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# Case management

What it is and how it can best be implemented



## Key messages

- Case management is an established tool in integrating services around the needs of individuals with long-term conditions.
- It is a targeted, community-based and pro-active approach to care that involves case-finding, assessment, care planning, and care co-ordination.
- The evidence for case management is mixed. However, where it is implemented effectively it has improved the experiences of users and carers, supporting better care outcomes, reducing the utilisation of hospital-based services, and enabling a more cost-effective approach to care.
- The following factors are linked to the achievement of successful outcomes:
  - assigned accountability of an individual or team to the patients being case-managed
  - clarity about the role of the case managers and support to ensure they have the right clinical and managerial competencies
  - accurate case-finding to ensure interventions target patients with defined care needs
  - appropriate caseloads to ensure that patients are receiving optimum care
  - a single point of access for assessment and a joint care plan
  - continuity of care to reduce the risk of an unplanned admission to hospital
  - self-care, to empower patients to manage their own condition
  - joined-up health and social care services with professionals working to aligned financial incentives and in multidisciplinary teams
  - information systems that support communication, and data that is used pro-actively to drive quality improvements.
- Case management works best as part of a wider programme of care in which multiple strategies are employed to integrate care. These include good access to primary care services, supporting health promotion and primary prevention, and co-ordinating community-based packages for rehabilitation and re-ablement.

## Introduction

Over the next decade and beyond, broad shifts in demographics and disease status will mean that patients with long-term chronic conditions will absorb the largest, and growing, share of health and social care budgets. In order to meet this challenge, health and social care systems need to develop an approach that better co-ordinates and integrates services around the needs of patients and service users of all ages with chronic, medically complex and disabling conditions. This is where the potential for delivering better and more cost-effective care is greatest.

At a local level, the health and social care sectors have been developing innovations in integrated care for many years. However, while integrated care promises to deliver both better-quality care and cost benefits, the evidence about what works remains mixed, due to the variety of approaches that have been adopted. There is, moreover, a general lack of knowledge about how best to apply (and combine) the various approaches to delivering co-ordinated care in practice.

## The aims of this paper

This paper examines how case management can be implemented successfully. It is the first in a series of reports from The King's Fund that examine key strategies designed to improve the delivery of integrated care for people with long-term conditions. In common with the other papers to be developed in this series, we draw on a review of the literature. Our aim is to provide an evidence-based resource to support commissioners and providers to implement case management as part of a wider strategy to provide better co-ordinated care for people with long-term conditions.

The paper explores these key questions:

- What is case management?
- What are the core components of a case management programme?
- What are the benefits of case management when it is implemented effectively?
- What factors need to be in place for successful case management?

## What is case management?

Case management is a generic term, with no single definition. Hutt *et al* (2004) described it as 'the process of planning, co-ordinating and reviewing the care of an individual'. The Case Management Society of America (CMSA) defines it as 'a collaborative process of assessment, planning, facilitation, care coordination, evaluation, and advocacy for options and services to meet an individual's and family's comprehensive health needs through communication and available resources to promote quality cost-effective outcomes' (CMSA website). These definitions suggest that, rather than being a single intervention, case management refers to a package of care which covers a range of activities that can vary widely between programmes.

The absence of a single definition has led to confusion and uncertainty about what exactly case management involves. For instance, in some contexts it can refer to an ongoing programme of individualised care aimed at keeping people well: but in others it refers to an intensive, personalised and time-limited intervention aimed at preventing a specific occurrence or event – usually an emergency hospital admission. In the NHS in England, there is some ambiguity over whether case management should be time-limited or ongoing (one Department of Health document suggests it should be ongoing (Department of Health 2005b)) case management usually refers to the latter, and so it is that definition we have used in this paper.

Case management is a key strand of the Department of Health's model for caring for people with long-term conditions (Department of Health 2005). This recognises that people living with long-term conditions have a varying intensity of needs and that care should be targeted accordingly. The premise of the model is that targeted, proactive, community-based care is more cost-effective than downstream acute care. Time-limited case management is the level of care targeted at those with the greatest risk of emergency admission. People at lower risk of admission can be targeted with disease management programmes or support to self-manage, although both these elements may also form part of a case management programme. Programmes can focus on a specific condition or group of conditions, but most often they are generic and aimed at individuals with complex needs. This paper explores generic case management; it does not focus on case management for specific long-term conditions or diseases, or on specific episodes such as end of life, except where there are transferable lessons to be learned.

Where case management has been implemented in the NHS, it has largely taken the form of community-based programmes set up and funded by primary care trusts (PCTs) and typically (but not always) staffed by community matrons. Although the programme content may vary widely, the key aims have remained the same:

- to reduce expensive hospital utilisation (principally in terms of emergency admissions but also in terms of length of stay)
- to improve care outcomes for patients
- to enhance the patient experience.

### What are the core components of a case management programme?

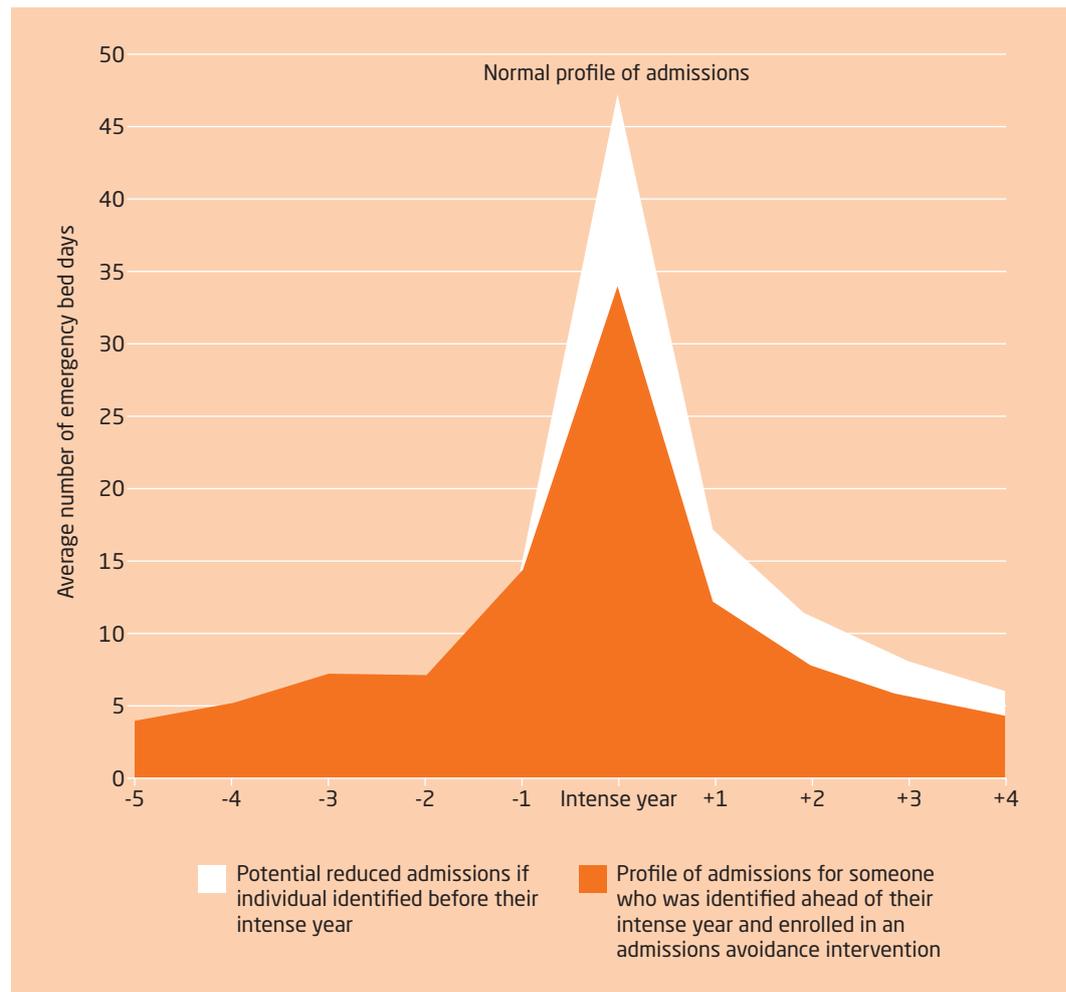
Drawing on the work of Challis *et al* (2010), Kodner (2003), and our own review of the literature, the following core components are particularly important to case management programmes:

- case-finding
- assessment
- care planning
- care co-ordination (usually undertaken by a case manager in the context of a multi-disciplinary team). This can include, but is not limited to:
  - medication management
  - self-care support
  - advocacy and negotiation
  - psychosocial support
  - monitoring and review.
- case closure (in time-limited interventions).

This categorisation might suggest that case management is a linear process with sequential elements. In practice, of course, it is much more complex. Many individuals will undergo repeated monitoring and review as well as further assessment and care planning until they are fit for discharge. Below, we examine the importance of each component to the case management process. The evidence for its effectiveness is reviewed later.

### Case-finding

Case-finding is an essential first element in any case management programme that is

**Figure 1 Regression to the mean**

(From Lewis GH, 'Predictive modelling and its benefits', Nuffield Trust)

aimed at preventing unplanned hospital admissions. It is a systematic method typically used to identify individuals who are at high risk of hospital admission, though it may also be used to predict other events. Research has shown that the distribution of health care utilisation across a population tends to be very uneven, with a small proportion of people accounting for a large share of total resources (Cummings *et al* 1997). Therefore, in order to ensure that an intervention is cost-effective, it is crucial that resources target the individuals at highest risk.

Any case-finding method needs to be able to identify individuals at high risk of *future* emergency admission to hospital. Patients who are currently experiencing multiple emergency admissions typically have fewer emergency admissions in future – a phenomenon known as 'regression to the mean' (Roland *et al* 2005; Nuffield Trust 2011). Therefore, offering case management to patients who are *currently* experiencing emergency admissions can be inefficient. If a patient can be identified before they deteriorate, there is more potential to reduce admissions. Figure 1 above shows the pattern of admissions among a cohort of people with an intense year of admissions.

There are a number of tools and techniques that can be used for case-finding. The most accurate are predictive models that use statistical algorithms to predict an individual's level of future risk of admission (Billings *et al* 2006; Nuffield Trust 2011). In practice, most programmes use a combination of a predictive model and clinical judgement; the model is used to flag individuals who are at high risk, and the clinician then makes a judgement as to whether a person is likely to benefit from case management. For any case-finding method to work well there must be access to good-quality data (*see below* for further

discussion on data). The most powerful predictive models require access to an individual's prior hospital admission records, as well as GP records and accident and emergency (A&E) attendances. Social care data can also add predictive power.

Models are now being developed that seek to systematically assess how effective preventive care is likely to be. (Lewis 2010). By enabling health systems to focus on those individuals who are at high risk of admission and who are amenable to preventive care, these 'impactability' models are intended to enhance the cost-effectiveness of interventions (Lewis 2010). Impactability models are primarily being developed and evaluated in the United States. They are not without controversy, though, since some of these schemes systematically exclude certain individuals from preventive care and might therefore widen health inequalities. But these models do appear to offer potential for improving the efficiency of admissions avoidance programmes (Lewis 2010). It is important to bear two things in mind at this stage: first, accurate targeting is critical to the success of any case management programme; and second, not every person identified as high risk will be amenable to preventive care.

## Assessment

Once an individual has been identified through case-finding, it is important that they are assessed in terms of both their current level of ability and their physical and social care needs. Most people requiring an intervention such as case management have complex health and social care needs, so it is important that the assessment is not restricted to health needs only. Social care services use various assessment tools that could be incorporated with a clinical and wider well-being assessment. Efforts have been made in recent years to develop a single assessment process for use by both the NHS and social care, but so far these have focused on older people only.

The package of care offered in a case management programme will depend on the results of the individual's assessment process. While most case-finding techniques offer an indication of the individual's level of risk, the assessment stage seeks to identify all of the individual's needs, and how they can best be met. This is where clinical and social care knowledge is important.

Issues that may be covered in an individual's assessment include:

- clinical background and current health status
- current level of mobility
- current ability and needs in terms of activities of daily living
- current level of cognitive functioning
- current formal care arrangements
- current informal care arrangements
- social history
- physical care needs
- medication review
- social care needs
- wider needs, including housing, welfare, employment and education.

It is also important to consider the health and well-being of the carer (where there is one) during the assessment of the individual, as the carer plays a key role. Evidence suggests that some carers are dissatisfied with the support they receive from other formal carers and the health service (Department of Health 2008), so their needs should be taken

into account by the case management programme. The report from the Commission on Funding of Care and Support (2011) (the Dilnot report) recommended that carers' assessments should be improved so that their contribution is valued and supported.

## Care planning

*Personalised and integrated care planning is essentially about addressing an individual's full range of needs, taking into account their health, personal, social, economic, educational, mental health, ethnic and cultural background and circumstances. It recognises that there are other issues in addition to medical needs that can affect a person's total health and well-being.*

(Department of Health 2009, p 4)

The personal care plan is at the heart of any case management programme. The care planning process brings together an individual's personal circumstances (including housing situation, welfare benefits status and access to informal care) with their health and social care needs to create a plan that aims to match needs with service provision. It is important that the case manager co-produces the care plan with the individual to facilitate shared decision-making and give them a choice about possible care options. Where possible and appropriate, the process can involve other care professionals, such as a patient's GP, and informal carers (*see* Boaden *et al* 2005; Schraeder *et al* 2008). Involving the individual in the care planning process is important, because an engaged or 'activated' patient is more likely to manage their condition effectively (Da Silva 2011).

The main purpose of the care plan is to support the case manager in providing a structure to the individual's care and to ensure that the goals of all the different services are aligned with each other. It is used as a reference tool to map the different types of service or input required, and their frequency. The care plan enables the case manager to:

- make referrals to various services
- co-ordinate all the different services he/she should liaise with
- ensure that referrals have been picked up and acted on
- monitor whether the individual has made any progress.

As such, the care plan should be viewed as a 'live' document. The case manager should continually review the individual's health and social care needs and revise the care plan accordingly (Boaden *et al* 2006). Thus, the care plan is in a constant state of change depending on the individual's condition and how much progress has been made. Therefore, although 'care planning' can often be described as a component stage in the process of case management, it should be perceived as an ongoing process that structures and facilitates the effective delivery of care over time.

## Care co-ordination

*Care co-ordination can reduce duplications of health care, avoid gaps and reduce health and social care service costs. The benefits to patients are multifaceted and can include improved access to services, avoidance of unnecessary investigations and procedures, improved disease management and faster discharge from hospital.*

(Sargent *et al* 2007, p 516)

Care co-ordination is the essence of case management. It involves continual communication with patients, their carers, and the various professionals and services they come into contact with. Fundamental to care co-ordination is the presence of an individual (a case manager) who often works with a team of professionals to organise and deliver a person's care. So, while the individual or team does not necessarily *provide* all

aspects of the person's care, they take responsibility for overseeing and co-ordinating that care and helping them to navigate the system.

This navigational role is important, because most individuals selected for case management need services or input from one or more providers. Case managers help patients and carers navigate the different services and processes that might otherwise prove too complicated. Case managers can also provide patients with information about the services they are being referred to and/or discuss choices about their care options (Boaden *et al* 2006; Hudson and Moore 2006). In most case management programmes in the NHS, a named case manager acts as a fixed point of contact for the patient during the course of their care. The most common activities undertaken by case managers and their teams are described below.

### ■ Medication management

Around 7 per cent of all hospital admissions are associated with adverse drug reactions, many of which are preventable (Pirmohamed *et al* 2004). In addition, it is estimated that between one-third and one-half of all medications prescribed for long-term conditions are not taken as recommended (Nunes *et al* 2009). Case managers spend a substantial proportion of their time ensuring that the individual's medication regimen is appropriate and up to date, that they are adhering to it, and are not experiencing any adverse side-effects (Sargent *et al* 2007; Challis *et al* 2010). To do this, they must communicate with the individual patient, general practice staff, specialists, the out-of-hours service, and sometimes community pharmacists. In some instances, case managers who are community matrons liaise with GPs and prescribe medication themselves, thus saving a GP consultation as well as time (Lyndon 2009; Sheaff *et al* 2009; Goodman *et al* 2010).

### ■ Self-care support

While support for self-management is largely offered to individuals with low-intensity needs, it can still play an important part in the package of care offered to those with the greatest needs. Whatever the level of care offered to a patient, for most of the time they have to manage their own conditions (sometimes with the help of their carer). Supporting self-care can consist of many activities, including:

- providing (and/or making referrals for) general health education and advice, such as smoking cessation or diet and exercise
- providing (and/or making referrals for) health education and advice specific to the individual's long-term condition(s), such as diet or pain management
- coaching about the most appropriate service to contact regarding non-urgent questions related to health or when a crisis is occurring.

Self-management support can be disease-specific, and can be technical or clinical, cognitive or behavioural. For instance, someone with diabetes may benefit most from structured education about diet and exercise, while someone with depression may benefit more from a behavioural intervention (Da Silva 2011). In practice, self-management is usually an ongoing process, but it can also form part of a time-limited case management programme.

### ■ Advocacy and negotiation

One of the case manager's key roles is advocating for and negotiating on behalf of the individual so that they have access to the services and equipment identified in their care plan. The case manager can also negotiate directly with service providers where patients and carers cannot do this for themselves. As a result, the case manager may be able to negotiate a prompt response to referrals or speed up the process of obtaining medication, equipment or home care services. Case managers often advocate on behalf of patients

when they are discharged from hospital (Boaden *et al* 2006), and support individuals to make care choices (Goodman *et al* 2010).

#### ■ Psychosocial support

*... a holistic approach to case management is particularly valued... [patients] like to have easy access to a health professional that they know and trust. This aspect of care seems to have been missing for some older patients with complex long-term conditions.*

(Brown *et al* 2008, p 416)

Case managers spend relatively more time with patients than other professionals, and the psychosocial support offered by this relationship is important. Good relationships fostered by regular contact with case managers can make patients feel more confident and increase their sense of well-being (Brown *et al* 2008; Leighton *et al* 2008).

There is evidence to show that patients talk to case managers and confide in them in ways they cannot with other health care professionals. They may feel 'cheered up' and look forward to appointments with someone who knows their needs and preferences and who helps them secure the services they need (Sargent *et al* 2007). Regular contact is regarded as an important source of support among patients, particularly those who have experienced bereavement – even if case managers do little more than provide a sympathetic ear (Goodman *et al* 2010).

Psychological support might best be described as part of the general process of building a therapeutic relationship between care-giver and patient. It is a key strategy in supporting self-care, in identifying and supporting an individual's willingness to change behaviour, or facilitating changes in the future goals for their care.

#### ■ Monitoring and review

A well-written care plan enables case managers to monitor and review whether an individual is receiving an appropriate package of care. The frequency of such monitoring may vary depending on the individual's level of need (Boaden *et al* 2006; Huws *et al* 2008; Sargent *et al* 2008). Monitoring can take place daily, weekly or monthly, and directly, in the individual's home, and/or through remote monitoring (for example, by telephone or through a telehealth device that measures blood pressure or other vital signs). Such monitoring can be undertaken by a multi-disciplinary team. The monitoring process allows care plans to be constantly reviewed and changed where necessary.

### Case closure

Where case management is intended as a time-limited intervention aimed at avoiding crisis, it is essential that there is a clear process for discharge or 'case closure'. Regular discharge of patients helps to manage the long-term capacity of case management programmes and ensures that those patients with the greatest need are able to access the correct support at the most appropriate time. Roland *et al* (2005) describe four possible methods of discharge from a case management programme:

- death
- self-discharge
- decision by the case manager and/or their multi-disciplinary team that care has been optimised (ie, that the person is well enough to live independently or that they require more- or less-intensive and ongoing support, such as a nursing home, or specialist care such as end-of-life care)
- the patient's risk of hospital admission, identified by a risk prediction tool, falls below a certain level as determined by the case management programme.

## How is case management being implemented?

When all the different components of case management are effectively combined into an integrated strategy to manage patients with long-term conditions, it could be argued that a 'programme approach' to care has been created. There are some good examples of this happening in practice, such as the Guided Care model and PACE programme in the United States, and the 'virtual ward' model in the UK (*see box below*).

### Case management in practice: three case studies

#### Guided Care

The Guided Care model for chronic disease care was developed in the United States in 2001. A specially trained registered nurse is recruited, trained in chronic disease care, and integrated into a primary care practice participating in managed care programmes, including Kaiser Permanente. The nurse works collaboratively with up to five primary care physicians and others in the practice team to deliver integrated care.

Predictive modelling techniques use claims data to identify patients over 65 years with multiple co-morbidities who are at risk of 'heavy' health service use in the coming year. Those at highest risk are targeted for the intervention and a caseload of approximately 50–60 patients is allocated to each Guided Care nurse.

The Guided Care nurse carries out a geriatric assessment of the patient and their carer at home. The nurse, a primary care physician, patient and carer design a comprehensive, evidence-based and patient-friendly 'action plan' based on best practice primary care interventions for this patient group. The nurse monitors the patient monthly and promotes the principle of self-management through education and support. The nurse co-ordinates the various parts of health care that are provided in different settings (eg, hospitals, social service agencies, hospices and rehabilitation clinics) and helps the patient make the transition between these care settings. Access to community resources is also facilitated.

A secure, web-based electronic health record is used to provide the nurse with alerts about drug interaction, best practice evidence and appointments/encounters with health care professionals.

Positive outcomes associated with the Guided Care approach include high levels of satisfaction with chronic disease care on the part of patients, carers and physicians. Compared with those receiving 'usual care', the perceived quality of care among patients and physicians is better (Boyd *et al* 2010; Marsteller *et al* 2010) while the reported strain on family care-givers was reduced (Wolff *et al* 2010). On average, total health care costs to the insurer were 11 per cent less (Leff *et al* 2009), linked to significant reductions in the provision of home health care and reduced admissions to skilled nursing care facilities (Boult *et al* 2011).

References: Boyd *et al* 2007; Aliotta *et al* 2008; Leff *et al* 2009; Boyd *et al* 2010; Marsteller *et al* 2010; Wolff *et al* 2010; Boult *et al* 2011. *See also* Guided Care, 'Care for the whole person, for those who need it most', available at: [www.guidedcare.org/index.asp](http://www.guidedcare.org/index.asp).

#### PACE

The US PACE (Promoting Action for All-inclusive Care for the Elderly) programme is an integrated provider model aimed at maintaining frail older people in the community for as long as possible. To qualify for PACE, individuals must be over 55

years of age and be considered by the state to be in need of long-term nursing home care. A typical PACE enrollee is a female, aged over 80, with more than seven medical conditions but who is able to live in the community with appropriate support.

PACE provides case management organised in daycare centres through multi-disciplinary teams, including nurses, physicians, therapists, social workers and nutritionists. The team takes shared accountability for managing patients, providing services and promoting co-ordination and continuity of care to every individual. A data system facilitates this by collecting information on all aspects of a patient's health status; it also forms the basis of the patient's care plan.

PACE operates in more than 34 sites across the United States, with caseloads of approximately 250 to 300 individuals. Caseloads are monitored to ensure that patient and carer contact is not compromised. Health and social care resources are pooled into a single budget; the providers are paid a capitation payment and take control of long-term care expenditure and financial risk.

Reference: Curry and Ham (2010)

### Virtual wards

The Virtual Ward programme is a model of case management that has been developed in the UK. It is now used widely across the NHS and there are programmes running in a number of sites, including Croydon, Wandsworth and Devon.

The format of the programme can vary between localities, but the basic premise is the same: that the concept of the hospital ward – with its multi-disciplinary team, ward clerk and regular ward rounds – is replicated in the community. Early intervention is key, and individuals are usually identified using a predictive risk model. The patients at highest risk are assessed and, where appropriate, admitted to the 'ward'. A community matron (or, in some models, a GP) acts as case manager, assessing the person's needs and developing a care plan together with the individual and their carer(s). Crucially, the assessment, care plan and as much of the subsequent care as possible is undertaken in the patient's home.

The case manager regularly meets with a multi-disciplinary team to assess each patient on the 'ward'. The team composition can vary according to the locality, but generally consists of nurses, health visitors, pharmacists, social workers, physiotherapists, GPs, mental health professionals, occupational therapists and a voluntary sector worker. Specialist staff, and housing and welfare services, can be involved where necessary. A ward clerk is attached to each ward and provides a central point of contact for all involved. At the virtual 'ward rounds' (which can take place over the phone), the team discusses each patient. The frequency of the rounds depends on the individual's risk status – some are discussed daily, some weekly and others monthly – and their care plan is amended according to the discussion.

Continuity is important. Patients on a virtual ward are given the contact number of the ward clerk, who acts as a single point of contact. Where wards do not operate 24 hours a day, a list of the virtual ward's current patients is sent to local hospitals, NHS Direct, and out-of-hours services. Should a virtual ward patient present to a service, the staff are alerted about their status on the virtual ward and the case manager is alerted that the patient has presented. Crucially, once patients' risk levels have dropped and the case manager deems them well enough, they are discharged from the service.

An evaluation of the Virtual Ward programme is being undertaken, so there is little data available as yet on its impact on service utilisation or cost-effectiveness. However,

anecdotal evidence suggests high levels of patient satisfaction and good patient experience, with patients stating that they are less likely to dial 999 because they know they can always contact their case manager, who knows them and their situation.

References: Lewis (2006); Lewis *et al* 2011 (forthcoming); Goodwin *et al* (2010); Ham *et al* (2010)

## What are the benefits of case management when it is implemented effectively?

Evidence on the impact of case management is 'promising but mixed' (Purdy 2010). This is mainly because of the difficulty in attributing any tangible impact (eg, reduction in hospital utilisation) to the case management intervention when there are multiple factors at play. This problem of attribution is common in the evaluation of schemes to reduce hospital utilisation (Steventon *et al* 2011; Purdy 2010). A further complication when assessing impact is that case management does not refer to a standard intervention; programmes can vary widely, which makes it difficult to make comparisons or generalised conclusions. The impacts of case management can also be difficult to quantify (for example, the impact on the patient experience and health outcomes). Furthermore, impacts may not be measurable in the short term, heightening the difficulties of attributing cause and effect.

There is, however, evidence that case management can have a positive impact on care experiences, care outcomes and, in some instances, service utilisation, when the approach is appropriately designed and implemented. Case management works best when it is part of a wider programme where the cumulative impact of multiple strategies (rather than a single intervention) can be successful in improving patient experiences and outcomes (Powell-Davies *et al* 2008; Ham 2009). Despite the mixed evidence it is widely accepted that case management is a valid approach for managing individuals with highly complex needs and long-term conditions. For this reason, the approach is now widely used for the management of people with long-term conditions, in the NHS and internationally.

While the balance of evidence does not allow us to come to a definitive conclusion on the overall benefits of case management, we now present some examples where positive results have been achieved in three key areas:

- service utilisation
- health outcomes
- patient experience.

What follows is not a comprehensive overview of the evidence for case management, as this is available elsewhere (*see*, for example, Challis *et al* 2010; Goodman *et al* 2010). Instead, the summaries below highlight some of the more positive examples, drawing on evidence from the UK where possible.

Later in this paper, we distil the key factors that need to be in place if case management is to prove effective.

### Service utilisation

Although the evidence is mixed, there is some evidence to suggest that case management interventions can result in reductions in hospital utilisation, as well as length of stay and admissions to long-term care. The literature finds a range of impacts, with some studies reporting significant reductions in hospital admissions and others finding much lower

or no impact on service utilisation (see Hutt *et al* 2004; Singh and Ham 2005; and Purdy 2010 for an overview).

Much of the more robust evidence comes from the United States, partly reflecting the fact that case management programmes have been established there for longer. A recent study of US programmes targeting older people with complex needs (including the case studies on Guided Care and PACE, see box on pp 9–10) found some very positive results (Boult and Wieland 2010). For example, the PACE programme has been associated with reduced hospital utilisation and nursing home use. When compared with a control group, older people enrolled in the PACE programme showed a 50 per cent reduction in hospital use and were 20 per cent less likely to be admitted to a nursing home. PACE patients, however, used more ambulatory care services (Kodner and Kyriacou 2000). Evaluations of Guided Care have similarly found evidence of reduced care costs, reduced hospital admissions and visits to A&E, and lower lengths of stay compared with control patients not on the programme (eg, see Sylvia *et al* 2008).

Although such evidence provides some positive examples and highlights the potential of case management, the fact that it originates in a different system makes it difficult to transfer lessons to the NHS. This is because some of the positive evidence is very closely linked to the structural, organisational and financial context that is specific to certain parts of the US system (Ham *et al* 2003). One key example of this is the Evercare model in the United States. Evercare – a programme of intensive, nurse-led case management targeting older people – had significant positive impacts, including halving the incidence of preventable hospitalisation and the rate of A&E admissions (Kane *et al* 2002). However, when it was implemented in the UK, the programme had a negligible impact on admissions and was not cost-effective (Boaden *et al* 2006). This failure to adopt the Evercare model successfully in the UK has been attributed in part to the different eligibility criteria used to case manage patients, and a lack of accurate targeting of individuals for whom it was likely to have most impact (in terms of costs and benefits) (Boaden *et al* 2006). Targeting issues also lay behind evidence that the virtual ward scheme in Wandsworth was admitting more patients than it was discharging, thereby having an impact on the long-term capacity of the wards to deliver case management (Ham *et al* 2010).

In addition to admissions, there is evidence to suggest that case management can have a positive impact on service utilisation in other ways. For example, a systematic review of case management programmes aimed at improving hospital discharge found evidence that re-admission rates and length of stay were significantly reduced (Chiu and Newcomer 2007). Furthermore, a UK survey of people on case management programmes revealed that patients were less likely to go to their GP or A&E department as they felt they could contact their community matron instead (Downes and Pemberton 2009). Case management has also been associated with reducing the need for institutionalisation in nursing homes or long-term care facilities. For example, one study found that people with a certain level of need were half as likely to have a nursing home admission if they were in a case management programme (Newcomer *et al* 2004). Another study of health visitors providing case management for older people found there was no significant reduction in hospital admissions, but there was a reduction in admissions to long-term care (Elkan *et al* 2001).

#### A UK-based case management programme that had a positive impact on service utilisation

<b>Where:</b>	Wales
<b>What:</b>	Controlled study of case management of people over 50 by advanced practice nurses (APNs) in primary care practices
<b>Targeting:</b>	Initial screening by APNs of patients with a history of two or more

admissions in the pre-intervention year. Patients screened for case management suitability and assigned to high, medium and low-risk groups

- Impact:**
- Statistically significant risk reduction of 9.1 per cent in unplanned medical and geriatric admission rate when compared with control practices and compared to pre-intervention years.
  - Reduction in length of stay of 10.41 per cent.
- Limitations:** Not all the reductions observed could be attributed directly to the case management programme.

(From Huws *et al* 2008)

## Health outcomes

Case management programmes have also been shown to have a positive impact on health outcomes. In this context, 'health outcomes' can refer to quality of life, independence, functionality and general well-being. However, measuring impact on outcomes is a complex process, and as a result, not all case management programmes measure and quantify their impact in this area. The following are examples of programmes where case management appears to have had a positive impact on health outcomes.

- PACE and Guided Care have shown potential to improve both the quality of care and quality of life for older people with complex needs while reducing, or at least not increasing, the cost of their care (Boult and Wieland 2010).
- A UK pilot of the US Evercare programme, while having little impact on service utilisation, found that 95 per cent of patients perceived an improvement in their ability to cope with their health problems (UnitedHealth Europe 2005).
- A survey of patients receiving case management in the UK found that these programmes had improved their quality of life (Fletcher and Mant 2009).
- Patient self-reported outcomes from a community matron service in Nottingham reported better overall health status and quality of life as a result of the intervention (*see box below*).

### A UK-based case management programme that had a positive impact on health outcomes

**Where:** Nottingham

**What:** Community matron service

**Target group:** Older people with complex long-term health conditions

**Method:** Qualitative interviews with patients

- Impact:**
- The service had improved patients' overall self-reported health status.
  - Patients felt better directly as a result of the service.
  - Patients reported improved quality of life at home.
  - Patients valued community matrons explaining their condition, medication and how to look after themselves.

(From Brown *et al* 2008)

## Patient experience

Hutt *et al* (2004) found that the strongest evidence for the impact of case management was related to improved patient satisfaction and user experiences. For example, while the impact of Evercare was poor in terms of reduced admissions to hospital, patient experiences were very positive. The Evercare experience in the UK suggests that this positive experience was associated with a number of factors. These include shared decision-making about care options (95 per cent of patients and carers reported that they were involved as much as they wanted to be in making decisions about care and treatment) and the availability of time to discuss their health problems with care professionals (97 per cent of patients and carers reported that they were given enough time to discuss health problems) (UnitedHealth Europe 2005). Over two-thirds of patients and carers thought that care was better organised (Hudson and Moore 2006).

Other studies and surveys of patients on case management programmes have also found high levels of satisfaction. According to one article, the specific elements that patients value include support for self-care, a patient-centred approach, the assurance that the service is there, and the availability of, and time given by, the case manager (Bowler 2009). A recent study, based on interviews with a purposive sample of 14 service users, found that patients felt they had easier access to health care services. Service users valued the role played by the case manager in acting as an advocate by helping them understand medical terminology, and providing a link with secondary care (Williams *et al* 2011). The studies of Guided Care similarly showed that patients receiving case management were more likely than other patients to rate their care highly (Boult *et al* 2009, 2011). The Guided Care programme also had a positive impact on carer satisfaction (Wolff *et al* 2010), which is corroborated in other reviews on the burden of carers supporting people with long-term conditions (Offredy *et al* 2009).

However, as the Evercare experience highlighted, some patients can become too attached to their case managers and the prospect of losing contact with them makes them anxious and reluctant to be discharged (Boaden *et al* 2006; Sheaff *et al* 2009). This underlines the importance of the case manager/patient relationship developing in a way that encourages independence, not dependence. Programmes have taken different steps to address some of the problems that have arisen within the discharge process. In Croydon, the virtual ward teams send a letter to patients explaining the decision to discharge (Lewis 2010); and the Unique Care Co-ordination service in Brent encouraged people to discharge themselves (in agreement with the service) when they felt they were able to cope without the support, although they did give the option of returning to the programme when necessary (Adam 2006).

### Positive UK examples of the impact of case management on the patient experience

<b>Where:</b>	Nine English PCTs
<b>What:</b>	Evercare model of case management
<b>Target group:</b>	People over 65 at risk of unplanned hospital admission
<b>Method:</b>	Qualitative case studies; 231 interviews with patients, carers and others
<b>Impact:</b>	<ul style="list-style-type: none"> <li>■ Patients and carers valued case management.</li> <li>■ They particularly valued it for improving access to health care, increasing psychosocial support, and improving communication with health professionals.</li> </ul>

- Patients valued the longer contact time they had with their case manager compared with their GP.
- Patients reported increased confidence arising from the fact they could contact their case manager at any time.

(From Sheaff *et al* 2009)

**Where:** Large metropolitan city in the north of England

**What:** Community matron service, including elements of self-care

**Target group:** People over 65 at risk of unplanned hospital admission

**Method:** 123 patient responses to postal questionnaire

- Impact:**
- High levels of satisfaction with the service (65 per cent say it was 'excellent', 27 per cent 'very good').
  - High levels of satisfaction with the system for contacting the community matron (56 per cent 'excellent', 34 per cent 'very good').
  - High levels of satisfaction with the competence of community matron (54 per cent 'excellent', 25 per cent 'very good').
  - Patients reported being more confident in being independent and in looking after themselves, and carers reported feeling relieved and comforted by people looking after the patient.
  - Respondents indicated that they particularly valued: the service reliability (in terms of always having someone there who could help); improved communication and care co-ordination; and perceived reduction in admissions (not measured quantitatively).

(From Leighton *et al* 2008)

## What factors need to be in place for successful case management?

We have described the generic components of case management models, and some of the positive impacts they can generate in terms of service utilisation, health outcomes and patient experience. However, evidence shows that many case management programmes have not achieved such positive results (Purdy 2010). We assert that this is not because case management is an ineffective approach but, rather, there is little agreement or guidance on the 'optimal' approach to implementing case management in different contexts.

In this section, we assess the key enabling factors that – based on a literature review – appear to be associated with the more successful case management models. These factors range from the competencies of the individual case managers to the overall programme design, and the context in which these operate.

The key **enabling factors** are:

- The role and skills of the case manager:
  - assigned accountability
  - role and remit
  - skills and support
  - building relationships.

- Programme design:
  - targeting and eligibility
  - manageable caseload
  - single point of access/single assessment
  - continuity of care
  - effective use of data and communication processes.
- Factors within the wider system:
  - shared vision and objectives
  - close links between health and social care
  - aligned financial flows and incentives
  - stakeholder engagement
  - provision of services in the community.

## The role and skills of the case manager

If a case management programme is to operate effectively, the case manager needs to have the appropriate skills and expertise to successfully carry out their role. Here, we identify four key areas that influence this ability: assigned accountability, role and remit, skills and support, and building relationships with key stakeholders, including patients.

### Assigned accountability

For case management to be successful there must be an individual or team that has oversight of, and is accountable for, the whole care process, including the various services that come into contact with the patient (Challis *et al* 2010). Where accountability is not clearly assigned to an individual or team, there is a risk that care becomes fragmented. For instance, in the Care Programme Approach (CPA) in mental health care, a lack of clarity over accountability for patient care has led to implementation problems and negative patient experiences (Goodwin and Lawton-Smith 2010).

### Role and remit

Clarity around the roles, responsibilities and boundaries of all those involved in a patient's care helps to facilitate case management (Goodman *et al* 2010; Chapman *et al* 2009). Case management programmes have often been characterised by confusion over roles, which can lead to tension – for example, between community nurses and GPs, and between case management teams and district nursing teams who have similar, and indeed often overlapping, responsibilities (Challis *et al* 2010). These problems are mostly due to a lack of clarity regarding role boundaries and/or a lack of communication between the different care providers. The perceived seniority of one service over another, and rivalry between different professionals, can also cause problems (Goodman *et al* 2010).

### Skills and support

The role of case manager can be undertaken by someone with a clinical or non-clinical background. Studies show that case managers come from various backgrounds, including nursing, social work, physiotherapy and occupational therapy (Lillyman *et al* 2009; Goodman *et al* 2010). The professional background of the case manager is not, therefore, usually a factor that determines how effective they are in the role. However, what is important is that the individual is equipped and trained with the necessary skills.

Key skills that case managers need include:

- *Interpersonal skills* – Key benefits of the case management process for patients include psychosocial support and a sense of reassurance that someone is ‘looking out’ for them. It is therefore essential that case managers are able to develop good relationships and communicate with a range of people. They need to be approachable and able to demonstrate empathy, even when addressing ‘minor concerns’ (Sargent *et al* 2007, p 516; Cubby and Bowler 2010; Goodman *et al* 2010).
- *Problem-solving skills* – Care co-ordination requires the case manager/case management team to have oversight of the health and social care systems, to make an assessment, and then to access appropriate services for each patient at the appropriate time. Case managers often refer to themselves as ‘fixers’; they find solutions to problems by drawing on various service providers and informal care networks, if available (Elwyn *et al* 2008, p 80). A lack of access to information and resources and a lack of stakeholder support have been identified as barriers to effective case management, and it can occasionally fall on case management staff to work autonomously in overcoming these difficulties (Cubby and Bowler 2010).
- *Negotiation and brokerage skills* – A major component of case management is advocating for patients. This involves liaising with various professionals or teams and negotiating with them to secure medication, equipment and support services. It is important for the case manager to have some influence over service providers (Kodner 2003). An evaluation of a case management programme that was focused on social care needs showed that the type of assistance most frequently given was help obtaining grants and equipment for the home, organising repairs and claiming welfare benefits (Fletcher and Mant 2006). But the case manager’s remit is much wider than co-ordinating physical health care. For example, it may include contacting the local authority regarding uneven footpaths, or a family solicitor in order to arrange for a patient to have access to their children (Sargent *et al* 2007). These interventions all contribute to more joined-up care and a positive patient experience. Patients have appreciated how quickly and efficiently their case manager has been able to obtain equipment or support services on their behalf (Sargent *et al* 2007; Goodman *et al* 2010).
- *Prescribing qualifications* – In some instances, nurse case managers are qualified to provide supplementary prescribing to their patients (Lillyman *et al* 2009; Lyndon 2009; Sheaff *et al* 2009; Goodman *et al* 2010). This has been identified as a major benefit by GPs and patients alike (Chapman *et al* 2009; Sheaff *et al* 2009; Goodman *et al* 2010). It can mean that patients are not as reliant on seeing their GPs for treatment (Sheaff *et al* 2009; Goodman *et al* 2010). However, not all case managers are qualified to prescribe medication. Whatever the case, it is important that there are clear lines of communication between the case manager and the patient’s GP to ensure timely access to medication, and to ensure that any prescribing undertaken by the case manager is appropriately monitored.
- *Training* – As well as having the right skills, it is important that case managers are able to access the right training, support and mentoring. There is no consensus about the level of training and education needed to be an effective case manager. Case studies show that the content and intensity of training for nurse case managers varies widely, depending on the background of the nurse (Goodman *et al* 2010). The literature does highlight the importance of nurse case managers having access to mentoring and clinical supervision, particularly if they use clinical or prescribing skills in their work (Boaden *et al* 2006; Hudson and Moore 2006; Cubby and Bowler 2010). Also, working across the boundaries of different disciplines can offer the opportunity to learn new and different skills (Graffy *et al* 2008; Chapman *et al* 2009). In some cases, PCTs have developed strategies such as providing GPs with financial incentives to mentor case

managers (Hudson and Moore 2006), and involving case managers in the Quality and Outcomes Framework (QOF) data collection process (Goodman *et al* 2010).

### **Building relationships**

A successful case manager needs to build effective relationships with patients and a number of other stakeholders. We explore the following key relationships:

- between case managers and their patients
- between case managers and GPs
- between case managers and hospital staff.

#### *Case managers and their patients*

One of the most significant relationships in the case management process is that between the case manager, the patient, and his/her informal carers. Case managers have reported that the quality of their relationship with patients affects how well the different elements of case management can be implemented (Goodman *et al* 2010). It can take between 6 and 12 months to build a good relationship, but this in-depth knowledge of the patient and their carers is invaluable because it enables case managers to observe signs of improvement or deterioration in health (Russell *et al* 2009; Goodman *et al* 2010). It is important that case managers take the necessary time to establish this relationship, however long the patient remains under their care.

The case manager/patient relationship should seek to empower the patient; it should not develop into a passive relationship. Case management should support the individual to be more independent and better able to manage their condition(s) themselves. There is a risk that individuals can become too reliant on the case manager, and some patients and carers then feel anxious about being discharged from the programme (Sheaff *et al* 2009).

Case managers must be skilled at imparting self-management information to patients and carers in a way that is meaningful to them and tailored to their needs (Sargent *et al* 2007; Huws *et al* 2008; Schraeder *et al* 2008; Offredy *et al* 2009). They should also be able to offer 'common sense' advice (Boaden *et al* 2006), and know when to give different information (for example, to coincide with new events or experiences in the life-course of their illness) (Schraeder *et al* 2008).

#### *Case managers and GPs*

Most case management work takes place in the community while the patient is still living at home, and primary care resources are vital for this. Case managers (or case management teams) therefore need to have good, collaborative working relationships with GPs. Some case managers report good experiences, where they have been able to communicate easily and quickly with their patient's GP in order to change care plans or medication regimens (Lyndon 2009). But not all case managers report positive experiences. For example, a survey of case management programmes in the UK found a 'spectrum of relationships' between case managers and GPs, ranging from the GP being an integral part of the case management team to case managers who were based in GP surgeries but worked completely independently (Goodman *et al* 2010).

#### *Case managers and hospital staff*

Case managers need to work with specialists and other hospital staff to co-ordinate care for their patient. In some cases, case management programmes aim to maintain contact with patients when they have been admitted to hospital for acute care so that they can work with hospital staff and facilitate discharge back into the community. Where there is a high degree of complexity, specialists may also be required to take part in multi-

disciplinary medical reviews of patients as part of the case management process. However, poor communication between case managers and hospital staff is often reported as a barrier to the co-ordination of patient care (Hudson and Moore 2006; Fletcher and Mant 2009; Sheaff *et al* 2009).

## Programme design

Although case management programmes can vary in their format, embedding certain elements in their design can increase the likelihood of success. The following elements are particularly important: targeting and eligibility, manageable caseloads, a single point of access, continuity of care, and the effective use of data and information to support communication processes.

### Targeting and eligibility

Case management is a time-consuming and labour-intensive approach to the management of patients with long-term conditions. Therefore, it is essential that any programme is effectively targeted to those most at risk and those who can benefit most – a process known as case-finding (*see* page 3). Where targeting is not accurate, there is a risk that the programme will not be cost-effective.

Targeting is important and complex, as the level of any patient's risk is dynamic and subject to change. The programme must develop clear eligibility criteria to target and enrol patients at highest risk. It should also set out at the outset clear criteria for discharge from the programme. In a time-limited case management intervention, it is critical that individuals are discharged when they are able to live independently or without the intensive support provided by the case manager. Without a clear discharge protocol, caseloads can become unmanageable and the case manager will not have time to focus on those most in need.

Predictive risk models can be used to assess changing risk profiles and, therefore, to determine the point at which an individual can be discharged. However, in practice, it is likely that a combination of a risk model and the case manager's judgement will be used to determine the optimum point of discharge. This is a decision that should be made by the entire multi-disciplinary team in consultation with the patient and their carer. It is likely that the more involved the patient has been in their care plan and management, the more understanding they will have of their readiness to be discharged.

### Manageable caseload

There is no consensus over what is an appropriate caseload for a case manager. Department of Health guidance suggests that community matrons are likely to have caseloads of between 50 and 80 patients requiring clinical intervention and care co-ordination (Department of Health 2005). This guidance also suggests that more than 80 patients would make a clinician's caseload 'unsustainable' (p 39). The case manager's role also includes a number of activities that are not related to providing direct care, such as administrative tasks, attending or delivering training sessions and attending meetings. This can affect case managers' capacity to provide care for all patients on their caseloads (Sargent *et al* 2008).

Some studies have explored issues relating to size of caseload (Boaden *et al* 2006; Sargent *et al* 2008; Russell *et al* 2009). They show that the number of patients deemed to be manageable in a caseload is influenced by various factors, including:

- the nature of patients' conditions
- the proportion of patients at high risk (it has been suggested that high-risk patients should not exceed 10–15 per cent of the caseload– *see* Sargent *et al* 2008)

- the experience of APNs/community matrons in working with patients with complex needs
- patients' socio-demographic profiles
- patients' circumstances (specifically home environment and access to informal care support)
- patients' geographical location (urban or rural settings)
- patients' individual characteristics (for example, willingness to engage with community matrons)
- time needed for non-clinical activities.

The Evercare evaluation showed that caseloads of approximately 50 patients were deemed to be the 'upper manageable limit' (Boaden *et al* 2006, p 66). If a caseload becomes unmanageable, case managers are at risk of providing a reactive service that largely responds to crises rather than providing the proactive and preventive service intended (Sargent *et al* 2008; Russell *et al* 2009). Case managers with caseloads in excess of 50 have reported work-related stress (Sargent *et al* 2008). Research on ideal caseload size has been carried out only from case managers' perspectives so far. Therefore it is difficult to appraise this from the perspective of patients and their carers, or commissioners.

### **Single point of access/single assessment**

A case management programme with a single point of access – organisationally rather than geographically – can ensure that each individual is offered a uniform assessment, and this, in turn, has been associated with positive outcomes (Challis and Hughes, no date). It can also ensure that where clinician referral is the main form of admission to the programme, the clinician can be assured of a straightforward route into the service in an otherwise complex system (Goodwin *et al* 2010). A single point of access and a single assessment process contribute to a more responsive service for the patient, and minimise the need for further referrals (Ham and Oldham 2009).

Information-sharing protocols can help to facilitate the assessment process. For example, the Single Assessment Process (SAP) introduced in 2001 aimed to reduce duplication in health and social care assessments of older people through the development of information-sharing agreements and protocols. The SAP was designed to standardise assessment across different agencies and settings, to raise the overall standard of assessment, and to facilitate a more timely response to referrals. Recent research shows that information-sharing agreements are still being developed, but SAP has provided a useful framework to improve inter-agency communication (Abendstern *et al* 2010).

### **Continuity of care**

Although care may be provided by a range of providers and professionals, the case manager should retain oversight over the entirety of an individual's situation over time. This gives a valuable sense of continuity for the patient – which is an important characteristic of any case management programme. It is not unusual, for example, for case managers to provide patients with their direct telephone number. Indeed, patients and carers commonly report that it is easier to receive a response from a case manager than a GP or other health care professional (Brown *et al* 2008; Sheaff *et al* 2009; Goodman *et al* 2010). Thus, patients and carers know they can rely on receiving support from one professional who knows them well.

Part of the challenge of providing this continuity is recruitment and retention of case managers. It can be difficult to attract potential recruits when posts are funded only for fixed-term periods. Further, the nature of the work can lead to stress-related absenteeism and high turnover (Russell *et al* 2009). If a case manager does leave their post, there is a risk

that their in-depth knowledge of the patient is lost rather than transferred. It is therefore important to ensure that robust information systems are in place so that knowledge is not owned by a single individual.

Continuity of care also relates to the availability of care out of hours. In most case management programmes in the UK, coverage is available only during conventional working hours. Although case managers who work in teams are able to make arrangements for colleagues to cover annual leave or study leave, it is particularly difficult to arrange cover out of hours (Goodman *et al* 2010). During this time, case managers tend not to be on call, and care is switched to the out-of-hours GP service. The Evercare experience highlighted the importance of making arrangements for continuity of case management out of hours, when more than half of the emergency admissions occurred (Boaden *et al* 2006). Without the case manager being able to arrange for the patient to be treated at home where possible, there is a danger that the out-of-hours service will simply advise patients to attend A&E.

### Strategies for maintaining continuity of care

The Croydon Virtual Ward programme has sought to address the issue of continuity out of hours. During the day, patients on the virtual ward have a direct telephone number for the ward clerk. The local out-of-hours primary care service then takes over that telephone number at night. The out-of-hours team also has access to the virtual ward electronic patient records (Lewis 2010).

The case management service at Blackburn, with Darwen PCT, used a rotating team of community nurses to ensure continuity of care out of hours. In order to ensure that all staff have the same skill-set, the team developed its own competency framework and training pack (Downes and Pemberton 2009).

### Effective use of data and communication processes

Case management is dependent on the exchange of information between partners who might be working in very different teams. It is important that all information (the assessment, care plan and updates) is streamed centrally through the case manager (or case management team) so that they can ensure that the patient and other partners are kept informed about developments. This means the case manager/team maintains oversight of the care pathway (Boaden *et al* 2006; Lyndon 2009; Lewis 2010; Cubby and Bowler 2010).

Constant communication and timely information exchange with the wider multi-disciplinary team is vital. It ensures that duplication of care and services is minimised and any gaps in provision are addressed, while the patient is kept informed of what will happen to them and the team is made aware of the patient's preferences. Critically, the patient has a single point of contact to whom they can address any queries or concerns.

Changes in patients' circumstances and developments in case management should be communicated to the members of the multi-disciplinary team in a timely fashion. Case management programmes have adopted different ways of doing this, ranging from relatively simple methods to more sophisticated ones: agencies exchange information in person at regular meetings (Graffy *et al* 2008), by fax (Lyon *et al* 2006), via a patient-held record that could follow the patient and be presented to various health and social care professionals (Graffy *et al* 2008; Downes and Pemberton 2009) and via electronic transfer (Challis *et al* 2010; Goodman *et al* 2010). Although some evidence suggests that communication between case managers and hospital teams is particularly challenging (Sheaff *et al* 2009), there are some examples of A&E or medical assessment units notifying

case management teams of contact with patients known to be on their caseloads (Downes and Pemberton 2009; Goodman *et al* 2010).

Good-quality data is an essential foundation for case management. It is vital for case-finding, care planning and assessment (as discussed above) and it is important to the ongoing process of care co-ordination. Access to this data enables different stakeholders to refer to patients' assessments and care plans; it also helps them to ensure that the various elements of case management are aligned and not being missed or duplicated. A practical example of this process is provided in the box below. However, a recent survey suggests that less than half of PCTs have a computerised system to hold client records for assessment and case management. Of those, only 20 per cent of systems were linked to other records within primary care. Thirty-nine per cent of PCTs reported that case management patients could be identified on hospital record systems (Challis *et al* 2010).

### Sharing information to support case management

In the Croydon Virtual Wards programme, there are daily 'ward rounds' based on common, electronic notes and charts, with the ward clerk keeping detailed notes to share with the multi-disciplinary team. The ward clerk has a dedicated phone number and email address and co-ordinates the exchange of information between the patient, the case manager and the rest of the multi-disciplinary team. In addition, a list of virtual ward patients is emailed securely to local hospitals and out-of-hours services each night so that they can upload the data to their own IT systems.

If a virtual ward patient is admitted to hospital, this will trigger an alert to hospital staff that they are being case managed, and early discharge planning can commence (Lewis 2010). This example suggests that an integrated IT system is desirable for case management as it facilitates greater communication between various teams. It also follows that IT literacy is a core skill for ward clerks.

## Factors within the wider system

Regardless of whether a case management programme is well designed, the wider context within which it operates will have a significant bearing on its success. If the context does not facilitate the provision of co-ordinated care, programmes may struggle to operate effectively. Incentives need to provide a receptive context for case management and an enabling 'platform' through which it can be developed. Key elements of this platform include:

- shared vision and objectives
- close links between health and social care
- aligned financial flows and incentives
- stakeholder engagement
- provision of services in the community.

### Shared vision and objectives

In order for case management to be effective, the various partners in health and social care need to share common objectives regarding the care of people with long-term conditions. In turn, case management programmes need to develop clear goals and objectives, which must be understood by the other partners.

Partners working in general practice, primary care teams, out-of-hours services, mental health teams, local ambulance services, social care services, secondary care teams and

A&E units need to have a shared understanding about the delivery of population-based chronic disease care. This type of working can be supported and sustained through ad hoc/informal exchanges between the various partners or through more structured protocols and contracts. Having a sense of shared responsibility and a collaborative approach to solving problems can facilitate better co-ordination of care (McEvoy *et al* 2011).

Where different partners or elements of the system do not share the same vision, co-ordination of care can prove difficult. For example, case management teams and secondary care providers operate very differently from each other; they often work towards different goals and are motivated by different values and incentives. A key lesson we can draw from the evidence about effective case management is the importance of engaging stakeholders early on in the programme. This can be done in various ways: inviting secondary care staff to join steering groups or advisory panels; mapping common goals and targets; agreeing communication protocols; and ensuring that members of the multi-disciplinary team have some face-to-face contact (Adam 2006; Graffy *et al* 2008). The benefits of cross-boundary working should also be recognised by the various stakeholders, in that multi-disciplinary case management can provide the opportunity to learn from colleagues based in other disciplines and, in turn, provide more holistic care to the patient (Graffy *et al* 2008; Chapman *et al* 2009).

### **Close links between health and social care**

Good collaboration between health and social care services is particularly important for effective case management. People with complex needs nearly always require support from both health and social care services, yet these relationships appear to be poorly developed in many case management programmes (Challis *et al* 2011). Social care is particularly important for patients in the rehabilitation and re-ablement phases. Delivering a co-ordinated response is vital, given that social care referrals (and the application process) can be complex and time-consuming (Sargent *et al* 2008). Further, recruiting case managers with experience of social work or housing provides the advantage of staff being familiar with how to access those types of resources (Fletcher and Mant 2009).

The co-location of the case manager/management team between health and social care teams (*see* box below) – as opposed to being based solely in one setting – can facilitate better communication and expedite referrals (Goodman *et al* 2010; Ham *et al* 2010). But co-location alone does not guarantee good joint working (Imison *et al* 2008). Regardless of where the case manager is based, links between health and social care need to be facilitated by a shared vision, good communication, data-sharing protocols and financial mechanisms that support joint working.

#### **Building close links between health and social care**

The case management model developed at Castlefields Health Centre in Runcorn is an example of where close links between health and social care services have been achieved, partly through the co-location of staff. A full-time social worker was recruited to work alongside a half-time district nurse, both of whom were based at the general practice in Runcorn. The social worker and district nurse carried out joint assessments, usually on the same day as receiving the referral. (Lyon *et al* 2006).

### **Aligned financial flows and incentives**

Financial incentives and payment mechanisms need to facilitate better co-ordination of care for people with long-term conditions, and be aligned with the goal of avoiding

unplanned hospital admissions. Different funding streams, however, pose problems for case management, especially where patients require both health and social care. As noted above, it is critical that the case manager has influence over providers, and influence over budgets is one way of ensuring this. Different funding options have been used to support case management for people with long-term conditions. They include the following.

*Pooled budgets:* Pooled health and social care budgets have been used by some case management programmes. For example, in the Castlefields example (*see box, p 23*), social workers were authorised to spend up to a maximum of £200 per week without needing to make further referrals (Lyon *et al* 2006). This helped to reduce delays in setting up joint packages of care.

*Personal health budgets:* Personal health budgets have recently been introduced in the NHS to allow people with long-term conditions to have more choice, flexibility and control over the services they receive. Research from direct payment schemes in social care, such as the In Control pilots, suggests that access to personal budgets can achieve good outcomes for some individuals (Glendinning *et al* 2008). However, take-up of budgets tends to be less common among older and frail people – those most likely to be enrolled in a case management programme. There is the potential, though, for a designated representative – which could be the case manager – to manage the budget on behalf of the individual in order to plan the package of care and manage how it is delivered.

*Capitation:* Another funding option that can facilitate effective case management is prepaid capitation. This fixed sum of money per patient can be used to pay for a package of care services where a case manager, or team, takes responsibility for a person's care over time. Capitation can provide an incentive for the case manager to prevent deterioration (Jha *et al* 2003; Kodner 2010).

### **Stakeholder engagement**

Case management programmes need the trust, support and enthusiasm of local stakeholders to refer into them if they are to be successful. The most effective way to gain this support and enthusiasm is to engage key professionals and teams in the case management process from the outset. This will ensure that potential areas for professional rivalry or conflict are addressed proactively, early on (Boult *et al* 2009; Cubby and Bowler 2010). But securing this support involves a significant amount of time on the part of case managers (McEvoy *et al* 2011). In the UK, case management programmes that lacked support from GPs have struggled to pick up referrals and maintain momentum (Boaden *et al* 2006; Lyon *et al* 2006; Graffy *et al* 2008; Cubby and Bowler 2010). The lack of enthusiasm or support for case management on the part of GPs can be attributed to many things, but it is possible to build trust over time once some of the benefits of case management become obvious – for example, improved patient outcomes and reduced workloads (Boaden *et al* 2006; Sheaff *et al* 2009).

As the case manager usually operates within a multi-disciplinary team, it is vital that those in the team, and beyond, are engaged in the programme (*see box opposite*). Primary care professionals and social care staff are generally positive about the role of case managers once they have a better understanding of what they do (Chapman *et al* 2009). They particularly appreciated the role of the case manager in:

- regular monitoring of patients
- making diagnoses and changes to medication regimens
- addressing patients' social isolation by spending time with them
- co-ordinating the overall care process

- providing a link between primary, secondary and social care.

Case managers need to work proactively with a range of health and social care professionals and, as such, good working relationships and effective communication are essential (McEvoy *et al* 2011).

### Getting other professionals on board

- A Care Co-ordination Service in Brent, Greater London, involved a team of four care co-ordinators. In order to encourage health and social care professionals to work together, the early stages of the programme involved social care workers training the case managers about fair access to care in order to set realistic expectations from the start. Case managers also spent some of their induction period within the social care services department in order to develop a better understanding of local services and systems (Adam 2006).

### Provision of services in the community

Case managers need to draw on a range of resources and services in the community in order for patients to receive care at home (or as close to home as possible). If case management is to work well, these community-based services need to be both available and accessible. In order for this to happen, resources and services must be effectively commissioned and case managers must know what is available and how to access it. It can also help for case managers to have some financial influence or control over providers (Kodner 2003).

Where there is access to diagnostics and specialist expertise in the community, the patient is likely to receive better quality of care and to avoid using hospital services. For instance, positive outcomes have been attributed to: blood tests being taken in the patient's home (Elwyn *et al* 2008); referring patients to intermediate care facilities, such as respite beds, or to nursing homes (Hutt *et al* 2004; Elwyn *et al* 2008); using remote technology to monitor patients' blood pressure (Goodman *et al* 2010); and having rapid access to diagnostic testing facilities in community hospitals (Goodman *et al* 2010).

Conversely, delays in accessing services have been shown to lead to deterioration in patients' health and are a likely cause of future hospital admission. The lack of availability of community-based services has been cited as a major challenge to delivering effective case management (Boaden *et al* 2006; Russell *et al* 2009).

### Conclusion and recommendations

Case management programmes have the potential to deliver better care for patients *and* cost savings. However, to do so, they must be well designed, involve appropriate and professionally trained case managers and care teams, and be embedded in a wider system that supports and values integrated and co-ordinated care.

In particular, it is important that case management is delivered as part of a strategic or 'programme approach' to the management of a specific population group (Ham 2009). This means ensuring not just that the case management process itself is well organised and well delivered, but that it runs alongside a bundle of other policies. These include good access to primary care-based services, supporting health promotion and primary prevention, and co-ordinating community-based packages for rehabilitation and re-ablement. The reason for this – which is supported by the evidence – is that the cumulative impact of multiple strategies (rather than single interventions) is more likely to be successful in improving patient experiences and outcomes (Powell-Davies *et al*

2008). Case management, therefore, should be seen as one of the key tools that is part of a wider strategy for integrated care.

For those seeking to commission or deliver case management, the evidence suggests that the following factors are most likely to achieve successful outcomes.

- **Assigned accountability.** There should be an individual or team with assigned accountability for the patients being case-managed.
- **Role and remit.** Case managers need a clear remit, and clarity about their roles, responsibilities and boundaries.
- **Skills and support.** Case managers should have a range of competencies that includes both clinical and managerial expertise. They must be able to build relationships, broker and negotiate, and organise across professional and organisational boundaries, while developing a strong rapport with patients and their carers.
- **Case-finding.** Accurate case-finding techniques should be used to maximise cost-effectiveness.
- **Targeting.** Programmes need to be carefully designed around specific groups of patients with defined care needs, where there is clarity around eligibility and referral. Clear admission and discharge criteria need to be developed from the outset.
- **Caseloads.** The size of caseload will need to be reviewed regularly to ensure that patients are receiving optimum care and that case managers are able to perform their tasks adequately.
- **A single point of access.** Providing a single point of access and a single assessment process should lead to a more responsive service for the patient.
- **A joint care plan** can support clarity and consistency in the delivery of services.
- **Continuity of care.** This ensures that patients feel supported and helps to reduce the risk of an unplanned admission to hospital.
- **Self-care.** Patients must not become dependent on the case manager; every effort should be made to empower the patient to manage their own condition.
- **Communication.** It is vital that there is good communication between all those involved in the patient's care. Good-quality data and information need to underlie this communication.
- **Integration and collaboration.** Health and social care services need to work together to support the development of shared objectives and to enable the delivery of joined-up services for patients with complex needs.
- **Aligned financial incentives.** Financial flows and payment mechanisms must be aligned with the goals of the case management programme to facilitate better co-ordination of care.
- **Access to community-based services.** Availability of and access to services in the community, such as diagnostics and other treatments, is essential to ensure that care can be delivered in a timely manner.
- **Part of a programme approach.** Case management is most effective when it works alongside other strategies that support greater integration and co-ordination of care for patients with long-term conditions.

As the NHS grapples with rising hospital admissions, and in order to meet the unprecedented productivity challenge, it is clear that effective strategies for managing people with long-term conditions must be implemented. Well-targeted case management must be one of the core strategies used by emerging clinical commissioning groups to help tackle these challenges. As clinical commissioning groups begin to take on budgets

for managing the health of their populations, they should prioritise the management of people with long-term conditions by commissioning effective case management programmes as part of a wider strategy for integrated care. They should develop strong and effective partnerships with local authorities through the new health and wellbeing boards, and engage early on with their clinical colleagues in primary, community and secondary care. This is likely to be the most successful route to implementing effective case management to meet the complex needs of people with long-term conditions.

## References

- Abendstern M, Hughes J, Clarkson P, Sutcliffe C, Wilson K, Challis D (2010). “We need to talk”: communication between primary care and other health and social care agencies following the introduction of the Single Assessment Process for older people in England. *Primary Health Care Research and Development*, vol 11, no 1, pp 61–71.
- Adam R (2006). ‘Delivering Unique Care: co-ordination in practice’. *Journal of Integrated Care*, vol 14, no 2, pp 37–47.
- Aliotta SL, Grieve K, Giddens JF, Dunbar L, Groves C, Frey K, Boulton C (2008). ‘Guided Care: a new frontier for adults with chronic conditions’. *Professional Case Management*, vol 13, no 3, pp 159–60.
- Billings J, Dixon J, Mijanovich T, Wennberg D (2006). ‘Case finding for patients at risk of readmission to hospital: development of algorithm to identify high risk patients’. *British Medical Journal*, vol 333, no 327, doi:10.1136/bmj.38870.657917.
- Boaden R, Dusheiko M, Gravelle H, Parker S, Pickard S, Roland M, Sargent P, Sheaff R (2006). *Evercare: Evaluation of the Evercare approach to case management: final report*. National Primary Care Research and Development Centre (NPCRDC) website. Available at: [www.medicine.manchester.ac.uk/primarycare/npcrdc-archive/archive/PublicationDetail.cfm/ID/171.htm](http://www.medicine.manchester.ac.uk/primarycare/npcrdc-archive/archive/PublicationDetail.cfm/ID/171.htm) (accessed on 6 January 2011).
- Boaden R, Dusheiko M, Gravelle H, Parker S, Pickard S, Roland M, Sargent P, Sheaff R (2005). *Evercare Evaluation Interim Report: Implications for supporting people with long-term conditions*. NPCRDC website. Available at: [www.natpact.nhs.uk/uploads/2005\\_Feb/Evercare\\_evaluation\\_interim\\_report.pdf](http://www.natpact.nhs.uk/uploads/2005_Feb/Evercare_evaluation_interim_report.pdf) (accessed on 7 January 2011).
- Boulton C, Wieland GD (2010). ‘Comprehensive primary care for older patients with multiple chronic conditions’. *Journal of the American Medical Association*, vol 304, no 17, pp 1936–43.
- Boulton C, Reider L, Leff B, Frick KD, Boyd CM, Wolff JL, Frey K, Karm L, Wegener ST, Mroz T, Scharfstein DO (2011). ‘The effect of guided care teams on the use of health services: results from a cluster-randomized controlled trial’. *Archives of Internal Medicine*, vol 171, no 5, pp 460–6.
- Boulton C, Giddens J, Frey K, Reider L, Novak T (2009). *Guided Care. A new nurse-physician partnership in chronic care*. New York: Springer Publishing Company.
- Bowler M (2009). ‘Exploring patients’ experiences of a community matron service using storybooks’. *Nursing Times*, vol 105, no 24, pp 19–21.
- Boyd CM, Reider L, Frey K, Scharfstein D, Leff B, Wolff J, Groves C, Karm L, Wegener S, Marsteller J, Boulton C (2010). ‘The effects of guided care on the perceived quality of health care for multimorbid older persons: 18-month outcomes from a cluster-randomized controlled trial’. *Journal of General Internal Medicine*, vol 25, no 3, pp 235–42.
- Boyd CM, Boulton C, Shadmi E, Leff B, Brager R, Dunbar L, Wolff JL, Wegener S (2007). ‘Guided care for multimorbid older adults’. *The Gerontologist*, vol 47, no 5, pp 697–704.
- Brown K, Stainer K, Stewart J, Clacy R, Parker S (2008). ‘Older people with complex long-term health conditions: their views on the community matron service: a qualitative study’. *Quality in Primary Care*, vol 16, no 6, pp 409–17.
- Case Management Society of America (2008–11). ‘What is a case manager?’. CMSA website. Available at: [www.cmsa.org/Home/CMSA/WhatisaCaseManager/tabid/224/Default.aspx](http://www.cmsa.org/Home/CMSA/WhatisaCaseManager/tabid/224/Default.aspx) (accessed on 6 October 2011).

Challis D, Hughes J (no date). Intensive care/case management'. Expert Briefing Paper 1. University of Manchester: Personal Social Services Research Unit. Available at: [www.medicine.manchester.ac.uk/pssru/PSSRUInformation/ExpertBriefingIntensiveCase-CareManagement.pdf](http://www.medicine.manchester.ac.uk/pssru/PSSRUInformation/ExpertBriefingIntensiveCase-CareManagement.pdf) (accessed on 6 July 2011).

Challis D, Hughes J, Berzins K, Reilly S, Abell J, Stewart K, Bowns I (2011). 'Implementation of case management in long-term conditions in England: survey and case studies'. *Journal of Health Services Research and Policy*, vol 16, Suppl 1, pp 8–13.

Challis D, Hughes J, Berzins K, Reilly S, Abell J, Stewart K (2010). *Self-care and Case Management in Long-term Conditions: The effective management of critical interfaces. Report for the National Institute for Health Research Service Delivery and Organisation Programme*. NIHR SDO programme website. Available at: [www.sdo.nihr.ac.uk/projdetails.php?ref=08-1715-201](http://www.sdo.nihr.ac.uk/projdetails.php?ref=08-1715-201) (accessed on 31 January 2011).

Chapman L, Smith A, Williams V, Oliver D (2009). 'Community matrons: primary care professionals' views and experiences'. *Journal of Advanced Nursing*, vol 65, no 8, pp 1617–25.

Chiu WK, Newcomer R (2007). 'A systematic review of nurse-assisted case management to improve hospital discharge transition outcomes for the elderly'. *Professional Case Management*, vol 12, no 6, pp 330–6.

Commission on Funding of Care and Support (2011). *Fairer Care Funding: The Report of the Commission on Funding of Care and Support* [online]. Available at: [www.dilnotcommission.dh.gov.uk/files/2011/07/Fairer-Care-Funding-Report.pdf](http://www.dilnotcommission.dh.gov.uk/files/2011/07/Fairer-Care-Funding-Report.pdf)

Cubby A, Bowler M (2010). 'Community matrons and long-term conditions: an inside view'. *British Journal of Community Nursing*, vol 15, no 2, pp 71–6.

Cummings NA, Cummings JL, Johnson, JN (eds) (1997). *Behavioral Health in Primary Care: A guide for clinical integration*. Madison, CT: Psychosocial Press (an imprint of International Universities Press). ISBN 1-887841-10-5.

Curry N, Ham C (2010). *Clinical and Service Integration: The route to improved outcomes*. London: The King's Fund. Available at: [www.kingsfund.org.uk/publications/clinical\\_and\\_service.html](http://www.kingsfund.org.uk/publications/clinical_and_service.html) (accessed on 8 October 2011).

Da Silva D (2011). *Helping People Help Themselves: A review of the evidence considering whether it is worthwhile to support self-management*. London: Health Foundation. Available at: [www.health.org.uk/publications/evidence-helping-people-help-themselves/](http://www.health.org.uk/publications/evidence-helping-people-help-themselves/) (accessed on 8 October 2011).

Department of Health (2009). *Supporting People with Long Term Conditions: Commissioning personalised care planning. A guide for commissioners*. London: Department of Health. Available at: [www.dh.gov.uk/en/Publicationsandstatistics/Publications/PublicationsPolicyAndGuidance/DH\\_093354](http://www.dh.gov.uk/en/Publicationsandstatistics/Publications/PublicationsPolicyAndGuidance/DH_093354) (accessed on 12 October 2011).

Department of Health (2008). *Carers at the Heart of 21<sup>st</sup> Century Families and Communities: A caring system on your side, a life of your own*. London: Department of Health. Available at: [www.dh.gov.uk/en/Publicationsandstatistics/Publications/PublicationsPolicyAndGuidance/DH\\_085345](http://www.dh.gov.uk/en/Publicationsandstatistics/Publications/PublicationsPolicyAndGuidance/DH_085345) (accessed on 19 April 2011).

Department of Health (2005a). *Supporting People with Long Term Conditions. An NHS and social care model to support local innovation and integration*. London: Department of Health. Available at: [www.dh.gov.uk/en/Publicationsandstatistics/Publications/PublicationsPolicyAndGuidance/DH\\_4100252](http://www.dh.gov.uk/en/Publicationsandstatistics/Publications/PublicationsPolicyAndGuidance/DH_4100252) (accessed on 17 March 2011).

Department of Health (2005b). *Supporting People with Long Term Conditions. Liberating the talents of nurses who care for people with long term conditions*. London: Department of Health. Available at: [www.dh.gov.uk/en/Publicationsandstatistics/Publications/PublicationsPolicyAndGuidance/DH\\_4102469](http://www.dh.gov.uk/en/Publicationsandstatistics/Publications/PublicationsPolicyAndGuidance/DH_4102469) (accessed on 4 November 2011).

Downes C, Pemberton J (2009). 'Developing a community matron service: a neighbourhood model'. *Nursing Standard*, vol 23, no 44, pp 35–8.

Elkan R, Kendrick D, Dewey M, Hewitt M, Robinson J, Blair M, Williams D, Brummell K (2001). 'Effectiveness of home-based support for older people: systematic review and meta analysis'. *British Medical Journal*, vol 323, pp 719–25.

- Elwyn G, Williams M, Roberts C, Newcombe RG, Vincent J (2008). 'Case management by nurses in primary care: analysis of 73 "success stories"'. *Quality in Primary Care*, vol 16, no 2, pp 75–82.
- Fletcher K, Mant J (2009). 'A before and after study of the impact of Specialist Workers for Older People'. *Journal of Evaluation in Clinical Practice*, vol 15, no 2, pp 335–40.
- Fletcher K, Mant J (2006). *Evaluation of the Specialist Workers for Older People (SWOP) Scheme for Heart of Birmingham Teaching Primary Care Trust*. University of Birmingham: Department of Primary Care and General Practice.
- Glendinning C, Moran N, Rabiee P (2008). 'The IBSEN project: national evaluation of the Individual Budgets Pilot Projects'. University of York: Social Policy Research Unit.
- Goodman C, Drennan V, Davies S, Masey H, Gage H, Scott C, Manthorpe J, Brearley S, Iliffe S (2010). *Nurses as Case Managers in Primary Care: The contribution to chronic disease management. Report for the National Institute for Health Research Service Delivery and Organisation programme*. NIHR SDO website. Available at: [www.sdo.nihr.ac.uk/projdetails.php?ref=08-1605-122](http://www.sdo.nihr.ac.uk/projdetails.php?ref=08-1605-122) (accessed on 17 January 2011).
- Goodwin N, Lawton-Smith S (2010). 'Integrating care for people with mental illness: the Care Programme Approach in England and its implications for long-term conditions management'. *International Journal of Integrated Care*, vol 10.
- Goodwin N, Curry N, Naylor C, Ross S, Duldig W (2010). *Managing People with Long-term Conditions. An inquiry into the quality of general practice in England*. London: The King's Fund. Available at: [www.kingsfund.org.uk/current\\_projects/gp\\_inquiry/dimensions\\_of\\_care/the\\_management\\_of\\_1.html](http://www.kingsfund.org.uk/current_projects/gp_inquiry/dimensions_of_care/the_management_of_1.html) (accessed on 8 October 2011).
- Graffy J, Grande M, Campbell J (2008). 'Case management for elderly patients at risk of hospital admission: a team approach'. *Primary Health Care Research and Development*, vol 9, no 1, pp 7–13.
- Ham C (2009). 'The ten characteristics of a high-performing chronic care system'. *Health Economics, Policy and Law*, vol 5, pp 71–90.
- Ham C, Oldham J (2009). 'Integrating health and social care in England: lessons from early adopters and implications for policy'. *Journal of Integrated Care*, vol 17, no 6, pp 3–9.
- Ham C, Imison C, Jennings M (2010). *Avoiding Hospital Admissions: Lessons from evidence and experience*. London: The King's Fund. Available at: [www.kingsfund.org.uk/publications/articles/avoiding\\_hospital.html](http://www.kingsfund.org.uk/publications/articles/avoiding_hospital.html) (accessed on 12 October 2011).
- Ham C, York N, Sutch S, Shaw R (2003). 'Hospital bed utilisation in the NHS, Kaiser Permanente, and the US Medicare Programme: analysis of routine data'. *British Medical Journal*, vol 327, no 7426, pp 1257–60.
- Hudson AJ, Moore LJ (2006). 'A new way of caring for older people in the community'. *Nursing Standard*, vol 20, no 46, pp 41–7.
- Hutt R, Rosen R, McCauley J (2004). *Case-managing Long-term Conditions: What impact does it have in the treatment of older people?*. London: The King's Fund.
- Huws DW, Cashmore D, Newcombe RG, Roberts C, Vincent J, Elwyn G (2008). 'Impact of case management by advanced practice nurses in primary care on unplanned hospital admissions: a controlled intervention study'. *BMC Health Services Research*, vol 8, p 115. Available at: [www.biomedcentral.com/1472-6963/8/115](http://www.biomedcentral.com/1472-6963/8/115) (accessed on 10 January 2011).
- Imison C, Naylor C, Maybin J (2008). *Under One Roof: Will polyclinics deliver integrated care?* London: The King's Fund.
- Jha AK, Perlin JB, Kizer KW, Adams DR (2003). 'Effect of the transformation of the Veterans Affairs Health Care System on the quality of care'. *New England Journal of Medicine*, vol 348, pp 2218–27.
- Kane RL, Flood S, Keckhafer G, Bershadsky B, Lum YS (2002). 'Nursing home residents covered by Medicare risk contracts: early findings from the EverCare evaluation project'. *Journal of the American Geriatrics Society*, vol 50, no 4, pp 719–27.

- Kodner D (2010). Case management workshop. Fondation Plan Alzheimer, 8–9 March. Available at: [www.fondation-alzheimer.org/sites/default/files/BOOK.pdf](http://www.fondation-alzheimer.org/sites/default/files/BOOK.pdf) (accessed on 8 October 2011).
- Kodner D (2003). 'Care management in the delivery of community-based long term care for the elderly: logic, practice and performance.' Paper prepared for the Health Services Research and Development Program (HSRDP), US Veterans Administration. Unpublished.
- Kodner D, Kyriacou C (2000) 'Fully integrated care for frail elderly: two American models.' *International Journal of Integrated Care*, vol 1, 1 November [publication online]. Available at: <http://www.ijic.org/index.php/ijic/article/view/11/21>.
- Leff B, Reider L, Frick KD, Scharfstein DO, Boyd CM, Frey K, Karm L, Boulton C (2009). 'Guided care and the cost of complex healthcare: a preliminary report.' *American Journal of Managed Care*, vol 15, no 8, pp 555–9.
- Leighton Y, Clegg A, Bee A (2008). 'Evaluation of community matron services in a large metropolitan city in England.' *Quality in Primary Care*, vol 16, no 2, pp 83–9.
- Lewis GH (no date) 'Predictive modelling and its benefits', PowerPoint presentation, Nuffield Trust. Available at: [www.nliah.com/portal/microsites/Uploads/Resources/ITohec1r2.ppt](http://www.nliah.com/portal/microsites/Uploads/Resources/ITohec1r2.ppt) (accessed on 7 October 2011).
- Lewis GH (2010). *Predictive Modelling in Action: How 'virtual wards' help high-risk patients receive hospital care at home*. Commonwealth Fund website. Available at: [www.commonwealthfund.org/Content/Publications/Issue-Briefs/2010/Aug/Predictive-Modeling-in-Action.aspx](http://www.commonwealthfund.org/Content/Publications/Issue-Briefs/2010/Aug/Predictive-Modeling-in-Action.aspx) (accessed on 25 January 2011).
- Lewis GH (2006). Case study: Virtual wards at Croydon Primary Care Trust. London: The King's Fund. Available at: [http://www.kingsfund.org.uk/current\\_projects/predicting\\_and\\_reducing\\_readmission\\_to\\_hospital/#casestudy](http://www.kingsfund.org.uk/current_projects/predicting_and_reducing_readmission_to_hospital/#casestudy) (accessed on 6 July 2011).
- Lewis GH, Bardsley M, Vaithianathan V, Steventon A, Georghiou T, Billings J, Dixon D (2011). 'Do "virtual wards" reduce rates of unplanned hospital admissions and at what cost? A research protocol using propensity matched controls.' *International Journal of Integrated Care*, vol 11.
- Lillyman S, Saxon A, Treml H (2009). 'Community matrons and case managers: who are they?'. *British Journal of Community Nursing*, vol 14, no 2, pp 70–3.
- Lyndon H (2009). 'Community matrons – a conduit for integrated working?'. *Journal of Integrated Care*, vol 15, no 6, pp 6–13.
- Lyon D, Miller J, Pine K (2006). 'The Castlefields integrated care model: the evidence summarised.' *Journal of Integrated Care*, vol 14, no 1, pp 7–12.
- Marsteller JA, Hsu YJ, Reider L, Frey K, Wolff J, Boyd C, Leff B, Karm L, Scharfstein D, Boulton C (2010). 'Physician satisfaction with chronic care processes: a cluster-randomized trial of guided care.' *Annals of Family Medicine*, vol 8, no 4, pp 308–15.
- McEvoy P, Escott D, Bee P (2011). 'Case management for high-intensity service users: towards a relational approach to care co-ordination.' *Health and Social Care in the Community*, vol 19, no 1, pp 60–9.
- Newcomer R, Maravilla V, Faculjak P, Graves MT (2004). 'Outcomes of preventive case management among high-risk elderly in three medical groups: a randomized clinical trial.' *Evaluation & the Health Professions*, vol 27, no 4, pp 323–48.
- Nuffield Trust (2011). *Predictive Risk and Health Care: An overview. Research summary*. London: Nuffield Trust.
- Nunes V, Neilson J, O'Flynn N, Calvert N, Kuntze S, Smithson H, Benson J, Blair J, Bowser A, Clyne W, Crome P, Haddad P, Hemingway S, Horne R, Johnson S, Kelly S, Packham B, Patel M, Steel J (2009). *Clinical Guidelines and Evidence Review for Medicines Adherence: Involving patients in decisions about prescribed medicines and supporting adherence*. London: National Collaborating Centre for Primary Care and Royal College of General Practitioners.
- Offredy M, Bunn F, Morgan J (2009). 'Case management in long term conditions: an inconsistent journey?'. *British Journal of Community Nursing*, vol 14, no 6, pp 252–7.

- Pirmohamed M, James S, Meakin S, Green C, Scott AK, Walley TJ, Farrar K, Park BK, Breckenridge AM (2004). 'Adverse drug reactions as cause of admission to hospital: prospective analysis of 18,820 patients.' *British Medical Journal*, vol 329, no 7456, pp 15–19.
- Powell-Davies G, Williams A, Larsen K, Perkins D, Roland M, Harris M (2008). 'Coordinating primary health care: an analysis of the outcomes of a systematic review.' *Medical Journal of Australia*, vol 188, no 8, S65–S68.
- Purdy S (2010). *Avoiding Hospital Admissions: What does the research say?*. London: The King's Fund. Available at: [www.kingsfund.org.uk/publications/avoiding\\_hospital.html](http://www.kingsfund.org.uk/publications/avoiding_hospital.html) (accessed on 25 January 2011).
- Roland M, Dusheiko M, Gravelle H, Parker S (2005). 'Follow up of people aged 65 and over with a history of emergency admissions: analysis of routine admission data.' *British Medical Journal*, vol 330, no 7486, pp 289–92.
- Russell M, Roe B, Beech R, Russell W (2009). 'Service developments for managing people with long-term conditions using case management approaches: An example from Cheshire in the UK.' *International Journal of Integrated Care*, vol 9.
- Sargent P, Boaden R, Roland M (2008). 'How many patients can community matrons successfully manage?'. *Journal of Nursing Management*, vol 16, no 1, pp 38–46.
- Sargent P, Pickard S, Sheaff R, Boaden R (2007). 'Patient and carer perceptions of case management for long-term conditions.' *Health and Social Care in the Community*, vol 15, no 6, pp 511–19.
- Schraeder C, Fraser CW, Clark I, Long B, Shelton P, Waldschmidt V, Kucera CL, Lanker WK (2008). 'Evaluation of a primary care nurse case management intervention for chronically ill community dwelling older people.' *Journal of Nursing and Healthcare of Chronic Illness*, vol 17, issue 11c, pp 407–17.
- Sheaff R, Boaden R, Sargent P, Pickard S, Gravelle H, Parker S, Roland M (2009). 'Impacts of case management for frail elderly people: a qualitative study.' *Journal of Health Services Research & Policy*, vol 14, no 2, pp 88–95.
- Singh D, Ham C (2005). 'Transforming chronic care: evidence about improving care for people with long-term conditions.' University of Birmingham: Health Services Management Centre (HSMC).
- Steventon A, Bardsley M, Billings J, Georghiou T, Lewis GH (2011). *A Case Study of Eight Partnership for Older People Projects (POPP): an evaluation of the impact of community-based interventions on hospital use*. London: Nuffield Trust.
- Sylvia M, Griswold M, Dunbar L, Boyd CM, Park M, Boulton C (2008). 'Guided care: cost and utilization outcomes in a pilot study.' *Disease Management*, vol 11, no 1, pp 29–36.
- UnitedHealth Europe (2005). *Assessment of the Evercare programme in England 2003–2004: Final report*. DH Care Networks website. Available at: [www.dhcarenetworks.org.uk/Prevention/Evidence/?parent=4378&child=4152](http://www.dhcarenetworks.org.uk/Prevention/Evidence/?parent=4378&child=4152) (accessed on 7 February 2011).
- Williams V, Smith A, Chapman L, Oliver D (2011). 'Community matrons – an exploratory study of patients' views and experiences.' *Journal of Advanced Nursing*, vol 67, no 1, pp 86–93.
- Wolff JL, Giovannetti ER, Boyd CM, Reider L, Palmer S, Scharfstein D, Marsteller J, Wegener ST, Frey K, Leff B, Frick KD, Boulton C (2010). 'Effects of guided care on family caregivers.' *The Gerontologist*, vol 50, no 4, pp 459–70.

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Nick has published widely, with more than 200 articles in professional and peer-reviewed journals. He is the Editor in Chief of the *International Journal of Integrated Care* and a Fellow of the Royal Geographical Society.

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