



**Service Priorities and Programmes**  
**Electronic Presentations**

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**Small bore Chest Tube with Transparent Dressing: A Quality Improvement Program**

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**Introduction**

Chest tube insertion is a painful procedure. In department current practice, "Argyle tube" - a larger bore chest tube was commonly used for insertion and then secured with traditional pressure dressing. The large catheter induces big wound, pain, wound infection, restricted activities and incurs risks of drain kinking, slip out or subcutaneous emphysema. Traditional dressing is bulky and opaque which hinders wound observation. A program on small bore chest tube with transparent dressing was implemented in the Respiratory unit for quality care improvement.

**Objectives**

To enhance patient comfort and safety by using small bore chest tube and transparent dressing for patients with indwelling chest catheter.

**Methodology**

The program was launched in the Respiratory Unit. A literature search on small bore chest tube and transparent dressing was conducted. The insertion, suturing and dressing techniques were discussed among medical and nursing staff with guidelines revised. In-service training was provided to ward staff for proper handling and management of this small bore catheter. A quick guide was produced for teaching and nurse reference. This catheter decreases wound size, reduces pain and allow more patient movement. The use of transparent dressing facilitates daily nurse observations; ensure tube in-situ with anchoring sutures intact. Patient is encouraged to take responsibility of the catheter and education is provided.

**Result**

From July 2011 to June 2012, 162 small bore chest tubes were inserted and secured with transparent dressing. There were 2 episodes of tube slipped out, 1 wound infection and 3 cases of subcutaneous emphysema. As compared with 108 Argyle tube with pressure gauze dressing applied, a reduction of 88% slip out rate was reported. Although there was no significant difference in wound infection rate and subcutaneous emphysema, patients on small bore chest tube verbalized decrease pain severity from severe or moderate pain to mild pain, they tolerate the catheter better with greater range of mobility. Thin and transparent dressing facilitates nurse

observation, allows early detection of excessive wound exudate or signs of infection. The program has successfully enhanced comfort and safety for patients with chest catheter. The program was supported by department management and this practice has been rolled out to all wards of the department in 2013.