 2012; Piette *et al.*, 2011). In addition, there are good practice exemplars where telephonic assessment and triage is used to equal effect with both musculoskeletal and mental health problems (Colchester Hospital Foundation Trust, 2012; RehabWorks, 2013; Swiss Re, 2013). Taken together, this means there is good reason to conclude that telephonic assessment and triage can be used effectively across most, if not all, common health problems.

Telephonic approaches compare favourably to face-to-face methods (Kilfedder *et al.*, 2010; McKinstry *et al.*, 2009; Pinnock *et al.*, 2003), and well-designed assessments can, in principle, identify 'red flag' symptoms to trigger escalation to more intensive investigation or intervention (e.g. (Atos Healthcare, 2013; Aviva UK Health, 2011; RehabWorks, 2013)). This might include face-to-face evaluation by a skilled OH practitioner, with the addition of a workplace visit when necessary. This means that when compared with face-to-face assessments, telephonic approaches can achieve robust decision making and similar triage

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referrals (Car and Sheikh, 2003; Foster *et al.*, 2011; Kilfedder *et al.*, 2010; Russell *et al.*, 2010). However, there are circumstances where telephonic approaches yield inferior results, which seem likely to be due to inadequate (training in) telephonic or clinical skills, poor service design and implementation and poor adherence (Foster *et al.*, 2011; Phillips *et al.*, 2012; Pulier *et al.*, 2003; Taimela *et al.*, 2008).

There is wide consensus that the key issue is one of skills and training – given the appropriate skill mix, clinical staff can provide effective assessment and triage (Nauright *et al.*, 1999; Turner, 2009) and, seemingly, so can non-clinical professionals (Rollman *et al.*, 2005). It follows that inadequate training will lead to unwanted effects such as suboptimal referrals (Pulier *et al.*, 2003). Thus, it appears to be crucial that the telephonic personnel (including clinically-trained staff) receive focused training and support that is reviewed on a regular basis and facilitated by standardised protocols and strict documentation procedures (Chetty, 2012a, b; CSP, 2010).

3.2 Telephonic case management

This section covers the topic of case management, focusing on the telephonic aspects. Case management includes services such as referrals, process coordination, signposting and follow-up. It will often involve additional elements that effectively are assessment, triage and intervention, so case management needs to be recognised as a complex process involving communication and coordination.

3.2.1 Evidence statements

ES-3 *** There is robust evidence that telephonic case management can support people with common health problems through care pathways, monitor progress and facilitate return to work. In addition, it can contain overall costs by reducing delays and optimising referrals. This applies both to musculoskeletal and mental health problems, and is supported by evidence from other health conditions.

Table B.1: (Salisbury *et al.*, 2013b)

Table B.2: (Gilbody *et al.*, 2003)

Table B.3: (Eakin *et al.*, 2007; Iles *et al.*, 2012; Kairy *et al.*, 2009; Riegel *et al.*, 2002; Rollman *et al.*, 2005; Rosemann *et al.*, 2007)

Table B.5: (Golinkoff, 2007; Simon *et al.*, 2009; Wang *et al.*, 2007)

Table B.7: (Cochrane, 2011; Institute of Health Economics, Alberta, Canada, 2010; Pomaki *et al.*, 2010; Powell and Tahan, 2008)

Table B.8: (Atos Healthcare, 2013; Aviva UK Health, 2011; Isle of Wight Health Trust, 2013; NHS Lanarkshire/University of Glasgow, 2013; RehabWorks, 2013; Swiss Re, 2013)

3.2.2 Interpretation

The overall effectiveness of the case management process is well established in a variety of settings and for a range of clients (Hanson *et al.*, 2006). The main finding of this section is that telephonic case management is also an effective approach. Naturally, there are circumstances involving a minority of cases where face-to-face assessment and intervention is a necessity. Examples include clients with communication problems and those with

complex pre-existing medical conditions in addition to their current common health problem. However, the telephonic assessment and triage processes previously discussed are able to identify these and move them to a face-to-face approach when necessary (Marsden, 2000; Martin and Coyle, 2006; McPherson *et al.*, 2010; Richards *et al.*, 2004; Swiss Re, 2013). More generally, careful service design and practitioner training is required to avoid duplication of services through over-escalation to face-to-face assessments (Foster *et al.*, 2011; Mark and Shepherd, 2003; Phillips *et al.*, 2012).

The specific advantages and benefits of telephonic case management approaches are as follows:

- Shortened waiting times. Telephonic approaches effectively dispense with waiting lists and, when delivered in sufficient scale, can be provided on a seven days per week basis, or even 24/7 if required (Kleeburg and Mader, 2008; Lattimer *et al.*, 1998; PERI, 2005; Pillsbury, 2004; Salisbury *et al.*, 2013b).
- Ease of access. Telephonic approaches provide unrivalled geographical coverage, enabling access to all clients (Andolina *et al.*, 2001; Goodwin, 2007; Martin and Coyle, 2006).
- Efficiency, due to telephonic case managers being able to carry higher caseloads (Foster *et al.*, 2011; Grant *et al.*, 2012).
- Good integration with other components of multifactorial intervention, including advice and information, motivational interviewing, return-to-work focus, demedicalisation, medication adherence, etc. (Clayson and Woolvine, 2004; de Silva, 2011; Gilbody *et al.*, 2003; McPherson *et al.*, 2010).
- Integration with decision-support systems (usually computerised) to enable criterion-based triage processes, augmented by professional judgement, to optimise referrals and support the use of stepped-care approaches – delivering ‘just what’s needed, when it’s needed’ (Golinkoff, 2007; Iles *et al.*, 2012; Pygall, 2004; WorkCover NSW, 2005).
- Telephonic case management can enhance return-to-work outcomes (Pomaki *et al.*, 2010) and provide objective monitoring of progress. This facilitates identifying non-compliance and poor motivation, refining the action plan when needed, escalating the case to a higher ‘step’ and ceasing ineffective interventions (Car and Sheikh, 2003; Sullivan and Simon, 2012; Wang *et al.*, 2007).

The practice exemplars (Section 3.6) illustrate clearly how telephonic case management, in a variety of guises, can be the key element that underpins and controls return-to-work initiatives.

3.3 Telephonic intervention

This section sets out the evidence on telephonic interventions, which can take the form of specific treatment delivery (including monitoring and review), sometimes referred to as telehealth or telemedicine. More pertinent here, telephonic intervention also covers the delivery of information, especially the provision of accurate, evidence-informed and appropriate generic and specific advice (e.g. myth busting), either directly or by signposting.

3.3.1 Evidence statements

ES-4 ** There is adequate evidence that relevant information and advice of various types can be delivered telephonically: although generally incorporated into a multifaceted intervention package, it is capable of having a positive effect in isolation.

Table B.1: (Foster *et al.*, 2011; Kleeburg and Mader, 2008; Salisbury *et al.*, 2009; Salisbury *et al.*, 2013b)

Table B.2: (Clayson and Woolvine, 2004; Golinkoff, 2007; Kilfedder *et al.*, 2010)

Table B.8: (5 Boroughs Partnership NHS Foundation Trust, 2013; RehabWorks, 2013; Swiss Re, 2013)

ES-5 ** There is adequate evidence demonstrating that self-management of common health (and other) problems can be encouraged and enhanced by telephonic contact.

Table B.4: (Byrne *et al.*, 2007)

Table B.5: (Bell *et al.*, 2008; Currell *et al.*, 2009)

Table B.7: (de Silva, 2011; NHS, 2010; Royal College of Nursing, 2006)

Table B.8: (RehabWorks, 2013; Swiss Re, 2013)

3.3.2 Interpretation

The evidence clearly indicates that advice and information, including self-management approaches, can be effectively delivered by telephone. In everyday practice this is likely to be augmented by written information provided in a number of different ways, e.g. email, pamphlets, websites, etc. (de Silva, 2011; National Collaborating Centre for Mental Health, 2009; Pomaki *et al.*, 2010). There is a relative lack of direct evidence on the effectiveness of telephonic information delivery (NHS, 2010) but this is likely because of its ubiquity and self-evident benefit, with the consequence that researchers do not separate its effects from the wider questions that they are investigating. Stated simply, information and advice in a case management context is seen as a necessary, but not sufficient, part of the overall intervention package.

Indeed, most approaches to managing health problems that involve a telephonic element will deliver information and advice by default. The purpose is usually to provide tangible support, which may be simple signposting to services, websites or publications (Clayson and Woolvine, 2004). Alternatively the information may be intended to be a direct intervention, e.g. when providing medication counselling (Gilbody *et al.*, 2003) or when intending to change perceptions and beliefs (Sullivan and Simon, 2012) or when advising on activity levels or exercises (Eakin *et al.*, 2007).

Provision of the right sort of information and advice in written form has the potential to reduce sickness absence (Fleten and Johnsen, 2006; Symonds *et al.*, 1995) and, because this is a remote intervention, there is no obvious reason why such messages cannot be delivered telephonically, perhaps supplemented with the written material. It should, perhaps, be emphasised that, for information and advice to be effective, it is essential that the messages are: evidence-informed; consistent; address unhelpful beliefs and expectations; are understandable and accessible; and acceptable to recipients (Main and Burton, 2012).

The reports in the grey literature and practice exemplars indicate that a proportion of cases can be managed exclusively with very early, carefully focused telephonic self-management approaches (RehabWorks, 2013) and that this outcome is sustainable (PERI, 2005). This

sort of support, that encourages participation and self-management at an early stage, fits well with the concepts of vocational rehabilitation for common health problems (Waddell *et al.*, 2008). Putting all this together, early telephonic delivery of work-focused information and advice can orient the person towards return to work, thus aiding decisions about how and when to return.

While it is possible to deliver specific therapeutic interventions over the telephone, as has been demonstrated for a range of medical problems (e.g. CBT for mental health problems (Bee *et al.*, 2010)), this form of telehealth is a clinical intervention that lies outside a case management service directed at occupational outcomes.

3.4 Return to work

The peer-reviewed evidence on telephonic interventions specifically directed to (early) return to work transpired to be somewhat limited in quantity. Nevertheless, the wider literature contains much of potential relevance to telephonic interventions focused on helping people overcome obstacles to work participation, and there is pertinent information available from practice exemplars. In addition to setting out the current direct evidence (including that from practice exemplars), the narrative interpretation picks out some effective approaches and interventions that can (in principle) be delivered telephonically.

3.4.1 Evidence statements

ES-6 *** There is robust evidence that numerous telephonic approaches, directed at a variety of players, can contribute to enhanced work participation outcomes. This is the case for musculoskeletal and mental health problems.

Table B.2: (Fleten and Johnsen, 2006)

Table B.3: (Iles *et al.*, 2012; Rollman *et al.*, 2005)

Table B.5: (Bee *et al.*, 2010; Lerner *et al.*, 2012; Wang *et al.*, 2007)

Table B.7: (Pomaki *et al.*, 2010)

Table B.8: (Atos Healthcare, 2013; Isle of Wight Health Trust, 2013; NHS Lanarkshire/University of Glasgow, 2013; RehabWorks, 2013; Swiss Re, 2013)

3.4.2 Interpretation

The main finding of this section is that telephonic approaches can be used effectively to facilitate return-to-work outcomes. It is clear that many of the essential aspects of vocational rehabilitation and early return to work for both musculoskeletal and mental health problems (Kendall *et al.*, 2009; Lelliott *et al.*, 2008; Seymour, 2010; Seymour and Grove, 2005; Waddell *et al.*, 2008) are amenable, in principle and at least in part, to delivery by telephonic means. The concepts of identifying obstacles, development of return-to-work plans, provision of work-focused information and coordination between the workplace and the worker can all be facilitated telephonically.

There are apparent inconsistencies within the research findings to date: not all the studies showed that telephonic approaches had a consistent or positive effect on return to work. For example, one study found that only those at high risk of work disability benefited from an intervention programme (Taimela *et al.*, 2008). Most studies did not intend to address occupational outcomes, while others did collect occupational outcomes data but had the

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focus on healthcare provision (e.g. (Salisbury *et al.*, 2013a)). Thus, when interpreting the overall evidence available, care needs to be taken to disentangle the findings from services that set out to focus on work outcomes from those that focus principally on clinical outcomes and other aspects of healthcare delivery.

Telephonic approaches have demonstrated that, when contacted early, a sizeable proportion of cases can be managed successfully without healthcare input by promoting and supporting self-management. For those who need referral for healthcare, or are already under care, the return-to-work process can still be managed telephonically. However, some cases will likely require face-to-face workplace intervention.

The features of everyday practice that seem to contribute to effectiveness in enhancing work outcomes are discussed in detail below (Section 3.6.1). Aspects to take into account when implementing telephonic services include: ensuring return to work is asked about in every case (5 Boroughs Partnership NHS Foundation Trust, 2013); adopting self-management approaches as soon as appropriate (Swiss Re, 2013); demedicalising common health problems wherever possible (RehabWorks, 2013); having a process to avoid serial ineffective treatment (5 Boroughs Partnership NHS Foundation Trust, 2013); integrating line managers into the return-to-work plan (5 Boroughs Partnership NHS Foundation Trust, 2013); and facilitating early referrals into the service (NHS Lanarkshire/University of Glasgow, 2013). Things that seem important to avoid include: overlooking work as an outcome and not asking about it; focusing only on getting clients into healthcare (Colchester Hospital Foundation Trust, 2012); and over-medicalising common health problems (Colchester Hospital Foundation Trust, 2012).

In summary, we can conclude that when telephonic approaches are carried out in the appropriate way they can be effective and also cost-effective (see below).

3.5 Aspects of implementation

This section takes account of important issues such as safety and acceptability of telephonic approaches. In addition, some practicalities such as skills and the timing of telephonic contacts and interventions are included because of their impact on effectiveness. Where available, evidence is presented on cost-benefits and cost-effectiveness. The narrative interpretation considers the limitations of telephonic approaches in general and with respect to return to work.

3.5.1 Evidence statements

ES-7 ** There is acceptable evidence that telephonic approaches have been demonstrated to be safe when well designed and delivered by well-trained staff.

Table B.1: (Marsden, 2000)

Table B.2: (Lattimer *et al.*, 1998)

Table B.4: (Bunn *et al.*, 2005; Bunn *et al.*, 2009)

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ES-8 *** There is robust evidence to indicate that telephonic approaches can be delivered in a manner that makes them acceptable to clients and to health professionals.

Table B.2: (Clayson and Woolvine, 2004; Goodwin, 2007; Inglis *et al.*, 2011)

Table B.3: (Kairy *et al.*, 2009; Riegel *et al.*, 2002)

Table B.4: (Bunn *et al.*, 2005; Bunn *et al.*, 2009; Mair and Whitten, 2000; Neal *et al.*, 2004; Richards *et al.*, 2006; Taylor *et al.*, 2002; Warren *et al.*, 2013b)

Table B.8: (Atos Healthcare, 2013; Isle of Wight Health Trust, 2013; NHS Lanarkshire/University of Glasgow, 2013; RehabWorks, 2013; Swiss Re, 2013)

ES-9 *** There is robust evidence, from various sources and methodologies, that when competently delivered, telephonic approaches based on biopsychosocial principles can lead to cost-benefits and be cost-effective for clinical and occupational outcomes.

Table B.1: (Kleeburg and Mader, 2008; Salisbury *et al.*, 2013a)

Table B.3: (Iles *et al.*, 2012)

Table B.5: (Simon *et al.*, 2009; Sullivan and Simon, 2012)

Table B.7: (Pillsbury, 2000; Pomaki *et al.*, 2010; Trueland, 2008)

Table B.8: (5 Boroughs Partnership NHS Foundation Trust, 2013; Aviva UK Health, 2011; Colchester Hospital Foundation Trust, 2012; NHS Lanarkshire/University of Glasgow, 2013; RehabWorks, 2013; Swiss Re, 2013)

ES-10 *** There is robust evidence that the timing of intervention is important to achieve the desired occupational outcomes: early intervention is consistently associated with a timely return to work. There is adequate evidence that the use of telephonic contact can minimise delays in starting the process.

Table B.1: (Kleeburg and Mader, 2008; McKinstry *et al.*, 2009; Pinnock *et al.*, 2003)

Table B.3: (Iles *et al.*, 2012; Kairy *et al.*, 2009)

Table B.4: (Car and Sheikh, 2003; Taylor *et al.*, 2002)

Table B.6: (Waddell *et al.*, 2008)

Table B.7: (Cochrane, 2011; Pillsbury, 2004; Pygall, 2004)

Table B.8: (5 Boroughs Partnership NHS Foundation Trust, 2013; Colchester Hospital Foundation Trust, 2012; NHS Lanarkshire/University of Glasgow, 2013; RehabWorks, 2013; Swiss Re, 2013)

3.5.2 Interpretation

An important finding is that telephonic approaches can apparently be used safely, though it is acknowledged that the evidence base is somewhat limited (Currell *et al.*, 2009). The topic of safety has not been extensively studied in respect of telephonic management of common health problems, thus the academic evidence supporting safe delivery is indirect. However, since telephonic management can be safely applied in more serious medical conditions, there is no reason to suppose it would be less so for common health problems.

While ethical and legal concerns do exist, there seems to be a consensus that those concerns are common to healthcare in general (Stanberry, 2001). Inevitably, there will be malpractice events during telephonic contact (Ernesater *et al.*, 2012), as there are with other forms of healthcare. The safety issue is not so much to do with the telephonic process; rather it is to do with skills and training (Atos Healthcare, 2013; Car and Sheikh, 2003; Stanberry, 2001) which need to be specific to the telephonic environment (Bishop *et al.*, 2013; Holmstrom and Hoglund, 2007).

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Perhaps the most important objection raised to telephonic approaches is that the assessment may overlook serious medical conditions or complications, and this certainly needs to be addressed when implementing any service. This concern seems to arise from misunderstanding the telephonic process assuming that it is intended to fully replace standard clinical examinations or that it is diagnostic. In regular telephonic practice this is rarely the case. To ensure client safety it is imperative that telephonic assessors have a structured approach that ensures musculoskeletal 'red flags' and signs of serious psychological disorders are elicited, including the potential for self-harm and harm to others; this needs to be closely associated with a clear protocol for action when these issues are identified (Atos Healthcare, 2013; McPherson *et al.*, 2010).

It seems clear that telephonic approaches (if suitably conducted) are generally accepted by service users and associated with satisfaction (Bunn *et al.*, 2005; Mair and Whitten, 2000; Warren *et al.*, 2013b), although patients may need convincing in some environments (Neal *et al.*, 2004). Clinicians also generally find telephonic approaches acceptable, despite the concerns of some clinicians over safety (Car and Sheikh, 2003). What is not clear from the evidence is to what extent people at the workplace (e.g. line managers) find telephonic contact acceptable. However, the line manager is regularly involved in work-focused interventions, in some cases actually referring into the service, and no issues have seemingly been reported (5 Boroughs Partnership NHS Foundation Trust, 2013; Atos Healthcare, 2013; Colchester Hospital Foundation Trust, 2012; Iles *et al.*, 2012; NHS Lanarkshire/University of Glasgow, 2013). It should be noted that the main limitation of telephonic approaches is when clients have communication problems of any sort, e.g. hearing difficulties, significant cognitive impairment or a learning disability, or language or comprehension problems. These types of cases do not arise in the research evidence, probably because it is self-evident that telephonic approaches are not applicable.

It is well established that a biopsychosocial approach is appropriate for managing common health problems, from both clinical and occupational perspectives, and is apparent when telephonic approaches are directed at return to work (NHS Lanarkshire/University of Glasgow, 2013; Sullivan and Simon, 2012). The biopsychosocial perspective indicates that a number of key components need to be in place for successful interventions directed at occupational outcomes: early identification of obstacles to work participation; development of a plan; taking stepped action; and getting all players onside (Corbiere and Shen, 2006; Waddell *et al.*, 2008). Most of these components can, in principle, be delivered through telephonic means. Much of the published evidence reviewed here did not concern itself with the issue of timing, perhaps because the telephonic method is implicitly associated with facilitating early contact. What may be important is the timing of telephonic contact related to the onset of symptoms or sickness absence: some studies took advantage of very early telephonic contact (e.g. within 24 hours of onset or consultation) to provide information and advice (PERI, 2005; Taylor *et al.*, 2002), while others made first contact after some months of incapacity (Warren *et al.*, 2013a). The models developed in the practice exemplars generally focus on early intervention to facilitate return to work using telephonic first-contact (Colchester Hospital Foundation Trust, 2012; Isle of Wight Health Trust, 2013; NHS Lanarkshire/University of Glasgow, 2013). While it is generally acknowledged that first contact should be as soon as practicable, sometimes within hours or days, it perhaps depends on what is to be done at the first contact. From the perspective of

vocational rehabilitation, there is a window of opportunity from around four to twelve weeks after onset of a common health problem, acknowledging that obstacles to work become more entrenched as time passes (Hoefsmit *et al.*, 2012; Waddell and Burton, 2004). This points to the potential of stepped-care approaches, with the intention to deliver 'just what's needed, when it's needed' (Foster *et al.*, 2011; Seekles *et al.*, 2011; Swiss Re, 2013). Early intervention may be restricted to providing information and liaising with the workplace, with more intense interventions being provided to those cases that do not manage a timely return to work and need additional help (Leicestershire Fit for Work Service, 2013; Swiss Re, 2013).

The various models of telephonic intervention have used different access points for the service, depending on the service sponsor: General Practitioner (GP) referral; self-referral; insurer referral; and employer referral. Irrespective of the referral route, it seems important for a timely return to work that all of the key players are onside and involved in the process; the telephone is clearly an effective tool, perhaps within a case management scenario (Atos Healthcare, 2013; Iles *et al.*, 2012; Pomaki *et al.*, 2010; WorkCover SA, 2012)

The integration of telephonic approaches into conventional OH services is not widely reported but, when it is, it can provide effective triage and contribute to occupational outcomes (Taimela *et al.*, 2008). Though it seems likely that specific training in OH issues is necessary (Atos Healthcare, 2013), that will depend on precisely what staff are being asked to do; much of the coordination and communication activities of case management do not require highly-developed clinical skills (Hanson *et al.*, 2006).

Although there is little rigorous economic analysis, the assembled evidence indicates that when all these components are put together in an efficient manner, with appropriately skilled staff, the service will facilitate timely return to work and demonstrate cost-benefits and cost-effectiveness (Iles *et al.*, 2012; NHS Lanarkshire/University of Glasgow, 2013; Pillsbury, 2000; Pomaki *et al.*, 2010; RehabWorks, 2013).

3.6 Practice exemplars

The findings from 10 UK practice exemplars are summarised in Table B.8. Six of these were conducted in the NHS, with five focusing on sickness absence for any reason and one focusing only on musculoskeletal cases. The remaining four exemplars are from the private and insurance sectors – one musculoskeletal, one mental health, and two are a mixture of both.

The information and data were generated by the organisations concerned. The documentation was either retrieved from the organisations' websites or provided directly to the review team by representatives of the organisations. The review team extracted the data to construct the exemplars, in both tabular form (Table B.8) and in extended narrative form in Sections 3.6.2 to 3.6.6. The data on effectiveness were largely quantitative, while the information on processes was largely qualitative. Much of the data came from internal reports and presentations of prospective studies and retrospective audits. The review team has taken the data at face value; they have not been corroborated or analysed, but serve as useful supplementary evidence.

3.6.1 Summary of practice exemplars

The real-world experiences described in the practice exemplars are broadly congruent with the evidence statements outlined in this review. All were established with different goals and within different contexts. Yet all have reported successful outcomes, to a greater or lesser degree. In nearly all cases the telephonic approaches were first tested in some sort of pilot and then adopted more widely across the business. All were continued, not ended. However, it is recognised that there may have been examples of use of telephonic support in other organisations that were not reported because they failed to deliver expected outcomes (for whatever reason).

By way of summary, it is useful to distil the common features that seem to have contributed to achieving the outcomes that are the focus of this review: return to work and cost-benefit.

- Having return to work as a clearly stated goal that is clear to everyone involved in a case and, at the very least, posing questions about work to every case.
- Providing self-management advice as part of the service delivered.
- Adopting a demedicalised stance as soon as is appropriate: moving to a focus on overcoming obstacles to participation rather than diagnosis and therapy.
- Telephonic triage needs to be distinguished from telephonic assessment. Triage determines which 'step' to start on – beginning with the least intensive intervention that is likely to be effective in achieving the desired outcomes. Assessment is the process of evaluating progress to date and obstacles to progress in the future, using any suitable methods – this might include obtaining existing employment and medical records, telephonic interview, administering online questionnaires, etc.
- Case management services that reduce the average number of treatment sessions do so while maintaining, or even enhancing, client satisfaction.
- Integrating line managers with the return-to-work process and keeping them informed.
- Early referral into the service, ideally on the day of injury/illness onset.

Features that seem to contribute to less successful approaches include:

- overlooking work as an outcome and failing to ask about it, or set any plans for returning to work;
- focusing only on getting workers into healthcare rapidly;
- over-medicalising common health problem cases by allowing telephonic triage and assessments to be merely a step on the route to getting more healthcare.

3.6.2 Exemplar 1. The 5 Boroughs Partnership NHS Foundation Trust

This initiative was based on the simple premise that providing rapid access to physiotherapy would reduce musculoskeletal sickness absence among staff. It was stimulated by publication of the Boorman report (Boorman, 2009) and the Safe Effective Quality Occupational Health Service standards in the NHS Health and Wellbeing Improvement Framework in 2011. These were noted to emphasise two main factors: timely intervention with easy and early treatment for the main causes of sickness absence in the NHS; and rehabilitation to help staff stay in work during illness or return to work after illness. This included the stated goal to ‘address biopsychosocial factors affecting a return to work’.

The relevant aspect of this initiative was the inclusion of a telephonic approach, specifically a ‘telephone triage service to provide timely management and advice for musculoskeletal conditions’. However, it is important to note that this project involved multiple simultaneous interventions aimed at several levels: individual staff members, line managers and senior management.

The key findings, assessed 12 months post implementation, included substantial reductions in the total number of sickness episodes, the total number of days lost and the cost to the business. It is important to note that this was achieved by a service that also reduced the average number of physiotherapy treatment sessions (to 3.5). The report concluded ‘telephone triage with supportive materials in the form of emails and hand-outs was effective’.

The report highlighted an important practical implication, namely ‘it is essential to include the correct key performance indicators, and analysis of the service from the beginning so that effectiveness can be measured and the service sustained’.

Potential reasons this service was effective at obtaining work outcomes, in addition to cost savings, include:

- A triage approach that focused on work as an outcome and that offered self-management advice.
- Inclusion of the line manager and senior management into the process.
- A case management approach that sought to constrain the provision of physiotherapy to only those cases that would actually benefit from it.

3.6.3 Exemplar 2. Isle of Wight Health Trust

A six-month pilot telephone sickness absence triage service was implemented to determine if it could reduce short-term sickness absence and encourage an early return to work. This involved an initial phone call to the staff member by a triage nurse in the afternoon of the same day sickness absence began in order to ask: how they were; what treatment they were taking; had they seen their GP; how long did they think they would be off for; and remind them to keep in touch with their manager. If they believed they were going to be off for more than five days the triage nurse would arrange to call them again in a few days for an update. At the same time they were advised of any support services such as counselling or physiotherapy. The manager was provided with brief, non-confidential information by email. The service did not seem to provide agreed stay at work or return-to-work plans. Despite this, the project reported some reduction in both episodes of sickness absence and their duration. It is not clear whether this also resulted in overall cost savings.

Furthermore, the outcomes clearly varied across the departments in which it was implemented with 'marked improvements and longer-term benefits' in some areas, with little or none in others. This seems 'to depend on local existing factors such as service reorganisation, employee relation issues, how the service is introduced to new areas and, most importantly, the level of engagement by management to support it'. The author of the report concluded that 'triage is a means of addressing sickness absence performance through the monitoring of days lost, full-time equivalent absence and direct costs'.

It is interesting to consider the potential reasons for why this service appeared to be at least somewhat effective at improving work outcomes, despite not providing a structured approach to developing return-to-work plans. The most likely answer may be that it at least posed the question to every employee on sickness absence about when they were likely to return to work. This is in line with the intriguing finding that the offer of modified work (not its actual implementation) predicts the likelihood of return to work (Institute for Work & Health, 2012) and seems congruent with the notion of emphasising the importance of the employee's contribution and value (Wood, 1987).

3.6.4 Exemplar 3. NHS Lanarkshire

This project began in May 2008 by implementing a telephone-based sickness absence management service that was designed to supplement existing absence policies and to enable telephone communication by non-clinical call handlers between the absentee, their line manager and the 'Early Access to Support You' (EASY) service from Day 1 of absence and referral to OH at Day 10. In practice, the non-clinical call handlers phoned the absentee on Day 1 of absence to offer advice and inform employees about services to which they could self-refer, e.g. OH, physiotherapy and counselling services, and also about the Family Friendly leave entitlements. Staff received a further telephone call from the EASY service on Day 3 if still absent from work and referral to OH occurs by Day 10 of absence. Human resource and OH roles were changed to one of proactive support to both the employee and manager. An important aspect of the EASY service was extensive communications to all employees and managers to ensure the purpose of the service (to provide early access to support) was understood and accepted.

Continued

The key finding was that the EASY service was effective in reducing sickness absence in terms of hours lost. Despite the lack of a control group, this finding can be considered quite robust since it is based on comprehensive time series analysis.

The service was found to be cost-effective, with the value of the hours saved from the reduced sickness absence comfortably exceeding the cost of operating the service (the return on investment ratio was estimated as 1.14:1).

Other important findings were that sickness absence incidence showed a year-on-year downward trend and that absentees phoned on the first day of absence were more likely to return to work than those phoned on subsequent days. Furthermore, a high level of satisfaction was found for customers of the service.

The authors of the report noted that these findings strongly challenge the traditional paradigm within Government and many enterprises that early intervention is not an efficient use of resources because of the large number of individuals who return to work relatively early without any specific intervention. They therefore concluded that 'what is clear from this study ... is that very early intervention can be beneficial and indeed may help to prevent chronicity of health problems and the downward spiral to worklessness and dependency of the small but significant proportion who fall out of work due to ill health each year and who cumulatively contribute to the £100 billion benefit costs which the UK spends each year'.

3.6.5 Exemplar 4. Colchester Hospital Foundation Trust

This project, led by senior management, implemented a telephonic approach to sickness absence. When an individual reported as sick, the line manager contacted the Occupational Health & Wellbeing Department with details of the absence. The Health and Well-being team then conducted a five to ten minute telephone call with the member of staff to establish any support that was required and signpost to relevant resources. An initial pilot programme resulted in rollout to all areas of the trust over a 10-month period to support all 4,298 staff. The main aim of the triage system was to support staff.

Key findings noted were that 'staff with mental health and musculoskeletal problems have been identified on day one and referred onward appropriately'. The author reported that 'identifying health issues early has enabled timely interventions, consequently sickness absence has reduced month-on-month and annually from 3.68 per cent to 3.46 per cent' (in a workforce of 4,298). There was a 100 per cent increase in referrals to physiotherapy, but data for mental health was not provided.

The cost-effectiveness of the service was not directly addressed, although it was reported 'the pilot scheme has contributed to a reduction in agency spend of £586,000 over the six-month period'.

The relatively small reduction in sickness absence rates might have been due to the presence of the service. However, in practice this service seems to have been established primarily as a way of getting workers into healthcare treatments rapidly and does not seem to have included specific interventions to improve return-to-work rates.

3.6.6 Exemplar 5. Swiss Re

This project implemented stepped care for mild-to-moderate mental health income protection claims, as follows: an initial telephone triage (with a mental health clinician); education; bibliotherapy; guided self-help; and signposting to other appropriate services. Following triage, the service 'streams' were stepped by the level of intervention intensity that could be: coaching with an occupational psychologist; telephone case management; or face-to-face input if required. The purpose was to provide an early intervention to get people back to work faster and subsequently prevent long-term disability and the consequent insurance claims.

Swiss Re is a global provider of income protection (IP) insurance and recently implemented a stepped-intervention model based on biopsychosocial principles in order to reduce the growing incidence of IP claims for workplace absence as a result of mild-to-moderate mental health conditions.

Clinical outcomes reported included improvements between pre- and post- intervention with a 59 per cent improvement in PHQ-9 scores and a 66 per cent improvement in GAD-7 scores. Customer satisfaction for the service was 92 per cent.

Work outcomes were that 80 per cent of claimants had returned to work, with the average duration of the intervention lasting 58 days

Cost savings were reported with a reduction in costs for intervention and length of claim duration when compared with the average intervention costs and average length of claim duration (a surrogate for return to work) for traditional claims management practices.

3.6.7 Exemplar 6. RehabWorks

This large company provides telephonic services in addition to face-to-face and on-site workplace services for both musculoskeletal and mental health problems. The telephonic approach includes triage calls for all cases, provision of information and advice, guided self-management and CBT. A report is submitted immediately after the triage call to the referrer that includes prognosis, work information and a management plan for the client. This is based on a review of past medical history and social factors, ruling out serious medical conditions, history and events leading to the injury/clinical presentation, identification of psychosocial obstacles, developing and agreeing a return-to-work plan and obtaining baseline measures of symptoms and functional impact. RehabWorks states that current best practice suggests that, where possible, clients should be assessed for serious symptomology and, in the absence of such, should be reassured and provided with up-to-date practical advice. In accordance with that evidence, it is their experience that in providing an early intervention telephone triage service to OH clients, typically 35 – 45 per cent of cases can be self-managed with the employee receiving guidance on how to manage their own condition to a recovery without the need to progress to face-to-face treatment sessions.

Continued

For those workers where self-management guidance is deemed appropriate, a specific advice and/or exercise programme or link will be selected and issued to the client via email or post (according to the employee's preference). This evidence-based advice includes exercise and information leaflets developed by RehabWorks, and also provides access to the online PhysioTools exercise database, which uses PDF- and video-based guidance. Self-management advice aims to:

- reassure that no serious medical issue is present;
- demedicalise by avoiding unhelpful and inaccurate terms such as 'disc bulges';
- provide support by giving practical advice on activity and symptom control.

The provider has documented outcomes for both mental health and musculoskeletal problems in a variety of organisations including large utility companies and police forces. These have demonstrated that about 35 per cent of cases can be successfully closed using telephonic triage and self-management only; and that for all cases, a sustainable return-to-work rate of 90 per cent or above can be achieved along with similar rates of improvements in clinical symptoms and client satisfaction. The return on investment has been calculated as 3.55:1, i.e. £3.55 saved for every £1 spent on the service.

3.7 Compatibility with UK standards

Telephonic approaches to assessment, triage, case management and rehabilitative interventions are compatible with relevant UK standards for best practice. These include:

- British Standards Institute PAS-150 Providing Rehabilitation Services – Code of Practice (BSI, 2010);
- Case Management Society UK Standards (CMSUK, 2005);
- UKRC Standards – Hallmarks of a Good Provider (UKRC, 2009);
- Vocational Rehabilitation Association Standards of Practice (VRA, 2013).

None require face-to-face contact and most refer directly to telephonic approaches. For example, CMSUK state that 'some cases may be managed from a distance by telephone while at the other end of the spectrum [referring, for example, to cases such as those with life-changing or catastrophic injuries] are some that need almost daily face-to-face contact'. This means telephonic approaches can be audited according to UK standards.

4 Overall interpretation

The findings of this rapid review can be summarised by concluding that telephonic approaches using assessment and triage, with supportive materials, can be effective at reducing the number of sickness episodes, the number of days lost and the overall cost of a case/claim while reducing the amount of healthcare needed and maintaining or improving client satisfaction. This applies when services are well designed and implemented, and are staffed by professionals who have been trained in using telephonic techniques.

It seems the single most important factor that contributes to enhancing return-to-work outcomes is that work participation is the principal focus for the service; ensuring that every client is asked about their work and helping them to devise a practical and feasible return-to-work plan. Integrating this with the workplace (i.e. line managers) appears to provide the best opportunity to obtain optimal outcomes.

A biopsychosocial approach is appropriate for helping people with common health problems maintain work participation. Successful interventions facilitating timely return to work require implementation of the key components of a biopsychosocial approach; the essential activities of identifying obstacles, development of return-to-work plans, provision of work-focused information, direction to work-focused healthcare and coordination between the workplace and the worker can all be facilitated telephonically.

In designing and implementing a telephonic service for common health problems it is fundamental to ensure there are a variety of pathways available; ranging from managing a significant proportion of clients with very 'light touch' methods, through to protocols for managing the small minority with urgent problems or those that need to be escalated to more intensive investigation and intervention. This fits well with a stepped-care delivery model.

4.1 Key points

A number of key points from this rapid evidence review can be summarised, in the order in which they appear:

- Telephonic approaches are suitable for assessing clients' needs in many health conditions, including all types of common health problems, accepting that some individuals will need face-to-face intervention.
- The approach used to assess and manage common health problems needs to be matched to the type of problem (e.g. musculoskeletal or mental health), but the underlying principles are common to all.
- The effects of using telephonic approaches for assessment, triage and case management compare favourably to face-to-face methods, so long as they are well designed, with suitable governance and applied to the appropriate type of clients.
- The assessment can be used to make decisions about allocation to appropriate care through a triage process. This includes identifying 'red flag' symptoms to trigger escalation to urgent or more intensive investigation or intervention.
- To deliver effective assessment and triage processes, professional skills and training are fundamental. Inadequate training leads to unwanted effects and suboptimal outcomes.

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- The overall effectiveness of case management is well established and delivering it telephonically can also support people with common health problems through care pathways, monitor their progress and facilitate return to work.
- Telephonic case management can contain overall costs by:
 - reducing delays and waiting times;
 - providing ease of access and comprehensive geographical coverage;
 - optimising referrals to face-to-face services;
 - efficient use of resources.
- Cost-benefit estimates range from about £1.15 to £3 for every £1 spent.
- For common health problems, when contacted early, a substantial proportion of cases can be helped to self-manage their problem without healthcare input. If healthcare is required, the return-to-work process may still be managed telephonically, though some cases will require face-to-face workplace intervention.
- Advice and information, including fostering positive beliefs, setting expectations and promoting self-management techniques can be delivered effectively by telephone. This can be augmented with written client-centred information using a variety of media.
- Telephonic approaches can be used effectively to enhance return-to-work outcomes. The concepts of identifying obstacles, development of return-to-work plans, provision of work-focused information and coordination between the workplace and the worker can all be facilitated telephonically.
- The features of everyday practice that seem to contribute to effectiveness include:
 - ensuring return to work is asked about in every case;
 - adopting self-management approaches as soon as appropriate;
 - demedicalising common health problems wherever feasible;
 - having a monitoring process to avoid serial ineffective treatment;
 - integrating line managers into the return-to-work plan;
 - facilitating early referrals into the service.
- Telephonic approaches by professionals with appropriate training and support can be used safely and are largely acceptable to users.

4.2 Caveats

This rapid review is a best-evidence synthesis, not a systematic review. It was such from inception because it was anticipated that the nature of the literature on the topic concerned would not be appropriate for systematic review methods, and this was the case. The best-evidence synthesis approach allows differing types of evidence to be pulled together and interpreted to supply answers to practical questions, where a systematic review would conclude that insufficient evidence exists to draw valid conclusions.

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The best-evidence synthesis is useful in that it can provide what is essentially our best estimate of the way things are. It is useful to answer pragmatic questions akin to 'what is the best way to do this right now' in an environment where answers are needed to guide policy and practice. So, accepting that people need help to manage their health problem and maintain work participation, and that current practice is manifestly suboptimal in achieving these outcomes, it is reasonable to explore the balance of advantages and disadvantages that may arise from implementing a particular form of practice in a particular environment. For a wide-ranging topic such as the use of telephonic approaches in the (occupational health) management of common health problems and return to work, it is pertinent to use whatever acceptable evidence is available to do so.

Inevitably there will be varying opinion over what is acceptable evidence, as there will be over the validity of the method. The review team recognises these legitimate differences of opinion and acknowledges that the method used does not control bias as well as a full systematic methodology would allow, so the potential for bias is accepted. While having to take much of the evidence at face value, the significance of the various sources of data was weighted by virtue of its provenance. While the review team believes that the approach taken has provided a reasonable overview of the topic with practical answers to some specific questions, there are necessarily some caveats:

- There is limited academic evidence on the use of telephonic methods to facilitate return to work and it is not altogether consistent. While the evidence from practice exemplars is less robust than empirical data, it is evidence-informed and consistently supports the potential for telephonic approaches to contribute to the return-to-work process.
- The literature on occupational outcomes with mental health problems is smaller than that for musculoskeletal problems, which limits conclusions on the former to some extent.
- While the review has identified that suitable skills and knowledge are required for safe, effective telephonic assessment and triage, it cannot specify precisely what they are or how they need to be put together without further investigation.
- People with certain communication problems may require alternatives to telephonic support.

Appendix A

Review methods

The nature of telephonic assessment and case management means that this review must cover a wide range of evidence of different types and quality. That makes the standard systematic review methodology unsuitable, because it is designed primarily for homogeneous sets of studies on specific treatments for clinical outcomes. Moreover, it relies largely on randomised controlled trials, which are inappropriate or impractical for many clinical, scientific and policy questions, where other types of evidence may be equally valid (Benson and Hartz, 2000; Concato *et al.*, 2000; Glasziou *et al.*, 2004; Johnston *et al.*, 2006). As a result, when applied to policy questions, systematic reviews often focus too narrowly and simply conclude that there is insufficient evidence to draw any firm conclusions (Mays *et al.*, 2005; Pawson *et al.*, 2005; Sheldon, 2005). Actually, policy involves complex social interventions on complex social systems with sometimes unpredictable outcomes. Different stages of the process may require different kinds of evidence. Policy decisions must consider alternative interventions and their likely effectiveness, but also their practicality, cost, acceptability and the likely reaction of key stakeholders. Thus, policy is at the nexus between scientific evidence, practicalities and politics (Innvær *et al.*, 2002; Mays *et al.*, 2005; Pawson *et al.*, 2005).

To provide a more useful evidence base for policy, this review is a 'best evidence synthesis', incorporating the available academic evidence (background and direct, quantitative and qualitative), logical reasoning, evidence-based guidance and examples of best practice (Goldsmith *et al.*, 2007; Silverstein *et al.*, 2005; Slavin, 1995). These examples of best practice are drawn from the 'grey literature' including government policy documents and reviews, and/or from company data or reports on 'good practice'. The review summarises the relevant literature and draws conclusions about the balance of evidence, based on its quality, quantity and consistency. It sets the conclusions in context. This provides the flexibility to tackle heterogeneous evidence and complex socio-medical issues, together with a degree of quality assurance. The potential for selection and personal bias is acknowledged, but efforts were made to minimise this, and the strengths and weaknesses of the evidence and the arguments are laid out as explicitly as possible. This is a further development of the methodology used in previous reviews (Burton *et al.*, 2008; Waddell and Burton, 2004, 2006; Waddell *et al.*, 2008) and contrasts with reviews that merely cover the academic evidence, (e.g. (Dibben *et al.*, 2012)).

Since the topic of the review is mainly focused on the process and the service delivery of telephonic assessment and case management, it was recognised that evidence needed to be drawn from multiple sources. These fall into three broad categories: (i) academic literature; (ii) grey literature; and (iii) relevant professional practice (including business case studies and service audits).

The process for the review involved six key steps:

- Develop working definitions for the project.
- Search and select – scientific literature search, grey literature and relevant professional practice.
- Extract data.
- Generate evidence statements.

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- Grade strength of evidence.
- Synthesise evidence.

A.1 Working definitions for the project

Much of the terminology relevant to this review has been used in a variety of ways, often with different meanings. To reduce the likelihood of ambiguity and enhance the usefulness of the review, it was necessary to establish working definitions for key terminology. These were sought from a number of pertinent sources and are given in Appendix B. For practical purposes some boundaries needed to be placed around 'common health problems' – these were taken to be the common mental health conditions, stress complaints and musculoskeletal problems that account for most sickness absence, and as used in previous reviews (Waddell and Burton, 2004, 2006; Waddell *et al.*, 2008).

A.2 Literature search

Throughout the review, broad and inclusive search strategies were used to retrieve as much material as possible, pertinent to the basic question and recognising that the material of interest was likely to be distributed across a wide range of literature and topics.

A.2.1 Search methods

A comprehensive and systematic literature search was conducted using six strategies: (1) searching electronic databases; (2) internet searches; (3) hand searches of relevant journals and other reports and documents; (4) personal databases; (5) indices of grey literature; (6) citation tracking; and (7) identification of documented practice exemplars.

Open search approaches were used to capture the widest possible range of articles. This resulted in large data sets that were carefully searched for relevant material. Limits applied were: (i) publication from the year 2000; and (ii) English language (Egger *et al.*, 2003).

Multiple Ovid databases were searched using appropriate Boolean search strings to identify published literature (Montori *et al.*, 2005; Wilczynski *et al.*, 2004). The key search string used was: (teleph\$.mp OR Helpline.mp OR Telehealth.mp OR Telemedicine.mp OR Remote consultation.mp OR Hotline.mp) AND (triage.mp OR Consultation.mp OR Evaluation.mp OR Advice.mp OR Assessment.mp) AND (work.mp OR return to work.mp OR RTW.mp OR stay at work.mp OR SAW.mp OR Occupational.mp OR Vocational.mp).

Ovid databases searched were (in alphabetical order):

- AMED (Allied and Complementary Medicine, which is a unique bibliographic database produced by the Health Care Information Service of the British Library. It covers a selection of journals in complementary medicine, palliative care and several professions allied to medicine) 1985 to July 2013.
- Evidence Based Medical (EBM) Reviews – Cochrane Database of Systematic Reviews (The Cochrane Database of Systematic Reviews is produced by the Cochrane Collaboration, an international network of individuals and institutions committed to preparing, maintaining and disseminating systematic reviews of the effects of health care). 2005 to May 2013.

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- EBM Reviews – ACP Journal Club (ACP Journal Club is part of Ovid's Evidence Based Medicine Reviews collection and consists of two journals, ACP Journal Club (a publication of the American College of Physicians) and Evidence-Based Medicine (a joint publication of the American College of Physicians and the British Medical Journal Group) 1991 to June 2013.
- EBM Reviews – Database of Abstracts of Reviews of Effects (DARE) is part of Ovid's Evidence Based Medicine Reviews collection and is produced by the expert and information staff of the National Health Services' (NHS') Centre for Reviews and Dissemination (NHS CRD) at the University of York. DARE is a full text database containing critical assessments of systematic reviews from a variety of medical journals. DARE contains structured abstracts of systematic reviews from around the world. Its records cover topics such as diagnosis, prevention, rehabilitation, screening and treatment) 2nd Quarter 2013.
- EBM Reviews – Cochrane Central Register of Controlled Trials (CCTR) (CCTR contains over 300,000 bibliographic references to controlled trials in healthcare together with references to clinical trials identified by contributors to the Cochrane Collaboration in MEDLINE and EMBASE. Contributors follow quality control standards to ensure that only reports of definite randomised controlled trials or controlled clinical trials are included. The controlled trials included were identified by the contributors to the Cochrane Collaboration to create an unbiased source of data for systematic reviews) June 2013.
- EBM Reviews – Cochrane Methodology Register (the database includes journal articles, book chapters, conference proceedings, conference abstracts and reports of ongoing methodological research. Relevant records are identified primarily through a programme of hand searching undertaken by the UK Cochrane Centre) 3rd Quarter 2012.
- EBM Reviews – Health Technology Assessment (HTA is produced in collaboration with the INAHTA Secretariat, based at the Swedish Council on Health Technology Assessment (SBU)). The database contains records of ongoing projects being conducted by members of the International Network of Agencies for Health Technology Assessment (INAHTA) as well as publications reporting completed technology assessments carried out by INAHTA members and other health technology assessment organisations) 2nd Quarter 2013.
- EBM Reviews - NHS Economic Evaluation Database (the NHS Economic Evaluation Database is funded by the Department of Health's NHS Research and Development Programme and produced by the Centre for Reviews and Dissemination, and provides cost-benefit analyses about healthcare interventions.) 2nd Quarter 2013.
- EMBASE (Excerpta Medica database is a major biomedical and pharmaceutical database indexing over 3,500 international journals in the following fields: drug research; pharmacology; pharmaceuticals; toxicology; clinical and experimental human medicine; health policy and management; public health; occupational health; environmental health; drug dependence and abuse; psychiatry; forensic medicine; and biomedical engineering/instrumentation).
- Ovid MEDLINE and MEDLINE Pending (MEDLINE is the United States National Library of Medicine's premier bibliographic database providing information from the following fields: medicine; nursing; dentistry; veterinary medicine; allied health; and pre-clinical sciences) 1946 to present with Daily Update.

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- Ovid Nursing Database (includes information from Journals@Ovid and MEDLINE, the United States National Library of Medicine's premier bibliographic database) 1946 to June Week 4 2013.
- PsycINFO (a bibliographic database providing abstracts and citations to the scholarly literature in the psychological, social, behavioural and health sciences) 1806 to July Week 1 2013.

Additional databases searched were:

- NHS Evidence
- Europe PubMed Central
- Bandolier
- UK Database of Uncertainties about the Effects of Treatments (DUETS)
- TRIP database
- Physiotherapy Evidence Database (PEDro)
- OTseeker
- National Institute for Health and Clinical Excellence (NICE) guidance
- SCOPUS
- ProQuest Megasearch

The formal search of the academic literature was augmented with direct requests to companies, organisations and individual experts about the existence of well-documented prospectively studied practice exemplars. This included sending requests to approximately 80 individuals and organisations, and posting a request for information on relevant professional bulletin boards. Some 20 respondents provided various forms of information, documentation and links to Internet resources. Ten UK organisations kindly shared sufficient data to construct practice exemplars (Table B.8). Six of these were conducted in the NHS, with five focusing on sickness absence for any reason and one focusing only on musculoskeletal cases. The remaining four exemplars are from the private and insurance sectors – one musculoskeletal, one mental health, and two are a mixture of both. The data on effectiveness were largely quantitative, while the information on processes was largely qualitative. Much of the data came from internal reports and presentations of prospective studies and retrospective audits. The review team has accepted the data at face value and has not attempted to corroborate evidence.

Grey literature was sought using standard Internet search engines (Google, Yahoo, Bing, etc.). Additional sources searched included OpenGrey (a system for information on grey literature in Europe).

Applicable UK professional standards (BSI, 2010; CMSUK, 2005; UKRC, 2009; VRA, 2013) were also reviewed.

A.2.2 Exclusion criteria

A priori inclusion/exclusion criteria were used for article selection and confirmed with the commissioners of the review.

The intention was to focus on common health problems, which were defined reasonably flexibly for this project. While it was appropriate to exclude studies involving certain specific medical conditions, some studies of specific conditions (e.g. mild/moderate traumatic brain injury, heart failure) could be informative to the aims of the project, so rather than use exclusion terms in the search strategy, it was decided to include/exclude such studies by discussion among the review team.

Under our definition of telephonic support, clinical interventions telephonically delivered by healthcare providers specifically to treat physical or mental conditions are essentially outside the scope of this review, but their potential contribution to lowering sickness absence and improving safety is recognised.

A.3 Literature selection

A very large pool of several thousand citations was retrieved during the systematic search and these were managed with bibliographic software. It was neither possible nor practical to review all studies, articles or reports that were retrieved. Therefore, careful selection was performed against the a priori criteria for relevance.

The citations retrieved from the searches were put into tables consisting of titles and abstracts (when available). These were circulated to three reviewers (Kim Burton, Nicholas Kendall and Serena McCluskey) and each indicated which should be obtained for possible inclusion in the review. Based on this voting system, the full papers of those selected for possible inclusion were obtained and scrutinised by at least two of the reviewers. Where there was disagreement, and that was rare, it was remedied by discussion and consensus. Of approximately 200 peer-reviewed articles retrieved, 83 were considered relevant for inclusion (Tables B.1 to B.6) and a further 28 items were selected from the grey literature (Table B.7). Copies of all included articles were duly archived.

From the material received in the form of practice exemplars, 10 cases were selected for their content and relevance (Table B.8).

A.4 Data extraction

Information from the included articles was extracted, summarised and entered into evidence tables (in alphabetical order for ease of reference).

The evidence tables (Appendix B) fall into three groups, each containing a number of tables.

Telephonic support

Table B.1: Telephonic assessment and triage

Table B.2: Telephonic information and advice

Table B.3: Telephonic case management

Table B.4: Safety and acceptability of telephonic approaches

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Indirect evidence

Table B.5: Therapeutic intervention

Table B.6: Generic topics

Grey literature

Table B.7: Audits, reports, trade articles, etc.

Table B.8: Summary of practice exemplars

Information on cost-effectiveness was incorporated when available from either the published evidence or from service audits conducted by existing service providers. Further evidence was gathered from the policy and business literature on cost-benefit analyses.

A.5 Synthesis of evidence statements

Building on each section of the evidence tables, themes were identified within the evidence and evidence statements were developed, refined and agreed by the three reviewers. This was an iterative process until consensus among the reviewers was reached, leading to high-level statements reflecting the balance of the evidence. Each statement was explicitly linked to the source(s) of the underlying supportive evidence. Where appropriate, the text of the evidence statements was used to expand on the nature or limitations of the underlying evidence and to offer any caveats or cautions. Where the evidence statements were insufficient to convey complex underlying ideas, important issues were discussed in narrative text.

High-level evidence statements may not fully convey the details of effective interventions, so exemplars of current practice were selected to help illustrate approaches, mechanisms and effects.

A.6 Grade strength of evidence

Detailed evidence linking was provided and the strength of the evidence supporting each statement was rated using the rigorous, yet pragmatic, system outlined in Table A.1 – adapted from (Waddell and Burton, 2006).

Table A.1 Evidence grading system to support evidence-based statements about the effect of telephonic support

Evidence grade	Definition ¹
*** Robust	Generally consistent findings provided by multiple peer-reviewed studies or data from multiple well-documented prospective practice exemplars.
** Adequate	Findings provided by a single peer-reviewed study, evidence-based guidance, or data from a single well-documented prospective practice exemplar.
* Vulnerable	Based on limited data from a single practice exemplar, or on professional or commercial consensus, or on inconsistent findings provided by multiple peer-reviewed studies.
⁰ Indirect	Consistent findings provided by peer-reviewed studies of non-telephonic support that are conceptually transferable to the telephonic environment, or telephonic interventions beyond the anticipated scope of the service that are similarly transferable.

¹ The definitions represent minimum requirements.

For the purposes of this project, peer review was accepted as a measure of quality for published articles. While there was no formal attempt to further grade the individual articles, the reviewers took account of their nature and quality in the synthesis of the evidence statements.

In a review of this nature, some important issues are inappropriate for experimental study, which is different from saying that there is 'no evidence available'. For these issues, however, it may be possible to construct a reasoned statement based on various other criteria, such as practice exemplars and evidence-based guidance. In appropriate cases this reasoned approach, which extends beyond (but may include) consensus, can produce statements that are arguably just as valid as those based on academic evidence (Waddell *et al.*, 2008).

For the purposes of this review, the content of the evidence statements was developed from the retrieved academic peer-reviewed material on telephonic approaches. Additional material, in the form of indirect evidence and documented practice exemplars, was added as supporting evidence where appropriate. Thus, the evidence statements may be supported by a variety of evidence sources, which are made explicit by referring to the relevant evidence tables in Appendix B.

A.7 Limitations of the review methodology

Compared with a systematic review, this method of evidence synthesis inevitably involves a greater degree of judgement about which articles were included or excluded, how the data were extracted, how the evidence statements were developed and how the evidence was graded. Nevertheless, it is the most appropriate method for the present purpose. The precautions taken to minimise the risk of bias and to make the process as explicit as possible are described above.

The focus on what works includes a mixture of direct and indirect evidence, and its application to actual professional practice.

Limitation to English language was unlikely to have any significant effect in respect of this particular topic. In respect of applicability to UK policy, the scientific evidence, although international, included numerous individual UK studies. In addition, UK data, evidence on practice, policy reports and exemplars were used wherever possible.

Appendix B

Evidence tables

B.1 Telephonic support

B.1.1 Telephonic assessment and triage

Table B.1 Telephonic assessment and triage

Authors	Key features [reviewers' comments in square brackets]	Condition	Topic
Bishop <i>et al.</i> , 2013 Randomised controlled trial	<p>PhysioDirect: Supporting physiotherapists to deliver telephone assessment and advice services within the context of a randomised trial</p> <p>Part of a wider study, this article investigates the skill sets required, and training and support needs for physiotherapists working in telephone assessment and advice services for patients with musculoskeletal problems. The authors found that even experienced staff needed to be trained in the new system. They achieved this with:</p> <ul style="list-style-type: none"> • an intensive face-to-face 'training' session lasting for one and a half days which involved the 32 physiotherapists participating in the trial; • a period of practice and skills consolidation using the computer-assisted system at the four clinical bases; • a competency check by with trainers observing each physiotherapist assessing patients using the system two weeks after the intensive face-to-face training and again at six weeks if required. <p>The conclusions were that: when setting up a physiotherapy-led telephone assessment and advice service, it is clear that time and resources for training of staff and skill consolidation need to be factored into the implementation plan; and an enhanced skill set is required for telephone assessment and advice, particularly in listening and communication skills. (See also Foster <i>et al.</i>, 2011; Salisbury <i>et al.</i>, 2013: Table 1.)</p> <p>[The important implication is that on-going management of staff delivering telephonic triage services should include these training and support features.]</p>	Musculoskeletal	Telephonic assessment

Authors	Key features [reviewers' comments in square brackets]	Condition	Topic
Chetty, 2012a	Telephone triage assessment for musculoskeletal disorders: part 1 This paper explores the diagnostic analysis process before a nursing triage assessment for musculoskeletal disorders was implemented in an occupational health and wellbeing service. Findings suggest that support of staff and service users is needed if such a change to existing service is to be implemented and services need to be reconfigured to improve overall efficiency.	Musculoskeletal	Telephonic assessment
Chetty, 2012b Qualitative	Telephone triage assessment for musculoskeletal disorders: part 2 This paper presents findings from the above diagnostic analysis. Several important themes were identified, including the need for evidence-based practice and implementation; unambiguous decision making and leadership; multidisciplinary practice (at organisational and departmental level); clinical and cost-effectiveness; staff development and training; quality outcomes and health promotion; and patient experience and satisfaction levels. [Although the sample is limited, the above themes are consistently reported in other studies that explore the obstacles and facilitators to implementing this kind of service.]		
Foster <i>et al.</i> , 2011 Narrative	The evidence for and against 'PhysioDirect' telephone assessment and advice services This debate article summarises models of PhysioDirect, the links to other healthcare developments and recent evidence to date about this type of service. Evidence showing prompt access to advice and treatment is the most compelling argument for this kind of service, with the triage process reserving more intensive and expensive treatments for patients who do not improve with self-management advice. This is analogous to the 'stepped-care' approach advocated in a range of conditions (e.g. mental health) where there is a high level of demand and a need to target resources. This also fits with other models of care that emphasise the importance of patient self-management and matches the supported self-care approach advocated by the DoH's policy on supporting people with long-term conditions.	Musculoskeletal	Telephonic assessment

Table B.1 Continued

Authors	Key features [reviewers' comments in square brackets]	Condition	Topic
	<p>Evidence showing a reduction of workload, robust decision making and satisfaction levels appears to be consistent. The main concern expressed by GPs has been a 'flooding' of services via self-referral, but this has proved to be unfounded with the majority of referrals still coming from GPs. Other concerns include inequity of service, with only those patients with a telephone and able to communicate clearly being able to access the service. Concerns about safety seem to be particularly important, with many clinicians recommending this type of service should be used for managing follow-up appointments. It is proposed that this kind of service needs careful clinical risk management and training, and the expertise and experience of those providing the service is important.</p> <p>Experienced staff can manage three straightforward calls per hour, compared with one, or at most, two face-to-face assessments. However, recent evidence has suggested that the majority of patients assessed over the telephone required further 'face-to-face' assessment or hands-on treatment. This duplication of service undermines the cost-effectiveness argument. (See also Bishop <i>et al.</i>, 2013; Salisbury <i>et al.</i>, 2013: Table 1.)</p> <p>[This article was written as a rationale for the PhyioDirect trial and most of the evidence reviewed is musculoskeletal, physiotherapy and primary care-related.]</p>		
Grant <i>et al.</i> , 2012 Prospective study	<p>An analysis of computer-assisted pre-screening prior to elective surgery</p> <p>This investigation found the quality of pre-operative assessments delivered by non-clinician telephone interview was comparable to face-to-face interview by anaesthetists, although more complex issues required face-to-face assessment. A non-clinician delivered the computer-assisted questionnaire via telephone. The sensitivity of telephone interview provided information to correctly classify patients as suitable for day of surgery evaluation was 98% (95% confidence interval 96 to 99%) with a specificity of 97% (95% confidence interval 92 to 98%).</p> <p>Conclusion was that the process performed well in identifying and displaying medical issues that require attention prior to surgery, and that remote computer-assisted assessment can produce quality patient health information and enable early patient work-up and triage with the potential to reduce costs through more efficient use of resources.</p> <p>[Carefully designed telephonic assessments (in this case, prior to heart surgery) can reduce need for face-to-face assessments in a significant proportion of cases.]</p>	Elective non-cardiac surgery	Computerised self-assessment

Table B.1 Continued

Authors	Key features [reviewers' comments in square brackets]	Condition	Topic
Kleeburg and Mader, 2008 Narrative review	<p>How to handle workplace injuries – with a telephone call</p> <p>Some employers have been able to implement occupational health clinics at their work sites, enabling employees to gain easy access to medical professionals who provide first aid, give advice and guide employees through their health concerns. But this isn't a practical solution for all employers or companies in all industries. A viable solution is telephonic injury triage, which can be used in many situations.</p> <p>The authors conclude that telephonic injury triage has some very real and significant positive effects on workers compensation, and these include faster reporting, leading to faster recovery and an earlier return to work with decreased lost productivity time.</p> <p>[The author is a major provider of telephonic triage services in the US but presents evidence from a large study of lag times and several business case studies.]</p>	Workplace injuries, all types	Telephonic assessment
Latorre <i>et al.</i> , 2009 Conference proceedings	<p>Assessment of chronic pain: agreement of face-to-face and telephone interview</p> <p>Investigation to compare telephonic and face-to-face assessments with chronic pain patients. Telephone interviews were conducted first, with face-to-face assessments two to seven days later. Good kappa scores were observed for presence of chronic pain and co-morbidities, but it was low for body pain location. Strong intra-class correlation was found for Brief Pain Inventory scores and variables such as BMI. The authors concluded telephone interview is a useful tool to evaluate prevalence and characteristics of chronic pain.</p> <p>[Carefully designed telephonic interviews can yield accurate assessments (in this case, of the characteristics of chronic pain). Since this is a conference presentation, it may only be an abstract that has been peer reviewed.]</p>	Chronic pain	Telephonic assessment v face-to-face

Table B.1 Continued

Authors	Key features [reviewers' comments in square brackets]	Condition	Topic
Mark and Shepherd, 2003 Retrospective study	<p>How has NHS Direct changed primary care provision?</p> <p>NHS Direct was designed to provide comprehensive health information and self-care advice. Users of the telephonic triage service are asked questions about their symptoms or problem. Common problems are often given simple self-care advice which users can follow thereby avoiding an expensive visit to a healthcare professional. More complex problems are assessed by a nurse and can then be given treatment advice or referred on to another service within the NHS.</p> <p>This retrospective review used quantitative data from a large primary care cooperative to demonstrate that there had been a consistent decline in provision of nurse advice for all age groups. The authors noted this was consistent with the qualitative data that suggested triage nurses were taking an increasingly pro-patient approach while at the same time exhibiting risk-averse behaviour. Despite this, the integration of NHS Direct and cooperative-based out-of-hours care contributed to a gradual reduction in out-of-hours workloads.</p> <p>[The experience of NHS Direct indicates the need for adequate staff training, enhanced skill sets and appropriate support in telephonic assessment and triage.] [See also Byrne <i>et al.</i>, 2007: Table 4.]</p>	Primary care patients NHS	Telephonic assessment
Marsden, 2000 Retrospective study	<p>An evaluation of the safety and effectiveness of telephone triage as a method of patient prioritization in an ophthalmic accident and emergency service</p> <p>Retrospective analysis of case notes from previous month, showing that nurse practitioners were able to elicit accurate information from a telephone triage conversation on which to base a decision about patient access, resulting in the appropriate prioritisation of patients with no adverse events.</p>	Ophthalmic A&E	Telephonic assessment safety
Martin and Coyle, 2006 Clinical algorithm	<p>Nursing Protocol for Telephonic Supervision of Clients</p> <p>Provides an algorithm with five clinical pathways for the telephonic supervision of patients in the home environment. The authors conclude it can be a cost-effective programme, particularly for those who are homebound or for persons, such as the elderly or those with chronic illness, who have long-term needs that vary between relative health and acute illness.</p> <p>[Algorithms such as this one provide a fluid system that continuously reassesses progress and needs, with a constant feedback loop that can provide consistency to the rehabilitation process: this study involved non-working client groups.]</p>	Outpatients	Telephonic assessment and telephonic patient supervision

Authors	Key features [reviewers' comments in square brackets]	Condition	Topic
McKinstry <i>et al.</i> , 2009 Qualitative	Telephone consulting in primary care: a triangulated qualitative study of patients and providers Questionnaire and focus groups were conducted with GPs, nurses, administrative staff and patients to understand how telephone differs from face-to-face consulting in terms of content, quality and safety. It was concluded that telephone consulting improves access to care, aids continuity and saves time. There were concerns from both clinicians and patients around using this method for acute triage.	Primary care patients	Telephonic assessment Safety
McKinstry <i>et al.</i> , 2010 Qualitative	The quality, safety and content of telephone and face-to-face consultations: a comparative study A qualitative analysis of audio-recordings of telephone and face-to-face consultations (derived from McKinstry <i>et al.</i> , 2009). No different findings from those reported above.		
McPherson <i>et al.</i> , 2010 Quasi-experimental	Telephonic screening and brief intervention for alcohol misuse among workers contacting the employee assistance program: A feasibility study Describes a pilot study conducted by Aetna for early identification and early intervention of alcohol problems through the adoption of telephonic alcohol screening, brief intervention and referral to treatment (SBIRT). <ul style="list-style-type: none"> • Rates of alcohol screening and identification: <ul style="list-style-type: none"> – During the five-month pilot programme, 295 members who contacted the EAP for services were offered alcohol screening during clinical intake assessment. – Alcohol pre-screening: Of the 295, 93% (n=274) completed AUDIT-C (7% not appropriate or refused). Of the 274, 40% (n=110) pre-screened positive for at-risk drinking. – Alcohol screening: Of the 110 pre-screen positives, 87% (n=96) agreed to complete the remaining seven AUDIT items, 52% (n=50) went on to screen at moderate risk (8-19, hazardous or harmful drinking) or high risk (20-40, alcohol dependence). – Brief intervention for alcohol use was offered to all members who screened positive. – Pre-post comparisons yielded baseline pre-intervention (service-as-usual) identification rate of <1% compared to post-intervention rate of 18.25%. 	Alcohol abuse	Telephonic assessment Telephonic intervention

Table B.1 Continued

Authors	Key features [reviewers' comments in square brackets]	Condition	Topic
	<ul style="list-style-type: none"> Rate of agreement to clinical follow-up: 78% of members who contacted EAP. Rates of referral: 72% set an appointment with a face-to-face counsellor to further address issues discussed during the telephonic consultation. <p>The authors concluded that integration of routine alcohol SBIRT into EAP practice is feasible in telephonic delivery systems and increases identification and opportunity for brief motivational counselling. When SBIRT is seamlessly integrated, workers are willing to answer questions about alcohol and participate in follow-up.</p> <p>[This research was supported by Aetna Behavioral Health and published in an academic journal.]</p>		
Nauright <i>et al.</i> , 1999 Qualitative	<p>Telephone Triage and Consultation: An Emerging Role for Nurses</p> <p>Findings from a focus group held with 17 nurses exploring their perceptions of telephone consulting practice. The experience of nurses and decision-making are seen as necessary for success; protocols and training in their use is needed, and documentation is important (both for administering correct advice/referral and for any potential legal issues).</p>	Outpatients	Telephonic assessment
Pinnock <i>et al.</i> , 2003 Randomised controlled trial	<p>Accessibility, acceptability and effectiveness in primary care of routine telephone review of asthma: pragmatic, randomised controlled trial</p> <p>Investigated whether routine review by telephone of patients with asthma improves access and is a good alternative to face-to-face reviews in general practices. Participants were randomised to either a telephone review or a face-to-face consultation with the asthma nurse. The review was a single telephone call where the nurse reviewed needs as per their normal practice and arranged any necessary follow-up consultations. Findings demonstrated that more patients could be reviewed compared with face-to-face consultation without clinical disadvantage or loss of satisfaction. The proportion of patients receiving a routine review (75%) was substantially higher in the telephonic group. A shorter duration means telephone consultations are likely to be an efficient option in primary care.</p>	Asthma	Telephonic review

Authors	Key features [reviewers' comments in square brackets]	Condition	Topic
Pulier <i>et al.</i> , 2003 Retrospective study	<p>Medical versus nonmedical mental health referral: clinical decision-making by telephone access center staff</p> <p>This paper reports on a retrospective analysis of decisions made by care managers staffing a university-based telephone access centre in referring new adult patients to non-psychiatrists versus psychiatrists for initial behavioural healthcare appointments (n=610). It was found that only 28% of patients were initially referred to psychiatrists, but further examination revealed that non-psychiatrists then referred about half of patients to psychiatrists. This duplication of service means that cost-effectiveness is limited.</p> <p>[It is unclear why this duplication of service occurred, but the authors suggest it may be due to complexity of mental health issues either not revealed over the telephone or that care managers were not suitably qualified to identify. However, callers were also screened previously for emergency cases and for service eligibility by a sub-contracted telephone access service.]</p>	Mental health	Telephonic assessment Staff skills
Richards <i>et al.</i> , 2004 Quasi-experimental	<p>Survey of the impact of nurse telephone triage on general practitioner activity</p> <p>Nurse management of minor illness is a common method of demand management in primary care. This survey measured, one month before and six months after the implementation of nurse telephone triage, the number of presenting problems per patient and the following four consulting behaviours of doctors: the number of consultations during the four weeks before and after the index consultation, the number of prescribed items, the number of outside referrals and the number of investigations.</p> <p>Results indicated that patients seen by doctors in the triage system had significantly more presenting problems and received more consultations, prescriptions and investigations. Numbers of referrals to secondary care were not different. Where nurses are used in telephone triage of some same-day appointments, there may be a need for GPs to change their consulting behaviours to accommodate an increase in the mean number of problems presented per patient, because those patients with self-limiting illnesses are diverted from the GP.</p> <p>[These results seem congruent with the notion that the telephonic triage nurses were filtering out and managing the more straightforward cases.]</p>	Primary care patients, NHS	Telephonic assessment

Table B.1 Continued

Authors	Key features [reviewers' comments in square brackets]	Condition	Topic
Russell <i>et al.</i> , 2010 Prospective study	<p>The diagnostic accuracy of telerehabilitation for nonarticular lower-limb musculoskeletal disorders</p> <p>A study to establish the criterion validity and reliability of remote physical assessment and diagnosis of nonarticular lower limb musculoskeletal conditions via telerehabilitation. Nineteen patients were assessed face-to-face and by telerehabilitation (computer-based videoconferencing system including tools to quantify various physical examinations). The telerehabilitation was found valid (diagnosis agreement) and reliable.</p> <p>[The remote 'system' studied here goes well beyond simple telephonic assessment.]</p>	Musculoskeletal	Remote assessment v face-to-face
Salisbury <i>et al.</i> , 2009	<p>'PhysioDirect' telephone assessment and advice services for physiotherapy: protocol for a pragmatic randomised controlled trial</p> <p>Protocol describing the set up of the trial, results of which are extracted in the studies below. More specific details of programme are shown below:</p> <p><i>'PhysioDirect is based on a physiotherapist following a computerised algorithm to assess the patient in a structured way and offering appropriate written advice, exemplified by the development of NHS Direct' [both were opt-in services It is important to note that the comparison between PhysioDirect and usual care is not simply between a telephone consultation versus a face-to-face consultation, nor is it between an early telephone consultation versus a 'waiting list control', i.e. receiving no care. It is between two different care pathways, but the use of telephone triage and assessment in PhysioDirect makes the earlier provision of advice possible. However, the issues of telephone-based care and the earlier provision of care are inextricably linked and cannot be separated in this pragmatic trial.]</i></p>	Musculoskeletal	Telephonic assessment Telephonic advice
Salisbury <i>et al.</i> , 2013b	<p>Effectiveness of PhysioDirect telephone assessment and advice services for patients with musculoskeletal problems: pragmatic randomised controlled trial</p> <p>Four physiotherapy services in England participated in a pragmatic randomised controlled trial, inviting patients who had been referred into the service by their GP or via self-referral to telephone a physiotherapist for an initial assessment and advice, followed by face-to-face physiotherapy if required (n=2,249).</p>		

8 Table B.1 Continued

Authors	Key features [reviewers' comments in square brackets]	Condition	Topic
Salisbury <i>et al.</i> , 2013a Randomised controlled trial	<p>Senior physiotherapists administered PhysioDirect during advertised sessions. Computerised templates were used to assess patients and record findings. As part of their training, physiotherapists were taught enhanced telephone communication skills, including the use of visualisation to help assess patients' symptoms and functional difficulties. Most patients were sent written advice about self-management and exercises and invited to telephone back after two-four weeks to discuss progress. They were then given further advice and a face-to-face appointment if necessary. Those who needed urgent face-to-face appointments were identified earlier in the process, and those who were deemed unlikely to gain benefit from physiotherapy were discharged. Patients in the usual care arm were placed on a waiting list for a physiotherapy appointment.</p> <p>Main outcome measures were numbers of appointments, waiting time for treatment and non-attendance rates. Primary outcome was physical health at six months. Secondary outcomes included other physical and mental health measures, time lost from work [60% of sample were employed, although at baseline a median of 0 days lost is reported, indicating this is not a problem for the sample] and patient satisfaction and preference.</p> <p>85% of participants provided primary outcome data at six months [unclear how many provided secondary outcome data at six months – it appears to be around 65%], showing no difference between the two arms in relation to physical health and in time lost from work [although at baseline it was zero?]. PhysioDirect patients were no more satisfied with access to physiotherapy than usual care patients, but had slightly lower satisfaction overall at six months. PhysioDirect patients were more likely than usual care patients to prefer PhysioDirect in the future and no adverse events were detected. PhysioDirect patients had fewer face-to-face appointments than usual care patients, a shorter waiting time and lower rates of non-attendance.</p> <p>A pragmatic randomised controlled trial of the effectiveness and cost-effectiveness of 'PhysioDirect' telephone assessment and advice services for physiotherapy</p> <p>[This publication is the full HTA report on the project.] It was shown that PhysioDirect reduced the number of physiotherapy consultations in total, but within the context of the trial the cost of physiotherapy using PhysioDirect was slightly more expensive than usual care. However, sensitivity analysis suggested that providing physiotherapy via PhysioDirect would be slightly cheaper than usual care when provided in a slightly modified way outside a trial.</p>		

Table B.1 Continued

Authors	Key features [reviewers' comments in square brackets]	Condition	Topic
	<p>The implication for health services is that PhysioDirect could be a less expensive way to provide physiotherapy services than usual waiting list-based care but this cannot be assumed and depends on whether or not the time of physiotherapists is used productively. The authors conclude that PhysioDirect is probably cost-effective because the slightly greater total NHS costs are accompanied by slightly greater health gains, related to faster improvement in health status among those allocated to PhysioDirect. The level of certainty about increased cost-effectiveness is only moderate, because the differences between trial arms in both the costs and benefits are very small with wide CIs, but the overall finding about the cost-effectiveness of PhysioDirect is robust to a range of sensitivity analyses. Therefore, providing a service based on PhysioDirect appears to be justified in terms of benefits to patients, potentially lower costs for the provision of physiotherapy services and a level of cost-effectiveness that is well within the threshold usually used to justify services within the NHS.</p> <p>It is proposed that in future, it is likely that PhysioDirect services will increasingly be provided in conjunction with direct access for patients (rather than following referral from another health-care professional) and may be offered as a choice for patients wanting quicker advice rather than as the only route to care. This is likely to increase the cost-effectiveness and acceptability of PhysioDirect because patients who self-refer are likely to contact the service with less severe problems of shorter duration, and such patients are particularly appropriate for the initial assessment and advice provided by the PhysioDirect service. Seemingly, there was no evidence of difference between PhysioDirect and usual care in time lost from work or usual activities, the cost to patients or the value of lost production. (See also Bishop <i>et al.</i>, 2013; Foster <i>et al.</i>, 2011: Table 1.)</p> <p>[The authors conclude that faster access to care may not always reduce patients' time off work or satisfaction with the service, with only 50% of eligible patients agreeing to participate. The authors acknowledge that patients who self-refer will probably have less serious problems of shorter duration than those referred by GPs and in these circumstances, the benefits of the telephone service could be greater. Limitations include the unrepresentative nature of the sample (both at baseline and follow-up). The recruitment findings seem to indicate that leaving it up to the person to make the initial telephone call is suboptimal: it is reasonable to suggest that take-up of such a service will be enhanced if the service telephones the person.]</p>		

8 Table B.1 Continued

Authors	Key features [reviewers' comments in square brackets]	Condition	Topic
Turner, 2009 Prospective study	<p>An exploratory study of physiotherapy telephone assessment</p> <p>This prospective series compared 55 musculoskeletal patients who each had phone assessments and face-to-face sessions, using less experienced physiotherapists (less than two years) and experienced ones (more than four years). Inter-examiner agreement indicated that diagnosis over the telephone appears to be comparable with face-to-face diagnosis (kappa 0.7 with experienced physiotherapists). However, management of musculoskeletal conditions by telephone, particularly by less experienced staff, was found to compare less favourably with face-to-face management.</p> <p>[The conclusion about management was made by clinical judgement.]</p>	Musculoskeletal	Telephonic assessment v face to face

B.1.2 Telephonic information and advice

Table B.2 Telephonic information and advice

Authors	Key features [reviewers' comments in square brackets]	Condition	Topic
Clayson and Woolvine, 2004 Retrospective	<p>Back Pain Direct Clinic: a collaboration between general practitioners and physiotherapists</p> <p>Outlines a back pain service with collaboration between GPs and physiotherapists, incorporating a dedicated telephone 'hotline' manned by physiotherapists. Patients are free to ring the service after their first visit to the GP: it is a key point in clinical risk management that each patient must consult their GP before they can access the service (first point of alert for serious pathology). Patients are then given a Back Pain Direct Clinic card and asked to phone the back pain hotline. Patients are also given details of how to obtain a booklet. Patients approaching the service are assessed using a rigorous protocol and then offered telephone advice, information by post, a clinic appointment or tertiary referral. 80% of patients were totally happy discussing their problem on the phone; 73% felt that The Back Book helped them to understand their problem; 73% of responders felt less worried about their back problem after contacting the hotline; 90% of responders felt they had been involved in the decision-making process.</p> <p>[The telephonic element of this local primary care (opt-in) service was well accepted by patients. No data on clinical or occupational outcomes.]</p>	Musculoskeletal	Hotline advice within primary care
Fleten and Johnsen, 2006 Randomised controlled trial	<p>Reducing sick leave by minimal postal intervention: a randomised, controlled intervention study</p> <p>This Norwegian study intended to determine whether minimal postal intervention had any effect on the length of sick leave. Participants were newly sick-listed persons with musculoskeletal or mental disorders were studied. The intervention group received a general information letter and a questionnaire as their sick leave passed 14 days. The minimal intervention entailed brief general information on available workplace accommodation measures for sick-listed persons and questions on the expected length of the current sick leave and on any relevant work adjustments for the ongoing sick leave. The overall reduction of 8.3 calendar days in mean length of sick leaves in the intervention group compared to controls was not statistically significant. However, the intervention significantly reduced length of sick leaves in subgroups with mental disorders and with rheumatic disorders and arthritis, and overall for sick leaves lasting 12 weeks or more. The overall relative risk of receiving benefits due to sickness after one year in the intervention group was 0.69 compared to controls. The authors suggested that the results should encourage employers, insurance institutions and authorities to initiate challenging questions on the length of sick leave and possible modified work measures, during the first few weeks for at least some groups of sick-listed persons.</p> <p>[In principle, the minimal questions and information delivered by mail in this study could readily be administered by telephone.]</p>	Mental health and musculoskeletal	Postal intervention

Authors	Key features [reviewers' comments in square brackets]	Condition	Topic
Geraedts <i>et al.</i> , 2013 Design for randomised controlled trial	<p>Web-based guided self-help for employees with depressive symptoms (Happy@Work): design of a randomized controlled trial</p> <p>A two-arm randomised controlled trial is designed to compare a web-based guided self-help course with care as usual in employees with depressive disorders. In their narrative review the authors noted:</p> <ul style="list-style-type: none"> • In the past 20 years, research on effective treatments for depression has been extensive. Several meta-analyses have shown that depressive disorders can be treated effectively with pharmacotherapy, psychotherapy, or a combination of pharmacotherapy and psychotherapy. • Compared to treatments for depression in general healthcare, the evidence for effective worker-directed treatments of employees with depressive symptoms is scarce. There is hardly any evidence on effective treatments of depressive symptoms for employees who are not on sick leave. <p>[It may be important to differentiate what is effective for depressed employees who are on sick leave from those who are not, but evidence is not yet available.]</p>	Mental health	Computerised self-management
Gilbody <i>et al.</i> , 2003 Systematic review	<p>Educational and organizational interventions to improve the management of depression in primary care: a systematic review</p> <p>This review evaluated the effectiveness of organisational and educational interventions to improve the management of depression in primary care settings, including simple and inexpensive methods, such as telephone medication counselling. The reviewers noted that several positive-result studies incorporated case management, usually through realignment of the role of primary care nurses. In some studies, nurse involvement was of low intensity and amounted to little more than providing brief patient education and medication counselling or giving support over the telephone. In other studies, nurse case management served as a core component of an effective complex strategy.</p> <p>They concluded strategies effective in improving patient outcome generally were those with complex interventions that incorporated clinician education, an enhanced role of the nurse (nurse case management) and a greater degree of integration between primary and secondary care (consultation-liaison). Telephone medication counselling delivered by practice nurses or by trained counsellors was also effective. Simple guideline implementation and educational strategies were generally ineffective.</p> <p>[Simple, inexpensive techniques such as telephonic medication counselling can be integrated with more complex interventions and case management.]</p>	Mental health	Telephonic medication counselling

Table B.2 Continued

Authors	Key features [reviewers' comments in square brackets]	Condition	Topic
Golinkoff, 2007 Narrative review	<p>Managed care best practices the road from diagnosis to recovery: access to appropriate Care</p> <p>Includes a review of Aetna's behavioural health programme. Interventions include outreach, assessment and enrolment; payer coordination of care between the medical and behavioural healthcare providers; patient telephonic coaching by behavioural health specialists and active case management for more severe depression; or educational information mailings for relatively mild depression. Because of a very high comorbidity between alcohol use and depression, screening for alcohol use is also a component.</p> <p>Improvements in mental health measures were supported by reductions in Hamilton Depression Rating Scale (HDRS) scores, improvements in energy level, reductions in work limitations and reductions in social limitations. One of the programmes for more severely affected members showed that members gained 7.7 days at work per month.</p> <p>Cost profile indicates reduced emergency room use, inpatient length of stay, outpatient visits and behavioural health inpatient stays with associated reductions in costs in these areas. The same programme showed minimal improvement in physical health.</p>	Mental health	Telephonic medication counselling
Goodwin, 2007 Narrative review	<p>Telephone Nursing: An Emerging Practice Area</p> <p>This Canadian review concluded the benefits of telephone services for patients couldn't be overlooked. Studies of economic impacts have focused on the cost of reduced visits elsewhere in the system. Telephone nurse advice services are a relatively inexpensive intervention for government in regions where an entire population of a provincial jurisdiction can be reached with one service. With fairly clear evidence that these programmes are safe and have high levels of caller satisfaction, governments are not waiting for evidence of effectiveness to move ahead with implementation. Evaluations to date in Canada showed minimal evidence of clinical impact and a cost per call ranging from \$10 to \$27.</p>	Outpatients	Telephonic advice

9 Table B.2 Continued

Authors	Key features [reviewers' comments in square brackets]	Condition	Topic
Inglis <i>et al.</i> , 2011 Cochrane review	<p>Structured telephone support or telemonitoring programmes for patients with chronic heart failure (Review)</p> <p>Examined the efficacy of structured telephone support or telemonitoring as a component of disease management for chronic heart failure. It was concluded that telemonitoring reduced all-cause mortality with structured telephone support demonstrating a non-significant positive effect. Both structured telephone support and telemonitoring reduced chronic heart failure-related hospitalisations, and several studies improved quality of life, reduced healthcare costs and were acceptable to patients. Improvements in prescribing, patient knowledge and self-care were also observed.</p> <p>[Adds weight to the issues around acceptability, reducing costs and improving quality of life, but telemonitoring is quite different and less involved than triage or case management. It perhaps should be acknowledged that these patients are likely to have had significant 'face-to-face' intervention within a well-established care pathway.]</p>	Cardiac	Telephonic advice
Kilfedder <i>et al.</i> , 2010 Randomised controlled trial	<p>A randomized trial of face-to-face counselling versus telephone counselling versus bibliotherapy for occupational stress</p> <p>Compares the effectiveness and acceptability of three interventions for occupational stress. 90 National Health Service employees were randomised to one of the three groups. The counselling was about helping the client explore the issues and problems in their working environment, not advising on what to do. The bibliotherapy was a 176 pages stress management workbook based on the interaction model of occupational stress. Authors concluded that the three interventions are equally effective. Because bibliotherapy is the least costly it might be considered as the first line of intervention in a stepped-care approach to occupational stress management, followed by telephone and face-to-face counselling as required.</p>	Occupational stress	Telephonic intervention v face to face v bibliotherapy
Lattimer <i>et al.</i> , 1998 Randomised controlled trial	<p>Safety and effectiveness of nurse telephone consultation in out of hours primary care: randomised controlled trial</p> <p>Nurse telephone consultation reduced overall workload of GPs by 50% while allowing callers faster access to health information and advice. It was not associated with an increase in the number of adverse events. The authors concluded that this model of out of hours primary care is safe and effective.</p>	Primary care patients, NHS	Telephonic advice Safety

Table B.2 Continued

Authors	Key features [reviewers' comments in square brackets]	Condition	Topic
Lattimer <i>et al.</i> , 2000 Randomised controlled trial	<p>Cost analysis of nurse telephone consultation in out of hours primary care: evidence from a randomized controlled trial</p> <p>An economic evaluation was undertaken on the findings of the above study, using a cost analysis from an NHS perspective (a full cost-effectiveness analysis was not possible because it was not an objective of the trial to measure long-term patient outcomes and because of the difficulties involved in measuring other benefits arising from the intervention and combining these with patient outcomes). Cost data were collected prospectively, including only categories of resource use for which costs were significantly different (i.e. additional inputs linked with nurse telephone consultation versus existing general practice). The cost of providing nurse telephone consultation was £81,237 per annum. This, however, determined a £94,422 reduction of other costs for the NHS arising from reduced emergency admissions to hospital. To break even, the intervention would need to save 138 emergency admissions per year, around 90% of the effect achieved in the trial. Additional savings of £16,928 for general practice arose from reduced travel to visit patients at home and fewer surgery appointments within three days of a call. 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. GPs currently bear most of the cost of telephone consultation and benefit least from the savings associated with it. The authors conclude this indicates that the service provides benefits in terms of service quality, which are beyond the reach of this cost analysis.</p>	Primary care patients, NHS	Telephonic advice Cost-effectiveness
Phillips <i>et al.</i> , 2012 Cohort study	<p>The cost effectiveness of NHS physiotherapy support for occupational health (OH) services</p> <p>Pilot project for self-referral physiotherapy service with three tiers: 1) Telephone advice and triage; 2) Face-to-face physiotherapy assessment and treatment if required; 3) Workplace assessment and a return-to-work facilitation package as appropriate. This study evaluated the feasibility and cost-effectiveness of the pilot service. The conversion rate of telephone consults into face-to-face assessments was 94%. All service users who got a workplace assessment had first received both telephone advice and a face-to-face assessment. In terms of adoption and implementation of the service, the face-to-face hospital-based contact was most successful, with little demand for telephone advice alone or workplace assessments. [Seemingly, if face-to-face contact is available immediately it is highly likely to be chosen over telephonic contact.]</p>	Musculoskeletal	Telephone triage and advice, and return to work

Authors	Key features [reviewers' comments in square brackets]	Condition	Topic
Taimela <i>et al.</i> , 2008 Randomised controlled trial	<p>The effectiveness of two occupational health intervention programmes in reducing sickness absence among employees at risk. Two randomised controlled trials</p> <p>This study evaluated the effectiveness of two interventions for employees at high or intermediate risk of sickness absence (classified with self-administered questionnaires). High-risk subjects were invited to a consultation at the occupational health services. Intermediate-risk subjects were invited to call a telephone health advice centre. Longitudinal cohort study with two embedded randomised trials. The identification of high risk of work disability was successful. The occupational health intervention was effective in controlling work loss to a degree that is likely to be economically advantageous within the high-risk group (reduced by a mean of 11 days; 30 v 19). The phone advice intervention for the intermediate risk group was not effective in controlling work loss primarily due to poor adherence (only 21% called the phone advice centre).</p>	High risk of work disability	Telephonic advice

B.1.3 Telephonic case management

Table B.3 Telephonic case management

Authors	Key features [reviewers' comments in square brackets]	Condition	Topic
Eakin <i>et al.</i> , 2007 Systematic review	<p>Telephone Interventions for Physical Activity and Dietary Behaviour Change. A Systematic Review</p> <p>Review of the literature on interventions for physical activity and dietary behaviour change in which a telephone was the primary method of intervention delivery. Twenty-six studies were reviewed, including 16 on physical activity, six on dietary behaviour and four on physical activity plus dietary behaviour. Twenty of 26 studies reported significant behavioural improvements. The reviewers concluded there is now a solid evidence base supporting the efficacy of physical activity and dietary behaviour change interventions in which the telephone is the primary intervention method.</p> <p>[Occupational outcomes were not included.]</p>	Preventive medicine	Telephonic intervention
Gentry <i>et al.</i> , 2013 Cochrane review	<p>Telephone delivered interventions for reducing morbidity and mortality in people with HIV infection (Review)</p> <p>One of three Cochrane reviews conducted to assess the effectiveness of telephone interventions for reducing morbidity and mortality in people with HIV infection. Primary outcomes were changes in behaviour, healthcare uptake or clinical outcomes. Secondary outcomes were appropriateness of the telephone mode and whether underlying factors for change were altered. Findings were based on 11 RCTs (n=1,381), with mixed-results. The overall quality of the evidence was relatively poor – it was found that telephone voice interventions may have a role in improving medication adherence, reducing risky sexual behaviour and reducing depressive and psychiatric symptoms, but the types of telephone intervention varied greatly, and a number of studies suggested that telephone interventions were no more effective than usual care alone. The authors call for more studies conducted in different settings, and highlight that the characteristics of the patient group have important influences on results.</p> <p>[Not sure of generalisability as the patient group are 'hard-to-reach' where a more tailored, face-to-face method may be most effective. The high-quality evidence relates to the effectiveness of telephone administered psychotherapy or counselling for patients with depression.]</p>	HIV	Telephonic intervention

Authors	Key features [reviewers' comments in square brackets]	Condition	Topic
Iles <i>et al.</i> , 2012 Quasi-experimental	<p>Multi-Faceted case management: reducing compensation costs of musculoskeletal work injuries in Australia</p> <p>An intervention including early reporting, employee-centred case management and removal of obstacles to return to work. A 'quasi experimental' pre-post design was employed with 16 selected intervention companies and 492 matched companies without the intervention as a control group: average of 21 months of post-intervention follow-up. There were two main aspects to the intervention provided.</p> <p>1 Early appropriate medical intervention: The intervention consisted of a 24-hour telephone contact line manned by trained injury managers to provide immediate professional assistance and encourage early reporting of a workplace injury. The aim was to receive notification within 20–60 minutes of the injury, with longer than 24 hours considered a delayed injury report. The worker was able to seek care from their usual medical practitioner, or offered medical care at a local preferred medical clinic. Preferred allied health and medical specialists were also utilised. The aim was to shorten waiting times for appropriate procedures in order to encourage return to work with the assignment of suitable duties.</p> <p>2 Workplace intervention: Once an injury was reported, an injury manager was assigned to manage the process and guide the employee, employer and other parties throughout the course of return to work. The injury manager aimed to facilitate contact between the key parties involved in the rehabilitation and return to work of the injured worker. The supervisor/line manager was involved in the process from the outset and if necessary, senior management was engaged to assist resolution of difficulties, predominantly when appropriate alternative duties and support for the worker were not being provided. Furthermore, contact with Human Resources within the company allowed non work-injury issues (obstacles) to be addressed. Injury managers managed cases by telephone contact, or directly at the workplace through a regular time commitment at the workplace. Injury managers were selected on their communication skills, and ability to project manage. Injury management software assisted with timely case management actions and streamlined the electronic communication. The injury manager's role could be considered similar to the stated role of a return to work coordinator. However, the high level of specific training and the consistent application of all processes were intended to enable injury managers to perform these responsibilities at a higher level. The injury manager was an employee of the intervention company, and was authorised by the worker to communicate with different parties regarding the worker's situation. Standard practices applied regarding medical confidentiality.</p>	Musculoskeletal	Telephonic case management

Table B.3 Continued

Authors	Key features [reviewers' comments in square brackets]	Condition	Topic
	<p>Primary outcomes were average number of days of compensation and average cost of claims. Secondary outcomes were total medical costs and weekly benefits paid. Information on 3,312 claims was analysed. In companies where the intervention was introduced the average cost of claims was statistically significantly reduced from \$6,019 to \$3,913, and the number of days of compensation significantly decreased from 33.5 to 14.1 days. Medical costs and weekly benefits costs were also significantly lower after the intervention. Reduction in claims costs were noted across industry types, injury location and most employer sizes.</p> <p>The authors concluded that the model of claims management investigated was effective in reducing the number of days of compensation, total claim costs, total medical costs and the amount paid in weekly benefits.</p> <p>[This study provides good evidence for the effectiveness of telephonic case management when implemented within a 'day of injury' service.]</p>		
Kairy <i>et al.</i> , 2009 Systematic review	<p>A systematic review of clinical outcomes, clinical process, healthcare utilization and costs associated with telerehabilitation</p> <p>In this study, telerehabilitation was defined as the use of communication and information technologies to provide clinical rehabilitation services from a distance. The main findings were:</p> <ul style="list-style-type: none"> • The studies report positive clinical outcomes, with improvement in physical, functional and psychological measures following a telerehabilitation intervention. The evidence consistently demonstrates that similar outcomes can be obtained using telerehabilitation as compared to a face-to-face or other control intervention. • There are fewer studies that examined process outcomes as compared to clinical outcomes. Nevertheless there is a trend from one fair quality RCT and six quasi-experimental studies with and without control groups of good attendance at programmes and good compliance with recommendations when a programme is offered by telerehabilitation. • Patients and therapists reported positive perceived benefits, convenience and usefulness of the telerehabilitation programme. • The literature available does not yet allow us to draw any clear conclusions regarding the effect of telerehabilitation on healthcare utilisation. 	Community rehabilitation	Telephonic intervention

Table B.3 Continued

Authors	Key features [reviewers' comments in square brackets]	Condition	Topic
	<ul style="list-style-type: none"> There are two quasi-experimental studies with control groups and two small pre-post studies that found lower costs for the healthcare facility when using telerehabilitation. While the evidence is gradually emerging, the lack of studies providing cost analyses from similar perspectives and accounting for similar costs prevents us from drawing any definite conclusions about the cost-effectiveness of telerehabilitation. The same is true in many areas of rehabilitation research. <p>The reviewers concluded that telerehabilitation could lead to similar clinical outcomes compared to traditional rehabilitation programmes, with possible positive impacts on some areas of healthcare utilisation. There is overall high acceptance from both patients and therapists. To date, there is insufficient evidence to confirm that telerehabilitation is a cost-saving or cost-effective solution.</p>		
Riegel <i>et al.</i> , 2002 Randomised controlled trial	<p>Effect of a standardized nurse case-management telephone intervention on resource use in patients with chronic heart failure</p> <p>A randomised controlled clinical trial was used to assess the effect of telephonic case management on resource use. Patients were identified at hospitalization and assigned to receive six months of intervention (n = 130) or usual care (n = 228) based on the group to which their physician was randomised. Hospitalisation rates, re-admission rates, hospital days, days to first rehospitalisation, multiple readmissions, emergency department visits, inpatient costs, outpatient resource use and patient satisfaction were measured at three and six months.</p> <p>The heart failure hospitalization rate was 45.7% lower in the intervention group at three months (P = .03) and 47.8% lower at six months (P = .01). Heart failure hospital days (P = .03) and multiple readmissions (P = .03) were significantly lower in the intervention group at six months. Inpatient heart failure costs were 45.5% lower at six months (P = .04). A cost saving was realised even after intervention costs were deducted. There was no evidence of cost shifting to the outpatient setting. Patient satisfaction with care was higher in the intervention group.</p>	Cardiac	Telephonic case management

Table B.3 Continued

Authors	Key features [reviewers' comments in square brackets]	Condition	Topic
Rollman <i>et al.</i> , 2005 Randomised controlled trial	<p>A randomized trial to improve the quality of treatment for panic and generalized anxiety disorders in primary care</p> <p>Does telephone-based collaborative care for panic and generalised anxiety disorders improve clinical and functional outcomes more than the usual care provided by primary care physicians? A randomised controlled trial in working age people. Intervention was by non-mental health professionals who provided psychoeducation, assessed preferences for guideline-based care, monitored treatment responses and informed physicians of their patients' care. It was concluded that telephone-based collaborative care for panic disorder and generalised anxiety disorder is more effective than usual care at improving anxiety symptoms, health-related quality of life and work-related outcomes.</p>	Mental health, anxiety	Telephonic intervention
Rosemann <i>et al.</i> , 2007 Randomised controlled trial	<p>Case Management of Arthritis Patients in Primary Care: A Cluster-Randomized Controlled Trial</p> <p>A three-arm pragmatic controlled trial including 1,021 patients from 75 primary care practices in Germany. GPs were randomised to intervention Group 1 (provision of self-management information and advice), Group 2 (as Group 1 with additional case management provided by a nurse practitioner over the telephone) and a control group.</p> <p>The most significant changes were found in Group 2, with an increase in certain dimensions of quality of life such as pain and social contacts and a reduction in the use of radiographs. The authors conclude that additional case management which involves frequent, structured follow-up was superior to self-management information provision alone and/or usual care.</p> <p>[The use of the telephone was not examined as such, but this study focuses on the use of case management and suggests that the telephone is an acceptable method to deliver this kind of intervention.]</p>	Musculoskeletal, osteoarthritis knee or hip	Telephonic case management

Table B.3 Continued

Authors	Key features [reviewers' comments in square brackets]	Condition	Topic
Warren <i>et al.</i> , 2013a Survey – qualitative	<p>Prospective pilot evaluation of the effectiveness and cost-utility of a 'health first' case management service for long-term Incapacity Benefit recipients</p> <p>A supportive biopsychosocial case-management approach for long-term Incapacity Benefit recipients used telephone and face-to-face techniques to address health needs and behaviours, and any other related psychosocial obstacles to health or employment. People were referred by GPs and other NHS services. The case managers signposted people to NHS, DWP and other services, and also enrolled people into physiotherapy and counselling services. The end-point was when people were ready to enter mainstream services such as Pathways-to-Work or community health services. The comparison was with IB recipients receiving usual care. The case management group showed improved quality of life and mental health measures within six months. For 38% the intervention was ineffective in addressing the primary health condition. Musculoskeletal symptoms and health behaviours did not improve. Tentative estimates of cost-utility suggest an intervention cost of £16,700 to £25,500 per QALY.</p> <p>[IB recipients (typically off work for 26 weeks or more) are known to be 'hard to help'. This study shows that a biopsychosocial case management intervention (including social signposting and access to therapy) can improve health measures. No details on what proportion had face-to-face as well as telephonic management. The end-point was 'when they were assessed to be ready to enter mainstream services such as Pathways-to-Work or community health services', but return-to-work data were not available.] (See also Warren <i>et al.</i>, 2013: Table 4.)</p>	Benefits recipients	Telephone and face-to-face case management

B.1.4 Safety and acceptability of telephonic approaches

Table B.4 Safety and acceptability of telephonic approaches

Authors	Key features [reviewers' comments in square brackets]	Condition	Topic
Andolina <i>et al.</i> , 2001 Conceptual review	<p>Case Management: An Overview of Challenges and Opportunities</p> <p>This review included a section on telephonic case management. The authors noted that telephonic case management has been set up in large geographical or regional areas. They pointed out that telephonic case management could generate unfavourable criticism today. For example when access to live operators is problematic, sending callers into circular voice messaging systems with no resolution. They also emphasise the need to ensure the bounds of telephonic assessment are not overstepped so that care decisions are not made outside areas of expertise, or patients are guided to inappropriate services.</p>	Any	Safety
Bunn <i>et al.</i> , 2005 Bunn <i>et al.</i> , 2009 Systematic review Cochrane review	<p>The effects of telephone consultation and triage on healthcare use and patient satisfaction: a systematic review</p> <p>Telephone consultation and triage: effects on health care use and patient satisfaction (Review)</p> <p>A Cochrane review conducted to assess the effects of telephone consultation and triage on safety, service use and patient satisfaction. Nine studies were included, and the specific outcomes of interest were mortality, adverse events, service use, calls handled by telephone alone, patient satisfaction and costs. Study settings were primary care, A&E, and out-of-hours care. In general, at least 50% of calls were handled by telephone consultation alone, demonstrating potential to reduce GP workload. No evidence was found of an increase in adverse effects or use of other services, and patients were satisfied. However, the authors note that not all outcomes of interest were reported on in the included studies and therefore the above findings come from only a small number of studies. They call for further rigorous evaluation of such outcomes.</p>	Any	Acceptability and use of GP services

Authors	Key features [reviewers' comments in square brackets]	Condition	Topic
Byrne <i>et al.</i> , 2007 Retrospective study	<p>A survey of NHS Direct callers' use of health services and the interventions they received</p> <p>NHS Direct is a 24-hour patient-led telephone advice service which aims to help callers to self-manage problems and reduce unnecessary demands on other NHS provision. This study aimed to evaluate the contribution of NHS Direct to quality of care and its impact on other health services. A postal survey was delivered to callers who had contacted the service between 2004 and 2005 with a cough/sore throat or abdominal pain. It was reported that 26% of callers were advised to self-care (and 26% of those chose to contact a GP anyway), 54% were advised to contact a GP, 19% were referred to A&E and 1% were referred to another service. Concludes that most referrals made were justified by the interventions received by patients, but there was some duplication of service use. [See also Mark and Shepherd 2003: Table 1.]</p>	Abdominal pain or cough and/or sore throat	Telephonic intervention
Car and Sheikh, 2003 Narrative review	<p>Telephone consultations</p> <p>A literature review of studies published between 1974 and 2002 evaluating the role of telephones in helping to deliver clinical care. Outcomes of interest were: acceptability by patients and healthcare professionals; the scope in management of acute and chronic disorders; quality and safety. It was reported that patient and healthcare professionals' satisfaction with telephone consultations is high, tempered only by clinicians' concerns about safety and medicolegal risks. It was also found that telephone consultations were comparable to face-to-face consultations in facilitating health promotion interventions, as a triage method in primary care and in promoting access and delivery of routine healthcare to people with chronic disorders. However, there is a lack of research focused on the management of individual acute disorders and overall cost-effectiveness.</p> <p>The authors note the best researched area is follow-up by telephone of various acute and chronic disorders, used as an extension of or substitute for traditional inpatient and outpatient care or GP visits. Telephone screening can be a valuable tool for identifying patients who need face-to-face review, and enables the efficient targeting of services. Telephone follow-up has been shown to improve adherence to medication and information, improve patient satisfaction, reduce missed appointments, reduce the number of return visits, and may also reduce pain and use of analgesics by altering pain perception.</p> <p>In order to ensure quality and safety, staff training, protocols for managing common scenarios, dedicated time for telephone contacts, documentation of all consultations and a low threshold for organising face-to-face consultation are required. Key communication skills for face-to-face consultations should be applied to telephone consultations.</p>	Any	Safety

Table B.4 Continued

Authors	Key features [reviewers' comments in square brackets]	Condition	Topic
Ernesater <i>et al.</i> , 2012 Retrospective study	Malpractice claims regarding calls to Swedish telephone advice nursing: what went wrong and why? Analysis of the characteristics of all 33 malpractice claims (13 deaths; 11 admissions to intensive care) arising from telephone calls to Sweden's Healthcare Direct during 2003-2010. The most common symptoms were abdominal (n = 11) and chest pain (n = 6). [While no mental health or musculoskeletal symptoms were listed, there may be an under-reporting phenomenon.] Failure to listen to the caller was the most common reason for malpractice claims (either nothing was communicated or the wrong thing was communicated), but high workload also featured. Work-group discussion was the most common measure taken to prevent future re-occurrence, along with nurse education. When callers make repeated contacts, telenurses need to re-evaluate their concerns and need for care.	Any	Safety
Holmstrom and Hoglund, 2007 Qualitative	The faceless encounter: ethical dilemmas in telephone nursing Interviewed 12 telephonic nurses and identified five areas for potential ethical dilemmas: talking through a third party; discussing personal and sensitive problems over the phone; insufficient resources and the organisation of health care; balancing callers' information needs with professional responsibility; and differences in judging the caller's credibility. The authors concluded that telephonic nurse services need to develop the ethical competence of their personnel.	Any	Ethical dilemmas
Mair and Whitten, 2000 Systematic review	Systematic review of studies of patient satisfaction with telemedicine This review was undertaken to examine patient satisfaction with teleconsultation, specifically clinical consultations between healthcare providers and patients involving real-time interactive video. Methodological deficiencies of the published research limit the generalisability of findings, but studies suggest that teleconsultation is acceptable to patients in a variety of circumstances, but issues relating to patient satisfaction require further exploration from the perspective of both clients and providers.	Any	Acceptability

Table B.4 Continued

Authors	Key features [reviewers' comments in square brackets]	Condition	Topic
Neal <i>et al.</i> , 2004 Quasi-experimental	<p>Alternative forms of consulting: survey of patients and GPs about their consultations</p> <p>Questionnaire data were collected from 1,150 consultations between patients and GPs. There were 90.8% valid responses from GPs and 73% valid responses from patients. A greater number of GPs than patients thought that a far greater proportion of consultations could have been dealt with by telephone or email, although there was greater agreement between the two groups that 'new problems' should be dealt with as a face-to-face appointment. The greatest differences were related to 'planned review' and 'further consultation' appointments, with GPs more amenable to telephone or email consultations. These findings suggest different types of appointment are more suitable to alternative methods of consultation, but patients may need convincing that this is acceptable.</p>	Any	Telephonic intervention to manage GP demand
Pandor <i>et al.</i> , 2013 Systematic review	<p>Home telemonitoring or structured telephone support programmes after recent discharge in patients with heart failure: systematic review and economic evaluation</p> <p>An HTA report of a systematic review undertaken to determine the clinical and cost-effectiveness of home telemonitoring or structured telephone support strategies compared with usual care for patients with chronic heart failure. The methodological quality of the 21 studies included varied widely, and the effectiveness of the interventions varied widely according to the type of system used, but in general, remote monitoring with medical support provided during office hours showed beneficial effects. [Outcomes measured were largely mortality and hospitalisation, no vocational outcomes examined.] However, the results were statistically inconclusive. The cost-effective analysis suggests that telemonitoring during office hours was an optimal strategy in most scenarios.</p>	Cardiac	Safety; comparison with usual care; cost

Table B.4 Continued

Authors	Key features [reviewers' comments in square brackets]	Condition	Topic
Richards <i>et al.</i> , 2006 Qualitative study	<p>Developing a U.K. protocol for collaborative care: a qualitative study</p> <p>Semi-structured interviews and focus groups with 11 patients and 38 mental healthcare professionals exploring the acceptability, feasibility and barriers to a collaborative care model of treatment of depression within UK primary care [telephone is only one aspect].</p> <p>Patients with depression value regular contact, but prefer the supportive aspect and the healthcare professional's focus on information. To be acceptable to patients, contacts must minimise potential for patient disempowerment. The use of the telephone is convenient and lends anonymity, but established mental health workers think it will impair their judgments. While patients merely identified the need for skilled case managers, GPs preferred established professionals. In summary, the main barrier to the implementation of collaborative care in the UK is the selection and training of workers who are prepared to operate in a collaborative care framework and who are acceptable to patients and GPs.</p>	Mental health	Telephonic intervention with low-intensity psychological intervention
Stanberry, 2001 Workshop summary	<p>Legal ethical and risk issues in telemedicine</p> <p>A summary of a workshop in London in 1999 where practitioners in the field of telemedicine discuss legal, ethical and risk issues arising from the practice of healthcare from a distance using information and technologies (including telephonic delivery). It was recognised that it creates concerns among health professionals. There was broad consensus that many of the legal and ethical issues raised by those who dislike the idea of telemedicine are not specific to telemedicine but common to healthcare in general. Ensuring clinicians conform to appropriate standards of care are generic issues. It was suggested that professional associations and Royal Colleges should take a proactive role in providing better education and guidance about telemedicine.</p>	Any	Ethics; safety

Authors	Key features [reviewers' comments in square brackets]	Condition	Topic
Taylor <i>et al.</i> , 2002 Randomised controlled trial	<p>Patient Satisfaction with a New Physiotherapy Telephone Service for Back Pain Patients</p> <p>A randomised-controlled trial conducted in two general practices whereby patients with back pain referred for physiotherapy were randomised into a control group who received usual care or an experimental group who received physiotherapy telephone advice before their usual care (n=295). The aim of the study was to determine the usefulness of the telephone service in terms of patient satisfaction.</p> <p>The telephone advice service was based on RCGP (1998) and CSAG guidelines (1994). This included postural management, activity modification (including work), promotion of activity (largely exercise rather than work), pain-relief positioning and reassurance. Subjects were contacted within 24 hours of receiving the referral in order to provide the advice. No formal training in telephone consulting was provided, but advice was sought from an experienced telephone triage nurse.</p> <p>Response rate to the patient satisfaction questionnaire was 75.6% (n=223) and it was found that the telephone advice group expressed more satisfaction than the control group (p<0.05), and that the telephone advice reduced patient symptoms (measured by a question asking whether they felt better).</p> <p>[No work or other behavioural outcomes are measured and it is unclear whether telephone only might have been as successful. It appears that satisfaction arises from reduced waiting times – important point to note as this is often reported by patients as a source of frustration and waiting to be seen hinders resumption of normal activities.]</p>	Any	Acceptability
Warren <i>et al.</i> , 2013b Survey – qualitative	<p>'It was just nice to be able to talk to somebody': long-term incapacity benefit recipients' experiences of a case management intervention</p> <p>This study explored participant experiences of the biopsychosocial case management intervention for Incapacity Benefit recipients (reported in Warren <i>et al.</i>, 2013: Table 3). Service experiences were assessed qualitatively for a sample of participants. Respondents were generally positive about their experience of the intervention and particularly the benefit gained from the personal support that case managers provided. Some participants indicated they would have preferred longer duration of treatments and an increased level of face-to-face support. It was concluded that case management approaches may offer a supportive environment in which the health needs of those in long-term receipt of IB can be addressed.</p> <p>[That long-term benefit recipients were generally appreciative of the help from a case manager is an important finding. It is not surprising that a proportion of this group of people might feel a need for more intensive intervention.]</p>	Any	Acceptability

B.2 Indirect evidence

B.2.1 Therapeutic intervention

Telephonic, non-telephonic and web-based delivery of therapeutic intervention illustrating principles and practice with the potential to inform telephonic occupational health approaches.

Table B.5 Therapeutic intervention

Authors	Key features [reviewers' comments in square brackets]	Condition	Topic
Bee <i>et al.</i> , 2010 Randomised controlled trial	Improving health and productivity of depressed workers: a pilot randomized controlled trial of telephone cognitive behavioral therapy delivery in workplace settings Participants were certified absent from work with mild/moderate mental health difficulties for 8 to 90 days. Randomised to telephonic cognitive behaviour therapy (CBT) or usual care. T-CBT was associated with medium to large positive effect sizes on clinical outcomes and work productivity at three months. High loss to follow-up at three months (40%) was considered comparable to other studies on non-face-to-face psychotherapy.	Mental health	Telephonic cognitive behavioural intervention
Bell <i>et al.</i> , 2005 Randomised controlled trial	The effect of a scheduled telephone intervention on outcome after moderate to severe traumatic brain injury: a randomized trial A randomised trial was conducted to measure the effectiveness of a scheduled telephone intervention offering counselling and education to people with traumatic brain injury on behavioural outcomes compared with standard outpatient follow-up at one-year post-injury (n=171). Subjects were randomly assigned to receive telephone calls at two and four weeks and two, three, five, seven and nine months after discharge. The calls consisted of brief motivational interviewing, counselling and education, plus facilitating usual care or usual care alone through follow-up appointments and therapy prescriptions. At one-year follow up, those who had received scheduled telephone intervention fared significantly better on the primary composite measure (a combination of single outcome measures including disability ratings, quality of life, neurobehavioural function, general health, and medical outcome). This group also fared better on specific outcomes such as functional status and quality of well-being. There were no significant differences on vocational status or community integration status. Authors advise results may not be generalisable because the sample and setting were not representative.	Traumatic brain injury	Telephonic counselling intervention

Authors	Key features [reviewers' comments in square brackets]	Condition	Topic
Bell <i>et al.</i> , 2008 Randomised controlled trial	<p>The effect of telephone counselling on reducing post-traumatic symptoms after mild traumatic brain injury: A randomised trial</p> <p>This study aimed to determine whether focused, scheduled telephone counselling during the first three months after mild traumatic brain injury decreases post-traumatic symptoms and improves major role performance (including work) and participation in community activities at six-months follow-up (85%, n=311) compared with usual care.</p> <p>The treatment arm received a telephone contact within two days of injury and four follow-up calls at two, four, eight and 12 weeks. The calls provided information and reassurance on the general course of recovery and assisted in providing a plan for self-management of specific symptoms. The providers all had experience in interviewing or telephone crisis management, and were trained in motivational interviewing and self-management techniques to assist the telephone interactions. They were also provided with education on specific symptoms and the typical course of recovery. The calls ranged from brief check-ins lasting less than a minute, to a more problem-focused call lasting up to 33 minutes, averaging eight minutes. A physician and a psychologist supervised the study. Adherence to study protocol was reviewed and calls were also used as an educational tool during group supervision, which occurred on a bi-monthly basis.</p> <p>The coordinators used techniques of problem clarification and reflective listening to help the patient identify and prioritise symptoms, suggesting appropriate management strategies and modelled problem-solving behaviours. They also reinforced positive behaviour aimed at physical mobilisation and provided encouragement. Patients were advised to seek appropriate medical treatment if warranted, and educational material was posted when indicated.</p> <p>People assigned to receive scheduled telephone calls had significantly better outcomes in relation to post-traumatic symptoms – fewer had anxiety and quality of life issues, and fewer had areas of functioning negatively impacted by symptoms. One of the largest differences between the treatment and control arms post-treatment was noted for work participation (11% difference, p=0.024) (although it is not clear in the paper what was measured exactly other than 'affected function').</p> <p><i>'These results demonstrate that telephone counselling with a focus on symptom management and encouraging an early return to everyday activities was successful in reducing the development of chronic symptoms.'</i></p> <p>[A lot of parallels with common health problems in that a small number of people move into chronicity with problems largely related to psychosocial factors. Study is sound, results are credible and the intervention is described well, although the authors did not establish which, if any, of the specific intervention components made the difference to outcome. A good case management example.]</p>		

Table B.5 Continued

Authors	Key features [reviewers' comments in square brackets]	Condition	Topic
Bell <i>et al.</i> , 2011 Randomised controlled trial	<p>Scheduled Telephone Intervention for Traumatic Brain Injury: A Multicenter Randomized Controlled Trial</p> <p>A follow-up on the above study (+2008 study) to assess outcomes between groups at one and two years. Telephone calls were made as described above, but continued at 12, 15, 18 and 21 months post-discharge. No significant differences were noted between the groups at years 1 or 2. The authors concluded that this study failed to replicate the findings of the previous study, but believe that essential differences in the way the treatment was implemented may account for the differences between the results of the current study and the previous one. [Thought this paragraph was useful.] <i>'One of the most challenging aspects of clinical trials using experience-based treatments is standardizing and defining the "active ingredients" of the treatment, and that this difficulty is an ongoing challenge where personal characteristics of the clinician, general treatment factors, and approach-specific factors are intertwined in complex ways. While the active ingredients of pharmacologic and physical agents are relatively well-defined, those for biobehavioural interventions in rehabilitation are less well-delineated. Rehabilitation research struggles to isolate the aspects of human clinical interactions that have therapeutic impact. It is possible that in this study, our attempt to focus the active ingredients more specifically toward independent problem solving was only useful for certain kinds of patients and certain types of problems, but it was not effective in the sample as a whole. Perhaps some patients benefit from more directive intervention and practical case management, which, as noted, was deemphasized. In line with this logic, future studies may benefit from a more narrowly defined patient population whose needs may be more likely to be met by a well-specified approach.'</i></p>		

Authors	Key features [reviewers' comments in square brackets]	Condition	Topic
Cavanagh <i>et al.</i> , 2006 Quasi-experimental	<p>The effectiveness of computerized cognitive behavioural therapy in routine care</p> <p>A pragmatic, non-randomised trial of a computerised cognitive behavioural therapy package 'Beating the Blues', which comprises nine treatment sessions: a 15-minute introductory video viewed on the computer, followed by eight interactive therapy sessions, usually one per week. Patients with anxiety and/or depression (n=219) were offered the package, and clinical, work and social adjustment scores were measured before and after. Statistically and clinically significant improvements in the scores were shown at six-months follow-up, although there was a large attrition rate, subject to self-selection bias and no actual behavioural outcomes (e.g. work participation) were recorded.</p> <p>[The authors report that the package has previously been demonstrated as a successful first-line tool within a stepped-care framework for the management of common mental health problems, but findings suggest patients do not routinely choose this option.]</p>	Mental health, anxiety and depression	Computerised CBT in stepped care
Cicolini <i>et al.</i> , 2011 Controlled trial	<p>Effectiveness of the telephonic-case-management for treatment of headache. A pilot study</p> <p>Three-month trial of nurse-led telephone case management for people with chronic headache. Intention was to provide a continuum of care and improve patients' compliance with care plans and medication. Authors concluded that telephone counselling by specialised nurses can improve compliance with treatment, reduce intensity of headache (but not frequency of attacks), reduce hospitalisations and improve perceived psychophysical wellbeing.</p>	Headache	Telephonic intervention

Table B.5 Continued

Authors	Key features [reviewers' comments in square brackets]	Condition	Topic
Currell <i>et al.</i> , 2009 Cochrane review	<p>Telemedicine versus face to face patient care: effects on professional practice and health care outcomes (Review)</p> <p>A Cochrane intervention review conducted to assess the effectiveness of telemedicine as an alternative to face-to-face patient care demonstrated by clinical outcomes of care, aspects of professional practice, economic measures, the acceptability of care to patients and staff, and staff and patient satisfaction. Findings are based on seven trials (n=800) comparing telemedicine with face-to-face care. The studies were concerned with self-management of hypertension, diabetes and rehabilitation for patients following a myocardial infarction and largely focused on instructions to monitor blood pressure, glucose levels, diet and exercise, and medication adherence.</p> <p>Sample sizes in each study were small. None of the included studies reported any detrimental effects, nor did they show unequivocal benefits and therefore did not constitute evidence of the safety of telemedicine. None of the included studies examined economic benefits and did not demonstrate evidence of clinical benefits. All the technological aspects of the interventions appear to have been reliable and to have been well accepted by patients.</p> <p><i>'When considering the use of communication technologies, practitioners need to ensure that the clinical rationale for the proposed application is established, and appreciate that the use of telemedicine technologies requires different clinical and communication skills. These issues need to be considered quite separately from the assessment of the technology.'</i></p>	Cardiac, hypertension, diabetes	Telemedicine v face-to-face

Authors	Key features [reviewers' comments in square brackets]	Condition	Topic
Hammond <i>et al.</i> , 2012 Quasi-experimental	<p>Comparative Effectiveness of Cognitive Therapies Delivered Face-to-Face or over the Telephone: An Observational Study Using Propensity Methods</p> <p>An observational study comparing the clinical effectiveness of cognitive therapies delivered face-to-face or over the telephone. 39,227 adults who were referred for IAPT were given two or more sessions of computerised CBT, and after controlling for confounding effects, 4,106 individuals were selected for a before and after analysis, and 147 pairs of participants were 1:1 matched in a more stringent analysis.</p> <p>Statistically greater reductions of scores for over-the-telephone treatment were found for depression, generalised anxiety and work and social adjustment [although the latter was the smallest effect size at 0.03]. The per-session cost for over-the-telephone treatment was 36.2% lower than face to face.</p> <p>These results suggest that over-the-telephone CBT is not inferior to face-to-face delivery, except for people with more severe illness where face-to-face was superior. The authors suggest this study provides evidence for better targeting of therapy, efficiencies for patients, cost savings for services and greater access to therapies for people with common mental health disorders.</p> <p>[The authors found that older age was associated with face-to-face treatment, and individuals were less likely to receive over-the-telephone treatment if they were unemployed, but the reasons why are not investigated in the study.]</p>	Mental health, anxiety and depression	Telephonic intervention v face to face within stepped care
Lerner <i>et al.</i> , 2012 Randomised controlled trial	<p>Impact of a work-focused intervention on the productivity and symptoms of employees with depression</p> <p>Trial of a novel multicomponent work-focused care programme, named the Work and Health Initiative (WHI), was developed for employees with depression. An eight-week programme provided over the phone by counsellors aims to optimise functional outcomes using vocational, medical and psychological strategies. The counsellor and employee co-create a care plan for dealing with each functional problem and review specific assignments and progress at each session.</p> <p>The programme had moderate-to-large positive effects on multiple indicators of functioning including at-work performance, at-work productivity loss, work absences and productivity loss due to missed work time, with considerable productivity cost savings.</p>	Mental health, depression	Telephonic intervention to improve work functioning

Table B.5 Continued

Authors	Key features [reviewers' comments in square brackets]	Condition	Topic
McLean <i>et al.</i> , 2012 Cochrane review	Telehealthcare for chronic obstructive pulmonary disease (Review) Hospital care is often used for exacerbations of chronic obstructive pulmonary disease (COPD): telehealthcare has the potential to reduce admission to hospital when used to administer care to the patient from within their own home. Included studies were randomised controlled trials assessing telehealthcare (defined as healthcare at a distance), involving the communication of data from the patient to the health carer who then processes the information and responds with feedback regarding the management of the illness. Concluded that people treated this way do manage to stay out of hospital longer than people treated by conventional systems of care. Although these systems are expensive initially, there can be a cost saving long term.	COPD	Telephonic intervention
Piette <i>et al.</i> , 2011 Randomised controlled trial	A Randomized Trial of Telephonic Counselling Plus Walking for Depressed Diabetes Patients Patients with diabetes and depression often have self-management needs that require between-visit support. A targeted programme of telephone-delivered CBT combined with a pedometer-based walking programme significantly decreased blood pressure, increased physical activity and decreased depressive symptoms among patients with both diabetes and depression. [No information on work status or occupational outcomes.]	Type 2 Diabetes, mental health, depression	Telephonic cognitive-behavioural intervention
Seekles <i>et al.</i> , 2011 Randomised controlled trial	Stepped care treatment for depression and anxiety in primary care: a randomized controlled trial Participants randomised to usual care or stepped care (consisting of (1) watchful waiting; (2) guided self-help; (3) short face-to-face problem solving treatment; and (4) pharmacotherapy and/or specialised mental health care. The study did not demonstrate that stepped care for depression and anxiety in general practice was more effective than care as usual. It was mentioned that the comparator (usual care) is particularly well developed (in The Netherlands), thus leaving limited room for a difference. Recruitment was problematic: the authors stated that this model, with recruitment through screening in patients with mild disorders, is not a good methodology – recruitment of patients via referral of the GP was recommended for further research. It was also suggested that an improvement to the model would be to give the patient a choice in the first step between low-intensity treatments – e.g. (guided) self-help and psychoeducation in few group-sessions – or they might even choose to skip the first step. [The first two steps could involve a support element, which could be delivered telephonically: whether such support would improve outcomes is unknown.]	Mental health, anxiety and depression	Stepped care

Authors	Key features [reviewers' comments in square brackets]	Condition	Topic
Simon <i>et al.</i> , 2009 Randomised controlled trial	<p>Incremental Benefit and Cost of Telephone Care Management and Telephone Psychotherapy for Depression in Primary Care</p> <p>Randomised trial comparing two interventions with continued usual care: (1) telephone care management intervention included up to five outreach calls for monitoring and support, feedback to treating physicians, and care coordination; and (2) care management plus telephone psychotherapy intervention added an eight-session structured CBT programme with up to four additional calls for reinforcement. Outcome was assessed by SCL-90 and 'depression-free days'. Health services costs were measured using healthcare plan accounting records.</p> <p>Over 24 months the telephone care management intervention led to a gain of 29 depression-free days compared to usual care, and care management plus telephonic psychotherapy led to a gain of 46 days.</p> <p>The incremental net benefit for the telephone care management programme varies according to the value assigned to an additional day free of depression. For the telephone care management plus psychotherapy intervention, the authors concluded that the incremental net benefit becomes positive (i.e. the value of added days free of depression exceeds added cost) whenever the value we assign to an additional depression-free day exceeds approximately US\$9.</p> <p>[This study illustrates that while telephonic intervention can be better than usual care for people with depression, outcomes can be improved with the provision of suitable psychotherapy, and this can also be delivered telephonically.]</p>	Mental health, depression	Telephonic intervention

Table B.5 Continued

Authors	Key features [reviewers' comments in square brackets]	Condition	Topic
Sullivan and Simon, 2012 Quasi-experimental	<p>A telephonic intervention for promoting occupational re-integration in work-disabled individuals with musculoskeletal pain</p> <p>Occupational rehabilitation for people with chronic musculoskeletal pain. Compares a telephonic occupational rehabilitation programme (a telephonic version of the Progressive Goal Attainment Program, which is a risk-targeted intervention designed to reduce pain-related disability consequent to musculoskeletal injury) with a face-to-face format of the same programme. The programme has return to work as a primary outcome. The sessions comprise a structured biopsychosocial plan-and-action process focused on activity resumption (rather than symptom reduction) which includes belief challenges, goal setting and problem solving. The telephonic version was acceptable to the majority of participants (76%) to whom it was offered. There were indications that engagement and adherence issues were more problematic in telephonic format than in the face-to-face intervention. Both groups showed comparable reductions in pain, depression, fear of symptom exacerbation and self-reported disability. Participants in the face-to-face intervention showed greater reduction in catastrophic thinking. 26% in the telephonic arm had resumed some form of employment at treatment termination compared to 56% in the face-to-face arm. Authors pointed to the low cost and accessibility advantages of a telephonic delivery.</p> <p>[No control group and small sample size are limitations, but the study does indicate that return to work can be facilitated telephonically for a proportion of people with persistent musculoskeletal pain.]</p>	Musculoskeletal	Telephonic intervention v face to face
Wang <i>et al.</i> , 2007 Randomised controlled trial	<p>Telephone Screening, Outreach, and Care Management for Depressed Workers and Impact on Clinical and Work Productivity Outcomes</p> <p>A randomised controlled trial involving 604 employees covered by a managed behavioural health plan were identified in a two-stage screening process as having significant depression. A telephonic outreach and care management programme encouraged workers to enter outpatient treatment (psychotherapy and/or antidepressant medication), monitored treatment quality continuity and attempted to improve treatment by giving recommendations to providers. Participants reluctant to enter treatment were offered a structured telephone cognitive behavioural psychotherapy.</p> <p>Combining data across six-month and 12-month assessments, the intervention group had significantly lower depression self-report scores, significantly higher job retention and significantly more hours worked among the intervention than the usual care groups that were employed. It was concluded that a systematic programme to identify depression and promote effective treatment significantly improves not only clinical outcomes but also workplace outcomes. The financial value of the latter to employers in terms of recovered hiring, training and salary costs suggests that many employers would experience a positive return on investment from outreach and enhanced treatment of depressed workers.</p>	Mental health, depression	Case management intervention

B.2.2 Generic topics

Generic topics, background and concepts having a possible bearing on telephonic occupational health approaches.

Authors	Key features [reviewers' comments in square brackets]	Condition	Topic
Burton <i>et al.</i> , 2008 Best evidence synthesis	<p>Management of work-relevant upper limb disorders: a review</p> <p>Upper limb disorders are clinically challenging and responsible for considerable work loss, and there is a need to determine effective approaches for their management. Symptoms related to the musculoskeletal system are exceedingly common in all segments of the population. The experience varies from transient discomfort to more severe pain. The symptoms are often recurrent and sometimes become persistent. The onset of a given episode may involve physical stress across a joint or the surrounding soft tissues (ligament, muscle, tendon), but this does not fully explain what is a complex phenomenon. The development of symptoms has an inconsistent association with physical stressors or pathology. However, it is common to find that symptoms are work-relevant – i.e. the symptoms fluctuate in severity and frequency in response to certain activities at work. The symptoms tend to be short-lived, with any injured tissues healing in a timely fashion: the progression to persistent pain and disability is related to psychosocial more than physical factors. Neither biomedical treatment nor ergonomic workplace interventions alone offer an optimal solution; rather, multimodal interventions show considerable promise, particularly for occupational outcomes. Early return to work, or work retention, is an important goal for most cases and may be facilitated, where necessary, by transitional work arrangements. The emergent evidence indicates that successful management strategies require all the players to be onside and acting in a coordinated fashion; this requires engaging employers and workers to participate. The biopsychosocial model applies; biological considerations should not be ignored, but psychosocial factors are more influential for occupational outcomes. Implementation of interventions that address the full range of psychosocial issues will require a cultural shift in the way the relationship between upper limb complaints and work is conceived and handled. [Review commissioned by the HSE.]</p>	Musculoskeletal – work-relevant upper limb disorders	Best evidence synthesis

Table B.6 Continued

Authors	Key features [reviewers' comments in square brackets]	Condition	Topic
Corbiere and Shen, 2006 Systematic review	<p>A systematic review of psychological return-to-work interventions for people with mental health problems and/or physical injuries</p> <p>This systematic review aimed to describe psychological return-to-work interventions for people with mental health problems and/or physical injuries. The findings were based on 14 studies that assessed interventions aiming to improve the ability of employees on sick leave, with or without work-related physical injuries, to cope or manage mental health problems. Outcomes variously included return-to-work status, sick leave duration and health-related quality of life. The most popular interventions focus on coping strategies, problem-solving strategies and belief/attitude adjustments. These are often grouped as a cognitive behavioural approach, which the authors concluded have led to significant improvements in occupational and health outcomes. Other key interventions were communication between the players, with involvement at individual, group and organisational levels) along with follow-up community support.</p> <p>[The methods used in the review for assessing the quality of the included studies and interpreting the return-to-work rates has been questioned elsewhere, with a risk of bias being identified. However, the findings of this systematic review point in a general direction that is echoed in numerous other publications.]</p>	Mental health and/or physical injury	Psychological interventions
Dibben <i>et al.</i> , 2012 Rapid evidence review	<p>Quantifying the effectiveness of interventions for people with common health conditions in enabling them to stay in or return to work: A rapid evidence assessment</p> <p>A rapid evidence review commissioned by the Department for Work and Pensions. An assessment of published research on the effectiveness of health and work interventions to help people with common health conditions to stay in work or return to work following sickness absence. The objective was to understand the quantitative impact of such interventions, considering the latest available evidence (2008–2011). The evidence base on work-related interventions for people with common health conditions has not changed substantially since 2007, and studies generally lack robust quantification of employment outcomes and cost/benefit analysis of interventions.</p>	Common health problems	Return-to-work interventions

Authors	Key features [reviewers' comments in square brackets]	Condition	Topic
	<p>There is a reasonably strong body of evidence, with positive effects for:</p> <ul style="list-style-type: none"> • workplace-based interventions for those with musculoskeletal disorders, particularly for low back pain (LBP); • cognitive behavioural therapy (CBT), vocational rehabilitation and workplace rehabilitation for LBP; • supported employment for people with severe mental health conditions; and • psychological interventions for depression. <p>In general, there is some evidence of the benefits gained from coordination between rehabilitation professionals and the value of a case management approach among studies examining interventions for people with general health conditions.</p> <p>The majority of studies on musculoskeletal conditions (largely from back pain) provide some evidence that a multidisciplinary approach including CBT and workplace-focused interventions are effective in terms of benefits and costs. Evidence on other interventions is either of low quantity, poor quality or inconclusive.</p> <p>Little evidence exists on the effectiveness of interventions for employment outcomes among people with mental illnesses. Some studies address depression, with evidence indicating the positive effects of psychological/work-based interventions. Others cover distress/burnout/stress, but tend to focus on healthcare professionals, with generally weak quantity/quality of evidence.</p> <p>Evidence was found for the benefits of early interventions, especially in terms of health outcomes, but with insufficient good evidence on the quantifiable employment outcomes. Importantly, many studies do not include mention of whether return to work is sustained.</p> <p>[Review commissioned by DWP.]</p>		

Table B.6 Continued

Authors	Key features [reviewers' comments in square brackets]	Condition	Topic
Hoefsmit <i>et al.</i> , 2012 Systematic review	<p>Intervention characteristics that facilitate return to work after sickness absence: a systematic literature review</p> <p>The aim was to detect characteristics of RTW interventions that generally facilitate return to work (i.e. in multiple target populations and across interventions). Authors considered that this type of knowledge is highly relevant to policy makers and health practitioners who want to deliver evidence-based care that supports work participation. While early interventions, initiated in the first six weeks of the RTW process were scarce, they were effective to support RTW. Multidisciplinary interventions appeared effective to support RTW in multiple target groups (e.g. back pain and adjustment disorders). Time contingent interventions (delivered to a pre-defined schedule) were effective in physical complaints. Activating interventions such as gradual RTW were effective in physical complaints, but have not been studied in psychological complaints. It was concluded that the most effective interventions to support RTW are early- and multidisciplinary intervention and time-contingent activating interventions.</p> <p>[As demonstrated by evidence elsewhere in these tables, it is anticipated that some of the intervention characteristics identified in this review can be incorporated into telephonic delivery.]</p>	Any (included studies were mostly musculoskeletal and mental health)	Return-to-work interventions
Hanson <i>et al.</i> , 2006 Narrative review and model development	<p>The costs and benefits of active case management and rehabilitation for musculoskeletal disorders</p> <p>'Active case management' describes the goal-oriented approach to achieving specific work retention and return-to-work outcomes. It is a strategy for supporting individuals (with MSDs) stay in work or return to work. In practice, case managers integrate clinical and occupational management with the needs of the individual to facilitate early return to work (or work retention). There is good international scientific evidence that case management methods are cost-effective through reducing time off work and lost productivity, and reducing healthcare costs. There is even stronger evidence that best-practice rehabilitation approaches have the very important potential to significantly reduce the burden of long-term sickness absence due to musculoskeletal disorders. Many of the factors influencing the adoption of cost-effective case management and rehabilitation approaches rest with employers, and funders/commissioners of healthcare. It may be easier to integrate these practices into large and medium-sized workplaces, but there is no reason why the same principles cannot be applied to small businesses and the self-employed. It appears to be very timely for the distribution of information to employers and other key players about how effective case management and suitable rehabilitation approaches can be, and how applicable they are to UK settings.</p>	Musculoskeletal	Case management

Authors	Key features [reviewers' comments in square brackets]	Condition	Topic
	<p>An evidence-based model for managing those with MSDs was developed that is widely applicable to all types of industry and business in the UK. It describes the principles to apply in order to integrate case management and rehabilitation with the workplace. There is a clear message in the model for all those involved on what they should do and why, using a staged approach: create the right culture; manage workers with musculoskeletal problems; manage the return-to-work process; and monitor and review the programme effectiveness. The model may be used by all sizes of organisation and should be suitable for all forms of musculoskeletal disorders. The role of the case manager may be taken by an occupational health professional or the employer (e.g. a line manager). The important points are to respond to the needs of individuals quickly, make appropriate arrangements for them (which may include treatment and workplace changes) and gain agreement from the individual, employer, healthcare provider and case manager as to the individual's planned return to work if absent. The review highlighted the importance of good communication and the need to ensure all the players are onside. [Review commissioned by HSE.]</p>		
Kendall <i>et al.</i> , 2009 Evidence-informed guidance	<p>Tackling musculoskeletal problems – a guide for clinic and workplace: identifying obstacles using the psychosocial flags framework</p> <p>What is known as the Psychosocial Flags Framework has been devised to help understand and identify psychosocial obstacles. People usually need help to overcome or navigate round obstacles. Flags point to the obstacles in need of action. All the players in and around the workplace, as well as health professionals, need to be looking for obstacles.</p> <ul style="list-style-type: none"> • Yellow Flags are about the person – unhelpful thoughts, feelings and behaviours that impede normal recovery, e.g. distress, uncertainty, dysfunctional beliefs and expectations. • Blue Flags are about the workplace – unhelpful interactions between the person and the workplace: e.g. low expectation of resuming work, low social support in workplace, lack of modified work. • Black Flags are about the context – unhelpful aspects of systems and policies: e.g. unhelpful procedures used by the company; delays due to mistakes, waiting lists or claims; and misunderstandings and disagreements between key players (employee, employer, healthcare). 	Musculoskeletal; psychosocial	Return to work

Table B.6 Continued

Authors	Key features [reviewers' comments in square brackets]	Condition	Topic
	<p>The essential steps to helping people back to work are: 'Identify flags, develop a Plan, take Action'. Identifying the relevant flags is about looking for unhelpful behaviours and circumstances. Anything about the person, the workplace or the context (including influential others) that stands in the way of early return to work.</p> <p>Developing a plan of action is about agreeing goals and sorting out who does what when. Taking action is all about overcoming obstacles at work; problem-solving approaches by the key players working together. It means providing timely and effective treatment and an accommodating workplace, with helpful policies and coordinated actions.</p> <p>The Action must address the identified flags and obstacles, using both healthcare and workplace interventions. Psychosocial factors, such as beliefs, fears and avoidance behaviours need to be tackled. Psychosocial interventions such as problem-solving training and suitable coping strategies can usefully supplement exercises and accurate information/ advice and contribute to increasing activity. An accommodating workplace can be the key to work retention and early return to work. Clinical intervention should take a stepped care approach – providing 'just what's needed, when it's needed'. Involve the workplace setting if possible, rather than the clinic alone. Ensure (through communication) that all players know what actions are to be done, by whom and when. Interventions to address psychosocial factors are more effective and use fewer resources when they are delivered early. Psychologists are usually not needed – the principles can be adopted and used by all key players. Many urban myths are powerful obstacles: e.g. muscle and joint pain is caused by work; time off work is essential; cannot return to work until 100% pain free; contacting the absent worker is intrusive. They need to be dispelled.</p>		

Authors	Key features [reviewers' comments in square brackets]	Condition	Topic
Lelliott <i>et al.</i> , 2008 Report	<p>Mental health and work</p> <p>Commissioned by the cross-government Health Work and Well-being programme, this policy report covered the various aspects of mental health and work (both severe and common conditions), with recommendations for relevant government departments.</p> <p>[Among the many aspects covered, some were particularly pertinent to the present review.] The potential for mental health problems to progress to being long-term sick was noted. Many factors, including individual perceptions, beliefs and decisions contribute to movement up and down a pathway around being well, having symptoms, taking sick leave, returning to work, or going on to prolonged absence and disability. It is unclear why some workers develop symptoms at work or attribute their symptoms to work. The nature of the work environment appears to be a factor in predicting which workers with symptoms will take time off, but beliefs and expectations of recovery are more prominent risk factors in those who are already off work.</p> <p>It is noted that there has been relatively little research about the effectiveness of interventions to help workers with common mental health problems to remain in or return to work: the findings of Seymour and Grove 2005 (see next page) are summarised. The later findings of Wang <i>et al.</i>, 2007 (see Table B.5) are also summarised, pointing to the use of telephone-based care management and the apparent cost-benefits. One obstacle to return to work for people with mental health problems may be a fear that, no matter how good a recovery they have made, their symptoms will be made worse by work. Stigma and lack of understanding of mental health problems in the workplace are also highlighted.</p> <p>[The recommendations in this report seem to indicate a need to get all the players, including workers, onside to recognise the value of work (and return to work) for people with mental health problems (both common and severe); this might suggest a need for widespread education, some of which could be incorporated into the necessary service provision.]</p>	Mental health	Aspects of employment and treatment

Table B.6 Continued

Authors	Key features [reviewers' comments in square brackets]	Condition	Topic
Seymour and Grove, 2005 Systematic review	<p>Workplace interventions for people with common mental health problems: evidence review and recommendations</p> <p>This report (for the British Occupational Health Research Foundation) defined common mental health problems as those that: occur most frequently and are more prevalent; are mostly successfully treated in primary rather than secondary care settings; and are least disabling in terms of stigmatising attitudes and discriminatory behaviour.</p> <p>Concluded that for the:</p> <ul style="list-style-type: none"> • job retention of employees at risk: <ul style="list-style-type: none"> – individual approaches to stress reduction, management and prevention for a range of healthcare professionals are effective and are preferable to multi-modal approaches; • rehabilitation of employees with sickness absence associated with mental health problems: <ul style="list-style-type: none"> – cognitive behavioural CBT) interventions are effective and they are more effective than other intervention types. CBT is most effective for workers in high-control jobs; – brief (up to eight weeks) therapeutic interventions such as individual counselling are effective for employees with job-related or psychological distress <p>[Note that outcome measures were very mixed and often combined self-report and observational indices; however, 'making people better' is not the same as 'getting them back to work'.]</p>	Mental health	Workplace interventions
Seymour, 2010 Update review	<p>Common mental health problems at work: what we now know about successful interventions – a progress review</p> <p>Key messages:</p> <ul style="list-style-type: none"> • People do not have to be entirely symptom free to remain in or return to work successfully. • The workplace is not the only setting for the delivery of appropriate and effective interventions for the management of common health problems among working-age people. • Different practitioners have valuable and complementary roles to play, in order to achieve positive work outcomes. • Independent case management is critical to achieving successful outcomes where employees are not recovering as expected • Line managers have a crucial role in supporting employees with common mental health problems to remain in or return to work. 		

Authors	Key features [reviewers' comments in square brackets]	Condition	Topic
Waddell and Burton, 2004 Conceptual review	<p>Concepts of rehabilitation for the management of common health problems</p> <p>There is now broad agreement on the importance of rehabilitation and the need to improve occupational health and vocational rehabilitation in the UK. However, there is considerable uncertainty about what 'rehabilitation' is and about its (cost)-effectiveness, particularly for the common health problems that cause most long-term disability and incapacity. The aim of this paper is to develop a theoretical and conceptual basis for the rehabilitation of common health problems.</p> <p>The stereotype of disability is a severe medical condition with objective evidence of disease and permanent physical or mental impairment (e.g. blindness, severe or progressive neurological disease, or amputation). In fact, most sickness absence, long-term incapacity for work and premature retirement on medical grounds are now caused by less severe mental health, musculoskeletal and cardio-respiratory conditions. These 'common health problems' often consist primarily of symptoms with limited evidence of objective disease or impairment. Importantly, many of them are potentially remediable and long-term incapacity is not inevitable.</p> <p>Rehabilitation has traditionally been a separate, second-stage process, carried out after medical treatment has no more to offer, yet recovery remains incomplete; the goal was then to overcome, adapt or compensate for irremediable, permanent impairment. That approach is inappropriate for common health problems, where the obstacles to recovery are often predominantly psychosocial in nature rather than the severity of pathology or impairment. In this situation, rehabilitation must focus instead on identifying and overcoming the health, personal/psychological and social/occupational obstacles to recovery and (return to) work.</p>	Common health problems	Rehabilitation

Table B.6 Continued

Authors	Key features [reviewers' comments in square brackets]	Condition	Topic
	<p>This implies that rehabilitation can no longer be a separate, second-stage intervention after 'treatment' is complete. The evidence shows that the best time for effective rehabilitation is between about one and six+ months off work (the exact limits are unclear). Earlier, most people recover and return to work uneventfully; they do not need any specific rehabilitation intervention and the priority is not to obstruct natural recovery. Later, the obstacles to return to work become more complex and harder to overcome; rehabilitation is more difficult and costly, and has a lower success rate. To take maximum advantage of this window of opportunity and minimise the number going on to long-term incapacity, rehabilitation principles should be an integral part of good clinical and occupational management:</p> <ul style="list-style-type: none"> • Clinical management should provide timely delivery of effective healthcare, but that alone is not enough. The primary goal of healthcare is to treat disease and provide symptomatic relief, but too often that fails to address occupational issues. Rehabilitation demands that healthcare should both relieve symptoms and restore function, and these go hand in hand. Work is not only the goal: work is generally therapeutic and an essential part of rehabilitation. Every health professional that treats patients with common health problems should be interested in and take responsibility for rehabilitation and occupational outcomes. That requires radical change in NHS and health professionals' thinking. • Common health problems are not only matters for health care, but much broader public health issues of 'health at work'. Sickness absence and return to work are social processes that depend on work-related factors and employer attitudes, process and practice. This requires employers, unions and insurers to re-think occupational management for common health problems: addressing all of the health, personal and occupational dimensions of incapacity, identifying obstacles to return to work; and providing support to overcome them. The same principles are equally applicable to job retention, early return to sustained work and reintegration. • This should not obscure the importance of the individual's own role in the management of common health problems. Rehabilitation is an active process that depends on the participation, motivation and effort of the individual, supported by healthcare and employers. 		

Table B.6 Continued

Authors	Key features [reviewers' comments in square brackets]	Condition	Topic
	<p>Better clinical and occupational management and rehabilitation of common health problems is the best way to reduce the number of people going on to long-term incapacity. Even with the best possible management, however, some will always need further help; consideration must also be given to long-term benefit recipients. Social security is then not just about paying benefits – the 'welfare to work' strategy is also about providing support to (re)-enter work. Rehabilitation in a DWP context must address the additional obstacles facing people who are more distanced from the labour market, including the particular problems of the 'hard to help', the disadvantaged and excluded, and those aged >50-55 years. It must also fit the practicalities of the DWP context, including issues of: early identification of those at risk; recruitment, engagement and retention; and incentives, disincentives and control mechanisms.</p> <p>Action depends on accepting ownership of the problem. Everyone – workers; employers, unions and insurers; health professionals; government and the taxpayer – has an interest in better outcomes for common health problems. Effective management depends on getting 'all players onside' and working together to that common goal. This is partly a matter of perceptions (by all the players). It requires a fundamental shift in the culture of how we perceive and manage common health problems, in healthcare, in the workplace and in society.</p> <p>Better management and rehabilitation of common health problems is possible, can be effective and is likely to be cost-effective. We have sufficient knowledge and evidence to reduce sickness absence and the number of people who go on to long-term incapacity, and to improve job retention, return to work and reintegration. All of these outcomes could potentially be improved for the common health problems by at least 30-50%, and in principle by much more (fully recognising the practical problems of achieving this). [Review commissioned by DWP.]</p>		

Table B.6 Continued

Authors	Key features [reviewers' comments in square brackets]	Condition	Topic
Waddell and Burton, 2006 Best evidence synthesis	<p>Is work good for your health and wellbeing?</p> <p>The review (commissioned by DWP) focused on adults of working age and the common health problems responsible for much sickness absence (i.e. mild/moderate mental health, musculoskeletal and cardio-respiratory conditions).</p> <p>There is a strong evidence base showing that work is generally good for physical and mental health and wellbeing. Worklessness is associated with poorer physical and mental health and wellbeing. Work can be therapeutic and can reverse the adverse health effects of unemployment. That is true for healthy people of working age, for many disabled people, for most people with common health problems and for social security beneficiaries. The provisos are that account must be taken of the nature and quality of work and its social context; jobs should be safe and accommodating. Overall, the beneficial effects of work outweigh its risks, and are greater than the harmful effects of long-term unemployment or prolonged sickness absence. [Review commissioned by DWP.]</p>	Common health problems	Relationship between work and health
Waddell <i>et al.</i> , 2008 Best evidence synthesis	<p>Vocational rehabilitation: what works, for whom and when?</p> <p>This review demonstrated that there is a strong scientific evidence base for many aspects of vocational rehabilitation. There is a good business case for vocational rehabilitation, and more evidence on cost-benefits than for many health and social policy areas. Common health problems should get high priority, because they account for about two-thirds of long-term sickness absence and incapacity benefits, and much of this should be preventable. Vocational rehabilitation principles and interventions are fundamentally the same for work-related and other comparable health conditions, irrespective of whether they are classified as injury or disease. It is an idea and an approach as much as an intervention or a service.</p> <ol style="list-style-type: none"> 1. Vocational rehabilitation is whatever helps someone with a health problem to stay at, return to and remain in work. 2. This review has demonstrated that there is now a strong scientific evidence base for many aspects of vocational rehabilitation. 3. There is a good business case for vocational rehabilitation, and more evidence on cost-benefits than for many health and social policy areas. 4. Common health problems should get high priority, because they account for about two-thirds of long-term sickness absence and incapacity benefits and much of this should be preventable. Return to work should be one of the key outcome measures. 	Common health problems	Return to work

Table B.6 Continued

Authors	Key features [reviewers' comments in square brackets]	Condition	Topic
	<p>5. Vocational rehabilitation depends on work-focused healthcare and accommodating workplaces. To make a real and lasting difference, both need to be addressed and coordinated.</p> <p>6. Most people with common health problems can be helped to return to work by following a few basic principles of healthcare and workplace management. This can be done with existing or minimal additional resources, and is low cost or cost-neutral. Policy should be directed to persuading and supporting health professionals and employers to implement these principles.</p> <p>Healthcare has a key role, but vocational rehabilitation is not a matter of healthcare alone – the evidence shows that treatment by itself has little impact on work outcomes. Employers also have a key role – there is strong evidence that proactive company approaches to sickness, together with the temporary provision of modified work and accommodations, are effective and cost-effective. (Though there is less evidence on vocational rehabilitation interventions in small and medium enterprises.) Overall, the evidence in this review shows that effective vocational rehabilitation depends on work-focused healthcare and accommodating workplaces. Both are necessary: they are inter-dependent and must be coordinated.</p> <p>The concept of early intervention is central to vocational rehabilitation because the longer anyone is off work, the greater the obstacles to return to work and the more difficult vocational rehabilitation becomes. It is simpler, more effective and cost-effective to prevent people with common health problems going on to long-term sickness absence. A 'stepped-care approach' starts with simple, low-intensity, low-cost interventions, which will be adequate for most sick or injured workers, and provides progressively more intensive and structured interventions for those who need additional help to return to work. This approach allocates finite resources most appropriately and efficiently to meet individual needs. Effective vocational rehabilitation depends on communication and coordination between the key players – particularly the individual, healthcare and the workplace.</p> <p>There is strong evidence on effective vocational rehabilitation interventions for musculoskeletal conditions. For many years the strongest evidence was on low back pain, but more recent evidence shows that the same principles apply to most people with most common musculoskeletal disorders.</p>		

Table B.6 Continued

Authors	Key features [reviewers' comments in square brackets]	Condition	Topic
	<p>Various medical and psychological treatments for anxiety and depression can improve symptoms and quality of life, but there is limited evidence that they improve work outcomes. There is a lack of scientific clarity about 'stress', and little or no evidence on effective interventions for work outcomes. There is an urgent need to improve vocational rehabilitation interventions for mental health problems. Promising approaches include healthcare which incorporates a focus on return to work, workplaces that are accommodating and non-discriminating, and early intervention to support workers to stay in work and so prevent long-term sickness.</p> <p>Current cardiac rehabilitation programmes focus almost exclusively on clinical and disease outcomes, with little evidence on what helps work outcomes: a change of focus is required. Workers with occupational asthma who are unable to return to their previous jobs need better support and, if necessary, retraining.</p> <p>[Review commissioned by UK cross-sector Vocational Rehabilitation Task Group.]</p>		

B.3 Grey literature and unpublished material

B.3.1 Audits; reports; trade articles etc.

Direct and indirect material documenting current practice of telephonic approaches by 'providers'.

Table B.7 Audits; reports; trade articles etc.

Authors	Key features [reviewers' comments in square brackets]	Condition	Topic
The Audit Commission, 2004 Report	<p>Implementing telecare: Strategic analysis and guidelines for policy makers, commissioners and providers</p> <p><i>'Telecare involves the use of information and communication technology (ICT) to support the delivery of care directly to people in their own homes. It addresses a range of government policies and a large number of policy reports have argued for its wider introduction.</i></p> <p><i>Evidence for telecare outcomes needs to distinguish between clinical or quality of life outcomes at the individual level; and the effect on the distribution of resources across the whole health and care system. The trials of telecare services have generally been evaluated with a view to exploring their clinical outcomes, rather than their affect on the whole system.</i></p> <p><i>Four important attributes of a successful telecare service are:</i></p> <ul style="list-style-type: none"> <i>• Information flow; flexibility; scalability; and continuity.'</i> 	Any	Telecare
CMSA/NASW, 2008 Report	<p>Case Management Caseload Concept Paper: Proceedings of the Caseload Work Group, a Joint Collaboration of CMSA and NASW</p> <p>CMSA recognizes several clinical practice settings:</p> <ul style="list-style-type: none"> • Inpatient/Acute • Rehab and LTC • Outpatient • Telephonic • On-site/field • Managed care • Rural versus urban <p>It is noted, <i>'case managers who provide telephonic services usually can accommodate more clients than a case manager in an acute or subacute inpatient setting'.</i></p>		

Table B.7 Continued

Authors	Key features [reviewers' comments in square brackets]	Condition	Topic
CSP, 2010 Professional association	Musculoskeletal disorders <i>'Telephone assessment and support: Assessing the severity of a patient's condition over the telephone has been found to be very resource efficient. This telephone triage saves patient and physiotherapist time as well as costs and ensures those needing the most urgent treatment are prioritised. Where appropriate, follow up support by telephone has also been found to be a clinically and cost effective way of enabling patients to self manage their condition, helping to prevent relapses.'</i>	Musculoskeletal	Telephonic assessment and support
Cochrane, 2011 Report	A best-practice case management model for patients with multi-morbidity <i>'There has ... been one NHS-based service with good outcome data and ... which is delivered entirely by telephone. The outcomes for the 23 participating GP practices compared to control practices show more than a 40% reduction in unscheduled admissions and patient satisfaction of over 90%. Telephonic services can out-turn higher productivity in terms of patient to practitioner ratios, typically 200 cases to 1 whole-time-equivalent for multi-morbidity patients. However not all patients can be recruited into this type of service directly so that participation rates are routinely only 40% of those who could benefit. Hence a combination of face-to-face and telephonic services may constitute the optimum service design.'</i>	Multi-morbidity of 3 or diagnoses	Telephonic case management
Conroy, 2007 Guidance	Supporting an Injured Worker Return to Work (Workplace Safety Initiative, Republic of Ireland) 'Holistic Approach' <i>The 'holistic' approach or the "whole person approach" encompasses personal, social and environmental factors. It views disability in terms of the health of the person and the environmental context in which they live. It combines the best elements of the medical and social models.</i> <i>A holistic approach is needed in order to successfully support an injured worker back to work, a model which focuses not only on the physical aspect of the worker's injury or illness, but also on workplace factors and environmental barriers which present additional barriers for the worker with a disability.</i> <i>To achieve the best outcome from this approach, the emphasis needs to shift from the person's disability to the changes society and business can make.</i> <i>It should be relatively easy to minimise the impact of injury on a worker's capacity to successfully perform his or her job and to enable that person to contribute their skills and productivity, both to the enterprise and to the wider society.</i>	Guidance	Early intervention and biopsychosocial approach

Table B.7 Continued

Authors	Key features [reviewers' comments in square brackets]	Condition	Topic
	<p>Early Intervention</p> <p><i>Early intervention is consistently cited in the research as being a key factor in the successful rehabilitation and return to work of an injured or disabled worker.</i></p> <p><i>A 2003 report from a working group of the [Irish] Department of Social and Family Affairs recommended the introduction of early intervention measures which are aimed at re-integrating people who sustain serious illnesses, injuries and disabilities back into the workforce before they become long-term dependant on social welfare payments.</i></p> <p><i>The Organisation for Economic Co-operation and Development (OECD) has concluded that sickness management, as well as the timing and quality of medical and non-medical interventions including the preparation of a re-integration plan and the use of full or partial early activation, largely determine workers' chances of returning to employment. It recommends that early intervention should be a key focus as it is the most effective measure against long-term dependence.</i></p> <p><i>It has been shown that, for example, interventions focussing on returning to work and implemented in the sub-acute stage of low back pain can reduce time lost from work by 30 – 50%. Frequently, simple modifications to equipment or hours at work are all that is required to facilitate the return to work, often starting with shorter hours and gradually building the returning worker up to a normal working day.'</i></p> <p>[The term 'holistic approach' seems to be equivalent to 'biopsychosocial'.]</p>		
de Silva, 2011 Evidence review	<p>Helping people help themselves: A review of the evidence considering whether it is worthwhile to support self-management</p> <p><i>'When it comes to putting self-management support at the heart of routine healthcare, there is a huge gulf between political rhetoric and the reality of UK clinical practice. Many clinicians question the notion that their role should change to support self-management. The Health Foundation has produced this literature review to respond to the questions and challenges of clinicians wanting to appraise the benefits of self-management support. The literature shows that proactive, behaviourally focused self-management support designed to increase self-efficacy can have a positive impact on people's clinical symptoms, attitudes and behaviours, quality of life and patterns of healthcare resource use.</i></p>	Any	Telephonic advice and support

Table B.7 Continued

Authors	Key features [reviewers' comments in square brackets]	Condition	Topic
	<p><i>Two conclusions of this review stand out. First, it provides a new perspective on self-management support. Traditionally, a wide range of methods have been described as supporting self-management – interventions as varied as handing out leaflets, tele-monitoring, intensive telephone coaching and structured education. This review shows that some approaches are significantly more effective than others.</i></p> <p><i>There is ... evidence about the benefits of more detailed case management via telephone. A randomised trial in the US evaluated six months of standardised telephone case management for 358 people with heart failure. Telephone case management helped to motivate people to self-care, and was associated with about half as many hospitalisations for heart failure, fewer days in hospital, and lower inpatient costs after six months.</i></p> <p><i>There is evidence to suggest that telephone support is often just as effective as face-to-face supported self-management.'</i></p>		
<p>Institute for Work & Health, 2012</p> <p>Summary of systematic review</p>	<p>Sharing best evidence highlights of a systematic review: factors affecting RTW following acute low-back pain</p> <p><i>'The research evidence to date shows certain factors can be used to identify workers with acute low-back pain who are at high risk of poor outcomes. The factors identified in this review – such as recovery expectations, interactions with health-care providers, self-reported pain and physical limitations, and physical demands of the job – could be used to screen those workers at high risk of long-term or permanent disability.</i></p> <p><i>The offer or availability of modified duties or work-place accommodations is another work factor associated with improved RTW outcomes. Interestingly, it seems the offer of modified work, not its actual implementation, predicts the likelihood of return to work.'</i></p>	Acute low back pain	Return to work

Table B.7 Continued

Authors	Key features [reviewers' comments in square brackets]	Condition	Topic
<p>Institute of Health Economics, Alberta, Canada, 2007</p> <p>Systematic review</p>	<p>Evidence of Benefits from Telemental Health: A Systematic Review</p> <p><i>'This review considers the evidence of benefit from use of telemental health (TMH) in studies that had clinical, economic, or administrative outcomes. The review also includes studies that provided information on the accuracy or feasibility of TMH.</i></p> <p><i>Evidence for TMH benefits by type of condition or application was as follows:</i></p> <p>General psychiatric/mental health services: <i>Quality was 'poor' for seven clinical studies, 'poor' to 'fair' for five, and 'fair' to good for four. Six studies provided evidence that TMH was successful, eight showed that TMH was potentially successful, and findings from five were unclear. Further work was necessary for 14 studies and desirable for four. One of three papers that considered only economic issues was of fair to good quality. All three indicated that use of TMH could achieve cost savings.</i></p> <p>Child psychiatry: <i>Two clinical studies showed that TMH was successful, with follow-up study desirable. One economic study did not establish whether there were benefits from TMH. The other found that TMH was more expensive than in-person consultations.</i></p> <p>Depression: <i>Three good-quality Internet studies showed TMH to be successful, with follow-up work needed for one study and desirable for another. Most of the eight studies on telephone-based approaches showed TMH to be successful, with a need for follow up.</i></p> <p>Dementia/cognitive disability: <i>One study found that TMH was successful and three that it was potentially successful. Follow-up work was needed for three studies and desirable for the other.</i></p> <p>Obsessive-compulsive disorder: <i>Two studies with acceptable quality found that TMH was potentially successful.</i></p> <p>Panic disorder and phobias: <i>Six studies, four of high or good quality, found that TMH was successful; in one study, TMH was potentially successful and in two it was unsuccessful. Further study was required in five studies and desirable in two.</i></p> <p>Schizophrenia: <i>TMH was successful in one study and potentially successful in two. All required follow-up work.</i></p> <p>Suicide: <i>One study showed that TMH was successful in suicide prevention; findings in another were unclear and follow-up work was needed.</i></p> <p>Alcohol and substance abuse: <i>Two studies found that TMH was successful and findings in a third were unclear. Follow-up work was needed or desirable in all studies.</i></p>	Mental health	Telephonic intervention

Table B.7 Continued

Authors	Key features [reviewers' comments in square brackets]	Condition	Topic
	<p>Eating disorders: TMH was potentially successful in one study and successful in two others of poor to fair quality. Further work was required.</p> <p>All of the economic studies that were reviewed were cost analyses. Two (17%) of the studies were based on RCTs. The cost analyses mainly used the societal perspective in that the studies tried to include all costs and benefits of TMH programs. Transportation costs were included in all but one study; breakeven analysis was undertaken in five (42%) and indirect costs (productivity losses) were estimated in five. Health-related quality of life (HRQOL) was considered in one study but there was no QALY analysis. Most studies showed societal cost savings associated with use of TMH".</p>		
<p>Institute of Health Economics, Alberta, Canada, 2010</p> <p>Systematic review</p>	<p>Evidence on the Effectiveness of Telerehabilitation Applications</p> <p>Evidence for TRH benefits by clinical area was as follows:</p> <p>Cardiology: There were good indications of success for home cardiac rehabilitation, with TRH being successful in ten studies. Application of a prevention programme was successful in decreasing cardiac risk factors. Success was not demonstrated in studies on use of a 'booster intervention', symptom management, improvement in self-efficacy and physical activity, and psychological adjustment.</p> <p>Neurology: In five studies on support for stroke patients, TRH was successful in three, but of limited or no benefit in two. Studies with persons who had suffered traumatic brain injury showed benefits in ameliorating depressive symptoms, improving behavioural outcomes, and increasing the probability of returning to employment. Telephone groups were as effective as on-site groups in providing support and education for rural caregivers of persons with brain injury.</p> <p>Two reports on TRH in the management of patients with multiple sclerosis and two studies with patients who had spinal cord injuries had limited success with TRH approaches.</p> <p>Cancer: Of two studies on TRH to support patients with breast cancer, one was not successful, while the other may have improved physical activity and decreased fatigue.</p> <p>Speech disorders: Two short-term studies of TRH for speech disorders had successful outcomes.</p> <p>Urology: Two studies provided good evidence that TRH methods were successful in improving continence of post-prostatectomy patients and of older women, with results equivalent to those from face-to-face treatment.</p>	Physical rehabilitation	Telephonic intervention

Table B.7 Continued

Authors	Key features [reviewers' comments in square brackets]	Condition	Topic
	<p>Rheumatology: Four studies of TRH in rheumatology applications (management of arthritis and fibromyalgia) provided some evidence of benefit, but not for all outcomes.</p> <p>Pulmonary disease: One of three studies on TRH in chronic obstructive pulmonary disease had successful outcomes, while benefits found in the others were limited.</p> <p>Chronic pain: Both studies that considered use of TRH for management of chronic pain reported successful outcomes.</p> <p>Mobility impairment: A study on patients using mobility devices gave an indication that the TRH approach may be acceptable for delivery of services.</p> <p>Orthopaedics: Four of five studies on management of joint disorders found TRH was successful, with unclear outcomes in the other study.</p> <p>Childhood obesity: An Internet-based intervention for follow-up care of obese children and adolescents after in-patient rehabilitation was unsuccessful.</p> <p>Various morbidities: A successful study found use of TRH for persons at risk of readmission to hospital resulted in fewer emergency admissions and in improvements to quality of life. A second study showed improvements in communication for home healthcare services. The success of TRH in three other studies was unclear.</p>		
National Collaborating Centre for Mental Health, 2009 NICE Guideline	<p>Depression: the Treatment and Management of Depression in Adults (National Clinical Practice Guideline 90)</p> <p><i>'Delivery of low-intensity psychosocial interventions</i></p> <p><i>Individual guided self-help programmes based on the principles of CBT (and including behavioural activation and problem-solving techniques) for people with persistent subthreshold depressive symptoms or mild-to-moderate depression should:</i></p> <ul style="list-style-type: none"> • <i>Include the provision of written materials of an appropriate reading age (or alternative media to support access)</i> • <i>Be supported by a trained practitioner, who typically facilitates the self help programme and reviews progress and outcome</i> • <i>Consist of up to six to eight sessions (face-to-face and via telephone) normally taking place over 9 to 12 weeks, including follow-up.'</i> 	Mental health, depression	Clinical guidance

Table B.7 Continued

Authors	Key features [reviewers' comments in square brackets]	Condition	Topic
National Collaborating Centre for Mental Health, 2010 NICE Guideline	Depression in Adults With a Chronic Physical Health Problem: Treatment and Management (National Clinical Practice Guideline 91) <i>'...the [guideline development group] extrapolated from the evidence from the depression guideline update and made recommendations for individual guided self-help and CCBT [Computerised CBT]. Factors influencing this extrapolation included the increased accessibility associated with both guided self-help (deliverable over the telephone) and CCBT (deliverable in the home over the internet), which was considered important in populations where mobility may often be limited.'</i>	Mental health, depression	Clinical guidance
National Collaborating Centre for Mental Health, 2011 NICE Guideline	Common Mental Health Disorders: Identification and Pathways to Care (National Clinical Guideline Number 123) In the summary of findings for systematic reviews of pathways it is concluded, <i>'Telephone interventions, internet support groups and passive education did not have enough evidence for evaluation of their effectiveness.'</i>	Mental health	Clinical guidance
National Collaborating Centre for Mental Health, 2012 NICE Guideline	Self-Harm: Longer-Term Management (National Clinical Guideline Number 133) <i>'There was insufficient evidence to determine the clinical effectiveness between telephone contact plus routine care and treatment as usual... There was no statistical difference between telephone contact and treatment as usual after a period of 1 month (RR 0.89, 95% CI, 0.62 to 1.28) (K=2, N=674) or 3 months (RR 0.79, 95% CI 0.54 to 1.16). No heterogeneity was observed and both of these studies are of moderate quality. No conclusions could be drawn due to the small evidence base.'</i>	Self-harm, suicidal behaviour	Clinical guidance

Table B.7 Continued

Authors	Key features [reviewers' comments in square brackets]	Condition	Topic
NHS, 2010 Clinical guidance	<p>Good practice guidance on the use of self-help materials within IAPT services</p> <p>This Increasing Access to Psychological Therapies report has sections on:</p> <ul style="list-style-type: none"> • What are low-intensity psychological interventions? • How to choose effective self-help materials. • Good practice in how self-help is delivered. • Self-help and community engagement. <p>Good practice in how self-help is delivered – In particular, the use of the telephone as a primary and efficient means for psychological well-being practitioners (PWPs) to provide support and guidance around low-intensity interventions is covered. Low-intensity interventions and contacts with patients are often based on short and sometimes frequent interactions (e.g. 15 minutes) between the PWP and the patient. Such brief interventions are ideally suited to telephone contacts and indeed would be impracticable if reliant always on face-to-face contacts and travelling to and from the clinic or base.</p> <p>Specific role of the telephone in guided self-help and low intensity interventions – The delivery of CBT self-help interventions is rapidly changing with innovations being adopted that have the potential to enhance the accessibility, availability and cost effectiveness of mental health services. The telephone has the ability to overcome many of the social, physical and economic barriers that prevent access to mental health services, and is increasingly being used as a means to support treatment delivery. Although there is evidence that users find telephone-delivered interventions acceptable, some healthcare professionals are resistant to this innovation. Key concerns highlighted by healthcare professionals are focused on the belief that the lack of non-verbal cues and interpersonal contact result in a perceived loss of the therapeutic alliance. Although there is a paucity of research examining therapeutic alliance with recipients of telephone interventions, emerging work shows that a positive therapeutic alliance, and a level of alliance comparable with face-to-face contact, is achieved with telephone-delivered support. Our experience of providing specifically tailored training for healthcare professionals in delivering telephone interventions has found an alleviation of fear and an increased receptiveness to using the telephone to support people using self-help materials.</p> <p>[An important recommendation in this report was that all telephone calls should be scheduled, thus ensuring the person is prepared and free from interruption.]</p>	Mental health	Telephonic intervention

Table B.7 Continued

Authors	Key features [reviewers' comments in square brackets]	Condition	Topic
NHS London, 2012 Guide	<p>Allied Health Professions MSK toolkit: how AHPs improve patient care and save the NHS money</p> <p><i>'...pathways reduce variation in practice and provide effective and sustainable care for patients with MSK conditions. This is achieved through self referral, evidence based triage protocols and single system MSK teams.'</i></p> <p>[Clinical triage protocols developed from evidence reduce practice variation and facilitate effective care.]</p>	Musculoskeletal	Evidence-based triage protocols
Pillsbury, 2000 Business case study	<p>Cutting Comp [Compensation] Costs for Clients</p> <p>Descriptive report on 'Company Nurse on Call' approach in Arizona USA that uses telephone triage to manage on-the-job injuries in a large hotel chain. The service is free and available 24/7. Injured workers are cared for rapidly and returned to work as soon as possible, which in many cases reduces or eliminates claims. In almost 30% of cases the nurse is able to recommend specific first aid and keep the claim out of the medical system. On average, injured employees use emergency departments 20% to 30% of the time. With the telephonic triage approach this drops to 7%. There is an overall 65% reduction in the average cost per case.</p> <p>[This case study compared outcomes to historical data and cost averages in Arizona.]</p>	Workplace injuries	Telephonic triage, rapid access to treatment when needed
Pillsbury, 2004 Business case study	<p>Workplace Health Management</p> <p>[Medcor] provides onsite services for large clients and a 24-hour telephonic triage service for smaller employers [from 25 employees.] <i>'The injured worker can talk directly to a nurse who makes an assessment on how to handle the injury immediately. That's very important in workers comp. The faster you deal with an injured employee and the more attention you give that individual, the happier that person is. It helps clients having a disgruntled employee, and that's good for everyone because it helps to keep claim costs down and employees at work.'</i> The 24-hour telephonic triage centre is much bigger than on-site clinic offering.</p> <p>[This service description emphasises the potential value for telephonic triage services when it is not practical to provide on-site clinics, e.g. with small and medium employers.]</p>	Workplace injuries	Telephonic triage, rapid access to treatment when needed

Table B.7 Continued

Authors	Key features [reviewers' comments in square brackets]	Condition	Topic
Pomaki <i>et al.</i> , 2010 Evidence synthesis report	<p>Best Practices for Return-to-Work/Stay-at-Work Interventions for Workers with Mental Health Conditions</p> <p>Comprehensive evidence synthesis with best practice principles were developed and classified according to the following levels of interventions:</p> <ul style="list-style-type: none"> • Organisational-level • Disability management practice-level • Individual-level. <p>'Disability management practice-level interventions PRINCIPLE #2:</p> <p><i>Structured and planned close communication between the worker, supervisor, healthcare provider(s), union representatives and other disability management stakeholders is essential to improve return-to-work/stay-at-work outcomes – this includes in-person/telephone contacts and written information for workers with mental health conditions on current policies and benefits.</i></p> <p><i>In-person or telephone contacts can result in earlier return to work and higher rates of return to work ... and can also be cost-effective modes of structured and planned close communication between the worker, supervisor, healthcare provider(s), union representative and other return-to-work stakeholders.'</i></p>	Mental health	Best practice guidance
PERI, 2005 Research	<p>Report The Day of Injury Study 2005 – Final Report</p> <p>The Schools Insurance Authority, Sacramento, California, USA conducted a study that focused on employers' day of injury response to occupational injury/illness incidents and claims. The purpose of the study was to identify the employer processes, activities, and resources that can best shape and control workers' compensation costs. The project identified and measured employer actions in the areas of injury reporting, access to medical care and return to work during the most critical stage of a workers' compensation claim, which the Schools Insurance Authority says is the day of injury. The study attempts to answer such questions as: What is the most effective procedure or protocol for injury reporting and why? How does the employer best manage the medical treatment process? What is the effect of the employer's efforts on overall claims volume, cost and duration? What are the key components for return-to-work and stay-at-work programmes? What works, what doesn't?</p>	Workplace injuries	Telephonic triage, rapid access to treatment when needed

Table B.7 Continued

Authors	Key features [reviewers' comments in square brackets]	Condition	Topic
	<p>Key findings:</p> <ul style="list-style-type: none"> The [telephonic] nurse triage process is highly effective in assisting the employee in the decision to seek medical treatment on the day of injury: 39.36% of all calls (incident reports) over a five-year period did not result in medical treatment; therefore, no claim was filed. Of those cases managed as self-care, 94% remained so after 90 days. This is an unexpected finding. The assumption was that a much higher percentage of calls/incidents would result in medical only or indemnity claims. This finding also supports the overall satisfaction of the employee with the nurse triage services (self-care advice) given to the employee on the day of injury. The nurse injury report process promotes positive communication with employees. The overwhelming response from employees has been very positive. The nurse injury report process integrated well with the early intervention return to work program in the 28 school districts. The nurse injury intake process facilitates speedy claims decisions. <p>Analyses of cost savings were provided for three projects:</p> <p>The city of Little Rock experienced a 44% reduction in their total cost from 2000 to 2001. This downward trend continued through 2004.</p> <p>Sacramento City 2002 v 2003, 38% decrease in total costs incurred.</p> <p>Redwood Empire Schools Insurance Group, Windsor, First Year Evaluation, 2004 v 2003: Total incurred costs decreased by 42%; Total Indemnity paid costs decreased by 35%.</p>		

Table B.7 Continued

Authors	Key features [reviewers' comments in square brackets]	Condition	Topic
Pygall, 2004 Professional article	<p>Telephone triage in practice</p> <p><i>'Telephone triage is commonly being used to manage requests for same day appointments and to meet access targets. The benefits for patients include: easier access; convenience; savings on time and money; less time off work; and improved contact and, therefore, improve compliance with treatment. Telephone triage can help manage workload, reduce numbers of home visits and provide an opportunity for patient education and empowerment. Limited research on telephone triage has shown it can improve outcomes with 50 per cent of calls being safely managed to self-care.</i></p> <p><i>Common pitfalls in telephone triage include:</i></p> <ul style="list-style-type: none"> <i>• lack of training in triage and communication skills</i> <i>• lack of preparation and planning</i> <i>• not communicating effectively — engagement is key to success and complaints relating to communication problems are frequent</i> <i>• failure to plan adequate time for triage calls — fitting in-between other activities</i> <i>• insisting staff do telephone triage when they do not like it or lack confidence</i> <i>• failure to adopt a 'telephone culture', therefore calls interrupted, which leads to risk</i> <i>• poor risk management.</i> <p><i>Failing to empower patients to manage their own care creates a culture of dependency. If a patient is seen unnecessarily, in future they will not be satisfied until seen face to face. Poor telephone consultation results in missed opportunities to educate patients.</i></p> <p><i>Telephone triage is an accepted form of remote assessment. The medico-legal aspects of this work are the same as any other form of nursing or medical practice. There is, however, a lack of specific guidance when it comes to telephone triage, but the usual best practice regarding accessing training, keeping yourself up to date and knowing when you have exceeded your professional boundaries remain.'</i></p>		

Table B.7 Continued

Authors	Key features [reviewers' comments in square brackets]	Condition	Topic
Reyes, 2010 Trade journal article	<p>Telephone Triage: Nursing patients back to health, 24/7</p> <p><i>'Depending on the health care agency, telephone triage nurse duties can range from consultations, education and advice, to referring patients or scheduling appointments with providers. They may also offer information for self-care and symptom management. This type of medical care is helpful to patients unable to leave their homes or jobs when an injury occurs.'</i></p> <p><i>'We function like an emergency room. Calls come in, we find out what happened, how it happened and if their injuries are urgent or non-urgent ... [our] job is to help every employee get back to work fast, and in good health.'</i></p>	Any	Description of telephonic triage service
Royal College of Nursing, 2006 Clinical guidance	<p>Telephone advice lines for people with long term conditions: Guidance for nursing practitioners</p> <p><i>'The telephone is an essential and effective means of communicating and sharing information in our society. In many health care settings now, telephone services are providing innovative approaches to delivering services and providing advice.'</i></p> <p>Principles of good practice</p> <p><i>Before providing such a service, nurses should demonstrate:</i></p> <ul style="list-style-type: none"> <i>• competencies in communication and consultation skills in routine clinical practice</i> <i>• effective clinical decision-making skills</i> <i>• awareness of governance issues that reflect safe practice and reduction of any potential risks related to telephone advice.</i> <p>Promoting self-management not reliance</p> <p><i>To help develop the service as a tool of self-management, rather something on which callers become increasingly reliant, make sure that:</i></p> <ul style="list-style-type: none"> <i>• the service provides clear frameworks that encourage callers' confidence in quality and standards of the service</i> <i>• there is clarity of aims and objectives, so practitioners and callers know what can and can't be achieved using the advice line</i> <i>• infrastructure and resources to support advice line needs are available (e.g. emergency access clinics to manage symptom control or rapid access to services)</i> <i>• the service complements, not replaces, primary care and medical support</i> <i>• advice line support is seen as an integral part of patient education and to support self-management strategies.'</i> 	Any	Telephonic advice

Table B.7 Continued

Authors	Key features [reviewers' comments in square brackets]	Condition	Topic
Trueland, 2008 Trade journal article	<p>Staff scheme an all-round winner: An occupational health scheme for NHS staff is proving cost effective and popular with staff and employers</p> <p>The staff physiotherapy service at NHS Lothian has cut sickness absence and improved patient care through improved staff well-being. Amanda Jones, the occupational health physiotherapy manager, told the Scottish Board meeting that NHS Lothian had recognised the wisdom of 'spending to save' in funding the service. As well as treating staff with problems by telephone and in person, the scheme also provides services such as workplace assessments, work fitness assessments and return-to-work support. In 2007, the service managed 1,240 referrals and had a 15-day routine appointment waiting time and a three-day wait for urgent cases. Almost nine out of 10 (87 per cent) were self-referrals.</p> <p>At discharge, 91 per cent of users said the problem was resolved or greatly improved, and 43 per cent said the service had prevented them taking sickness absence, saving the board more than £300,000 – double that if agency costs were taken into account. Follow-up at three and nine months also produced positive results. Among managers, 95 per cent thought the service was excellent or good, with the remainder rating it as satisfactory. Ms Jones said the service was meeting its aims, which include being easily accessible, enabling staff to stay at or return to work, promoting well-being and being cost effective.</p> <p>[This occupational health physiotherapy service used telephone triage and follow-up support. Over £300,000 was saved in salaries alone by reducing sickness absence and there was a 74% reduction in recurrence in nine months following the programme.]</p>	Musculoskeletal	Telephonic triage and support
Tuckey, 2009 Trade journal article	<p>KLC's Risk Manager Delivers Some TLC; Return to Work, Return to One System</p> <p>Outline of return-to-work approach in supermarket chain with 330,000 employees, using return to work coordinators. Resulted in 10% reduction in temporary total disability payments in the first year.</p> <p>Description of telephonic triage system for 38,000 employees at childcare centres. Nurse case manager is assigned to every worker's compensation claim. The author stated <i>'the most critical metric for success remains the 30% reduction in medical inquiries.'</i></p>	Any	Telephonic triage and case management

Table B.7 Continued

Authors	Key features [reviewers' comments in square brackets]	Condition	Topic
WorkCover NSW, 2005 Report	<p>Case Management Principles</p> <p>Triage and screening principle – Early and accurate identification of the needs, risks and potential obstacles to achieving health and return-to-work outcomes ensures the focus of management is upon risk factors indicative of poor outcomes. Categorising claims according to the risk of delayed return to work, long-term disability and delayed finalisation allows the organisation to quantify, track and prioritise claims activity and assign claims to a case manager with relevant skills. Re-screening throughout the life of the claim facilitates periodic review of risk factors and barriers to ensure that intervention is effective in mitigating the risk and reducing the impact, and continues to be relevant to the worker and key parties. These reviews provide evidence to support or refine the screening system.</p> <p>Components – Evidence-based systems and practices – Triage is sorting claims into broad categories and making an early assessment about the extent to which an injured worker's return to work and recovery are potentially at risk. Evidence-based systems and practices for gathering accurate and relevant information are essential to effective triage. Screening and re-screening is an assessment of risk factors, psychosocial indicators and return-to-work barriers. An effective screening tool must be consistent, replicable, research-based and capture data. Screening facilitates assignment of the case manager with appropriate competencies relevant to the claim, allocation of resources and prioritisation of activities.</p> <p>[Case management triage enables matching effective intervention to needs and allocation of resources to ensure return-to-work obstacles are addressed.]</p>	Any	Case management

Table B.7 Continued

Authors	Key features [reviewers' comments in square brackets]	Condition	Topic
WorkCover SA, 2012 Guide	<p>Rehabilitation & return to work coordinators: All you need to know</p> <p>'Return to work planning – <i>The best approach is to start planning the worker's return to work as soon as possible.</i></p> <p>Supporting early intervention – <i>Early intervention can increase the likelihood of the worker remaining at work. When the employer encourages early reporting of difficulties such as soreness, it can trigger the use of the occupational rehabilitation program and/or your risk management program. This can lead to the worker remaining at work, as opposed to needing to return to work after an absence. Assisting an injured worker to remain at work can reduce the financial and emotional impact on the worker, their family and their employer. It can also be an important factor in helping the worker recover faster and return to their normal duties.</i></p> <p>Consulting on a return to work – <i>Initiate discussions about return to work, rather than leaving initiation to the injured worker:</i></p> <ul style="list-style-type: none"> • <i>Discuss their return to work options.</i> • <i>Involve their supervisor.</i> • <i>Conduct an analysis of what assistance the injured worker may require.</i> • <i>Examine information from all relevant sources, particularly information from treating practitioners and the injured worker.</i> • <i>Consult the treating doctor or healthcare provider (subject to the consent of the worker) and workplace rehabilitation provider (if one has been appointed).</i> <p><i>Proper consultation involves:</i></p> <ul style="list-style-type: none"> • <i>sharing information about the worker's return to work with the people involved</i> • <i>providing a reasonable opportunity for those people to consider and express their views about the worker's return to work</i> • <i>taking those views into consideration</i> <p><i>Consultation should be undertaken directly with the worker, although they may be represented, assisted and supported by another person during the consultation. Consultation may be conducted face-to-face, over the telephone or in writing. You should consider what is most appropriate in the circumstances.'</i></p>	Any	Telephonic intervention

Table B.7 Continued

Authors	Key features [reviewers' comments in square brackets]	Condition	Topic
Stroetmann <i>et al.</i> , 2010 Report	<p>How can telehealth help in the provision of integrated care? (Policy Brief 13)</p> <p>Key messages include the following: <i>'Demographic change, rising incidence of chronic disease and unmet needs for more personalised care are trends that demand a new, integrated approach to health and social care. Professionals must work across sectors as a team with common goals and resources to deliver a coordinated response to each individual's care requirements. Advanced information and communications technology (ICT) provides a major new opportunity to realise care integration, superseding today's chain of disjoint responses to discrete threats to health.'</i></p>	Any	Policy
Zwar <i>et al.</i> , 2011 Evidence review	<p>Telephone coaching models to support chronic disease management in multi-morbid and vulnerable populations: a rapid review</p> <p>(An evidence check review brokered by the Sax Institute for the NSW Ministry of Health.)</p> <p>The review examines the effectiveness of telephonic-based coaching services for the management of patients with one of the following chronic diseases: type 2 diabetes, congestive cardiac failure, coronary artery disease, chronic obstructive pulmonary disease (COPD) or hypertension. In the review there is a particular focus on those with multi-morbidities, single morbidities and vulnerable populations.</p> <p>The evidence for the effectiveness of telephone coaching for people with chronic conditions suggests that coaching can improve health behaviour, self-efficacy and health status but there is less evidence for improvements in quality of life and patient satisfaction with the service. The evidence for improvements in health service use was limited.</p> <p>Telephone coaching interventions were effective for vulnerable people with chronic disease. Often the vulnerable populations had worse control of their chronic condition at baseline and demonstrated the greatest improvement compared to those with better control at baseline. Planned (i.e. weekly or monthly telephone calls to support the patients with chronic disease) and unscripted telephone coaching interventions appear to be most effective for improving self-management skills in people from vulnerable groups. The planned telephone coaching services had the advantage of regular contact and helping people progress skills over time. The unscripted aspect allowed the coach to tailor support to the patient individual's needs and appears to be appropriate for people from vulnerable populations. In most studies the telephone coaching intervention lasted 12 months.</p>	Type 2 diabetes, congestive cardiac failure, coronary artery disease, chronic obstructive pulmonary disease (COPD) or hypertension	Telephonic intervention

B.3.2 Summary of practice exemplars

Summary of programme details (data and processes) gleaned from recent documented provider initiatives that use telephonic approaches, with a focus on occupational outcomes.

Table B.8 Summary of practice exemplars

Provider	Programme details
5 Boroughs Partnership NHS Foundation Trust, 2013	<p>Rapid Access to Physiotherapy: reducing musculoskeletal sickness absence</p> <p>The overall goal of this project was to reduce sickness absence due to musculoskeletal disorders (MSDs). A new physiotherapy manager reviewed the existing physiotherapy service and implemented a number of changes in 2011, one of which was to introduce a telephone triage service to provide timely management and advice to staff with MSDs, and for the prioritisation of referrals. Referrals were either done by the line manager, occupational health (OH) or by individuals themselves.</p> <p>Set-up</p> <p>A Band 7 OH physiotherapist was employed. Education for managers within the Trust was provided via a series of presentations in order that they adhere to early referral of staff with MSDs to occupational health. The service was then monitored to record the number of referrals, the time from absence to referral and the time from referral received to intervention. Numerous other work outcomes were recorded, with the most important being work status at initial assessment and discharge. The whole process was done in conjunction with the Director of Nursing, OH manager, heads of service and ward managers. Analysis was performed at 12 months post implementation.</p> <p>Outcomes</p> <ul style="list-style-type: none"> • The total number of sickness episodes due to MSDs was reduced by 18%. • The total number of days lost (WTE) was reduced by 21%. • The total saving to the Trust was £170,000 (based on average cost of sickness absence per day). • The maximum sickness absence episode length was reduced by 16%. • The average episode was only marginally reduced by 0.5 days. <p>Challenges</p> <ul style="list-style-type: none"> • It was difficult educating managers to comply with early referral of staff off sick. This was overcome by contacting managers who did not comply directly and by advertising the service. The effectiveness of the service soon became evident and managers were pleased with the feedback and advice regarding staff and their return to work. • The telephone management was occasionally met with objection from staff expecting direct contact with a physiotherapist. When advice and exercise programmes were emailed to staff, this resulted in them becoming more open to this type of management. • The new ways of working within the department took time to become embedded, and the direct referral pathways were sometimes interrupted in the early stages but with positive reinforcement, and by also referring primary cases for additional nurse and doctor input as appropriate, it was accepted. • GPs would occasionally provide extended sick notes, but this was overcome with improved communication. <p>[This points strongly to the 'all players onside' approach, and highlights the need for education, advertising, constant monitoring and communication between players.]</p>

Table B.8 Continued

Provider	Programme details
Atos Healthcare, 2013	<p>Rationale for using telephone consultations rather than face to face consultations</p> <p>Atos Healthcare has been delivering telephone consultations as the primary method of assessing occupational health cases for the majority of their contracts for about five years. The default assessment method is a telephone assessment with an Occupational Health Adviser (OHA). About 60 – 70% of cases (dependent on the contract) can be closed after this assessment because the OHA is able to answer all the manager's referral questions. If the questions can't be answered from this assessment (depending on contractual terms) the OHA can route the case for another telephone assessment (for example, where some information is missing but will soon arrive, e.g. results of a scan), face to face (e.g. where there have been communication difficulties) or to another practitioner, e.g. a doctor.</p> <p>The move to telephone assessments was done with the recognition that, even in diagnostic consultations (e.g. with a GP or hospital consultant), about 90% of the information needed to make a diagnosis was obtained through the medical history obtained by talking to an individual, and examination and testing only added about 10% to the process. In OH, diagnosis is not an issue but functional impairment and an awareness of the patient's perception of their illness and potential blocking issues to a return to work are the main reason for the assessments. These are all assessed by question, and examination is very rarely required.</p> <p>In 2007 Atos Healthcare performed a trial looking at 1,700 cases that were assessed by telephone and compared them to 1,400 cases that were assessed over the same time period using the then standard model of face-to-face assessment. This study showed no significant difference in the return-to-work time between the two groups. Discussion with the practitioners taking part highlighted some issues specific to assessing by telephone. The staff was all trained in this method of assessment, using the learning from the trial.</p> <ul style="list-style-type: none"> • Mental health and musculoskeletal disorders are now assessed using set protocols to ensure correct identification of any red flag issues (not in place at the time of the trial). Feedback from managers, and from on-going Voice of the Customer workshops, is that where they felt that the patient was not being honest in their engagement in the process the clinician had identified this in the same proportion of cases, just not necessarily the same type of cases. • There is a feeling among managers (but not measurable) that back problems can be falsified but mental health cases may be better than when assessed face to face. The managers say they like it that telephone assessments make it more difficult for an employee who is seeking to avoid an assessment, as there are no excuses around phobia or physical travel difficulty or transport disruption. • In Atos Healthcare's experience, in order for telephone assessments to work, managers need to be able to provide a contact phone number (preferably two) for the individual. If the person is at work, a private area is needed where the call can be taken confidentially. The manager also needs to notify Atos on the referral if there are any contra-indications to a telephone assessment, e.g. hearing or speech difficulties, or the need for an interpreter, etc. • Although most organisations mandate use of the telephone assessment process as the default, a degree of flexibility in the arrangements is required based on individual cases and company policy.

Table B.8 Continued

Provider	Programme details
Aviva UK Health, 2011	<p>BackUp (Back Pain) Service and Whiplash Service</p> <p>Aviva contracts a leading provider of professional rehabilitation, case management and employment services to the insurance industry to provide a service for back pain claims. This was developed because of Aviva's historical experience: traditional benefits being provided in accordance with customer expectations and health beliefs; unmanaged and self-directed care resulting in fee for service arrangements with a huge number of providers; high and increasing spend of over £23million per year that led to questions about affordability of cover and sustainability.</p> <p>The new service uses a telephone triage to provide an early, stepped-care approach. This is driven by evidence-based practice, and aims to enhance the customer journey. Following telephone assessment and provision of advice, each client is allocated to one of four back pain pathways, known as 'protocols'. The distribution of cases into these pathways was as follows:</p> <ul style="list-style-type: none"> • 4% to Protocol A – telephone assessment and guided self-help. • 6% to Protocol B1 – as for Protocol A plus one session of physiotherapy. • 73% to Protocol B2 – as for Protocol A plus further sessions of physiotherapy. • 12% to Protocol C – requiring onward referral. <p>Results demonstrated that 18,000 customers had used the service. 97% spoke to a clinically qualified case manager within two hours. Only 12% of customers needed to be referred to a consultant. BackUp cases were managed at 40% lower than the cost of non-BackUp cases.</p> <p>This approach has also been extended to whiplash problems, which has a total spend of £200million annually. Outcomes reported were as follows:</p> <ul style="list-style-type: none"> • The claimant drop-out rate is reduced from 33% to 3%. • Lifecycle is reduced from 170+ days to just seven days. • For every 100 cases saved there is a financial saving of over £200,000. • 100% positive customer feedback. • Early sight of more serious injuries. • Significant improvements in customer experience and control of benefit spend.

Table B.8 Continued

Provider	Programme details
Buckinghamshire Healthcare NHS Trust, 2012	<p>Healthcare People Management Association (HPMA) award for excellence in improving employee health and well-being 2012</p> <p>In order to combat the costs and impact on business efficiency resulting from staff sickness absence, the Trust recognised that a different approach was needed in order to influence the perceptions of how the organisation handled sickness absence.</p> <p>Set-up</p> <p>The Trust appointed a case-manager to work directly with OH in order to develop a strategy aimed at integrating the different elements of the new approach. The role of the case manager represented a simple and cost-effective way of working, by coaching managers and adopting a case management approach. A robust and detailed data collection scheme was developed, recording not only headline activity, but also tracking hotspots, types of ill health, role relationship, diversity and job role. Fast-track counselling and physiotherapy were also introduced and outcome measurements developed. The case manager role was established with the specific remit to support a reduction in sickness absence from 4% to 3% in two years. The role was created for a postholder with a deep understanding of all aspects of the Trust's culture, relationships and management processes rather than a clinician. The case manager holds a pivotal role, coordinating all the support required via the case management system which includes coaching managers to address and not avoid challenging situations, and supporting managers to address their own personal barriers in tackling difficult staff and situations. Being an excellent communicator and influencer are essential elements to the role in order to empower managers.</p> <p>The case manager was monitored by weekly case review, and a live anonymised tracking system accessible only by HR and OH enabled the timely review of cases and formulation of new plans. The evaluation of actions as a way of learning and developing the process was also important.</p> <p>Outcomes</p> <ul style="list-style-type: none"> • A greater reduction in sickness absence was observed in those departments where managers were trained and coached. • There has been a 30% increase in email and telephone enquiries received by OH, and referrals have increased by 20% indicating stronger internal engagement. • The case manager is widely respected and the role is seen as supportive, trustworthy and pragmatic. • It was revealed that the tools for achieving sickness absence reduction were already in place, but just need to be coordinated in a more effective way. <p>Departments, managers and personnel working in isolation can be the biggest obstacle – sharing information in a timely manner is essential</p> <p>[The telephone is not mentioned explicitly, but it seems to be part of the case management system for early referrals/contact, etc.]</p>

Table B.8 Continued

Provider	Programme details
Colchester Hospital Foundation Trust, 2012	<p>Sickness absence – early intervention pilot</p> <p>The Trust introduced a triage system with the aim of providing an early intervention and support to staff who are off sick with mental health conditions and musculoskeletal disorders, referring them to the relevant professional bodies.</p> <p>Set up</p> <p>The leadership and wellbeing team implemented the service, and this was led by the assistant director for organisational development, along with representatives from health and wellbeing and HR. A two-month pilot was initiated in 2011, and all staff received a letter advising them of the additional support that they would receive from the Occupational Health and Wellbeing Team. When an individual reports as sick, their line manager contacts OH with details, who then conduct a brief telephone call on the same day with the member of staff to establish any support that is required and signpost to relevant services. Following the success of the pilot programme, it was decided to roll-out the initiative to all areas of the Trust over a 10-month period.</p> <p>Outcomes</p> <ul style="list-style-type: none"> • Of those staff with mental health issues, 72% of staff returned to work within four weeks, 22% returned within eight weeks, and 7% remain absent. • For staff with musculoskeletal disorders, there has been a 100% increase in referrals to physiotherapy, and 53% have remained at work, 22% returned to work within eight days, 15% returned to work between 9-14 days, 7.5% returned to work between 15-21 days, and 2.5% returned to work within 30 days. • Identifying health issues early has enabled timely interventions, and consequently sickness absence has reduced month-on-month and annually from 3.68% to 3.46%. • The pilot scheme has contributed to a reduction in agency spend of £586,000 over a six-month period. <p>Challenges</p> <ul style="list-style-type: none"> • There were some concerns that the Trust would be putting staff under pressure to attend work. • Staff were initially anxious about calls, with some staff not happy to receive them, but as the conversation developed they realised the service was supportive. • Some staff do not like the idea of being contacted on Day 1 of absence. <p>[Nice example of an initiative being implemented from a senior level.]</p>

Table B.8 Continued

Provider	Programme details
Isle of Wight Health Trust, 2013	<p>Case Study – Occupational Health Triage Service for Staff Sickness</p> <p>The Trust undertook a six-month pilot telephone sickness absence triage service in 2010 to see whether it could reduce short-term sickness absence and encourage an early return to work for staff with the top 10 health conditions with the highest short-term, frequent absence.</p> <p>Set-up</p> <p>A Band 6 Occupational Health Nurse was employed full-time to run the programme and support the OH team in delivering the service, as well as its promotion. Managers would mark a rota system with any absent staff by mid-morning and the OH nurse would go through the selected areas each day, phoning the employee normally in the afternoon with a supportive call, asking how they were, what treatment they were taking, had they seen their GP, how long did they think they would be off for and remind them to keep in touch with their manager. If they were going to be off for more than five days she would arrange to call them again in a few days for an update. At the same time she advised them of any support services such as counselling or physiotherapy. Then having logged all the information on a specially designed Cohort system, she would email the manager with brief, non-confidential information.</p> <p>Outcomes</p> <ul style="list-style-type: none"> • There was a decrease of 46 episodes of sickness absence per year. • There was a reduction of 264 days lost in a six-month period. • 70% of respondents to a survey conducted about the new system believed triage is/has been of benefit to their area; all respondents were satisfied with their experience of using the triage to assist in their management of short-term sickness absence, and several managers stated triage has become a key part of this and helped them to overall manage absence more effectively. 80% believed triage to be an effective mechanism in the early detection of emotional ill health. <p>Challenges</p> <ul style="list-style-type: none"> • It became apparent that there were some major inconsistencies in management styles and processes, ranging from: poor engagement between management, their staff and HR; lack of follow-up for staff taking repeated absences; and poor understanding of the role of OH in supporting this process. • Contact on the first day of sickness absence does not effectively target those individuals who are struggling to return to work and are on the borderline of entering long-term sickness absence. <p>[This service provided a useful link between the employee and their manager in relation to managing sickness absence, but no clear RTW plans were implemented or followed-up.]</p>

Table B.8 Continued

Provider	Programme details
Leicestershire Fit for Work Service, 2013	<p>The Leicestershire Fit For Work Service pilot: the Fit for Work Team</p> <p>This is a not-for-profit, social enterprise providing services and expertise across work and health. The service was set up to reduce long-term sickness absence by giving people early help to get back to work. The service is open to people who are employed or self-employed and referrals mainly come from GPs. Once referred, the client will attend an appointment with the allocated case-manager who will identify the issues and tailor the support provided to the individual. This may include:</p> <ul style="list-style-type: none"> • Assessing health needs alongside job role, identifying the need for work adjustments and liaising with the employer. • Providing impartial employer liaison, conflict resolution and mediation. • Helping clients to overcome barriers, manage work/life balance and build confidence. • Pain management, fast track and targeted physiotherapy or other physical therapies, referrals to free NHS psychological therapy, expert occupational health advice. • Supported signposting – debt advice, housing advice, family problems, confidence building. <p>Since the service began, 70% of absentees referred have returned to work and 80% of referrals who were still at work remained at work. The majority of individuals in the service are experiencing mental health conditions, with musculoskeletal disorders second most common.</p> <p>Telephone triage</p> <p>The first point of contact with individuals referred into the service is by telephone, whereby clients are assessed according to the complexity of their condition. From September 2011, telephone-only case management was provided for individuals with 'simple' MSDs, as defined by the referring GP. This includes providing advice and fast-track referral to physiotherapy at the most basic level, with additional signposting and employer liaison if required. Those with mental health conditions are always seen face to face, with follow-up sometimes being conducted by telephone.</p> <p>Outcomes</p> <ul style="list-style-type: none"> • For those individuals receiving telephone-only case management (i.e. simple MSDs), 53% returned to work or remained at work, 30% became unemployed and 17% were still absent from work. <p>Challenges</p> <ul style="list-style-type: none"> • Feedback from case managers was that many of those with 'simple' MSDs were not being referred into the service early enough and had been in the system for some time with stronger preconceived ideas/beliefs which were difficult to change. • The team delivers the Open Mind Service in partnership with Leicestershire NHS Trust, which is part of the IAPT initiative. The premise of this was for initial assessments to be carried out over the telephone using standardised questionnaires in order to reduce waiting times, and individuals were then referred on to mental health services if deemed necessary. However, difficulties were encountered when trying to complete questionnaires over the telephone, leading to clients then needing to be assessed face to face to ensure the correct information was being collected. <p>[This service usually contacts individuals on the day of GP referral, but it appears that GPs may not be referring individuals early enough in the process to gain maximum benefit from the service. The problems with providing IAPT may point to the need for appropriately trained mental health professionals conducting such assessments.]</p>

Table B.8 Continued

Provider	Programme details
NHS Lanarkshire/ University of Glasgow, 2013	<p data-bbox="405 261 1971 325">Reducing sickness absence in Scotland – applying the lessons from a pilot NHS intervention: Early Access to Support You (EASY)</p> <p data-bbox="405 333 1971 587">In May 2008, NHS Lanarkshire implemented a unique telephone-based sickness absence management service, supplementing existing absence policies. The EASY service is an innovative approach to managing sickness absence, which was designed based on the biopsychosocial model, applying cognitive behavioural principles and utilising evidence based interventions. [This intervention was designed by Professor Ewan Macdonald and subsequently evaluated by Dr Judith Brown of the University of Glasgow.] The service enabled telephone communication between the absentee, their line manager and the EASY service from Day 1 of absence, further telephone contact at three days, and referral to OH at Day 10. A pilot study was conducted to establish whether the EASY service was effective in reducing sickness absence, and to consider how the EASY service could be developed into a larger early sickness absence intervention, which could be used by employers in Scotland.</p> <p data-bbox="405 595 537 627">Outcomes</p> <ul data-bbox="405 635 1948 928" style="list-style-type: none"> <li data-bbox="405 635 1444 667">• The EASY service was effective in reducing sickness absence in terms of hours lost. <li data-bbox="405 675 1780 707">• Sickness absence incidence shows a year-on-year downward trend, greater than that observed across Scotland. <li data-bbox="405 715 1948 746">• Those absentees phoned on the first day of absence were more likely to return to work than those phoned on subsequent days. <li data-bbox="405 754 1691 786">• There was a high level of satisfaction with the EASY service (response rate to questionnaire was 25.7%). <li data-bbox="405 794 1758 858">• The service was cost-effective: the value of the hours saved comfortably exceeded the cost of the intervention. The estimated net benefit was £166,390 and return on investment was estimated to be 1.135:1. <li data-bbox="405 866 1758 898">• Having a control group would have allowed a more rigorous investigation on the effectiveness of EASY service. <li data-bbox="405 906 1534 938">• The study highlights the importance of early intervention for sickness absence management.

Table B.8 Continued

Provider	Programme details
RehabWorks, 2013	<p>Specialist business to business musculoskeletal and psychological therapy service rehabilitation</p> <p>RehabWorks uses a stratified approach for all services beginning with an initial triage call, followed by allocation to either supported self-help or referral for fast track treatment. The full range of services offered by the system includes: triage; assessment; self-management; treatment; case management; and reporting. RehabWorks has found that in providing an early intervention telephone triage service to OH clients typically 35 – 45% of cases can be self-managed with the employee receiving guidance on how to manage their own condition to a recovery without the need to progress to face-to-face treatment sessions.</p> <p>Triage calls are handled by RHW physiotherapists and the service operates from 8am – 9pm Monday to Friday and 9am – 5pm on Saturdays and Sundays. The Saturday and Sunday service currently runs on a reduced capacity basis, but if requirements show a need this can be increased. Triage calls are typically a 30-minute interview and assessment and will:</p> <ul style="list-style-type: none"> • understand past medical history and social factors. • obtain consent to provide relevant information relating to the employees occupational ability to the occupational health practitioner, line manager, HR and GP (depending on the reporting arrangements). • rule out serious medical conditions (red flags). • understand the history and events leading to the injury/clinical presentation. • identify any obstacles to recovery such as psychosocial work issues and agree a return-to-work plan. • document outcome measures including the Keele questionnaire and Work and Social Adjustment Scale (WASAS). • establish the best course for treatment, as prompted by the relevant clinical care pathway. This will be one of the following: <ul style="list-style-type: none"> – guided self-management; – face-to-face treatment; – Functional Restoration Programme (FCA and Return to Work Programme); – emergency treatment – in the rare instance of red flags manage the onward referral process immediately, producing medical referral letters that the employee can take to their GP/A&E. • the triage physiotherapist submits a report immediately following the triage call to the referrer on prognosis and work information, and provides a management plan for the client. <p>Outcomes example for common mental health problems – Initiative ‘Maintaining Wellness Following an Occupationally-Focused Evidence-Based Telephone-led CBT Intervention’. At discharge 88% had returned to work with the same employer, and this increased to 92% at six-month follow-up indicating work outcomes were sustained. 91% of cases maintained clinical gains (measured by PHQ-9 and GAD-7), and 90% were happy ‘to give a testimonial’ indicating a high level of client satisfaction.</p> <p>Outcomes example 1 for musculoskeletal problems – Utility (water) company. Stepped approach: Triage – quick access to initial telephone consultation with a Chartered Physiotherapist; acute physiotherapy – fast track appointments; and Functional Restoration Programme for more complex cases. Customer benefits: 40% Drop in musculoskeletal zone-related absence from 2008-11; Contributed to a drop in the company’s employers liability insurance premium; and employee engagement and satisfaction rates increased.</p> <p>Outcomes example 2 for musculoskeletal problems – Police service. 536 cases managed as follows: 35.2% (154) were self-managed with triage support only; 57.9% (253) were seen for acute face-to-face assessment and treatment; and 6.8% (30) were referred for the Functional Restoration Programme. At discharge 92% had returned to full work, 6% to modified duties, and only 2% remained off work. Patient satisfaction was over 90% for the outcome of their treatment and 96% were pleased with the advice they were given. The return on investment calculated as 3.55:1, i.e. £3.55 saved for every £1 spent on the service.</p>

Table B.8 Continued

Provider	Programme details
Swiss Re, 2013	<p>Disability management in practice: work and mental health. Psychosocial factors and the use of early intervention strategies to improve return-to-work outcomes. Early intervention for income protection claimants with mental health conditions</p> <p>Swiss Re is a global provider of income protection insurance (IP), and recently implemented a stepped-intervention model based on biopsychosocial principles for claimants with mild-to-moderate mental health conditions. The purpose was to provide an early intervention programme to assist claimants in their recovery and ability to return to work faster and help prevent long-term disability.</p> <p>Set up</p> <p>The mental health stepped-care model was developed in collaboration with a rehabilitation provider with experience using a similar intervention model for musculoskeletal conditions (RehabWorks). The model involved initial telephone triage (with a mental health clinician), education, bibliotherapy, guided self-help and signposting to other appropriate services. Following triage, the service 'streams' were stepped by the level of intervention intensity, which could be: coaching with an occupational psychologist; telephone case management; or face-to-face input if required. An open study commenced with a UK-based IP insurer in November 2010. The study population included new claimants with mild-to-moderate mental health conditions. Upon lodging an IP claim, study participants were referred to the provider for telephonic triage and allocation to an appropriate intervention 'stream'.</p> <p>Outcomes</p> <ul style="list-style-type: none"> • Preliminary analyses indicated a reduction in costs for intervention and length of claim duration when compared with the average intervention costs and average claim duration for traditional claims management practices. • Improvements were noted between pre- and post-intervention including: a 59% improvement in scores on the PHQ-9 and a 66% improvement in scores on the GAD-7 scale. • Customer satisfaction for the service was 92%. • 80% of claimants had returned to work, with the average duration of the intervention lasting 58 days.

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