

## AN AUDIT OF THE REPORTING OF DEPRESSION & ANXIETY IN COPD PATIENTS

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### SUMMARY

Anxiety and depression contribute to a substantial burden of Chronic Obstructive Pulmonary Disease-related morbidity by impairing quality of life and by reducing adherence to treatment. The identification of COPD patients with comorbid depression or anxiety symptoms is vital, as it is estimated that only a third of patients with these co-morbidities are receiving appropriate treatment. The aim of this audit was therefore to identify whether current methods of anxiety and depression screening in elderly patients (over the age of 65) with severe COPD (FEV1 <50% at most recent spirometry reading) are adequate by assessing how frequently anxiety and depression is reported as "discussed with patient" in COPD review appointments across two practices. SystemOne was used to identify a total of 83 patients, and the recording of depression and anxiety discussions in this cohort's review appointments was analysed and compared with the incidence of QOF-coded depression and anxiety in the patient notes. The results show that both the rate and the quality of depression and anxiety reporting in these review appointments is highly heterogeneous, and has led to 'missed' patients suffering from comorbid mental health issues. Additionally, this audit identified a number of patients with depression or anxiety directly related to their COPD, and it highlighted a trend among this cohort towards more frequent appointments with their General Practitioner, and towards related presentations at the Emergency Department. The results of this audit suggest there is room for amelioration of the current practice, such as the implementation of a structured screening tool into System One's COPD review appointment template.

**Key words:** audit - depression - anxiety - COPD

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### INTRODUCTION

Anxiety and depression contribute to a substantial burden of COPD-related morbidity by impairing quality of life and reducing adherence to treatment (Yohannes et al. 2010). In a recent longitudinal study by Schneider et al. (2010) looking at 35 000 patients with COPD over a 10 year period, the incidence of depression was 16.2 cases per 1000 person-years in the COPD group compared with 9.4 cases per 1000-person years in the non-COPD control group. This study also found that those with severe COPD were twice as likely to develop depression compared with patients with mild COPD. This is generally corroborated by the literature, with studies suggesting that the prevalence of anxiety and depression in COPD are "generally higher than those reported in other advanced chronic diseases" (Maurer et al. 2008). In addition to supporting the idea that patients with COPD have a higher risk of anxiety and depression than controls without the condition, studies such as that by Eisner et al. (2009) found that the higher the severity of COPD, and consequently the higher the degree of dyspnoea, the greater the risk of anxiety among patients.

Untreated depression and anxiety in patients with COPD have negative effects on their physical functioning and their social interaction, including increased fatigue and healthcare utilisation (Dalal et al. 2011). Depressed patients with chronic physical illnesses have

been found to be more severely affected than their non-depressed counterparts across a range of medical illnesses including diabetes (Ciechanowski et al. 2000). This is no different for COPD: both anxiety and depression have been found to be significantly associated with decreased functional status and worse health status in patients with psychological symptoms comorbid with COPD, compared to those without psychological symptoms. While there is evidence that depression and anxiety in COPD may be treated with pharmacological therapy (Argyropoulou et al. 1993) or as little as a single cognitive behaviour therapy session (Kunik et al. 2001), fewer than one third of COPD patients with comorbid depression or anxiety symptoms are receiving appropriate treatment (Yohannes & Alexopoulos 2014). Maurer et al. (2008) attribute this to barriers on a patient, physician, and system level. These barriers include, on a patient level, a lack of patient knowledge and a real or perceived stigma regarding mental illness. However, one of the major factors that is consistently identified throughout the literature as being a barrier to detecting mood disorders in the COPD population is the lack of a consensus on the most appropriate screening tool for identification of anxiety and depression in patients with COPD. Many of the screening tools for depression and anxiety contain somatic symptoms, and thus overlap with the physical symptoms of COPD. This makes the interpretation of these scales more challenging.

## CURRENT GUIDELINES

NICE Guideline *Chronic obstructive pulmonary disease in over 16s: diagnosis and management* (2018) recommendation 1.2.95 is as follows: “Be alert for anxiety and depression in people with COPD. Consider whether people have anxiety or depression, particularly if they have severe breathlessness, are hypoxic, or have been seen at or admitted to a hospital with an exacerbation of COPD”.

NICE *Clinical Guideline 19*, recommendation 1.3.1 is as follows:

Ask patients with a chronic physical health problem two questions:

- During the last month, have you often been bothered by feeling down, depressed or hopeless?
- During the last month, have you often been bothered by having little interest or pleasure in doing things?

If a patient answers yes to either of the depression identification questions, they should be referred to an appropriate professional who is competent to perform a mental health assessment.

## AIMS, OBJECTIVES AND STANDARDS

The aim of the audit was to identify whether current methods of depression screening in elderly patients

(over the age of 65) with severe COPD (FEV1 <50%) are adequate. Therefore the objectives were to assess how often anxiety/depression is reported as “discussed with patient” in COPD review appointments and to assess how effective this is as a method of screening for depression or anxiety in the selected cohort. The standards used were NICE guideline CG19 and NICE guideline CG101 (2018 update) described above.

## COPD REVIEW TEMPLATE

This is the page of the template currently used in the COPD review appointment in the GP Computer System, SystmOne. The area of interest is whether "Anxiety/Depression discussed with patient" (highlighted in red, answer "discussed with patient") is an adequate method to screen for depression in this high risk, complex group of patients (Figure 1).

## METHODOLOGY

The populations of two general practices were searched on the practice computers for patients aged 65 years or older (“elderly”) AND patients with a FEV1 < 50% at their latest spirometry reading.

Patients were identified from QOF indicators list of achieved COPD patients.

The image shows a screenshot of a medical form titled "COPD Diagnostic Codes". It contains several input fields and checkboxes. The "Anxiety/Depression discussed with patient" field is highlighted with a red border. Below this, there are sections for "Review Codes" and "Inhaler Technique". The "Inhaler Technique" section has radio buttons for different levels of technique: good (S031), observed (S037), shown (S038), poor (S039), moderate (Y002), and not observed (Y007). At the bottom, there are fields for "Pulse Oximetry" and "Record Oxygen Saturation level for all patients with MRC score 3 or above".

Figure 1. COPD review appointment in the GP Computer System, SystmOne

Data was collected by searching of tabbed journal using key words:

- FEV1
- COPD
- Depression / depress / low / mood / low mood
- Anx / anxiety / worried / worri /worry.

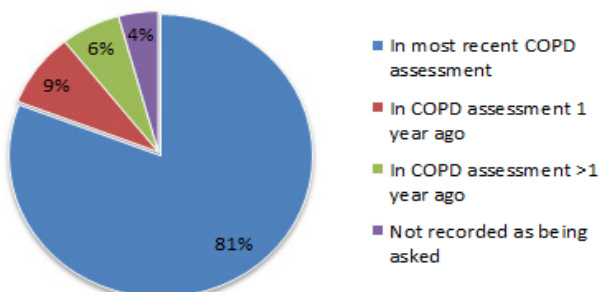
The GP computer system ‘SystmOne’ was used to identify a total of 83 patients across the two GP practices audited, and the recording of depression and anxiety discussions in this cohort’s review appointments was analysed and compared with the incidence of QOF-coded depression and anxiety in the patient notes.

In the first practice, this search identified 47 patients aged 65 and over who were recorded as having an FEV1 of <50% at their most recent spirometry reading (severe COPD). In the second practice, 36 patients meeting the inclusion criteria were identified. Once the cohort had been identified, Information was collected on when their COPD diagnosis was coded in their record, when their last COPD review appointment was, the most recent date that “Anxiety/Depression discussed with patient” was recorded, whether they had previously had a depression screen from another review appointment, whether (and how) depression/anxiety/low mood previously was recorded in the patient notes, and whether the patient was or had previously been treated for mental health issues.

## RESULTS

### Practice 1

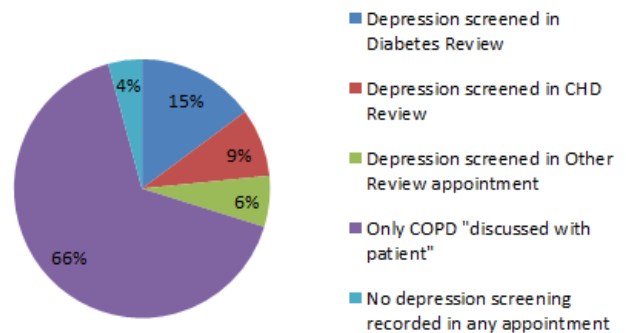
81% of patients had had "Anxiety/Depression discussed with patient" recorded as part of their most recent COPD check. 9% of patients had had this in a COPD check from the previous year. For 6% of patients, it had been more than 1 year since "Anxiety/Depression discussed with patient" had been recorded in their COPD check, despite several more recent COPD review appointments. For 4% of the sample, this had never appeared in their COPD review (Figure 2).



**Figure 2.** Most recent recorded data of “Anxiety/Depression discussed with patient”

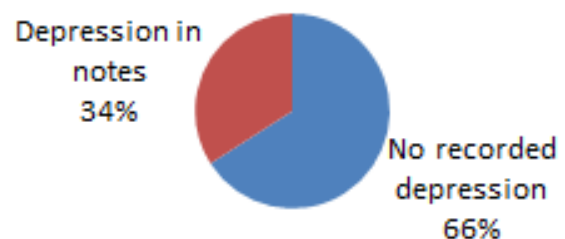
Of the 47 patients in the cohort, 66% had only had formal depression screening in the form of the "Anxiety/Depression Discussed with patient" from COPD review appointments. 15% had been assessed using a

questionnaire as part of their diabetes review, 9% had been assessed in a similar, more formal way, as part of their CHD review. 6% had been screened as part of a different review appointment (examples included a Mental Health Physical Check). 4% had no depression screening recorded in any format on their notes (Figure 3).



**Figure 3.** Screening for depression in other appointments

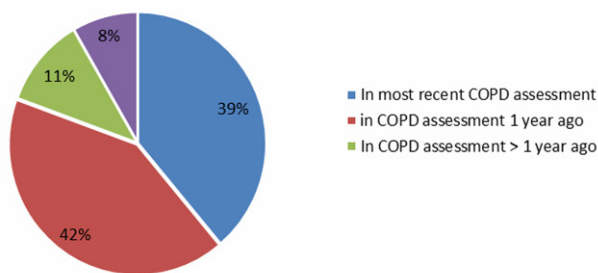
Of the 34% of patients with depression recorded in their notes, 87.5% were receiving active treatment or had been previously medically treated for either depression or anxiety. 31.2% of patients' depression was documented after their diagnosis of COPD. 31.2% of patients had depression or anxiety recorded as related to their COPD. Only 2 patients had low mood/depression/mental health symptoms documented in their COPD review appointments. 34% of the cohort (16 patients) had depression/low mood/anxiety recorded in their notes in some way. Of these patients, 14 were being or had previously been receiving medication for this. 5 patients had depression documented after their diagnosis with COPD. 5 patients had recorded links between COPD and their depression/anxiety. Only 2 patients had low mood/depression/mental health symptoms actively documented on their COPD review appointment notes (Figure 4).



**Figure 4.** Recording of depression in patient notes

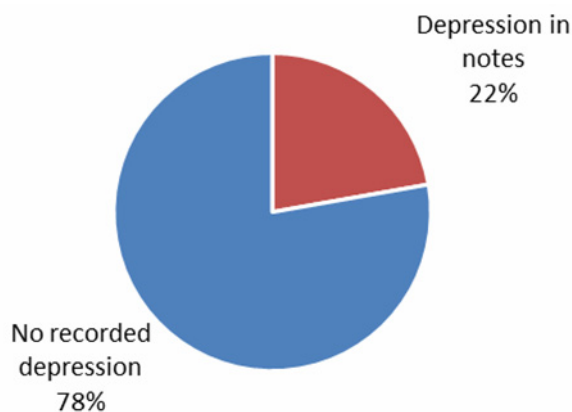
### Practice 2

In practice 2, 39% patients had ‘Anxiety/depression discussed with patients’ recorded in their most recent COPD review assessment, while the majority (42%) had had this in their assessment 1 year ago. It had been more than 1 year since this had been recorded in the COPD review assessment for 11% of patients, and 8% of the identified cohort had not been had this coded in their review assessment at all (Figure 5).



**Figure 5.** Most recent recorded data of “Anxiety/Depression discussed with patient”

In practice 2, as in practice 1, the majority of patients had not had depression recorded anywhere in their patient notes. However, of the 22% of patients who did have recorded depression elsewhere in their notes, 75% were currently receiving or had previously received medical treatment for this depression. As many as 8 patients at practice 2 had recorded symptoms of mental health issues related in part to their COPD, including “lack of confidence going out alone” and feeling “low due to reduced mobility”. 6 patients had had ‘low mood’ or symptoms of anxiety recorded in their notes after depression screening in their COPD review, but there was no follow-up or treatment for this recorded in their notes (Figure 5).



**Figure 6.** Recording of depression in patient notes

## CASES TO CONSIDER

We here discuss the issues raised by two patient records which raise issues common to all the records examined:

### Case 1

The patient had a COPD review in 2017, in which it was recorded that depression/anxiety was discussed with patient. No other reference to depression, anxiety or mood was noted. However, soon after the COPD review, the patient had an appointment with their GP in which he presented with a low mood which he described as feeling “linked to his chronic diseases, esp (ecially) breathing which stops him from doing what he

would like to be able to do”. The GP recorded this encounter as a severe depressive episode, and the patient was subsequently started on mirtazepine.

Points raised by this case are that although the notes for the COPD review appointment recorded having discussed anxiety/depression with patient, there was no further documentation of low mood, depression or other mental health symptoms at this appointment. Hence the following questions arise; Is the current method not adequate at identifying depression in patients? Or are the patient’s answers not being documented thoroughly enough? Furthermore, would identification of depression during the COPD review appointment have had an impact on the patient’s care?

### Case 2

Patient 2 had not had ‘anxiety/depression discussed with patient’ documented in his COPD review appointment notes since 2016, although he had attended a more recent COPD review in 2017. However, “low mood” was found to be documented in COPD review appointments in July 2016, January 2016, July 2015, and May 2015. The patient had a history of severe recurrent depression documented since 1985, and COPD was coded in the notes from 2014. In 2015, the patient had several GP consultations where he was noted to be “very anxious about COPD”, “worried re COPD”, “very anxious, stopped going out around people in case he gets an infection”.

Points raised by this case are that, in contrast to case 1, the COPD review appointments for patient 2 had documented some discussion of low mood beyond “anxiety/depression discussed with patient”. So what arises are questions as to what accounts for the variation in reporting, both between cases and between individual appointments for patients? Should there be a unified objective system that would allow for more reliable identification of people suffering from COPD-related depression and/or anxiety? Despite recurrent episodes of depression throughout his life, patient 2 began experiencing clear issues linking his physical health condition to his mental health following his diagnosis of COPD. So does this reinforce the idea of improved depression screening in patients with COPD even if they are known to suffer or previously had suffered from depression? Finally, would this have an effect on the number of GP appointments made by these patients?

## CONCLUSIONS

In practice 1, 81% of patients have had “Anxiety/Depression discussed with patient” recorded at their most recent COPD review appointment. This is a good rate of recording, but could be improved upon, in light of the fact that 4% of the cohort had never had this recorded in their notes in any form. In practice 2, the rate of recording at the most recent COPD review

appointment was much lower, with only 39% of patients having had "Anxiety/Depression discussed with patient" marked. There is scope for improvement in the rate of recording at this practice. In practice 1, 16 patients had depression or anxiety recorded in their notes, but only 2 patients had any mention of low mood, depression, or other mental health issues in their COPD review appointments. In practice 2, 6 patients had low mood, depression, and other mental health issues recorded in their COPD review appointments using the free text option in the online form. This, in combination with the cases discussed previously, highlights the fact that depression and anxiety documenting in the COPD review appointments is widely heterogeneous, with an overarching tendency to have no additional information documented. This may suggest that the free text option in the COPD template is being underused, or used inconsistently, and these issues are being under-documented if they are being discussed in the appointments. The results may also indicate that simply discussing anxiety/depression with the patient is not an adequate method of screening for and identifying these mental health conditions in this cohort, and may be leading to potential missed cases.

In practice 1, 5 patients were found to have depression or anxiety related to their COPD, and had frequent GP appointments and/or ED attendances as a result of these issues. A comparable number of patients in practice 2 were recorded as having low mood or anxiety linked to the physical symptoms of COPD. This may suggest that support for, education about, and management of COPD-related depression is not currently at a high enough level for patients in this cohort. Changes made in this area may therefore lead to a reduction in such appointments or emergency presentations.

5 patients in practice 1 and 6 patients in practice 2 were documented as having depression/anxiety/other mental health problems which were recorded after the date of their COPD diagnosis. These results may corroborate the findings from other studies and meta-analyses which have identified a link between COPD and depression and anxiety. However, 70% of patients in the total cohort of the two practices combined had no recorded depression, anxiety or other mental health issues in their notes. Furthermore, the sample size of this audit was relatively small, which limits the interpretation of these results. Further investigation on a larger scale would be required to further confirm this conclusion.

### **Suggestions for future practice**

Suggestions for future practice include: encourage healthcare professionals to use the blank fill boxes in the template and record mood assessments more thoroughly; integrate the use of the two questions recommended by NICE CG19 for use in screening for depression in patients with chronic physical health

conditions into the COPD review appointment. These are as follows:

- During the last month, have you often been bothered by feeling down, depressed or hopeless?
- During the last month, have you often been bothered by having little interest or pleasure in doing things?

These questions are the PHQ 2, and are validated questions for screening for depression. Positive answers should lead to a full assessment for depression.

Integration of a more structured depression/anxiety screening tool into the COPD review appointment template could mitigate the subjective nature of the current system, which is subject to variation depending on the professional carrying out the review appointment.

Alternatively, Self-assessment questionnaires regarding depression or anxiety could be filled out by the patient before the appointment to help improve time constraint issues. Suggestions from the nurses who undertake the COPD review appointments included self-assessment questionnaires that patients would be able to fill out in the waiting rooms prior to their appointment. Such self-assessment questionnaires could be the PhQ 9 and the GHQ 7, which are currently used in the QOF for screening for depression and anxiety respectively.

### **Action plan**

We recommend the following action plan; to implement one or more changes detailed in these recommendations above, and to re-audit in 6/12 in order to demonstrate changes in practice. Furthermore, comparison with a younger age group could provide insight into confounding factors including age. One study (Cleland et al. 2007) found that anxiety and depression did indeed differ by age group of patients with a diagnosis of COPD, but found that clinically significant levels of depression and anxiety were in fact more prevalent in patients aged less than 60 years old, thus suggesting that psychological comorbidities are more common in younger patients. An audit of the two practices' younger patients with COPD could therefore help to illuminate this issue further.

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**Conflict of interest:** None to declare.

### **Contribution of individual authors:**

Juliette Murphy & Gloria Lau developed the Audit Standards and carried out the audit.

Mark Agius supervised the analysis and writing up of the project.

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