Primary Care Guidance: Treating Depression in People with Coronary Heart Disease (CHD)

KEY LEARNING POINTS

» Patients with long-term conditions, such as CHD, have a high prevalence of co-morbid depression and anxiety.

» Co-morbid depression leads to reduced quality of life and outcomes for the individual, and to increased healthcare use and costs.

» Depression in people with CHD may go undiagnosed and thus untreated: case-finding is a useful strategy in the primary care consultation.

» People with CHD and depression should be offered psychological treatment and/or antidepressants, depending on severity of the depression and patient preferences.

» Collaborative care is an evidence-based framework that has been shown to be effective for the treatment of people with depression and a long term physical illness.

Introduction

Depression affects about 20% of people with CHD, which may be associated with psycho-social issues around loss, and is linked to poor quality of life, outcomes and health service use. This fact sheet presents current knowledge about the links between CHD and depression, and best clinical practice.

Compared to people with CHD and no depression, those with depression are twice as likely to have further coronary events.
Depression increases the incidence of CHD in healthy people

• Depression in healthy people increases their risk of subsequently developing CHD by 60%, even after taking into account all the other known cardiac risk factors 2,3.

• There is a dose effect with clinical depression having a bigger risk of developing CHD than depressive symptoms alone, although the latter increase the risk by just under 50% 2.

Depression worsens cardiac prognosis

• Compared to people with CHD and no depression, those with depression are twice as likely to have further coronary events or die, and to have worse quality of life 4-6.

• Whilst the exact mechanisms are unproven, depression is associated with increased likelihood of smoking, less physical activity, poorer diet, and reduced adherence to treatments or rehabilitative programmes.

• Depression is also associated with increased platelet stickiness, reduced heart rate variability due to autonomic dysfunction, circulating inflammatory factors and dysregulation of the hypothalamic-pituitary-adrenal axis, all of which could lead to worse cardiac outcomes 7,8.

• People who develop depression after suffering an acute coronary syndrome (ACS) are at even greater risk of further cardiac events or death 5,11.

• Individuals with prominent physical symptoms of depression, such as fatigue, may be less likely to respond to active treatment 12 and more likely to have worse cardiac outcomes than others 13.

Depression often goes undetected and unmanaged

Patients’ tendency to use normalising attributional styles that see depression as a normal consequence of ill health, along with professionals’ conceptualisations of depression as justifiable and difficult to manage, especially in older adults, are implicated with under-detection and inadequate treatment of depression in patients with long-term conditions, such as cardiac disease, in primary care 14,15.

Barriers to optimal depression care in LTC care can partly be explained by the time limited nature of primary care where clinical decision making is often centred around prioritising competing patient demands. This is especially true in health care settings like the NHS where the management of LTCs is driven by guidelines and treatment algorithms that focus on single diseases. In these time-limited and highly structured environments, competing demands on health professionals’ time often leads to prioritisation of physical health problems. It should also be acknowledged that many people presenting to surgeons have depression, coronary heart disease or both. These conditions can reduce or delay people’s ability to recover from surgery.

The importance of case-finding

The use of case-finding questions (see box below) should be part of usual practice for GPs in consultations with people with long term conditions such as cardiac disease, or where the GP has a clinical suspicion that depression may be present.

Severity of depression should then be assessed using a schedule such as the PHQ9. When depression is detected, the GP should assess the risk of self-harm and suicide.

Treatment improves depression but not cardiac outcomes

Recent NICE guidance directing the treatment of depression in people with physical health problems proposed that such people be treated using a “stepped care” model 16. In this model, people with depression are started on low intensity treatments including guided self-help, physical activation and computerised CBT. Intensity of treatments is increased to include more intensive psychological treatments and antidepressants, depending on failure to respond to less intense treatments, patient preference and history of previous response. Ultimately combining therapies, case management and collaborative care strategies involving specialist services are reserved for individuals with most severe and treatment resistant depression. This stepped care model would be appropriate for use in people with CHD.

At the mild end of the spectrum appropriate physical activation may improve mood and physical outcomes.

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### Case-finding questions

During the past month, have you often been bothered by feeling down, depressed, or hopeless?

During the past month, have you often been bothered by having little interest or pleasure in doing things?

A ‘yes’ to either question is considered a positive test. A ‘no’ response to both questions makes depression highly unlikely.
Antidepressant medication and cognitive behavioural therapy (CBT) would be more suitable for people with moderate depression, though they have been shown to have only modest effect in people with CHD\textsuperscript{17}.

These treatments have not yet been associated with any improvement in cardiac outcome or survival, though only one study was designed adequately to examine cardiac outcomes. In that study, the improvements in depression were very small\textsuperscript{18}.

**Antidepressant drugs**

SSRIs remain the first choice for treating people with moderate to severe depression, or in people with mild to moderate depression who have:

i) a history of previous episodes of moderate to severe depression, or

ii) failure to respond to low intensity psychological treatments (such as guided self help).

Sertraline is effective and the drug of choice for people with CHD\textsuperscript{18,19}. Citalopram and escitalopram should only be used in people with heart disease following an ECG to rule out QT prolongation, and should be avoided in people taking other medications known to prolong the QT interval. The maximum dose used for citalopram is 40mg and for escitalopram, 20mg; and this should be halved in the elderly and people with hepatic disease. Other SSRIs are likely to be as efficacious and safe though potential for drug interactions, side-effects and patient preference may affect choice of drug.

Sertraline, (and probably other SSRIs) may also reduce future cardiac events, irrespective of whether they improve depression, probably as the result of their anti-platelet effect.

Mirtazapine is considered safe in CHD, and can be introduced if SSRIs are ineffective or poorly tolerated.

Venlafaxine is contraindicated in people at high risk of cardiac arrhythmias and may cause hypertension in higher doses. Caution is indicated when using venlafaxine in CHD, and blood pressure monitoring is advised.

**Tricyclic antidepressants can be cardio-toxic, particularly in overdose, should be avoided as first line treatments. They should only ever be used with extreme caution in individuals with CHD.**

**Psychological treatments**

Psychological interventions with behavioural and/or cognitive components reduce depression in people with CHD\textsuperscript{20}. NICE\textsuperscript{18} suggests that a psychological intervention should be delivered within a collaborative care framework for people with long term physical conditions. This model involves a multi-professional approach to care, structured management plans, scheduled follow-ups and enhanced inter-professional communication\textsuperscript{21}. In depressed patients with poorly controlled diabetes and/or coronary heart disease, collaborative care involving nurse case managers working closely with GPs can significantly improve control of both the medical disease and depression\textsuperscript{22,23}.

**Overall care**

Treatment approaches for concurrent depression often need to address a wide range of individual needs such as possible stigma or social isolation; problem solving, interpersonal relationship therapy or coping strategies for associated life events and difficulties (which may precede or follow coronary events), and lifestyle behavioural modification such as smoking cessation, good diet, and exercise (the latter two of which may help depression as well as CHD). People with CHD may also have erectile dysfunction and other comorbid physical problems (e.g. diabetes, hypertension, hyperlipidaemia etc). Some patients who fit the above criteria will be housebound and practices will need systems to identify and manage such vulnerable patients.

**Useful Resources**

- Royal College of Psychiatrists. Improving Physical and Mental health [http://www.rcpsych.ac.uk/mentalhealthinfo/improvingphysicalandmh.aspx](http://www.rcpsych.ac.uk/mentalhealthinfo/improvingphysicalandmh.aspx)
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To cite: Tylee A, Dickens C, Chew-Graham C. Primary Care Guidance: Treating Depression in People with Coronary Heart Disease (CHD) – 2014 update; Royal College of General Practitioners & Royal College of Psychiatrists; 2014.

This factsheet is one of a series of practitioner resources originally developed by the Primary Care Mental Health Forum (Royal College of General Practitioners & Royal College of Psychiatrists) which have been updated with the support of NHS England and Public Health England.

Acknowledgements
Mrs Scarlett McNally, Royal College of Surgeons of England, for her review and helpful comments.
Dr David Shiers for his review and general support.

Endorsements
Royal College of General Practitioners (RCGP)
Royal College of Psychiatrists (RCPsych)
Royal College of Surgeons (RC Surgeons)
UK Faculty of Public Health (FPH)
Rethink Mental Illness

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