REPORT

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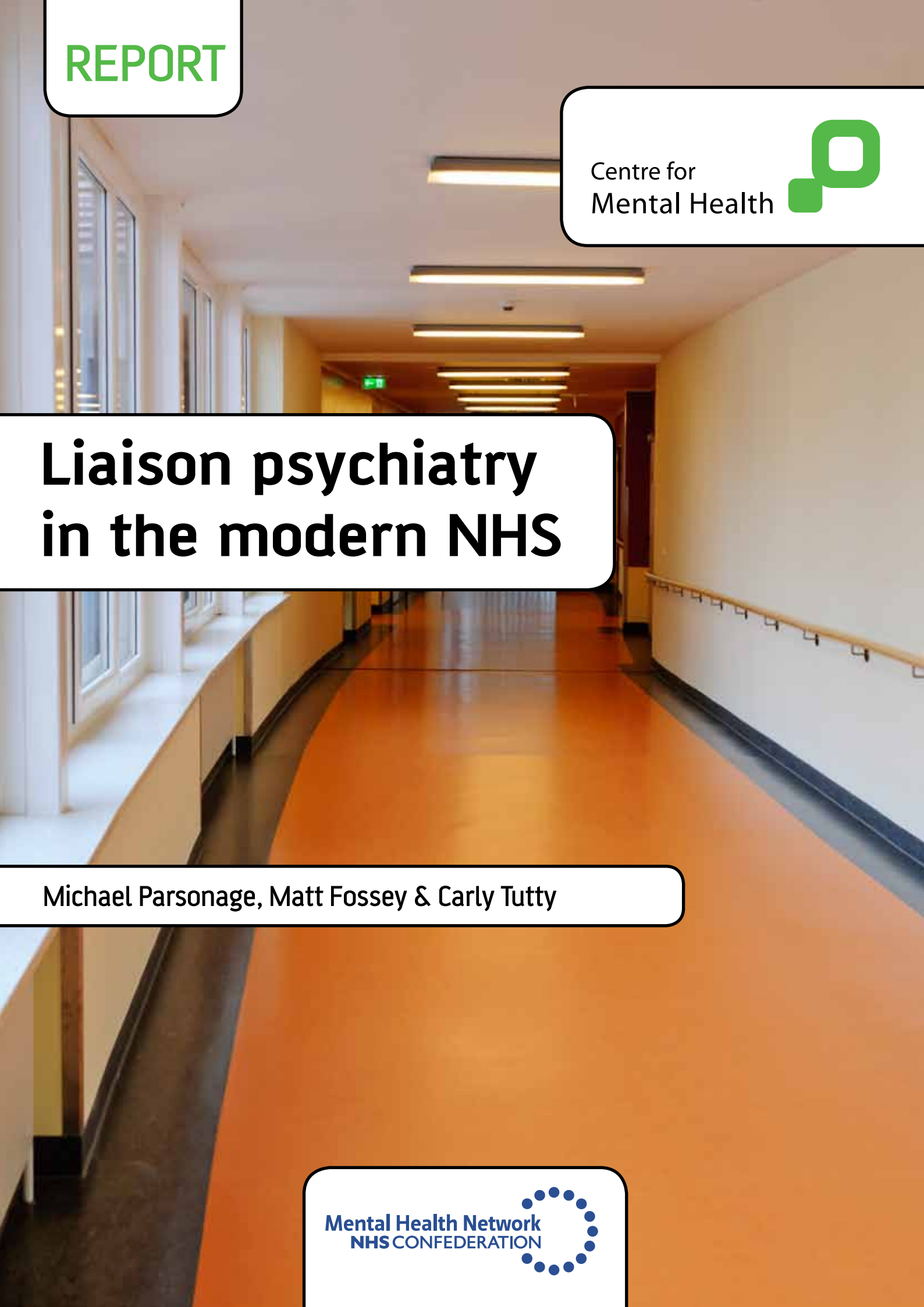

Liaison psychiatry in the modern NHS

Michael Parsonage, Matt Fossey & Carly Tutty

Mental Health Network
NHS CONFEDERATION

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Executive summary

This report sets out the findings of a study of liaison psychiatry services commissioned by the NHS Confederation Mental Health Network on behalf of Strategic Health Authority (SHA) Mental Health Leads. It seeks to identify how liaison psychiatry can most effectively contribute to the Quality, Innovation, Productivity and Prevention (QIPP) challenge of improving health outcomes while at the same time reducing health care costs.

It is based on detailed case studies of five established liaison psychiatry services in England, a review of published research and discussions with academic and other experts. The approach is analytical rather than descriptive, with a particular emphasis on effectiveness and outcomes relative to cost.

The general case for liaison psychiatry

Liaison psychiatry services address the mental needs of people who are being treated primarily for physical health problems or symptoms. At present liaison mental health services are mostly provided to patients attending general and acute hospitals, but there is also a major – as yet under-developed – role for liaison psychiatry in improving services in community settings for people with co-morbid physical and mental health problems.

The prevalence of mental illness among people with physical health conditions is two to three times higher than in the rest of the population. Prevalence is particularly high in the hospital setting, where around half of all inpatients suffer from a mental health condition such as depression, dementia or delirium.

Many of these co-morbid mental health problems typically go undiagnosed and untreated. In the absence of effective intervention, they lead to poorer health outcomes, including increased rates of mortality and morbidity.

Mental health co-morbidities also substantially increase the costs of physical health care. Overall, it is estimated that co-existing mental health problems including medically unexplained symptoms cost the NHS around £13.5 billion a year in extra spending on physical health services. Nearly half of this total - about £6 billion a year – falls on general and acute hospitals.

For a typical 500-bed general hospital, this is equivalent to extra costs of around £25 million a year. Based on the available evidence, **an attainable objective for a liaison psychiatry service in a typical general hospital would be to generate savings of up to £5 million a year**, particularly by reducing lengths of stay among older inpatients. These savings would be over and above any improvement in health outcomes.

Liaison psychiatry in the hospital setting

Despite some convergence in recent years, there remains much variation around the country both in the availability of liaison psychiatry services in general hospitals and in models of service delivery. In essence, this is because liaison psychiatry is still seen in some quarters as an optional extra in the NHS. This needs to change. Particularly in the QIPP context, liaison psychiatry should be regarded as essential to the provision of high-quality and efficient health care.

Every general and acute hospital should therefore have a dedicated liaison psychiatry service. This should be physically located in the hospital, in order to capitalise on the many advantages of on-site provision compared with the main alternative of support provided on a case-by-case outreach basis by community-based crisis teams or other mainstream secondary mental health services.

The scale and nature of operations of a hospital-based liaison psychiatry service should vary according to local needs. For example, the requirements of a large inner city teaching hospital are likely to differ from those of a small suburban or rural general hospital.

Every service should be established on a sustainable basis. This requires
1. secure funding,
2. a critical minimum size of the service and
3. a critical minimum level of expertise, particularly in terms of the input of consultant psychiatrists.

There is a good case for incorporating related services such as clinical psychology and substance misuse services within a hospital-based liaison psychiatry service.

Liaison psychiatry services should seek to integrate psychiatry and psychology fully into medical care. This requires close day-to-day working with medical teams, a strong focus on the education, training and supervision of acute hospital staff and a leadership role in changing the culture of the hospital so that the central importance of psychological factors is much more widely recognised and embedded in the routine care of patients.

In hospitals where liaison psychiatry support is currently limited or non-existent, the initial priority should be to set up a rapid-response generic service, focusing on assessment, the day-to-day management of patients during their time in hospital and onward referral to community services. The core work of such a service is likely to be in medical inpatient wards and emergency departments.

A generic service should wherever possible provide liaison psychiatry support on an all-ages, all-conditions basis. Relative to current patterns of service provision, this is likely in many cases to imply more work with older patients and with children and young people. The case for more support for older inpatients is particularly strong, as they account for about 80% of all hospital bed-days occupied by people with co-morbid physical and mental health problems. Work with older inpatients should be a top priority for all liaison psychiatry services.

The scale of mental health co-morbidities in the hospital population is such that only a small proportion of all patients who might benefit can be directly seen and managed by a liaison psychiatry service. **A liaison service should therefore focus mainly on complex and costly cases**, particularly those with intractable symptoms who might otherwise be kept in hospital for lengthy periods. Similarly, in emergency departments, particular efforts should be made to engage frequent attenders.

The training and supervision of acute hospital staff should be a core function of all liaison psychiatry services. This is likely to be the most cost-effective way of increasing the overall capacity of the hospital to improve the management of patients with co-morbid mental health conditions. It also

underpins the case for targeting the work of liaison psychiatry teams on more severe or complex cases.

Once a rapid-response generic service has become established, the next stage of development for a hospital-based liaison psychiatry service is likely to be in the provision of outpatient clinics for the treatment of mental health problems which cannot be resolved during the limited time that most patients spend in hospital. **Outpatient treatment clinics should focus particularly on conditions which are not generally well managed in the community, for example medically unexplained symptoms and self-harm.**

Liaison psychiatry beyond the hospital

The present concentration of liaison psychiatry services on patients being treated in general hospitals may be justified on the grounds of the very high prevalence of mental health problems in this setting and the very high costs of hospital care. However, liaison psychiatry also needs to reflect and reinforce wider trends in health care, particularly the growing importance of chronic rather than acute physical illness and an associated shift in the balance of care from the hospital to the community.

The way ahead for the long-term development of liaison psychiatry is likely to lie primarily in the expanded provision of community-facing services.

One way of developing services in this way would be to open up all outpatient treatment clinics run by hospital-based liaison psychiatry services to referrals from GPs and other community-based providers.

Another possible area for the expansion of community-facing services is in relation to perinatal mental health, particularly during the antenatal period. In some areas specialist perinatal teams are provided by child and adolescent mental health services (CAMHS), but their availability around the country is limited and provision by a liaison psychiatry service offers an alternative model which may be appropriate in some circumstances.

The biggest area for the development of community-based liaison psychiatry is in contributing to the management and treatment of mental health problems among people with long-term physical conditions such as diabetes or chronic cardiac problems. The potential scale of such activity is very large, as there are an estimated 4.5 million people in this country with a long-term physical condition and co-morbid mental health problem such as depression or anxiety, but so too is the potential benefit in terms of improved health outcomes and reduced costs of care.

Expansion in this area is likely to entail the involvement of liaison psychiatry services in integrated stepped-care models of provision, working in collaboration with other providers including GPs, community nurses and (Improving Access to Psychological Therapy) IAPT services. The liaison psychiatry role would focus on the treatment of severe and complex cases, combined with the training and supervision of other staff responsible for more straightforward cases.

Examples of community-based liaison psychiatry services operating on these lines are now starting to emerge in different parts of the country, albeit on a limited scale. The prevalence and cost of mental health co-morbidities among people with long-term conditions is such that developing community-based collaborative care services with an integrated liaison psychiatry component should be a high priority for all clinical commissioning groups working with local providers.

Measuring outcomes

Well-designed liaison psychiatry services can generate both health improvements and cost savings, but there remains a need to demonstrate this through the use of a robust measurement framework.

Identifying and quantifying the outcomes attributable to liaison psychiatry interventions is far from straightforward and there is at present no consensus on the best measures to use. We favour a balanced scorecard approach, bringing together a range of measures on different areas of potential improvement, including clinical outcomes, service use and patient experience.

Key points

Liaison psychiatry is one of the few services in the NHS to operate at the interface between physical health and mental health.

Over time, their aim should be to collaborate in the delivery of integrated care for all patients with co-morbid physical and mental health conditions, whether in hospital or in the community.

Integrated care in hospitals is critical because that is where the sickest patients are. But delivering integrated care to patients outside the hospital is at least as important because of the much larger numbers.

The status of liaison psychiatry should change. It needs to be recognised as an essential ingredient of modern health care and not an optional extra which is merely nice to have.

1 Introduction

Physical health and mental health are inextricably linked. Poor physical health is a major risk factor for poor mental health, and equally, poor mental health is a major risk for poor physical health. Despite this pervasive interplay, NHS services for mental and physical health are largely commissioned, funded and provided in separate compartments.

A heavy price is paid for this lack of integration in terms of poorer health outcomes for patients and in greatly increased costs of care to the taxpayer. The better management of co-morbid physical and mental health conditions probably offers more scope for contributing to the Quality, Innovation, Productivity and Prevention (QIPP) agenda of better health at lower cost than any other activity in the NHS.

About this report

This report sets out the findings of a study of liaison psychiatry services commissioned by the NHS Confederation Mental Health Network on behalf of Strategic Health Authority (SHA) Mental Health Leads. It seeks to identify and describe how liaison psychiatry can most effectively contribute to the QIPP agenda, by providing services for patients with co-morbid physical and mental health problems which not only improve health outcomes but also reduce the overall costs of health care. QIPP requires the NHS to make efficiency savings of up to £20 billion by 2014/15 while maintaining the quality of care.

The study was commissioned in follow-up to a short report published last year in which we set out an economic evaluation of the RAID (Rapid Assessment Interface and Discharge) liaison psychiatry service in Birmingham City Hospital (Parsonage & Fossey, 2011). This found that there is a strong business case for the RAID model, based primarily on the ability of the service to reduce acute inpatient bed use by shortening lengths of stay and reducing rates of re-admission, particularly among older patients. Drawing on this analysis, the RAID service was subsequently identified in the NHS Operating Framework for 2012/13 as an example of good practice to support delivery of the QIPP challenge: “Innovative service models such as the RAID 24/7 psychiatric liaison service have been shown to generate significant cost savings and health improvements” (Department of Health, 2011a). A number of new liaison psychiatry services based on the RAID model are now under development around the country.

The main aim of the present study is to identify the key components and characteristics of a psychiatric liaison service which is both effective and cost-effective, drawing on a wider range of evidence than covered in our RAID report. Among the questions we have considered are: what services should be provided and in which settings? Which patient groups should receive these services? How should liaison psychiatry services be organised and on what scale? And how should the outcomes of liaison services be measured? Wherever possible, our approach in addressing these questions has sought to be analytical as well as descriptive, with a particular emphasis on effectiveness and outcomes relative to cost.

In line with the RAID analysis, and with the present coverage of liaison psychiatry services in this country, the main focus of our work has been on the provision of liaison psychiatry in general and acute hospitals. However, at the end of this report we also offer a short discussion of the role of liaison psychiatry beyond the hospital setting. This role is potentially very important for the future, as part of wider efforts to shift the balance of health care from the hospital to the community and to achieve more integrated care for the very large numbers of people in all settings who have co-morbid physical and mental health problems.

Information relevant to our inquiry has been collected in a number of ways:

First, we have worked closely with five established liaison psychiatry services around the country, recommended by the NHS Confederation Mental Health Network and SHA Mental Health Leads as leading examples of good practice. The services in question are based in Carshalton, Exeter, Hull, Leeds and the Wirral. Work with these sites has been designed to support a detailed description of different models of service provision together with the key features of these models that contribute to good performance (see Annex B for these descriptions). During our visits to the five sites we had detailed discussions not only with those responsible for managing and providing liaison psychiatry services but also with a range of acute hospital clinical staff and with local commissioners.

Second, we have received very helpful information and advice from a number of other providers of liaison psychiatry services around the country, including those based in Cambridge, Edinburgh and Southampton; from members of the Royal College of Psychiatrists Liaison Psychiatry Network; and from academic experts in the field of liaison psychiatry, particularly Professor Michael Sharpe of the University of Oxford.

And third, we have reviewed the published research literature on liaison psychiatry, particularly for any evidence on the effectiveness and cost-effectiveness of different service models based on good quality research designs.

We are extremely grateful to all those who have helped us in this work. Particular thanks, for their hospitality as well as advice and support, are due to members of the liaison psychiatry services in our five chosen sites.

2 The general case for liaison psychiatry

Liaison psychiatry services address the mental health needs of people who are being treated primarily for physical health problems or symptoms. Although coverage remains patchy, the availability of these services in general and acute hospitals has expanded considerably in recent years and there has also been some convergence in models of service provision in the hospital setting, in line with guidance produced by the Royal College of Psychiatrists, the Department of Health, the National Institute for Health and Clinical Excellence (NICE) and other bodies.

The expansion of liaison psychiatry services is a welcome development, because although the evidence base which underpins these services remains limited or inconclusive in a number of important respects, there are genuine grounds for thinking that a well-run service can not only improve clinical outcomes among hospital patients but also promote significant savings in health care costs.

Four related propositions underlie this assessment:

1. the prevalence of co-morbid mental health problems among patients in general and acute hospitals is extremely high;
2. many of these problems typically go undiagnosed and untreated;
3. in the absence of effective intervention, mental health co-morbidities lead to poorer health outcomes and significantly increased costs of care; and
4. improvements in the identification, management and treatment of mental health conditions in hospital can significantly reduce the scale and cost of these problems.

The last of these propositions is discussed in more detail later in this report, but it may be helpful at this stage to elaborate briefly on the other three and also to set out some relevant figures on overall levels of acute hospital activity and expenditure in this country, leading to a broad assessment of the overall scale of NHS costs associated with mental health co-morbidities in acute hospitals, as an illustrative measure of the potential financial benefits that could be achieved by effective intervention.

The scale of mental health co-morbidities

A recent review of the evidence on co-morbidities indicates that people with long-term physical health conditions, who together account for around 70% of all expenditure in the NHS, are two to three times more likely than the general population to experience mental health problems such as depression, anxiety or dementia (Naylor *et al.*, 2012). In total, this amounts to some 4.6 million people in England with co-morbid physical and mental health problems.

The prevalence of mental and physical health co-morbidities is particularly high among patients in general and acute hospitals. One reason for this is that a significant number of patients develop a

mental health problem during their stay in hospital, in addition to those who are admitted with an existing condition. Another is the very high proportion of older people in the inpatient population.

Older people account for 65% of all inpatients in general and acute hospitals at any one time (NHS Information Centre, 2012) and the overall prevalence of mental health conditions among this group is estimated at around 60% (Royal College of Psychiatrists, 2005). Less comprehensive information is available on the prevalence of mental health problems in younger inpatients but may be estimated at around half the rate among older people, implying an overall prevalence of physical/mental health co-morbidities in the inpatient population of nearly 50%.

As described by Lloyd (G., 2012), the high prevalence of mental illness among hospital patients results from several factors which often interact with each other:

- pre-existing mental illness contributing to the development of physical illness;
- psychological reactions to physical illness;
- organic effects of physical illness on mental function, e.g. delirium;
- the effects of medically prescribed drugs on mental functions and behaviour;
- medically unexplained physical symptoms that mask underlying mental illness; and
- alcohol and drug misuse.

Many cases of mental illness among hospital patients go undetected by acute clinical staff. Estimates of detection rates vary between studies but are commonly put at around 50%, and may be even lower for some conditions such as delirium. There are various reasons for this. The presence of physical illness may make the detection of mental health problems more difficult. Hospital staff often have little training or expertise in the identification of mental health conditions. They may understandably focus attention on the primary health condition for which a patient has been admitted. And they may feel that a degree of mental distress is a natural reaction to illness and hospitalisation even though this may conceal more serious problems.

The cost of co-morbidities

Co-morbid mental health problems lead to much poorer health outcomes for people with physical health conditions. For example, mortality rates for individuals with co-morbid asthma and depression are twice as high as among people with asthma on its own (Walters *et al.*, 2011). Similarly, people with chronic heart failure are eight times more likely to die within 30 months if they also have depression (Junger *et al.*, 2005). There is also evidence that co-morbid mental health problems can have a greater effect on the functional status and quality of life of people with long-term physical conditions than the severity of their physical illness (Yohannes *et al.*, 2010; de Jonge *et al.*, 2006), and that quality of life for those with co-morbid mental and physical health problems is considerably worse than among people with two or more physical health problems (Moussavi *et al.*, 2007).

Concerning the impact on NHS costs, evidence reviewed in Naylor *et al.* (2012) shows that co-morbid mental health problems are typically associated with increases of 45-75% in the costs of physical health care for long-term conditions. Increases of this order are observed across a wide range of physical health conditions and are based on costs measured after adjustment for the severity of physical disease. Mental health co-morbidities can also result in wider economic costs on a

substantial scale. For example, individuals with diabetes and depression are seven times more likely to take time off work than those with diabetes on its own (Das-Munshi *et al.*, 2007).

The scale of potential savings

NHS commissioners spent nearly £40 billion in 2010/11 on the services provided by general and acute hospitals (Department of Health, 2011b). This is easily the largest single block of expenditure in the NHS budget; it represents almost 40% of all health spending and is five times as large as the total amount spent on GP services or on secondary mental health care. Expenditure on inpatients including day cases represents nearly 70% of the acute hospital total, with outpatient and A&E attendances accounting for the remainder. There were 14.9 million completed admissions to general and acute hospitals in 2010/11 and the average length of stay of these episodes was 5.5 days (NHS Information Centre, 2012), at an estimated cost of around £1,800 per case. Each outpatient and A&E attendance costs £100 on average (Department of Health, 2011c).

How much of the £40 billion spent on general and acute hospital services can be attributed to the impact of co-morbid mental health problems? Lack of data prevents anything other than a very broad estimate, but a useful starting point is the calculation in Naylor *et al.* (2011) that for the NHS as a whole the cost of co-morbidities is in the range £8 – 13 billion a year. A mid-point estimate of the aggregate cost of co-morbidities in the NHS is thus £10.5 billion a year.

There is little evidence to go on in calculating what proportion of this cost falls on general and acute hospitals, as not all studies looking at the cost of co-morbidities provide a breakdown of costs by setting and those that do show that the proportion falling on acute hospitals may vary quite widely by type of physical health condition. The simplest solution, and one broadly consistent with the limited available evidence (e.g. Unutzer *et al.*, 2009), is to assume that the share of costs falling on acute hospitals is in line with the share of these hospitals in total health spending, i.e. around 40%. On this basis the cost of mental health co-morbidities in acute hospitals is around £4.2 billion a year.

Allowance should also be made for the costs of medically unexplained symptoms, i.e. physical symptoms which appear on investigation to have no underlying organic cause. Medically unexplained symptoms are surprisingly common. For example, they account for about 50% of all first attendances at outpatient departments in general hospitals (Nimnuan *et al.*, 2001), and patients with medically unexplained symptoms may be among the most frequent and intensive users of health services in both primary and secondary care settings. Medically unexplained symptoms are not covered in the cost estimates given in Naylor *et al.*, but a separate study published in 2010 indicates that the overall cost to the NHS of medically unexplained symptoms is nearly £3 billion a year (Bermingham *et al.*, 2010). Of this total, 60% falls on general and acute hospitals, i.e. £1.8 billion a year.

Combining these two calculations, it can thus be estimated that the extra cost of physical health care in general and acute hospitals associated with co-morbid mental health problems including medically unexplained symptoms is of the order of £6 billion a year, equivalent to 15% of total expenditure in these hospitals. For a typical general hospital of 500 beds, this corresponds to a cost of around £25 million a year.

While clearly subject to a wide margin of error, these estimates offer one way of highlighting the quantitative importance of mental health problems in the acute hospital setting and also as a broad measure of the potential scale of benefits to be achieved by effective intervention. It would of course be unrealistic to assume that all of the annual cost burden of £6 billion is avoidable. A better assessment of the potential scope for cost savings may be found in the conclusions of a

meta-analysis of nearly 100 relevant research studies which found that psychological interventions for patients with physical conditions being treated in acute hospitals and similar settings reduce health care costs per patient by about 20% on average (Chiles *et al.*, 1999). This also appears to be broadly consistent with the findings of the RAID evaluation (Parsonage & Fossey, 2011). Savings on this scale translate to potential cost reductions of around £1.2 billion a year at the national level, or £5 million a year for a typical 500-bed general hospital.

3 Liaison psychiatry in the hospital setting

Most liaison psychiatry services in this country are provided to patients attending general and acute hospitals. This chapter reviews the evidence on which forms of liaison psychiatry in the hospital setting score most highly in terms of their effectiveness and cost-effectiveness and also on how services might be most efficiently organised.

Current provision

No comprehensive statistics were available at the time of writing on overall levels of activity or expenditure on liaison psychiatry services provided in general and acute hospitals. A number of small-scale surveys have, however, been carried out over the years, concentrating on particular geographical areas or patient groups. Without exception, these have commented on the striking degree of variability which is found around the country both in levels of provision and in models of service delivery. Some hospitals appear to have little or no provision of organised mental health support, while others benefit from the services of large in-house specialist teams. One of the services we visited, Leeds, is probably the largest in England, employing 75 staff at a cost of around £4.5 million a year.

In addition to differences in overall scale, the provision of liaison psychiatry varies greatly according to the coverage and organisation of services. Relevant dimensions in which significant variations are found include:

- the types of patient seen, including groupings by age and health condition;
- the hospital settings in which support is provided (emergency departments, inpatient wards etc.);
- the nature of the service provided, with a particular distinction between those services which focus mainly on the assessment and short-term management of patients during their time in hospital and those which are primarily treatment-oriented, including the on-going provision of psychological and other interventions after patients have been discharged from hospital;
- the balance between clinical work with patients and the education and training of acute hospital staff;
- hours of operation, with some services operating 24/7 but many on restricted hours;
- the size, composition and skill mix of liaison psychiatry teams; and
- whether liaison psychiatry services are provided by specialist teams physically located within the general hospital or on an out-reach basis by community-based secondary mental health services.

Variations in provision

Variations in the scale and type of provision reflect to some degree differences in underlying need. Most obviously this includes differences in the size of the hospital population being served. For example, among the sites we visited, the liaison psychiatry service in Leeds supports two large teaching hospitals which have a combined total of around 2,100 inpatient beds, whereas the service in Carshalton operates within a single general hospital of 550 beds.

Another relevant variable is the mix or composition of the patient population receiving support. For example, some hospitals provide a range of specialist or tertiary services for patients who may have a particularly high level of need for liaison psychiatry, such as transplant patients. The design of services should clearly take into account such genuine differences in underlying need or demand. As one guidance document puts it, liaison psychiatry services need to "map onto the specific needs of an acute hospital" (Academy of Medical Royal Colleges, 2009).

Variations in the scale of liaison psychiatry support may also reflect differences in the availability of related services within the general hospital. These include clinical psychology services, which are often provided on a sessional basis to specific medical departments such as oncology or neurology. Some hospitals also receive support from specialist drug and alcohol teams operating alongside a liaison psychiatry service.

While these differences in levels of need and complementary service provision are significant, the extent of diversity in liaison psychiatry services around the country is such that some other explanation must also be sought. A clue to this may be found in the historical development of services, which has proceeded very much in an *ad hoc* and opportunistic way rather than as a result of strategic planning. Services have become established in large measure through the initiative and enthusiasm of individual practitioners, often operating on a consultant-to-consultant basis with supportive medical colleagues and taking advantage of short-term funding opportunities.

Lying behind this *ad hoc* pattern of development is continuing ambiguity about whether ownership for liaison psychiatry lies with mental health or physical health services. Although it is now widely acknowledged that a mind-body dichotomy is not conducive to the provision of high-quality medical care, this distinction remains deeply embedded in the culture and organisation of the NHS, including commissioning, funding and service provision.

The establishment of services such as liaison psychiatry which operate at the interface between mental and physical health thus needs to overcome institutional barriers which in some respects have become more pronounced in recent years, for example because of the introduction of new payment systems for hospital services which pay little heed to mental and physical health co-morbidities and the development of large, community-focused mental health trusts which are often geographically as well as organisationally distant from their physical health counterparts.

As one striking example of this separation, liaison psychiatry received barely a single mention in the National Service Framework for Mental Health, which set out a blueprint for the development of adult mental health services in the first decade of this century (Department of Health, 1999). The question of who should pay for liaison psychiatry also remains contested and is a further manifestation of the institutional constraints which have so far hampered the rational development of services. As one of our interviewees rather tellingly put it, "liaison psychiatry is like playing a permanent away fixture". Whether new organisational structures in the NHS such as clinical commissioning groups will restore a measure of home advantage remains to be seen.

The evidence base for liaison psychiatry

Wide variations in service models also limit the extent to which the findings of research studies based on individual services can be compared or generalised. (A similar problem also limits the relevance of research carried out in other countries, particularly the US where institutional arrangements are very different.) This is just one of several reasons why the published evidence base on liaison psychiatry is incomplete or inconclusive in important respects. Other reasons include:

- most published studies are descriptive rather than evaluative;
- many of the evaluative studies are subject to methodological shortcomings, such as small sample sizes or failure to identify an appropriate comparison group;
- liaison psychiatry interventions are inherently complex and therefore not easy to evaluate using rigorous research methods such as the randomised controlled trial, which works best when applied to single-component interventions, such as a new drug or surgical procedure, in tightly controlled settings;
- the patients seen by liaison psychiatry services are heterogeneous in nature and also supported by other services, which makes it difficult to determine the extent to which any improvement in outcomes can be attributed to the liaison psychiatry input; and
- liaison psychiatry interventions typically have multiple outcomes, which can complicate the interpretation of results.

Such considerations have led some reviewers to reach rather agnostic conclusions on the strength of the existing evidence base. For example, drawing on their review of published research, Callaghan *et al.* (2003) conclude that "there is a pressing need for more, and better-designed, studies that evaluate liaison mental health services", while Ruddy and House argue in a similar analysis that "many areas of liaison psychiatry lack robust research evidence" (Ruddy & House, 2005).

Such conclusions must certainly be given due weight, but with one possible qualification. This is that many individual research studies focus mainly on effectiveness defined in terms of improvements in health outcomes and pay less attention to the implications of intervention for health service resource use. In practice both dimensions are important, particularly at a time of severe budgetary restraint.

Services which reduce the pressure on NHS expenditure may be of great value even if their direct impact on health outcomes is relatively limited, as they release resources which can be used to expand other services and their associated outcomes without any change in the overall level of NHS spending. For budget holders in the health service, the appropriate criterion for evaluation is therefore cost-effectiveness, i.e. NHS cost per unit of health gain, rather than effectiveness on its own. (Taking a wider perspective, allowance should also be made for any changes in resource use in other settings, such as reductions in the need for social care.)

Where the impact on health service resource use as well as health outcomes is taken into account, a number of studies suggest a more positive result. Typically, liaison psychiatry interventions achieve only relatively modest improvements in health outcomes but there is evidence that they also produce important savings in health service costs. While this proposition remains to be fully tested, our reading of the research literature is that it has some justification. In short, the case for liaison psychiatry may be stronger on grounds of cost-effectiveness than effectiveness alone.

Commissioning liaison psychiatry

The rest of this chapter reviews the available evidence from published research and other sources, including our site visits, on the various dimensions of service coverage and design noted above (types of patient seen, hospital settings in which services are provided, and so on). In all cases the aim is to bring an analytical perspective to the question of what types and methods of service delivery appear to yield the best results in terms of their cost-effectiveness.

We have in mind a hypothetical NHS commissioner considering whether to fund a new liaison psychiatry service in a local hospital where no such service currently exists. As always, resources are limited and it is clear from evidence on the overall numbers of patients in acute hospitals with mental health co-morbidities that decisions on priorities are essential. On any realistic assessment only a small proportion of all such patients can be seen and managed by a liaison psychiatry service – probably less than 5%, judging by the data on referrals and caseloads provided by the sites we visited. Where should resources be concentrated? From an analytical perspective, an answer to this question requires evidence on such issues as the scale and severity of need in different patient groups and the relative effectiveness and cost-effectiveness of different forms of intervention in addressing this need.

The analytical approach being taken here necessarily leaves out of account a range of less tangible benefits that may be generated by a liaison psychiatry service in the hospital setting. These include: providing advice on mental capacity assessments and decisions on use of the Mental Health Act; improving the quality of care as perceived by patients and their relatives; reducing risks for patients, such as falls from delirium; improving the psychological wellbeing of the hospital doctors and nurses who are less stressed by problems that they can neither understand nor manage; and reducing complaints from patients and relatives from mismanaged mental illness amongst patients, including other patients. All these and other less tangible benefits clearly need to be factored into commissioning decisions.

Older inpatients

Older people currently account for 45% of all inpatient episodes in general and acute hospitals in England (NHS Information Centre, 2012). This proportion has been growing over time; for example, in the ten years to 2010/11, numbers of inpatient episodes among people aged 75+ increased by 75%, compared with only 31% among those aged 15-59. This will continue to grow in the future, in line with the continuing ageing of the population.

Average length of stay in hospital is roughly twice as high among older people as among adults of working age - at 8.6 days against 4.2 days (NHS Information Centre, 2012). As a result, the share of older people in hospital activity as measured by numbers of bed-days rather than inpatient episodes is significantly higher, at 65%. Much of the increase in average length of stay can be attributed to the significantly higher prevalence of co-morbid mental health problems in older patients. The interplay between physical health and mental health is at its greatest in older people (Anderson & Ooman, 2012) and nowhere is this more apparent than in hospital. We estimate that older people account for 80% of all hospital bed-days occupied by adult patients with co-morbid physical and mental health conditions. Such figures strongly support an argument that the older inpatient population constitutes the biggest single area of need for liaison psychiatry support in the hospital setting.

The overall prevalence of mental health problems among older inpatients in acute hospitals is estimated at 60% by the Royal College of Psychiatrists (2005) on the basis of a systematic evidence review. Table 1 summarises the prevalence of different mental health conditions among this group.

Table 1: Prevalence of mental health conditions in older people

	in hospital %	in the community %
Dementia	31	5
Depression	29	12
Delirium	20	1-2
Anxiety	8	3
Alcoholism	3	2
Schizophrenia	0.4	0.5

Source: Royal College of Psychiatrists (2005)

Note: the figures in the first column add up to more than 60% because some patients suffer from two or more problems at the same time. There is a particularly large overlap between dementia and depression and also between dementia and delirium.

Three conditions – the three Ds of dementia, depression and delirium – account for the majority of cases and the prevalence of dementia and delirium in particular is markedly higher in hospital than in the community at large. The diagnostic case mix in older people is very different compared with younger patients. Dementia and delirium are largely conditions of older age, while among younger adults there is relatively higher prevalence of such problems as self-harm, alcohol and drug misuse and medically unexplained symptoms.

Detection rates for mental health conditions among older patients are typically very low. For example, one study found that delirium was missed in up to two-thirds of cases (Inouye, 1994), while a meta-analysis of studies of depression in older medical patients showed a median detection rate of just 10% (Cole & Bellavance, 1997). And even when problems are identified, the treatment provided by clinical staff in acute hospitals is often sub-optimal, including over-use of psychotropic medication in the management of dementia and delirium (Holmes *et al.*, 2003) and failure to provide anti-depressants for the majority of depressed older patients (Holmes & House, 2000). Psychological interventions are very rarely used.

Evidence reviewed by the Royal College of Psychiatrists (2005) shows that mental health problems in older inpatients are associated with a wide range of adverse consequences. These include:

- poorer health outcomes, including a two- to three-fold increase in mortality rates in hospital, after controlling for age and severity of physical illness;
- longer lengths of stay, typically increasing the time spent in hospital by 5-10 days per case;
- increased rates of re-admission to hospital after the initial episode; and
- increased rates of discharge to institutional care rather than the patient's own home, reflecting higher levels of morbidity, dependence and functional impairment.

There is now broad agreement that these problems are most effectively addressed by a rapid-response, multi-disciplinary liaison psychiatry team providing a range of services for older patients which include:

- early identification of mental health conditions;
- risk assessment;
- regular review during the patient's stay;
- management of disturbed or challenging behaviour;
- advice on medication;
- participation in discharge planning;
- liaison with community-based mental health and social care services to ensure continuing support and rehabilitation after discharge; and
- education and training of acute hospital staff.

A strong body of research evidence and clinical opinion indicates that a comprehensive service on these lines can generate significant benefits, particularly in the form of reduced health care costs. A positive impact on health outcomes during the patient's stay is less strongly established, although some studies have identified modest improvements in rates of mortality and morbidity and there is also evidence that 30-40% of new cases of delirium in hospital can be prevented, by identifying patients at high risk and then focusing care on the avoidance of precipitating factors such as dehydration (Anderson, 2005).

A wider body of evidence going back 30 years or more shows that the effective management and discharge planning of older inpatients with mental health conditions can significantly reduce lengths of hospital stay (e.g. Levitan & Kornfeld, 1981). Estimates vary between studies, but they generally suggest reductions in the range 2-5 days per patient. In financial terms, even at the lower end of the range, this implies a saving of £520 per case, based on a figure of £260 for the national cost of an "excess" or marginal hospital bed-day as used in Payment by Results (Department of Health, 2011c). Further savings come from reduced rates of hospital re-admission and reduced rates of institutionalisation after discharge, with one study showing that a sample of older patients with mental health conditions were twice as likely to return to independent living if they received liaison psychiatry support as a matched sample of patients receiving care as usual (Cole *et al.* 1991).

Several of the sites we visited during this study were able to point to local evaluations showing similar evidence of cost savings and also to identify other possible reductions in resource use. For example, one site mentioned that the introduction of a liaison psychiatry service was associated with a 50% fall in admissions of older people to psychiatric hospitals.

Reference may also be made to the evaluation of the RAID service in Birmingham, which on conservative assumptions identified a total reduction of 14,500 hospital bed-days, equivalent to savings of £3.55 million, in the first full year after the service was introduced (Parsonage & Fossey, 2011). About half of this saving related to shorter lengths of stay in hospital and the other half to reduced rates of re-admission. (Reduced rates of discharge to institutional care were also identified but not costed in this study.)

Some 90% of the financial benefits resulted from reduced bed use among older patients, even though this group accounted for only 60% of referrals from inpatient wards. Overall, the financial benefits attributable to RAID exceeded the cost of the service by a factor of 4 to 1. Even higher returns have been found in some other studies. For example, a liaison psychiatry intervention for older

patients evaluated in two US hospitals showed a benefit:cost ratio of 5:1 in one site and 8:1 in the other (Strain *et al.*, 1991).

Combined with the evidence on the scale and severity of need among older inpatients, such findings on cost-effectiveness indicate that the development of liaison psychiatry services for older people should be a high priority. Our assessment of current provision is that, measured against the extent of need and the availability of evidence-based interventions, this is an area that so far has been relatively neglected. In our view, the provision of a well-resourced liaison psychiatry service for older inpatients should be a 'must do' in all general and acute hospitals.

Hospital inpatients of working age

Adults of working age account for 43% of all inpatient admissions to general and acute hospitals in England but for only 30% of all occupied bed-days (NHS Information Centre, 2012). This is more or less the opposite of the pattern observed among older patients and reflects a much shorter average length of stay in younger adults. Moreover, the time spent in hospital by a typical inpatient of working age has fallen by a third in the last ten years and this trend may be expected to continue, driven by a combination of financial pressures and continuing medical advances such as non-invasive surgery. A further difference between younger and older patients, and one which partly explains the difference between them in average lengths of stay, is the significantly lower prevalence of co-morbid mental health problems in the former group.

This combination of fewer patients and shorter stays in the younger inpatient population necessarily limits the scope for liaison psychiatry services to achieve reductions in health care use and cost on the scale noted for older patients. The limited time spent in hospital also reduces the opportunity to provide psychological or other interventions aimed at improving health outcomes, though it is important to note that even very short inpatient stays provide a good opportunity for assessments which can inform the subsequent treatment of patients in primary care and so reduce future re-admissions.

Published research literature on liaison psychiatry appears to provide relatively few examples of significant short-term health or financial benefits among younger inpatients. The RAID evaluation, for example, found that while adults of working age accounted for 40% of all inpatient referrals, this group generated only 10% of the savings associated with reductions in bed use.

Our overall interpretation of such evidence is that, compared with a service for older people in hospital, a cost-effective liaison psychiatry service for younger inpatients should be more limited in scale and more targeted in approach. Key areas of intervention for such a service include:

- **Complex and costly cases**

Figures on average length of stay conceal the outliers, i.e. those patients whose time in hospital far exceeds the mean. They also conceal patients who have recurrent or repeated episodes of inpatient care. Discussions with clinicians and practitioners suggest to us that in a significant proportion of these cases there is a strong psychological component to the patient's condition, for example physical symptoms which are disproportionate to the severity of the physical pathology.

Such cases may be found in all medical specialties but they tend to be concentrated in certain areas such as neurology and gastroenterology. Patients with intractable symptoms may be difficult to manage and cause a good deal of anxiety among hospital staff. While there is relatively limited evidence on the effectiveness of interventions in this area, we see a potentially important role for liaison psychiatry, particularly because of the sizeable scope for cost savings. Comprehensive

assessment of these complex and costly cases can lead to a more effective and efficient management plan than would be achieved by narrowly focused medical care and investigation.

- **Eating disorders**

The prevalence of eating disorders has increased in recent years and many of these cases are to be found in hospital settings. They raise particular problems of risk management because of high mortality and physical health complications, and in some cases they may require treatment against a patient's will. Liaison psychiatry has an important part to play in diagnosis, management and initial treatment.

- **Alcohol**

About 20% of patients admitted to hospital are regularly consuming unsafe levels of alcohol (Royal College of Physicians, 2001). Alcohol problems often go unrecognised and undiagnosed in hospital, particularly among patients admitted for unrelated reasons, and poor management of alcohol withdrawal states can lead to increased lengths of stay. There is good quality research evidence to show that, among people who are drinking above safe limits, detection followed by a brief alcohol intervention results in significant reductions in consumption after discharge (McManus *et al.*, 2003). For patients who are alcohol-dependent, a liaison psychiatry service can support their management while in hospital and arrange their referral on to specialist community services.

- **Patients with severe mental illness**

People with severe mental illnesses such as schizophrenia and bipolar disorder often have very poor physical health, with life expectancy up to 20 years less than the population average (Chang *et al*., 2011). They are therefore likely to be over-represented in the general hospital population. Treatment of such cases can be a cause of anxiety to staff, particularly in relation to the management of risk. Liaison psychiatry services have an important role in the management of these patients and in ensuring continuity of treatment for their mental illness while in hospital.

- **Self-harm**

Self-harm is a leading cause of acute medical admission for both men and women in this country. Many of these cases are initially seen in emergency departments, where self-harm, including cases not subsequently admitted as inpatients, accounts for a high proportion of the caseload of many liaison psychiatry services.

Implications of this approach

Our suggestion that a liaison psychiatry service for younger inpatients should be smaller in scale and more targeted in approach than a service for older adults implies not only a different style of working but also a different skill mix in the team. In particular, a focus on complex and costly cases in the younger age group is likely to require more input at the consultant psychiatrist level, providing relatively intensive support for relatively small numbers of patients.

In contrast, a service for older inpatients may provide less intensive support for larger numbers, with most of the work being undertaken by mental health nurses and others with rehabilitative skills such as occupational therapists.

At the risk of over-simplification, a service for younger inpatients may therefore be characterised as low volume/high cost and a service for older inpatients as high volume/low cost. (It is important to emphasise that we are referring here solely to an inpatient service. The balance of provision between older people and adults of working age is likely to be very different in the work of liaison psychiatry outpatient clinics which provide follow-up psychological treatments after patients have been discharged.)

Children and adolescent hospital inpatients

Children and young people currently account for 11% of hospital admissions, but because their average length of stay is only 2.2 days, this translates into just 4% of all occupied bed-days (NHS Information Centre, 2012). As among adults, physical illness is a major risk factor for mental health problems in children, with studies in the general population indicating an approximate doubling of risk (Rutter *et al.*, 1970). This carries through into the hospital setting, where it is estimated that the prevalence of mental health problems in children's wards is in the range 20-35% (Abrams & Rauch, 2008). Conditions commonly presented include psychosomatic and adjustment disorders as well as anxiety and depression.

Co-morbid mental health conditions among children with physical illness have a number of adverse consequences. These include:

- poorer health outcomes, including increased rates of mortality and morbidity, often associated with lower rates of adherence to treatment for the physical condition and higher rates of self-harm;
- continuing mental health problems, with high rates of persistence into adult life (one study based on longitudinal data showed that over 80% of people who suffered from symptoms of depression or anxiety in adolescence continued to experience these problems as adults (Colman *et al.*, 2007)); and
- increased costs of health care, especially among children with severe and complex somatoform disorders and medically unexplained symptoms (Lloyd, H., 2012).

As among adults of working age, the short length of time that children and young people typically spend as inpatients is likely to limit the scope for liaison psychiatry services and again we found little evidence of effective interventions in the published research literature. Findings on cost-effectiveness appear to be largely non-existent. However, the scale of potential long-run as well as short-run benefits in terms of better health and lower costs is such that even relatively modest improvements in these outcomes may be sufficient to support a cost-effectiveness case for intervention, particularly among complex and costly cases. As with working-age adults, it is also important to acknowledge the important role of liaison psychiatry in screening and assessment which allows better management after the patient has left hospital.

Under current arrangements, liaison psychiatry support for children in general hospitals is provided by child and adolescent mental health services (CAMHS). This is generally done on a case-by-case outreach basis and only a minority of CAMHS provide a dedicated liaison psychiatry service (Woodgate & Garralda, 2006). Provision is generally described as patchy and inadequate; indeed, according to a recent report by the Academy of Medical Royal Colleges and Royal College of Psychiatrists (2009), "most paediatric departments are still without any meaningful CAMHS input".

Because mental health services for children and adolescents are commissioned, funded and provided separately from those for adults, none of the liaison psychiatry services seen during our site visits provides any support for children as inpatients. However, one site does provide an all-ages liaison service for cases of self-harm seen in emergency departments and there may be a case for extending this approach to other settings within the general hospital, including inpatient wards.

Such an approach has indeed been recommended in recent guidance on liaison psychiatry published by the Joint Commissioning Panel for Mental Health (2012), on the grounds that while the liaison psychiatry needs of children and young people may differ from those of adults, the principles and benefits are applicable across all ages. Further arguments in support of this approach include the

perceived deficiencies of current arrangements for children and also the fact that liaison psychiatry work with children requires expertise in mental health problems that are commonly seen by adult liaison psychiatry services but not in the generality of CAMHS work, for example adjustment to physical illness and medically unexplained symptoms. We agree with the JCPMH that all-ages provision "will present challenges to the way in which services are currently organised but is important if the ambition of the English mental health strategy is to be realised".

Emergency departments

The emergency department of a typical general hospital receives around 50-60,000 attendances each year. Work in this setting, alongside the adjunct short-stay acute medical assessment units which are now a feature of many general hospitals, represents a significant proportion of the overall workload of many liaison psychiatry services. Some sites report that it accounts for up to two-thirds of all referrals. The scale of provision has increased substantially in recent years, particularly as a result of the national target introduced in 2001 which requires all patients to be discharged from A&E departments within four hours. The introduction of this target was also partly responsible for the spread of short-stay assessment units, as a means of avoiding breaches.

The increased scale of emergency work was noted in a survey of liaison psychiatry services carried out in London in 2006, which also raised a concern that this development might be at the expense of support for other patients in general hospitals (Kewley & Bolton, 2006). This is a legitimate concern, as there is surprisingly little good quality research evidence on the effectiveness and cost-effectiveness of liaison psychiatry services in emergency departments. This is perhaps the single most important gap in the evidence base for liaison psychiatry.

The main areas of activity in emergency work are:

- **Self-harm**

All sites report that self-harm is now the main reason for A&E referrals, driven in part by NICE guidance published in 2004 which recommends that all cases of self-harm should receive a full psychosocial assessment (NICE, 2004). The rate of self-harm in this country is among the highest in Europe, with the numbers attending emergency departments estimated at around 150,000 a year (Hawton *et al.*, 2007). This corresponds to about two cases a day in a typical general hospital. The incidence of self-harm is particularly high among young people, with a peak age of 15-19 among females and 30-34 among males (Gunnell *et al.*, 2004). One survey found that more than 10% of all girls aged 15-16 had self-harmed in the previous year (cited in NICE, 2011). The high rate of self-harm among adolescents reinforces the need for an all-ages liaison psychiatry service, rather than one catering just for adults.

Repetition of self-harm is very common, with at least half of those requiring emergency medical care having a history of a prior episode (Royal College of Physicians, 2003). About a fifth of cases repeat within a year and the risk of suicide after any one episode is 1% in the following year, which is 100 times higher than in the general population (Royal College of Physicians, 2003). About half of all suicides have a history of self-harm, including 20-25% having an episode in the year before death (Royal College of Physicians, 2003). Effective management of self-harm may therefore contribute to suicide prevention.

Self-harm is not in itself a psychiatric diagnosis, but the prevalence of mental ill health in the self-harming population may be as high as 90% , including personality disorder and co-morbid substance misuse (Haw *et al.*, 2001). Some of these cases can be difficult to manage and treat, and

attitudes among A&E staff, particularly towards frequent self-harmers, may sometimes be negative and judgemental (Palmer *et al.*, 2007).

The initial task of a liaison psychiatry service is to carry out a psychosocial assessment along the lines recommended by NICE, which should include need as well as risk. It is clear from our discussions with A&E staff that this role is highly valued, not least in relieving the pressures in a busy department and helping to avoid breaches of the four-hour target. There is good evidence that liaison psychiatry improves the quality of assessments (Whyte & Blewett, 2001) and we were also told that it can prevent unnecessary admissions, as lack of expertise among A&E staff tends to make them err on the side of caution and to admit patients purely for assessment purposes. While based more on clinical opinion than detailed quantitative research, this potential for the prevention of unnecessary admissions is clearly important in cost-effectiveness terms. There is also some evidence that good quality assessments are in themselves therapeutic, leading to improvements in health outcomes including reduced repetition of self-harm (Bergen *et al.*, 2010).

The assessments carried out by a liaison psychiatry service should include individualised management plans for follow-up action. It is estimated that 5-10% of cases are sufficiently severe to need psychiatric inpatient care (Royal College of Physicians, 2003), but the majority require less intensive forms of support. These include brief psychological interventions and a number of liaison psychiatry services run follow-up clinics for this purpose. The National Service Framework for mental health, which was published in 1999, noted that at that time there was "insufficient evidence to identify any particular intervention as most effective following self-harm…but there are a number of promising approaches" (Department of Health, 1999). This remains the case, although there is now good quality research evidence to show that psychological intervention can in some cases reduce rates of repetition of self-harm and in suicidal ideation (Guthrie *et al.*, 2001). On a less optimistic note, a recent review of evidence relating specifically to adolescents concludes that "At present there are no independently replicated findings of any intervention being effective in reducing or preventing self-harm in adolescents" (Ougrin *et al.*, 2012).

Little is known about the impact of liaison psychiatry services on the number of achieved suicides, mainly because suicide is a relatively rare event, even among those who self-harm. We were, however, told of a study in Exeter which used detailed local data to compare actual and expected numbers of suicides in the locality over a period of years following the introduction of an emergency liaison psychiatry service. This found that there were 30-40 fewer suicides than expected over eight years, although it is acknowledged that other changes such as the introduction of community-based mental health crisis teams also contributed. But even if only a proportion of the reduction can be attributed to liaison psychiatry support, this is still a major benefit. Seeking to value this benefit in monetary terms is clearly problematic, but estimates of the monetary value of prevented fatalities are used in other public sector contexts such as the appraisal of transport safety measures and these suggest a figure of around £1.5 million per case, based mainly on evidence of people's willingness to pay for small reductions in the risk of death or injury. Relating this to the Exeter study, attribution of say 20 prevented suicides over eight years to the emergency liaison psychiatry service implies a benefit to society valued at around £30 million. This exceeds the cost of the service several-fold.

- **Severe mental illness**

Mental illness is estimated to be the primary cause of about 5% of all A&E attendances (Royal College of Psychiatrists, 2004), including significant numbers with acute psychosis. For many of these patients, contact with a liaison psychiatry practitioner in the emergency department will be their first experience of mental health services. Liaison psychiatry has an important role to play in the identification of severe mental illness in this setting and to arrange engagement with mainstream community-based services, including crisis and early intervention teams. This is particularly important among young people experiencing a first episode of psychosis, as there is now a strong

evidence base to demonstrate the effectiveness and cost-effectiveness of early intervention services for this group (McCrone *et al.*, 2011).

- **Alcohol**

Alcohol misuse is implicated in about 10% of all A&E attendances (Royal College of Physicians, 2001). There is also evidence that about 50% of self-harm presentations are associated with heavy alcohol use and that following self-harm, alcohol misuse significantly increases the risk of completed suicide in the following year (cited in Butler, 2011).

Attendance at A&E provides a good opportunity for screening for alcohol misuse, using validated instruments such as the Alcohol Use Disorders Identification Test (AUDIT), and for onward referral to community-based services where this is appropriate. As noted earlier, liaison psychiatry services can also directly provide brief interventions aimed at reducing future alcohol consumption and there is evidence that this is effective in emergency departments as well as in other settings within the general hospital (Crawford *et al.*, 2004).

- **Frequent attenders**

All A&E departments are familiar with the phenomenon of frequent attenders. Various research studies show that a high proportion of these people have mental health problems, along with a range of other difficulties including poor physical health and social isolation. Frequent users of A&E tend to be frequent users of other health services in both primary and secondary care settings and so impose high costs on the NHS.

Our discussions with sites suggests that good practice by liaison psychiatry services should entail close working with A&E staff, to include keeping a register of frequent attenders, regular review of these patients and pro-active case management. Evaluation of a service on these lines in Hull showed evidence of a reduction of 60% in the number of patients with mental health problems who re-attended the A&E department five or more times a year.

Implications for liaison psychiatry

Such findings support an overall verdict that liaison psychiatry in the emergency department can make a valuable contribution in reducing healthcare costs and improving health outcomes. The main qualification concerns the shortage of high quality supporting evidence. Findings based on a limited number of small-scale local evaluations and clinical opinion are not to be discounted, but must carry less weight than results which are replicated in a sizeable body of well-designed quantitative research studies.

Treatment in outpatient clinics

Liaison psychiatry services in the hospital setting provide two broad types of service. The first is rapid-response support for emergency or urgent cases, focusing on assessment, management of patients during their time in hospital and onward referral or signposting to community-based services. The second is the provision of psychological and other treatment interventions. The latter are generally more time- intensive and, because of the limited duration of most hospital stays, are usually provided on a follow-up basis in outpatient clinics. (In some cases these clinics may accept referrals from GPs and other community-based services as well as from within the hospital, providing a bridge to the issue of liaison psychiatry beyond the hospital, to be discussed in the next chapter.)

In practice the dividing line between the two forms of support is not clear-cut and most liaison psychiatry services provide both to some degree. It is, however, clear from our site visits that the

balance between them can vary quite widely. The analysis in this chapter has so far focused mainly on rapid-response support and patient management in the wards and in A&E. We now review the available evidence on the effectiveness and cost-effectiveness of treatment options.

The main focus will be on psychological interventions, but – as described in McHale and Brown (2012) – most courses of treatment for patients with co-morbid mental and physical problems or symptoms require a multi-faceted approach including:

- psycho-education, to convey to the patient the relevance of psychological factors, especially in cases of unexplained or intractable symptoms;
- problem-solving and other supportive strategies such as motivational interviewing;
- specialist psychological therapies such as CBT or interpersonal therapy;
- consideration of social, family and practical problems; and
- possible use of medication.

The aims of treatment are to improve the management of both physical and psychological symptoms, enhance functioning, improve adherence to treatment for the physical condition (or in some cases persuade the patient that their problem cannot be solved with further physical treatment) and ensure the appropriate use of health services. Because of the relatively high cost of mental health treatment on these lines, hospital-based services are generally focused on severe and complex cases.

A major study of the evidence base for liaison psychiatry treatment interventions brought together the evidence from high-quality systematic reviews and meta-analyses in 14 areas of physical illness and symptoms (Ruddy & House, 2005). The review covered both psychological and pharmacological interventions. It noted that there was an imbalance in the number of reviews for different areas, for example five reviews of treatment for irritable bowel syndrome but only one for mental health problems among patients with cardiovascular disorders. Overall, the study found that in only four of the 14 areas was there "unequivocal evidence of an effective intervention", leading the authors to conclude that there are large gaps in review evidence on liaison psychiatry treatments for some of the most common medical conditions, such as renal, respiratory and cardiovascular disorders, and also for one of the basic problems that a liaison psychiatry service deals with (adjustment to chronic physical illness).

The review by Ruddy and House was subsequently updated by Guthrie (2006) in a study which focused on the evidence for psychological interventions. Guthrie concluded that "the best evidence at present for the efficacy of psychological treatments is in patients who present with medically unexplained symptoms. Systematic reviews of psychological interventions in physical disease states have yielded only moderate effects." In relation to medically unexplained symptoms, the strongest evidence relates to the effectiveness of interventions for specific functional somatic syndromes such as irritable bowel syndrome and chronic fatigue syndrome. Guthrie also noted that because more trials have been conducted to evaluate the efficacy of cognitive therapy than other psychological treatment approaches, so there is the best evidence for this approach; but there is little direct evidence that cognitive therapy is superior to other psychological treatment methods.

The overall conclusion of these reviews is that evidence on the effectiveness of psychological interventions is limited in many areas but with positive findings in relation to medically unexplained symptoms. As might be expected, there is even less evidence on cost-effectiveness than on effectiveness defined in terms of improvements in health outcomes. However, where information is provided on cost impacts, this suggests promising results. For example, a randomised controlled trial of the cost-effectiveness of psychotherapy for irritable bowel syndrome found that over a 12-month follow-up period the intervention reduced healthcare costs by 41% compared with treatment as

usual (Creed *et al.*, 2003). As in other areas, this suggests that liaison psychiatry may perform better in terms of cost-effectiveness than effectiveness alone.

Local evaluations in our sites provide some support for the positive findings on medically unexplained symptoms. For example, a small study in Hull of clinical outcomes in a service for patients with chronic fatigue syndrome based on cognitive analytic therapy found that effect sizes were large on two standard outcome measures (the CORE measure of general mental health and the Self-Efficacy Scale) and moderate on another (the Fatigue Assessment Instrument). Similarly, a small study in the Wirral of patients with severe medically unexplained symptoms seen in a liaison psychiatry clinic found that in a nine-month follow-up period there was a reduction in both the number and the length of stay of subsequent inpatient admissions compared with the nine months before intervention, with the total number of bed-days falling by 22%.

Most patients seen in outpatient treatment clinics are likely be adults of working age. This is partly because of the much shorter time that they typically spend as inpatients compared with older people and partly because of the higher prevalence in this group of medically unexplained symptoms and functional somatic syndromes.

Training of acute hospital staff

We see the provision of training – to include both formal education and on-the-job training – as a core function for all liaison psychiatry services working in general and acute hospitals. This is for a number of reasons.

First, training improves the ability of hospital staff to identify mental health conditions. Most doctors and nurses derive only limited knowledge and understanding of mental health issues in their pre-registration training and this is reflected in low rates of detection for all major mental health problems in the hospital setting. There is a reasonable body of evidence to show that awareness training improves detection rates (Tabet *et al.*, 2005). Among other things, better identification of mental health conditions is likely to improve the quality and timeliness of referrals to the liaison psychiatry service. Timeliness is particularly important in achieving cost-effectiveness, as research studies show that delays in the engagement of a liaison psychiatry service are strongly associated with increased lengths of inpatient stay (Kishi *et al.*, 2004).

Second, training improves the quality of care provided by acute hospital staff. There is evidence that even when mental health problems are detected, treatment is often under-provided or provided sub-optimally by hospital staff. Skills-based training can help to remedy this deficiency. Measuring the impact of such training is not straightforward, but there is some evidence in the research literature to suggest that outcomes improve as a result (Teodorczuk *et al.*, 2010). The RAID evaluation estimated bed-days saved by the service separately for two groups of patients: one group directly seen and managed by members of the liaison psychiatry team and the other managed by staff who had received training from the team. Overall, it was estimated that nearly half of all the reduction in inpatient bed use was associated with patients in the latter group. In our site visit to Exeter, we were told of a survey of staff working with older patients who had received training from the liaison psychiatry service; 83% of respondents said that they had changed their day-to-day practice in the care of patients as a result of the training.

Third, training increases the overall capacity of the hospital to manage patients with co-morbid physical and mental health problems. The number of such patients is typically so large that some form of rationing or targeting of liaison psychiatry services is unavoidable. The availability of trained clinical staff allows the liaison psychiatry team to concentrate on the more severe and complex cases,

without a need to spend time on the management of patients whose problems are relatively straightforward. Recent guidance issued by the Department of Health on the care of patients with dementia in general hospitals suggests that training may indeed be the most cost-effective option for increasing the capacity and capability of hospitals to improve dementia care (Department of Health, 2011d).

Finally, training can help to integrate mental health care into routine hospital practice and promote awareness and understanding of mental health problems among all staff working in the hospital, not just those with clinical responsibilities. Better knowledge of mental health conditions may help to reduce stigma and improve the experience of patients throughout their time in hospital. A strategy to improve mental health awareness throughout the hospital based on training provided by the liaison psychiatry service is being implemented in Hull, with strong support from local commissioners and senior trust management. There are also plans to evaluate the impact of this training on performance and quality of care. As this example highlights, there is an important leadership role for liaison psychiatry in helping to change the overall culture of the NHS with regard to mental health.

Current provision of training

The liaison psychiatry services in all the sites visited during our study provide education and training for hospital staff, although the scale of this activity varies somewhat from site to site and in one or two cases difficulties were reported in engaging clinical staff.

Nationally, the picture on training is less satisfactory. The best evidence relates to dementia, where deficiencies in staff training have been widely identified as a major source of concern in relation to the quality of care provided in hospitals. This is despite strong recommendations for training in NICE guidance and in the National Dementia Strategy (NICE, 2006; Department of Health, 2009).

According to the 2011 national dementia audit carried out by the Royal College of Psychiatrists, only 32% of hospital staff working with older patients reported that they had received sufficient training in dementia care; only 39% of all general and acute hospitals said that a local liaison psychiatry service provided training for such staff; and only 5% of hospitals reported that they provided mandatory dementia training for all staff, as advocated in the National Dementia Strategy (Royal College of Psychiatrists, 2011).

Despite its benefits, the provision of education and training is a relatively time-intensive activity. For example, one audit of a nurse-led liaison service found that 7.5% of the time of team members was spent on providing formal education and 33% on giving case-by-case guidance and advice to ward staff (Sharrock & Happell, 2002). It is, however, plausible to argue that, over time, the scale of these activities, particularly the latter, is likely to decline, as knowledge and understanding of mental health conditions and the associated ability of staff to manage patients with them become more firmly embedded throughout the hospital workforce.

Hours of operation

Information collected from our site visits and other sources shows a good deal of variation in the hours worked by hospital-based liaison psychiatry services. Some work 9am - 5pm Monday-Friday, some work extended hours including evenings and weekends, and others are 24/7. Hours worked may also vary within a particular service depending on the type of work being done. For example, outpatient treatment clinics typically work normal office hours, whereas services in A&E and inpatient wards often provide access for longer periods.

Relevant factors in determining appropriate hours of operation include the following:

- **Local need**

Local need may influence the time pattern of demand over the day. For example, hours covered by the A&E service in Hull were recently extended from 5pm to 8pm after it was found that attendances for self-harm rise steadily during the day. Extended hours mean that more patients arriving mid to late afternoon can be assessed in the early evening. Among other things, this helps the emergency department to avoid breaches of the 4-hour target and also reduces the number of patients leaving without an assessment, which might otherwise result in higher rates of re-attendance. In another site it was mentioned that instances of disturbed behaviour among older patients were more common at night than during the day, while elsewhere a consultant geriatrician supported by a liaison psychiatry team working Monday to Fridays said that weekend working would be helpful, as weekends are a peak time for discharges and the non-availability of liaison services at this time can lead to delays and hence longer lengths of stay.

- **Availability of alternative provision**

In the absence of 24/7 working, liaison psychiatry support in the hospital setting is usually provided by mental health crisis teams. This can give rise to a number of problems, as these teams are primarily community-based and focus on home treatment. Particularly in areas where the population is geographically dispersed, it may take some hours for the crisis service to respond to a hospital referral, which can result in patients attending A&E being admitted unnecessarily. The focus of crisis teams on home treatment is also problematic, as only about 10% of people seen in emergency departments for mental health reasons are offered this form of support (Academy of Medical Royal Colleges, 2009).

- **Costs and benefits**

The provision of a liaison psychiatry service on a 24/7 basis is obviously more costly than a service working shorter hours but may nevertheless be justifiable in financial terms. For example, in Leeds we were told of a business case for extending the hours worked by the A&E self-harm service to 24/7 which identified significant potential savings from reduced numbers of admissions to the short-stay medical assessment unit. The additional cost of moving to 24/7 provision is put at £350,000 a year, but the financial saving from reduced admissions is estimated at up to £900,000 a year.

In another site going the other way, a local survey of patients arriving at A&E between 8 pm and 8 am found that 40% were intoxicated with alcohol and a further 20% required admission for medical reasons, meaning that only about one patient a day was fit for mental health assessment in A&E overnight. As a result, a 24/7 liaison psychiatry service was not judged to be cost-effective in this case.

As these last two examples illustrate, circumstances can vary greatly from place to place. No single model of provision is therefore appropriate and the optimum hours of working for a liaison psychiatry service need to be determined case by case, depending on local patterns of need and cost.

Location of teams

It has already been noted that there is a good deal of variation around the country in models of psychiatric provision for patients in general and acute hospitals. The terminology used to describe these models is also subject to variation, but perhaps the key distinguishing factor is location. In particular, services may be differentiated depending on whether support is provided on a case-by-case outreach basis by community-based crisis teams or other secondary mental health

services; or by a dedicated specialist liaison psychiatry service physically located in the general hospital.

The use of dedicated in-house liaison psychiatry services is a relatively recent development in the NHS; indeed, such services were virtually unknown until the 1970s (Lloyd, 2001). Their number has expanded considerably since then, but coverage remains patchy and many general hospitals continue to rely wholly or in part on the off-site model. The latter approach finds little support in research evidence or expert opinion, and use of the alternative in-house model is widely recommended in central guidance. We strongly agree that a dedicated specialist service based in the general hospital is the preferred approach because:

- A dedicated service is likely to have much greater expertise in the types of mental health problems most commonly found in the hospital setting, for example medically unexplained symptoms, self-harm and delirium. These problems are not often seen by secondary mental health services, which focus mainly on psychosis. Indeed it can be argued that one of the functions of a hospital-based liaison psychiatry service is to pick up the pieces for conditions which are not currently well served by community-based services.
- There is good evidence that on-site services respond more quickly to referrals (Holmes *et al*., 2010) and also avoid the risk that priority will be given to community cases. The referral process is likely to be easier for general hospital staff to operate if the service is in-house, especially when based on a single point of access, and in-house provision also allows pro-active case-finding, for example through the regular presence of team members in A&E and the wards.
- Hospital-based services provide more frequent monitoring and review of patients, which is important for fluctuating conditions such as delirium, and better access to assessment and treatment (Holmes *et al*., 2010). There is evidence that the out-reach model is associated with poor rates of adherence to treatment recommendations, with one study finding that recommendations were implemented in less than 50% of cases (Shah *et al*., 2001).
- The in-house model allows development of close working relationships with acute hospital staff and a good understanding of their working practices. It also provides more opportunities for the education, training and supervision of such staff.
- Well-designed comparative research studies show that the in-house model leads to better outcomes than the out-reach approach in a number of dimensions, including shorter average lengths of stay for hospital inpatients (Strain *et al*., 1991) and higher rates of return to independent living (Cole *et al*., 1991). Such findings indicate that the in-house model is superior on cost-effectiveness grounds.
- The off-site model perpetuates the unsatisfactory distinction between mental health and physical health, whereas a specialist service embedded in the general hospital promotes more integrated and holistic care. In the absence of dedicated in-house support, mental health is always likely to be seen as the responsibility of mental health services rather than the general hospital. In short, "mental health will become part of general hospital practice only if mental health is part of the general hospital" (Royal College of Psychiatrists, 2005).

These arguments add up to a powerful case in favour of dedicated specialist liaison psychiatry services and we believe that the provision of such services should be available on site in all general and acute hospitals in the NHS as a routine matter of good practice.

Composition and skill-mix

Within any individual hospital, the size, organisation and composition of a liaison psychiatry service should be determined by the scale and nature of the work being undertaken. In a small general hospital, a single generic team may be sufficient, whereas in large teaching hospitals it may make sense to have two or more teams specialising in different areas of activity. In a large hospital, for example, the mental health needs of older patients may be deemed sufficiently different from those of younger adults to justify separate teams.

All teams should be multi-disciplinary in composition, though again the balance of skills will vary according to the extent of specialisation and should match the specific needs of the patient groups being served. For example, a liaison service for older people is likely to have a particular need for occupational therapists and physiotherapists.

A final point raised by a number of our discussants is whether complementary provision such as clinical psychology and services for drug and alcohol misuse should be amalgamated with liaison psychiatry teams.

The advantages of having a single service for all mental health needs are that this avoids possible duplication of effort, simplifies the referral process for hospital staff, creates opportunities for joint learning and is likely to improve the practicalities of senior clinical supervision, particularly for clinical psychologists who may otherwise run the risk of professional isolation. We see merit in a combined service along these lines, perhaps badged as psychological medicine rather than liaison psychiatry. Psychological medicine implies a more integrated approach and, as others have argued, is anyway a better description of the type of work done by liaison psychiatry services (Lloyd & Mayou, 2003).

4 Liaison psychiatry beyond the hospital

Liaison psychiatry expertise is at present largely confined to hospitals. In some ways this makes good sense. The prevalence of mental health problems is very high in hospitals, resulting in a concentration of need which requires support. The hospital is a good place to detect problems, often for the first time, and to link patients with other services. One of our sites indicated that about half of all cases of dementia assessed by its liaison psychiatry service for older people were new diagnoses, not previously known to services, and hospital emergency departments are often the first point of contact with mental health services for people experiencing a first episode of psychosis. Hospitals are also the most costly component of the healthcare system, implying potentially high returns from the more effective management of patients in this setting.

This picture is unlikely to change greatly in the foreseeable future and there still remain major gaps in the coverage and provision of hospital-based services around the country which need to be filled. But the future development of services also needs to reflect and indeed reinforce wider changes in the delivery of health care, which are in turn associated with long-term shifts in underlying patterns of health need. In particular, the ageing of the population combined with better ways of dealing with acute episodes of illness mean that the bulk of NHS resources are increasingly being devoted to the management of patients with chronic long-term conditions whose main requirement is for integrated or co-ordinated support in community settings.

While hospitals remain an important component of the system, as needs for acute care will always arise, inpatient stays are becoming ever shorter, having fallen across all age groups by a third in the last decade (NHS Information Centre, 2012). Continuation of this trend necessarily implies that the scope for liaison psychiatry services to generate significant financial savings by improving the management of hospital inpatients will steadily decline, and shorter stays also mean that more treatments need to be provided after discharge.

Health services are not currently organised in a way that supports integrated care, particularly for people with multiple health problems. Indeed, service models are very largely oriented around single diseases, with a particularly sharp divide between physical illness and mental illness. Liaison psychiatry seeks to bridge this divide in the hospital setting and so promotes more integrated care for the population of hospital patients who have physical and mental health co-morbidities. But there are much larger numbers of people with the same co-morbidities in other settings and there are also barriers to integrated care other than the mental/physical health divide, most notably the divide between primary and secondary care.

Liaison psychiatry services should therefore seek to extend their remit through an enhanced community focus, not as a replacement for existing hospital work but rather as an appropriate response to changing patterns of health need and service delivery. In time, such a response may indeed reduce the need for hospital work, for example by preventing unnecessary inpatient admissions through the earlier identification and treatment of problems in the community.

Some of the sites we visited during this study have already taken steps along this road, as have a number of other services around the country. For example, about half of all referrals to the outpatient clinics run by the liaison psychiatry service in Leeds are from GPs and other community-based

providers, while the work undertaken by the service for older people in St Helier Hospital in Carshalton includes follow-up home visits to patients who have been discharged from hospital, to check that problems such as delirium identified during an inpatient stay have continued to improve. This may prevent possible re-admissions.

We also found broad support for the general principle that liaison psychiatry should provide more services that span the primary/secondary care boundary, but with the major reservation that the potential scale of demand for such work is so large that services run the risk of being swamped. This is clearly a legitimate concern and suggests that any expansion should be carefully planned and also based on a clear delineation of responsibilities between liaison psychiatry services on the one hand and a range of community-based providers including GPs and IAPT (Improving Access to Psychological Therapy) services on the other.

This approach is most likely to be taken forward through the development of stepped care models of community-based support for people with co-morbid mental and physical health problems, in which the intensity of support provided to patients is graded according to the severity or complexity of their needs. The clinical management and treatment of individual patients by a liaison psychiatry service should be restricted to the most severe and complex cases, combined with a major role in the training and supervision of staff from other services who have lead responsibility for treating the much larger numbers of patients with more straightforward conditions.

We see three main areas for the expansion of liaison psychiatry services into community-focused work.

Medically unexplained symptoms

Medically unexplained symptoms are a common and costly problem in all health care settings. For example, they account for at least 20% of all new consultations with GPs (Escobar, 1998), and a significant proportion of patients with medically unexplained symptoms become frequent users of services in both primary and secondary care. The overall cost of MUS to the NHS is estimated at around £3 billion a year (Bermingham *et al.*, 2010).

Patients with medically unexplained symptoms form a heterogeneous group, with wide variations in the severity and presentation of symptoms. Many also suffer from co-morbid anxiety or depression. Only a minority of patients have symptoms which are sufficiently severe to merit a clinical diagnosis of psychiatric disorder and for less serious cases the prognosis is generally good, with the majority resolving within a year without the need for specific treatment (Hartman *et al.*, 2009). However, among more serious and complex cases, the outlook is less good, particularly for those with specific somatic syndromes. For example, a systematic review of studies which examined outcomes in chronic fatigue syndrome found that the median full recovery rate was only 5%, while the median proportion of patients who improved during follow-up was only 39.5% (Cairns & Hotopf, 2005).

The initial presentation of medically unexplained symptoms is almost invariably in primary care settings and because patients do not see themselves as having a psychological problem, there may be a lengthy interval before the GP is able to make an accurate assessment. In the meantime, significant costs are often incurred through frequent re-attendances at the GP surgery and referrals to secondary care services for the investigation of physical symptoms. Even when a diagnosis is eventually made, the GP may find it difficult to manage the case, particularly as the patient will often be unwilling to engage with mental health services including psychological therapy (IAPT), which in any event are not well equipped to deal with complex psychosomatic conditions.

The overall scale of medically unexplained symptoms is such that most patients will always need to be managed in primary care, but under present arrangements there is no obvious source of support for GPs in this work or for treating complex cases. Liaison psychiatry teams have more expertise in managing and treating medically unexplained symptoms than any other service and, as already seen, there is a reasonable body of evidence to show that, if patients can be successfully engaged, psychological and other interventions improve outcomes and reduce costs. An enhanced role for liaison psychiatry services in primary care settings is therefore indicated, as part of an improved spectrum of care for patients with medically unexplained symptoms.

New models of provision on these lines are starting to emerge. For example, a recently introduced Primary Care Psychological Health service in the London Borough of Kensington and Chelsea provides a continuum of support for patients with complex needs including medically unexplained symptoms, bridging GPs and specialist mental health services. The service is headed by a primary care liaison psychiatrist and also includes community psychiatric nurses and the local IAPT team within a single integrated structure. One aim is to reduce the need for referrals to secondary care by providing case management and a range of psychological and other interventions. The input provided by the consultant psychiatrist means that the service is able to support patients with more complex needs than would be seen by a typical IAPT service. This input is particularly necessary in relation to medically unexplained symptoms, because of the importance of assessment and formulation in these cases and of promoting engagement with treatment services.

Also in London, a Primary Care Psychotherapy Consultation Service was introduced in City and Hackney in 2009, to work with local GP practices in the management of frequent users of health services, many of whom are patients with medically unexplained symptoms. The service fulfils two main roles. First, it provides a clinical service for patients with the most complex needs (assessment and interventions including CBT and other forms of psychological therapy). And second, it supports GPs in the management of less complex cases through professional consultation, joint consultations with the patient, case-based discussions with primary care teams and training.

A third example, of a combined liaison psychiatry and IAPT service in Cambridge, which addresses the mental health needs of patients with long-term physical health conditions as well as those with medically unexplained symptoms, is discussed in more detail in the following section. As with the London examples, this is a new service and in all cases there is a pressing need for detailed evaluation to measure their impact on the quality and availability of support for patients with medically unexplained symptoms and on health outcomes and health care costs. All are targeting a high-need, high-cost client group in the community that other services are currently unable or unwilling to address satisfactorily.

Long-term conditions

According to the Department of Health, more than 15 million people in this country have one or more long-term conditions such as diabetes, asthma, cardiovascular disease and arthritis (Department of Health, 2008). The prevalence of mental health problems in this group is two to three times higher than in the general population and overall it is estimated that there are some 4.6 million people with co-morbid physical and mental health conditions (Naylor *et al.*, 2012).

These co-morbidities are associated with a wide range of adverse consequences, including increased rates of mortality and morbidity, lower quality of life, poorer self-care and adherence to treatment, and significantly increased costs of care. The overall cost of co-morbidities to the NHS is around £10.5 billion a year, equivalent to 10% of the total NHS budget. On average, the health service

spends an extra £2,300 a year on every individual patient who has co-morbid mental and physical health problems as against a physical condition on its own.

Most cases of mental ill health among people with physical illness go undetected and untreated (Cepoiu *et al.*, 2008). For those who are identified as having poor mental health, standard interventions such as antidepressants or CBT can be effective in improving their mental health, but there is relatively little evidence to show that this is associated with any consequent improvement in physical health outcomes. Better results can, however, be achieved by integrating the treatment of mental health and physical health needs, rather than simply providing mental health interventions on top of existing treatment programmes for the physical condition.

Among the advantages of integrated treatment are that this can exploit the synergies between mental and physical health care, such as the commonality that exists between behavioural treatments for mental illness and self-management or rehabilitation programmes for chronic physical conditions. It can also avoid any tensions between treatments, especially in the use of medication.

A growing body of evidence, reviewed in Naylor *et al.* (2012), indicates that integrated care leads to improved outcomes in both mental health and physical health and to savings in health care costs. Despite such evidence, integrated approaches are currently the exception rather than the rule. For example, a recent study found that only 7% of cardiac patients are supported by rehabilitation programmes which have a psychological component, even though about half of all cardiac patients suffer from anxiety or depression (British Heart Foundation, 2011).

The model of integrated treatment that finds most support in the literature is the collaborative care approach recommended in NICE guidance on the management of depression in people with chronic physical health problems (NICE, 2009). This model contains a number of ingredients, including multi-professional working, case management, structured care plans, systematic follow-up, patient education and support for self-management, and a stepped care approach to treatment which matches the intensity of intervention to gradations of severity in patient needs. The most detailed research on collaborative care relates to people with diabetes and co-morbid depression and studies confirm that the approach both improves health outcomes and delivers net cost savings (Katon *et al.*, 2006; Simon *et al.*, 2007).

The role of liaison psychiatry

Liaison psychiatry services already promote integrated care in hospital settings for patients with co-morbid physical and mental health problems. It would therefore be a natural extension of their work to provide these services in community settings, particularly given the emphasis in current policy on treating more patients closer to home. An increasing proportion of long-term conditions are now being managed predominantly in primary care, but even with the greater availability of IAPT services there remains a significant shortfall in the quantity and quality of mental health support in community-based provision for these conditions.

The expertise of liaison psychiatry is likely to be essential in filling this gap and in promoting the development of comprehensive pathways for chronic illnesses which cross the boundary between primary and secondary care and are based on models of collaborative working. Key roles for liaison psychiatry services under this approach are likely to include:

- diagnosis and formulation, particularly for patients presenting with complex psychiatric morbidity;
- case management of complex cases, including the provision of high-intensity psychological interventions;

- supervision and support for other professionals, including GPs and IAPT therapists providing low-intensity interventions for less complex cases;
- training of all staff working in collaborative care services; and
- the development of educational materials for supported self-care by patients.

A particular emphasis in all this work should be on reducing referrals and admissions to secondary care.

The integration or embedding of liaison psychiatry in community-based collaborative care services for people with long-term conditions is already starting to take place in a number of areas around the country. For example, the liaison psychiatry service in King's College Hospital in south-east London runs a diabetes and mental health service which takes referrals both from within the hospital and from any community-based diabetes clinic in the region. It also includes an outreach service in the form of liaison psychiatry clinics integrated with three community diabetes clinics in Lambeth and Southwark. These target people with complex mental health presentations and aim to improve the ability of patients to look after their diabetes and improve glycaemic control, to engage better with routine diabetes care and to reduce the unscheduled use of health services.

As mentioned above, a combined liaison psychiatry and IAPT service is being developed in Cambridge which supports patients with long-term conditions as well as those with medically unexplained symptoms. Particular emphasis is being placed on training, not only for IAPT therapists but also for non-medical staff such as nurses working in chronic disease management programmes. The training of such staff in mental health awareness and skills has a number of benefits. It strengthens their ability to detect mental health problems; it improves their day-to-day work including advising patients on self-care; it enables them to provide low-level interventions in simple cases; and it provides them with knowledge about appropriate pathways for more complex cases.

Subject to the findings of evaluation, services such as these point the way ahead for the long-term development of community-facing liaison psychiatry services. The scale and cost of mental health co-morbidities among people with long-term conditions is such that developing these services should be a priority for clinical commissioning groups, working with local providers.

Perinatal mental health

The perinatal period, i.e. during pregnancy and in the 6-12 months after childbirth, represents the time when women are at their greatest risk of developing mental health problems (Lazarus, 2012). The consequences of this are particularly serious, not just because of their impact on the wellbeing of the mother, which includes a significantly elevated risk of maternal mortality, but also because maternal mental illness is a major risk factor for the subsequent development of emotional and behavioural difficulties in the child.

Intervention during this period has an important preventive aspect, with potentially very sizeable long-term benefits. Many of the mental health conditions suffered by women at this time go undetected and untreated, but the effectiveness of interventions is in most cases good (NICE, 2007).

The most widely recognised mental health problem in the perinatal period is postnatal depression, with 10-15% of mothers experiencing clinically significant depressive symptoms within the first six months following childbirth (O'Hara & Swain, 1996).

Less than a third of women with postnatal depression receive any form of treatment and in the absence of intervention the condition may persist for as long as two years in about 30% of cases

(Nair, 2007). Mother-infant attachment is often compromised as a result of postnatal depression, increasing the susceptibility of the child to developmental problems and subsequent mental health problems. Economic analysis suggests that a programme of screening and early treatment for postnatal depression is good value for money even in the short term, because of the positive effects on mothers' health and economic activity (Bauer *et al.*, 2011), and the inclusion of longer-term benefits associated with the prevention of mental health problems among children would further strengthen the case.

Notwithstanding the importance of postnatal depression, it is arguable that even more weight should be attached to mood disorders during the antenatal period, particularly anxiety. One reason for this is that only about half of all cases of postnatal depression are new onset, the remainder being the continuation of problems of depression or anxiety which first developed during pregnancy (Gotlib *et al.*, 1989). A possible implication of this is that many of the adverse effects commonly attributed to postnatal depression may instead derive from antenatal problems (Glover & O'Connor, 2002).

In addition, antenatal anxiety is associated with a number of obstetric complications with poor outcomes such as pre-term labour and low birth weight, and there is now growing evidence from longitudinal studies of a strong link between anxiety during pregnancy and the development of severe and persistent behavioural problems in children (Barker & Maughan, 2009). The implication is that maternal stress at critical periods of development may alter the programming of the foetal brain.

Other research has demonstrated that severe and persistent behavioural problems are associated with a wide range of damaging long-term consequences, including not only continuing mental health difficulties (childhood conduct disorder is a risk factor for all major adult psychiatric disorders) but also poor educational and labour market performance, substance misuse, teenage pregnancy, criminality and reduced life expectancy. According to one estimate, the lifetime costs to society of childhood conduct disorder are around £225,000 per person (Friedli & Parsonage, 2007), implying that even modestly effective interventions are likely to generate high returns.

NICE guidance published in 2007 makes a number of recommendations for the improvement of perinatal mental health support, including the availability of specialist mental health services in all areas (NICE, 2007). A national survey of existing provision described in the guidance identified major shortcomings. For example, it found that only about 25% of PCTs had a fully developed and implemented policy for perinatal mental health and that only 21% of mental health providers reported having a specialist mental health team, with nearly a third of these having limited or no access to the prompt provision of specialist psychological interventions. It concluded that "there is very patchy provision of specialist perinatal [mental health] services, with expertise concentrated in one or two areas" (NICE, 2007).

Another survey of perinatal mental health support, carried out in the East Midlands, sought the views of relevant professionals including midwives, health visitors, GPs and obstetricians (Rothera & Oates, 2008). This identified a number of shortcomings, including:

- lack of knowledge and skills among non-specialist healthcare practitioners to detect and manage perinatal mental health problems;
- difficulties in accessing psychiatric services;
- inadequate availability of systematic care pathways, protocols and guidelines;
- poor liaison between maternity, psychiatric and primary care services; and
- unclear roles and responsibilities.

The role of liaison psychiatry

Liaison psychiatry services may have a role to play in remedying these deficiencies in some areas, by setting up dedicated specialist teams and supporting the development of integrated perinatal mental health services based on a stepped care model of provision. The roles of the team would include:

- assessment;
- provision of psychological and other interventions particularly for complex cases;
- coordination and supervision of other services including IAPT for the treatment of mild/ moderate problems; and
- consultation, supervision and training for non-mental health professionals, especially midwives and health visitors.

Particular emphasis should be placed on the early identification of problems, by promoting the screening of clients at their first point of contact with routine services.

A specialist service on these lines is provided in one of our sites, Hull. It takes referrals both from the obstetric department in the hospital and from midwifery and other services in the community. Referrals from midwives follow screening using questions recommended in NICE guidance ("During the last month, have you often been bothered by feeling down, depressed or hopeless?" and "During the last month, have you often been bothered by having little interest or pleasure in doing things?"). All potential cases identified by the screening are then assessed by the specialist mental health team, with follow-up treatment including psychological interventions as appropriate. The service in Hull was developed in response to a local need and represents one possible model for the improvement of perinatal mental health care.

5 Conclusions

Physical health and mental health are inextricably linked. The prevalence of mental illness among people with physical health conditions is two to three times higher than in the rest of the population. Causation runs in both directions, with poor mental health being a cause as well as a consequence of poor physical health. Despite this pervasive interplay, NHS mental health and physical health services are largely commissioned, funded and provided in separate compartments.

A heavy price is paid for this lack of integration, as the available evidence shows beyond doubt that failure to deal effectively with co-morbidities leads not only to much poorer health outcomes but also to greatly increased costs of care, adding some 10-15% to total health spending.

It is almost certainly true to say that the better management of co-existing physical and mental health conditions offers more scope for contributing to the Quality, Innovation, Productivity and Prevention (QIPP) agenda of better health at lower cost than any other activity in the NHS. The QIPP challenge is undoubtedly a daunting one, but also one which offers a major opportunity for liaison psychiatry, given its key role in the provision of care at the interface between physical and mental health.

Against this background, our analysis of how liaison psychiatry can contribute most effectively to the QIPP agenda suggests the following conclusions.

1. **Every general and acute hospital should have a dedicated in-house liaison psychiatry service.** This rests partly on the strong general case for liaison psychiatry in the hospital setting and partly on the many advantages of an in-house service compared with the main alternative of provision on a case-by-case outreach basis by community-based crisis teams or other secondary mental health services.

2. **The scale and nature of operations of a hospital-based liaison psychiatry service should vary according to local needs.** The requirements of a large inner city teaching hospital that provides a broad range of tertiary services will differ considerably from those in a small suburban or rural district general hospital. Some hospitals have a large enough caseload to justify 24/7 provision, but others may not.

3. **Every service should be established on a sustainable basis.** This requires secure funding, a critical minimum size of the service and a critical minimum level of professional expertise, particularly in terms of the input of consultant psychiatrists. Under-resourced services are unlikely to have an impact on the scale required.

4. **There are good operational and management reasons for incorporating related services such as clinical psychology and substance misuse services within a hospital-based liaison psychiatry service.**

5. **Liaison psychiatry services should seek to integrate psychiatry and psychology fully into medical care.** Integration must go beyond the provision of an on-site mental health team in the hospital if this merely perpetuates the operation of a largely separate and parallel service. It also requires close day-to-day working with medical teams, a strong focus on the education, training and supervision of acute hospital staff and a leadership role in changing the culture of the hospital so that the central importance of psychological factors is much more widely

recognised and embedded in the routine care of patients.

6. **In hospitals where liaison psychiatry support is currently limited or non-existent, the initial priority should be to set up a rapid-response generic service,** focusing on assessment, the day-to-day management of patients during their time in hospital and onward referral to community services as appropriate. Once such a service has become established, consideration should then be given to the development of other forms of provision such as outpatient clinics.

7. **The core work of a generic service is likely to be in medical inpatient wards and emergency departments.** It will be important to ensure an appropriate balance between these two areas of activity. In some services the bulk of referrals come from A&E, but as yet there is only limited research evidence on the effectiveness and cost-effectiveness of liaison psychiatry interventions in this setting.

8. **A generic service should wherever possible provide liaison psychiatry support on an all-ages, all-conditions basis.** Again the balance of provision between different groups of patients should be set in relation to the levels of need in these groups and the effectiveness and cost-effectiveness of relevant interventions. Relative to current patterns of service provision, this is likely in many cases to imply more work with older patients and also with children and young people. The case for more support for older inpatients is particularly strong and this area of work should be a top priority for all liaison psychiatry services.

9. **The scale of mental health co-morbidities in the hospital population is such that only a small proportion of all patients who might benefit can be directly seen and managed by a liaison psychiatry service.** One way of ensuring an effective use of limited resources is for liaison psychiatry expertise to be focused mainly on complex and costly cases, particularly those with intractable symptoms who might otherwise be kept in hospital for lengthy periods. Similarly, in emergency departments, particular efforts should be made to engage frequent attenders.

10. **The training and supervision of acute hospital staff should be a core function of all liaison psychiatry services.** This is likely to be the most cost-effective way of increasing the overall capacity of the hospital to improve the management of patients with co-morbid mental health conditions. Training for non-specialist staff also enables liaison psychiatry teams to focus their efforts on more severe cases.

11. **The next stage of development for a hospital-based liaison psychiatry service is likely to be in the provision of outpatient clinics** for the treatment of mental health problems which cannot be resolved during the limited time that most patients spend in hospital. In most cases these patients can be referred to primary care or to mainstream community-based mental health services, but for some conditions the expertise of these services is limited and a continuing role for support from a liaison psychiatry service is therefore required. The main such problems are medically unexplained symptoms and self-harm.

12. **Liaison psychiatry services are at present largely confined to the hospital setting.** This may be justified on the grounds of the very high prevalence of mental health problems in the hospital population and the very high costs of hospital care. But liaison psychiatry also needs to reflect and reinforce wider trends in health care, particularly the growing importance of chronic rather than acute physical illness and an associated shift in the balance of care from the hospital to the community. The way ahead for the long-term development of liaison psychiatry is likely to lie primarily in the expanded provision of community-facing services.

13. **One way of developing services in this way would be to open up outpatient treatment clinics to referrals from GPs and other community-based providers**, where this is not already the case. This is likely to be particularly important for people with medically unexplained symptoms.

14. **Another possible area for the expansion of community-facing services is in relation to perinatal mental health**, particularly during the antenatal period where there is good evidence that maternal anxiety is a major risk factor for the subsequent development of severe and persistent behavioural problems in children. In some areas specialist perinatal mental health teams are provided by CAMHS services, but their availability around the country is limited and provision by a liaison psychiatry service offers an alternative model.

15. **The biggest area for the development of community-based liaison psychiatry is in contributing to the management and treatment of mental health problems among people with long-term physical conditions** such as diabetes and chronic respiratory or cardiac problems. The potential scale of such activity is very large, as there are an estimated 4.5 million people in this category, but so is the potential benefit in terms of improved health outcomes and reduced costs of care. Expansion in this area is likely to entail the involvement of liaison psychiatry services in integrated stepped-care models of provision, working in collaboration with other providers including GPs, community nurses and IAPT (Improving Access to Psychological Therapy) services. The liaison psychiatry role would focus on the treatment of severe and complex cases, combined with the training and supervision of other staff responsible for more straightforward cases.

Liaison psychiatry is too often seen as an optional extra in the NHS. In planning services for their local populations, all commissioners must ensure that there are appropriately scaled hospital departments for cardiology, oncology, gastroenterology and so on, but there is no such requirement to provide a corresponding service for liaison psychiatry.

The status of liaison psychiatry needs to change. It should move from being an optional service to one which is seen as essential for the provision of high-quality and efficient health care. As this transition still has some way to go, it may be argued that the development of a comprehensive network of liaison psychiatry services should be a strategic priority for the NHS, to be promoted and driven forward at the national level by the National Commissioning Board, fundamental to the Government's aim of bringing mental health on a par with physical health in the NHS. Local decisions should continue to determine the exact way in which services are provided - but no longer in a national policy and management context which regards liaison psychiatry as something which is merely nice to have.

Annex A
Measuring outcomes

This annex discusses how services can demonstrate that they have contributed to a broad range of outcomes, not only the improved mental health of the patient. We have drawn on our observations and experiences during the site visits as well as subsequent discussions with experts in the field.

Demonstrating the effectiveness of liaison psychiatry services should be an integral element of service design and should support a robust commissioning arrangement. This can help to show how liaison psychiatry services can contribute towards meeting the QIPP challenge and provide a platform for addressing the imperatives set out in national strategies such as those developed for mental health (Department of Health, 2011e) and dementia (Department of Health, 2009) and the emerging work on the long-term conditions outcomes strategy (Department of Health, 2012).

Liaison psychiatry services bridge the gap between mental and physical health conditions. The complexity of the patients seen, their presentations and multiple morbidities often make it difficult for clinical improvements to be attributed solely to any involvement that may have been provided by liaison psychiatry services.

Liaison psychiatry services are also provided in a range of settings where the type and frequency of client contact may differ greatly, e.g. emergency department assessments for deliberate self-harm, ward-based evaluations, outpatient therapeutic sessions. This too will have an impact on the types of clinical outcome measures and service-level information that can be collected.

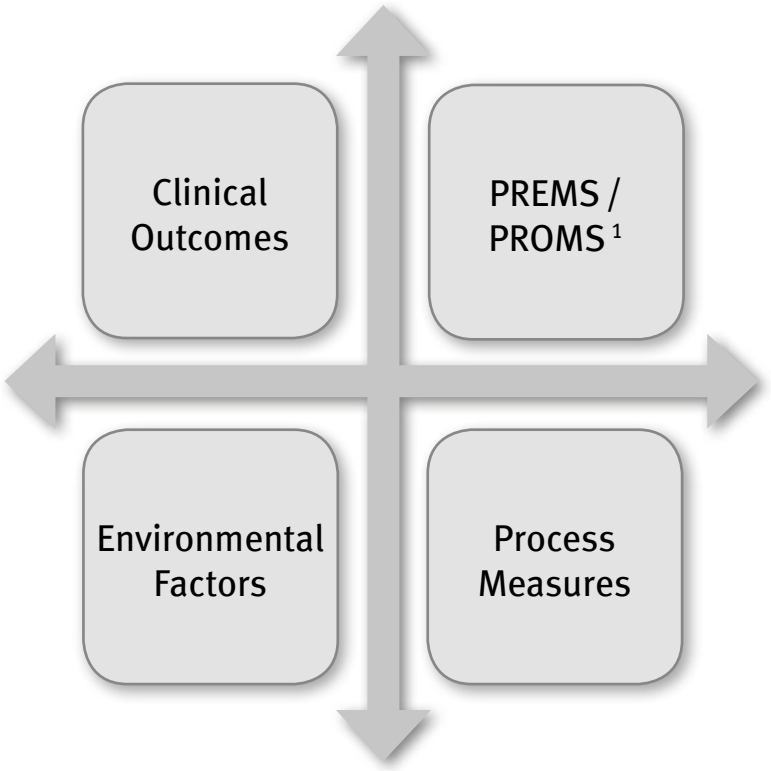
Although it can be difficult to attribute change directly to the inputs provided by a liaison psychiatry service, it remains very important to understand the effects in terms of outcomes. The recent evaluation of the RAID service (Parsonage & Fossey, 2011) showed that the effectiveness and cost-effectiveness of psychiatric liaison services can be demonstrated through their impact on service use and cost as well as through direct clinical benefits to the patient.

There has been debate about the complexities of measuring the effectiveness of liaison psychiatry (Aitken, 2012) and how these measurements can contribute to the development of models of delivery (Butler & Temple, 2012; Burlinson & Morris, 2012). Reports focusing mainly on service commissioning (Joint Commissioning Panel for Mental Health, 2012; Academy of the Medical Royal Colleges, 2009) have tended to define service structures and anticipated benefits rather than how outcomes can be captured. The use of outcome measures is a component of the accreditation process used by the Psychiatric Liaison Accreditation Network (PLAN), although the way in which these data are captured and the types of instruments used are not specified (Psychiatric Liaison Accreditation Network, 2010).

In visiting a number of liaison psychiatry services, we have seen different ways in which clinicians and service managers have attempted to capture and report on clinical outcomes and service performance. The collection of good quality data on the effectiveness of liaison services has not been a universal feature of all the sites we visited, although all were collecting process and input information. It was, however, recognised that for the effective delivery and management of services good quality information is essential.

A simplified balanced scorecard approach to measuring outcomes could be adopted by services, as illustrated in Figure 1. In an ideal situation, it is important when considering the effectiveness and cost-effectiveness of liaison psychiatry services that equal weight is applied to the different measurable outcomes associated with the quadrants of the scorecard. However, practicality and lack of evidence may lead to more emphasis being placed on some areas than others.

Figure 1: A balanced scorecard approach to measuring outcomes



Clinical Outcomes

There are a range of different generic and condition-specific validated tools that can be used in a liaison psychiatry setting. We do not intend to cover all of these and a brief overview of the most commonly used tools can be found in Aitken (2012).

Where liaison psychiatry services in our visited sites delivered therapeutic interventions in outpatient settings, specific clinical measures were used depending upon the presentation, e.g. Visual Analogue Pain Rating, Chalder Fatigue Score and CORE.

As outlined above, measuring and recording clinical outcomes in liaison psychiatry can be a challenge, and there is little evidence to support the use of one mechanism or validated tool over another.

Liaison psychiatry assessments can be carried out in different settings within the hospital and in some cases may only involve a single patient contact. Where this is the case, it is impossible to determine whether there has been a clinical change due to the intervention of the liaison service. However, where a patient is seen on more than one occasion, attempts should be made to ascertain whether their mental state has changed. It is therefore important that any tools used should be easy

[1] Patient Recorded Outcome Measures (PROMS) and Patient Reported Experience Measures (PREMS)

to administer (by all multi-disciplinary members of the liaison psychiatry team), quick, reliable and sensitive to change.

A number of clinical outcome measures were used by the sites, the most popular being:

- **The Clinical Global Impression Scale (CGI)**: The CGI was originally developed for use in clinical trials to provide a brief assessment of the clinician's view of the patient's global functioning before and after initiating a study medication (Guy, 1976). The CGI is an easily administered and readily understood tool (Busner & Targum, 2007).

  The CGI comprises two sections. The first is used to determine the severity of the patient's psychiatric condition and is called the CGI-Severity. Based upon observed and reported symptoms, behaviour and function in the past seven days, the clinician is asked: "Considering your total clinical experience with this particular population, how mentally ill is the patient at this time?" This is then rated on a 7-point scale (1 = normal, not at all ill; 2 = borderline mentally ill; 3 = mildly ill; 4 = moderately ill; 5 = markedly ill; 6 = severely ill; 7 = among the most extremely ill patients).

  The second component of the tool is the CGI-Improvement (CGI-I). This requires the clinician to consider: "Compared to the patient's condition at admission to the project [prior to medication initiation], this patient's condition is: 1 = very much improved since the initiation of treatment; 2 = much improved; 3 = minimally improved; 4 = no change from baseline (the initiation of treatment); 5 = minimally worse; 6 = much worse; 7 = very much worse since the initiation of treatment." As this tool was originally developed for clinical drug trials (Guy, 1976), the liaison psychiatry services using the tool had modified the GCI-I to meet their needs. This enables clinicians to track a patient's improvement over time.

- **EuroQol 5 Dimensions (EQ5D)**: The EQ5D measures health-related quality of life and is a standardised instrument for use as a measure of health outcome. In particular, it may be used to generate a measure of the quality-adjusted life-year (QALY) which is widely used in cost-effectiveness appraisals by NICE and others. The use of the EQ5D as an integral component of Patient Recorded Outcome Measures (PROMs) for certain elective surgical procedures has been mandated in the NHS since 2009. Alongside condition-specific outcome measures, it is expected that these data would be used to inform both the commissioning process and clinical improvement (Jacobs & Moran, 2010). Although the use of EQ5D and other QALY-generating outcome measures is becoming routine in other parts of the NHS, the utility of this measure is only just beginning to be realised in liaison psychiatry. Using such tools could be very effective in developing the cost-effectiveness case for liaison psychiatry.

- **Hospital Anxiety and Depression Scale (HADS)**: This scale, validated for use with hospital inpatients (Zigmond & Snaith, 1983), is a quick-to-administer tool with dimensions for symptoms of anxiety and depression. Although Aiken (2012) reports that HADS is not that helpful in measuring symptom reduction or recovery, it is often used in clinical trials and is also used in outpatient settings (e.g. pulmonary rehabilitation). HADS is a good tool to guide the clinician to make further inquiry.

- **Clinical Outcomes in Routine Evaluation (CORE)**: the CORE-Outcome Measure (Barkham *et al*., 1998; Barkham *et al*., 2001; Evans *et al*., 2002) is a widely used patient self-report measure across service settings delivering psychological treatments, together with a practitioner-completed component termed the CORE-Assessment (Mellor-Clark *et al*., 1999). This tool was not used by the liaison psychiatry teams in routine practice but as a useful outcome measure in follow-up and outpatient settings, particularly in services working with patients with Chronic Fatigue Syndrome presentations.

- **Health of the Nation Outcome Scale (HoNOS)**: This scale was developed by the Royal College of Psychiatrists' Research Unit and is an instrument with 12 items measuring behaviour, impairment, symptoms and social functioning (Wing *et al.*, 1996). The scales have been tested for acceptability, usability, sensitivity, reliability and validity, and can be administered and used in any setting (Royal College of Psychiatrists, 2012). Although HoNOS is now mandated by the NHS and administered across mental health trusts as the mechanism by which Payment by Results clusters are determined, its utility for liaison psychiatry services remains in question. For example, the consultation role of liaison work may not be captured and the short time frames within which liaison psychiatry services work may not necessarily show symptomatic change (Ranjith, 2010).

Process Measures

Liaison psychiatry services can have a significant impact on lengths of inpatient stay and rates of re-admission, especially among older people. These data are collected in most of the services we visited, but not always on a routine basis, and complications with access to relevant information from acute trusts sometimes presented as a barrier.

Other aspects of service utilisation could also be considered for measurement, e.g. admissions to hospital via the emergency department or medical assessment units. Measuring the impact here could be even more complicated as there are very few controlled studies to draw upon for comparison. Anecdotal reports from all of the sites we visited suggested that liaison psychiatry had a significant impact in this area, but supporting quantitative information is lacking. The impact of liaison psychiatry in preventing costly admissions is an area that would benefit from more research.

It is likely that the impact of liaison psychiatry interventions on patient outcomes will be felt beyond the general hospital. The RAID service, for example, claimed to have increased the numbers of older adults returning to live in their own homes. This would generate a saving for the local authority if placements in nursing homes or care homes were avoided or delayed.

Generating and analysing health utilisation data are important as they have the potential to help to form the case for service expansion and to demonstrate the clinical and economic impact of liaison psychiatry services.

Process information and understanding the flows into the service can help to inform the management of liaison psychiatry teams. Clinical audit data on number, place, frequency and time of referrals can help to determine how services are staffed and provided, including whether 24 hour or extended hour services are an appropriate option. All of the services we visited maintained some information on process.

Similarly, recording response times to referrals was deemed important as a measure of service quality, particularly in relation to the 4-hour A&E target.

A number of the services we visited were also working with their acute trusts to look at the impact of frequent attenders in A&E. It has been demonstrated that frequent attenders account for a disproportionately high proportion of overall A&E attendances (Murphy *et al.*, 1999) and a Swedish study showed them to have an excess mortality over other patients, particularly associated with alcohol abuse (Hansagi *et al.*, 1990). A study undertaken at Hull Royal Infirmary (Lynch & Greaves, 2000) over a 6-month period saw 40 regular attendees present 475 times, resulting in 191 admissions. The study concluded that these patients account for a large proportion of the departmental workload and place an economic burden in terms of unnecessary interventions and inappropriate admissions. Improved management of these patients, including appropriate liaison psychiatry assessment, may be beneficial.

PROMS and PREMS

Understanding the patient (and carer) journey should be routine when providing any service. This feedback should be a key to service improvement (The King's Fund, 2012) but is still not a routine feature of all health service provision (Jacobs & Moran, 2010). It has been identified by the Royal College of General Practitioners as very important to commissioning effective A&E services where liaison psychiatry is considered to be a key component (Fernandes, 2011).

Collecting and working with the experiences of patients was not a universal feature of the services we visited. Good practice in service delivery and engaged and informed commissioning should drive this important mechanism for informing improvement.

Environmental Factors

Although difficult to measure, it has been noted that the support of liaison psychiatry can have a marked impact on the ward environment. This is particularly the case where liaison psychiatry input can assist in the management of patients whose presentations can be disturbing for others on the ward. Reducing the impact of disturbed patients' behaviour will help in the maintenance of a recovery-conducive ward environment.

If wards have a number of patients who are particularly difficult to manage because of a mental illness, this may have a detrimental impact on staff morale. As an integral feature of PLAN accreditation, the views of non-mental health clinicians working with the liaison psychiatry service are considered. However, these questions do not directly consider whether the input of liaison psychiatry (through teaching or direct clinical work) has any impact on ward staff's ability to cope. It may be possible to capture this through ward-based audit or staff surveys.

Conclusions

Measuring outcomes should be a multi-faceted exercise that considers the needs of the different stakeholders who will benefit from the information: the clinician, the manager, the commissioner and importantly the patient.

To date, there has been no overall agreement on the most effective ways to measure outcomes for liaison psychiatry services, although our visits have shown that different services are considering how best to address this challenge. They have identified ways in which they can use these outcome measures to influence commissioning, improve clinical practice and contribute towards the QIPP agenda.

Using a balanced scorecard approach to measuring outcomes for liaison psychiatry services has the advantage of encouraging clinicians and service managers to consider all potential aspects of improvement.

Annex B Liaison psychiatry site visits

Integral to the development of this report were site visits, meetings and telephone/email contacts with a number of liaison psychiatry services across England.

For reasons of time and capacity, it was not possible to visit a large number of liaison psychiatry sites. Rather, a sample of sites was chosen using the process outlined below. Although only five sites were visited, insights and some data were collected from a number of other services who were consulted by telephone or one-off meetings. We were also able to discuss our observations and thoughts with a number of experts in the field of liaison psychiatry.

Process for choosing sites

The process was managed by the NHS Confederation via the Mental Health Network.

Strategic Health Authority Mental Health Leads were asked to communicate our intention to write this report with their local providers and request expressions of interest to participate. A deadline was set and applicants were asked to respond directly to Centre for Mental Health in the first instance. It was a requirement that all expressions of interest should be accompanied by additional information to substantiate their involvement in this piece of work.

Once all initial expressions of interest had been received we contacted everyone and conducted a brief telephone-based fact-finding exercise to determine which of the applicants:

- had an established liaison psychiatry service currently in place;
- would be able to provide us with the range of information required to assist in the development of this report; and
- would be in a position to host a brief site visit.

A brief summary of the applicants setting out their respective merits was then presented to the NHS Confederation who, following discussion, ultimately made the decision as to which sites would be best suited. The process enabled the selection of services that were established, open to engagement and importantly represented a geographical spread across England. This process was not scientific in its approach and the sample may not be completely representative of all liaison psychiatry services across the country. However, this was a pragmatic exercise which enabled us to consider a diverse range of services with different clinical approaches and operating models.

The NHS Confederation then contacted all of the services that had expressed an interest in involvement in this work either setting out the next steps for a site visit, or for those not chosen, explaining that they may be contacted for further information if required.

The following services were chosen for further exploration and a site visit:

- St Helier Hospital Liaison Psychiatry Service, Carshalton, Surrey
- Exeter Liaison Service, Royal Devon and Exeter Hospital, Exeter, Devon
- Department of Liaison Psychiatry, Arrowe Park Hospital, The Wirral, Cheshire
- Department of Psychological Medicine, Hull Royal Infirmary, Hull, East Yorkshire
- Leeds Liaison Psychiatry Service, St James University Hospital & Leeds General Infirmary, Leeds, West Yorkshire.

Information on structure, staffing, basic operational details and the range of services provided by the above sites is set out in more detail in the boxes below.

In visiting the different sites, we were able to see different models of liaison psychiatry in practice and understand how they functioned *in situ*. All site visits were completed over a five week period, each visit lasting two days. The visits comprised a mixture of informal meetings and discussions with members of the psychiatric liaison service and other clinical and managerial leaders from the hospitals serviced, and an opportunity to see the operational environments of the different services.

During the visits we were able to explore in more detail some of the rationale behind the development of services and why they had adopted certain operating models. There was also an opportunity to discuss how the different services were evaluating effectiveness, reflections on future developments and lessons learned from their own unique perspectives.

Psychiatric Liaison Accreditation Network (PLAN)

Throughout this study it was very important to develop a relationship with the Psychiatric Liaison Accreditation Network (PLAN), one of the Royal College of Psychiatrists' Service Quality and Accreditation Projects [2]. PLAN works with services to assure and improve the quality of psychiatric liaison in hospital settings, from referral systems, to meeting emergency and routine mental health needs. It engages staff and service users in a comprehensive process of review, through which good practice and high quality care are recognised and services are supported to identify and address areas for improvement.

To enable us to consider the broader issues associated with the delivery of liaison psychiatry services, contact with other services was facilitated by PLAN.

For those sites visited which are members of PLAN, their most recent accreditation reports provided an invaluable source of additional information.

[2] http://www.rcpsych.ac.uk/quality/qualityandaccreditation.aspx

St Helier Hospital Liaison Psychiatry Service

BASIC INFORMATION

PROVIDER TRUST	South West London and St George's Mental Health NHS Trust
COMMISSIONER	The service is commissioned by the local PCT (although this will change with the introduction of the clinical commissioning groups and things are currently in flux) and is funded and managed via South West London & St George's Mental Health NHS Trust.
HOSPITALS SERVICED	St Helier Hospital, Wrythe Lane, Carshalton, Surrey, SM5 1AA. A hospital within Epsom and St Helier University Hospitals NHS Trust.
BRIEF DESCRIPTION OF HOSPITALS	Acute hospital mainly providing services for the population of the London boroughs of Merton and Sutton as well as providing the SW Thames renal and transplantation service.
NUMBER OF INPATIENT BEDS	The latest figure is 550 for St Helier.
OVERVIEW	The liaison psychiatry service at St Helier Hospital has been reasonably well established for over 25 years. Originally with a limited nurse-led liaison service covering self-harm presentations in the Emergency Department and a limited service on the inpatient wards. The team has expanded over time with the introduction of a full-time liaison psychiatrist in 2002. In 2011-12, the service responded to 757 new referrals (with 2323 patient contacts).

TEAM INFORMATION

NUMBER OF STAFF IN LP SERVICE	**Discipline**	**WTE**
	Team Administrator	1
	Team Manager/Nurse Specialist (Band 7)	1
	Consultant Psychiatrist	1
	Nurse Specialist (Band 6)	1
	Core Psychiatry Trainee	1
	Foundation Year 1 Trainee	1
NUMBER OF SPECIALIST STAFF (E.G. OA, SUBSTANCE MISUSE)	**Discipline**	**WTE**
	Specialist Older Adult Nurse*	1
	Specialist Older Adult OT*	1
	*This service is funded and provided separately to the core LP service. However the working relationships mean that operationally the Sutton OA service is integral to how the overall LP service operates.	
OTHER	0.8 WTE Higher Trainee in Psychiatry (supernumerary); student placements – various disciplines	
OVERALL COST OF SERVICE	Total number of staff = 8. The general and older person liaison teams have a combined cost of just under £1m per annum.	

DESCRIPTION AND HOURS OF OPERATION (INPATIENT)	0900 - 1700 Mon - Fri. Inpatients account for 63% of all referrals to the general liaison team and 100% of those to the older person liaison team.
ARRANGEMENTS FOR OUT OF HOURS COVER	On-call psychiatrist and community crisis team.
DESCRIPTION AND HOURS OF OPERATION (A&E)	0900 - 1700 Mon - Fri. For the general liaison team, 28% of referrals are received from the Emergency Department – these patients are usually classed as emergencies and are seen within 1 hour of referral.
ARRANGEMENTS FOR OUT OF HOURS COVER	On-call psychiatrist and community crisis team.
PROVISION FOR WORKING AGE ADULTS	For the general liaison service, 69% of all referrals are for adults aged 18-64 years. The service accepts referrals for a wide range of psychiatric and behavioural problems, including mood disorder in the context of physical illness, self harm, psychosis, confusion (dementia and delirium), medically unexplained symptoms, medicolegal issues (including capacity to consent to treatment), perinatal psychiatric disorders, eating disorders, and unexplained poor concordance with treatment.
PROVISION FOR OLDER ADULTS	There are dedicated staff (nursing and occupational therapy) who work with older adults, but at the time of writing, local commissioning peculiarities mean that the full range of services provided are only available for residents living in one borough, Sutton. These staff work in collaboration with the LP service, but are not direct members of the team. The separate Older Person Liaison Team also attends the discharge planning meetings on the Medicine for the Older wards where their input is seen as very valuable. The needs of older adults who do not live in Sutton are managed within the core liaison psychiatry team. For the combined general and specialist Older Person Liaison Team, 46% of all patients referred are over 64 years of age.
PROVISION FOR CHILDREN	There is a separate liaison service provided for children and adolescents by the local CAMH service. This is not based on-site and in emergency situations the LP service will manage younger patients and then refer onto specialist colleagues when possible.

RELATIONSHIPS WITH SERVICES

LINKS TO SPECIALIST HOSPITAL DEPARTMENTS	The liaison team has a particularly close working relationship with the SW Thames renal service, as patients with co-morbid renal and mental health problems are more likely to be managed at the St Helier Hospital site than at their local general hospital or satellite renal services. The liaison consultant also provides supervision for the Women's Health Unit counsellor.

LINKS TO HOSPITAL OUTPATIENT CLINICS	The liaison psychiatry team have good relationships with a number of outpatient departments, including neurology, and accept 9% of their referrals from here. Other elements of psychological therapy are provided throughout the hospital with a number of outpatient clinics (including the chronic pain service, stroke unit, genito-urinary medicine, and the diabetes clinic) providing sessional psychology. It is an aspiration of the liaison team to provide an all-encompassing service including other elements of mental health care provided within the hospital - to develop a psychological medicine service.
LP OUTPATIENT CLINICS	The liaison service runs regular outpatient clinics and accepts outpatient referrals from hospital clinicians. The liaison clinics are also used to follow-up patients who have previously been assessed on the inpatient wards or in the emergency department.
LINKS WITH COMMUNITY SERVICES	There is specialist support for the staff working with older adults. This is provided by the Community Mental Health Team for Older People (CMHTOP) in Sutton. Limited old age psychiatry input is available. This engagement with the local CMHTOP has its advantages, allowing the staff members of work with patients through discharge planning and transfer back to their own homes. The general liaison service has close working relationships with local community services, to facilitate the ongoing management of patients. These include community mental health teams, crisis teams, drug and alcohol services and non-statutory services. A system of referral has been set up by the liaison service to facilitate hospital referrals to primary care psychology (IAPT). Cases are often jointly managed by liaison and IAPT.

AUDIT AND EVALUATION

CLINICAL OUTCOME MEASURES USED	Severity of psychiatric presentation and clinical outcomes are routinely measured using the Clinical Global Impressions Scale (CGI). Overall, 72% of patients across all referring departments were considered to be moderately to extremely ill on initial assessment. Following intervention by the liaison psychiatry service, analysis of CGI outcomes for both clinician and patient ratings showed marked improvements in mental state (with patients consistently reporting that they felt their condition had “much improved” or “very much improved”.

MEASURES OF SERVICE EFFECTIVENESS	Since 2010, the combined liaison services have maintained an accreditation of "excellent", awarded by the national Psychiatric Liaison Accreditation Network. This involves audit against 200 standards, peer review and feedback from hospital colleagues, patients and carers. Anonymous feedback from patients are carers is regularly sought. Routine activity data collected including: • Patient demographics (gender, age, borough of residence), • Referral source and urgency, • Diagnoses, • Disposal.
SERVICE AUDIT	A number of audits have been carried out, including: • Mental health breaches of A&E 4-hour target; • Management strategies for frequent attenders at A&E; • Alcohol histories on the acute medical unit.

TRAINING

TRAINING	• Formal annual training is provided for Foundation Doctors, Trainee GPs and ED Medical staff, and the service has medical student and physician assistant attachments. • Regular training days for all hospital staff are organised and delivered jointly by regional liaison psychiatry services. • There is supervision of the Women's Health Unit midwife counsellor. • Regular *ad hoc* teaching provided for acute hospital ward staff. • The liaison team also contributes to the development of hospital guidelines for the management of psychiatric disorders.

OTHER

OTHER SIGNIFICANT SERVICE CHARACTERISTICS	Both liaison service teams have a robust culture of daily multidisciplinary support, where cases, risks and diagnostic differences are discussed.

Exeter Liaison Service

BASIC INFORMATION

PROVIDER TRUST	Devon Partnership NHS Trust
COMMISSIONER	NHS Devon (the PCT)
HOSPITALS SERVICED	Royal Devon and Exeter Hospital
BRIEF DESCRIPTION OF HOSPITALS	The RD&E provides specialist and emergency hospital services to about 350,000 residents and visitors primarily in Exeter and East and Mid Devon, though patients also come from further afield in the South West and England. The RD&E has 797 inpatient beds and 80 day-case beds at the RD&E Wonford and Heavitree hospital sites in Exeter. Increasingly the hospital provides patient care closer to home including managing the day case surgery activity in Devon community hospital theatres, community midwifery services, stroke care, renal dialysis units and a mobile eye clinic which takes specialist care out to glaucoma patients in rural towns.
NUMBER OF INPATIENT BEDS	877 (including day-case beds)
OVERVIEW	The principle liaison psychiatry team provides a service for adults aged 18-65. A separate service exists for older adults. The liaison psychiatry service provides a comprehensive bio-psycho-social assessment to patients presenting with psychological and mental health difficulties. This helps to support the hospital in meeting waiting time directives by providing a timely response to all self-harm presentations and mental health presentations in the Emergency Department and medical wards and by providing psychiatric formulation and risk management guidelines for referred inpatients.

TEAM INFORMATION

NUMBER OF STAFF IN LP SERVICE	**Discipline**	**WTE**
	Consultant liaison psychiatrist	1
	Specialist doctor	0.6
	Nurses	4
	Administrators	1.6
	Supernumerary students from various disciplines are also attached to the team	
NUMBER OF SPECIALIST STAFF (E.G. OA, SUBSTANCE MISUSE)	**Discipline**	**WTE**
	Consultant old age liaison psychiatrist	1
	Team manager/Band 7 nurse	1
	Nurses	3
	Administrators	1

OVERALL COST OF SERVICE	£1.1 million
DESCRIPTION AND HOURS OF OPERATION (INPATIENT)	The service operates 0900 - 1700 Mon - Fri.
ARRANGEMENTS FOR OUT OF HOURS COVER	This is provided by the duty psychiatrist, contactable via the RD&E switchboard.
DESCRIPTION AND HOURS OF OPERATION (A&E)	The service operates 0900 - 1700 Mon - Fri. All patients presenting with an episode of self-harm, suicidal behaviour and/or mental health difficulty in the Emergency Department will also be assessed using the bio-psycho-social model.
ARRANGEMENTS FOR OUT OF HOURS COVER	This is provided by the duty psychiatrist, contactable via the RD&E switchboard.
PROVISION FOR WORKING AGE ADULTS	• Bio-psycho-social assessment, formulation, diagnosis and initial management plan for patients currently on inpatient wards at the RD&E with a physical illness or disease, and associated psychiatric and/or psychological difficulties and distress. • Psychological support and advice for families and carers. • Signposting and networking with other agencies about psycho-social follow-up and support. • Advice is given regarding the assessment of capacity in relation to consent/refusal to accept medical treatment when required.
PROVISION FOR OLDER ADULTS	Between January 2010 and January 2012, 808 older adults have been assessed by the service. Most of the referrals are generated by the acute medical and care of the elderly wards. The older adult team has adopted a proactive approach to case finding and attends the multidisciplinary team meeting and discharge planning meetings on the care of the elderly wards.

RELATIONSHIPS WITH SERVICES

LINKS TO SPECIALIST HOSPITAL DEPARTMENTS	• Links to specialist hospital departments - honorary contract in division of medicine, also service has close clinical working relationship with embedded health psychology in pain, tinnitus, respiratory, cancer care, neuro-rehabilitation. • There are also links with the health psychology service co-managed within the Department of Psychological Medicine.
LINKS TO HOSPITAL OUTPATIENT CLINICS	• Service to diabetes Outpatient Department as required. • Service to bariatric surgery - there are commissioned separately. • Medically unexplained symptoms services in general practice.
LINKS WITH COMMUNITY SERVICES	A small scale research project has been undertaken to consider how the team can assist GPs in the management of patients presenting with medically unexplained symptoms. This time limited restricted piece of work is still to be fully evaluated.

AUDIT AND EVALUATION

CLINICAL OUTCOME MEASURES USED	CORE in the Outpatient Mental Health service and HoNOS with patient experience survey in the adult service.
MEASURES OF SERVICE EFFECTIVENESS	Effectiveness of the service is measured using: • Performance targets as defined within the Service Level Agreement; • Signing up to PLAN (psychiatric liaison accreditation network); Quality of the service is measured using: • Compliance with operational policy; • Informal feedback from users and carers; • Formal feedback gathered using the satisfaction questionnaire which is routinely given to all people who use the service; • Positive feedback from partners and stakeholders; • Learning from complaints and clinical governance; • Learning from audit; • Learning from research that may be undertaken within the service. Efficiency of the service is determined by: • The service is delivered within budget; • Quarterly performance management meetings.
SERVICE AUDIT	Regular small scale improvement projects of the system, audits of adherence to practice standards. The liaison team also complete the trusts quality governance assurance system (ORBIT) enabling clinicians and managers to keep track of clinical and financial performance.

TRAINING

TRAINING	A comprehensive range of training is offered for students and substantive members of staff. This training is provided on a regular or as required basis depending upon need. Subjects taught include: somatoform disorders; suicide and self-harm; capacity workshop; confusing diagnoses; psychiatric emergencies; Mental Health Act; cognitive impairment; delirium; asthma COPD and mental health; and personality disorder.

OTHER

OTHER SIGNIFICANT SERVICE CHARACTERISTICS	Supervision is a strong feature of the Exeter Liaison Service model. This is a core component of the safety management strategy adopted by the team. Safety of the service is very important and is achieved through: • All staff are regularly supervised; • All staff attend a daily clinical meeting each morning and a debrief at the end of the day; • Each month all staff attend a staff support meeting that is led by an external facilitator; • All compulsory training is completed; • All clinical records are kept up-to-date and accurate; • The delivery of consistent clinical standards.

Department of Liaison Psychiatry, Cheshire & Wirral

BASIC INFORMATION

PROVIDER TRUST	Cheshire and Wirral Partnerships NHS Foundation Trust
COMMISSIONER	Wirral Clinical Commissioning Group CCG
HOSPITALS SERVICED	Arrowe Park Hospital and Clatterbridge Hospital
BRIEF DESCRIPTION OF HOSPITALS	Arrowe Park Hospital is located in the heart of the Wirral peninsula. As well as the full range of acute health services for adults and children, Arrowe Park has an Accident & Emergency (A&E) unit, a Maternity Unit and a Walk-In Centre. An annexe houses the Fracture & Orthopaedic Clinic, which has its own dedicated X-ray suite with capacity to treat up to 30,000 patients a year. The Liaison Team work with the chronic pain service based at Clatterbridge Hospital.
NUMBER OF INPATIENT BEDS	900
OVERVIEW	The Department of Liaison Psychiatry provides services primarily to A&E and to the wards of the acute hospital, but in addition offers both consultant and nurse-led outpatient clinics, referrals assessments, specialist self-harm clinics, specialist perinatal clinics and *ad hoc* review clinics. The service provides: • emergency mental health care to adults of all ages; • routine mental health care to working age adults; • routine mental health care to older people; • therapeutic interventions, and • mental health training to hospital colleagues. The most common problems encountered are: • self-harm, • emergency psychiatry, • acute confusion / delirium / dementia. The service undertakes over 5,000 psychiatric assessments a year with an average of 390 per month (range 318-475).

TEAM INFORMATION

NUMBER OF STAFF IN LP SERVICE	**Discipline**	**WTE**
	Consultant liaison psychiatrist	2
	Specialist doctor	1
	Doctors	2
	Team Manager	1
	Nurses	14
	Administrators	4
	Advocates	1.5

NUMBER OF SPECIALIST STAFF (E.G. OA, SUBSTANCE MISUSE)	A number of the nursing staff are also qualified in working with patients with alcohol and substance misuse problems.
OVERALL COST OF SERVICE	The service costs just under £1,000,000 a year.
DESCRIPTION AND HOURS OF OPERATION (INPATIENT)	Liaison psychiatry offers a 24 hour service across the hospital – the increase of service from operational office hours to a comprehensive 24 hour service was driven in part by local need, but also by a number of breaches of the 4-hour A&E waiting-time target and at least two serious untoward incidents by mental health patients.
PROVISION FOR WORKING AGE ADULTS	The majority of adult referrals are generated by A&E with a significant number being for patients who have self-harmed. There were 4020 referrals for assessment in 2011/12.
PROVISION FOR OLDER ADULTS	One of the consultant psychiatrists has a specialist interest in working with older adults and takes referrals predominantly from the medicine for the elderly wards. There were 1045 referrals for assessment in 2011/12.
PROVISION FOR CHILDREN	Services for children are currently provided by CWP CAMH team via paediatrics. They are currently working with a CAMHS consultant for liaison to provide initial assessment for the child and support to Hospital staff and family when children attend the A&E department. But this is in the early development stage.

RELATIONSHIPS WITH SERVICES

LINKS TO SPECIALIST HOSPITAL DEPARTMENTS	As well as covering services in A&E and on the general and acute medicine units, the liaison psychiatry team also have relationships with maternity, oncology and the pain clinic based at Clatterbridge Hospital. There is a good stepped care system in obstetrics, where every woman is asked the Whooley questions and questions about past psychiatric history and family history, on booking, and these are repeated at 5 months as well as whenever indicated. If the community midwife is concerned she refers to specialist midwife in mental health who meets the pregnant woman to explore concerns. Care is then co-ordinated by the specialist midwife including counselling referrals or discussion at the weekly LP clinic. The main purpose of the clinic is to provide assessment and signposting - most patients are seen only once. Separate arrangements are made for women already under the care of specialist mental health services. The perinatal service receives between 30-50 referrals per month from both the community and hospital.
LINKS TO HOSPITAL OUTPATIENT CLINICS	Joint peri-natal and pain clinics.

LP OUTPATIENT CLINICS	A specialist nurse-led clinic is offered to patients who have self-harmed. This predominately used a psychodynamic interpersonal therapy approach. Also follow-up clinics for short term interventions are also provided rather than refer into secondary mental health services.
LINKS WITH COMMUNITY SERVICES	The Liaison Psychiatry Service is trialing a GP single point of access (see OTHER, below) as an integral aspect of its service.

AUDIT AND EVALUATION

CLINICAL OUTCOME MEASURES USED	No specific clinical outcome measures are used within the service.
MEASURES OF SERVICE EFFECTIVENESS	Routine data is collected on types of referral source, responses and disposal. Information is also gathered on frequency of attendance in the emergency department and used to inform treatment and management planning.
SERVICE AUDIT	An audit has been conducted on the impact of liaison clinics on inpatient admissions. Work has also been undertaken to examine the holistic needs of heavy multiple users of inpatient services. This work concluded that although different medical specialties were aware of the psychological component of the patients' presentation, there remained an issue with referral for support from liaison psychology.

TRAINING

TRAINING	The liaison team offers the hospital staff basic training on mental health but this is infrequent at the moment due to both services being very busy and going through considerable change. However, it is hoped that this will be reinstated with the development of a training "breakfast club", offering brief training at the start of shifts.

OTHER

OTHER SIGNIFICANT SERVICE CHARACTERISTICS	There are two aspects which differ markedly from other services: 1. Advocates as integral team members: the liaison psychiatry team use advocates who help patients with a range of non-clinical problems that can affect their recovery e.g. debt, housing, social problems etc. This service is commissioned from a local voluntary sector organisation. 2. Development of a Single Point of Access for Primary Care: An unusual feature of the team is the trial of an expansion to cover a single point of access for GPs (0800 – 2000 Mon-Fri). They are able to contact the team to seek advice on the management of patients in primary care, specifically patients who are not currently under the care of mental health services. The premise is that this service can help reduce A&E attendances by enabling better care and management in the community.

Department of Psychological Medicine, Humber

BASIC INFORMATION

PROVIDER TRUST	Humber NHS Foundation Trust
COMMISSIONER	Service paid for by the former Hull PCT now Hull CCG, Hull and East Yorkshire Hospitals NHS Trust (HEYHT), Humber NHS Foundation Trust and the former East Yorkshire PCT now East Yorkshire CCG.
HOSPITALS SERVICED	Hull Royal Infirmary (HRI) and Castle Hill Hospital. (Services provided by HEYHT.)
BRIEF DESCRIPTION OF HOSPITALS	The Hull Royal Infirmary site is the main centre for emergency work at the Trust. The A&E department sees around 120,000 people each year. The Trust is a major partner in the Hull York Medical School (HYMS). Castle Hill Hospital is the location for the majority of the Trust's elective activity. The hospital has the Queen's Centre for Oncology and Haematology providing care for patients with cancer and blood disorders.
NUMBER OF INPATIENT BEDS	1490 (including maternity provision) + 40 dialysis stations
OVERVIEW	The liaison services within the Department of Psychological Medicine in Hull provide specialist mental health and learning disabilities services to patients within the HEYHT. HRI has 739 beds plus 93 maternity beds and 40 dialysis stations. The second hospital, Castle Hill, in the north of the city, has 658 beds. Regional services to 1.2 million people are provided for renal, oncology and neurosciences. The liaison psychiatry services are most developed on the HRI site. However, from June 2012, both hospital sites will be fully covered by the service. **Referral information (2011)** — **Number** A&E — 2968 Working age psychiatry — 455 Perinatal — 268 Huntington's Disease Service — 17 Older Adult — 597 Chronic Fatigue Syndrome service — 138 Total — 4443

TEAM INFORMATION

NUMBER OF STAFF IN LP SERVICE	**Discipline**	**WTE**
	Medical Staff	
	Consultant Liaison Psychiatrist/clinical lead	0.8
	Consultant liaison Psychiatrist with special responsibility to A&E	1
	Reader in Psychiatry (7 PA's in clinical services principally Huntington's Disease and neuropsychiatry)	1
	Consultant Liaison Psychiatrist (6 PA's perinatal service and 4 PA's general liaison psychiatry service)	1
	Consultant Liaison Psychiatrist working with the Older People's Service	0.8
	Consultant Liaison Psychiatrist working with the Chronic Fatigue Service	0.2
	Core Trainee	1
	The A&E Mental Health Liaison Team	
	Bd 7 Mental Health Practitioner (MHP)	1
	Bd 6 MHP 's	8.8
NUMBER OF SPECIALIST STAFF (E.G. OA, SUBSTANCE MISUSE)	**Discipline**	**WTE**
	Working Age Psychiatry	
	Bd 8 Clinical lead/ Cognitive Behavioural Therapist	1
	Bd 7 Clinical Psychologist	1
	Bd 7 Therapists	1.6
	Learning Disabilities	
	Bd 7 MHP	1
	The Perinatal Mental Health Team	
	Bd 7 MHP	1.2
	Bd 6 MHP	1
	Bd 7 Cognitive Behavioural Therapist	0.6
	Bd 6 Recruited	1
	Huntington's Disease Service	
	Bd 6 MHP	1
	Bd 3 Support, Time and Recovery Worker (STR)	1
	Older Adult Liaison Service	
	Bd 6 MHP	4
	Bd 5 to be recruited	1
	The Chronic Fatigue Syndrome Service	
	Consultant Physician	0.2
	Bd 7 MHP	0.8
	Bd 6 MHP	1
	Bd 5 Occupational Therapist	0.5
	Bd 6 Therapist	1

OTHER	**Discipline** **WTE** Across the Department Bd 3 STR Workers 2 Bd 8 Department Manager 1 Researcher/Evaluation Lead & therapist 0.6 Consultant Neuropsychologist 0.1 Administrative Team Bd 4 Administrator 0.6 Bd 3 Medical secretaries/Team Secretaries 4.7 Bd 2 Admin Assistants 5.9
OVERALL COST OF SERVICE	Total number of staff = 49.3. The cost in 2011/12 was £2,081,355.
DESCRIPTION AND HOURS OF OPERATION (INPATIENT)	9am – 5pm Monday to Friday.
ARRANGEMENTS FOR OUT OF HOURS COVER	Outside these hours, mental health input to the hospital is provided by the A&E Mental Health Liaison Team until 10pm (seven days a week) and then Humber Foundation NHS Trust's Crisis Service.
DESCRIPTION AND HOURS OF OPERATION (A&E)	The A&E Mental Health Liaison Team operates seven days a week from 8am until 10pm. It is a multidisciplinary team which includes a range of professionals who focus on people who deliberately self-harm and/or who have mental health problems within the acute care pathway. This team therefore sees patients who have self-harmed in A&E and on the Hull Royal Infirmary and Castle Hill sites and will also arrange to see patients who are initially seen within the Minor Injuries Units which are spread throughout Hull and East Yorkshire. The latter patients are usually seen within 24 hours. The team provide an AGELESS service to patients who have self-harmed. They offer specialist psycho-social assessment, follow-up where appropriate and limited outpatient work of a more psychotherapeutic nature where there is an identified need.
ARRANGEMENTS FOR OUT OF HOURS COVER	Outside these hours, mental health input to the hospital is provided by the Humber Foundation NHS Trust's Crisis Service.

PROVISION FOR WORKING AGE ADULTS	The General Liaison Psychiatry Service is a multidisciplinary team which provides services for patients of working age i.e. between 18 to 65. The team see patients with mental health/psychological problems within the context of physical illness, patients with severe and complex medically unexplained symptoms and patients with neuropsychiatric problems. In addition, they provide a ward service to patients based at Hull Royal Infirmary and Castle Hill and generally aim to see ward referrals within 24 unless there is a more urgent need. The team provides specialist bio-psycho-social assessment, formulation and diagnosis and, where appropriate, treatment, which can be of a psychotherapeutic nature (brief interventions). The team also contributes to the management of patients with long-term conditions e.g.diabetes/renal disease, and assists in appropriate discharge planning and participates in Mental Health Act and Mental Capacity assessments. Patients referred to this team must be either inpatients or outpatients within the Acute Trust. No referrals are accepted from primary care. Learning Disabilities: This service has working within it a nurse advisor who provides expert advice and support to staff who are caring for people with learning disabilities, with or without additional mental health problems. The service is primarily focussed on the acute hospital environment but provides a critical link with community learning disability teams and care homes. The Perinatal Mental Health Service: This is a dedicated multidisciplinary mental health team which provides specialist psychiatric assessment and intervention to women during the antenatal and postnatal (up to 12 months) period. Pregnant women with pre-existing severe mental illness who are already in contact with community mental health services are also able to access this service for advice, monitoring and management when required. Referrals to this team come from either primary care or the obstetric wards.
PROVISION FOR OLDER ADULTS	Older Adult Liaison Service operates five days a week 9am until 5pm. It is a multidisciplinary service providing assessment and advice to older people in the hospital. The work is focussed mainly in the 72-hour admission ward based at Hull Royal Infirmary, but the team do see inpatients at both hospital sites. The service aims to provide early assessment and detection of the presence of depression, delirium and dementia (and other functional mental illness) within older people i.e. 65 and over, to initiate management as appropriate and to facilitate appropriate earlier discharges.
PROVISION FOR CHILDREN	All young people who have self-harmed are routinely referred to the A&E Mental Health Liaison Team where they are clinically and risk assessed, and where appropriate an outpatient clinic is offered. The team liaises closely with the local CAMHS.

RELATIONSHIPS WITH SERVICES

LINKS TO SPECIALIST HOSPITAL DEPARTMENTS	Specialist links have been established with the Diabetes and Renal services.
LINKS TO HOSPITAL OUTPATIENT CLINICS	The service works closely with the neurology OP clinics, particularly seeing patients who are referred with functional presentations.
LP OUTPATIENT CLINICS	The Huntington's Disease Service: The Huntington's disease service provides specialist assessment and management of patients with Huntington's disease and their families and carers. The service accepts referrals from primary, secondary and tertiary care as well as from patients and families themselves. There is no age restriction and patients are seen at any stage of the illness and followed up long term. Patients present with a variety of psychological, neuropsychiatric and social problems and support and management is provided according to patients' needs and wishes. People at genetic risk of HD are also assessed and psychological support given in the context of decisions around genetic testing. The team works closely with the neurologist, geneticist and social services as well as ancillary services such as speech and language therapy, physiotherapy, dietician and various agencies. The HD team participates also in the Euro-HD clinic held at Castle Hill hospital on a monthly basis. This is a European initiative allowing people who are keen to participate in research to be registered on a European data base. In turn this allows for a co-ordinated approach to be taken in recruitment for appropriate research projects. The Chronic Fatigue Syndrome Service: This is a multidisciplinary team providing services to people experiencing chronic fatigue syndrome (CFS). The team provides assessment, treatment, education and information for patients with a diagnosis of chronic fatigue syndrome. Referrals to this service come directly from primary care rather than the acute hospital setting.

AUDIT AND EVALUATION

CLINICAL OUTCOME MEASURES USED	The CORE-OM, the Fatigue Assessment Instrument (FAI) and The Self-Efficacy Scale (SES) are used routinely in the Humber Chronic Fatigue Service – an outpatient clinic run by the Department of Psychological Medicine.
SERVICE AUDIT	A number of service evaluations have been proposed including: • Service evaluation of the A&E Liaison Team and re-attendance rates at HRI; • Older Adult Mental Health Service evaluation; • Explaining Medically Unexplained Symptoms: evaluating the usefulness of a service development leaflet.

TRAINING

TRAINING	Over the years, there has been a variety of training of hospital staff. The training has mainly been conducted by the medical (psychiatric) staff to medical staff within HEYHT e.g. at Grand Rounds and to doctors in training as part of their training programmes. Topics have included: • delirium – recognition and management, • mental capacity training and • medically unexplained symptoms – understanding what they are and management. It has been difficult to deliver a training programme to the nursing staff for a variety of reasons. However, with recent investment in the department and development and implementation of the 'Acute Trust Strategy for Mental Health and Learning Difficulties', training for nursing staff about the recognition and management of mental health problems has been prioritised. We are now running a regular 3-hour training session for nursing staff in the acute trust about recognising and managing mental health problems in the acute hospital, focussing on the early detection and management of delirium. This training is being evaluated. Other regular training includes: • Perinatal Mental Health training - to all midwives (hospital and community based), obstetricians and, in June 2012, to health visitors. • Older Adult Mental Health training - to older adult wards at HRI (depression/delirium and capacity). • Learning Disability training – LD awareness training to acute trust staff (clinical and non-clinical). Four sessions have been booked for this year, but there are plans to deliver this on a monthly/ bimonthly basis.

Leeds Liaison Psychiatry Service

BASIC INFORMATION

PROVIDER TRUST	Leeds Mental Health Trust
COMMISSIONER	NHS Leeds (the PCT)
HOSPITALS SERVICED	St James University Hospital and Leeds General Infirmary (Leeds Teaching Hospitals Trust)
BRIEF DESCRIPTION OF HOSPITALS	The Leeds Teaching Hospitals Trust (LTHT) is the largest general hospital trust in the UK. It provides all general hospital services for the 740,000 people of Leeds and a wide range of tertiary care services for patients from around the region and beyond. Most of the general hospital services are based at Leeds General Infirmary (LGI) and St James University Hospital (SJUH).Some wards are also based at Chapel Allerton Hospital. Clinic and day services are delivered from Wharfedale Hospital and Seacroft Hospital. The Trust is also a regional centre for a number of specialist services such as cancer and cardiac surgery, and is recognised as a national centre of excellence for specialist services such as paediatric and adult liver transplantation.
NUMBER OF INPATIENT BEDS	c2,100
OVERVIEW	Liaison psychiatry services in Leeds have grown gradually over the last 32 years. The absolute focus has been on providing specialist rather than generic liaison psychiatry services, although this has resulted in a complex network of services. 1. Liaison psychiatry services (largely for people aged 18-64) - managed within the Specialist Services Directorate (SSD) of Leeds and York Partnership FT (LYPFT). This includes an extensive range of outpatient and therapeutic services which will be described later. 2. Older People's liaison psychiatry service for patients aged 65 or over - managed in the Older Peoples Directorate of LYPFT. 3. Drug and alcohol general hospital service for patients aged 18 and over - managed by the Addiction Unit within SSD, but distinct from the LP service. 4. A&E mental health services for patients aged 18 and over - provided by the crisis team within the Adult Mental health directorate of LYPFT. These are NOT currently provided by the LP service, but a business case has been submitted arguing that LP would be better placed to deliver this. Separate children's liaison services and specific psychological therapies are also commissioned and provided across LTHT.

TEAM INFORMATION

<table>
<tr><td>NUMBER OF STAFF IN LP SERVICE</td><td>The liaison psychiatry services delivered across Leeds involve many different specialisms in a range of clinics and settings, and cover a number of separate physical sites. The staff numbers for the different components of the service are, in brief:

<table>
<tr><th>Department</th><th>Clinical staff</th><th>Non-clinical staff</th><th>Overall total</th></tr>
<tr><td>Liaison psychiatry outpatients</td><td>5.75</td><td>4.8</td><td>10.55</td></tr>
<tr><td>Palliative care and psycho-oncology</td><td>4.2 *</td><td></td><td>4.2</td></tr>
<tr><td>Psychosexual medicine</td><td>2.8</td><td></td><td>2.8</td></tr>
<tr><td>Chronic fatigue syndrome service</td><td>8.91</td><td>3.47</td><td>12.38</td></tr>
<tr><td>Cognitive behavioural therapy outpatients</td><td>3</td><td></td><td>3</td></tr>
<tr><td>Yorkshire Centre for Psychological Medicine</td><td>18.4</td><td>2</td><td>20.4</td></tr>
<tr><td>Self-harm service</td><td>4.8</td><td>1</td><td>5.8</td></tr>
<tr><td>Liaison psychiatry inpatient service</td><td>3.4</td><td></td><td>3.4</td></tr>
<tr><td>Liaison psychiatry for older people</td><td>10.8</td><td>2</td><td>12.8</td></tr>
<tr><td>Drug and alcohol service (including: drug and alcohol in-reach and intensive home treatment)</td><td>13 **</td><td></td><td>13</td></tr>
<tr><td>Total</td><td>75.06</td><td>13.27</td><td>88.33</td></tr>
</table>

These numbers do not include the staff working for the crisis team, which covers the emergency department.

* 3.5 Psychology staff funded by the Acute Trust.
** Drug and alcohol staff are not provided directly by the LP service, but are very important to its operation.</td></tr>
<tr><td>OVERALL COST OF SERVICE</td><td>£4,493,583</td></tr>
<tr><td>DESCRIPTION AND HOURS OF OPERATION (INPATIENT)</td><td>Most of the liaison psychiatry services operate within office hours Mon - Fri with the exception of:
• Self-harm service – this also has arranged cover during weekend office hours provided by an on-call psychiatrist.
• A&E cover – this is currently provided by the local crisis team, and is not within the direct management of the LP service. This operates a 24/7 service.
• Yorkshire Centre for Psychological Medicine – this is a specialist inpatient unit and is staffed 24/7.</td></tr>
</table>

ARRANGEMENTS FOR OUT OF HOURS COVER	On call junior psychiatry trainees.
DESCRIPTION AND HOURS OF OPERATION (A&E)	The A&E service constitutes two components: • A dedicated deliberate self-harm service – provided by the LP team (office hours, 7-days a week). • A mental health liaison service provided by the local crisis resolution team (24/7).
ARRANGEMENTS FOR OUT OF HOURS COVER	Not applicable as the crisis service operates around the clock.
PROVISION FOR WORKING AGE ADULTS	The In-reach service sees any patient aged 18-64, referred with a psychological/psychiatric problem on the wards of SJUH, LGI or Chapel Allerton Hospitals. The service occasionally sees acute referrals from outpatients and occasionally parents of sick children who are spending large amounts of time visiting their children attending one of the general hospitals. There are no referral criteria as LTHT staff are encouraged to contact the team if they feel they need help. The service does not accept simple “mental capacity” assessment as it is expected that these should be done by staff themselves. The in-reach service received 572 referrals last year. The Self-harm service: is provided to individual aged 17-64, who present to the LTHT A&E department or are medically admitted following an episode of self-harm. This includes overdose, self-injury and a range of other self-injurious behaviours. The self-harm service received 2469 referrals last year. All of the Outpatient clinics described below work with adults (see LP OUTPATIENT CLINICS section).
PROVISION FOR OLDER ADULTS	The hospital mental health team for older people (Liaison Psychiatry for Older People) is a city-wide service covering St James University Hospital, Leeds General Infirmary, Chapel Allerton Hospital and Wharfedale General Hospital. The team aims to support general hospital colleagues in recognising mental health problems in older people, and then seeking specialist advice about care and treatment including initiating post discharge mental health support. The service aims to ensure that older people are never unfairly discriminated against as a result of age, culture, gender, sexuality, race or disability and that the older person's (and their carer's) views are at the centre of all clinical decisions. The service operates a multi-disciplinary model within the acute hospital setting. It mainly works with patients presenting with either depression, dementia or delirium, but also sees patients with other mental illnesses and alcohol misuse. The service has had a significant impact on reducing lengths of stay. For instance, the length of stay for patients with dementia reduced from 30 days in 2003/4 to 13.8 days in 2007/8. Referral rates for the service have also increased from 220 per year in 1999 to 1,500 per year in 2010.

PROVISION FOR CHILDREN	There is a small input into paediatric services from Child and Adolescent Mental Health Services (CAMHS) for those aged 0-17, which is managed by Leeds Community Healthcare Trust. However, this operates very separately and is managed by a different trust.

RELATIONSHIPS WITH SERVICES

LINKS TO SPECIALIST HOSPITAL DEPARTMENTS	The team works closely with a number of clinical services within Leeds Teaching Hospital Trust. Examples of this include the respiratory medicine service, colo-rectal nursing, bariatric surgery team and oncology services.
LINKS TO HOSPITAL OUTPATIENT CLINICS	There are no joint clinics with other specialities.
LP OUTPATIENT CLINICS	There are a range of outpatient clinics provided by the liaison psychiatry service. The principle OP clinic accepts over 630 referrals annually for patients with a range of conditions including: • Physical and psychiatric co-morbidity, • Complex physical and mental health needs, • Unexplained medical symptoms, • Body dysmorphic disorder. There are a number of other OP Clinics offered by the service including: • Cosmetic Exception Case Panel psychological assessments: assessing a small number of patients to aid the PCT in their decision to fund cosmetic surgery on “psychological grounds”. • EMDR clinic: Providing EMDR therapy (Eye Movement Desensitisation and Reprocessing) to patients with somatoform or body dysmorphic disorders. • Medico-legal reports: Providing expert medical opinion for insurance companies and legal firms. This service generates a small amount of income for the Mental Health Trust (25 reports June 2010 – June 2012). • Live liver transplant psychological assessments: There is an active liver transplant programme at SJUH. There are a small number of live donors wishing to donate part of their liver, usually to a close relative. The service provides a psychological assessment to confirm suitability, resilience, capacity etc. 11 referrals were accepted in last year.

LP OUTPATIENT CLINICS (continued)	• Palliative Care Psychiatry: The Leeds Specialist Palliative Care Team (SPCT) funds four sessions of direct input from a liaison psychiatrist. The SPCT is a comprehensive service in Leeds and includes two hospices (St Gemma's and Wheatfields), each with community teams, day units and inpatient wards and two hospital-based teams providing palliative care for patients in St James University Hospital and the Leeds General Infirmary. The liaison psychiatry input is provided by a single consultant who attends multi-disciplinary team meetings on a weekly basis at both hospices and for both of the hospital-based teams. This creates the opportunity for cases to be discussed where advice or a direct assessment is required. A two-hour clinic is provided at each hospice each week. 47 referrals were accepted in last year. • Psycho-oncology: This is provided by the liaison psychiatrist working in the palliative care service, as patients often become palliative during their cancer journey. The main difference is the direct involvement of the clinical psychologists from the general hospital trust. The service consists of a weekly three-hour clinic and a weekly team meeting. The service offered by liaison psychiatry differs slightly from that offered by LTHT in that referrals are accepted from GPs and for patient who are not being treated by an LTHT oncologist. 71 referrals were accepted last year. • Psychosexual Medicine: The PSM team provide a specialist therapy service within the Department of Liaison Psychiatry, for those referred from primary or secondary care. Sexual problems are categorised under three subheadings: sexual dysfunction; gender identity disorders; and paraphilia. The service provides sexual psychotherapy to both individuals and couples aged 16 and up, regardless of their relationship status, gender, ethnic origin or sexuality. A proportion of patients have other psychological problems and other medical illness. Some of these patients are seen both in PSM and in other parts of liaison psychiatry as well. 493 referrals were accepted last year.

LP OUTPATIENT CLINICS (continued)	• Chronic Fatigue Syndrome/ME Service: The service provides assessment and advice on management and treatment strategies for people referred by primary and secondary care, with a primary problem of chronic and debilitating fatigue, for which there is no identifiable pathology or alternative diagnosis. All referrals must have been already screened for differential diagnosis, include the results of the relevant diagnostic tests, and the referrer assumes that the person fulfils the criteria for CFS/ME. The service is primarily outpatient based. Some rehabilitation may be provided in the home or local environment. Patients with severe presentations requiring inpatient care can be referred to dedicated beds at the Yorkshire Centre for Psychological Medicine (see below on OTHER). 688 referrals were accepted last year. • Cognitive Behavioural Therapy outpatient service: This service only accepts internal referrals from the liaison psychiatry team and offers CBT for patients who have co-morbid physical and psychological difficulties with a clear relationship between the two e.g. adjustment disorder, somatisation, specific phobias, health anxiety and mild to moderate depression. 94 referrals were accepted last year. The outpatient clinics form a significant component of the work undertaken by the Leeds Liaison Psychiatry Service and in 2011/12 accepted in excess of 2,000 referrals.
LINKS WITH COMMUNITY SERVICES	A number of the outpatient clinics work closely with the community, including the CFS clinics and psycho-oncology. All clinics and services have robust care pathways enabling effective discharge. The drug and alcohol service, although not formally a component of the liaison psychiatry team, works closely to provide a dedicated hospital in-reach service and the capacity for intensive home treatment.

AUDIT AND EVALUATION

CLINICAL OUTCOME MEASURES USED	A range of different measures are used depending upon the service provided. However the most commonly applied are: CORE-OM, a modified version of the CGI, PHQ9/GAD7, Chalder Fatigue Score, Visual Analogue Pain Rating, Self Efficacy Score, EQ5D and SF36.
MEASURES OF SERVICE EFFECTIVENESS	The service maintains comprehensive records of patient demographics (age, gender etc.) and service activity, including numbers and source of referrals and discharge destination.
SERVICE AUDIT	As a regional specialist service for CFS, the team actively participates in research and audit at a local and national level.

TRAINING

TRAINING	The liaison psychiatry team continuously discusses and evaluates how to improve the mental health skills of NHS staff. In some areas, informal supervision is provided to LTHT staff by team members, and the team also runs regular training sessions for them. Links also exist at an operational level; the Clinical Service Manager and Lead Clinician for Liaison Psychiatry have a link into the LTHT management structure through the Business Manager and Medical Director for the medical specialities' directorate. The Hospital Mental Health Team has offered half-day Managing Distress training to all LTHT staff and training has also been offered to the colo-rectal nurses and LTHT social workers. In the context of the psychosexual medicine network, clinicians regularly contribute to teaching colleagues from urology, endocrinology/diabetes, gynaecology and genito-urinary medicine. The service also provides training and support to other developing services across North, East and West Yorkshire (known as a Clinical Network Co-ordinating Centre). CBT clinicians provide clinical supervision to palliative care nurses, with informal teaching on CBT as part of the process. They also provide training (formal and informal) to other colleagues working within liaison psychiatry. Training is also offered by the self-harm service, alcohol in-reach teams and older persons liaison service. Attendance at some training sessions has been variable and sometimes poor, especially in the training in meeting the needs of older adults.

OTHER

OTHER SIGNIFICANT SERVICE CHARACTERISTICS	Uniquely, the Leeds Liaison Psychiatry Service also provides the Yorkshire Centre for Psychological Medicine (YCPM), a dedicated inpatient unit specialising in helping people with the following types of problems: • Severe and complex medically unexplained symptoms, eg. psychologically-based physical symptoms and syndromes; • Severe physical and psychological/psychiatric comorbidity: a) In people who are already general hospital in-patients but who have psychological needs at a level that cannot be effectively met on a general medical or surgical unit. b) In people in other services or in the community who could benefit from focussed multidisciplinary treatment provided in an inpatient setting; • Patients with severe CFS/ME - providing the inpatient component of the Leeds and West Yorkshire CFS/ME Service; The service accepts referrals from within Leeds (4 beds) and from across the UK (4 beds), from liaison psychiatry teams, general hospital (any medical and surgical) services, general practitioners, and other mental health teams. The YCPM treats approximately 35 patients per year with an average length of stay of 13 weeks (range: 2-53 weeks). The service uses a number of outcome measures to evaluate clinical progress, including: CORE-OM, CGI, EQ-5D, the range of measures used by the CFS service (see above in AUDIT and EVALUATION).

Site visits in summary

The scope, organisation and operational models of the liaison psychiatry services we visited varied greatly. The impact of these differences has been covered in greater detail earlier in this report. Below is a brief overview of some of the more significant differences noted during the site visits.

Staffing and operation

The number of staff in the different services reflected the range and type of work undertaken, the size of the population covered and the working practices of the different teams. Staff numbers varied from 7 WTE clinical staff at St Helier to 75 in Leeds.

Some services were delivered during office hours (Leeds, St Helier, Exeter), one on a 24/7 basis (Wirral), and another had extended hours of operation (Hull).

In most of the services the emphasis for service delivery was on the needs of patients of working age, despite the evidence that acute care providers would benefit the most if this emphasis was geared more towards the needs of older people. This work often took the form of assessment, diagnosis/ formulation, risk assessment and a management plan, associated with *ad hoc* learning and teaching opportunities for ward-based staff.

Most services provided some formalised teaching for general hospital staff. Hull in particular had also developed an excellent relationship with the acute provider trust, and the two were working together to drive the development of a psychologically-minded workforce at Hull Royal Infirmary. This has been expedited by supportive local commissioning arrangements.

Working with other hospital departments

With the exception of Leeds (where the position is currently under review), all services provided support for the A&E department. Most of the work in this setting involved the psychological assessment of patients who had self-harmed, although patients with other psychiatric and substance misuse issues were also seen by the teams. Some of the services also offered follow-up outpatient clinics for self-harm patients, but limited data was available to show how effective these were. Some services took a very proactive stance in the management of frequent attenders and worked closely with A&E staff to formulate action plans and help in the management of these particular patients.

All of the services also had staff dedicated to working with older adults, but these staff members were often managed outside the core liaison psychiatry team. Only a couple of the sites extended their services to children (notably Hull, which provided an all-ages service in A&E), with local CAMH services otherwise providing psychiatric care when required.

In two of the services (Leeds and Hull), considerable emphasis was placed on developing clinical treatment interventions and therapeutic relationships over time, and there were a range of well-established outpatient clinics. These clinics also took referrals from primary care.

Collecting information and measuring outcomes

Supervision and reflective work practices were important in maintaining staff safety and good clinical outcomes. The Wirral service insisted that following A&E assessments, all paperwork was completed away from the emergency department, minimising the risk of back-to-back assessments. The St Helier service held regular clinical team meetings for all staff, and the Exeter service had a very

comprehensive approach with both morning and late afternoon case discussion and clinical reflection time.

All of the services collected patient-specific information and some form of management data. There were often issues with double inputting, as the mental health and acute trusts had different data systems. The Wirral service were trialling an innovative data-pen solution to help reduce workload.

Collecting information about service effectiveness was not a universal feature of all sites. The St Helier service routinely used the CGI, and Leeds and Hull both used a variety of clinical outcome measures. Although there was the potential to gather data from the acute hospital to consider service impact, this was rarely done, probably because it is very difficult to attribute change to the liaison service alone. However, a number of small-scale research projects to consider effectiveness have been commissioned by different services, although at the time of writing they have not reported.

The development of services

The broad differences in design and operation among the services we visited may be attributed to a number of factors:

- historical development of the services (e.g. the Leeds service has been developing for 30 years);
- style and clinical interests of lead clinicians in the service;
- needs of the local population (city-wide provision (Hull, Leeds, Exeter) or coverage of a number of London boroughs (St Helier));
- type of acute hospital serviced and its own requirements (e.g. the Leeds service covers two large university hospitals with a combined total of over 2,100 beds, while the St Helier service support a small acute hospital with 550 beds);
- strategic relationships with both the acute medical services and the provider mental health trust;
- individual professional relationships with medical consultants;
- relationships with commissioners and the availability of funding sources (Leeds and Hull had particularly good relationships with their commissioners and decision-making appeared to have a multilateral dimension);
- serendipity.

Other factors have also driven the development of services and are common across all the sites visited. These post-date the genesis of the services visited, but continue to be used as developmental levers. They reinforce the importance of liaison psychiatry to acute hospitals and the broader health and social care economy:

- NHS-wide clinical quality indicators or targets (e.g. patients' care being met within 4 hours in A&E, where mental health patients need specialist support and assessment that cannot be delivered by the acute hospital staff);
- good practice guidance (e.g. NICE guidance for managing self-harm, which states that all patients should have a comprehensive assessment of their psychological needs);

- national clinical commissioning priorities (e.g. the development of a national CQUIN (Commissioning for Quality and Innovation payment network) for the identification and management of dementia); and
- a range of emerging evidence on the economic case for improving the management of co-morbid physical and mental health presentations (e.g. Naylor *et al.*, 2012; Parsonage & Fossey, 2011).

All services described the importance of relationships with ward-based clinical staff as crucial to their success. Trust, judging risk and clinical competence were some of the values and skills that were highly regarded by acute trust staff. The counterpoint to these are the difficulties described by acute staff when liaison psychiatry is not provided out of hours and this function is taken on by an on-call psychiatrist or local crisis team. It was universally noted that there was a significant difference in relationships, particularly trust, when services are not operated around the clock.

One significant common factor was that all of the services had grown organically from a relatively small base, hence their somewhat idiosyncratic nature, with wide variations in provision and delivery model. None of the early development of the services appears to have been driven by commissioning for the needs of the local population. This reflects the often overlooked and difficult nature of commissioning for complexity. As new commissioning arrangements are beginning to mature and clinical commissioning groups take a leading role, there is a potential for more interest in this important area.

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