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An intervention to improve depression care in older adults with COPD

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Summary

Objective—To describe an intervention for older persons with Major Depressive Disorder (MDD) and Chronic Obstructive Pulmonary Disease (COPD) to improve adherence to psychiatric, medical, and rehabilitation recommendations. The intervention supplements antidepressant therapy for depression with an individualized care manager who targets psychological barriers that interfere with treatment participation.

Method—Description of intervention development, training, and barriers to care, and illustration with case example.

Results—Depression and its associated lack of motivation, helplessness, and lack of energy can obstruct active participation in rehabilitation exercises recommended for COPD. Additionally, depressed older adults perceive the benefits of depression treatment; however they also fear side effects, addiction to antidepressants and have concerns about stigma. The intervention elucidates individual attitudes and beliefs that may become barriers. The care manager works with the older adult to address the barriers and improve treatment participation.

Conclusion—Augmentation of traditional pharmacotherapy for depression with a care manager can improve adherence to both depression and COPD treatment. This improved adherence may lessen the physical, psychological, and functional costs of both diseases.

Keywords

depression; COPD; adherence

Introduction

Chronic obstructive pulmonary disease (COPD) affects 16.7% of older men and 12.6% of older women and has detrimental consequences (Verbugge and Patrick, 1995). In the United States it has been the 4th leading cause of death among older adults with no decline in the past 30 years (Petty, 2003). It is the only cause of death in which morbidity and mortality are increasing (Sin, 2003). The disability associated with COPD leads to a decrease in physical activity and functional independence among older adults (Sewell *et al*., 2005). While the

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course of COPD is progressive and non-reversible, a regimen of medical and rehabilitation interventions can improve breathing and prevent further deterioration. It addition, rehabilitation programs for older adults can increase daily activities and improve functional independence (Sewell *et al*., 2005).

Depression is the most common psychiatric disorder in adults with COPD. The reported prevalence of depressive symptomatology ranges from 7–42% in COPD patients depending on the sample and the method used to ascertain the depressive symptoms (Van Manen *et al*., 2002). In our own sample of adults with COPD who are admitted for pulmonary rehabilitation, 27% of those adults meet criteria for major depression (Alexopoulos and Latoussakis, 2004). In most instances, depression in adults with COPD is undetected and untreated. Depressive symptoms have been found to restrict activities of daily living and increase relapse after acute COPD exacerbations (Dahlen and Janson, 2002). In fact, depression and symptoms associated with depression have been found to predict functional capacity even more so than traditional physiologic indicators in COPD patients (Lesser *et al*., 1996; Stuss *et al*., 1997; Felkner *et al*., 2001). Major depression, through its associated symptoms such as hopelessness, helplessness, and anhedonia, can significantly interfere with an individual's capacity to adhere to this regimen and can lead to increasing impairment. The ACCP/AACVPR Pulmonary Rehabilitation Guidelines Panel has pointed out that while depression affects a substantial number of COPD patients, depression is not a necessary concomitant of lung disease and can be treated (ACCP, 1997).

It has been difficult to effectively treat depression in COPD patients. While there is evidence that antidepressant therapy is effective (Borson *et al*., 1998), many patients are reluctant to accept care. A feasibility trial of antidepressant therapy in COPD patients found that the majority of depressed patients refused antidepressant therapy (72%; Yahannes *et al*., 2001). Of those adults who accepted care, only 14% completed the 6 months of drug therapy. Barriers to treatment included denial of depression, fear about antidepressant medications, embarrassment, and reluctance to take an additional medication. These barriers are similar to those documented among older adults with depression seen in both primary care and psychiatric settings (Sirey *et al*., 2001a).

Given the barriers to depression treatment, it is not sufficient merely to increase recognition of depression and antidepressant prescription rates. Instead, effective treatment of adults with COPD and major depression requires an intervention that addresses barriers to care and provides ongoing support for depression treatment. Similar types of depression intervention programs have been successfully initiated with other older adult populations in other settings with successful outcomes (Bruce *et al*., 2004; Hunkeler *et al*., 2006). These intervention programs have supplemented standard pharmacotherapy for depression with a care manager who: (1) provides psychoeducation; (2) monitors patient clinical status and medication side effects; (3) encourages adherence; and (4) serves as liaison with patients' physicians.

The population of older adults with depression and COPD poses specific challenges to implementing a successful treatment. Interventions must target not only adherence to depression treatment, but also to medical treatments and rehabilitation programs. To improve care for depression and ultimately, outcomes of COPD, we have designed an

intervention program that supplements pharmacotherapy with an individualized care manager to address barriers to care and improve adherence to psychiatric, medical, and rehabilitation recommendations.

Barriers to Depression Care in Older Adults With Copd

Psychological barriers to care such as stigma and denial of depression have been found to predict treatment discontinuation and medication nonadherence in older adults seen in other settings (Sirey *et al*., 2001). In addition to psychological barriers to depression care encountered in older adults, those older adults with COPD must contend with a chronic non-remitting illness with concurrent limitations in mobility and self-care. Because COPD is associated with smoking, COPD sufferers often experience significant guilt and shame associated with the illness. The negative spiral of guilt, hopelessness and anhedonia associated with depression and COPD may contribute to a fatalistic attitude that causes inactivity and treatment nonadherence. This downward spiral is difficult to modify.

In our experience there are six major challenges to depression treatment participation in COPD patients. These factors are: (1) misconceptions about COPD, depression and their treatments; (2) practical obstacles to treatment (e.g. cost of medications, accessibility of treatment); (3) poor acceptance of depression and the need for depression care (e.g. denial of need for care); (4) guilt and stigma associated with COPD and depression; (5) cognitive distortions associated with depression (e.g. hopelessness and helplessness); and (6) poor mobility and function due to co-morbid disabling illnesses.

To break the negative spiral of deterioration of depressed COPD patients, we designed an intervention to address the barriers to care to be delivered at discharge from an inpatient pulmonary rehabilitation unit. During an inpatient rehabilitation stay, the older adult receives a full medical evaluation and undergoes extensive exercise training and classes. This rehabilitation experience offers a unique portal in which trained assessors can diagnose depression. If the patient is found to suffer from depression, treatment can be integrated into the overall medical regimen. Our goal was to design an intervention to help older adults with COPD maintain the gains they achieve on the rehabilitation unit and integrate the depression care and exercise regimens for COPD into their daily lives after discharge.

The remainder of the paper describes the format and content of the intervention, barriers to depression care found among older adults diagnosed with depression during their pulmonary rehabilitation stay, and a case study to illustrate how the intervention addresses specific barriers.

Intervention Design

The goal of the intervention is to maximize treatment adherence to both depression and COPD treatment. Modeled after the Treatment Initiation Program (Sirey *et al*., 2005), the intervention involves a care manager who offers adherence-improving techniques to all participants and works with the patient to identify his/her specific barriers to adherence to both treatments. Reasons for poor treatment adherence vary from patient to patient and may be a consequence of one or more of the factors outlined above. For example, the principal

reason for poor treatment adherence may be depression-related hopelessness in one patient, inability to arrange transportation to a doctor's office in another patient, and poor understanding or resistance to accepting the presence of depression in a third patient. For this reason our intervention combines a standard set of interventions and education offered to all participants with individualized interventions targeting patient-specific barriers. The care manager identifies potential contributors to poor treatment adherence in the individual patient and plans the intervention accordingly. An important goal of the intervention is to activate depressed older adults and increase their treatment self-efficacy (e.g. the ability to raise concerns with physicians and be knowledgeable about their own signs and symptoms of both COPD and depression).

Intervention Format

The intervention is offered to older adults receiving pulmonary rehabilitation for COPD who are identified by a two stage screening process as suffering from major depressive disorder (MDD). The non-medical clinician (e.g. MSW or PhD) care manager begins the intervention with a meeting with the patient during the rehabilitation stay just prior to discharge. The care manager reviews the six barrier areas with each participant to identify obstacles to care. These obstacles then become the focus of the intervention sessions. The care manager contacts the patient's primary care physician to notify him/her of the addition of an antidepressant and of the patient's study participation. Follow-up sessions are conducted at the convenience of the older adults, typically in their home as many COPD patients have limited mobility. The intervention sessions are scheduled to be more frequent immediately after discharge and to decrease over time. The first two follow-up intervention sessions are scheduled during the first and second week after discharge, and then monthly thereafter for 6 months for a total of eight scheduled visits. The care manager may contact the patient between meetings if there are concerns about the patient's health status or adherence to treatments. Each contact is recorded to ensure documentation of the intensity of intervention contacts.

The intervention is designed for the older adults, but may also include family members who are active in the participant's care. The care manager may contact the participant's physician or other service providers to help assure adherence to both psychiatric and COPD treatment regimens. A senior geriatric psychiatrist and clinical psychologist provide weekly supervision of the care management intervention.

Content of Intervention Sessions

The care management intervention begins with psychoeducation about depression and its impact on the course of COPD. This is often accompanied by review of common myths associated with depression and its treatment. Depressed ideation, low energy and anhedonia associated with depression are often misconstrued as lack of motivation and energy to combat COPD. The beneficial effects of depression treatment and the resulting increase in motivation and energy to carry out the exercises necessary to manage COPD is explicitly stated. The care manager seeks to elicit lack of knowledge or misconceptions that the patient has about either depression or COPD.

Practical barriers such as transportation, loss of services and lack of resources are reviewed to determine whether they pose obstacles to adherence. Wherever possible, the care manager tries to problem solve with the patient, and where necessary, link the older adult to available resources. The specific methods used by the patient to adhere to medications are reviewed. If not already in place, the care manager teaches the participant to use cueing, offers pillbox techniques, and reviews attitudinal barriers to care. Often patients are on multiple medications, including inhalers and supplemental oxygen. The medication regimen may be overwhelming and demoralizing. Both the realistic complexities of care and the feelings about their treatments are discussed. The goal is to improve the management of these regimens and offer the empathy that may enable the patient to battle both the hopelessness associated with depression and the chronic nature of their disease. For each patient, the care manager helps the patient establish at least one short-term goal associated with the treatment of depression. This goal is both a way to help the patient channel motivation to achieve something and serves as a personalized measure of improvement.

Training to become a care manager involves familiarity with depression in older adults combined with training on care manager activities and learning about COPD. Care manager trainees observe the intervention sessions and spend at least two weeks shadowing staff on the rehabilitation unit. This training period is followed by assessment and intervention sessions with in-person supervision.

Barriers to Care

We interviewed participants (n = 112) in our ongoing intervention trial to determine the prevalence of barriers to care in the group as a whole before either the intervention or usual care began (Table 1). To assess attitudes towards depression and antidepressant therapy we administered a scale to assess attitudes towards depression and antidepressant therapy (Bungay personal communication). Perceived stigma was assessed using the Link Stigma Coping Scale (Link *et al*., 1989). As a group many respondents reported concerns about depression treatment. While many believed in the usefulness of antidepressant therapy, they were fearful of its costs. Almost half were concerned about side effects and a third feared becoming addicted. Most interviewees were aware of the stigma associated with depression. They perceived both personal devaluation and social discrimination associated with being depressed, even after being recovered. For these patients they must face two diseases that are associated with shame and stigma. Yet these data do not fully capture the challenges facing these older adults. To better illustrate these challenges, we present a case example of an intervention participant.

Case Example

Mrs B is a 73 year-old married white woman. She was diagnosed with COPD 6 months earlier, prior to which she had been active and healthy. Mrs B was hospitalized for COPD, at which point she met criteria for major depression of moderate severity. This was her fourth episode of depression. While in the hospital, Mrs B was prescribed sertraline 50 mg and alprazolam 0.25 mg daily. On discharge, Mrs B was referred for inpatient rehabilitation. The

study care manager began working with the patient and identified the following barriers to treatment:

1. *Stigma about being depressed and being on an antidepressant*: Despite a history of three previous depressive episodes, Mrs B had never sought treatment and indeed never identified herself as experiencing depression. When asked why she was recently prescribed sertraline, she said: ‘I threw the psychiatrist out of my room at the hospital when he first said I was depressed … Only weak people are depressed—not me! … I never thought I would have to take medication for depression’.
2. *Feelings of hopelessness*: Mrs B reported feelings of hopelessness because of the limitations COPD put on her activities, for example no longer being able to garden. Her hopelessness was also related to loss of independence over the past 6 months; she had needed her family's assistance for self-care for the first time. Because of this, she felt guilty about the burden she was now putting on her family.
3. *Embarrassment about having COPD*: Mrs B reported that she was embarrassed about being helped by others and about needing to use oxygen in public, and that she would avoid going out because of this.

The care manager brought to Mrs B's physician's attention the persistence of depressive symptoms and as a consequence sertraline was increased to 100 mg. After discharge from the rehabilitation center, the care manager worked with Mrs B in her home to ensure that she adhered to her psychiatric, medical, and rehabilitation recommendations by addressing the above barriers. Mrs B continued to receive sertraline reliably but rarely did home exercises upon her return home: ‘I know that not doing my exercise is hurting me, but I'm still not doing it. I just get too tired’. The care manager provided further education to Mrs B on the impact of COPD on her lifestyle, and explained how exercise could improve her functioning. She helped Mrs B come up with a feasible daily plan for exercising that included specific exercises at specific times of the day. To help counteract the guilt Mrs B was experiencing concerning her dependence on her family, the care manager worked with her to arrange home services to help with grooming and cooking. To address her frustration with lack of activities, treatment focused on finding activities she was still able to do that she could get pleasure from. For example, while she was no longer able to be as active in local politics as she once was, Mrs B felt she could stay informed by reading the editorial page in the newspaper.

Following the 26-week intervention, Mrs B's depression was in full remission. Although her life had not returned to normal, for example she remained unable to go back to work, she began to accept the limitations caused by her physical condition and get pleasure from new activities. She was also able to allow her daughter to take on some of the traditional family roles she previously had. She was doing more physically, had regained enough strength to do more self-care, was socializing more, had initiated more telephone calls to friends, had joined a book club at the library, and had gone out to dinner on a few occasions.

Conclusions

The challenges facing older adults with COPD and depression are many and complex. These older adults require more than a prescription of inhalers, antidepressants and exercise. To help older adults adhere to the necessary treatments and stave off the downward spiral of COPD with depression, we have designed an intervention to augment antidepressant therapy for depression and pulmonary treatment for COPD. The intervention is a focused, individualized series of sessions that address barriers to care, ranging from practical logistics to psychological concerns.

Offering a diagnostic assessment and treatment for depression in this unique setting affords an opportunity to help patients cope with their illnesses, improve their adherence, and ultimately have better clinical outcomes and quality of life.

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Key Points

- Depression is prevalent among adults with COPD. We describe and present a case study to illustrate our intervention. The intervention is designed to address the psychological (e.g., stigma, minimizing the need for care) and logistical (e.g., transportation, cost) barriers to adherence to treatments for both diseases.
- Working with the older to address barriers to care can improve adherence to COPD rehabilitation actvities and improve depression outcomes.

Table 1

Negative beliefs about depression and antidepressant therapy among older adults with both COPD and major depression (*n* = 112)

Negative beliefs about depression and antidepressant therapy	% agree
Afraid of having side effects	47
Discouraged when medicines take too long to work	61
Fear of becoming addicted to medication for depression	33
Belief that having depression is a weakness	26
Belief that people should handle their emotional problems themselves	18
Feel bad about having to take medication for depression	34
Perceived stigma towards people with depression	% agree
Most people think less of a person who has been in a hospital for depression	52
Most people would not accept a person with depression as a close friend	49
Most would not treat a person with depression as they would anyone else	40
Most employers will pass over an application of a person who has had depression in favor of another applicant	83