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Depression in the Context of Chronic and Multiple Chronic Illnesses

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1. Introduction

As an individual ages, the likelihood of living with a chronic illness increases. So too does the likelihood of a person living with multiple chronic illnesses. Current projections for ageing suggest that 25% of the populations of developed countries will be aged 65 years and over by the year 2050. Epidemiological research has identified that individuals living with chronic physical illnesses, such as heart disease, diabetes and respiratory diseases, are more likely to experience depression than those without chronic illness. These individuals experience worse quality of life, are more likely to be non-compliant with treatment regimens and more likely to suffer additional morbidity and premature mortality.

The impact of the interaction between chronic disease, disability and depression, therefore, is of increasing relevance in the pursuit of healthy ageing. In this chapter we will report findings from a review of the literature together with emerging findings from our own research program to highlight the epidemiology of depression and multi-morbidity, innovations in the management of persons living with multiple chronic illnesses and opportunities for improving the quality of mental health care for these people.

2. Epidemiology of chronic illness and depression

Chronic illnesses are the leading source of morbidity and mortality in developed nations. In the United States for example, nearly half of the US population experiences one or more chronic illnesses (Adams, Barnes et al. 2009) and chronic illnesses are among the leading causes of death (Kung, Hoyert et al. 2008). Likewise, mental health problems are common in the community and pose a significant burden of disease (Murthy, Bertolote et al. 2001). Of the mental health problems, depression is one of the most common mental health conditions experienced amongst populations, and is found in people of all regions, all countries and all societies (Murthy, Bertolote et al. 2001). The global burden of disease study estimated the 12 month prevalence of uni-polar depressive episodes to be between 5.8% and 9.5% (Murthy, Bertolote et al. 2001).

The incidence, prevalence and persistence of depression is not evenly distributed in the community. Depression is more common amongst those who are younger, female (Murthy, Bertolote et al. 2001), who have lower income or education (Lorant, Delliege et al. 2003;

Muntaner, Eaton et al. 2004; Melchior, Chastang et al. 2011), live in poverty or who live in poorer neighbourhoods (Murthy, Bertolote et al. 2001; Mair, Diez-Roux et al. 2008; Paczkowski and Galea 2010).

Another group that is particularly vulnerable to depression is those with chronic illness. There is now an extensive body of research documenting the epidemiology of chronic illness and depression. This is seen most clearly when comparing prevalence of depression in community settings where the prevalence is typically low (3%-5%) compared with primary care and inpatient settings where the prevalence is higher (5%-10% to 10%-14% respectively) (Katon 2003). Principally however, studies have reported increased prevalence of major depression in individuals diagnosed with specific medical illnesses such as cardiovascular disease (including myocardial infarct, stroke and cerebrovascular disease), type II diabetes, chronic obstructive pulmonary disease, arthritis and chronic pain, asthma and cancer (Lett, Blumenthal et al. 2004; Iosifescu 2007; Mezuk, Eaton et al. 2008; Patten, Williams et al. 2008; van der Feltz-Cornelis, Nuyen et al. 2010; Renn, Feliciano et al. 2011; Dong, Zhang et al. 2012).

The impact of co-occurring depression with chronic medical illness is significant. Once people develop chronic medical illness, depression is associated with increased symptom burden (perhaps arising from poorer adherence to treatment regimens and poorer perception of medical symptoms), additive functional impairment, greater medical utilisation costs and worse quality of life (Katon and Chiechanowski 2002; Katon 2011). Depressive disorders can adversely impact the course of medical illnesses (Benton, Staab et al. 2007) and recent evidence suggests that patients with depression die 5 to 10 years earlier than patients without depression (Chang, Hayes et al. 2010).

In the past decade, studies have identified depression as a risk factor for future chronic illness and not just arising from illness (Katon 2011). For example, Patten reported hazard ratios associated with major depression for several long term medical conditions identified as part of the Canadian National Public Health Survey(Patten, Williams et al. 2008). The age and sex adjusted risk of developing heart disease (1.6), arthritis/rheumatism (1.9), asthma (2.0) back pain (1.4), chronic obstructive pulmonary disease (2.4) and hypertension (1.7) were all statistically significantly raised for individuals with major depression at baseline, during the 8 year follow up period of the study.

It is increasingly clear that the relationship between chronic illness and depression is most likely bidirectional, whereby having depression increases risk of chronic illness, and conversely, having chronic illness increases risk of depression (Benton, Staab et al. 2007; Iosifescu 2007; Katon 2011; Renn, Feliciano et al. 2011). Conceptual models highlight the complex interactions between risk factors for major depression and chronic medical illness such as genetic and biological vulnerability, childhood adversity, stressful life events, and health risk behaviours such as smoking, sedentary lifestyle and over eating (Katon 2003; Katon 2011). While the mechanisms by which disease and depression interact are still to be resolved, it is clear that patients with chronic disease and comorbid anxiety or depression experience greater disease burden (Katon, Lin et al. 2007; Findley, Shen et al. 2011) and disability (Arnow, Hunkeler et al. 2006; Scott, Von Korff et al. 2009).

Most research investigating relationships between depression and chronic illness have focused on individual conditions and either exclude those patients with multiple chronic

illnesses or do not consider conditions together. However, as the population ages, there are increasing numbers of individuals living with more than one chronic illness, and studies are only now beginning to investigate the prevalence and impact of depression in patients with multimorbidity.

3. Definition and epidemiology of multimorbidity

The term 'multimorbidity' is often used to describe the presence of two or more chronic conditions in an individual (Batstra, Bos et al. 2002), in contrast to the term 'comorbidity', which is defined as the presence of any disease in addition to an 'index' disease under study (Feinstein, 1967, quoted in (de Groot, Beckerman et al. 2003)).

Practical application of the term 'multimorbidity' differs across the literature. In Marengoni et. al.'s (Marengoni, Angleman et al. 2011) thorough systematic review of the literature to date, three major operational definitions are described:

- Number of concurrent diseases in an individual – the definition most frequently used in epidemiological research, but which does not differentiate between patients living symptom-free and patients experiencing severe functional loss.
- Cumulative indices measuring both number and severity of conditions – used in clinical studies for identifying patients at risk of negative health outcomes.
- Cumulative effect of conditions, symptom burden, and cognitive and physical dysfunction – used where care needs and use of services are addressed.

Attempts to estimate the prevalence and patterns of multimorbidity have provided inconsistent results. Studies investigating multimorbidity have been conducted worldwide, including the Netherlands (van den Akker, Buntinx et al. 1998) Canada (Fortin, Bravo et al. 2005), Sweden (Marengoni, Winblad et al. 2008), Australia (Britt, Harrison et al. 2008), United States (Wolff, Starfield et al. 2002), and Ireland (Glynn, Valderas et al. 2011), producing prevalence estimates ranging from 64.7% to 98.7% of patients over 65, although prevalence tends to be lower amongst persons aged less than 65 (Taylor, Price et al. 2010). Differences in data collection methods, defining and scoring multimorbidity, categorising ages, and modelling of prevalence data, limit the extent to which these studies can be compared. Data drawn from administrative databases and surveys (van den Akker, Buntinx et al. 1998) presented a much lower prevalence of multimorbidity than data drawn from medical records (2005). Recent studies propose patient record review as the most accurate method of multimorbidity data collection (Glynn, Valderas et al. 2011), as databases and surveys may provide incomplete information. As yet no resolution to these confounding factors has been reached.

Most studies published to date tend to define and measure multimorbidity as a simple disease count, which does not reflect disease burden. However, scales such as the Charlson Comorbidity index (Charlson, Pompei et al. 1987), the Index of Co-Existent Diseases (ICED) (Greenfield, Apolone et al. 1993) and the Cumulative Illness Rating Scale (CIRS) (Linn, Linn et al. 1968) have been developed to provide a measure of severity in multimorbidity research. The Charlson index provides a weighted score on the basis of disease count and severity, the ICED includes disease count, severity and physical impairment, and the CIRS classifies diseases by organ domains and attributes a severity score to each. Where the CIRS

has been used in the literature, multimorbidity is defined as ...'the presence of illness in two or more morbidity domains' (pp73) (Britt, Harrison et al. 2008).

A systematic review of multimorbidity studies identified an inverse relationship between disease count and health-related quality of life (HRQOL), but the studies reviewed were limited by inconsistency of measures and definitions, and the absence of disease burden measures (Fortin, Lapointe et al. 2004). A recent study looking at multi-morbidity and self-rated health found that the effect of having a single chronic disease on perception of health was larger than the cumulative effect of chronic conditions, but that from the first disease onwards, multi-morbidity is associated with a smaller cumulative decline, suggesting that some form of adaptation occurs (Galenkamp and Braam et al. 2011). Whilst disease count has been associated with decline of physical functioning in both cross-sectional (Verbrugge, Lepkowski et al. 1989) and longitudinal (Kriegsman, Deeg et al. 2004) studies, disability has been found to be more predictive of mortality than disease count (Marengoni, von Strauss et al. 2009).

Disability has also been found to be more predictive of depression than age (Roberts, Kaplan et al. 1997). Roberts, Kaplan and Shema et al.' s (1997) analysis of the prevalence of major depressive episodes from the 1994 cohort of the Alameda County Study found that, when all risk factors were accounted for, age-related increases in depression were attributable to declines in physical health, physical function and perceptions of well-being. This finding, supported by subsequent research (Luszcz 2007), contradicts the assumption that depression is an inevitable effect of ageing, and highlights the impact of disease and disability on mental wellbeing.

While the relationship between disability and depression has been known for some time, few studies have investigated the occurrence of depression in people living with multimorbidy. An Australian study involving more than 7500 patients recruited from 30 General Practices found the prevalence of probable depression increased with increasing number of chronic physical conditions (Gunn, Ayton et al. 2010). For 2 conditions the age, sex and location adjusted odds of depression was 2.4 and for 5 or more conditions it was 3.45.

Another study of primary care patients reported increased psychological distress amongst 238 patients in Quebec, Canada. Multivariate analyses showed that psychological distress was increased when multimorbidity was measured by a simple illness count, but was significantly greater when measured using the CIRS. The risk of psychological distress was almost 5 times in the group with the highest burden of disease.

4. Challenges in management of the patient with multimorbidity and depression

A number of challenges have been identified in the treatment of the patient with co-morbid depression and chronic illness (Cimpean and RE. 2011; Katon 2011), however, while high quality trials of antidepressant treatments and psychotherapies demonstrate the effectiveness of these treatments in depressed medically ill patients, the efficacy of these treatments is lower in this population than in depressed individuals who are not medically ill (Iosifescu 2007). More intensive collaborative treatments that include antidepressants,

psychotherapy, education and case management can be effective in this patient group (Iosifescu 2007).

But what of the patient with multimorbidity? Although the effect of depression on patterns of treatment, expenditures and outcomes for chronic medical conditions has received significant attention, the impact of multimorbidity on the treatment of depression is only now being investigated. It might be expected that additional challenges will present themselves in the identification of the depression, particularly in elderly patients, and the treatment of the depression in multimorbid patients. These challenges are outlined in further detail below.

4.1 Identification of depression in the elderly, multimorbid patient

A worldwide study conducted by the World Health Organisation (WHO) found that depression occurs more frequently in people with a chronic condition (Moussavi, Chatterji et al. 2007). Depression is also associated with increased risk of the development of other health conditions and increased symptom burden (Katon, Lin et al. 2007); therefore, timely detection and management of depression should be a priority where chronic illness is present.

At the frontline of mental health medicine, GPs struggle to detect and diagnose clinical depression in older patients. Depressive symptom presentation differs in older adults as compared with younger adults. Older patients suffering from depression will complain of irritability or feeling down, or admit to having lost interest in previously pleasurable activities (Mulsant and Ganguli 1999), but more often experience depression in a somatic form. The denial of psychological symptoms whilst emphasising physical symptoms is referred to as 'somatisation' (Lipowski 1988). A study of Canadian GPs found that the style of clinical presentation strongly affected clinician detection of depression in patients presenting with physical symptoms of depression (Kirmayer, Robbins et al. 1993). Complicating the presentation of depressive illness is the higher likelihood of older patients experiencing chronic disease, loss of function, and pain, where symptoms such as low energy, poor appetite, weight loss or cognitive decline may be related to depression, or disease, or both (Mulsant and Ganguli 1999). Chronically ill patients may also complain of medically unexplained symptoms or higher levels of pain (Katon, Lin et al. 2007). Consequently, where a chronic disease is present, depression is at risk of being undiagnosed or untreated (Redelmeier, Tan et al. 1998).

Differentiating between depression and other psychological and social problems continues to pose a challenge even after GP education has occurred. After ten years of education and guidelines, GPs in the Netherlands still struggled to differentiate depression from social problems in patients over 55 (Volkers, Nuyen et. al. 2004). Justification of the presence of depression further complicates diagnosis, as identified by a recent meta-synthesis of papers addressing GP depression diagnosis in the United Kingdom (Barley, Murray et al. 2011). Where social or physical circumstances were viewed as justifying the presence of depression, some clinicians were found to take a 'normalising' approach to the patient's depressive symptoms. Reluctant to medicalise social problems, these clinicians struggled to differentiate between distress and clinical depression (Barley, Murray et al. 2011). This poses a risk for clinicians who view depression in multimorbid patients as a natural response to

illness and disability, as they may fail to recognise clinical depression and consequently withhold treatment by normalising and justifying patient depression.

Grief further complicates depression diagnosis. Older patients face the loss of spouses and peers, and although a grief reaction may take the appearance of a depressive episode (1994), in a healthy grief process the bereaved moves from acute grief to a state of integration and recovery of pleasure in life (Zisook and Shear 2009). Where acute grief lingers and becomes pathological, however, clinicians may misattribute and normalise symptoms of depression in bereaved patients, and inadvertently deprive patients of treatment (Zisook and Shear 2009). Pathological grief and bereavement-related depression have been identified as unique conditions separate from major depression (Prigerson, Bierhals et al. 1996), and have also been differentiated from major depressive disorder in the elderly (Kim and Jacobs 1991; Prigerson, Bierhals et al. 1996).

Scales like the Geriatric Depression Scale (Yesavage, Brink et al. 1983), the Beck Depression Inventory (Beck, Steer et al. 1996), and the Hospital Anxiety and Depression Scale (Zigmond and Snaith 1983), have been developed using criteria drawn from the DSM-IV to assist with the identification and diagnosis of depression. As yet, no validation of any of these scales has been attempted in multimorbid patient groups; this raises concerns about their reliability where depressive symptoms overlap with symptoms of disease (McFarlane, Ellis et al. 2008), particularly where somatic symptoms are addressed in the scale questionnaire. Geriatric Depression Scale item #13 (Sheikh and Yesavage 1986), for example, asks, 'Do you feel full of energy?'. A negative answer to this question is attributed to depression, but in a patient experiencing one or more chronic conditions, a lack of energy could equally be a vicissitude of their illnesses or medications as a symptom of depression. In a recent study by the authors of this chapter, 77.8% of multimorbid participants interviewed using the GDS endorsed a lack of energy, with the high endorsement rate suggesting that this question may not be appropriate as a depression screening criterion in this population. Item #2 of the GDS may be similarly inappropriate for patients with multiple chronic conditions, as an endorsement of the question 'Have you dropped many activities or interests?' could also be attributable to disability due to disease. The Beck Depression Inventory (Beck, Steer et al. 1996) also relies on somatic symptoms to detect depression. Additionally, emotionally-dependent questions relating to feelings of sadness, worthlessness or suicidality may not be useful where patients deny psychological symptoms. The Hospital Anxiety and Depression Score's exclusion of somatic symptoms gives it a higher degree of face validity, but no validation of the Hospital Anxiety and Depression Score in the multimorbid population has yet been published.

5. Treatment of depression

Once diagnosed with depression, depression can remain untreated for a variety of reasons such as competing demands on the time spent in consultation, patient resistance to discussing the depression or accepting treatment, polypharmacy, fear of antidepressant side effects, and limited access to treatment and services.

Due to increasingly tight time limitations in general practice, when depression presents alongside multiple physical conditions, the treatment of physical conditions often takes precedence (Ford 2008). Where patients prioritise symptoms to maximise their limited

time with GPs, they may be unwilling to take time away from higher priority concerns to discuss their mental health; consequently, where physical symptoms are the patient's primary cause for concern, GPs may be unwilling to raise the issue of treatment for depression when patients have not complained about psychological suffering (Kendrick, Dowrick et al. 2009).

Patient acceptance of the diagnosis is a critical hurdle for general practitioners in providing depression treatment for older chronically ill patients, as many older patients deny or normalise depressive symptoms or attribute them to physical illness (Lipowski 1988; Mulsant and Ganguli 1999). Patient engagement is necessary for successful depression treatment (Zivin and Kales 2008), with general practitioners providing education and encouragement for patients to accept the need for some form of intervention.

5.1 Treatment: pharmacotherapy

Antidepressant treatment is the recommended first course of action in depression treatment (Montano 1999) and has good evidence of success in older patients (Frazer, Christensen et al. 2005). Antidepressant treatment remains the leading treatment mode in multimorbid patients, with one study in the United States identifying that amongst multimorbid adults with a diagnosis of depression, twice as many patients (56.2%) were prescribed antidepressants compared with those who received psychotherapy (21.4%). The remaining 22.5% received no treatment for depression (Vyas and Sambamoorthi 2011).

In patients with multiple chronic conditions, and particularly in elderly multimorbid patients, polypharmacy and medication side effects are salient concerns. Whilst software programs are available that support general practitioners attempting to navigate the minefield of multiple medication management, both patients and GPs are wary of disrupting a successful medication combination that may have taken some trial and error to reach. Even where GPs may be confident in their choice of antidepressant, patient anxiety around disrupting their medication plan may result in continued resistance to treatment.

Additionally, potential side effects of medications may exacerbate particular vulnerabilities in the elderly, such as dizziness increasing the risk of falls, and result in GP reluctance to prescribe and patient reluctance to trial them.

5.2 Non-compliance with medication

Even where GPs have prescribed an antidepressant, patient non-compliance presents a barrier to depression treatment. Zivin and Kales (Zivin and Kales 2008) observed that antidepressant medication non-adherence ranges from 40-75% in depressed elderly patients, identifying treatment preferences, resistance regarding depression's status as a medical illness, social support, cost of treatment and stigma as variables that effect non-adherence. Prior negative experiences, fear of adverse reactions, fear of antidepressant addiction, and polypharmacy also impacted negatively on medication adherence, as well as fear that the antidepressant would prevent the occurrence of natural sadness (Zivin and Kales 2008). Other studies have identified that expectation of positive benefits from taking medication, social support, and cognitive function are critical factors for antidepressant adherence, but

that the same factors are also negatively impacted on by depression (DiMatteo, Lepper et al. 2000).

5.3 Treatment: psychotherapy

There is a noticeable gap in the literature on the subject of multimorbidity and psychotherapy. Psychotherapy is often used in the management of pain (Turk, Wilson et al. 2011), and has been observed to occur in multimorbid patients (Vyas and Sambamoorthi 2011), but no research to date has examined psychotherapy techniques or efficacy in this population.

5.4 Other strategies: exercise

Exercise has been found to alleviate depressive symptoms and improve mood as well as physical health in depressed adults with and without a range of chronic diseases (Dinas, Koutedakis et al. 2011). No studies have yet addressed the efficacy of exercise in patients with multiple chronic conditions, but exercise appropriate to the patient's capability may alleviate depressive symptoms in this population.

5.5 Other strategies: socialisation strategies

Whilst a gap remains in the literature examining loneliness and depression in patients with multiple chronic conditions, physical incapacity to engage in previously enjoyed activities, tiredness resulting from illness, medication side effects or depression, and the deaths of peers or spouse, foster an environment in which loneliness can develop. Loneliness has been found to be associated with depression in a range of studies worldwide (Kara and Mirici 2004); consequently, interventions that encourage or facilitate social engagement are often recommended for depressed chronically ill patients.

6. Innovations in the treatment of multimorbidity and implications for mental health

As we have described in the previous section, there are a number of challenges in the treatment of the patient with multimorbidity. While Western medical systems and health care professionals struggled to adapt to the shift in disease burden from acute, primarily infectious disease to chronic illness through the second half of the 20th Century, now these systems of care need to adapt again to support the treatment of increasingly older patients with multiple chronic illness.

There is momentum now in the move away from traditional medical care models, where patients see specialists for care of individual conditions with limited or no interaction between care providers, towards a more collaborative, integrated model of care, where patients play a central role in decision making about their treatment.

To help improve chronic care, there is a need to strengthen the primary care system, encourage care coordination, and promote care management of high cost patients with complex conditions (Shea, Shih et al. 2008; Boult, Green et al. 2009).

Multidisciplinary approaches have been trialled and discussed in a range of health care settings, including maternity and child health services (Schmied, Mills et al. 2010), chronic headache care (Gaul, Bromstrup et al. 2011), community-dwelling elders (Vedel, De Stampa et al. 2009), eczema sufferers (van Gils, van der Valk et al. 2009) and has been found to optimise patient outcomes in palliative care for lung cancer (Borneman, Koczywas et al. 2008) and short bowel syndrome (Modi, Langer et al. 2008). The dynamics of multidisciplinary teams have been studied in post-cancer follow-up care (Leib, Cieza et al. 2011) and maternity care (McIntyre, Francis et al. 2011), as well as in a hospital setting (Hogan, Barry et al. 2011). A 2004 systematic review of systematic reviews of integrated care programs found that despite considerable heterogeneity of care models, integrated care programs improved fragmentation, continuity and coordination of care, and provided an overall improvement in patient care (Ouwens, Wollersheim et al. 2005).

Several successful models of care for older persons with chronic conditions have been evaluated, and a recent systematic review of models of comprehensive care for older adults with chronic conditions describes 15 of these (Boult, Green et al. 2009). The models primarily involved interdisciplinary primary care, or services that enhance traditional primary care (Boult, Green et al. 2009). However, community based approaches, such as chronic disease self-management, have also been found to be effective, including for patients with multimorbidity and depression (Harrison, Reeves et al. 2011)

As the first line of medical care, the role of coordinator of care often falls to primary care providers. This may prove problematic in complex patients, as complex patients frequently accessing specialty care have been found to experience less continuity of care with their primary care provider, suggesting that high use of specialist services may compromise the primary care provider's ability to provide adequate coordination of care (Liss, Chubak et al. 2011). Where complex patients receive large amounts of specialty care, it may be more effective to share coordination of care with other care providers; this could be achieved where the specialist is part of a multidisciplinary team.

Other solutions continue to emerge. For example, dedicated multidisciplinary clinics with the express goal of providing coordinated care to multimorbid patients are a fairly recent phenomenon that have been successful in improving coordination of care and patients outcomes in Ireland (Hogan, Barry et al. 2011), and such clinics have been implemented elsewhere.

The Multidisciplinary Ambulatory Consulting Service (MACS) clinic, operated out of the clinical pharmacology unit at the Royal Adelaide Hospital, South Australia, provides a useful model for multidisciplinary care for multimorbid patients with complex care needs. The MACS clinic team is comprised of several specialists, including a pharmacologist, cardiologist, and complex disease management specialists; registrars on rotation; pharmacists; and nurses. Patients are referred to a specific specialist in the clinic. Patients attending the clinic see first the nurse, who takes their weight and blood pressure measurements and discusses contextual stressors and potential support needs such as community services or domiciliary care. Patients then meet with the pharmacist, and bring all medications and other vitamins and supplements for the pharmacist to review. Patients

then meet with the specialist to whom they have been referred. After the clinic, the members of the team meet together to discuss patient needs, and collaborate on patient care plans. A detailed report is sent to the patient's primary care provider after each clinic visit.

An acknowledged limitation of the clinic in its current form is the absence of psychological or psychiatric care – a challenge that is frequently faced in primary care. Whilst many patients are burdened with comorbid mental health problems, recent research in the USA identified that the segregation of physical and mental health administration in Medicare is the greatest barrier to providing mental health care in a primary care setting (Kathol, Butler et al. 2010). This segregation is also present in health systems with Universal health care, such as Australia, which includes psychological therapy as an 'allied health' service as opposed to a general medical service, and limits the number of Medicare-subsidised psychological service visits to twelve. The administrative and ideological segregation between 'medical' care providers and 'allied health' providers presents a substantial barrier to integration of care (Kathol, Butler et al. 2010), particularly where multidisciplinary teams are in place to manage complex patients. As depression and anxiety increase with symptom burden (Katon, Lin et al. 2007; Findley, Shen et al. 2011), incorporation of mental health care into multidisciplinary models seems a logical step in the development of coordinated and integrated care. It is clear, however, that some ideological shifts may be required before such integration is possible.

7. Conclusion

A large body of research, spanning several decades, confirms that individuals with chronic illness are more likely to have depression than those without chronic illness. Research published in the past decade indicate that the relationship between chronic illness and depression is most likely bi-directional, and conceptual models are now emerging that help to explain the mechanisms underlying this bi-directional relationship.

As populations age, the number of people living with chronic illness, and increasingly, multiple chronic illness increases. Prevalence of depression is higher amongst patients with more functional disability and those with multiple chronic illness. There are additional challenges to treating depression amongst this group compared to those without chronic illness, or those with a single chronic illness, but systems and processes, such as coordinated care and multi-disciplinary clinics, are emerging to support health care providers to meet these challenges.

Few studies to date have investigated depression treatment in a specifically multimorbid patient population. A clearer understanding of the concerns and motivations of the patient with multiple chronic conditions will aid in developing treatment approaches appropriate for this population. Furthermore, many studies have maintained a pharmacological focus, leaving issues relating to nonpharmacological treatment and the patient's broader context largely unexplored. With the expanding multimorbid patient population and increased risk of depression in these groups, future high quality trials are needed to establish the most effective approaches to identification and treatment of depression in multimorbid populations.

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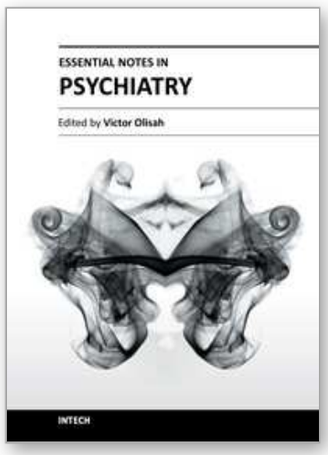
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Psychiatry is one of the major specialties of medicine, and is concerned with the study and treatment of mental disorders. In recent times the field is growing with the discovery of effective therapies and interventions that alleviate suffering in people with mental disorders. This book of psychiatry is concise and clearly written so that it is usable for doctors in training, students and clinicians dealing with psychiatric illness in everyday practice. The book is a primer for those beginning to learn about emotional disorders and psychosocial consequences of severe physical and psychological trauma; and violence. Emphasis is placed on effective therapies and interventions for selected conditions such as dementia and suicide among others and the consequences of stress in the workplace. The book also highlights important causes of mental disorders in children.

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