

Chest Tubes and Chest Drainage Systems: Patient Assessment and Interventions

Site Applicability

VCH and PHC Acute Care Sites

Practice Level

Basic Skill: Registered Nurses (RN)

- RN is responsible for monitoring and managing patients with pleural chest tubes and chest drainage systems (CDS) in collaboration with the Most Responsible Provider (MRP): physician or nurse practitioner (NP)

Requirements

1. Emergency equipment must accompany the patient at all times. See [Emergency Equipment](#).
2. Emergency equipment is assembled on the unit and is transported with patient to the department inserting CT
3. Use aseptic technique when accessing chest tubes, CDS, or insertion sites.
4. Transporting patients with chest tubes:

PHC: Refer to [PHC Transport for Tests/Treatments/Procedures: Patient Accompaniment](#).

VCH: Refer to [VCH Patient Accompaniment within the hospital \(Intrahospital\): Transport for tests, treatments, procedures and transport between care areas](#).

- a) Following chest tube insertion, an RN accompanies patient back to unit with porter.
- b) Patients with pleural chest tubes requiring transport off the unit for diagnostic tests or treatments are accompanied by an RN or have portable tests conducted under the following conditions:
 - Air leak is present
 - Inserted in the last 24 hours
 - Drainage exceeds these volumes:
 - Sanguineous drainage greater than or equal to 100 mL/h
 - or
 - All other types of drainage (i.e., serosanguineous, serous, or chylous) – greater than or equal to 100 mL/hr x 3 hr
 - Suction is required during transport (if MRP ordered)
 - Clamped (as ordered) for less than 24 hours
 - Clinical conditions require frequent nursing assessments or interventions of the:
 - Airway and respiratory system

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- Hemodynamic and cardiopulmonary system
- Neurological system when the patient:
 - Requires close or constant care
 - Is an elopement risk; or a risk to self or others
- c) In all other situations, the RN utilizes their knowledge, skills, and judgment to evaluate the risk to patient stability during transport off the unit. The RN collaborates with the MRP and interdisciplinary team to identify staff with the appropriate skill set to accompany the patient during transport.
- 5. The responsibility for instillation of medication or other substances into a chest tube lies with the provider.
- 6. **PHC, all VCH Coastal sites & Richmond Hospital:** Irrigation of chest tubes is a provider responsibility.
 - **Exception:** Applies to select units at **VGH**, as detailed in the corresponding VCH decision support tool: [Thoracic Percutaneous Pigtail Catheter \(PPDC\): Irrigation & Removal](#)
- 7. Chest tube removal is a provider responsibility.
 - **Exception:** Refer to the following decision support tools for units where the skill is within the competency list of the approved unit/program:
 - **PHC, SPH CSICU only:** [Chest Tube Removal Post Cardiac Surgery \(CSICU\)](#)
 - **VCH: VGH only:**
 - [Chest Tubes: Large Bore – Assisting with Removal](#)
 - [Pigtail Drainage Catheter or Small Bore Chest Tube – Assisting with Removal](#)
 - [Chest Tubes: Pleural Chest Tube Removal](#)

Quicklinks

- [Emergency Equipment list](#)
- [Patient Assessment and interventions](#)
- [Dressing changes after chest tube insertion](#)
- [Documentation](#)

Need to Know

1. MRP order is required to apply or discontinue suction to a chest tube.
Cerner Sites: provider to complete the CERNER PowerPlan: Chest Tube Insertion Post Procedure (Module).
Non Cerner Sites: Refer to Pre-Printed Orders (PPO), where available.
2. Chest tubes must be attached to an approved CDS.
 When a patient is admitted from another facility with a CDS insitu that is not available at your site, consult with MRP before transitioning to an approved system such as PleurEvac®. Refer to [Maintenance of the Pleur-Evac® Chest Drainage System](#).

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3. To prevent obstruction of a percutaneous pigtail drainage catheter or a small bore chest tube, minimize the risk of a pneumothorax and other adverse outcomes, the stopcock must remain open unless otherwise ordered closed by the provider.
4. Clamping chest tubes requires a provider order. Do not clamp a chest tube during transport or while mobilizing unless specifically ordered.
An order is not required to clamp the CT for a **brief period** (as short a period as possible) when:
 - a) Changing the CDS
 - b) Assessing for an air leak
 - c) Obtaining a sample
 - d) Lifting the CDS above the insertion site

Refer to [Maintenance of the Pleur-Evac® Chest Drainage System](#) for other situations when clamping may be indicated.

5. Clamping may be ordered by the provider in the following situations, when:
 - Assessing patient's readiness for CT removal
 - Following the instillation of a sclerosing agent for pleurodesis
 - Preventing rebound pulmonary edema from sudden large drainage volume

When clamping the CT, ensure clamps are placed from opposite directions, close to insertion site.



Figure 1

Large bore: double clamp near insertion site



Figure 2

Pigtail with no stopcock: double clamp on soft end of connecting tube (not on pigtail)

6. Clamping a percutaneous pigtail drainage catheter with toothed/non-toothed forceps may damage the tubing lumen, occlude the catheter, and complicate removal. If clamping is ordered, turn the stopcock to occlude drainage on percutaneous pigtail drainage catheters. If there is no stopcock, double clamp only the soft end of the connecting tubing with the plastic clamp.
7. The practice of milking or stripping a chest tube to dislodge a clot is contraindicated, as this may cause high negative intra-pleural pressure and damage to the lungs. A provider order is required. **Exception: Cardiac Surgery Intensive Care Units.**

Equipment and Supplies

Emergency Equipment

Assemble emergency equipment (if not already done) and ensure it is with the patient at all times, accompanying them during transport, as outlined in the specified [Requirements](#). It is advisable to consider placing emergency equipment in a clear plastic bag and hanging it from the IV pole.

Emergency Equipment list:

- 2 non-toothed forceps for each chest tube (plastic or stainless steel)

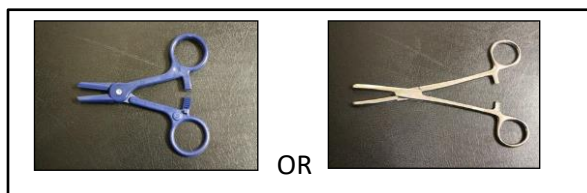


Figure 3: Non Toothed Forceps

- 250 mL bottle sterile water
- Petroleum impregnated gauze
- 4 X 4 gauze dressing
- Medipore tape (PRN)
- Gloves (PRN)

For information, on nursing interventions for unexpected outcomes, refer to [Management of Potential Complications](#).

For Example:

- **Accidental Chest Tube Removal - Immediate Interventions:**
 - Immediately apply petroleum impregnated gauze and 4 x 4 over the insertion site (or any sterile dressing). **Do not tape.**
 - Call for assistance from another RN, or call a code if the patient is unstable
 - Ask them to call a provider STAT
 - If the patient had an air leak or is developing respiratory distress, release the dressing on expiration (to allow air to escape) and reapply the dressing on inspiration (to prevent re-entry of air). Continue intervening until a provider arrives
 - Prepare to assist with insertion of a new chest tube as needed

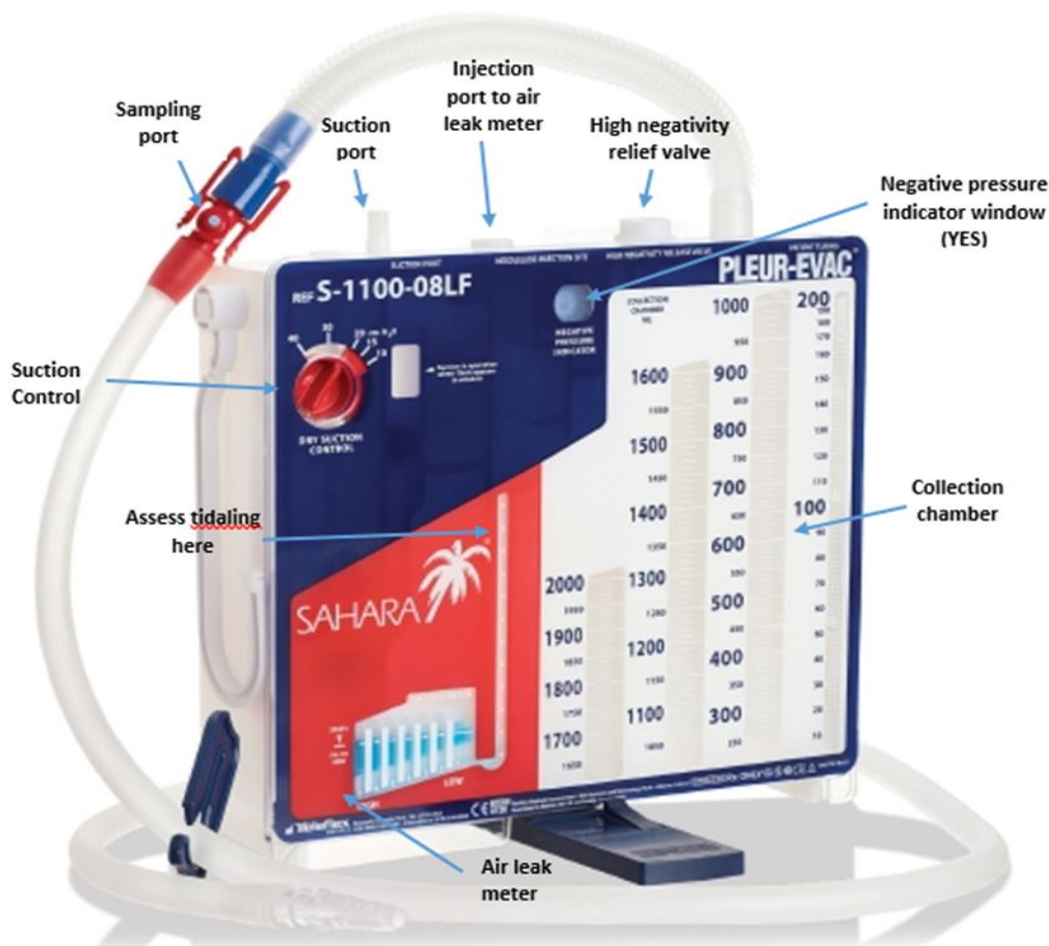


Figure 4: Pleur-Evac Sahara Chest Drainage System

Protocol

Chest Tubes and Chest Drainage Systems: Patient Assessment and Interventions

Nursing interventions aim at maintaining patency and sterility of the CDS, monitoring for complications, and evaluating the effectiveness of medical treatments and/or nursing care.

The **Pleur-evac Sahara®** is used at VGH (figure 4). The Patient Assessment and Interventions below refer to the Pleur-evac®



The **Medela Thopaz™** is a digital device used on the Chest Centre @ VGH, see [Appendix A](#)




If the patient is in respiratory distress at any time despite interventions, call a provider immediately, and call a code blue.


Assessment & Interventions/Information

Assessment	Interventions/Information
<p>1. Assess & document cardiopulmonary system, and vital signs:</p> <ul style="list-style-type: none"> Post insertion: <ul style="list-style-type: none"> I. q 15 min x 1 hour II. q 30 min x 1 hour III. q 1 hour x 4 hours IV. q 4 hours and PRN x 24 hours Ongoing Assessment: <ul style="list-style-type: none"> After 24 hours, if stable then q 6 hours and PRN 	<p>Report to provider any new or increased:</p> <ul style="list-style-type: none"> Respiratory distress Hypoxia or decreased oxygen saturation (SpO₂ less than 92%) Tachypnea Asymmetric chest expansion Decreased or absent breath sounds on affected side Sudden sharp, focal chest pain Tachycardia, hypotension, arrhythmias Subcutaneous emphysema Distended neck veins Tracheal deviation to unaffected side Fever Symptoms of hypovolemia
<p>2. Assess pain/comfort level using approved pain scale q 4 hours and PRN</p>	<ul style="list-style-type: none"> Offer the patient regularly scheduled analgesics (or use other pain relief strategies) to promote mobilization, range of movement on chest tube side and breathing exercises. Remind the patient to splint the affected side while deep breathing and coughing Q2H. Report new or increased sharp, focal pain at the insertion site to the provider. <p>For information on nursing interventions for unexpected outcomes, see Management of Potential Complications.</p>

<p>3. Assess the insertion site and surrounding tissue with each dressing change and PRN for:</p> <ul style="list-style-type: none"> • Subcutaneous emphysema <ul style="list-style-type: none"> ○ Palpate around the insertion site for subcutaneous emphysema (feels like crispy rice cereal) • Signs of inflammation or infection • Drainage around the insertion site • Visible drainage holes in chest tube • Kinks in CT • Securing suture <p>See Documentation section for where to document subcutaneous emphysema on Cerner</p>	<p>Subcutaneous emphysema is caused by air leaking into the skin due to a blocked chest tube or CDS, a displaced chest tube, or insufficient suction.</p> <p>Report the following to the provider:</p> <ul style="list-style-type: none"> • New or increasing subcutaneous emphysema. If present, mark edges with indelible marker and monitor for increase size. • New or increasing air leak at the insertion site. • Redness, purulent drainage or other signs of infection around insertion site. • Visible drainage holes in chest tube, indicate CT has slipped out of place and there is now a potential for air to enter pleural space. Cover holes with Vaseline gauze/occlusive dressing until CT can be reinserted by provider. • Absence of securing suture (note: pigtail catheter will not have securing suture). <p>For information on nursing interventions for unexpected outcomes, see Management of Potential Complications.</p>
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<p>4. Assess securement of connections & tubing: Ensure connection between chest tube and CDS is secured appropriately</p> <ul style="list-style-type: none"> Using a 2-directional taping method for strength and securement e.g. use spiral taping method <ul style="list-style-type: none"> VGH CSICU/PACU: Nylon Cable Ties  <p><i>Figure 5: Taping Example</i></p> <ul style="list-style-type: none"> Ensure all clamps on drainage tubing and stopcocks on pigtail catheters are in open position (unless otherwise ordered) Ensure no dependent loops or kinked tubing Ensure tubing is secured to gown with blue clamp/elastic to prevent pulling on CT site.  <p><i>Figure 6: Drainage Tubing Secured to Patient Gown</i></p>	<p>Spiral tape the connection between chest tube and CDS with white cloth zinc tape (at PHC) or secure with waterproof tape (where used)</p> <ul style="list-style-type: none"> Use ½ inch tape (tear in half if using 1 inch tape), spiral taping over connections in both directions (similar to a DNA double helix) Leave connector unobstructed to allow visualization of drainage & securement of connection Tape over the ends to reinforce <ul style="list-style-type: none"> Dependent loops may impede drainage. Kinked or clamped tubing prevents drainage. Tension pneumothorax may occur. To prevent pulling on the chest tube site, consider securing the drainage tubing to the patient's gown with a blue clamp with elastic band, or clip supplied (such as with a P-Eggy valve)
<p>5. Assess for tidaling (fluctuating) in the air leak meter:</p> <ul style="list-style-type: none"> Fluid in the small arm of the air leak meter and drainage tubing moves with respirations, demonstrating patency, lung expansion and maintenance of negative pressure If on suction, turn off momentarily (less than one minute) to assess for tidaling 	<p>Tidaling (fluctuating) may stop when:</p> <ul style="list-style-type: none"> the suction is turned on the lung is re-expanded the tubing is blocked by an obstruction CT is non-functional the indication for insertion is resolved the stopcock on a percutaneous pigtail drainage catheter/small bore chest tube is turned off to the patient or closed

	<div> <div> <p>Stopcock (with a port) turned off to the patient</p> <p><i>Figure 7</i></p>  </div> <div> <p>Stopcock (without a port) turned off to the patient</p> <p><i>Figure 8</i></p>  </div> </div> <div> <p>Stopcock open for drainage</p> <p><i>Figure 9</i></p>  <p>Re-accumulation of air in the pleural space may result, causing pneumothorax and respiratory distress.</p> </div>
<p>6. Assess and monitor patient for air leaks.</p> <p>If on suction, turn off momentarily (less than one minute):</p> <ul style="list-style-type: none"> Ask the patient to breathe deeply. Observe the air leak meter. If no air leak is seen, ask the patient to cough. Assess bubbling in the air leak meter (PleurEvac) from none (0), low (1) to high (7) and on the digital drainage device by flow (mL). <p>Assess for subcutaneous emphysema or air leaking from insertion site.</p>	<ul style="list-style-type: none"> Quantifying the pleural air leak allows for evaluation of improvement or deterioration of the leak. Report new, increasing, or unresolved air leaks to the provider. A patient (pleural) air leak is typically observed as intermittent bubbling in the air leak meter during expiration with or without coughing. If continuous bubbling or a sudden increase in bubbling/air leak is observed, suspect a leak in the CDS or a partially dislodged chest tube. A sudden cessation of bubbling/air leak may indicate a block in the system. <p>For information on nursing interventions for unexpected outcomes, see Management of Potential Complications.</p> <ul style="list-style-type: none"> Top up air leak meter with sterile water PRN as indicated by fill line level.

<p>7. Assess colour, clarity and flow of drainage in tubing and assess for clots.</p> <p>Document: q 4 hours and PRN in first 24 hours, then q 6 hours and PRN.</p>	<ul style="list-style-type: none"> • Sudden decrease or cessation of drainage may indicate a block. • Sudden increase in drainage may indicate a bleed. • Do not drain more than 1 litre of fluid at a time (e.g. during insertion) as this may result in rebound pulmonary edema. • Notify provider if output volume greater than or equal to 100 mL/hr sanguineous or greater than or equal to 100 mL/hr x 3 hr for all other types of drainage (serosang, serous, chylous)
<p>8. Assess the negative pressure indicator window for “YES”</p> <ul style="list-style-type: none"> • When on gravity drainage, the negative pressure indicator “YES” may be seen intermittently with patient respirations • When on suction drainage, the negative pressure indicator “YES” should be visible continuously  <p><i>Figure 10: Visible “Yes” Indicator</i></p>	<p>If “YES” is not visible in the negative pressure window:</p> <ul style="list-style-type: none"> • Assess the patient for new or deteriorating cardiopulmonary symptoms. • Assess for loose connections or obstructions in the chest tube or CDS. • If connections are all secure and “YES” does not reappear, report to provider. • Replace the CDS. See Maintenance of the Pleur-Evac® Chest Drainage System. <p>Report sustained increases in negative pressure to provider.</p>
<p>9. Assess and maintain stability of CDS</p>	<p>Ensure CDS is below the level of the chest, in an upright and secure position at all times:</p> <ul style="list-style-type: none"> • Secure to the base of an IV pole. • If appropriate, may hang the CDS from attached hooks to the bed or stretcher to assist with mobilization or transport. • Ensure all connections and tubing are secured with 2-directional tape (whichever tape is used at your site), or other securement device. • For a percutaneous pigtail drainage catheter or small-bore chest tube, secure with the appropriate size fixation device.

Dressing Changes after Chest Tube Insertion

- In the first 24 hours post-insertion, reinforce the dressing as needed.
- The initial dressing change should occur at 24 hours post-insertion
- Subsequent dressing changes should be performed every 2 days and as needed (PRN)

Monitor patient for any skin reactions to the tape, dressing, or adhesives of any product, and consult with wound care clinician if necessary.

Additional Equipment and Supplies:**Percutaneous Pigtail Drainage Catheter (PPDC)/Small bore Chest Tube:**

- Skin prep pad
- Appropriate size fixation device for size of percutaneous pigtail drainage catheter/small-bore chest tube. Change weekly or as ordered, and PRN.
- Tegaderm IV™ or other clear semi-occlusive dressing (to visualize and assess the insertion site)
- 2 x 2 gauze or 4 x 4 gauze (dependent on amount of exudate at insertion site)
- Normal saline for cleansing

Large Bore Chest Tube

- 2 x 2 or 4 x 4 gauze and 4 x 4 drain gauze (dependent on amount of exudate at drain site)
- Mepore®, Mefix® or other adhesive island dressing for light drainage
- Normal saline for cleansing
- Petroleum impregnated gauze
 - To be used only if air leak found at insertion site
- Change dressing schedule to daily from every 2 days & PRN when using petroleum gauze

Percutaneous Pigtail Drainage Catheter (PPD)/Small-Bore Chest Tube

Change the dressing **24 hours** after insertion and then every 2 days and as needed (PRN).

Follows these steps:

1. Cleanse the insertion site and surrounding skin with normal saline using aseptic technique.
2. Ensure there are no kinks or dependent loops in the percutaneous pigtail drainage catheter/small bore chest tube or drainage tubing.
3. Ensure the stopcock is open, if present (see [assessment #5](#)).
4. To improve adhesion of dressing and/or fixation device, prepare the surrounding skin with No Sting Skin Prep (away from the insertion site). Allow to dry thoroughly for 30 seconds.
5. Apply Tegaderm IV™ or another sterile, clear semi-occlusive dressing to the insertion site.

6. If the fixation device needs to be changed, prepare the skin distal to the percutaneous pigtail drainage catheter/small-bore chest tube and apply the appropriate size Statlock or an alternate Fixation device.
 - Change the dressing every seven (7) days and PRN. Some newer fixation devices, such as StayFix, are applied directly over the insertion site and must be removed at each dressing change.

Large Bore Chest Tube:

Change the dressing **24 hours** after insertion and then every two (2) days and PRN.

Follows these steps:

1. Cleanse the insertion site and surrounding skin with normal saline using aseptic technique.
2. If there is no air leak at the insertion site, discontinue the petroleum-impregnated gauze (continued use is discouraged to prevent skin maceration).
3. If an air leak at the insertion site recurs, or if drainage holes on the CT are visible outside the chest, wrap the petroleum-impregnated gauze around the chest tube (to seal the insertion site) and inform the provider. For information on nursing interventions for unexpected outcomes, refer to [Management of Potential Complications](#).
4. Apply drain gauze around the chest tube, one above and one below the insertion site.
5. Cover with 4 x 4 gauze and Mepore®, Mefix®, or another adhesive island dressing.
6. Ensure there are no kinks or dependent loops in the drainage tubing.
7. Secure the chest tube to the patient below the dressing to prevent accidental removal.
8. To prevent pulling on the chest tube site, consider securing the drainage tubing to the patient's gown with a blue clamp or blue clamp/elastic combo.



Figure 11: Drainage Tube Secured to Patient Gown

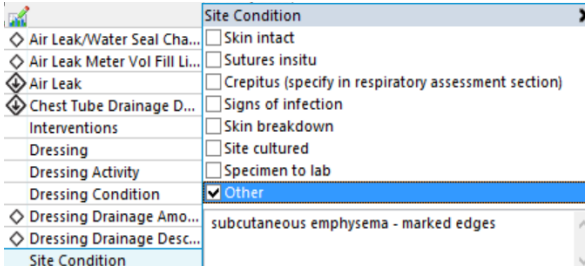
Documentation

Document in CERNER PowerChart or unit specific documentation forms:

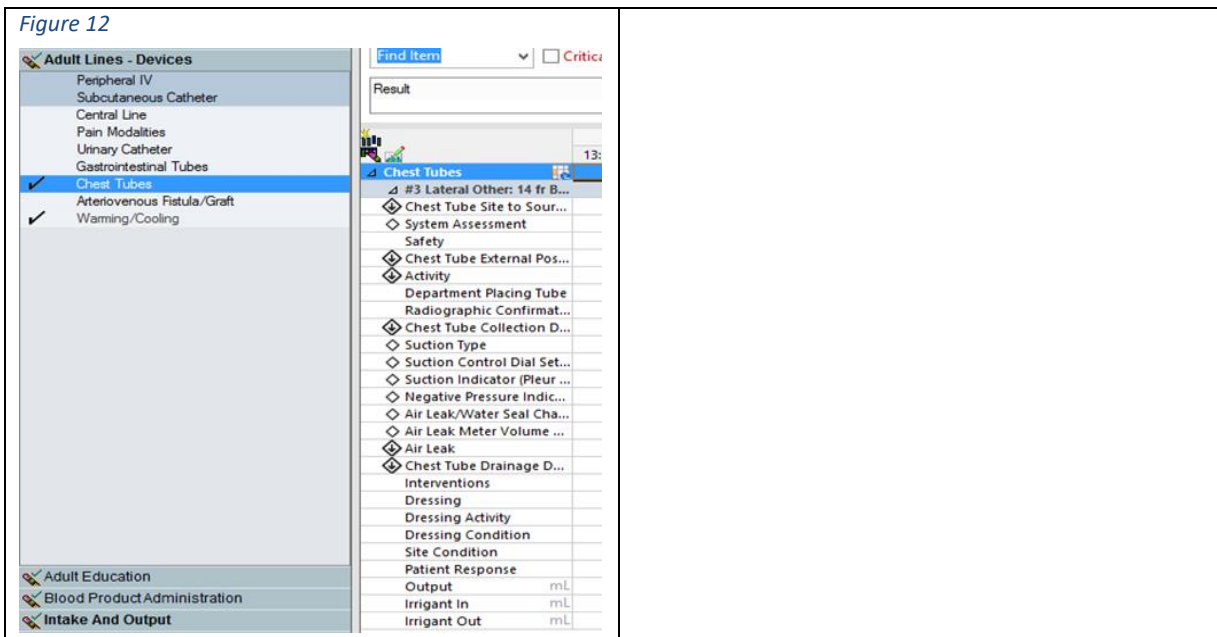
- Cardiopulmonary assessment and vital signs
- Date and time of procedures or interventions
- Chest tube size, date of insertion, location of insertion site
- Type of CDS
- Unexpected outcomes and nursing interventions
- Presence or absence, and trend of tidalling and bubbling in the air leak meter

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- Amount, colour, and characteristics of drainage
- Amount of suction, if ordered
- Patient and family education

Cerner Sites	Non-Cerner Sites
<ul style="list-style-type: none"> • iView→Adult Quick View→Vital Signs and Pain Assessment • iView→Adult Systems Assessment→Respiratory (you will find Cough and Deep Breathe here) • iView→Adult Lines-Devices→Add Chest Tubes • Chest tube→Site condition →Other → subcutaneous emphysema • iView Intake and Output→Chest Tube Output • Documentation section→Narrative Nursing Note→Title ‘Chest Tube’ – type, any significant changes, issues, interventions, etc. • iView Adult Education General Education Tubes/Drains/IVs • Use unit downtime tools in the case of a Cerner/network downtime 	<ul style="list-style-type: none"> • Chest Tube Assessment Flowsheet (VCH.0577) • Tube/Drain Flowsheet • Patient Care Flowsheet • 24 Hour Fluid Balance Record • Clinical Pathway document (if applicable) • Interdisciplinary Progress Notes • Pain Assessment and Documentation flowsheet
Cerner PowerChart, iView Chest tube documentation:	Subcutaneous Emphysema: <i>Figure 13</i> 

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Related Documents

- [BD-00-07-40010](#) - Chest Tubes and Chest Drainage Systems: Maintenance of the Pleur-Evac® Sahara
- [BD-00-12-40013](#) - Chest Tubes: Large Bore; Assisting with Insertion
- [BD-00-12-40014](#) - Chest Tubes: Large Bore: Assisting with Removal
- [BD-00-07-40015](#) - Chest Tubes: Management of Potential Complications
- [B-00-12-40016](#) - Chest Tubes: Thoracic Percutaneous Pigtail Drainage Catheter or Small Bore Chest Tube - Assisting with Insertion
- [BD-00-12-40017](#) - Chest Tubes: Thoracic Percutaneous Pigtail Drainage Catheter or Small Bore Chest Tube - Assisting with Removal
- [BD-00-12-40012](#) - Chest Tubes: Heimlich Valve

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Appendices

[Appendix A: Thopaz+™ Chest Drainage System](#)



Appendix A: Thopaz+™ Chest Drainage System

Site Applicability:

VGH: OR, PACU and T12

Note: Thopaz+™ must be changed to Pleur-Evac chest tube drainage system if not going to T12.

(The Thopaz+™ pumps belong to T12. Once no longer in use, they are cleaned and disinfected by T12 staff and stored on the unit)

Thopaz+™ Quick Facts

- A portable digital chest drain system that provides regulated negative pressure
 - No wall suction required
 - Applies internal suction required to maintain the negative pressure prescribed by physician. Contains an internal motor that serves as a vacuum source
 - Minimal or no fluctuations seen in a Thopaz system
 - Monitors AIR LEAK and FLUID COLLECTION
 - Disposable canisters and tubing
 - Thopaz+™ is placed below patient's chest level to facilitate drainage
 - Thopaz+™ is not compatible with MRI
- Site Battery powered with an AC adapter. Medela guarantees a minimum of four hours run time after battery is fully charged. In Practical operation run time is >10 hours.

Adjusting Pressure

- Hold bottom arrow simultaneously
- Pressure screen will display and adjust with side arrows



- To change the pressure units, navigate to the menu section. To do so, press Standby. From here, the Menu option becomes available where you can navigate to change pressure unit and adjust to the appropriate settings.

Gravity Drainage

- To place a patient on gravity drainage, either follow step above or utilize the Physio Button
- Physiological pressure can be activated for patients who are to be treated by gravity drainage (equivalent to a water seal)
- This mode corresponds to a pressure of at -8cm H₂O suction (-0.8 kPa kilopascals)



Air Leak Assessment

- Air Leak displayed on Screen in ml/min

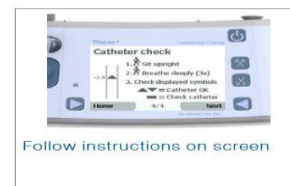


AIR LEAK FLOW RATE	DESCRIPTION	GUIDELINES
0-50 ml/min	No or minimal air flow rate	<ul style="list-style-type: none"> Consider chest drain removal based on patient assessment and physician direction Acceptable Air leak range for most patients
50-1000 ml/min	Moderate air flow rate	<ul style="list-style-type: none"> Check for air leaks in the system A persistent air leak may be present Notify physician
1000 ml/min	Large air flow rate	<ul style="list-style-type: none"> Check for air leaks in the system Notify physician Observe patient for risk of pneumothorax

Catheter Patency check

- If there is an air leak, confirm air leak size is reasonable/expected and that the system integrity is intact from patient to the Thopaz
- If flow or air leak is at **0ml/min**, then an on-screen patency check is required (see instructions below)

How to access Catheter check



catheter open

check catheter



Notice: The catheter check is only active if the airleak is 0ml/min

Only use the catheter check when patient catheter is in the interpleural space

Replacing the Canister

- Clamp off tubing and turn Thopaz+™ to standby mode
- Replace with new canister

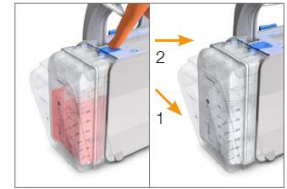
- Turn back on and unclamp
- Ensure air leak is within patients normal value



1. Prepare sterile canister
2. Clamp off tubing



3. Switch Thopaz+ to Standby
(Press for 3 seconds)



4. Replace canister

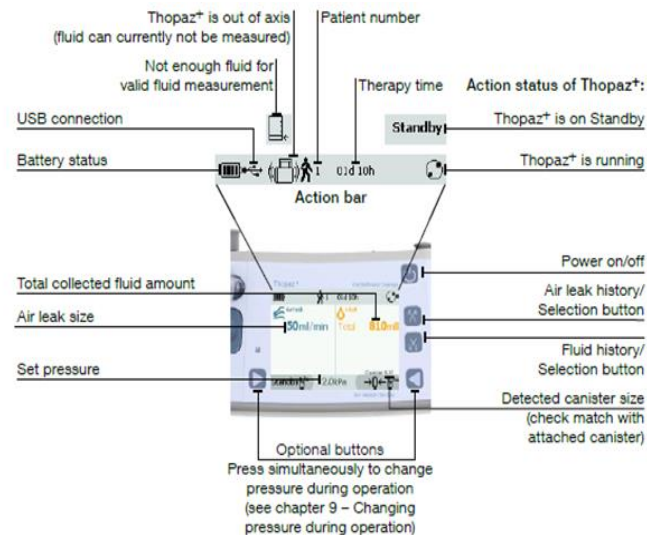
Documentation

- Breath Sounds Assessment: Periop system Assessment -> Breath sounds Assessment
- Chest Tubes and Drainage system: Periop Systems Assessment -> Chest Tubes -> Create Dynamic Group

System Assessment	System Assessment
Safety	<input checked="" type="checkbox"/> Checked and patent
Chest Tube External Position	<input checked="" type="checkbox"/> No dependent loops
Activity	<input checked="" type="checkbox"/> Connections secure
Department Placing Tube	<input type="checkbox"/> Protective valve cap locked
Radiographic Confirmation	<input checked="" type="checkbox"/> Secure upright and below drainage level
Chest Tube Collection Device	<input type="checkbox"/> Other

Thopaz		
Right Chest tube		
Chest Tube Site to Source Checked		Yes
System Assessment		Checked and Safety equipm
Safety		
Chest Tube External Position		
Activity		Assessment
Department Placing Tube		
Radiographic Confirmation		
Chest Tube Collection Device		Digital draina
Pressure Setting		-20
Unit of Pressure		cmH2O
Patency Check		Arrows
Therapy Check/Air Leak	mL/min	100
Chest Tube Drainage Description		Sanguineous
Interventions		
Dressing		
Dressing Activity		
Dressing Condition		Dry, Intact
Site Condition		
Patient Response		
Output	mL	
Irrigant In	mL	
Irrigant Out	mL	

Thopaz+™ Screen Monitoring Functions



Additional Resources

- Thopaz+™ Quick Card
Copy and past the url to your browser to access Thopaz+™ Quick Card:
<https://www.medelahealthcare.com/dam/medela->

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[com/healthcare/documents/products/thopaz-plus.pdf/thopaz-plus-cardiothoracic-drainage-quick-card.pdf?uuid=jcr:4b4e66a3-ec52-42bc-a9f6-ec96511cd8d7](https://www.medelahealthcare.com/healthcare/documents/products/thopaz-plus.pdf/thopaz-plus-cardiothoracic-drainage-quick-card.pdf?uuid=jcr:4b4e66a3-ec52-42bc-a9f6-ec96511cd8d7)

- **THOPAZ+ SIMULATOR** available for iOS and Android from the App Store: The simulator helps you become familiar with Thopaz+ and its advanced functions
- **Videos:** guide you through set-up, operation and troubleshooting:
<https://www.medelahealthcare.com/en-CA/solutions/chest-drainage/thopaz>

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Owners: <i>(optional)</i>	PHC	VCH
	CNS Acute Medicine, PHC	CNE CSICU, VGH, VCH