

Non-pharmacological interventions for breathlessness in advanced stages of malignant and non-malignant diseases

NICE has developed the Cochrane Quality and Productivity (QP) topics to help the NHS identify practices which could be significantly reduced or stopped completely, releasing cash and/or resources without negatively affecting the quality of NHS care. Each topic has been derived from a Cochrane systematic review that has concluded that the evidence shows that the practice is harmful or ineffective and should not be used, or that there is insufficient evidence to support widespread use of the practice.

Summary

NICE summary of review conclusions

Breathing training, walking aids, neuroelectrical muscle stimulation and chest wall vibration appear to be effective non-pharmacological interventions for relieving breathlessness in the advanced stages of some diseases.

The routine use of acupuncture or acupressure; distractive auditory stimuli (music); relaxation; fans; counselling and support programmes with or without relaxation and breathing training; case management; and psychotherapy to relieve breathlessness in the advanced stages of disease are not supported by sufficient good quality evidence. Consideration could be given to using it only in the context of a research or audit project.

Reducing the use of therapies for which there is no proven benefit and promoting those that do provide benefit may improve patient care and provide productivity savings.

The 'Implications for practice' section of the Cochrane review stated:

"Giving recommendations for the clinical setting is limited by the fact that most interventions were only tested in one patient group. Weighing up the findings of this review the following can be summarised:

- The studies testing neuroelectrical muscle stimulation indicate strong evidence that this intervention is helpful to relieve breathlessness in COPD [chronic obstructive pulmonary disease] patients.
- The studies evaluating chest wall vibration show that there is strong evidence that this intervention can relieve breathlessness in COPD patients. However, the practical implication of this intervention is unclear as the studies were only conducted in the respiratory laboratory.
- The studies testing the use of walking aids (rollators) indicate moderate strength of evidence that there is some benefit for COPD patients with breathlessness.
- The studies testing breathing training suggest that there is moderate strength of evidence that patients with breathlessness benefit from it.
- There is not enough evidence to recommend the routine use of acupuncture/acupressure, distractive auditory stimuli (music), relaxation, fan, counselling and support programmes, counselling and support programmes in combination with relaxation and breathing training, case management, and psychotherapy. These interventions need further testing before they can be routinely used in clinical practice.
- This review showed the big gap of evidence outside COPD. Many studies have been conducted either in the respiratory laboratory or in respiratory settings with little connection to palliative and end-of-life care. This review contributes to the need to view

Cochrane Quality and Productivity topics

such interventions offered to participants with COPD or chronic heart failure from a palliative care perspective and will hopefully foster the cooperation between the different specialties to further improve the management of breathlessness in participants with advanced diseases.”

Details of Cochrane review

Cochrane review title

Non-pharmacological interventions for breathlessness in advanced stages of malignant and non-malignant diseases

Citation

[Bausewein C, Booth S, Gysels M, Higginson IJ. Non-pharmacological interventions for breathlessness in advanced stages of malignant and non-malignant diseases. Cochrane Database of Systematic Reviews 2008, Issue 2. Art. No.: CD005623. DOI: 10.1002/14651858.CD005623.pub2](#)

When the review content was assessed as up to date

4 February 2008

QIPP category

End of Life Care

Relevant codes

OPCS	ICD10	HRG
Outpatient attendance	R06	Outpatient attendance

Programme budget

Cancers and tumours

Evidence

Relevance to the NHS

The Cochrane review considered randomised controlled trials (RCTs) or controlled clinical trials comparing the efficacy and safety of multiple non-pharmacological interventions for breathless in patients with advanced malignant and non-malignant diseases.

Forty-seven RCTs or controlled clinical trials were included (2532 participants) and categorised as follows: single component interventions with subcategories of walking aids (n = 7), distractive auditory stimuli (music) (n = 6), chest wall vibration (n = 5), acupuncture/acupressure (n = 5), relaxation (n = 4), neuroelectrical muscle stimulation (n = 3) and fan (n = 2). Multi-component interventions were categorised into counselling and support (n = 6), breathing training (n = 3), counselling and support with breathing-relaxation training (n = 2), case management (n = 2) and psychotherapy (n = 2). Participants had either advanced cancer, severe COPD, chronic heart failure, interstitial lung disease or motor neurone disease. Non-pharmacological interventions covered by other reviews were excluded; including pulmonary rehabilitation, non-invasive ventilation, nutritional supplementation, oxygen, self-management education and exercise.

Cochrane Quality and Productivity topics

There was a high strength of evidence that neuroelectrical muscle stimulation and chest wall vibration could relieve breathlessness and moderate strength for the use of walking aids and breathing training. There was a low strength of evidence that acupuncture or acupressure is helpful and no evidence for the use of music. There are not enough data to judge the evidence for relaxation, fan, counselling and support, counselling and support with breathing-relaxation training, case management and psychotherapy. Most studies have been conducted in patients with chronic obstructive pulmonary disease (COPD), only a few studies included participants with other conditions.

Despite categorisation of the studies, most groups remained too heterogeneous to suitably do a meta-analysis. Therefore, most of the results were presented as a narrative synthesis, rather than formal meta-analysis.

Some of these non-pharmacological interventions are already available on the NHS. However, access is variable across the country. Concentrating resources on interventions that have medium to strong evidence and discontinuing the routine use of those without evidence of benefit will contribute to ensuring that resources are used appropriately.

Relevant NICE guidance

[Supportive and palliative care: Improving supportive and palliative care for adults with cancer – NICE cancer service guidance](#)

(Published: March 2004)

Key Recommendation 17: Commissioners and NHS and voluntary sector providers should work in partnership across a Cancer Network to decide how best to meet the needs of patients for complementary therapies where there is evidence to support their use. As a minimum, high quality information should be made available to patients about complementary therapies and services. Provider organisations should ensure that any practitioner delivering complementary therapies in NHS settings conforms to policies designed to ensure best practice agreed by the Cancer Network.

[End of life care for adults – NICE quality standard](#)

(Published: November 2011)

4. People approaching the end of life have their physical and specific psychological needs safely, effectively and appropriately met at any time of day or night, including access to medicines and equipment.

10. People approaching the end of life who may benefit from specialist palliative care, are offered this care in a timely way appropriate to their needs and preferences, at any time of day or night.

Potential productivity savings

Estimate of current NHS use

It is very difficult to quantify what the activity in the NHS is. It is clear that most hospitals provide a "breathlessness clinic" on an outpatient basis, mainly for patients with advanced cancer or COPD. These clinics cover interventions such as relaxation and breathing techniques, reassurance and emotional support, all of which are not recommended by the Cochrane review and need further research.

Cochrane Quality and Productivity topics

Level of productivity savings anticipated

The activity data are not coded separately therefore costs cannot be estimated. Each clinic seems to run on a part-time basis, often only a half day per week and seems to have a capacity for only a few patients (7 or 8 has been quoted). Exact details will vary from location to location. The tariff applied will also depend on which disease the patient has and can be determined at a local level.

Type of saving

Cash releasing

Any costs required to achieve the savings

There is unlikely to be a cost barrier to change

Other information

The savings are likely to affect PCT commissioning budgets

Potential impact on quality of NHS care

Impact on clinical quality

Not anticipated to have any impact (favourable or adverse) on quality of care delivered to patients

Impact on patient safety

Not anticipated to have any impact on patient safety

Impact on patient and carer experience

Concentrating resources in providing services that are supported by evidence is likely to have a beneficial impact on patient and carer experience

Likely ease of implementation

Time taken to implement

Can be achieved in the medium term: 3 months to 1 year

Healthcare sectors affected

Affects multiple organisations, involving multi-agency working

Stakeholder support

Securing services with evidence of benefit is likely to be well-supported. Recommending that further research needs to be carried out for services where the benefits are not yet clear may meet more resistance.
