Physical and Mental Health

43

Chris Naylor

Physical and mental health is closely dependent on each other. Evidence reviewed in this chapter demonstrates that having a physical health condition significantly increases the risk of developing a mental health problem and vice versa. More broadly, mental health is a vital component of health and well-being and is influenced by the activities of all parts of the healthcare system. It is for this reason that the World Health Organization has long argued that there is 'no health without mental health' (Herrman et al. 2005).

Despite this interdependency, it often remains the case that the institutional architecture of health systems, the design of reimbursement systems, and the training and education of professionals, all tend to reinforce structural and cultural barriers between mental and physical health care. As described below, these barriers mean that mental and physical health is often treated as if existing in isolation of each other.

When thinking about this dimension of integrated care, there are three separate but closely related issues that require consideration:

1. Comorbidity between long-term physical health conditions and mental health problems is highly common and has a significant effect on outcomes.
2. Psychological distress is frequently expressed in the form of physical symptoms —so-called medically unexplained symptoms that lack an organic cause and are often challenging to manage.
3. All physical illness can have an important psychological or emotional component, regardless of whether or not a diagnosable mental health problem is present.

C. Naylor (✉)
Health Policy, The King's Fund, London, UK
e-mail: c.naylor@kingsfund.org.uk

V. Amelung et al. (eds.), *Handbook Integrated Care*,
https://doi.org/10.1007/978-3-030-69262-9_43

The first two of these issues relate to defined client groups, whereas the third is a cross-cutting issue applicable to any form of health care. All three have profound implications for integrated care. In this section, we will focus largely on the specific needs of people with comorbid conditions and/or medically unexplained symptoms. However, many of the principles discussed are also relevant to the wider issue of the psychological and emotional aspects of health.

The prevalence of comorbid mental and physical health problems is high. A review of the literature suggested that overall, around 45% of people with mental health problems also have a long-term physical health problem. Similarly, people with cardiovascular diseases, chronic respiratory diseases, diabetes or chronic musculoskeletal disorders are around two to three times more likely to experience a mental health problem than the general population (Naylor et al. 2012). The strength of this interaction is exacerbated significantly by social deprivation—among those with multiple physical disorders living in the lowest socio-economic groups, the prevalence of mental ill health is almost 50% (Barnett et al. 2012). Medically unexplained symptoms are also highly common, accounting for an estimated 15–30% of all primary care consultations (Kirmayer et al. 2004) and, in one study, over 20% of all outpatient consultations among the most frequent attenders (Reid et al. 2001).

Physical health outcomes are poor among people with comorbid mental health problems. Mortality rates among people with cardiovascular diseases or diabetes are significantly higher for those who also have depression (Blumenthal et al. 2003; Junger et al. 2005; Lesperance et al. 2002; Park et al. 2013). Outcomes are particularly poor for people with schizophrenia or other psychoses, for whom excess mortality largely attributable to poorer physical health leads to a life expectancy 15–20 years below the general population (Laursen et al. 2014). The presence of mental health problems can lead to reduced access to care for physical health problems—for example, in a Canadian study revascularisation rates among people with ischaemic heart disease were found to be significantly lower for those who also had dementia or psychosis, after adjusting for clinical need (Kisely et al. 2007).

The interaction between physical and mental health has significant consequences in terms of resource utilisation and costs. In an analysis conducted in the UK, emergency department attendance rates were three times higher and unplanned hospital admissions were five times higher among people with mental health problems, compared to a matched control group drawn from the general population, with most of these attendances and admissions being for physical health care (Dorning et al. 2015). A large number of other studies have confirmed that conditions such as depression significantly increase the risk of unplanned hospitalisation for ambulatory care sensitive conditions (Davydow et al. 2013). Overall, by interacting with and exacerbating physical health problems comorbid mental health problems are estimated to increase the costs of long-term conditions by at least 45% per affected person. This suggests that at least 12% of all expenditure on chronic diseases in high-income countries is linked to poor mental health and well-being (Naylor et al. 2012). In addition to this, a conservative estimate of the cost of

medically unexplained symptoms is around 3% of the entire health budget in the UK (Bermingham et al. 2010).

These and other findings suggest there is a strong case for integrating physical and mental health care more closely. Figure 43.1 lists 10 areas where the opportunities to achieve better integration are particularly striking (Naylor et al. 2016). People with comorbid mental and physical health problems, as well as those with medically unexplained symptoms, should be seen as priority target group for integrated care. The rest of this section outlines some of the challenges involved in providing integrated care to these client groups and describes the evidence-based interventions available for doing so.

43.1 Challenges Involved in Integrating Physical and Mental Health Care

43.1.1 Disease Factors

Integrating mental and physical health care is not one challenge, but rather a whole set of related challenges. This follows from the fact that underneath the umbrella term 'mental health problems' sits a wide array of very different conditions. This includes various kinds of depressive and anxiety disorders, psychoses such as schizophrenia, eating disorders, personality disorders, neurocognitive disorders such as dementias or delirium, and substance abuse disorders. Forms of integration

Prevention / public health	1. Incorporating mental health into public health programmes 2. Health promotion and prevention of physical ill health among people with severe mental illnesses
General practice	3. Improving management of 'medically unexplained symptoms' in primary care 4. Strengthening primary care for people with severe mental illnesses
Chronic disease management	5. Supporting the mental health of people with long term conditions 6. Supporting the mental health of carers
Hospital care	7. Mental health liaison in acute general hospitals 8. Physical health liaison in mental health inpatient facilities
Community / social care	9. Integrated support for perinatal mental health 10. Supporting the mental health needs of people in residential homes

Fig. 43.1 Key areas where integration of physical and mental health is needed. *Source* Naylor et al. (2016)

that may be successful for one of these will not necessarily translate to another. However, there is enough commonality for a discussion of generic approaches and issues to be meaningful.

A distinctive feature of mental health is the degree to which needs are not currently met. For many mental health problems, this far exceeds levels of unmet needs observed in physical health—for example, even in high-income countries it is typical for less than half of those with depressive or anxiety disorders to be receiving any form of formal treatment, and in the case of alcohol and other substance abuse disorders the proportion is smaller still (Kohn et al. 2004). In this context, it is important to recognise that integration of mental health care into general health systems may lead to identification of previously unmet needs. This improvement in access to care is one of the potential benefits that a more integrated approach offers. However, it does also highlight the need to ensure that sufficient capacity exists to deal with new demand.

A significant issue in mental health is the paucity of high-quality data. In many countries, prevalence data is limited, and the nature of many mental health diagnoses and interventions makes outcome measurement intrinsically difficult. This lack of reliable data adds to the challenges involved in planning new, integrated approaches to care. It is no coincidence that some of the most successful examples of integrated mental and physical health care have made significant investments in building robust, shared data systems.

43.1.2 Patient Factors

One of the most important clinical consequences of comorbid mental health problems is the impact on self-care and self-management. A cornerstone of integrated care is the principle that chronic diseases are managed most effectively when patients take an active role in this themselves. Comorbid mental health problems can significantly reduce a person's ability and motivation to manage their physical health. For example, diabetic self-care, medication adherence and health behaviours (e.g. diet, exercise, smoking) are significantly poorer among people who also have depression (Lin et al. 2004; Egede et al. 2009). Clinicians may need to adopt different consultation techniques to help motivate and support people with mental health problems to look after their physical health. However, there is evidence that self-management programmes and lifestyle interventions can be effective for this group, particularly when adapted to the specific needs of people with mental health problems (Cimo et al. 2012).

A challenge for clinicians working in this area is the multiple and diverse understandings that patients may have of the relationship between their mental and physical health. The sensitivities around this require particular skill in the case of medically unexplained symptoms. People experiencing physical symptoms which may be highly painful and debilitating should not be given the impression that a clinician believes their symptoms are 'all in the head'. Introducing the notion that physical symptoms and mental health are closely intertwined takes a high level of

clinical skill and sensitivity, and professionals may require training in specific techniques that can be used to discuss the psychological aspects of health without undermining the physical reality of symptoms.

43.1.3 Professional Factors

The trend for increasing sub-specialisation in medical education reinforces the notion that some clinicians are responsible for the body, while others are responsible for the mind. In most countries, there is little or no mandatory mental health training in the core educational curricula for general practitioners, acute physicians or nurses. Where mental health rotations are available, these are often in acute psychiatric facilities and fail to provide trainees with exposure to mental health in a form that will be relevant to general healthcare settings. Similarly, many mental health professionals report feeling under-confident in relation to even basic aspects of physical health care, such as measuring blood pressure.

While the issue of skills is important, a more fundamental challenge is the existence of deeply engrained attitudinal barriers and a restrictive understanding of the boundaries of professional responsibility. Integrating physical and mental health care requires that professionals on either side of the 'divide' see themselves as being responsible for health, in the fullest sense of the word. This does not mean that all professionals need to become mental health experts, but it does mean that the culture of seeing mental health as something distinct and separate from the rest of health care needs to change. Part of the challenge here will involve acknowledging and confronting the stigma that still exists around mental health, and related issues regarding the relative status of mental health professionals.

43.1.4 Institutional and System Factors

Physical and mental health care is often, although not always, provided by separate organisations. While integration at the organisational level is neither necessary nor sufficient for integration at the clinical or service level (Curry and Ham 2010), this institutional separation does create some specific barriers. For example, the impact of some attempts to deliver more integrated services has been reduced as a result of separate and incompatible IT systems being used in physical and mental healthcare providers. A specific example of this is that liaison psychiatrists working in acute hospital settings (but employed by a separate mental health provider) are not always able to access the medical records used by other staff in the hospital.

Separate reimbursement systems can also create a barrier to integration. For example, in the UK most physical health care is reimbursed through activity-based payment, whereas mental health providers are paid largely through a single block contract covering the full set of services they provide. Financial incentives to integrate physical and mental health care more closely are often weak, with the costs and benefits of integration accruing to different budget-holders.

New provider models such as accountable care organisations potentially offer a way of overcoming this institutional separation and creating financial incentives to manage physical and mental health together. However, it appears that in the USA this opportunity has not yet been widely embraced, with few accountable care organisations pursuing innovative service models that integrate mental health care with general health systems (Lewis et al. 2014).

43.2 Goals of Integrated Physical and Mental Health Care

As discussed in the introduction, the rationale for integrating physical and mental health care is founded on evidence demonstrating that treating physical and mental health separately leads to poor outcomes for patients and unnecessary expense for health systems. The overall goal of integrated physical and mental health care should be to overcome this separation in such a way that there is improvement in terms of both outcomes and costs. Figure 43.2 provides a more detailed analysis of what some of the specific goals might be, in terms of clinical practice, health outcomes, professional skills and attitudes, and healthcare utilisation.

43.3 Key Components of Integrated Physical and Mental Health Care

43.3.1 Collaborative Care

Improving support for the mental health and psychological aspects of physical illness cannot mean treating a large number of additional people within specialist mental health services; an expansion along these lines would be both unaffordable and undesirable. Instead, a primary care-based approach is needed. The best-developed model available for this is collaborative care.

Collaborative care is a model for managing patients with chronic conditions in primary care that has been extensively tested in a number of countries. A major focus has been on using collaborative care to improve support for people with comorbid physical and mental health problems. The core components of collaborative care are:

- Proactive management of physical and mental health conditions by a non-medical case manager, working closely with a GP and/or other primary care staff
- Regular supervision meetings involving the case manager, primary care staff and a mental health specialist, in which new cases and progress made by existing patients are reviewed
- Use of standardised treatment protocols by the case manager

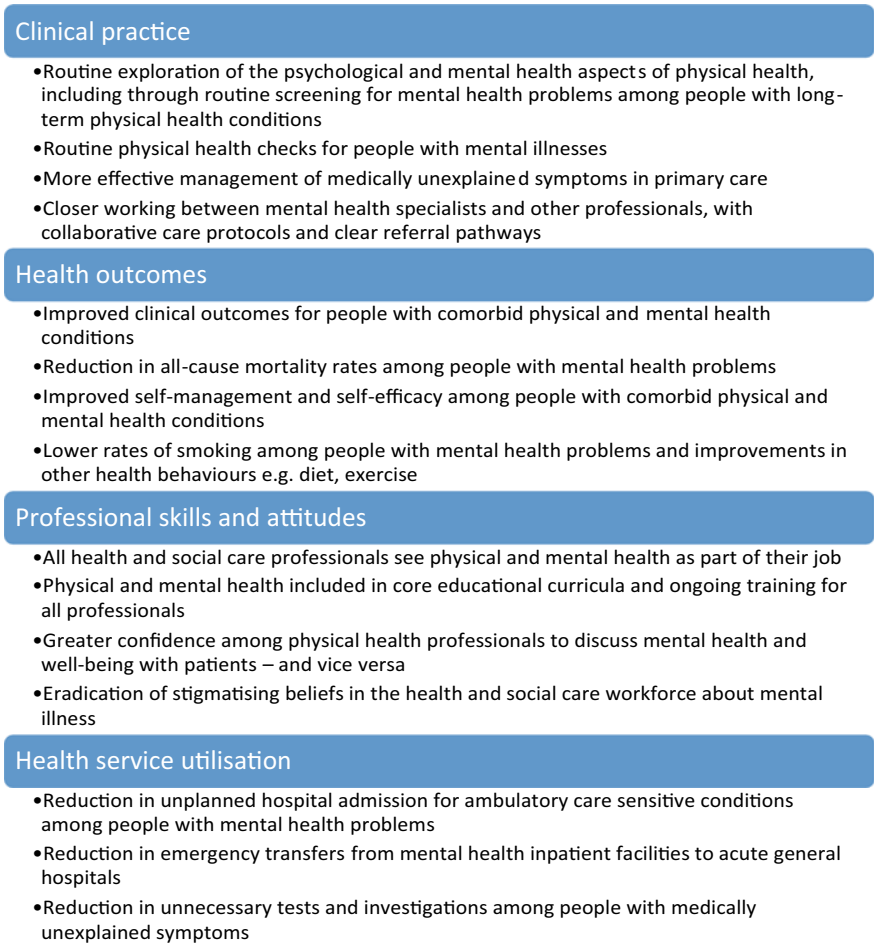

Fig. 43.2 Goals of integrated physical and mental health care

- Active exploration of the interaction between mental well-being and physical conditions by the case manager
- In some cases, case managers may also be trained to deliver brief psychological interventions
- A focus on education and skills transfer among the different professionals involved in the collaborative care process.

Collaborative care is often delivered within a stepped-care framework, with escalation to more specialist support where required. For example, NICE recommends the use of collaborative care for people with moderate to severe depression alongside a chronic physical health condition, particularly in cases where the

depression has not responded to initial psychological or pharmacological treatment, but is not considered sufficiently severe to warrant a referral to specialist mental health services (NICE 2009).

The collaborative care model has been used both in multi-provider systems and within the context of integrated delivery systems. In the USA, the principles of collaborative care have been used by organisations such as Intermountain Health Care (see Box 43.1), the Veterans Health Administration and Kaiser Permanente as part of major integrated care programmes seeking to integrate mental health services into primary care. Collaborative care approaches have also been used in Europe, for example, in the UK (Coventry et al. 2015), Italy (Rucci et al. 2012) and the Netherlands (Goorden et al. 2015), and in some lower- and middle-income countries, for example, through the 'PRIME' and 'Emerald' research programmes (see https://www.prime.uct.ac.za/ and https://www.emerald-project.eu/).

The principles of collaborative care have been adapted for use in other settings outside of primary care. For example, there is some evidence indicating that collaborative care can be successfully used in obstetrics and gynaecology clinics for managing depression during the perinatal period (Katon et al. 2015).

Box 43.1 Case Study: Mental Health Integration in Intermountain Health Care

In the early 2000s, primary care practitioners in Intermountain Health Care, a non-profit health system operating in Utah and Idaho, USA, identified a need for a more effective way of supporting the large number of people presenting with mental health needs, often alongside a mixture of physical illness, substance abuse problems and complex social circumstances. In response to this, Intermountain developed a mental health integration (MHI) programme, which has now been rolled out in the majority of primary care clinics.

The MHI programme involves primary care practitioners accepting an increased responsibility for providing mental health, with the support of an enhanced multidisciplinary team embedded in primary care. Key elements of the model include:

- Team-based care with mental health professionals embedded in the primary care team, including input from psychiatry, psychology, psychiatric nursing and social work
- A nurse care manager to coordinate medical, psychological and social support
- Significant investments in training practice staff (including physicians, nurses, receptionists and others) in mental health awareness, empathic communication skills and shared-decision making
- Shared electronic medical records accessible by all team members
- Proactive screening for mental health problems among high-risk groups in the population
- Supported self-management of physical and mental health
- Making use of extended community resources and peer support

- Using disease registries and evidence-based guidelines
- Exploiting new technologies, e.g. telehealth and telecare

Under MHI, mental health care is delivered through a stepped-care approach, with the balance of responsibilities between primary and specialist care depending on the level of complexity. Overall, around 80% of mental health care is delivered by non-specialists. Evaluations of the model have found significant improvements in both physical and mental health outcomes, better self-management and lower per patient medical costs (Reiss-Brennan et al. 2010).

43.3.2 Multidisciplinary Case Management

Community-based multidisciplinary teams are a key mechanism for coordinating the care provided to people with multiple or complex chronic diseases. Successful integration of physical and mental health care requires that mental health is fully embedded within these teams. A number of different approaches towards this have been tried, some of which are disease-specific whereas others cut across multiple diseases.

Disease-specific approaches include multidisciplinary teams established to respond to the physical and mental health needs of people with diabetes. For example, as part of an integrated care programme in North West London, liaison psychiatrists attend a regular multidisciplinary case conference at which the needs of people who are struggling to manage their diabetes are discussed. An evaluation found that mental health issues were discussed in over 80% of all cases brought to these meetings, with the impact of mental well-being on self-management being a particularly common theme (Sachar 2012). Another successful example of multidisciplinary care for the physical and mental aspects of long-term conditions is the 'three dimensions for diabetes' service (see case study in Box 43.2 below).

An alternative to the disease-specific approach is to use multidisciplinary team meetings to discuss patients identified as being at greatest risk of unplanned hospital admission (generally through the use of a risk prediction algorithm). Again, it is important that input from mental health specialists is an integral part of this approach. An example is the 'extensive care' model. In this, a dedicated primary care clinic exists (often virtually) to provide intensive, multidisciplinary case management to the highest need patients in a defined locality. This model has so far been used largely for frail older people, but its applicability to other multi-morbid patients, including those with co-occurring physical and mental health problems, is now being tested. For example, as part of the 'vanguard' integrated care programme in England, an extensive care service has recently been established in Blackpool focusing on people with complex mental health problems, substance abuse issues

and other problems including co-morbid physical health conditions. The effectiveness of these approaches still requires evaluation.

Box 43.2 Case Study: Three Dimension of Care for Diabetes

'Three dimension of care for diabetes' (3DFD) was an award-winning service in an inner-city area of London, UK, which provided integrated care for the physical, mental and social aspects of diabetes. The service was specifically targeted at people with poor glycaemic control, and served a highly mixed population, including many people with multiple complex co-morbid conditions and high levels of social deprivation. More recently, the 3DFD service has evolved into a broader service aimed at people with other conditions beyond diabetes, and is now known as 'three dimensions for long-term conditions'.

While inclusion of a mental health professional in multidisciplinary team meetings is increasingly common in diabetes care, the 3DFD model went further than most by having a wider range of mental health professionals fully integrated in the team and including the social dimension of support. Alongside diabetologists and diabetes nurses, the team included a psychiatrist, psychologists and social support workers. This allowed the team to provide support to people with a wider range of mental health problems—not only mild-to-moderate depression or anxiety, but also severe depression, psychosis, eating disorders or dementia.

The team provided brief psychological therapies as well as interventions targeting social problems, such as issues with housing, debt management, carer support or domestic violence. In addition to seeing patients directly, an important part of the role of mental health staff in the 3DFD team was to provide formal and informal training to diabetes physicians and nurses, for example in motivational interviewing techniques, basic principles of cognitive behavioural therapy, and general training in mental health.

An evaluation of 3DFD found significant improvements in glycaemic control, reduced psychological distress and a reduction in emergency attendances and unscheduled admissions.

43.3.3 Liaison Mental Health

Liaison psychiatrists, and related professionals such as liaison nurses and clinical health psychologists, are experts in the interface between mental and physical health. These professionals are most commonly employed in acute hospital settings, often as part of liaison psychiatry or psychological medicine teams. These teams perform a vital function in identifying mental health needs among people attending

emergency departments, outpatient clinics or using inpatient services, and ensuring that appropriate support is then available to meet these needs.

Mental health problems are highly prevalent in hospital settings, and the need for high-quality liaison mental health services is clear. It is therefore regrettable that the provision of these services is often highly variable. Guidance for commissioners of liaison mental health services suggests that the following standards should be met (JCPMH 2013):

- Liaison services should be comprehensive, with clear and explicit responsibility for all patients in acute hospital settings.
- Liaison services should cover all ages, including children, adults and older people.
- Part of the role of liaison clinicians should be to build capacity within the wider hospital workforce, for example, by improving the mental health skills of nurses.
- There should be a single integrated set of healthcare notes.
- Integrated governance arrangements should exist to allow the liaison team to work closely with the acute hospital.
- There should be capability for providing a range of interventions including brief psychological therapy.
- Liaison teams should have strong links with specialist mental health services in the community and good knowledge of local resources
- Liaison clinicians should be able to assess physical health as well as mental health.

In some cases, liaison mental health services have extended their focus beyond acute hospitals, becoming involved in supervisory and direct clinical activities in primary care and other community settings (including through collaborative care models and multidisciplinary locality teams, as described above). This is a promising development and particularly relevant to the care of people with ongoing needs likely to continue beyond their hospital stay, such as those with long-term conditions or medically unexplained symptoms.

43.3.4 Managing Medically Unexplained Symptoms in Primary Care

A critical aspect of effective care for people with medically unexplained symptoms is the quality and style of communication between professionals and patients. Clinicians need to strike a delicate balance, introducing people to new ways of understanding their symptoms without challenging the reality of their experience. Techniques such as motivational interviewing can provide a useful framework for consultations.

Some psychological therapies, in particular cognitive behavioural therapy, have been shown to be effective and cost-effective interventions for people with medically unexplained symptoms (van Dessel et al. 2014; Konnopka et al. 2012). One

benefit is that these can have the effect of improving the patient's 'psychological literacy' such that their readiness to engage in discussions with their GP about the psychological aspects of their symptoms is subsequently improved. Psychological therapies and other interventions for medically unexplained symptoms can be delivered in primary care through stepped-care approaches (Guthrie 2008).

The challenges of working with people experiencing medically unexplained symptoms mean that educational interventions aimed at GPs and other primary care staff are often particularly valuable. A 'primary care psychotherapy consultation service' provided to GPs in the City and Hackney area of London is one example of an innovative service that combines an educational function with direct clinical work. An evaluation suggested the service has both delivered results for patients and been positively received by the local GP community (Parsonage et al. 2014)—see Naylor et al. (2016) for a detailed case study.

43.4 Results of Integrated Care Approaches

Integration of physical and mental health is a new frontier for integrated care and is an area where further evaluative studies are needed. However, in some areas a significant body of research already exists, and the evidence that is available suggests that there are significant opportunities both for quality improvement and potentially for improving the cost-effectiveness of care.

Collaborative care is one area where the evidence base is relatively well established. Studies such as the TEAMcare trial in the USA (Rosenberg et al. 2014) and the COINCIDE trial in the UK (Coventry et al. 2015) have found that collaborative care interventions can improve recovery from depression among people with diabetes and/or coronary heart disease, at the same time as improving self-management of physical health. This was also the conclusion of a systematic review conducted by Huang et al. (2013). Collaborative care also appears to be highly cost-effective and potentially cost-reducing (Katon et al. 2008, 2012; Simon et al. 2007).

Liaison psychiatry has received significant recent interest in the UK, partly in response to the impressive findings of an economic evaluation of a 'rapid assessment interface discharge' (RAID) service in Birmingham. Parsonage and Fossey (2011) found that by facilitating early discharge from hospital and reducing rates of readmission (particularly among older people), the value of reduced bed use within the acute hospital exceeded the costs of the RAID service by a factor of more than 4 to 1.

Similarly, there is evidence of significant potential benefits to both patients and the system stemming from embedding mental health specialists within chronic disease management programmes. There is particularly good evidence of the benefits of including a psychological component within pulmonary and cardiac rehabilitation programmes. For example, a systematic review found that psychological interventions for people with coronary heart disease led to improvements in

depression and anxiety, and also a small reduction in cardiac mortality. However, it also concluded that more research is needed to establish which patient groups benefit most and what the core components of effective interventions should be (Whalley et al. 2014). There is some evidence that integrated psychological support can reduce costs related to conditions such as COPD (Howard et al. 2010) and angina (Moore et al. 2007).

43.5 Lessons Learned

It is clear that in the absence of integrated care, the interaction between physical and mental ill health can lead to significantly poorer health outcomes, reduced quality of life and increased costs to the healthcare system. The prevailing approach to dealing with chronic disease is at risk of failing unless it is recognised that many of the people most in need of integrated care have comorbid psychological or mental health problems that can impair their ability and motivation to self-manage. Care for large numbers of people could be improved by better integrating mental health support within primary care, acute hospital care and chronic disease management programmes.

Fundamentally, integrating physical and mental health care involves redrawing professional boundaries, such that all practitioners working in health and social care accept their role as de facto mental health professionals. Similarly, mental health specialists should see physical health and well-being as part of their responsibility. For many, this poses a significant cultural change as well as a technical one. It will therefore require skilled and committed leadership, and new forms of integrated training and education.

Naylor et al. (2016) discuss the practical lessons learned from the process of implementing integrated service models for physical and mental health in the UK. A key finding is that innovation has often been driven by individual clinical champions working, at least initially, in relative isolation from the rest of the system. To be sustainable, the work of these clinical innovators needs to receive support from senior leaders within local organisations and must be reinforced by consistent messages from this leadership. Without this, there is little hope of widespread cultural change taking place. A powerful catalyst for cultural change is direct contact between professionals working in different parts of the system—specifically, those traditionally responsible for physical health and those specialising in mental health. Given this, the service models which have the greatest potential may be those which combine direct clinical work with joint supervision and educational functions, creating opportunities (formal and informal) for skills transfer between mental and physical healthcare professionals.

Integration of physical and mental health care should be seen as a core component of any integrated care programme. This important aspect of integrated care has often received insufficient attention in the past and should be a priority for research and service improvement in future.

References

Barnett, K., Mercer, S. W., Norbury, M., Watt, G., Wyke, S., & Guthrie, B. (2012). Epidemiology of multimorbidity and implications for health care, research, and medical education: A cross-sectional study. *The Lancet, 380*(9836), 37–43.

Bermingham, S. L., Cohen, A., Hague, J., & Parsonage, M. (2010). The cost of somatisation among the working-age population in England for the year 2008–2009. *Mental Health in Family Medicine, 7*(2), 71–84.

Blumenthal, J. A., Lett, H. S., Babyak, M. A., White, W., Smith, P. K., Mark, D. B., et al. (2003). Depression as a risk factor for mortality after coronary bypass surgery. *The Lancet, 362*(9384), 604–609.

Cimo, A., Stergiopoulos, E., Cheng, C., Bonato, S., & Dewa, C. S. (2012). Effective lifestyle interventions to improve type II diabetes self-management for those with schizophrenia or schizoaffective disorder: A systematic review. *BMC Psychiatry, 12,* 24.

Coventry, P., Lovell, K., Dickens, C., Bower, P., Chew-Graham, C., McElvenny, D., et al. (2015). Integrated primary care for patients with mental and physical multimorbidity: Cluster randomised controlled trial of collaborative care for patients with depression comorbid with diabetes or cardiovascular disease. *British Medical Journal, 350,* h638.

Curry, N., & Ham, C. (2010). *Clinical and service integration. The route to improved outcomes*. London: The King's Fund.

Davydow, D. S., Katon, W. J., Lin, E. H., Ciechanowski, P., Ludman, E., Oliver, M., & Von Korff, M. (2013). Depression and risk of hospitalizations for ambulatory care-sensitive conditions in patients with diabetes. *Journal of General Internal Medicine, 28*(7), 921–929.

Dorning, H., Davies, A., & Blunt, I. (2015). *Focus on: People with mental ill health and hospital use. Exploring disparities in hospital use for physical healthcare. Research summary*. London: The Health Foundation and Nuffield Trust.

Egede, L. E., Ellis, C., & Grubaugh, A. L. (2009). The effect of depression on self-care behaviors and quality of care in a national sample of adults with diabetes. *General Hospital Psychiatry, 31*(5), 422–427.

Goorden, M., Huijbregts, K. M., van Marwijk, H. W., Beekman, A. T., van der Feltz-Cornelis, C. M., Hakkaart-van Roijen, L. (2015). Cost-utility of collaborative care for major depressive disorder in primary care in the Netherlands. *Journal of Psychosomatic Research, 79*(4):316–323. pii: S0022-3999(15)00469-9.

Guthrie, E. (2008). Medically unexplained symptoms in primary care. *Advances in Psychiatric Treatment, 14*(6), 432–440.

Herrman, H., Saxena, S., & Moodie, R. (2005). *Promoting mental health. Concepts, emerging evidence, practice*. Geneva: World Health Organisation.

Howard, C., Dupont, S., Haselden, B., Lynch, J., & Wills, P. (2010). The effectiveness of a group cognitive-behavioural breathlessness intervention on health status, mood and hospital admissions in elderly patients with chronic obstructive pulmonary disease. *Psychology, Health and Medicine, 15*(4), 371–385.

Huang, Y., Wei, X., Wu, T., Chen, R., & Guo, A. (2013). Collaborative care for patients with depression and diabetes mellitus: A systematic review and meta-analysis. *BMC Psychiatry, 13,* 260.

Joint Commissioning Panel for Mental Health. (2013). *Guidance for commissioners of liaison mental health services to acute hospitals*. London: Joint Commissioning Panel for Mental Health.

Junger, J., Schellberg, D., Muller-Tasch, T., Raupp, G., Zugck, C., Haunstetter, A., et al. (2005). Depression increasingly predicts mortality in the course of congestive heart failure. *European Journal of Heart Failure, 7*(2), 261–267.

Katon, W., Russo, J., Lin, E. H., Schmittdiel, J., Ciechanowski, P., Ludman, E., et al. (2012). Cost-effectiveness of a multicondition collaborative care intervention: A randomized controlled trial. *Archives of General Psychiatry, 69*(5), 506–514.

Katon, W., Russo, J., Reed, S. D., Croicu, C. A., Ludman, E., LaRocco, A., & Melville, J. L. (2015). A randomized trial of collaborative depression care in obstetrics and gynecology clinics: Socioeconomic disadvantage and treatment response. *The American Journal of Psychiatry, 172*(1), 32–40.

Katon, W. J., Russo, J. E., Von Korff, M., Lin, E. H. B., Ludman, E., & Ciechanowski, P. S. (2008). Long-term effects on medical costs of improving depression outcomes in patients with depression and diabetes. *Diabetes Care, 31*(6), 1155–1159.

Kirmayer, L. J., Groleau, D., Looper, K. J., & Dao, M. D. (2004). Explaining medically unexplained symptoms. *Canadian Journal of Psychiatry, 49*(10), 663–672.

Kisely, S., Smith, M., Lawrence, D., Cox, M., Campbell, L. A., & Maaten, S. (2007). Inequitable access for mentally ill patients to some medically necessary procedures. *Canadian Medical Association Journal, 176*(6), 779–784.

Kohn, R., Saxena, S., Levav, I., & Saraceno, B. (2004). The treatment gap in mental health care. *Bulletin of the World Health Organization, 82*(11), 858–866.

Konnopka, A., Schaefert, R., Heinrich, S., Kaufmann, C., Luppa, M., Herzog, W., & König, H. H. (2012). Economics of medically unexplained symptoms: A systematic review of the literature. *Psychotherapy and Psychosomatics, 81*(5), 265–275.

Laursen, T. M., Nordentoft, M., & Mortensen, P. B. (2014). Excess early mortality in schizophrenia. *Annual Review of Clinical Psychology, 10,* 425–448.

Lesperance, F., Frasure-Smith, N., Talajic, M., & Bourassa, M. G. (2002). Five-year risk of cardiac mortality in relation to initial severity and one year changes in depression symptoms after myocardial infarction. *Circulation, 105*(9), 1049–1053.

Lewis, V. A., Colla, C. H., Tierney, K., Van Citters, A. D., Fisher, E. S., & Meara, E. (2014). Few ACOs pursue innovative models that integrate care for mental illness and substance abuse with primary care. *Health Affairs (Millwood), 33*(10), 1808–1816.

Lin, E. H., Katon, W., Von Korff, M., Rutter, C., Simon, G. E., Oliver, M., et al. (2004). Relationship of depression and diabetes self-care, medication adherence, and preventive care. *Diabetes Care, 27*(9), 2154–2160.

Moore, R. K., Groves, D. G., Bridson, J. D., Grayson, A. D., Wong, H., Leach, A., et al. (2007). A brief cognitive-behavioural intervention reduces admission in refractory angina patients. *Journal of Pain and Symptom Management, 33*(3), 310–316.

National Institute for Health and Clinical Excellence (NICE). (2009). *Depression in adults with chronic physical health problems: Treatment and management (Clinical Guideline 91)*. London: National Clinical Guideline Centre.

Naylor, C., Das, P., Ross, S., Honeyman, M., Thompson, J., & Gilburt, H. (2016). *Bringing together mental and physical health: A new frontier for integrated care*. London: The King's Fund.

Naylor, C., Parsonage, M., McDaid, D., Knapp, M., Fossey, M., & Galea, A. (2012). *Long-term conditions and mental health: The cost of co-morbidities*. London: The King's Fund.

Park, M., Katon, W. J., & Wolf, F. M. (2013). Depression and risk of mortality in individuals with diabetes: A meta-analysis and systematic review. *General Hospital Psychiatry, 35*(3), 217–225.

Parsonage, M., & Fossey, M. (2011). *Economic evaluation of a liaison psychiatry service*. London: Centre for Mental Health.

Parsonage, M., Hard, E., & Rock, B. (2014). *Managing patients with complex needs*. London: Centre for Mental Health.

Reid, S., Wessely, S., Crayford, T., & Hotopf, M. (2001). Medically unexplained symptoms in frequent attenders of secondary health care: Retrospective cohort study. *British Medical Journal, 322*(7289), 767.

Reiss-Brennan, B., Briot, P. C., Savitz, L. A., Cannon, W., & Staheli, R. (2010). Cost and quality impact of Intermountain's mental health integration program. *Journal of Healthcare Management, 5*(2), 97–113.

Rosenberg, D., Lin, E., Peterson, D., Ludman, E., Von Korff, M., & Katon, W. (2014). Integrated medical care management and behavioral risk factor reduction for multicondition patients: Behavioral outcomes of the TEAMcare trial. *General Hospital Psychiatry, 36*(2), 129–134.

Rucci, P., Piazza, A., Menchetti, M., Berardi, D., Fioritti, A., Mimmi, S., & Fantini, M. P. (2012). Integration between primary care and mental health services in Italy: Determinants of referral and stepped care. *International Journal of Family Medicine, 2012,* 507464.

Sachar, A. (2012). How important is mental health involvement in integrated diabetes care? The Inner North West London experience. *London Journal Primary Care, 5*(1), 63–67.

Simon, G. E., Katon, W. J., Lin, E. H. B., Rutter, C., Manning, W. G., Von Kroff, M., et al. (2007). Cost-effectiveness of systematic depression treatment among people with diabetes mellitus. *Archives of General Psychiatry, 64*(1), 65–72.

van Dessel, N., den Boeft, M., van der Wouden, J. C., Kleinsta¨uber, M., Leone, S. S., Terluin, B., Numans, M. E., van der Horst, H. E., & van Marwijk, H. (2014). Non-pharmacological interventions for somatoform disorders and medically unexplained physical symptoms (MUPS) in adults. *Cochrane Database of Systematic Reviews, 11*, CD011142.

Whalley, B., Thompson, D. R., & Taylor, R. S. (2014). Psychological interventions for coronary heart disease: Cochrane systematic review and meta-analysis. *International Journal of Behavioral Medicine, 21*(1), 109–121.