



### **Issue: Review of Chest Drainage Bag Devices**

*Raised by:* Wendy Hartley – Snr Flight Nurse RFDS.

*Background:* Report of an occasion of leakage from the Portex Ambulatory Chest Drainage Bag system during aeromedical retrieval warranted a review of other equipment options available. These incidents occurred when the Portex bags were not adequately secured in an upright position. RFDS position is that the Portex product is satisfactory however needs to be managed carefully and adequately secured.

*Discussion:* A review of available products was undertaken. The two shortlisted products were:

Pnuemostat Chest Drain Valve device – small and unobtrusive, therefore patient mobility less effected, drainage capacity of 30mls. Cost \$80.00.

Portex Chest Drain Bag – 1500ml drainage capacity, size similar to a urine drainage bag, requiring more conscious care. Cost \$116.40.

Both devices can be used for transportation of clients in higher altitude.

Both devices attach to intercostal catheter's (ICC) listed in the Remote Health Branch standardised Chest Drain Kits are sizes 28G & 32G. However the Portex chest drain bags do not attach to ICCs smaller than 18G. While this is a limiting factor, use of smaller drains for paediatric cases is not catered for in the standardised RHB equipment lists. (Note this is a purposeful decision; it is recommended paediatric chest drain insertion is carried out by retrieval teams, excepting emergency relief of tension pneumothoraces.)

AirMed felt the Pnuemostat device drainage capacity was too small in the event of a haemo-pnuemothorax. Although the Pneumostat does allow fluid draw-off through a dedicated port, it is noted there is reduced capacity to manage body fluids should the chamber require emptying and poses an OH&S risk, particularly in flight.

The Best Practice Group felt that the Pneumostat was an excellent product but recognised its limitation due to capacity of the drainage chamber. While it is desirable to gain the benefits of the unobtrusive and simple Pneumostat device, the Best Practice Group decision is to recommend only the Portex Chest Drain Bag is stocked in the Chest Drain Kits. This simplifies the familiarity of staff with the one product, reduces investment in increased stock if holding multiple products, will prevent retrieval teams changing the drainage bag (infection and spill risk), and caters for any large blood loss that might occur.

The initiating issue of potential for the Portex product to leak needs to be noted, and staff advised to manage the bags appropriately.

*Consultation:* RFDS, Alice Springs Base; Air Med, Gove and Darwin; McNeil Surgical Supplies.

*References:* Product websites.

*Outcome:* **Portex Ambulatory Chest Drainage Bag is the endorsed drainage system for the Chest Drain Kit.** (It is available through the PPN held stock process)

**Staff are advised that there is a potential for this bag to leak if not maintained in an upright position.**