



# Mouth <sup>2</sup> Mouth

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Interim Issue... the publication BY First Responders FOR First Responders



**AMBULANCE  
FIRST RESPONDER**

*Special  
Issue*

## CHANGE IN OXYGEN DELIVERY TO PATIENTS...

The British Thoracic Society has developed new oxygen protocols using evidence-based medicine. **A breath of fresh air: new national guideline will provide clarity on emergency oxygen use in adults.**

Oxygen is routinely given to seriously ill adults in a variety of emergency settings, and it can save the lives of patients with illnesses which have caused hypoxaemia. It is essential to correct hypoxaemia quickly for these patients and the widespread use of targeted oxygen therapy will hopefully allow health care professionals to deliver the right dose of oxygen to seriously ill patients and this may save many lives.

Amongst healthcare professionals there is a widespread belief that oxygen relieves breathlessness, yet there is no evidence that this is the case, providing that oxygen levels in the blood are normal (which is true in many serious illnesses, even if breathlessness is present). In fact, giving oxygen

when blood saturation levels are normal will produce hyperoxia which may stimulate reflexes that actually reduce the blood flow to organs such as the heart and might therefore reduce the delivery of oxygen to these vital organs.

Unnecessary oxygen therapy can hinder the efforts of healthcare professionals by delaying the recognition of patient deterioration due to the false reassurance that can be provided by a high oxygen saturation reading. Additionally, patients with some lung diseases, such as COPD, are sensitive to oxygen and an excess can have harmful consequences.

Before the widespread adoption of oximeters, oxygen saturation



### Pulse Oximeters

In the new guidelines, it is now essential that each Community First Responder group has a pulse oximeter to establish the oxygen saturation level of the patients' blood. To see a range of fingertip pulse oximeters see our website at [www.medatrain.co.uk](http://www.medatrain.co.uk)

could only be estimated by clinical examination, which is unreliable, or by taking blood from the arteries, which is a specialist technique (and uncomfortable for patients). This has meant that protocols had been developed to ensure that patients received sufficient oxygen. Audit in several countries has shown that the protocols were rarely followed due to the complexity of the protocols and the lack of standardisation of oxygen use within and between units.

The introduction of oximeters, however, allows blood oxygen saturation to be monitored, allowing more accurate initial assessment of the patient's condition as well as ongoing monitoring. This paves the way for more effective oxygen therapy, targeted at patients with a clear, clinical need<sup>1</sup>.

One Ambulance Trust is commencing the new guidelines on 1st June 2009.

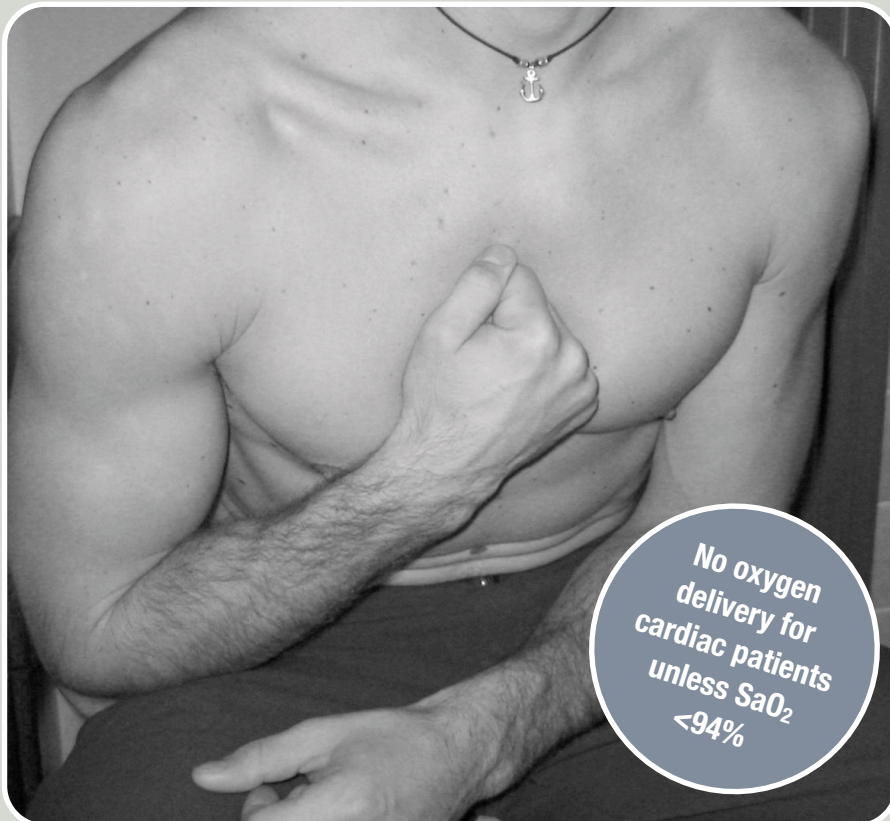
They feel that by running the guidelines for CFR's alongside it's road staff will 'reduce the risk of embarrassment or conflict if a crew came into a room and immediately reduced or increased the flow of oxygen.'

A significant change in the new guidelines is confirmed or suspicion of paraquat poisoning. The guidelines state that patients may be harmed by supplemental oxygen so avoid delivery unless  $SaO_2 < 88\%$ . Paraquat is no longer contra-indicated<sup>2</sup>.

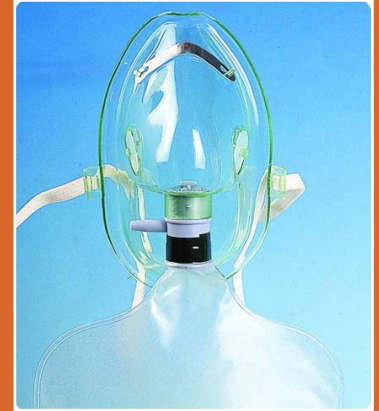
There is no change to the way we deliver oxygen to children. ALL children with significant illness or injury should receive HIGH levels of supplementary oxygen.

<sup>1</sup> British Thoracic Society. 2008. *Emergency Oxygen in Adults*. Online. [Available at <http://www.brit-thoracic.org.uk/ClinicalInformation/EmergencyOxygen/tabid/219/Default.aspx>]

<sup>2</sup> Joint Royal Colleges Ambulance Liaison Committee. 2009. *Oxygen Update*. Online. [Available at [http://www.jrcalc.org.uk/newjrcalcguidance/oxygen\\_guideline\\_combined220409.pdf](http://www.jrcalc.org.uk/newjrcalcguidance/oxygen_guideline_combined220409.pdf)]



## LET US KNOW



We want to know how your Trusts are preparing you for the forthcoming changes.

Pulse oximeters are required for these new guidelines. How is your group funding them? What additional training are you getting? Does your Trust specify a particular pulse oximeter?

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