

## Statement regarding use of emergency oxygen and nebulisers in General Practice premises

### Use of oxygen in primary care

Oxygen is required for treating hypoxaemia during medical emergencies which may present in primary care settings. Many practices already have a supply of oxygen. Historically, this has usually been in the form of cylinders sourced from community pharmacies. Frequently, these cylinders are unable to deliver high flow oxygen and are often limited to rates of 4 litre/minute.

Current best practice tells us that it is essential to provide optimal oxygen therapy at the earliest possible opportunity while the acutely breathless and hypoxic patient is being assessed and treated in the community. Early intervention can reduce hypoxaemia which can lead to cardiac arrhythmias, renal damage and, ultimately, cerebral damage<sup>1</sup>.

**Health centres and practices should therefore have a supply of oxygen for emergency use. Generally, cylinders with high-flow regulators should be ordered, capable of delivering a flow of at least 6 litre/minute in order to deliver medium and high-dose oxygen therapy.**

**Caution:** Excessive oxygen therapy in some people with COPD may lead to deterioration in hypercapnia and respiratory depression. In the emergency situation oxygen should be titrated to a target oxygen saturation of 88-92%. This may be achieved with a venturi mask to assist delivery of controlled supplemental oxygen. Patients with COPD who have required oxygen therapy to treat hypoxia due to an acute deterioration, should be issued with an oxygen alert card.

### Use of nebulisers in primary care

Nebulisers have often been used in primary care to treat exacerbations of asthma and COPD. SIGN / BTS asthma<sup>2</sup> guidelines for acute asthma suggest that using multi-dosed inhaled beta-agonists via MDI + spacer is at least as good as a nebuliser for treating mild and moderate exacerbations. The guideline does recommend that the nebulised route (**oxygen-driven**) be used for the delivery of high-dose beta-agonists in acute asthma with life-threatening features. If an **air-driven** nebuliser is used for treating asthma in the emergency situation, there are theoretical risks of oxygen desaturation. Therefore, nebulisers should be oxygen-driven with a 'high flow regulator' fitted to the cylinder in order to provide the necessary flow rate of 6

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<sup>1</sup> BTS guideline for emergency oxygen use in adult patients 2008

<sup>2</sup> BTS/ SIGN guideline 101 - British Guideline on the Management of Asthma 2012 update

litre/minute. Air-driven nebulisers may sometimes be appropriate for use in COPD patients at risk of hypercapnia.

### **Obtaining supplies of oxygen for the premises**

Under new oxygen arrangements, community pharmacies will no longer be providing the domiciliary oxygen service. It is expected that most community pharmacies will not stock oxygen but some may continue to provide oxygen under private arrangement to general medical practices. Oxygen cylinders which have previously been obtained from community pharmacies may not deliver adequate flow rates for emergency oxygen use and oxygen driven nebulisers. Emergency high flow oxygen can be obtained from:

- BOC lifeline website ([www.boclifeline.co.uk](http://www.boclifeline.co.uk)) or by calling BOC on 0161 930 6010

NB: There is an annual charge which includes masks and servicing

### **Summary of recommendations**

1. GP practices and health centres should have a supply of **high flow** oxygen for emergency use.
2. Air driven nebulisers should not be used in exacerbations of asthma.
3. **High flow** oxygen driven nebulisers are required for life-threatening asthma, whilst in less severe presentations multidosing via MDI and spacer should be used.
4. GPs should not continue to rely on old oxygen cylinders with low flow rates, and will no longer be able to source these from community pharmacies.

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