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Review

Nurse-delivered collaborative care for depression and long-term physical conditions: A systematic review and meta-analysis

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ABSTRACT

Background: Depression will be the second largest cause of disease burden by 2020. It is commonly associated with long term physical health conditions resulting in worsened clinical outcome and increased costs. Nurses would appear ideally placed to facilitate depression management in those people with long term health problems within health care clinics. This article reviews the evidence to support such a clinical approach.
Method: A systematic review and meta-analysis of randomised trials of nurse led management of depression in patients with long term health problems. Databases were searched between December 2011 and May 2012, data were extracted and analysed using Comprehensive Meta Analysis software. Subgroup analysis and meta-regression were used to explore the impact of study level moderators of effect.
Results: Nurse delivered collaborative care was compared to usual care in 14 studies including 4440 participants. The mean effect size at follow-up was $d=0.43$ 95% CI 0.34 to 0.52 $p<0.001$ NNT 4.23, representing a moderate impact on depression severity. Results were consistent across studies and maintained at longer term follow up.
Limitations: Data were only available on depression outcomes and with most studies being USA based generalizability is somewhat limited. To date only one study reported cost effectiveness outcomes.
Conclusions: Based upon the research literature nurse led depression management provides effective treatment across a range of long term health conditions. Nurses are ideally placed to deliver such interventions and further research is required to examine the cost utility of the approach and its durability outside of the USA.

Contents

Abbreviations: CC1, Proactive Follow-Up; CC2, Adherence; CC3, Monitoring of Progress; CC4, Psychological Support; CC5, Regular Communication with MH Specialist and/or PCP; Q1, Adequate Generation of Randomisation Sequence; Q2, Allocation Concealment; Q3, Blinding of Assessment; Q4, Dealing with Missing Data.

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1. Introduction

Depression is set to become the second largest cause of disease burden by 2020 (World Health Organisation, 2008). It has a point prevalence of 2.6% (McManus et al., 2009) and is the third most common reason for primary care consultation (Singleton et al., 2001). It is associated with significant distress, impairment of functioning, disturbance to interpersonal relationships and an increased risk of suicide (Hirschfeld et al., 1997). Depression is commonly associated with long-term physical health conditions such as diabetes, ischemic heart disease, stroke and cancer with a several fold increase in prevalence where two or more of such conditions co-exist (National Institute for Health and Clinical Excellence, 2011). This results in worsened physical and psychological health outcomes (Katon and Ciechanowski, 2002) and increased treatment cost (National Institute for Health and Clinical Excellence, 2009).

Collaborative care (CC) is based upon an integrated care model which has been applied in the context of long-term conditions. Elements of collaborative care include: a multi-professional approach, evidence-based protocols to organise patient management, enhanced pharmacological and psychological interventions, scheduled follow-up and defined inter-professional communication systems (Gunn et al., 2006). A core role in collaborative care is that of the case manager who, in conjunction with the primary care physician and mental health specialist, provides low-level psychological support and medication advice, and adjusts the level of intervention based upon changes in symptom levels. Collaborative care for depression is clinically effective (Archer et al., 2012; Gilbody et al., 2006a) and appears to offer good value for money (Gilbody et al., 2006b); it is beneficial in the management of depression with physical health outcomes (National Institute for Health and Clinical Excellence, 2009). Limited evidence exists on which professionals are ideally placed to provide the case manager role. Nurses commonly deliver health care management for people with long-term physical conditions in primary care, and would appear ideally placed to extend this to any co-morbid depression. In the UK, evaluation of practice nurses supporting depressed patients following brief training in collaborative care methods showed promising results (Ekers and Wilson, 2008). The degree to which this approach would be effective if incorporated into the overall health care management for those with depression and long-term physical health difficulties is to date unclear. This systematic review and meta-analysis of randomised trials of collaborative care using general nurse-led case management explores this question, examining the content of treatment, its clinical effectiveness for depression outcomes and the impact of study level moderators of such outcomes.

2. Method

2.1. Identification of studies

Searches were conducted between December 2011 and May 2012 on EMBASE (incorporating MEDLINE), PsycINFO, Cochrane Library, CINAHL, AMED and the British Nursing Index (BNI), incorporating randomised controlled trial filters where applicable. Reference lists of identified studies were reviewed to find additional trials. Two authors (DE and RM) considered abstracts and screened the full text of selected studies for relevance. Searches were then compared to those of a recent Cochrane systematic review of collaborative care treatment for depression and anxiety (Archer et al., 2012) and any additional studies identified were reviewed and added. Searches were designed and conducted by an information specialist (CE) and RM. Searches were then entered into a reference management program (EndNote version 5) and duplicates were identified and removed.

2.2. Inclusion criteria

All available randomised controlled trials (RCT) were included where a specifically trained general nurse delivered brief proactive follow-up (collaborative care or a similar intervention) was compared to treatment as usual or an alternative intervention. To reduce the potential for publication bias (Khan and Kleijnen, 2002) all languages were potentially included. Studies included participants who were adults (age 16 or over), treated in community or primary care settings, with a primary diagnosis of depression and one or more long-term physical health problems. The number of collaborative care components in each intervention was coded for analysis.

2.3. Collaborative care (CC)

We included trials in the CC group if the treatment was based upon a collaborative model with at least two or more components as defined below (Gunn et al., 2006);

- Proactive follow-up of participants
- Assessing patient adherence to psychological and pharmacological treatments
- Monitoring of patient progress using a validated measure, taking action when treatment is unsuccessful based upon evidence-based protocols