Lines, Tubes, and Drains

To Recognize, Evaluate and Treat

Board Preppers

What to know about Acute Treatment

Objectives

- **To be able to recognize the different lines, tubes and drains we encounter in the treatment of our patients in many different settings.**
- **To understand the purpose of the lines, tubes, and drains and how they effect our patients.**
- **How to treat our patients that have these medical devices—Safety and precautions needed to treat our patients successfully.**
- **How we can set up our room to give our patients the best treatment possible.**

Oxygen Administration

- Nasal Cannula: Typically $\leq$ 6L O2
- Most common method of O2 administration
- Can be humidified and/or heated, particularly if over 6 L O2

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Oxygen Cont.

- When patients require O2 outside of their room, you will be required to change the source to a **regulated bottle**.
- When your patient requires more than 6L O2 there will be a **mask** involved.
- You **CAN NOT** change volume, discontinued, or add O2 without permission!!

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Oxygen Cont.

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- Patients who **can not** breath on their own, will be put on a **ventilator**, either through a tube down their **throat** or through a **tracheostomy**.
- The ventilator has a tube that passes into your trachea and through mechanical pump, pushes breathable air into and out of your lungs.

Oxygen Cont.

- There is a step down process **from trach-ventilation to trach-collar.**
- When our patients require assisted oxygen **with bypass of the mouth or nose for long term**, you will see a tracheostomy used to allow for this.

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Oxygen Cont.

- The measurement of oxygen happens most commonly through a device called **a Pulse Oximeter**
- This measurement of oxygen levels in blood is called, “Oxygen Saturation” and is commonly measured with **three** different types of devices.

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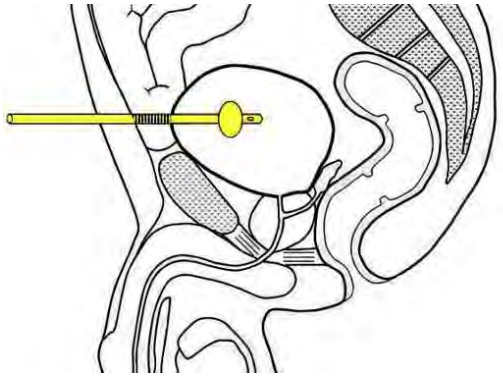
Catheterization

- With managing urine for those who have hospital stays longer than 24 hours, usually involving surgery, will have a catheter administered.
- There are **three** types of catheters that you will encounter. They are **Condom, Foley and Suprapubic,** all of which will require care when handling your patients.



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Catheterization Cont.

- At the end of the catheter is a collection bag. It will have measurements on it in milliliters. This device will typically be hooked to the bed on the patients right side. Urine output is normally **measured and notated** in the patients medical chart, confer with attending nurse before emptying—use urinal to get measurement.

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Intravenous Administration

- Many of your patients will have an **intravenous administration system** in place. These applications are used for medications and other necessary fluids.
- Also referred to as an **"IV"**, this system is used for a fast one time **"PUSH"** of medication, and/or a slow administration of meds or fluids, know as a **"DRIP"**.
- You will see this process enter the body in many places. The most common of which, will be at the **wrist, elbow and neck**.
- All of these different IV's require **specific attention and care!**
- The type of IV is typically determined by the **time of application and type** of fluids or meds being administered.

Intravenous Administration Cont.

- The three common placements:

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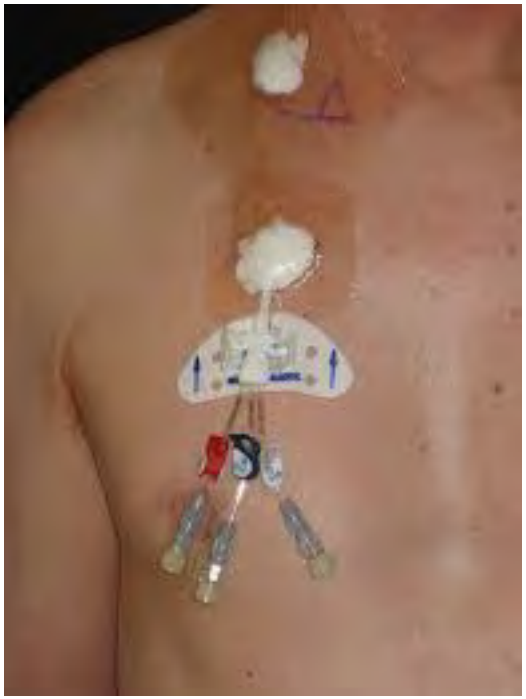
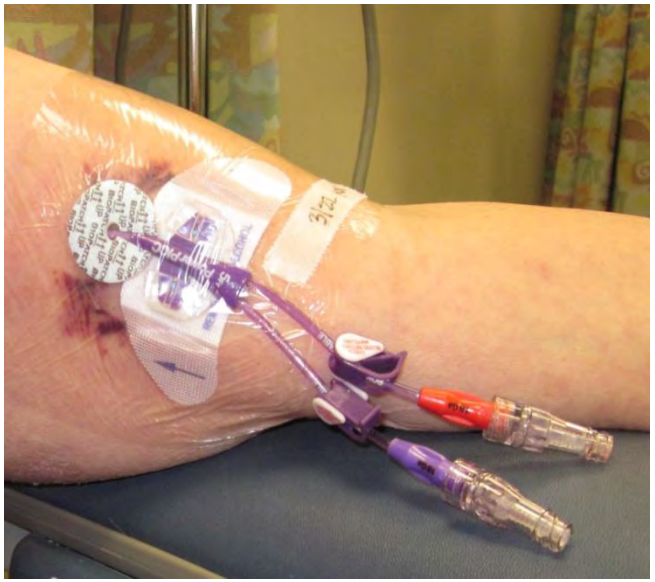
Intravenous Administration Cont.

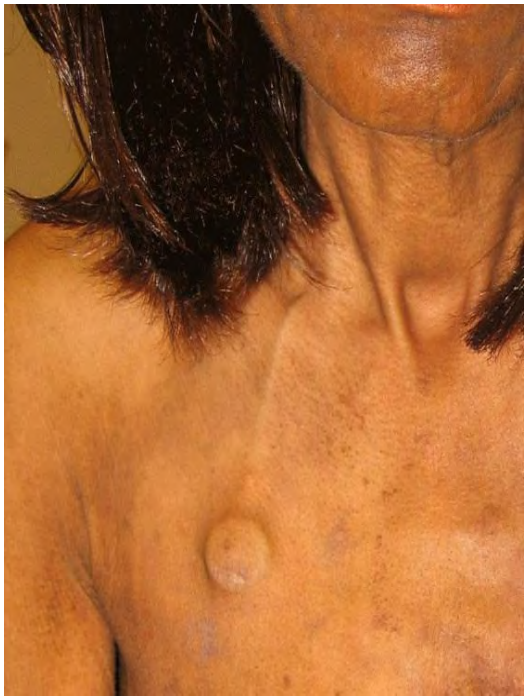
- Time comes into play when deciding what type and placement of an IV system. For **LONG** term use you will see a **"CVC"** central venous catheter. The CVC is typically placed in the chest.
- A peripherally inserted central catheter line **"PICC"** is a form of a CVC but is placed in the superior and medial portion of the arm.
- When Long term administration of medications is necessary a **"PORT"** can be surgically implanted. This method is more practical for living outside the hospital and is less likely to have complications, like infection.
- All of these CVC's allow for meds and fluids to be directly deposited into large veins, allowing for faster delivery. This process also allows for central venous pressure to be **measured and monitored**.

Intravenous Administration Cont.

- What these long term IV systems will look like:







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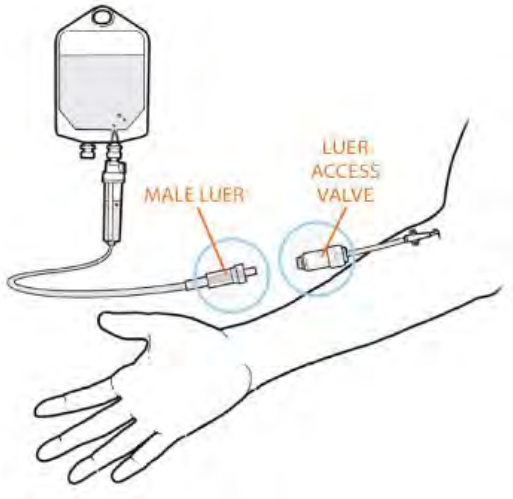
Intravenous Administration Cont.

- When moving patients with IV's in play, you will use a IV pole.
- Some IV's can be detached for out-of-room ambulation. **Ask your supervising nurse to assist you with this process.**



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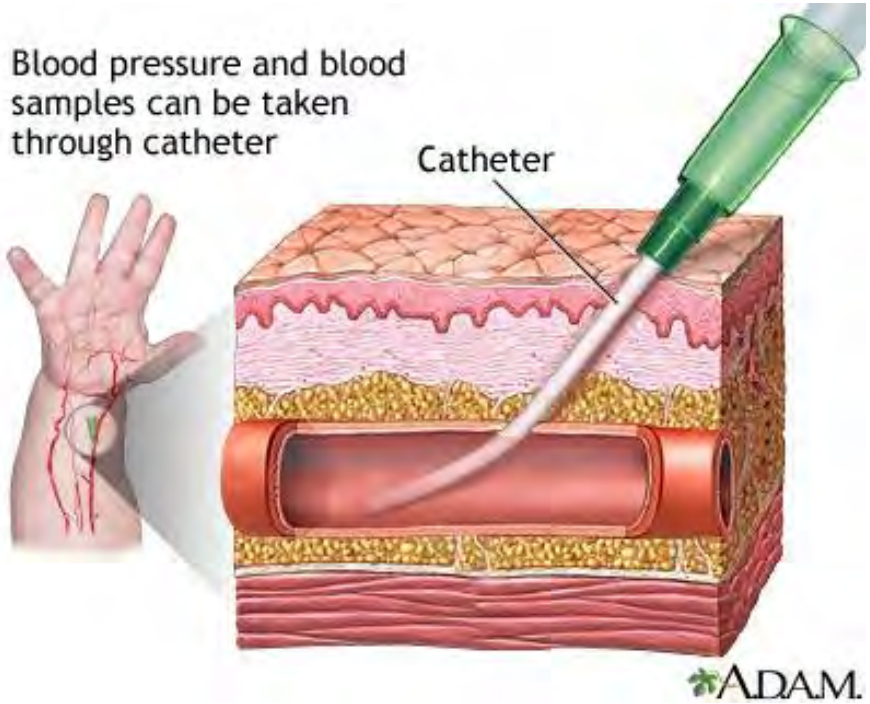
Peripheral Arterial Line

- A **Peripheral arterial line (PAL)** is administered when your patient has the need for acute measurement of blood pressure, or when there is a need for regular blood monitoring.
- This medical application requires **EXTREME CARE** and **CAUTION** when moving your patient.
- The primary concern is the disruption of blood flow to the extremity. Although, this line is directly inserted into an artery, **either in the arm or leg**, and if improperly removed—bleeding will be significant.
- Note: You **WILL UPSET** your supervising and attending nurses without **FAIL!**

Peripheral Arterial Line Cont.

- This is what a **PAL** will look like:



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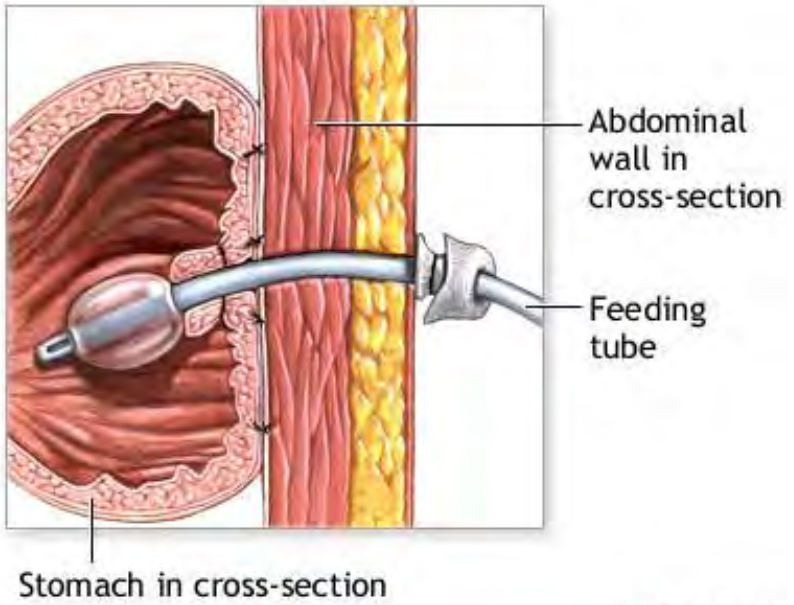
Feeding Tubes

- A **feeding tube** is a medical device used to provide nutrition to patients who cannot obtain nutrition by mouth, are unable to swallow safely, or need nutritional supplementation.
- There are several ways to feed your patient when **nothing by mouth "NPO"** is prescribed.
- For short term or acute need for alternative feeding, an **"NG TUBE"** nasogastric tube will be used.
- When long term or permanent feeding method alternatives are necessary, a Gastrostomy **"G-TUBE" or "PEG TUBE"** is used by placing a line through the abdominal wall, directly into the stomach or portion of the small intestine.

Feeding Tubes Cont.

- Depending on your patients pathology requiring a feeding tube, feeding may be prescribed on a 24 hour basis or on a particular schedule.
- This is what you will see:



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Drains

- A **Jackson-Pratt Drain "JP DRAIN"** is a medical device that is commonly used as a post-operative drain for collecting bodily fluids from surgical sites. The process of draining fluids in facilitated by squeezing the bulb causing mechanical suction to the surgical site.
- A **chest tube** (**thoracic catheter**, **tube thoracostomy**, or **intercostal drain**) is a flexible plastic tube that is inserted through the chest wall and into the pleural space. It is used to remove air or bodily fluids from the intrathoracic space.
- These drains are surgically placed and therefore should be **handled with Special Care**. The improper removal of these medical devises will create a medical emergency.

Drains Cont.

- These drains can be hooked to the wall to **add suction** to the process.
- This is what you can expect to see when looking at **chest tubes**:

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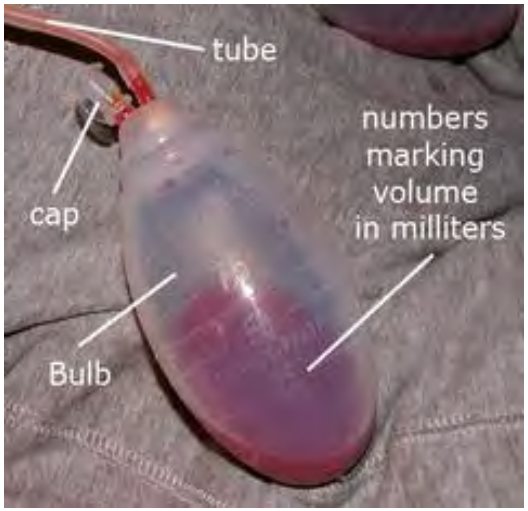
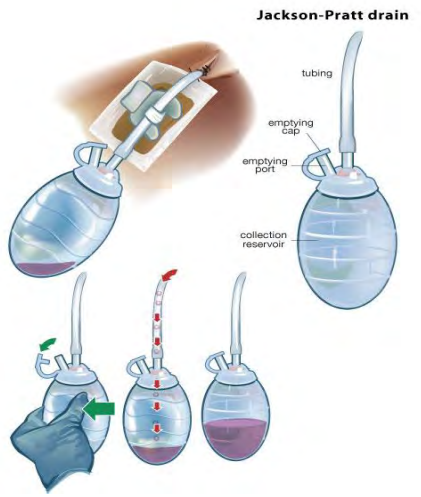
Drains Cont.

- You will need to fasten the JP drains to your patients gown. This is typically done with large safety pins.
- When looking for JP Drains, this is what you should expect to see:





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ALWAYS!

- **Before entering the patients room**, you should **ALWAYS:**
  - **Review your patients chart**—Review the current pathologies, PMH, Last nurses entry, and the previous PT sessions.
  - Be particularly mindful of **Orthostasis and Weight Bearing restrictions.**
  - Always make contact with your nurse to make sure that the patient is **OK** for therapy and that you are not going to interfere when a patients is needed off the floor.
  - Always be aware of **required PPE**, i.e. glove, gown, mask. Hospitals are full of wonderful organisms like, **MRSA, VRE, C-diff, Rhino Virus, and TB**

Always Cont.

- Always be mindful that your patient is **not feeling very well** and should be treated as such. Keep voices down, have patience, and remember your patients will move slowly.
- Always **WASH YOUR HANDS!!!**

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The Set Up
10 Steps to a successful Treatment

- **Step One:** When entering the room, **wash your hands or use hand sanitizer**. You will be in a hospital, so put on gloves before touching anything in the room. This process will significantly reduce the transmission of nosocomial infection.
- **Step Two:** Upon entering the patients room, Introduce your self and then observe and evaluate the different lines, tubes and drains.
- **Step Three:** Figure out what your plan of care is going to consist of, and what side of the bed you want to work from.
- **Step Four:** Inform your patient what "the plan" is before making any adjustments to the room. Your patient will feel more confortable with you if they know what you are doing.

The Set Up Cont.

- **Step Five:** Prepare oxygen, by either attaching to bottle or remove oxygen from the equation. **(this will need nurses approval).**
- **Step Six:** Move catheter to side of bed you are going to work from.
- **Step Seven:** Prepare IV lines for patient movement. (lines will be tangled up) If there are several IV lines, ask the attending nurse if any can be disconnected for therapy. The nurse will do this for you if possible.
- **Note:** If there are many medical devices needed to go with you out of the room, get help from a tech, a nurse's aid, or even family. Don't try to carry so much that you aren't able to keep hands on your patient for safety.

The Set Up Cont.

- **Step Eight:** Before standing patient, put a gait belt on them, being conscious of abdominal incisions, tubes and drains. If there are abdominal interferences, put gait belt high on the chest – under the arms. **Safety has to come first.**
- **Step Nine:** Hook catheter to walker, have IV stand ready to go, if O2 is necessary have enough hands to handle patient and equipment safely.
- **Note:** If blood pressure is a concern, take vitals before and after therapy. If patient is on continuous O2, check pulse-ox before and after treatment.
- **Step Ten:** Remember to be vigilant, patient and kind. Take a deep breath, everything is going to be OK!

The Room

Your PATIENT

References

- All images were taken from Google Images on October 15th, 2003
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