Approved 9/2/26, Effective 1/15/27, replaces all prior versions

10F – CHEST TUBE MONITORING ADULT & PEDIATRIC

PARAMEDIC

Indications:

Interfacility transfer of patient with chest tube thoracostomy.

Technique:

The chest tube thoracostomy-related device(s) must be reviewed with either the transferring practitioner/physician or appropriate nursing personnel prior to conducting the interfacility transfer. Potential complications during transfer should be discussed, such as in the possibility of recurrent pneumothorax, and contingency plans reviewed, such as releasing the occlusive dressing around the chest tube or performing a needle thoracostomy per Protocol 10E – Needle Thoracostomy. If the Paramedic feels unable to safely monitor and maintain the chest tube, he or she is to request appropriate resources from the transferring hospital to accompany the patient during transfer.

Under these conditions, EMS personnel will not begin the transfer until such request is accommodated.

During packaging, patient movement, and throughout the interfacility transfer, perform periodic inspection and assessment of the chest tube.

The chest tube may be attached to a one-way valve (Heimlich valve) that allows for air or fluid passage from the chest to the outside, often contained within a simple bag container. If a Heimlich valve is present, keep it attached to the chest tube.

The chest tube may alternatively be attached to a multi-chamber container that can be attached to low suction. This container can be used for collection of blood drainage from the chest for auto-transfusion and/or to measure how much blood or other fluid is being drained from the chest tube. The chamber connecting to the chest tube is for fluid collection. The second chamber contains a small volume of water, establishing a water seal, creating a one-way flow of air from the chest, and keeping the pressure in the chest less than atmospheric pressure. The third chamber is a suction chamber, designed to limit excessive wall suction effect on the chest. Keep the container upright to keep fluid collection measurement accurate and avoid any loss in function of the device.

Persistent bubbling in the chamber(s) indicates an air leak in the chest tube system. This may be due to a loose connection in the tube/chamber/suction circuit or due to a perforation in the airway (e.g. bronchiole). Check the visible connections of the chest tube system. If bubbling prior to transfer, discuss with transferring practitioner/physician.