



SMART

Newborn Resuscitation Training System



The SMART system provides objective and immediate feedback on face mask ventilation technique; in terms of mask leak and other important respiratory parameters.

- Integral part of the ARNI course
- Used as a training aid, permitting risk free practice
- Objective and immediate feedback on face mask ventilation techniques
- Can be used individually or as part of group training
- Easy to use with user friendly visual feedback

GM INSTRUMENTS



Who should use it?

Trained newborn resuscitators (NLS or NRP) can use this system to identify and measure mask leak. It is also a useful adjunct for neonatologists, paediatricians, neonatal nurses and midwives responsible for delivering training.

This system is an integral part of the Advanced Resuscitation of the Newborn Infant (ARNI) course, run by the Resuscitation Council (UK).

Why they should use it?

The SMART system provides objective and immediate feedback on face mask ventilation technique; in terms of mask leak and other important respiratory parameters. Individuals or resuscitation teams can use the specially modified term and preterm (25 week) manikins to assess their performance with both new and existing equipment.

It permits risk free practice, enabling adjustment of an individual's technique in real time to achieve important outcomes; establish a stable, comfortable and reproducible technique; reduce mask leak; and so provide more consistent ventilation delivery.

How they should use it?

This equipment is best used to facilitate training. The SMART system permits effective demonstration of techniques and enables individuals and groups to practice differing techniques with real time feedback. This feedback allows individuals to find their most effective mask hold and can be used to highlight any areas for continued development that may be pertinent to clinical practice.

It can also be used to explore a range of aspects that may impact on the efficiency of face mask ventilation, from devices to team factors. Group work can highlight that one technique may not suit all resuscitators, an important consideration when supervising and training colleagues in this important skill. The SMART system can subsequently be used in self-directed practice to maintain and enhance performance after training.



What feedback does it give?

The SMART software displays typical respiratory function waveforms - pressure, flow and volume. Easy to read scales, including a time stamp, enable the user to examine delivered positive pressure ventilation and its variation on a 'breath by breath' basis.

The system does not require the user to be familiar with respiratory waveforms as mask leak is simultaneously presented numerically with accompanying colour coded graphics in a clear and unambiguous way.

By means of the user-friendly visual feedback, the effectiveness of resuscitation devices and/or techniques can be assessed, altered and improved.

SMART Basic

Included in the basic package is the SMART Transducer Unit with carry case, USB cable, SMART assessment software, term and preterm manikins.

Optional Extras

- Mask Pack comprising eight masks in a variety of shapes and sizes.
- Laptop PC.

The SMART system has been developed in conjunction with Dr Charlotte Kemp and Dr Fiona Wood of the Medical Physics Department and the Department of Neonatal Medicine at the James Cook University Hospital, Middlesbrough; part of South Tees NHS Foundation Trust.