Use of oxygen in end of life care (Sally Coppock).

The use of oxygen therapy at end of life is common in practice however there are suggestions in the literature that this process may even prolong the dying process, and lead to suffering for both patients and their families. Though research is limited there have been some studies carried out to explore whether oxygen at end of life is useful for managing breathlessness, the potential disadvantages of oxygen use and the attitude of caregivers and professionals in the use of oxygen. Recently there has been a change in the contractual arrangements for the supply of home oxygen which has led to restrictions on the ordering of home oxygen by non-specialist professionals. In collaboration with the respiratory team in Leeds Community Healthcare and Air Products we have recently developed a Hospice Standard Operating Procedure for the supply of home oxygen which further led to questions around the appropriate use of oxygen at end of life.

Does oxygen improve the symptom of breathlessness?

There are numerous studies that have been looked at in Cochrane reviews however due to large variation in methodologies and small numbers of some studies it was difficult to draw on conclusions.

Key messages:
There is no clear evidence that oxygen therapy improved breathlessness in patients who are not hypoxic.
Unable to demonstrate beneficial effect of oxygen breathing over air breathing in cancer or heart failure.

Does ambulatory oxygen benefit patients?
Cochrane summaries for ambulatory oxygen 2009- two studies looked at including 70 patients. Results only found 1 in 9 patients had severe hypoxia at rest and ambulatory oxygen reduced minute ventilation at maximal exercise.

Key Messages:
Ambulatory oxygen should only be considered when oxygen saturations fall below 90% or greater than 4 % during exercise and remain hypoxic for more than 5 minutes post resting.

Does oxygen therapy improve survival?
Cochrane summaries reviewed the evidence on Domiciliary oxygen for COPD patients 2008-6 RCTs reviewed.

Key messages:
Home oxygen therapy did not appear to improve survival in patients with mild to moderate hypoxaemia or in those with only arterial desaturation at night.

Should we humidify oxygen?
High flow oxygen if humified, can reduce sensation of dryness in upper airways that oxygen can cause. In non intubated patients little evidence to suggest any benefit from humidification.

Key messages:
RCTs on effects of humidified high flow oxygen on patient comfort are required.
Humidification is not necessary for less than 4 litres/ minute.

Attitudes and Beliefs relating to oxygen use at end of life.
Oxygen may provide psychological comfort to patients or carers.
Patient perception of benefit may be important factor to determine initiation or continued oxygen therapy. Is oxygen prescribed on the judgement of health professionals rather than the evidence of benefit to the patient. Has it become standard practice?

Recommendations
St Gemma’s assesses patient for hypoxia before commencing oxygen therapy and reviews the effectiveness of oxygen therapy for all patients as part of their medicine review. Humidification not to be offered as standard practice unless the patient reports undesirable effects. The evidence on use of oxygen therapy is considered when review the breathlessness management guidelines. Appropriate information and education is offered to the patients and their families around the benefits and disadvantages of oxygen therapy.

References:
Cochrane summaries 2009. Oxygen breathing therapy for the relief of breathlessness in advanced terminal illness in adults.
NHS Primary Care Commissioning 2011. Home oxygen service-Assessment and review Good practice guide.
Depression – to screen or not to screen (Jason Ward)

Depression is common in palliative care patients (Hotopf M et al 2002; Mitchell A et al 2012). Prevalence rates vary depending on how depression is identified and whether depression as a symptom or psychiatric diagnosis (6-63%). Using a ‘gold standard’ interview 15-20% of patients will fulfil psychiatric diagnostic criteria for a major depressive episode. Anxiety disorder and adjustment disorder are also common.

NICE recommends that “patients should be systematically screened for psychological problems at key points in patient pathway (5.26)”. However, there is little evidence to show that screening for psychiatric illness such as depression is of benefit in improving psychosocial outcomes in non-psychiatric settings (Gilbody et al 2001; Mitchell et al 2008; Rayner al 2011). Specific screening tools for depression are rarely used by clinical nurse specialists and senior hospice doctors, although many routinely assess for depression (Lloyd-Williams M & Payne S 2002; Lawrie I et al 2004). Further more, staff find even ultra-short screening tools (1-4 items which take < 2 minutes to complete) unacceptable (Mitchell et al 2008).

Recent European Guidelines on the treatment of depression (Rayner et al 2011) recommend psychological therapies in addition to antidepressants. In patients with advanced illnesses antidepressants are superior to placebo at 4-5 weeks (NNT = 9 (4.3-81)) with more patients gain benefit by 9 to 18 weeks (NNT = 5 NNH = 6).

Numerous screening tools (HADs, Beck Depression Inventory, VAS, Edinburgh Postnatal Depression Scale) for depression have been used in palliative care. A systematic review recommended the ‘single question’ (Lloyd-Williams, Spiller & Ward 2003). However, subsequent studies in palliative care have shown different sensitivities (0.55 – 1.0) and specificities (0.66-1.0) of the single question. Some of this variation may be in the question used. The ‘two question’ screening tool includes the additional question “Have you lost interest or pleasure in all or almost all activities?” and has a sensitivity of 0.9 - 1.0 and specificity of 0.68 - 0.98.

Completion rates of screening tools by patients depends on the tool used and location of the patient but vary between 23% and 70% (Ward & Stockton 2004, Payne et al 2007, Lloyd-Williams 2002).

A recently conducted study at St Gemma’s compared the single screening question “Have you felt depressed, most of the day, almost every day for the last 2 weeks?” for depression with a standardised clinical interview (Mini International Neuropsychiatric Interview) in patients referred to the community specialist palliative care team. 24 women and 26 men completed the study (median age 71 years (49-81). The single question was found to have;

- Sensitivity 0.8 (0.44-0.97)
- Specificity 0.85 (0.7-0.94)
- Positive Predictive Value 0.57 (0.29-0.82)
- Clinical bottom line

Clinical bottom line

The specific question “Have you felt depressed, most of the day, almost every day for the last 2 weeks?” is useful to rule out patients who are not depressed and identify those in whom a more in depth assessment of mood would be helpful.