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# Physiotherapy management of breathlessness in palliative care

## Abstract

**Background.** Breathlessness is a one of the most difficult symptoms to manage in palliative care and has primarily been managed by pharmacological measures.

**Method.** Forty patients with lung cancer were audited on their distress from breathlessness and their ability to cope with breathlessness by Visual Analogue Scale. A patient survey also examined individual physiotherapy techniques and attitudes to attending the hospice. Three Personal goals were also agreed with the patient. This article examines individual physiotherapy interventions and how they benefit breathless patients with lung cancer. It also considers the environment in which the patient is treated and their attitudes to attending a hospice out patient department.

**Results/Conclusion.** Results showed that most patients benefited from receiving the breathlessness training, and they found that attending the hospice outpatient clinic a positive experience.

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## Introduction

Breathlessness is one of the most challenging and common symptoms encountered in palliative care. Despite this, it remains difficult to manage, and is still treated predominantly by pharmacological measures [1–3]. It is defined as an uncomfortable sensation or awareness of breathing, and evidence suggests that despite an individual experiencing the sensation and having an understanding of it, there is no universal agreement to its definition [5].

In patients with lung cancer, management by the physiotherapist concentrates on a combination of non pharmacological interventions. Evidence shows that these techniques are beneficial to patients with lung cancer [2], and also to patients with Chronic Obstructive Pulmonary Disease through pulmonary rehabilitation programmes [6].

## Method

A breathlessness clinic was set up at Dove House Hospice in Hull by a Senior Physiotherapist. The aims were to offer patients advice and support for their breathlessness and to help to alleviate fears and anxieties about attending the hospice. Patients would be given the opportunity to discuss their illness and worries in depth and an introduction to the hospice may be beneficial should patients need to access further services as their disease progresses. All breathless patients with a diagnosis of small cell lung cancer, non small cell lung cancer and mesothelioma were invited to attend the clinic. Patients with a significant pleural effusion were not accepted at the clinic until the referring team had drained the effusion. Patients had a mean age of 70 yrs. Thirty patients had completed either radiotherapy or chemotherapy and ten patients were in the end

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stages of their illness (last three months). Referrals were taken from any health professional. Forty patients attended a one hour session at weekly intervals for 4 weeks. Patients were given the opportunity to discuss their illness and worries in depth.

The breathlessness training consisted of breathing control [7], anxiety management, activity pacing when walking and climbing stairs, relaxation (based on Mitchell 1977) [8] and chest clearance (if appropriate). Patients were given written information on the techniques and were asked to practice on a regular basis.

**Techniques**

Controlled breathing involves the use of the lower chest or upper abdomen. It encourages better use of the diaphragm. This method is particularly useful for relaxing the upper chest and also helps to reduce tightness and tension in the neck and shoulders.

The Calming Hand is a tool that was used for controlling panic attacks. It also works well with episodes of breathlessness [9]. The patients were given a copy of the Calming Hand with five components on it and taught to use their own hand to count calmly through the five steps of the cycle. This technique is quick and easy to learn, unobtrusive and can be used whenever and wherever the patient is experiencing anxiety and breathlessness.

Pacing involves explanation and walking alongside patients more steadily and slowly than they may be used to. Patients achieve an understanding of energy conservation and control of their breathing during physical activity. The physiotherapist walked with the patient teaching them to control

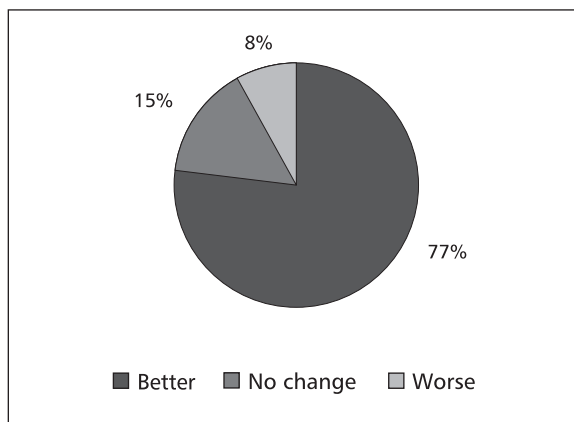
their breathing when walking, including slopes and stairs as appropriate.

Relaxation techniques are helpful in the management of the breathlessness. Patients were taught a simple method of physiological relaxation [8]. They were given reassurance and information and were sensitively helped to find a position which was comfortable for them. They were encouraged to practice on a daily basis at home.

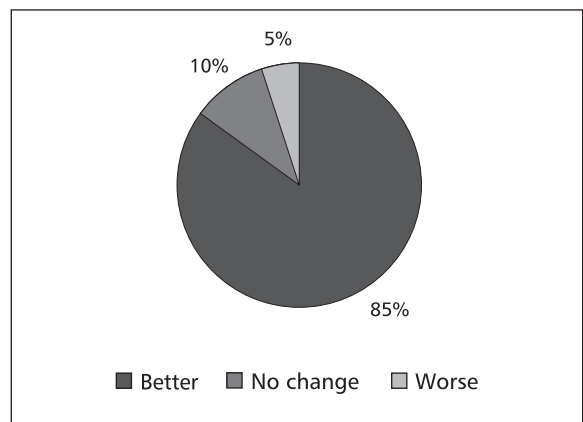
Ability to cope and distress from breathlessness were measured by Visual Analogue Scale (VAS). A survey by questionnaire was completed by each patient at the end of week 4 to establish which aspects of the training they found most beneficial, and also their feelings about attending the hospice for their breathlessness training. The patient also agreed 2 or 3 personal goals which were specific, realistic and meaningful to them. The number of goals achieved at the end of the 4<sup>th</sup> week session was noted.

**Results**

Data was collected from 40 patients seen in the clinic. 78% showed an improvement in their distress from breathlessness with a mean improvement of 3.4 on Visual analogue scale (see Figure 1). Thirty four patients (85%) reported an improvement in their ability to cope with breathlessness with a mean improvement of 3.1 on Visual Analogue Scale. Thirty patients (77%) achieved all their personal goals and all patients achieved at least one goal. Personal goals ranged from climbing the stairs and being less breathless or being able to walk to the shops or the pub.



**Figure 1.** Change in distress from breathlessness after intervention as measured by VAS



**Figure 2.** Change in ability to cope with breathlessness after intervention as measured by VAS

## Chest Clearance

Sixteen patients who needed to clear their chests found advice on postural drainage and active cycle of breathing very beneficial. If phlegm is cleared at regular intervals, particularly in the mornings and evenings then breathing will be easier. Active cycle of breathing helps to move sputum along the airways avoiding tightness of the chest.

Once in the large airways, sputum can be coughed up with ease and without exhaustion. Active cycle of breathing comprises the use of relaxed diaphragmatic breathing, thoracic expansion and one or two huffs.

## Patient Survey

Patients were given a patient survey on their last session at the clinic and were asked to complete it either at that time or at home. Patients were asked which treatments they found most beneficial. One hundred per cent of patients found breathing control to be beneficial and 97% of patients found pacing beneficial. Anxiety management and relaxation were similar in terms of benefit at 90%. Not all patients identified panic as a particular problem.

Patients were asked about their initial feelings and thoughts about coming into the hospice to the out patient department. Responses varied from, apprehensive, worried,reluctant, to: happy, hopeful and fine. After completing the four week breathlessness training patients were asked if their feelings had changed by the end of the course.

Ninety four per cent of patients gave a positive response, happy, relaxed, wonderful were some of the words used.

## Conclusion

The results of this audit suggest that most patients found benefit from attending the breathlessness clinic in terms of their breathlessness and their ability to cope with their symptoms. The clinic offered an introduction to the hospice and a positive way to educate patients about palliative care and what it has to offer. Most patients found attending the hospice a positive experience.

## Discussion

Several patients went on to access other hospice services. This included out patient occupational therapy, day therapy and support services and our physiotherapy led acupuncture clinic. Some of the patients also accessed our in patient unit for symptom control. We also have a drop in service available

once per week. This has been in operation for over twelve months now, with increasing numbers. However patients were still being referred to the breathlessness clinic at a late stage and some of them found that attending four consecutive sessions was too tiring. This raised the question how often should patients attend the breathlessness clinic, to gain most benefit. A feasibility study is currently underway to investigate the value of different intensity breathing programmes to breathless patients with malignant lung cancer. This will allow us to examine the current service with a view to changing our practice. One group of patients are given a one off session and are taught all of the breathlessness intervention , breathing control, pacing, relaxation and anxiety management, supported by written, visual and audio information. The other group are offered three consecutive sessions and both groups are followed up by telephone. Validated questionnaires are being used to collect the information. This study will conclude in the next few months. Our research team consists of 2 consultants, a senior physiotherapist, lung cancer specialist nurse, and a research nurse. Physiotherapy has evolved slowly in palliative care however, it is now well established in many hospices. In some areas there are still gaps in services and it is important to raise the profile of the physiotherapist. Physiotherapy student placements remain sparse in hospices, due to pressures of funding and limitations on time, physiotherapists are often lone workers and are unable to provide adequate supervision. The audit on the breathlessness clinic involves only patients with primary and secondary lung cancer. We have recently expanded our breathlessness service to include patients with chronic obstructive pulmonary disease and heart failure. The numbers at our clinic are increasing and again patients seem to benefit from our intervention. We are now collecting data on our breathless patients with non malignant disease in order to provide more information and improve our services, this audit will conclude early next year.

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