

Notes on Construction of a Surgical Airway Skills Trainer.

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A simple device can be constructed from readily available materials to practice cannula jet ventilation, Seldinger percutaneous tracheostomy and surgical cricothyroidotomy. The tissues are reasonably realistic and cheaply replaceable enabling each student to take the opportunity for hands-on practice. The plastic bag 'lung' permits a visual comparison of the effectiveness of different methods of ventilation.

It provides an opportunity to go through the procedures in a safe environment and become confident that the student understands the steps and has acquired the dexterity needed. As well it builds confidence in procedures that are rarely used but may be unexpectedly and urgently required.

The usefulness of this trainer has been evaluated by Varaday, Yentis and Clarke in "A homemade model for training in cricothyroidotomy" *Anaesthesia* 2004, 59: 1012-1015

The assembled trainer is illustrated below.



These are the components required for assembly.



The framework is a disposable plastic dish. Part of a second dish is used to build a chin. This framework is reusable.



The trainer uses anaesthetic tubing for the trachea with a one litre plastic bag as the lung. The tubing needs to have smooth inner bore to prevent the inserted tube catching.



Part of the barrel of a 20 ml syringe is used to simulate the reusable larynx. It is enlarged by wrapping with one-inch tape.



Subcutaneous tissues are simulated with closed cell foam cut from a camping mat.



Brown surgical tape is used to hold it all together and simulate the skin.

