



Home Infusion Therapy (HIT) Essentials

2021

By the end of this module, nurse learners will be able to:

- Apply knowledge of home infusion therapy to daily nursing practice.
- Evaluate appropriate NurseLink resources for home infusion patients to promote effective learning and safely administer home infusion therapy.
- Apply NurseLink policies and procedures to daily nursing practice for home infusion patients.
- Apply best practice in all modes of administration when teaching and caring for home infusion patients.
- Apply best practice techniques while performing vascular-access dressing changes and lab draws.
- Analyze and synthesize HIT orders, product labels, and resources for application in the home setting.
- Identify opportunities to prevent medication errors and patient adverse events.

CarepathRx Resources



Online Resources



Nurse Education



Patient Education



**Policies &
Procedures**



News

NurseLink: Nurse Education

- Annual Update: Home Infusion Nursing Manual
- Pump Brochure: Image and explanation of all pumps
- Education Videos: Patient step-by-step videos and simple nurse instructional videos
- Infusion Nurse Resources: List of links to Home Infusion organizations
- Web-Based Trainings: Links to CarepathRx online training modules
- Documents: Company published articles



Nurse Education

We know that proper infusion education and resources are essential to providing clinical excellence in the home setting.

[Annual Update](#)

[Pump Brochure](#)

[Education Videos](#)

[Infusion Nurse Resources](#)

[Nearpod Training](#)

[Documents](#)

NurseLink: Patient Education

- IV Infusion Videos: Patient step-by-step administration videos
- Enteral Videos: Patient step-by-step administration videos
- Infusion Teaching Guides: Patient step-by-step administration instructions
- Enteral Teaching Guides: Patient step-by-step administration instructions



Patient Education

NurseLink aims to not only provide agency education and training, but also to help our patients and caregivers throughout their time on service with us. We know that the more our patients are comfortable with their therapy and administration, the better the therapy outcome.

IV Infusion Videos

Patient Advocacy

Infusion Teaching Guides

Enteral Videos

Patient Handbook

Enteral Teaching Guides

FAQs

Patient Teaching Guides

Click on a therapy button to expand/collapse the teaching guides for that therapy.

Antibiotic

CADD Prizm Pump

- CADD Prizm Battery Change Procedure
- CADD Prizm Battery Change Procedure (Español)
- CADD Prizm Power Pack Instruction for Usage
- CADD Prizm Power Pack Instruction for Usage (Español)
- CADD Prizm Administration Procedure - Intermittent or Continuous Mode

- CADD Prizm Administration Procedure
- Pole Mounted CADD Prizm Administration
- Pole Mounted CADD Prizm Administration
- Pole Mounted CADD Prizm Administration
- Pole Mounted CADD Prizm Administration
- Partial Dose Infusion via CADD Prizm
- Partial Dose Infusion via CADD Prizm
- Continuous Subcutaneous Infusion for
- Continuous Subcutaneous Infusion for

CADD Solis Pump

- CADD Solis Administration Procedure
- CADD Solis Administration Procedure
- Cadd Solis Pump Rechargeable Battery
- Cadd Solis Pump Rechargeable Battery
- CADD Solis Pump Disposable Battery
- CADD Solis Pump Disposable Battery
- Pole Mounted Cadd Solis Administration
- Pole Mounted Cadd Solis Administration
- Pole Mounted Cadd Solis Administration
- Pole Mounted Cadd Solis Administration
- Cadd Solis Administration Procedure
- Cadd Solis Administration Procedure

Elastomeric

- Administering Medication via Elastomeric
- Administering Medication via Elastomeric

Freedom 60 Pump

PROCEDURE FOR INFUSION AND DAILY BAG WITH TUBING CHANGE:

1. Clean work area. Wash hands thoroughly. Gather supplies
2. Prepare your prefilled syringes for flushing your IV Catheter as instructed by your nurse.
3. Remove CADD tubing from package. Remove the blue clip from the top of the cassette by pulling up on the blue clip. This will prevent unintended gravity flow.
4. Remove protective tab from entry port of medication bag.
5. Remove the cover from the spike on tubing and insert spike into medication bag using a pushing- twisting motion. **DO NOT TOUCH SPIKE.**
6. **FOR INITIAL INFUSION ONLY:** Press the Power button on the right side of pump. Pump will make a series of beeps. Main screen will appear with pump mode showing and "READY TO BEGIN" in center of screen.
7. Open cassette latch lever 90 degrees and attach new tubing to pump (hook hinged end first). Push up on the cassette until it firmly clicks into place OR place the pump upright on a firm, flat surface and then press down on the latch side of the pump until the cassette clicks into place. Close Latch.
***NOTE:** Do not force latch. If you are unable to latch the cassette with minimal to no resistance, the cassette is not in the proper latching position. Unlatch the cassette and repeat the process. Top of screen will flash "High Volume or Standard Administration Set Latched".
8. Check the pump screen; if **RESET RESERVIOR VOLUME TO _____? ML** appears, press "YES" on keypad. ***This question will not appear during initial infusion**

Patient Step-by-Step Teaching Guides



Delivered to patient with 1st delivery.



Detailed instruction on how to administer home IV and enteral therapies.



Can be found on the NurseLink by CarepathRx website.

Infusion Teaching Videos



Administering Your Medication via CADD Solis Pump at Home



Administering TPN Infusion at Home



Stopping Your TPN Infusion at Home



Administering Your Mini-Bag Plus Medication via Gravity at Home



Administering Your Vial Mate Medication via Gravity at Home



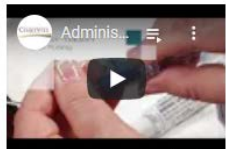
Administering Medications via Your Freedom 60 Pump



Administering Your IV Push Medication via Prefilled Syringe at Home



Flushing Your IV Catheter at Home



Administering Medication via Gravity at Home



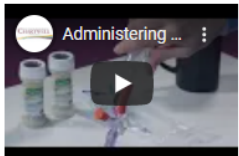
Administering Medication via Elastomeric Easy Pump



How to Power Your CADD Prizm Pump with Battery & Power Pack

Enteral Teaching Videos

Chartwell/CarepathRx Videos



Administering Your Enteral Bolus Feed at Home



Administering Your Enteral Feed via Gravity at Home

Kangaroo™ Joey Pump Manufacturer Videos

Infinity® Pump Manufacturer Videos

Patient Step-by-Step Videos



Step-by-Step administration instructions for patient/caregiver administration of home therapies.



Videos located on the NurseLink by CarepathRx website



Easy to share link with patient.

NurseLink: Policies

Listing of all CarepathRx Nursing
Policies with link to PDF.



Policies and Procedures

Our Chartwell policies and procedure are designed to follow the patient's plan of treatment. These are updated annually and provide you with the strategy and guidelines needed to provide safe and effective home infusion therapy.

A. General

Flushing Catheters	NUR-001
Intravenous Therapy Principles	NUR-002
IV Lines and Their Care; Quick Reference	NUR-003
Blood Culture Collection	NUR-004
Drug Level Drawing Times	NUR-005
Lab Draw Protocol	NUR-006
Antimicrobial Lock Therapy Central Venous Access Device	NUR-010
Management of Allergic/Anaphylactic Reactions	NUR-012
IV Push Medication Via Syringe	NUR-013
Withdrawing Medication From A Vial	NUR-014
Administration of Cathflo Activase in Adult Patient	NUR-015
Infiltration and Phlebitis	NUR-121
Vascular Access Recommendations	NUR-208A

On Call

- 24/7 access to pharmacy clinical and delivery teams
- For after-hours support, troubleshooting, and delivery needs:
 - Pharmacists
 - Nurses
 - Delivery dispatchers
- Staff in house 7 days per week, 365 days a year
- Business Hours
 - Monday – Friday, 8 a.m. – 5:30 p.m.
 - Saturday, 9 a.m. – 3 p.m.
 - Operational hours are around the clock



Lab Tracking

Hi, this is Christie from ABC Nursing & I dropped John Doe's Vanco trough at UPMC Hamot. Last dose was at 8pm.

Must inform the pharmacy where and when to obtain results!!

Hi, this is Christie from ABC Nursing and I just dropped John Doe's CBC, CMP, Mag & phos. off at UPMC Hamot.

Hi, this is Christie from ABC Nursing John Doe's labs will be drawn Tuesday this week.

Pharmacy must be notified of lab processing locations to retrieve results.

Timely notification helps us to better advocate for our patients.

Timely retrieval of lab results is important. The pharmacist will contact the lab if not all ordered tests were processed.

Please also verify timing of trough level draws to make dosage changes.



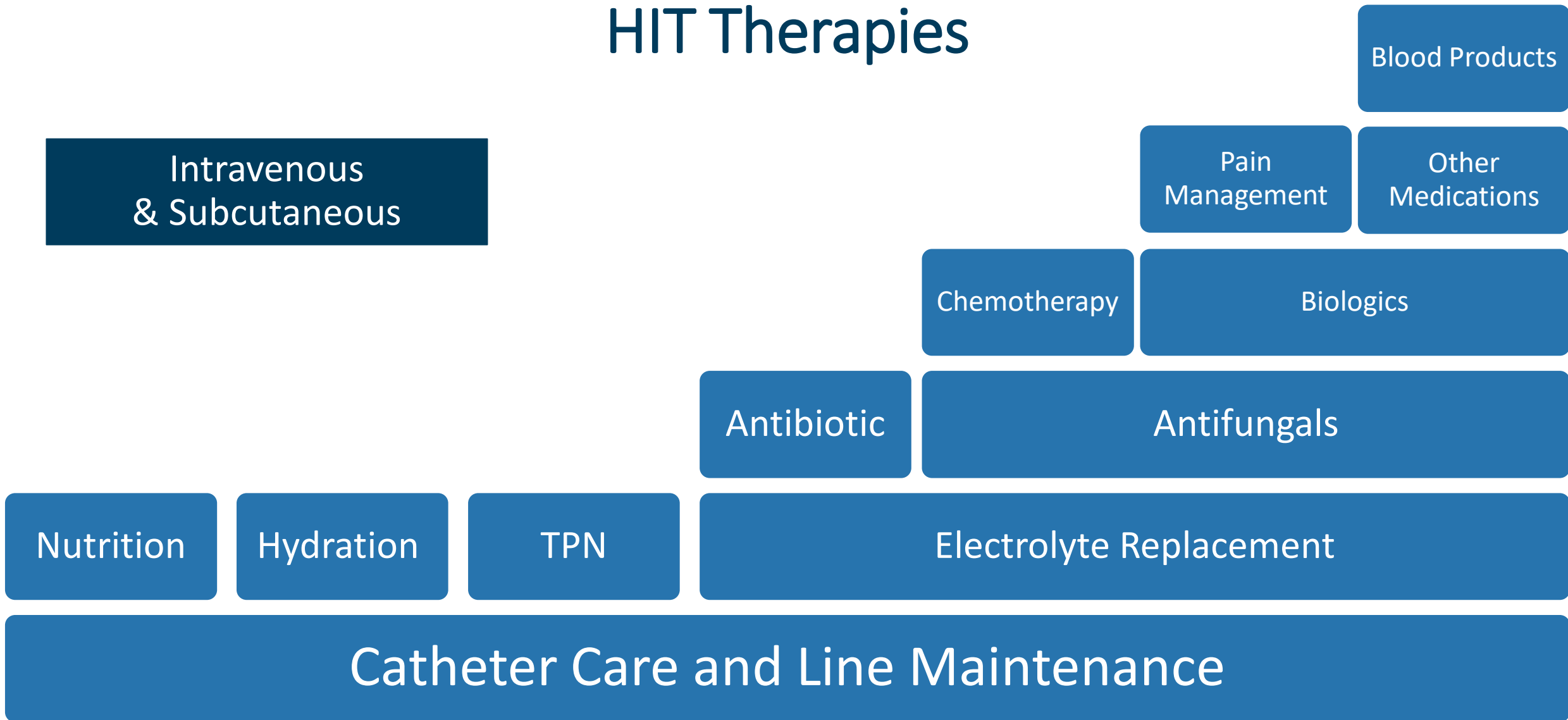
Home IV Therapy



Home Infusion Therapy (HIT) defined by CMS

Home infusion therapy involves the intravenous or subcutaneous administration of drugs or biologicals to an individual at home. The components needed to perform home infusion include the drug, i.e., antivirals, immune globulin; equipment, i.e., a pump; and supplies, i.e., tubing and catheters. Likewise, nursing services are necessary to train and educate the patient and caregivers on the safe administration of infusion drugs in the home. Visiting nurses often play a large role in home infusion. Nurses typically train the patient or caregiver to self-administer the drug, educate on side effects and goals of therapy, and visit periodically to assess the infusion site and provide dressing changes. The home infusion process typically requires coordination among multiple entities, including patients, physicians, hospital discharge planners, health plans, home infusion pharmacies, and, if applicable, home health agencies.

HIT Therapies



HIT Documentation & Accountability

Education

Medication information and side effects

QA – double check label and pump with each dose

Medication administration

Pharmacy resources

On call availability by Pharmacy and Nursing Agency

Assessment

Physical exam

IV site and lab draws

Fluid and hydration status

Electrolyte status

Safety

Caregiver and support system

Mental status – ability to self care

Fall risk

Home environment conducive to healing

General

Visit date and timespan

Communication with RPH – compatibility & clinical significance

Medication profile

Nursing care plan

Therapy appropriate for dx

Home IV Therapy Skillsets

**Therapies and services provided will be dependent on agency policies and procedures.

- Administration of IV medication.
- Educate patients on self-administration of IV medication.
- Removal and insertion of peripheral IV catheter.
- Removal of PICC and midline catheters.
- Lab draws.
- Administration of blood, blood components and plasma volume expanders, tissue plasminogen activators, immunoglobulins, antineoplastic (chemotherapy) agents, etc. ***policy and nurse training dependent*
- Administration of fibrinolytic or thrombolytic agents to de-clot IV catheter. ***payor dependent*
- Program or access implanted IV infusion pump and devices, including Medtronic pumps. ***nurse training dependent*
- Therapeutic phlebotomy. ***policy and nurse training dependent*

HIT Patient Criteria

Nursing services available in home or clinic and patient under the care of a physician

Ethical, cultural & social considerations (no current IVDU)

Insurance benefit covers therapy (or patient accepts financial responsibility)

Patient/Caregiver willing and able to participate and comply with care

Patient or Caregiver with capacity to learn

Patient medically and emotionally stable and therapy appropriate for in home administration

Emergency plan in place in home environment w/ utilities and adequate med storage (geographic considerations)

Patient or Caregiver independent with infusion and support network in place to promote healing

Categories of IV Catheters

- Peripheral
- Midline
- PICC
- Non-tunneled central
- Tunneled central
- Implanted Ports

Catheter Lumens



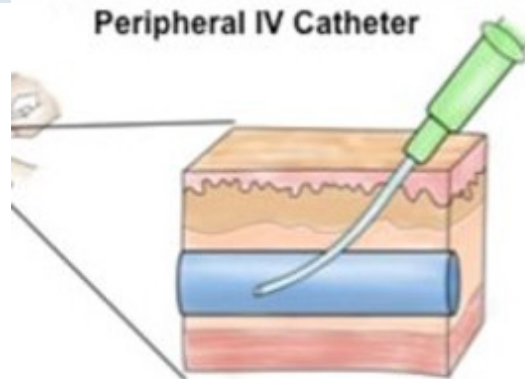
Single-Lumen



Double-Lumen

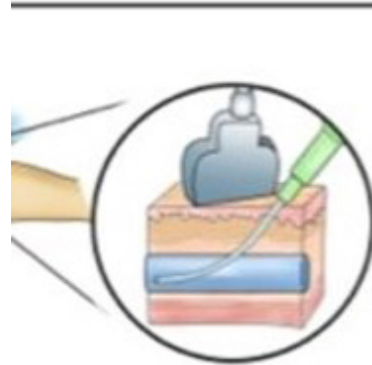
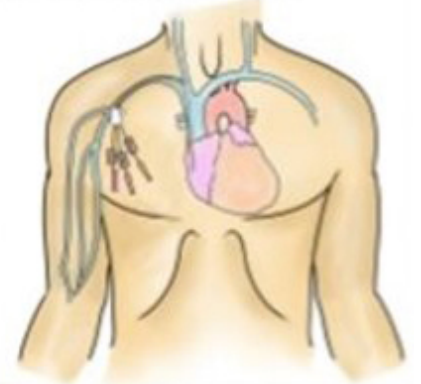


Triple-Lumen

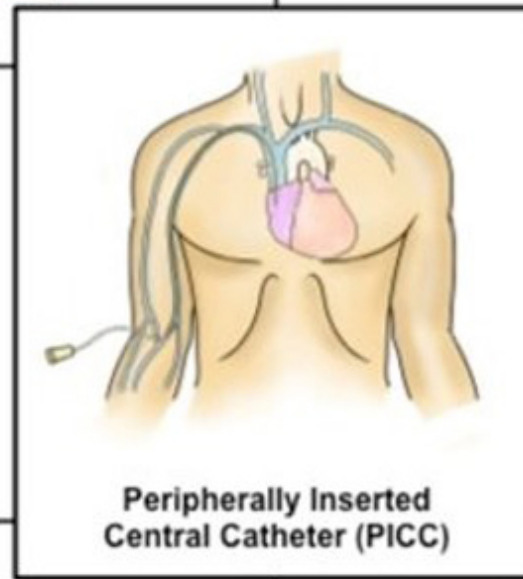


Peripheral IV Catheter

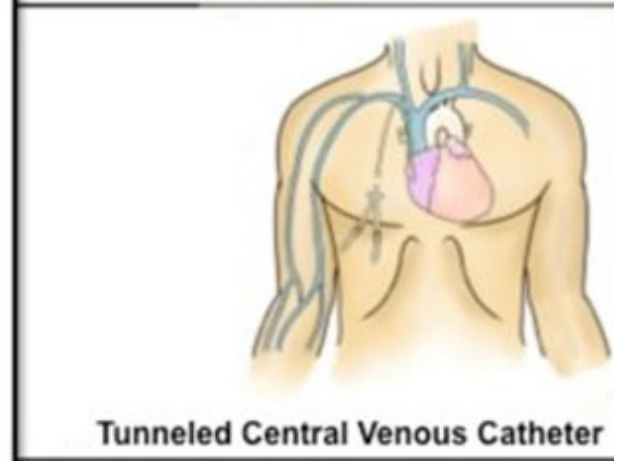
Non-Tunneled Central Venous Catheter



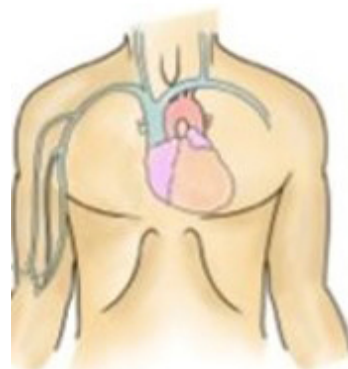
Peripheral IV Catheter



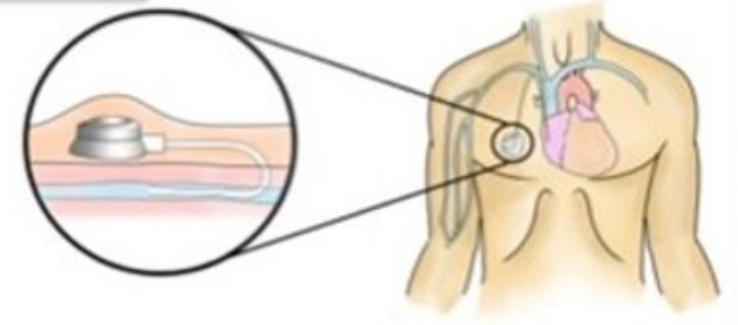
Peripherally Inserted Central Catheter (PICC)



Tunneled Central Venous Catheter



Midline Catheter



Implanted Port

HIT Complications

Catheter malposition / migration

- Intravascular malposition
- Extravascular malposition
 - Infiltration – medication goes into the surrounding tissue
 - Extravasation – infiltration of vesicants

Infection

- Sepsis
- Skin infection
- Skin erosion

Hypersensitivity reaction

- Site reaction
- Anaphylactic, systemic reactions
- Red-Man's syndrome

Line related

- Catheter fracture/damage
- Catheter occlusion by clot, residue or kink

Vascular

- Thrombosis – blood clot in the vein
- Thrombophlebitis – inflammation and damage of the vessel
- Superior vena Cava syndrome occlusion of SVC (sx: edema, coughing up blood, CP)
- Air embolism

Fluid overload

Monitor:

- Vital signs
- Weight
- Breath sounds
- Edema status

Preventing CLABSI

Scrub the Hub!

- The catheter hub is a known source of Central Line Associated Blood Stream Infections (CLABSI).
- The CDC recommendations are to “SCRUB” rather than “WIPE” the hubs with alcohol or chlorhexadine before accessing.
- SCRUB THE HUB before each use.
 - S.A.S.H requires cleaning the HUB 4 times.
- Teach the patient scrupulous hand hygiene and maintaining aseptic technique.



“Hub scrub” for 30 seconds using alcohol and friction in a twisting motion.

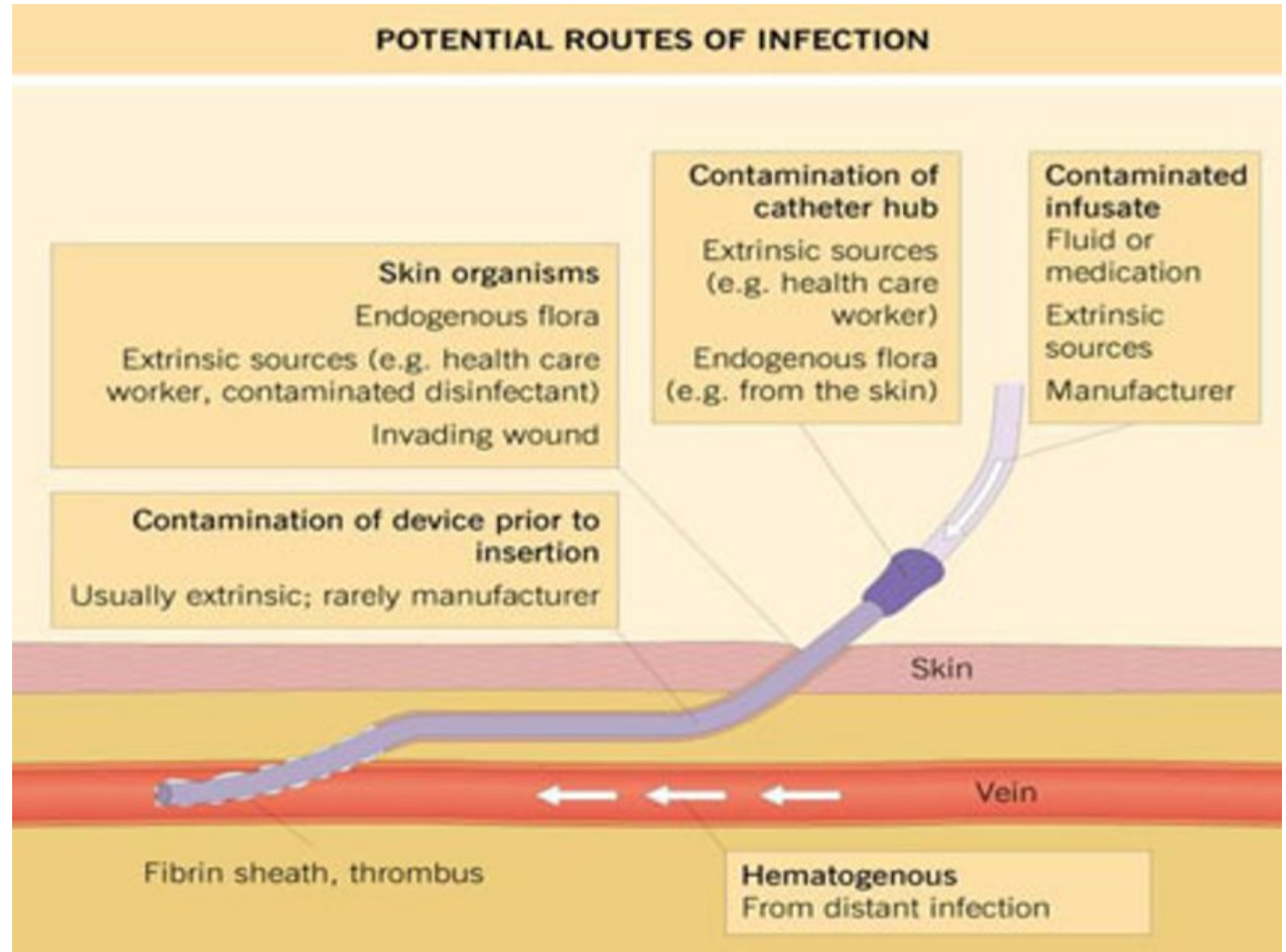
Allow to dry for 60

TPN patients:
30 second scrub with a 60 second air dry twice prior to each line access.



Preventing Central Line Associated Blood Stream Infection (CLABSI)

- Catheter hub
- Skin organisms
- Contamination during insertion
- Contaminated infusions
- Other infections settle in vein
- Thrombus in IV line or vein



Peripheral Catheters

- Easily inserted
- Changed every 48-72 hours
- May be left in place more than 72 hours based on nurse's assessment of the patient's condition, access site, skin and vein integrity, length and type of prescribed therapy, venue of care, integrity, and patency of the catheter
- Inserted by RN or LPN in the home
- There must be documentation of close monitoring of site
- Safely removed in the home by RN, LPN and in some cases by the patient or caregiver.

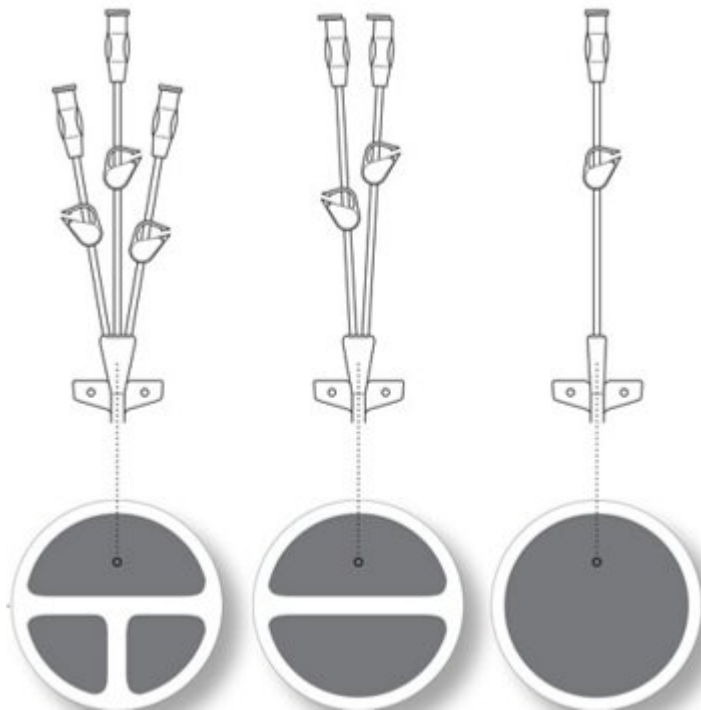


Catheter Lumens

Catheter lumens are individual access points for IV administration in the same catheter.

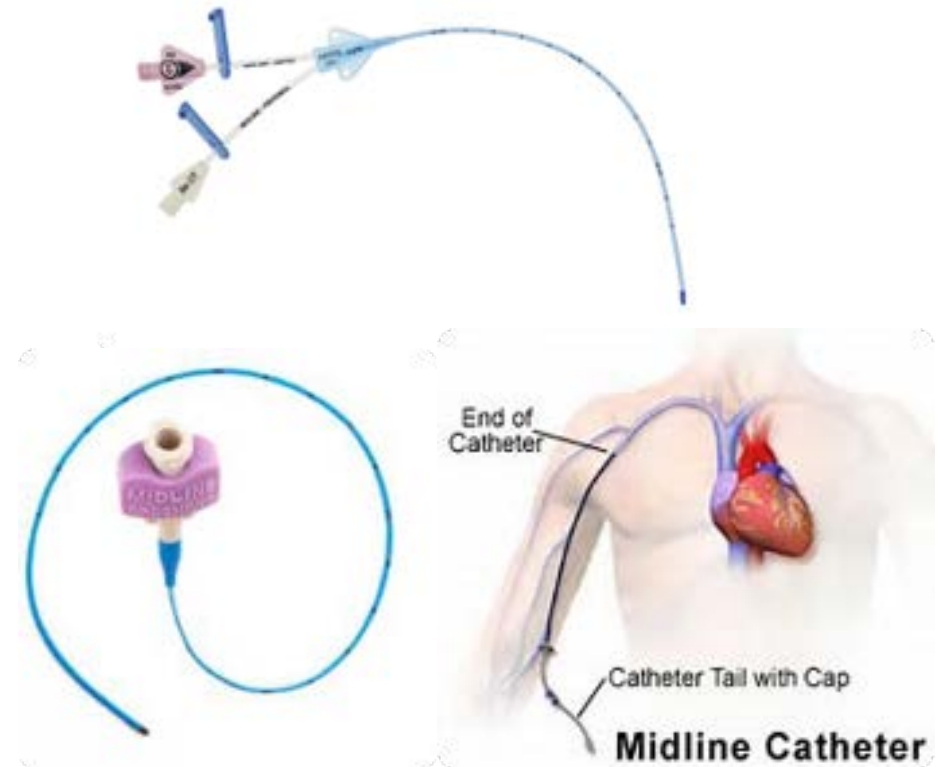
- From access point to the tip of the catheter, each lumen is separate from the other lumen(s).
- Infused medication does not mix with medications infused in another lumen until it enters the blood stream.
- Medication compatibility for infusion is not required when infused in separate lumens.

Each lumen is separate from access point to the opening in the vein.



Midline Catheters

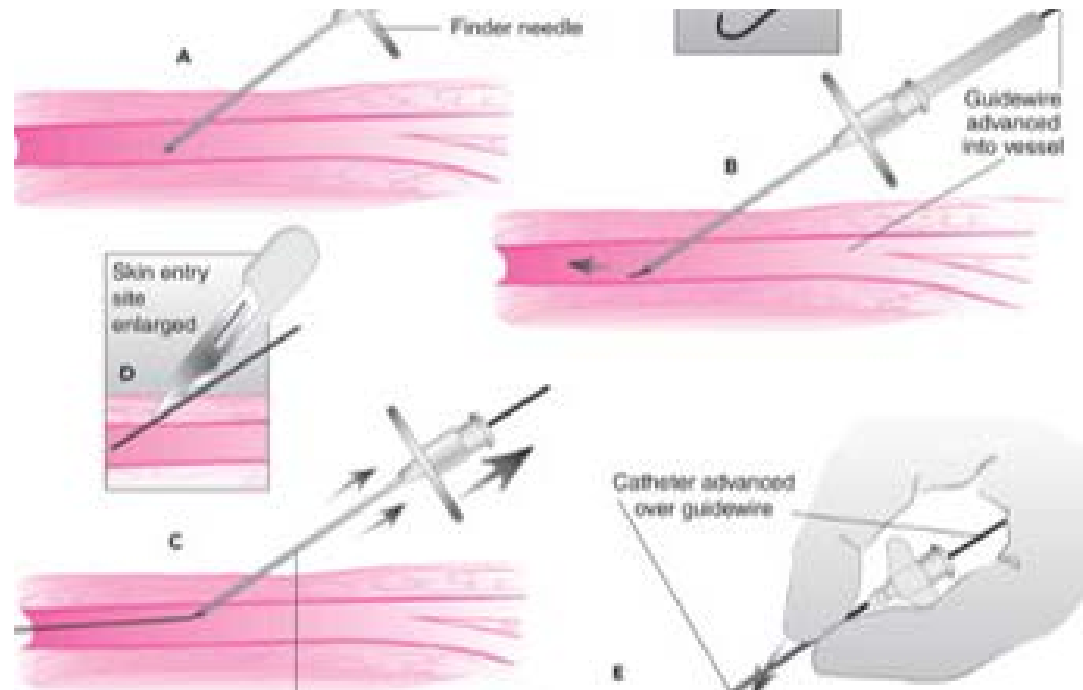
- This is a long peripheral IV catheter with the tip of the catheter at the axilla
 - Medication must be appropriate for peripheral infusion
- TPA/CathFlo is not appropriate
 - Research being conducted to assess if CathFlo is appropriate
- Used for short-term therapies
 - Dwell time is 2-4 weeks, refer to manufacturer recommendations.
- Weekly and PRN line care/dressing change
 - Securement device required
 - Cap and extension set changes
- Safely removed in the home by RN or LPN



Peripherally Inserted Central Catheters (PICC Lines)

- Dwell time weeks to several months
- Inserted in radiology or at the bedside
 - Correct catheter placement can be confirmed by using EKG technology or x-ray to confirm placement of the tip in the SVC (Superior Vena Cava).
 - These catheters can safely be removed in the home by a RN.

NOTE: A centrally inserted PICC line is treated like a CVC.



PICC Lines

Catheter Lumens



Single-Lumen



Double-Lumen



Triple-Lumen



PASV TUNNELED CATHETER

Open-ended

Heparin required
Should be clamped when not in use

Valved

No heparin
Prevent backflow of blood into catheter



TUNNELED VALVED CENTRAL
VENOUS CATHETER (Groshong)

PICC & Midline Care

INS standards recommend use of a manufactured securement device

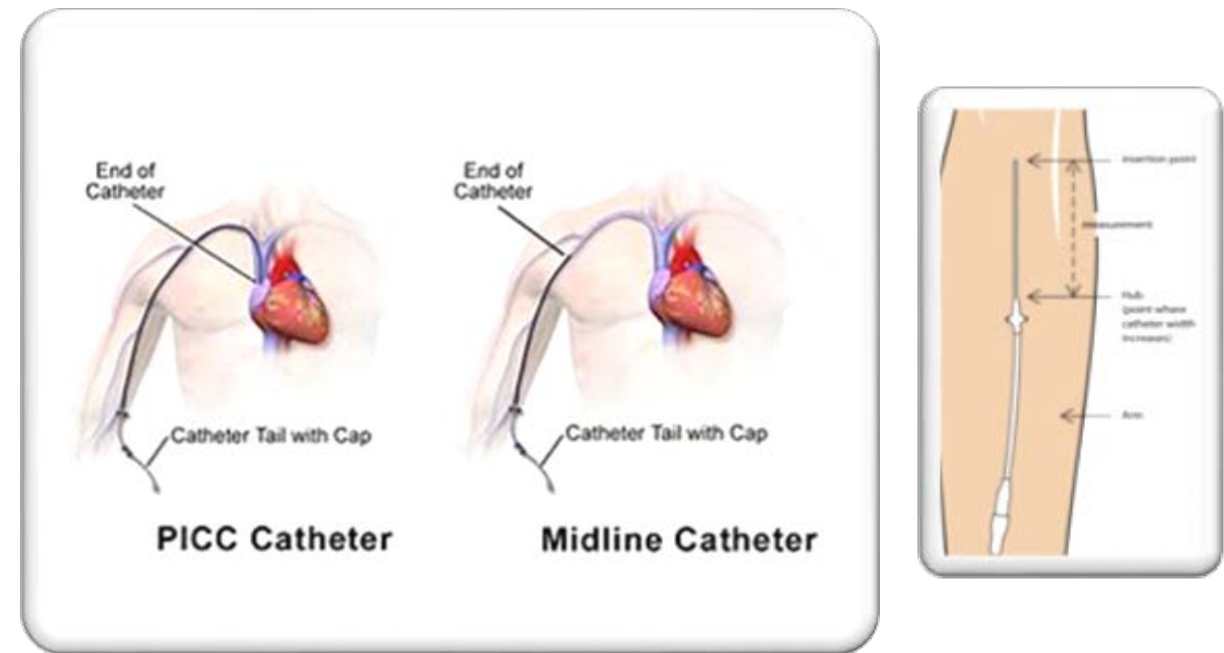
- Securement dressing
- Stat lock
- Other securement device

Weekly and PRN dressing changes

- Change injection caps and extension sets with each dressing change and lab draw
- Securement device to be changed with each dressing change

External length of the PICC/Midline to be measured and documented with each dressing change

- If the external length of the catheter has increased by 2cm or more since SOC the MD and the Infusion Pharmacist must be notified.



Non-Tunneled Central Venous Catheters (CVC)

This type of catheter is inserted by direct stick into the subclavian vein and is then threaded into the SVC by a physician

- Sutured in place
- Other locations are IJ and Femoral

The primary use of this type of catheter is in the acute care setting

- NOT recommended for in-home use

Highest infection rate of all Central Lines

Weekly and PRN dressing changes

- Change injection caps with each dressing change and lab draw

Not generally removed in the home

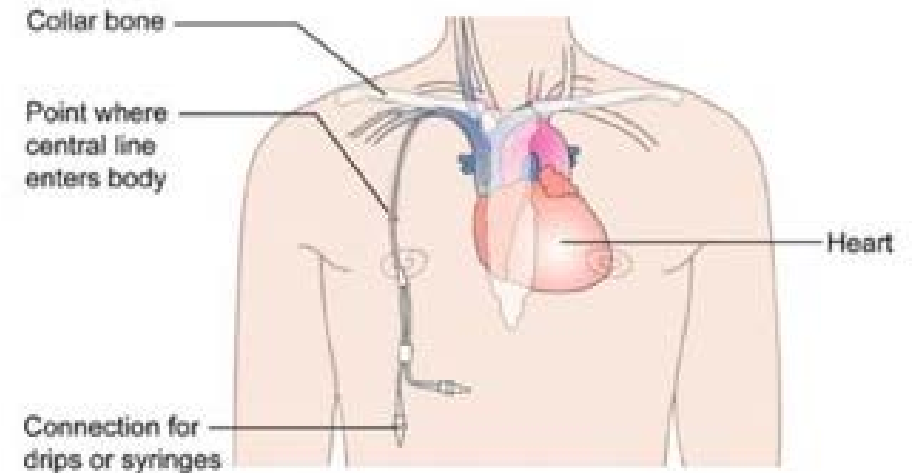
- Check your organizational policy to confirm

NOTE: A centrally inserted PICC line is treated like a CVC



Tunneled Central Veinous Catheters (CVC)

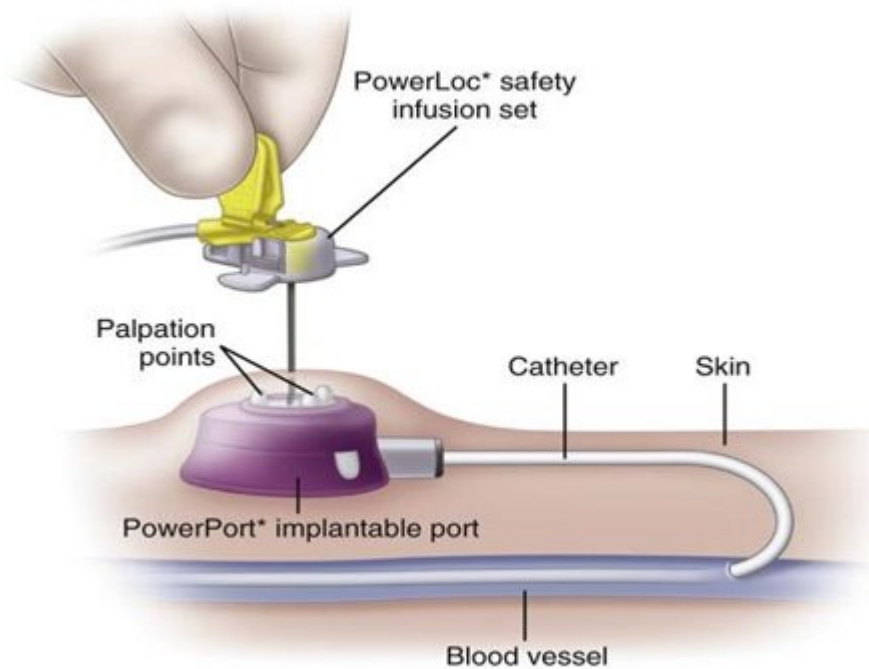
- Long term use
- Surgically inserted into the subclavian vein, then advanced to the SVC.
 - The distal portion of the catheter is then threaded through a subcutaneous tunnel to an exit site.
 - Dacron cuff encourages tissue growth around the catheter, which secures it in place.
- Weekly and PRN dressing changes
 - Change injection caps with each dressing change and lab draw.
- Surgically removed

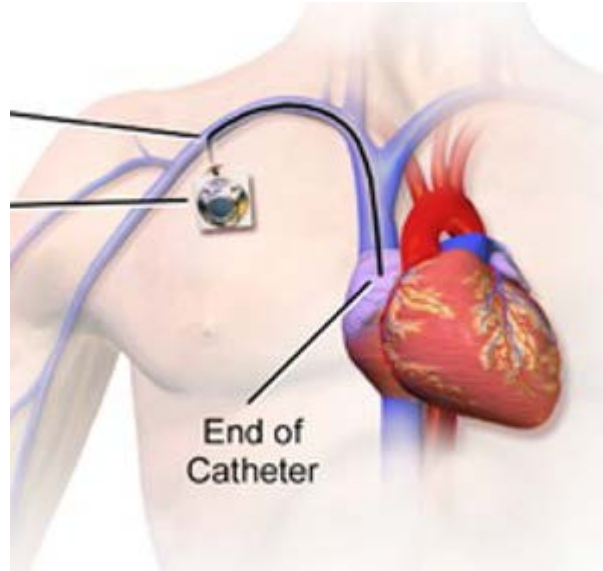


Hickman[®] - Broviac[®] - Groshong[®]

Implanted Ports

NON-CORING Huber needles must be used to access the self-sealing implanted





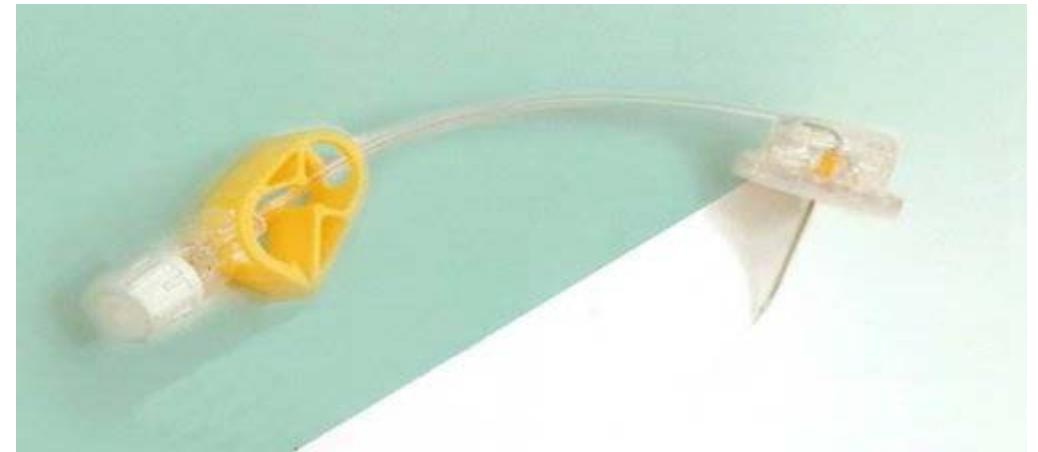
Implanted Ports

- Surgically implanted
 - Attached to a catheter that is threaded into the SVC
 - Removed surgically
- Long-term use
- Usually placed in the chest
 - Other locations: Arm, thigh, abdomen, ribs/side
- Typically single injection ports
 - Double injection ports are available



Non-Coring Needles

- Used to access ports for vascular access
 - Needle technology prevents damage to ports
 - Power Injectable PICCs
 - Must use power injectable Huber Needle with power PICC, if using for radiology power injector
- Needle changes with each weekly dressing change
 - Needle change by RN
 - Needle removed by RN and in some cases the patient or caregiver



SASH Method

1 . Follow physician orders on POT for flushing volumes.

Patients are **NOT** taught to check for a blood return.

Flush using **Push Pause Method.**

Flush all lumens with adequate amount of saline or heparin to **ensure patency.**

After lab draws, flush with 10-20mls of saline to clear the line.

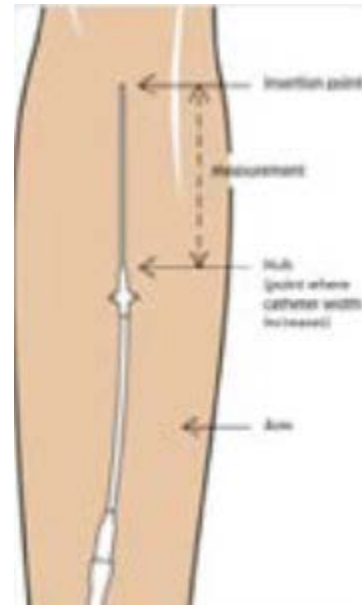
2. Flush before AND after every dose of medication.

- S – Flush the device with sterile Saline
- A – Administer the medication / draw blood work
- S – Flush the device with Sterile Saline
- H – Flush the device with Heparin

3. Unused lumens to be flushed daily with heparin only (no saline).

Dressing Changes

- Dressing changes are weekly and as needed
- INS guidelines recommends use of a securement device
 - Securement dressing is a recognized securement device.
- Dressing change kits often include a Tegaderm (breathable) dressing
- All supplies must be changed with every dressing change
 - Statlock
 - Extension sets
 - Injection caps
 - Biopatch



Securement dressing instructions:
<https://youtu.be/jM73tL7C48w>



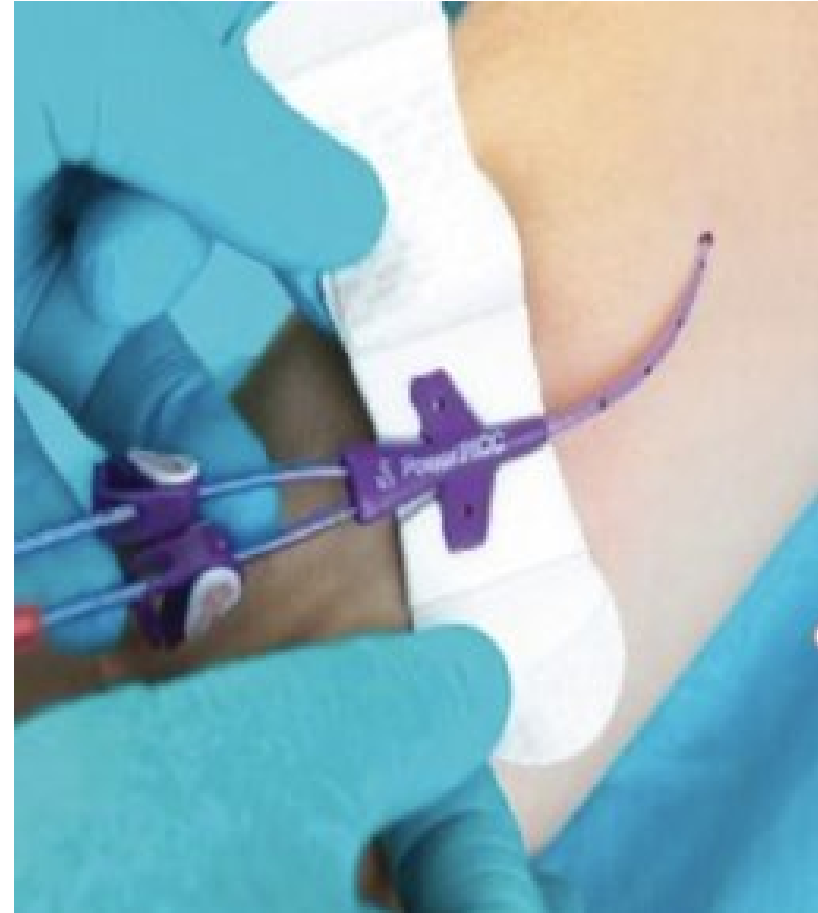
SorbaView Video



<https://youtu.be/jM73tL7C48w>

Securement Devices

- INS Guidelines recommends use of a securement with each dressing change:
 - Securement Dressing
 - Statlock for PICC
 - Posts for common PICC lines
 - Used as double securement with securement dressing
 - Used when patients can't tolerate SorbaView`
 - DO NOT USE WITH Tegaderm
 - Other Securement Devices
 - Gripper
 - Universal securements
 - Tube securements
 - Wing guard
- Used double securement with a securement dressing for
 - Pediatric patients
 - Patients at risk for line removal
 - By physician order
- Change with each dressing change



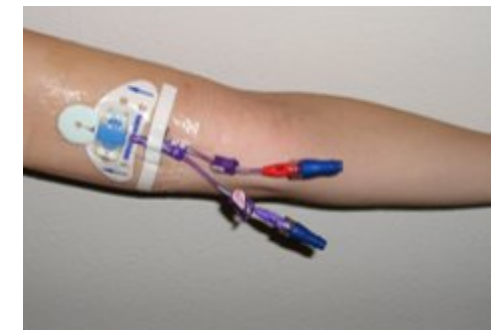
Initial Visit Line Care – PICC Extension Sets

Extension sets must be placed on PICC lines

- Patients are not able to flush or administer medications if they are not able to reach their vascular access device with both hands

Instructions:

- Maintain sterile technique
- Prime extension set with injection cap
- Prior to removing injection cap from vascular access device, cleanse connection with antiseptic wipe
- Attach extension set with injection cap
- Flush line



CATHETER INJECTION CAPS



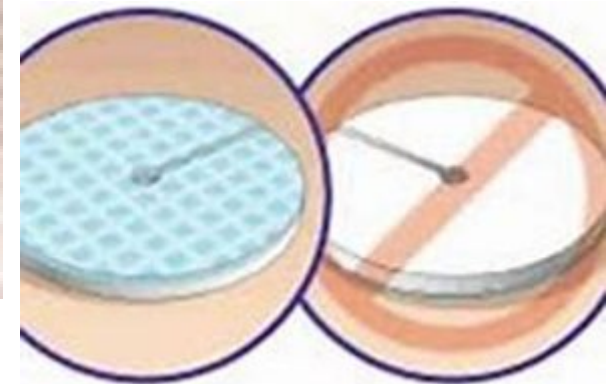
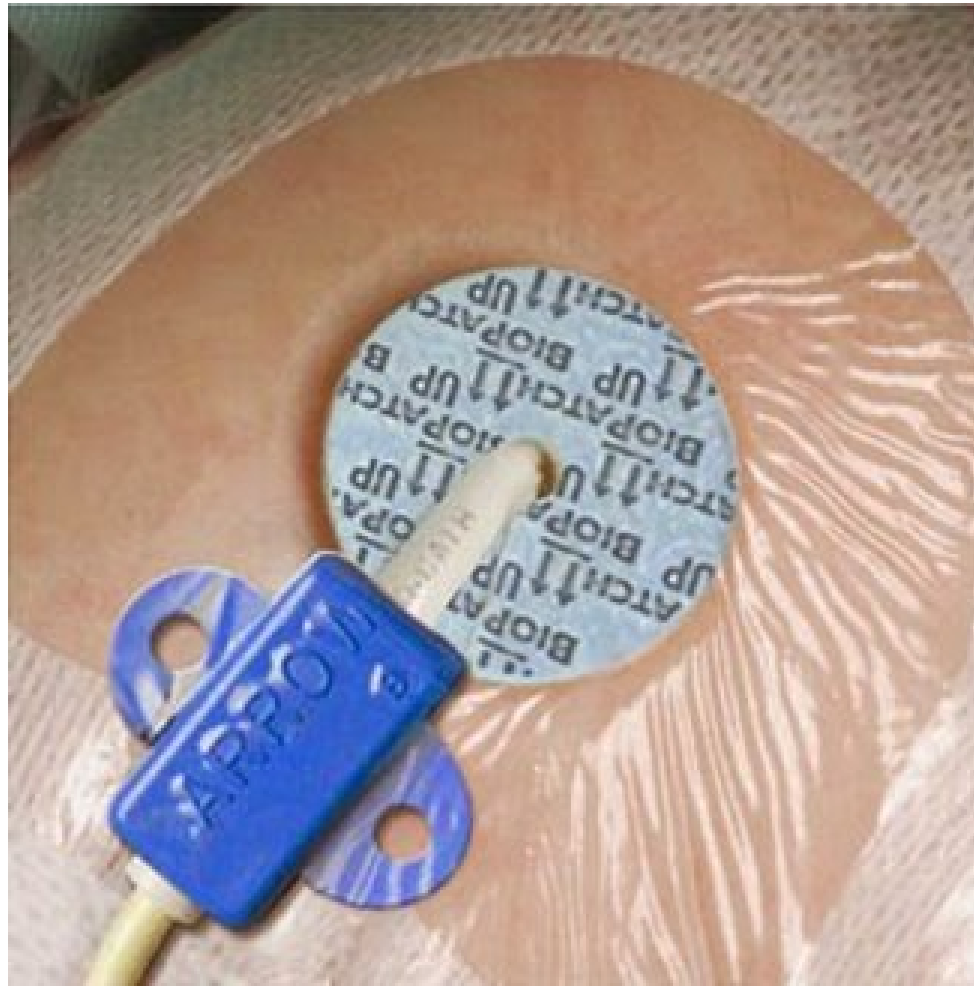
Positive pressure caps are NOT compatible with Negative pressure compounding systems for hazardous products.

Neutral pressure caps ARE compatible with Negative Pressure compounding systems for hazardous products.

Injection caps must be changed every seven (7) days and with each blood draw.

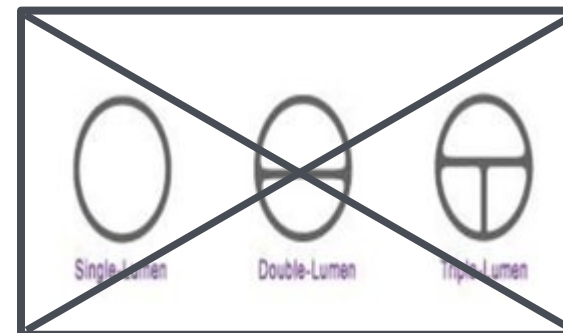
Biopatch

- Chlorhexidine impregnated disc.
- Reduces site infections, CLABSI, and skin colonization of microorganisms
- To be changed with each dressing change
- Print facing up during use



Y-sites

- IV-line connector or extension to provide a second access point for IV tubing to connect to the IV catheter.
- Medication is y-sited and infused into the same lumen.
- Always confirm medication compatibility before use.
 - Pharmacist will verbally or in writing communicate y-site compatible medications.
 - Document pharmacist y-site recommendations.



Y-sites are different from lumens.

Alcohol Caps

- Cap cover for injection port (hub/connector)
- Cap with alcohol-soaked sponge to cleanse hub
- Cap is left in place between IV-line access
 - Alcohol dries and cap becomes a simple cover
- Reduces risk of CLABSI from injection port contamination
- **Must continue to scrub the hub!**
- Single use only



Must scrub the hub for 30 seconds before EVERY IV hub access



Failure to scrub the hub will result in increased infection risk!

Line Locking

- To prevent CLABSI and maintain line patency
- Not to be administered systemically
 - Always withdrawal lock solution before flushing line with Saline
 - If multiple caregivers, label the catheter: “DO NOT USE-LineLock” to prevent systemic administration (flushing of lock solution)
- Allow lock solution to dwell for a period specified by the physician order
- Antibiotic lock therapy:
 - Goal of sterilizing the catheter lumen
 - Instilling high concentrations of antibiotics into the catheter lumen for extended periods of time
- Ethanol lock therapy:
 - Goal of sterilizing the catheter lumen
 - IV line must be made of silicone, other materials may deteriorate

Common locking solutions:

Ethanol
Vancomycin
Gentamycin
Ciprofloxin
High dose Heparin



IV Line Filters

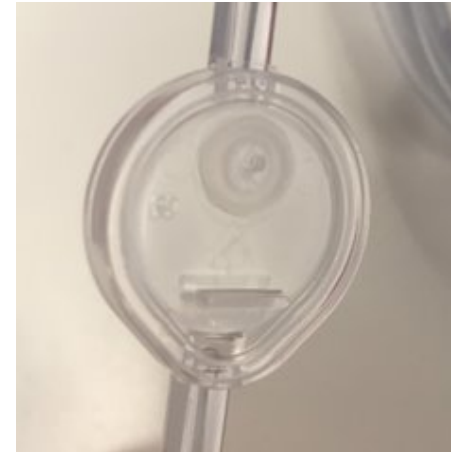
An IV-line filter is a membrane in the tubing set designed to prevent particulates and air bubbles from being administered.

Filters Components:

- Inlet allows fluid to enter the filter compartment.
- Fluid then fills the vented side, allowing air to be removed.
- Filter membrane becomes wet and prevents air and particulates to flow through the tubing. Works like a strainer.
- Fluid flow to patient side for administration.

Proper priming techniques allow the fluid to fill the air-vent side first, then saturating the membrane and before filling the patient side.

- Arrow should point up when priming to allow air bubbles to flow through membrane before fluid saturates it.



Arrow to point up during priming.

Common filter membrane sizes:
0.2 micron

- For medications compounded in the home.
- Most frequently used to filter particulates.

1.2 micron

- Usually for TPN lipids.
- Allows larger molecules to pass to the patient.



Medication Temperature for Infusion

Solutions should be at room temperature for infusion.

- Most medication to be removed from the refrigerator 2-4 hours prior to their infusion.
- Elastomeric Device (Easy Pumps) must be removed from the refrigerator 6-12 hours prior to infusion.

Instruct to NOT artificially warm the bag or syringe.

- ❌ Do NOT microwave
- ❌ Do NOT bathe in warm water
- ❌ Do NOT heat in any way



Blood Sampling Tips

- Always stop the infusion prior to lab draw
- Flush line before and after lab draw
 - 5-10ml flush before
 - 10-20ml flush after
- Waste 10ml of blood prior to collecting specimen
- Trough results should be drawn immediately prior to next dose
 - Should the patient administer dose, do not draw trough and re-schedule lab draw
 - Do not draw from the same line the medication is infusing
- Hub to hub for best results
 - Always remove extension sets when drawing labs
 - Attach new sterile caps/extension sets after lab draws
- Helpful with sluggish or no blood return
 - Positioning of line and limb
 - Syringe draw by pulling back 1-2 ml increments and allow to fill
 - Use the other line lumen
 - Ensure catheter is not kinked under the dressing (may need dressing change)
 - Flush briskly with 10mls using the push pause method to create turbulent flow



Chemotherapy & Hazardous Drug Considerations

Chemo PPE:

- Double gloves
- Protective gown
- Eye protection
- Mat to protect work area from drip

Closed system drug transfer device and drug administration sets should be attached and primed prior to administration.

Dispose of in proper container (not household garbage).

Chemo spill kit in home to safely clean spills.

- Fabrics washed twice separately in warm water.

Chemo precaution for body fluids for 48 hours after chemotherapy dose.



Certification required for starting chemotherapy infusion.

Every RN can stop chemo with proper PPE.

****Check organizational P&P****

SAVE THAT LINE!

S

- **Scrupulous Hand Hygiene** – before and after contact with vascular access devices and prior to insertion

A

- **Aseptic Technique** – during catheter insertion and care

V

- **Vigorous Friction to Hubs** – vigorous friction with alcohol/antiseptic wipe for 30 seconds wherever you “make or break a connection” to give medications, flush, or change tubing and injection port or add on device

E

- **Ensure Patency** – Flush all lumens with adequate amount of saline or heparinized saline to maintain patency

SOC Visit Responsibilities

Review the **Patient Welcome Book**

- Patient specific documents inventory of drugs and supplies in the home during weekly call.
- Patient Specific Documents:
- Pharmacy orders
 - Patient Teaching Guide (step-by-step administration instructions)
 - Drug information sheets

Ensure patient has signed their consent for treatment.

Therapy administration and troubleshooting education.

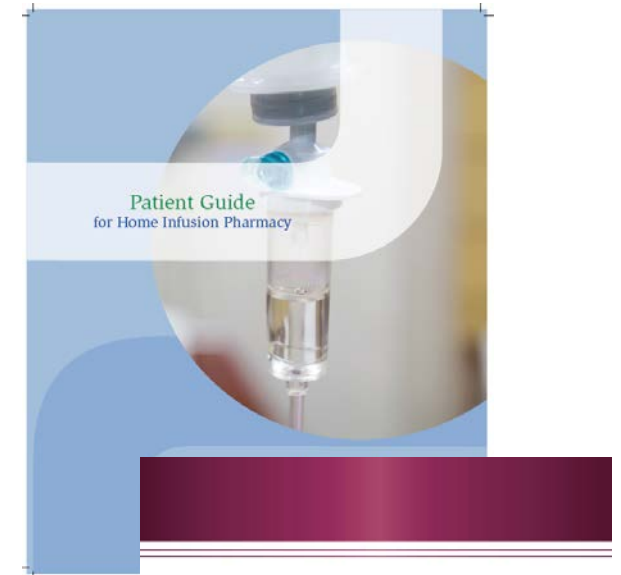
- Supplies, medication usage and storage.
- Use patient teaching guide and video resources

Remind patients that pumps must be returned to the pharmacy when therapy is completed.

- Not disposable

The pharmacy must speak to the patient before each delivery to assess the patient and for medication and supply ordering.

- Complete inventory of drugs and supplies
- Delivery needs
- Response to therapy
- Answer patient questions



Patient Welcome Handbook



Home Infusion Pharmacy

Pittsburgh Erie Altoona
1-800-755-4704 1-888-252-0716 1-855-349-6226

Specialty Pharmacy

1-800-366-6020

Enteral Nutrition

1-800-755-4704, Option 4

Patient Teaching Guides

Teaching Guides and Videos are located on the NurseLink Portal on the CarepathRx [website](#).

Step by step instruction on how to administer medications.

Resources

Supplies

Set up

Administration

Clean up

CADD PRIZM ADMINISTRATION PROCEDURE (INTERMITTENT OR CONTINUOUS MODE)

Properly administering your medication via the CADD Prizm Pump at home is important to your safety. Please call 1-800-755-4704 if you have any questions or concerns at all while administering the medication. We are available 24 hours a day, 7 days a week. In the event of an emergency, always call 911.

For teaching guides and videos:

<https://chartwellpa.com/patients/patient-teaching-guides.asp>

SUPPLIES:

- Medication bag or cassette
- CADD tubing (**change M-W-F unless otherwise instructed**)
- Sodium chloride/Saline syringe
- Alcohol/antiseptic wipes
- 9 volt battery (if due to be changed)
- coin

SASH FLUSH PROCEDURE:

- S** Saline ___ ml
- A** Administer medication as instructed by your nurse
- S** Saline ___ ml
- H** Heparin ___ ml (if required)

PROCEDURE:

1. Gather supplies. Clean work area. Wash Hands thoroughly for at least 20 seconds.
2. Check labels for name, drug, frequency, and expiration. Inspect the medication bag or cassette for any cracks, leaks, particulate matter, and clarity of medication. Contact Chartwell for any discrepancies or concerns.
3. Prepare your prefilled syringes for flushing your IV Catheter as instructed by your nurse.
4. Remove CADD tubing from package. Remove the blue clip from the top of the cassette by pulling up on the blue clip. Removing blue clip causes flow stop to close, preventing unintended gravity flow.
5. Remove protective tab from entry port of medication bag.
6. Remove the cover from the spike on tubing and insert spike into medication bag using a pushing twisting motion. **DO NOT TOUCH SPIKE.**

Drug Information Sheets

- Delivered to the patient at State of Care (SOC)
- Review medication and side effects with patient/caregiver

WARNING: 1

POSSIBLE SIDE EFFECTS:

BEFORE USING THIS MEDICINE:

OVERDOSE:

HOW TO USE THIS MEDICINE:

ADDITIONAL INFORMATION:

CAUTIONS:

Patient: NAME

PATIENT EDUCATION MONOGRAPH

Ganciclovir Sodium

Date: Friday, November 6, 2020

Physician: KILARU, SILPA (103385)

Rx: 587708

GENERIC NAME: Ganciclovir (Systemic) (gan SYE kloe veer)

WARNING: Very bad and sometimes life-threatening blood and bone marrow problems like anemia, low platelet counts, or low white blood cell counts have happened with this drug. Change in dose or even stopping the drug may be needed if any of these side effects happen. Talk with the doctor. This drug has caused fertility problems in animals and some humans. Fertility problems may lead to not being able get pregnant or father a child. This may go back to normal but sometimes it may not. If you have questions, talk with the doctor. In animals, this drug has caused harm to unborn babies and cancer. This drug may have the same effects in humans. If you have questions, talk with the doctor. **COMMON USES:** It is used to treat a viral infection of the eyes in people with immune system problems. It is used to prevent cytomegalovirus (CMV) disease after organ transplant. It may be given to you for other reasons. Talk with the doctor.

BEFORE USING THIS MEDICINE: WHAT DO I NEED TO TELL MY DOCTOR BEFORE I TAKE THIS DRUG? TELL YOUR DOCTOR: If you are allergic to this drug; any part of this drug; or any other drugs, foods, or substances. Tell your doctor about the allergy and what signs you had. **TELL YOUR DOCTOR:** If you have any of these health problems: Low white blood cell count, low platelet count, or low red blood cell count. **TELL YOUR DOCTOR:** If you are taking imipenem-cilastatin. **TELL YOUR DOCTOR:** If you are breast-feeding. Do not breast-feed while you take this drug. This is not a list of all drugs or health problems that interact with this drug. Tell your doctor and pharmacist about all of your drugs (prescription or OTC, natural products, vitamins) and health problems. You must check to make sure that it is safe for you to take this drug with all of your drugs and health problems. Do not start, stop, or change the dose of any drug without checking with your doctor.

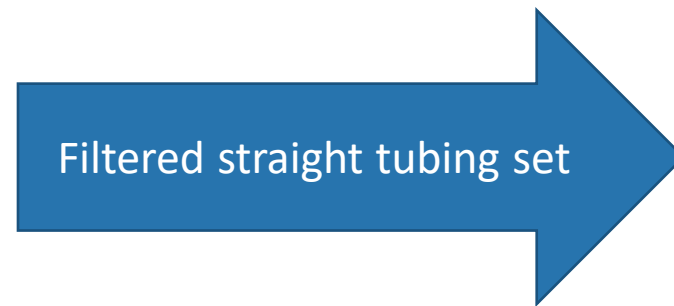
HOW TO USE THIS MEDICINE: HOW IS THIS DRUG BEST TAKEN? Use this drug as ordered by your doctor. Read all information given to you. Follow all instructions closely. It is given as an infusion into a vein over a period of time. Drink lots of noncaffeine liquids unless told to drink less liquid by your doctor. **HOW DO I STORE AND/OR THROW OUT THIS DRUG?** If you need to store this drug at home, talk with your doctor, nurse, or pharmacist about how to store it. **WHAT DO I**

Gravity Infusion



Straight tubing set with IV bag hung from an IV pole.

Drip rate conversion tables on teaching guides.



Drip rates can be found on patient teaching guides.

CONVERSION TABLE FOR 20 DROP PER ML TUBING
ML/HR → DROPS/MINUTE

ML/HOUR	DROPS/MINUTE
30	10
45	15
60	20
75	25
90	30
99	33
105	35
114	38
120	40
126	42
135	45
144	48
150	50
165	55
180	60
195	65
210	70
225	75
240	80
250	83
255	85

CONVERSION TABLE FOR 10 DROP PER ML TUBING

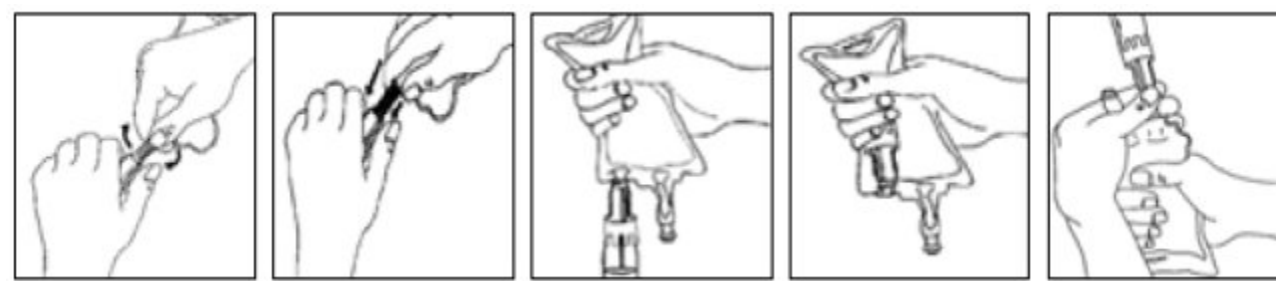
ML/HR → DROPS/MINUTE

ML/HOUR	DROPS/MINUTE
6	1
12	2
18	3
24	4
30	5
36	6
42	7
48	8
54	9
60	10
66	11
72	12
78	13
85	14
90	15
96	16
102	17
108	18
114	19
120	20
126	21
132	22
144	24
150	25
180	30
198	33
204	34
210	35
240	40
252	42

In-Home Compounding System: Mini-Bag Plus, Vial-Mate & AddEASE



- Always use with filtered tubing and hanging from a pole
- These compounding systems contain air in bags and cannot be placed on the pouch
- If on a pump, it will need to be pole mounted
 - Partial dose given on a pump
- Usually given via gravity method
- Tubing change every 24 hours



Elastomeric Device

Allow medication to warm to room temperature for 6-12 hours, as noted on the pharmacy orders.

Calibrated to work at room temperature (69.4 – 76.6 degrees F).

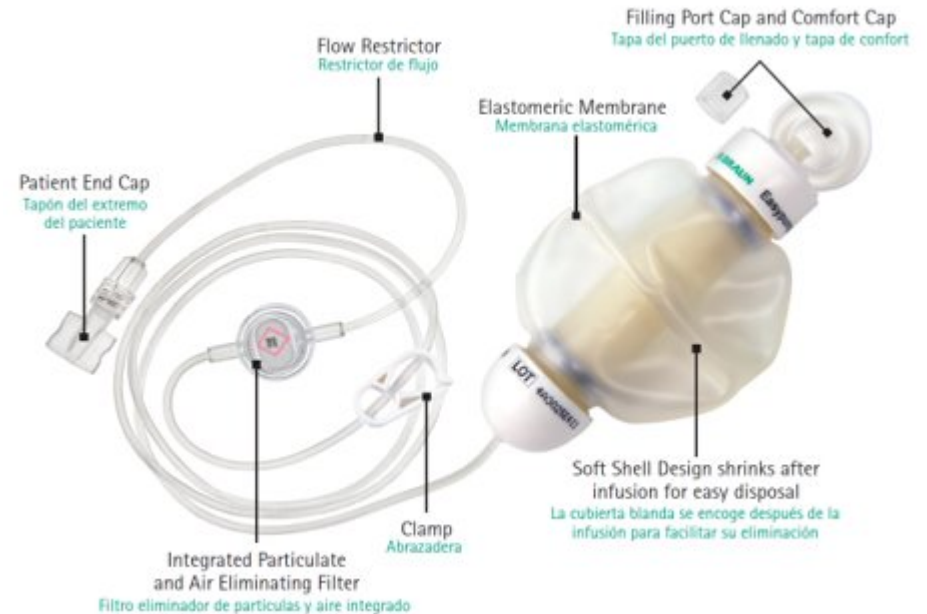
- May infuse too slow if cooler than 69.4 degrees F
- May infuse too fast if warmer than 76.6 degrees F

Flow Restrictor is calibrated to work at 88 degrees Fahrenheit

- Should have close contact with the patient's skin during infusion.

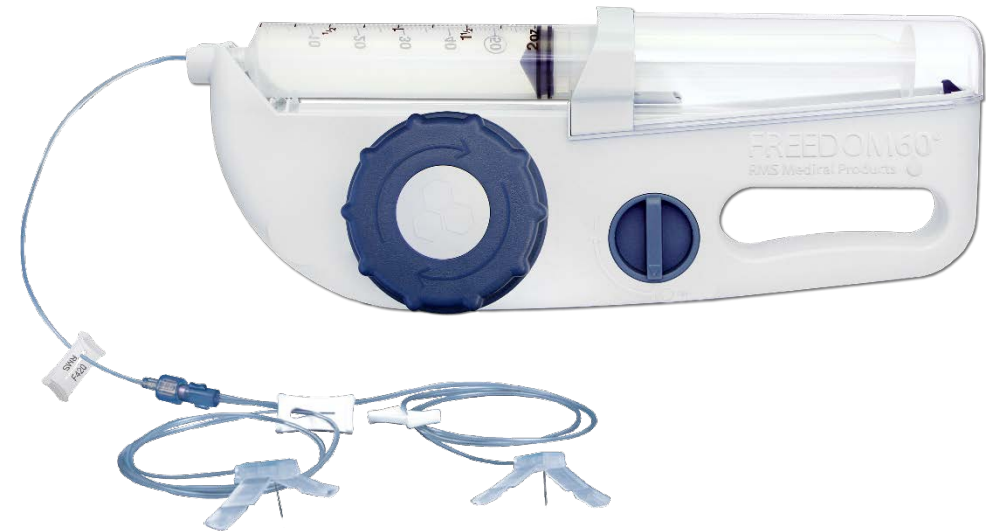
Calibrated to work at the level of the IV catheter

- Do not hang or set on floor



Freedom60 Pump

- Syringe pump
- Change tubing every 24 hours
- Allow medication to warm to room temperature for 2-4 hours, as noted on the POT
- Rate is controlled by Tubing – identified on both packaging and tubing clamp
 - F30 = 30ml/hr
 - F45 = 45ml/hr
 - F60 = 60ml/hr
- **Disc on tubing secures the syringe into the pump**
 - Do not confuse with IV extension tubing
- Turn wheel until you hear tab “click” and then spin without moving tab, before turning the pump on



CADD Solis Pump

- Tubing change
 - Intermittent – every 24 hours
 - Continuous – Mondays, Wednesdays and Fridays only
- Allow medication to warm to room temperature for 2-4 hours, as noted on the pharmacy orders..
- Powered by 4 AA batteries or rechargeable battery
 - Plug in pump for 4 hours each day to fully charge rechargeable battery
- Clinician Code for Lock Screen is: 061
- Clinician Code for PCA Bolus is: 617
- Always power up before attaching tubing cassette
 - Listen for series of beeps and self-check before attaching the tubing cassette
 - This will prompt “Reset RES VOL?”
- Always prime on its side, with the lever side down to prevent “Air In Line” alarms



Pump will be delivered programmed with the patient's orders. Always confirm pump setting against orders prior to starting the pump



Prime on side with lever side DOWN



CADD Prizm Pump

- Tubing change
 - Intermittent – every 24 hours
 - Continuous – Mondays, Wednesdays and Fridays only
- Allow medication to warm to room temperature for 2-4 hours, as noted on the POT.
- Powered by 1 9-volt battery
 - External power pack is used with the 9-volt battery in the pump
 - Power pack should be charged 7 hours each day
 - Power pack requires monthly refresh cycle by the patient
- Always power up before attaching tubing cassette
 - Listen for series of beeps and self-check before attaching the tubing cassette
 - This will prompt “Reset RES VOL?”
- Clinician Code for Lock Screen is: 061
- Clinician Code for PCA Bolus is: 997



Pump will be delivered programmed with the patient's orders.

Always confirm pump setting against orders prior to starting the pump.

Product Label

Product label to be reviewed with each dose or bag change.

Pump settings to be reviewed on the pump with each dose or bag change.

Product label components to review:

- Patient name
- Medication name
 - Amount in bag/cassette
 - Diluent name and volume
 - Can calculate concentration
- Administration instructions
 - Plain language instructions
 - Pump parameters
 - To be verified on pump with each bag change
 - How often to change the bag if continuous
- Storage instructions
 - Including how long to warm to room temperature if refrigerated
- Expiration date

```
Pt: !
MD: MYLES ZUCKERMAN
RX#:546941-0          Doses: 2          RPH:REO

Morphine Sulfate      (HOSP)    500    MG
Sodium Chloride 0.9% (BAX)     50     ML
```

```
Administer Morphine IV continuously at 2mg/hr via Cadd
SOLIS with a 1mg bolus every 15 minutes as needed. Use
as directed.
```

```
Parameters: res vol=50mL, rate=2mg/hr, bolus=1mg every
15 minutes as needed, conc=10mg/mL.***Change cassette
at least every 7 days***
```

```
*CAUTION: Federal law prohibits transfer of drug to any
person other than patient it was prescribed*
```

```
Pt:
MD: RAVI RAMANI PROTECT FROM LIGHT
RX#:527200-41 Original Date: 12 18 19      REO          REFRIGERATED
Filled:          12 18 19      Exp Date: 12 27 19
```

```
Milrinone Lactate    (FRES)    38     MG
Dextrose 5%          (BAX)    190    ML
```

```
Administer milrinone IV continuously at 6.8 mL/hr via
Cadd Solis pump to provide 0.25 mcg/kg/min as directed.
Dosing weight = 90.9 kg. Bag contains overfill. Change
bag daily.
```

```
Parameters: ResVol = 190mL, Rate = 6.8 mL/hr, Conc =
0.2mg/mL.
```

```
REFRIGERATE UNTIL 2-3 HOURS PRIOR TO USE
```

```
Original Date: 08 05 19      WRZE          REFRIGERATED
Filled:          05 11 20      Exp Date: 05 20 20
```

Curlin Pump

- Tubing change
 - Intermittent – every 24 hours
 - Continuous – Mondays, Wednesdays and Fridays only
- Allow medication to warm to room temperature for 2-4 hours, as noted on the POT
- Screen does not lock
- Can be programmed with variable rates
- Nicknamed the “Yes Pump”
 - Push “yes” to select menu items
- Powered by 2 C batteries
- Always confirm pump settings against orders prior to starting the pump



Pump will be delivered programmed with the patient's orders.

Always confirm pump setting against orders prior to starting the pump.

Home Enteral Therapy



Patient Teaching Guides

(located in handbook)

- Teaching guides and videos are located on the CarepathRx website and provided to the patient at SOC.
- Step by step instruction on how to administer medications
 - Supplies
 - Set up
 - Administration
 - Clean up

ADMINISTRATION OF ENTERAL FEEDING USING KANGAROO JOEY PUMP IN CONTINUOUS MODE

IMPORTANT:

- CHANGE FEEDING BAG EVERY 24 HRS.
- ONLY 8 HOURS OF FORMULA SHOULD BE POURED INTO BAG AT A TIME.
- CARRYING CASE IS MACHINE WASHABLE. USE GENTLE CYCLE.
- A FULLY CHARGED PUMP WILL RUN APPROXIMATELY 18 HOURS @ 125ML/HR

SUPPLIES:

- Formula
- Kangaroo Joey pump
- Kangaroo Joey feeding set (feeding bag)
- Backpack (if applicable) or IV pole
- 60 cc. syringe for flushing

PROCEDURE:

1. Gather supplies and equipment. Clean work area.
2. Perform hand hygiene.
3. Place Kangaroo Joey pump on a stable surface or attach it to the IV pole using the pole clamp.
NOTE: If using IV pole, it is important to secure the pump 6 inches or less from the feeding bag.
4. Remove Kangaroo feeding bag with tubing from package.
5. Fill the bag with the proper amount of formula and close bag securely at the top.
6. Turn pump on. The pump screen will display **PRIOR SETTINGS**. For your first home dose, press ► **CLEAR SETTINGS** key. After initial home dose, you will press ► **KEEP SETTINGS** key. The pump screen will display **LOAD A SET**.
7. Open the blue transparent door on the top of the pump.
8. Load the pump set into the pump by grasping finger tab on the set valve and inserting it into pump valve (as illustrated on top of pump). Grasp the black ring retainer and stretch the tubing counterclockwise around the pump rotor. Lower the black retainer into the slot (as illustrated on top of pump). Close the blue transparent door when the tubing is in place. The pump screen will display **SET LOADED**.

Therapy Education

- Remind patients that pumps must be returned to the pharmacy when therapy is completed
 - Pumps are not disposable!
- Patient or caregiver must call pharmacy to re-order supplies and formula. The pharmacy needs to know:
 - List of supplies and formula needed
 - Complete inventory of formula and supplies
 - Response to therapy
 - Changes in feeding orders
 - Physician order required to increase formula volumes



Patient Teaching Guides

- Teaching Guides are included in the first delivery at SOC
- Step-by-step instructions on how to administer medications
 - Supplies
 - Set up
 - Administration
 - Clean up

ADMINISTRATION OF ENTERAL FEEDING USING KANGAROO JOEY PUMP IN CONTINUOUS MODE

IMPORTANT:

- CHANGE FEEDING BAG EVERY 24 HRS.
- ONLY 8 HOURS OF FORMULA SHOULD BE POURED INTO BAG AT A TIME.
- CARRYING CASE IS MACHINE WASHABLE. USE GENTLE CYCLE.
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Delivery Slip

- Instruct patient to review to ensure all items have been delivered
- Instruct patient to use as a tool to communicate supply inventory and needs

___Bag ___Cooler ___Box ___IV Pole ___Sharps

CHARTWELL PENNSYLVANIA 1001 OAKDALE ROAD OAKDALE, PENNSYLVANIA 15071
(412)920-7500 WWW.CHARTWELLPA.COM (800)755-4704

PA Medical Assistance, Fee-for-Service Program (ACCESS) patients, please call 833-710-0211
Call your doctor for medical advice about side effects. You may report side effects to the
FDA at 1-800-FDA-1088.

Created by ZUGARON on 11/25/2020 at 11:59:20 AM EST **Delivery Slip: 1071208** Page 1 of 2
Printed by ZUGARON on 11/25/2020 at 11:59:55 AM EST Reprinted by FISHCL on 03/22/2021 at 03:34:43 PM EDT

Patient: Doe, Jane (107122) **Ship Date:** 11/25/2020
Address: 89 Main Street **Del Date:** 11/25/2020
IRVONA, PA 16656 **Next Del Date:** 12/24/2020
(412) 995-4069, Primary Residence Number, T... **Physician:** LINDBLAD, D. .
(412) 330-7654, Other Residence Number, Cellular Phone

Delivery Method: Driver
Map Area Code: TEAM 4
Delivery Instructions:
DELIVER TO CHP 7C RM 748 1:30PM PLEASE THANK YOU

SUPPLIES

Code	Bin	Description	Qty Ord	Qty Deliv
		59342 PUMP ENTERAL	10 DAY	_____
		59342 PUMP ENTERAL	20 DAY	_____
7-01-044		Entralite Infinity Pump Teaching Guide	1 EA	1
7-00-005		PATIENT WELCOME HANDBOOK	1 EA	1
7-00-011		PUMP MANUAL	1 EA	1
7-00-023		PUMP RETURN BOX	1 EA	1
7-01-048		NEW ENTERAL ORDERS	1 EA	1
5-66-122		ENTRALITE INFINITY SUPER MINI BACKPACK	1 EA	1
3-82-104	03-03-01-02	IV POLE FOR PUMP W/WHEELS	1 EA	1
4-10-116	03-05-01-01	ENTERALITE INFINITY 1200 ML BAG ENFIT	2 EA	2
3-53-134	03-05-01-03	GAUZE,4"x4" 6 PLY DRAIN SPONGE (TRAY OF 50)	1 BX	1
4-10-113	03-05-01-04	ENTERALITE INFINITY 500 ML BAG ENFIT	30 EA	30
3-51-500	03-07-04-04	TAPE, CLOTH (1")	1 RL	1
3-53-256	Drop ship...	Team 4 GAUZE SPONGE STERILE 4PLY 4X4	1 EA	1
3-30-617	WA2B	SYRINGE, 60CC STERILE IRRIGATION	5 EA	5

EQUIPMENT

Code	Description	Serial #	Asset Tag	Exp. Return
5-71-332	ENTERALITE INFINITY PUMP	516060206	CO3318	_____
5-28-126	POLE CLAMP - INFINITY	652	_____	_____

Delivery Slip: 1071208 Page 2 of 2

PERSON, WAVERLY G (107122)

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CHECKED BY: _____ / _____ PACKED BY: _____

OF BENEFITS and RELEASE OF INFORMATION: I authorize my insurance company or fund
or payment of my care, if applicable, to pay benefits on my behalf directly to
sylvania, LP, for products and services furnished to me by Chartwell
LP. I authorize Chartwell Pennsylvania, LP to request on my behalf, all
benefits for products and services provided to me by Chartwell Pennsylvania, LP.
I authorize Chartwell Pennsylvania, LP of any change in my status, including but not
change of address, admission to a hospital or nursing facility, changes that
affect my ability to pay for products/services prescribed by my
insurer rendered by Chartwell Pennsylvania, LP.

I acknowledge below, you are indicating that we have provided you with
admission information and you are consenting to receive services as a patient, from
Chartwell Pennsylvania, LP, as outlined on the back of this form.

SIGNATURE OF PATIENT/LEGAL GUARDIAN OR RESPONSIBLE PARTY DATE

RELATIONSHIP TO PATIENT (IF NOT RECEIVED BY PATIENT): _____

ADDRESS OF PERSON SIGNING THIS DOCUMENT (IF NOT SIGNED BY PATIENT):

REASON PATIENT WAS UNABLE TO SIGN: _____

Free Water Flushes



Free water boluses will be ordered by the provider

- Volume to be given
- Frequency of bolus

Free water boluses are to be given during normal awake hours only.

- If a patient requires around the clock free water bolus scheduling, they should be on the Kangaroo Joey-pump FEED and FLUSH mode.

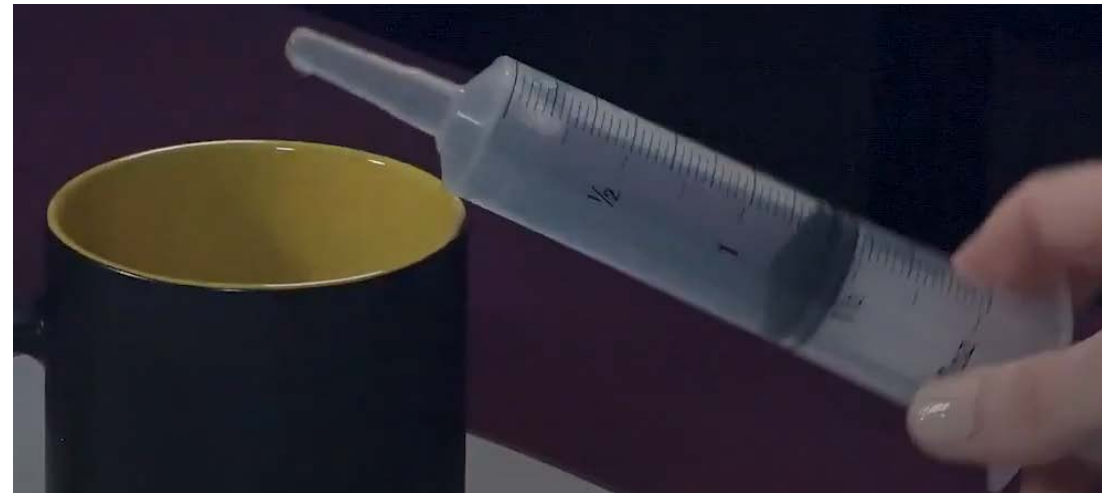
Free Water Flushes

Free water boluses will be ordered by the provider

- Volume to be given
- Frequency of bolus

Free water boluses are to be given during normal awake hours only.

- If a patient requires around the clock free water bolus scheduling, they should be on the Kangaroo Joey Pump FEED and FLUSH mode.



Tubing

- Bags are to be changed daily
- Formula hang time at room temperature
 - 8 hours for adult
 - 4 hours for pediatric and neutropenic patients
- Piston syringes are changed weekly but cleansed after each use
- Open formula can be stored in the refrigerator for 24-48 hours, depending on manufacturer recommendations



EnteraLite Infinity
Feeding set

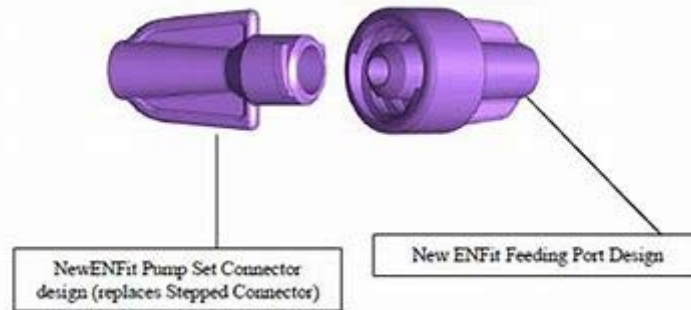


Kangaroo Joey
Feed and Flush set



Kangaroo Joey
Feeding set

Traditional Tubes & ENFit Tubes



Specific syringes and tubing sets connect to traditional and ENFit tubes

EnteraLite Infinity Pump



RATE/DOSE button to set pump

- Will toggle between rate & dose being displayed on the screen
 - Rate – the rate the formula infuses
 - Dose – the amount of formula to infuse
 - Use the + and – buttons to increase or decrease the rate & dose
 - For **INF Mode**, push the + button until INF appears for infinity feeding

Routinely clean under door with damp cloth or run under water, with pump turned off and unplugged

Most alarms are reset by rebooting the pump (turning it off and back on again)

- **NO FOOD** will alert when there is no formula left to infuse
 - If this alarms when food is in the bag:
 - Clean the sensor under the cassette door with a damp cloth or run under water
 - Check for tubing kinks between bag and pump

Kangaroo Joey Pump

EZMode (continuous – EZ by battery image)

- Only adjust continuous rate
- Pump will run until tubing bag is empty

Other Modes (nothing next to battery image)

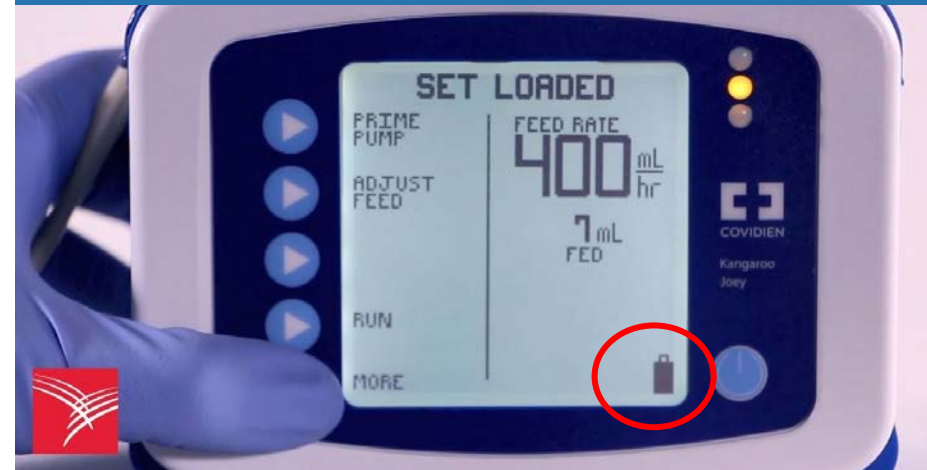
- **Continuous** with Volume to be infused set on pump
- **Intermittent** (interval feeding)
- **Feed and Flush** mode
 - Pump will automatically deliver free water flush as programmed with feeding

Routinely clean under door with damp cloth when pump is turned off and unplugged

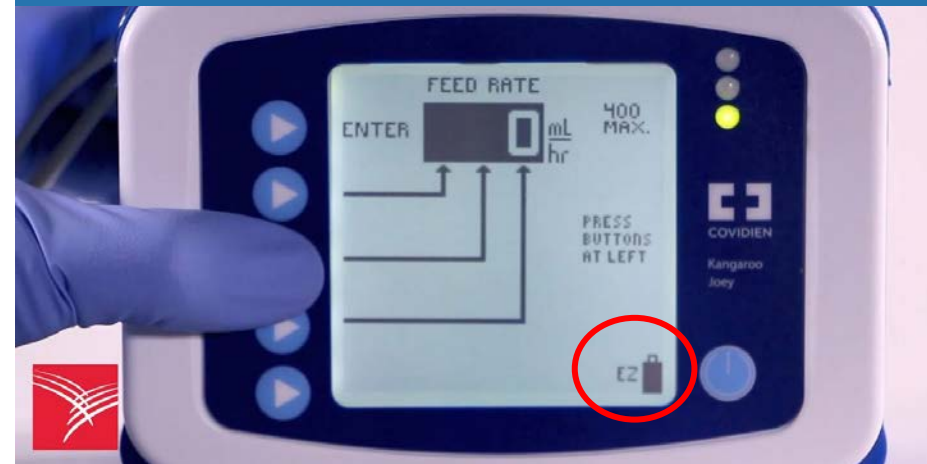
Most alarms are reset by rebooting the pump (turning it off and back on again)

- **FEED ERROR** will alert when formula is not passing through the tubing
 - Clean under door with damp cloth, when pump is turned off and unplugged
 - If this alarms when food is in the bag:
 - Clean the sensor under the cassette door with a damp cloth or run under water
 - Check for tubing kinks between bag and pump

EZMode (EZ by battery image)



Intermittent, Continuous, and Feed and Flush



General Pump Information



Pump Batteries & Charging

- 4 – AA batteries or Rechargeable battery – charge pump 4 hours each day with AC adaptor.

CADD Solis



- 9V battery or External Powerpack with **9V battery** – charge powerpack 7 hours each day with AC adaptor.

CADD Prizm



- 2 – C batteries

Curlin



- Internal battery – charge pump 6 hours each day with AC adaptor.

Kangaroo Joey



- Internal battery – charge pump 6 hours each day with AC adaptor.

EnteraLite Infinity



Pump Returns

Pumps are delivered in a mail-back return box

- Instruct the patient to save the box, the return box will be plain and labeled "UPS PICK UP"
- If the patient discards the return box, they can package the pump in any box with appropriate padding and tape it shut

The infusion pharmacy will contact the patient & arrange pump pick-up by UPS.

- UPS brings the shipping label
- The patient does not need to be home for UPS shipping
- Pump box labeled "UPS PICK UP" can be picked up by the UPS driver
- There is no fee to the patient for this service



**Nurses are NOT to remove pumps from patients' homes.
Contact pharmacy for equipment return.**

Thank you for participating!

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