Chartwell

Pharmacy

Home Infusion and Enteral Competency

2026

Nurse Link
BY CAREPATHRX

NURSE EDUCATION

PATIENT EDUCATION

POLICIES & PROCEDURES

NEWS

To Log In:

Nurselink Welcome – CarepathRx

Password: chartwell_NL

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Specialty Pharmacy & Infusion Solutions

Chartwell Website

- Patient Handbook
- Teaching Sheets
- How to Videos
- Enteral Information

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Chartwell on Call

24/7 Access to Chartwell Clinical and Delivery Teams

Teams in house 7 days per week, 365 days a year

Business Hours:

Monday – Friday 8am – 5:30pm

Saturday – 9am – 3pm

Chartwell Contacts

Call 1st for urgent issues

Main Phone Number:

1-800-755-4704

Issue escalation and Help

NursingSupport@carepathrxllc.com

We are available 24/7!

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Pharmacy Contact Information

Team 1	**cw-inf-team1@carepathrxllc.com**	**412-438-5151**
Team 2	**cw-inf-team2@carepathrxllc.com**	**412-438-5152**
Team 3	**cw-inf-team3@carepathrxllc.com**	**412-438-5153**
Team 5	**cw-inf-team5@carepathrxllc.com**	**412-438-5156**
Team 8	**cw-inf-team8@carepathrxllc.com**	**412-438-5146**
Team 9	**cw-inf-team9@carepathrxllc.com**	**412-446-1884**
Team10	**cw-inf-team10@carepathrxllc.com**	**412-446-1872**
Team11	**cw-inf-team11@carepathrxllc.com**	**412-446-1874**
Enteral	**cw-ent-all@carepathrxllc.com**	**412-438-5154**

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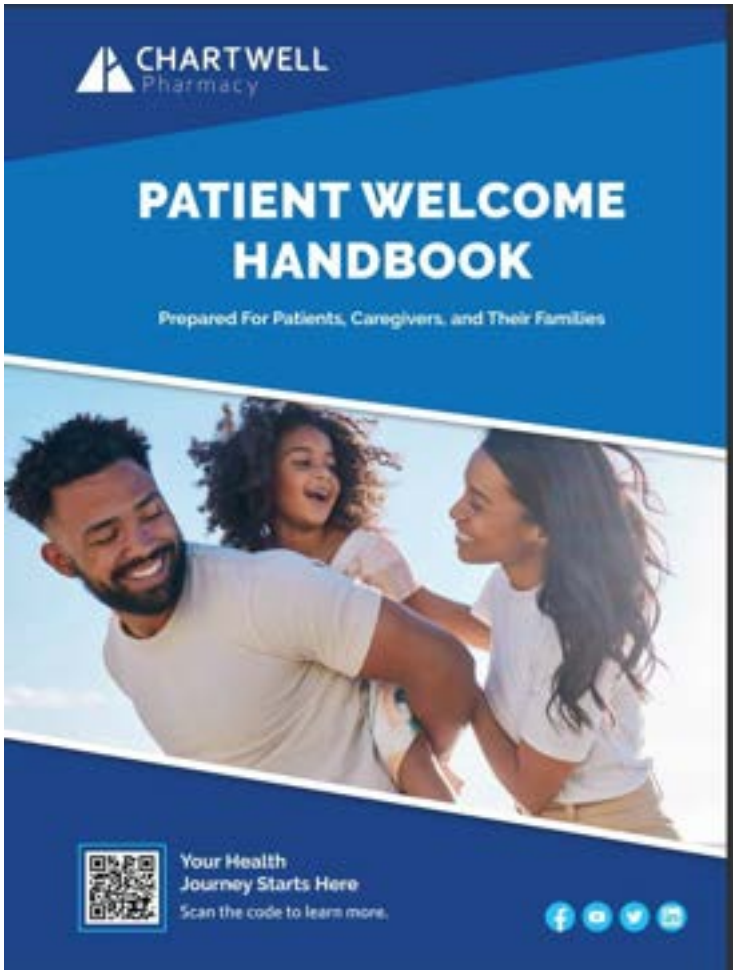
Patient Handbook

What it Contains



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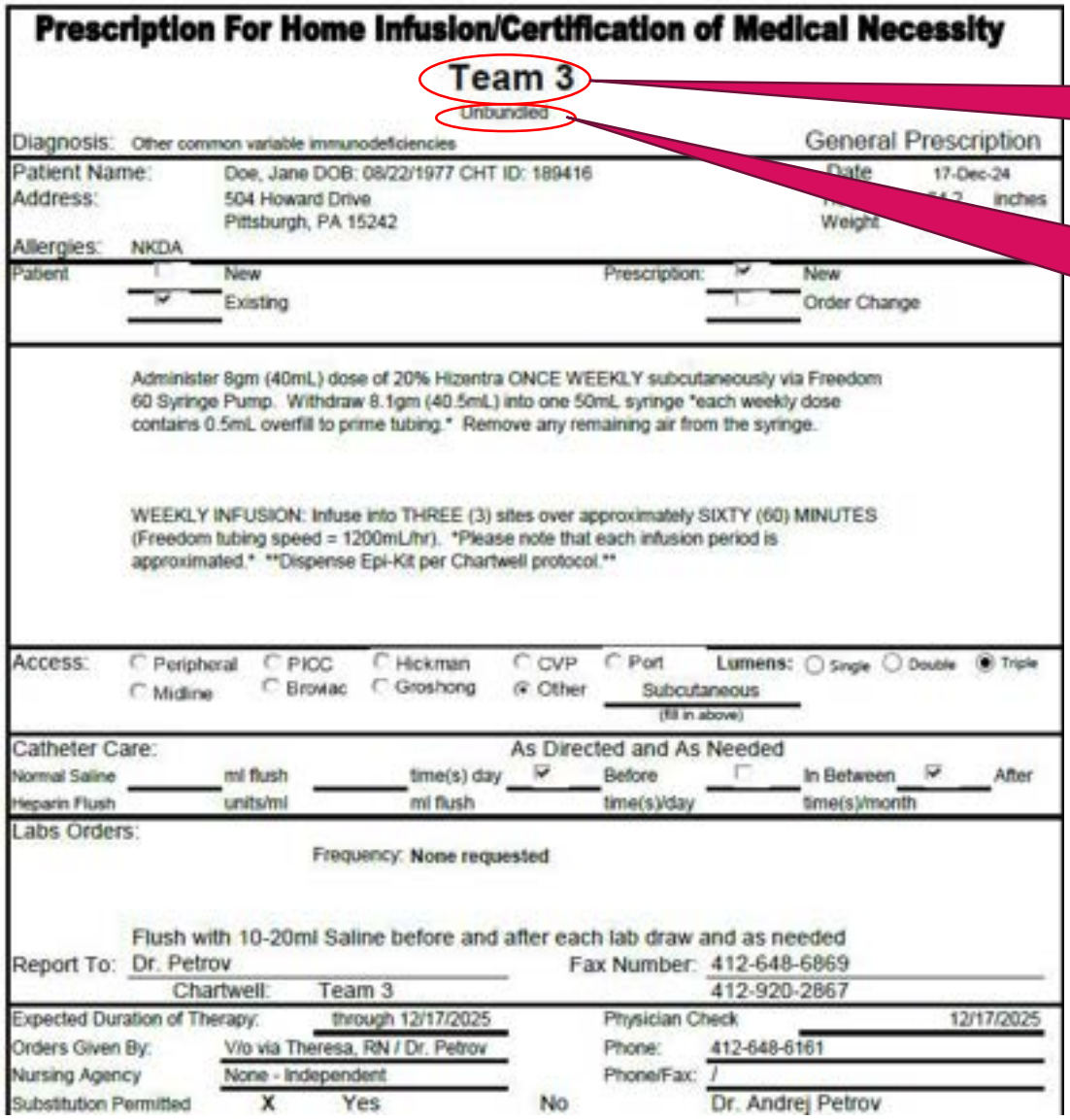
Plan of Treatment Infusion (POT)

(found in handbook)

- Patient information
- Medication orders with instructions
- IV Access
- Flushing Orders per Provider
- Lab orders
- Provider managing therapy



Prescription For Home Infusion/Certification of Medical Necessity

Team 3

Unbundled

Diagnosis: Other common variable immunodeficiencies — General Prescription

Patient Name: Doe, Jane DOB: 08/22/1977 CHT ID: 189416 — Date 17-Dec-24

Address: 504 Howard Drive, Pittsburgh, PA 15242 — Weight — inches

Allergies: NKDA

Patient: ☐ New ☑ Existing — Prescription: ☑ New ☐ Order Change

Administer 8gm (40mL) dose of 20% Hizentra ONCE WEEKLY subcutaneously via Freedom 60 Syringe Pump. Withdraw 8.1gm (40.5mL) into one 50mL syringe *each weekly dose contains 0.5mL overfill to prime tubing.* Remove any remaining air from the syringe.

WEEKLY INFUSION: Infuse into THREE (3) sites over approximately SIXTY (60) MINUTES (Freedom tubing speed = 1200mL/hr). *Please note that each infusion period is approximated.* **Dispense Epi-Kit per Chartwell protocol.**

Access: ☐ Peripheral ☐ PICC ☐ Hickman ☐ CVP ☐ Port ☐ Midline ☐ Broviac ☐ Groshong ☑ Other — Subcutaneous (fill in above) — Lumens: ○ Single ○ Double ◉ Triple

Catheter Care: As Directed and As Needed

Normal Saline ____ ml flush ____ time(s) day ☑ Before ☐ In Between ☑ After

Heparin Flush ____ units/ml ____ ml flush ____ time(s)/day ____ time(s)/month

Labs Orders:

Frequency: **None requested**

Flush with 10-20ml Saline before and after each lab draw and as needed

Report To: Dr. Petrov — Fax Number: 412-648-6869

Chartwell: Team 3 — 412-920-2867

Expected Duration of Therapy: through 12/17/2025 — Physician Check 12/17/2025

Orders Given By: V/o via Theresa, RN / Dr. Petrov — Phone: 412-648-6161

Nursing Agency: None - Independent — Phone/Fax: /

Substitution Permitted: X Yes No — Dr. Andrej Petrov

Helps contact the correct clinicians at Chartwell

Unbundled – agency will bill insurance

Bundled – agency will bill Chartwell

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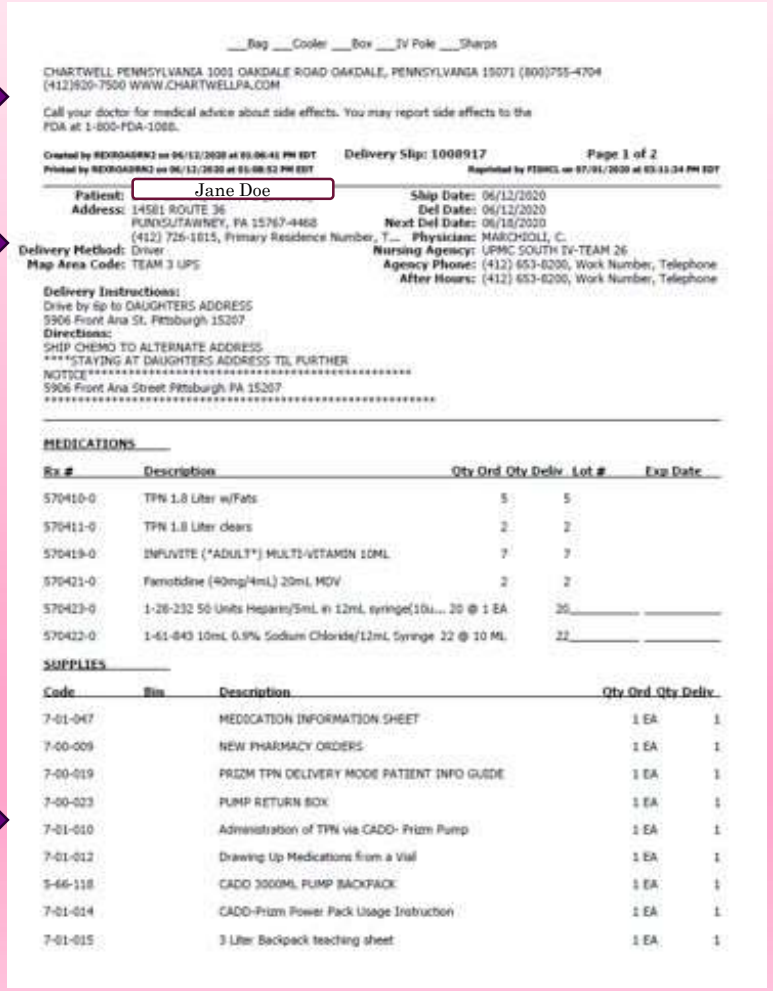
Delivery Slip and Consent for Treatment
(in Pt Handbook)

Pharmacy Information

Patient Information

Meds and Flushes

Supply Items



___Bag ___Cooler ___Box ___IV Pole ___Sharps

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

Call your doctor for medical advice about side effects. You may report side effects to the FDA at 1-800-FDA-1088.

Created by REXROADRK2 on 06/12/2020 at 01:06:41 PM EDT Delivery Slip: 1008917 Page 1 of 2
Printed by REXROADRK2 on 06/12/2020 at 01:08:52 PM EDT Reprinted by FIDHCL on 07/01/2020 at 03:11:24 PM EDT

Patient: Jane Doe
Address: 14581 ROUTE 36
PUNXSUTAWNEY, PA 15767-4468
(412) 726-1815, Primary Residence Number, T...
Delivery Method: Driver
Map Area Code: TEAM 3 UPS

Ship Date: 06/12/2020
Del Date: 06/12/2020
Next Del Date: 06/18/2020
Physician: MARCHIOLI, C.
Nursing Agency: UPMC SOUTH IV-TEAM 26
Agency Phone: (412) 653-8200, Work Number, Telephone
After Hours: (412) 653-8200, Work Number, Telephone

Delivery Instructions:
Drive by tip to DAUGHTERS ADDRESS
5906 Front Ana St. Pittsburgh 15207
Directions:
SHIP CHEMO TO ALTERNATE ADDRESS
****STAYING AT DAUGHTERS ADDRESS TIL FURTHER
NOTICE**********
5906 Front Ana Street Pittsburgh PA 15207
****

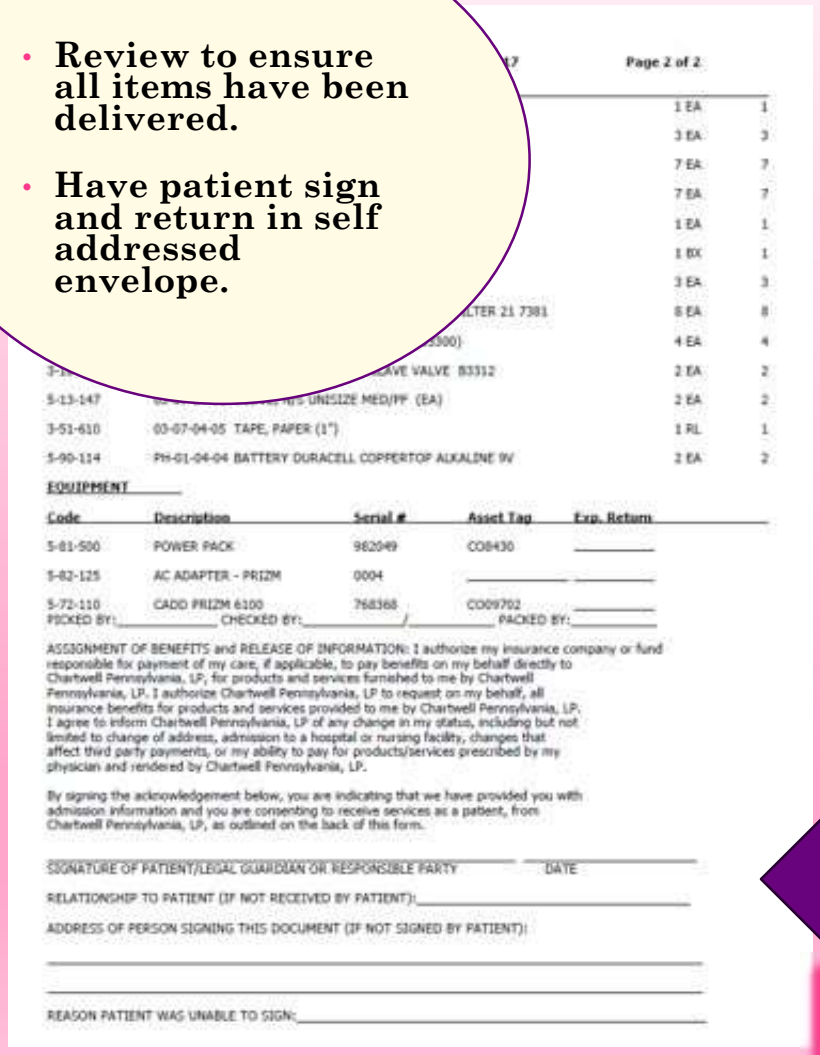
MEDICATIONS

Rx #	Description	Qty Ord	Qty Deliv	Lot #	Exp Date
570410-0	TPN 1.8 Liter w/Fats	5	5		
570411-0	TPN 1.8 Liter clears	2	2		
570419-0	INFUVITE (*ADULT*) MULTI-VITAMIN 10ML	7	7		
570421-0	Famotidine (40mg/4mL) 20mL MDV	2	2		
570423-0	1-28-232 50 Units Heparin/5mL in 12mL syringe(10u...	20 @ 1 EA	20		
570422-0	1-61-843 10mL 0.9% Sodium Chloride/12mL Syringe	22 @ 10 ML	22		

SUPPLIES

Code	Bin	Description	Qty Ord	Qty Deliv
7-01-047		MEDICATION INFORMATION SHEET	1 EA	1
7-00-009		NEW PHARMACY ORDERS	1 EA	1
7-00-019		PRIZM TPN DELIVERY MODE PATIENT INFO GUIDE	1 EA	1
7-00-023		PUMP RETURN BOX	1 EA	1
7-01-010		Administration of TPN via CADD- Prizm Pump	1 EA	1
7-01-012		Drawing Up Medications from a Vial	1 EA	1
5-66-118		CADD 3000ML PUMP BACKPACK	1 EA	1
7-01-014		CADD-Prizm Power Pack Usage Instruction	1 EA	1
7-01-015		3 Liter Backpack teaching sheet	1 EA	1

- **Review to ensure all items have been delivered.**
- **Have patient sign and return in self addressed envelope.**



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	1 EA	1
	3 EA	3
	7 EA	7
	7 EA	7
	1 EA	1
	1 BX	1
	3 EA	3
...LTER 21 7381	8 EA	8
...2300)	4 EA	4
...VE VALVE B3312	2 EA	2
5-13-147 ...NG UNISIZE MED/PF (EA)	2 EA	2
3-51-610 03-07-04-05 TAPE, PAPER (1")	1 RL	1
5-90-114 PH-01-04-04 BATTERY DURACELL COPPERTOP ALKALINE 9V	2 EA	2

EQUIPMENT

Code	Description	Serial #	Asset Tag	Exp. Return
5-81-500	POWER PACK	982049	CO8430	
5-82-125	AC ADAPTER - PRIZM	0004		
5-72-110	CADD PRIZM 6100	768368	CO09702	

PICKED BY:_____ CHECKED BY:_____/_____ PACKED BY:_____

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

By signing the acknowledgement 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:_____

Patient Signature

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Patient Teaching Guides

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

- Antibiotic
- Catheter Care/Cathflo/Injections
- Chemotherapy
- Desferal
- Cardiac
- IGG
- Pain Management
- TPN

DRAWING UP MEDICATIONS FROM A VIAL

Properly drawing up your medication from a vial 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
https://www.chartwellpa.com/patients/infusion-teaching-videos.asp
QR Code :

SUPPLIES:

- syringe with attached needle
- vial of medication
- alcohol/antiseptic wipes
- sharps container

PROCEDURE:

1. Prior to use, allow medication to reach room temperature according to medication label or manufacturer's instructions for use.
2. Gather supplies. Clean work area. Wash Hands thoroughly for at least 20 seconds.
3. Check medication label for name, drug, frequency, and expiration. Inspect the medication vial for any cracks, leaks, particulate matter, and clarity of medication. Contact Chartwell for any discrepancies or concerns.
4. Remove the protective cap from the vial and wipe the top of vial vigorously for 30 seconds with an alcohol/antiseptic wipe and allow to dry.
5. Draw air, equal to the amount of medication to be withdrawn from the vial into the syringe by pulling back on the syringe plunger.
6. Carefully remove needle cap from the syringe. **DO NOT TOUCH THE NEEDLE.**
7. Insert the needle into the center of the rubber stopper on the vial.

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Patient Education

Medication Education

Infection Control

Line Care

Supplies

Medication Education

- **Procedure for administration**
- **Educational material provided for the dispensed medication(s)**
- **Risks, benefits, side effects and goals of treatment**
- **Signs and symptoms of a reaction, including those that may occur post treatment**
- Safe storage of medication (appropriate conditions of light and temperature) and supplies
- Disposal of medications, supplies and equipment
- Needle Safety

Infection Control:

- Standard Precautions for Caregivers
- Aseptic Non-Touch Technique (ANTT)
- Hand Hygiene
- Activity precautions

Line Care and Supplies

Proper care of access device

Site inspection for redness, swelling or pain

Signs and symptoms of access device complications

PUMPS/SUPPLIES

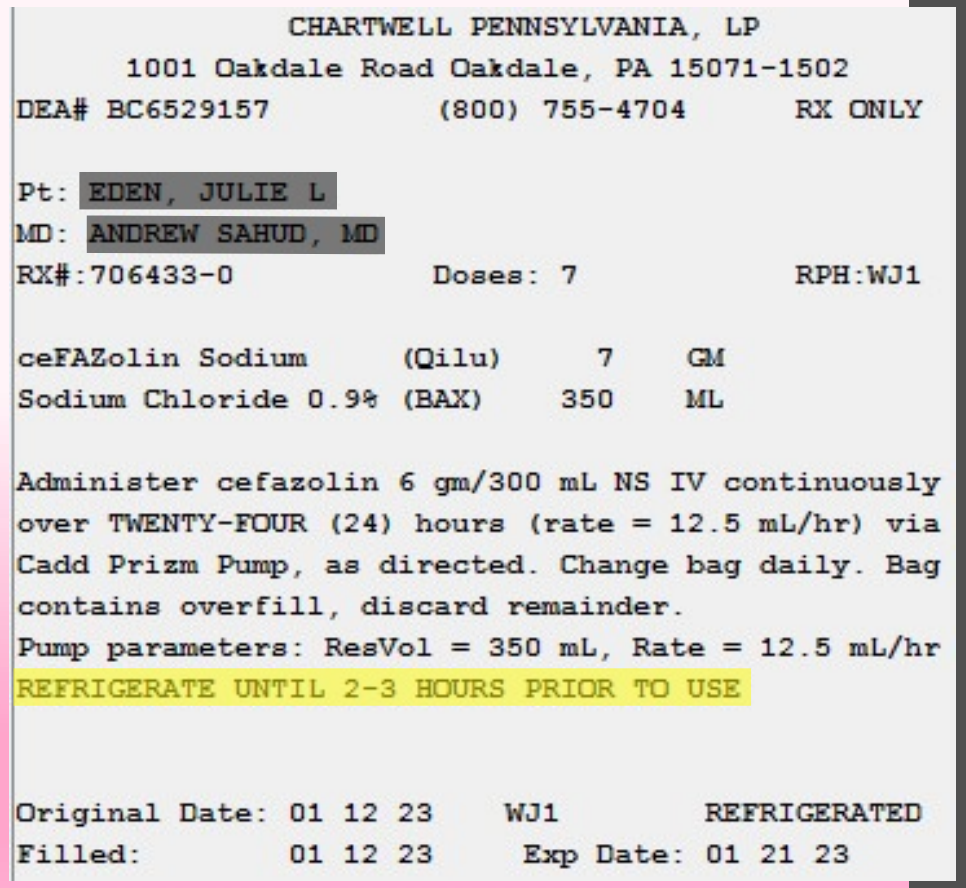
Pump and supply setup, features/settings, cleaning and troubleshooting.

Home Infusion Therapy

Product Label

Review with EACH administration or bag change:

- Patient name
- Ordering provider
- Medication name and dose in bag or cassette
- Diluent name and volume
- Administration instructions / Pump parameters
- How often to change bag if continuous
- Storage & warming instructions (including when to remove from the refrigerator)
- Expiration date



```
                CHARTWELL PENNSYLVANIA, LP
      1001 Oakdale Road Oakdale, PA 15071-1502
DEA# BC6529157          (800) 755-4704       RX ONLY

Pt: EDEN, JULIE L
MD: ANDREW SAHUD, MD
RX#:706433-0             Doses: 7             RPH:WJ1

ceFAZolin Sodium      (Qilu)      7     GM
Sodium Chloride 0.9% (BAX)      350     ML

Administer cefazolin 6 gm/300 mL NS IV continuously
over TWENTY-FOUR (24) hours (rate = 12.5 mL/hr) via
Cadd Prizm Pump, as directed. Change bag daily. Bag
contains overfill, discard remainder.
Pump parameters: ResVol = 350 mL, Rate = 12.5 mL/hr
REFRIGERATE UNTIL 2-3 HOURS PRIOR TO USE


Original Date: 01 12 23    WJ1          REFRIGERATED
Filled:        01 12 23     Exp Date: 01 21 23
```

Please Note OVERFILL!!!

Alert Labels on Plan of Treatment & Medication Labels

On the medication label

- To alert to administer multiple vials/syringes for each dose
- To alert to administer partial dose

On new Plan of Treatment

- Alert to pump settings need changed prior to medication administration
- Chartwell will make 3 attempts to contact the patient to perform pump changes.
- Will talk patient or caregiver through pump change with read back of settings as safety check.
- Home health nurse to confirm pump changes occurred and confirm pump settings are accurate EVERY VISIT

HIT Complications

Line Related

- Intrvascular/ Extravascular malposition
- Medication Infiltrate
- Extravasations

Infection

- Sepsis
- Skin infection
- Skin Erosion

Hypersensitivity Reactions

- Site Reaction
- Anaphylactic/systemic
- Red-Mans syndrome

Catheter Related

- Catheter fracture/damage
- Catheter occlusion (clot/kink/residue)

Vascular

- Thrombosis
- Phlebitis
- Superior Vena Cava Syndrome
- Air embolism

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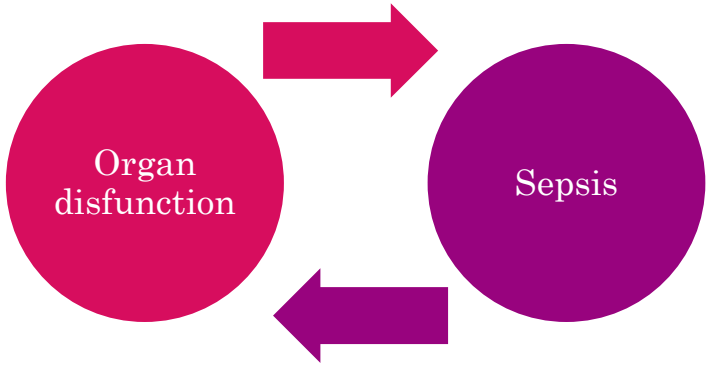
Sepsis
- Infection/bacteria in the blood stream

Severe Sepsis
- 2 or more symptoms: Δ LOC, SBP<100mmHg, RR>22BPM

Septic Shock
- Organ dysfunction
- Can be fatal
- Hypoprofusion



Symptoms of Sepsis

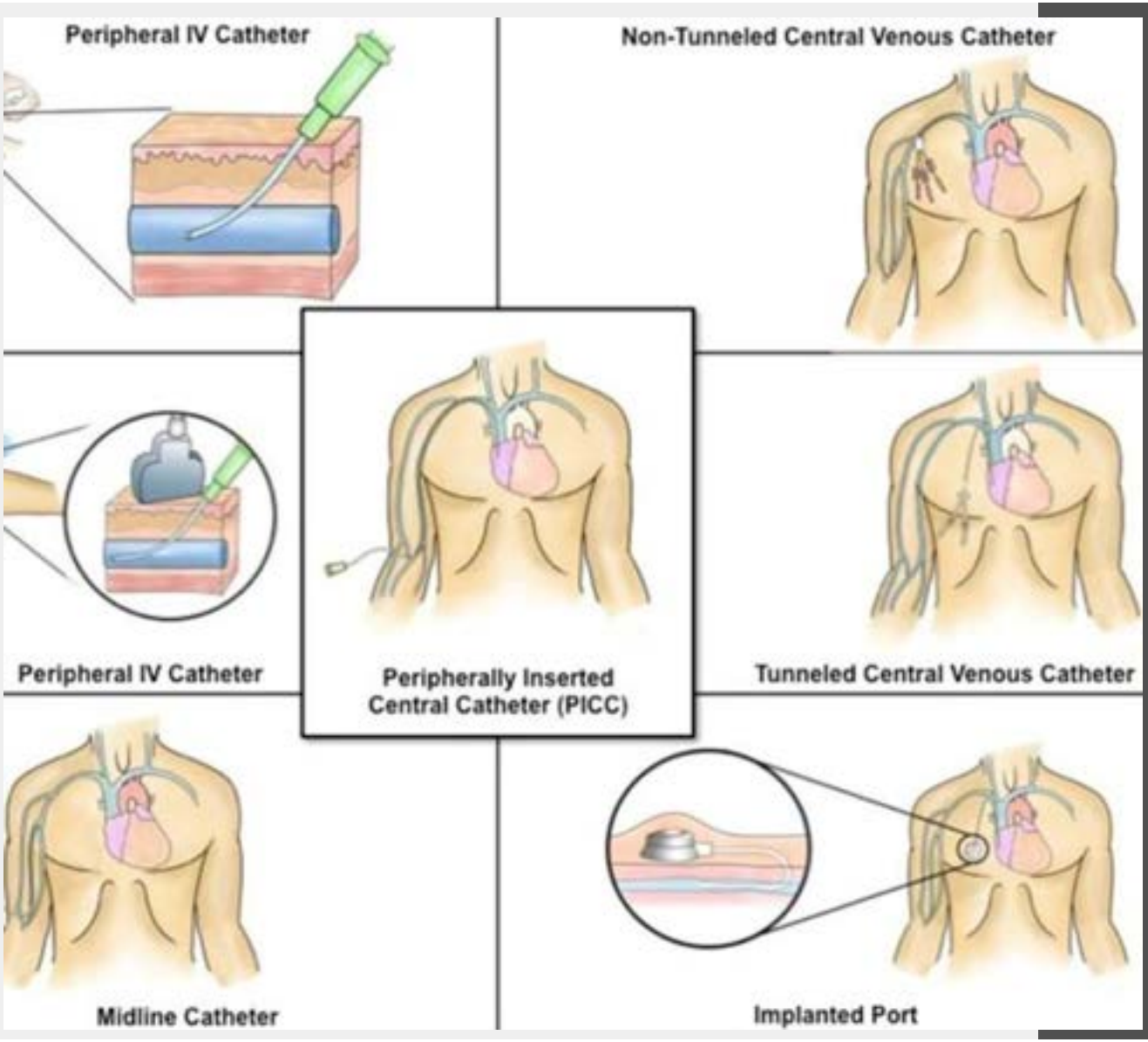
Fever or hypothermia
Altered mental status/Disorientation
Hypotension
Tachycardia
Rigors/Chills
Warm/clammy
Tachypnea
Rash, VAD appearance
Pain, discomfort, malaise
Urgency
Weakness/ activity intolerance
Appearance (grey/green/bilious)

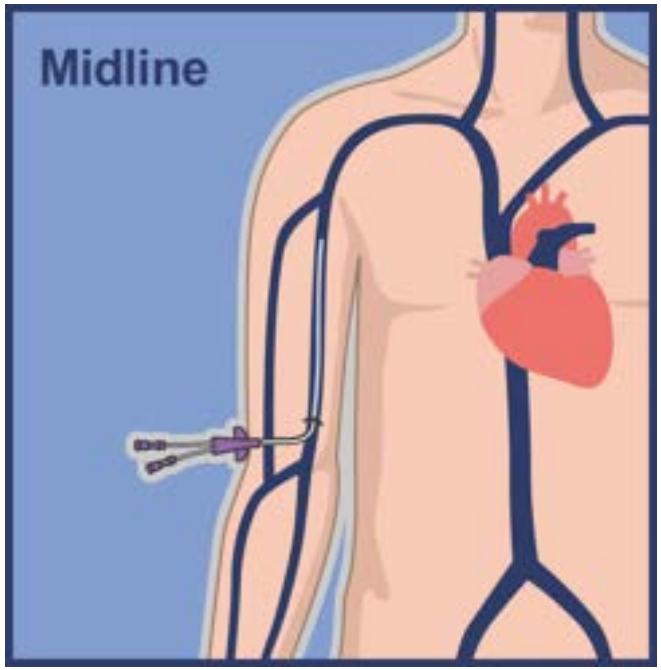
Types of Catheters

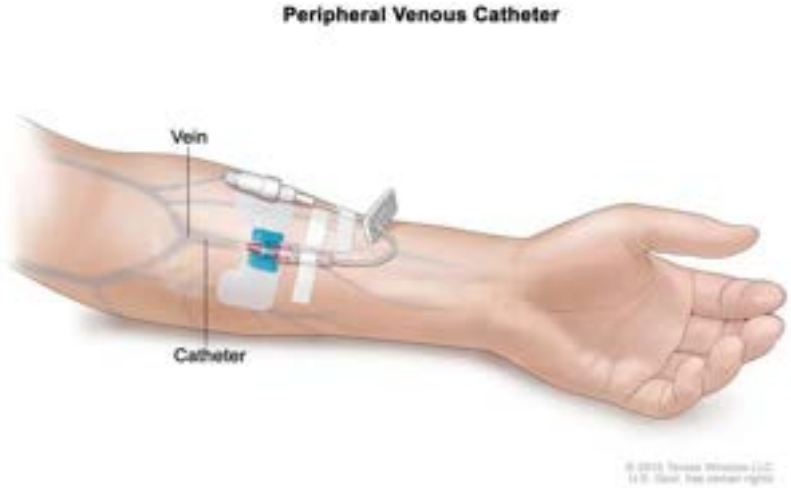
Six categories of IV catheters:

1. Peripheral
2. Midline
3. PICC
4. Non-tunneled central
5. Tunneled central
6. Implanted Ports

Catheter Lumens

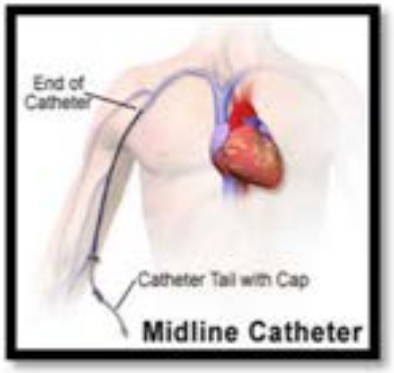


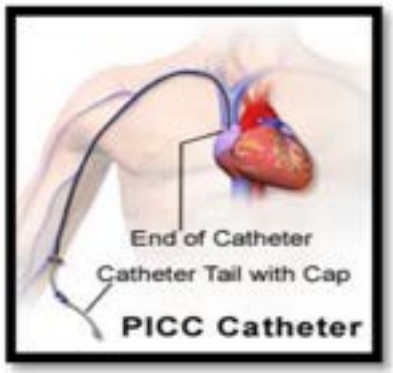




Peripheral Catheters

MIDLINE - VS- PICC LINE





A long peripheral catheter (typically 3-11 inches in length) inserted via antecubital fossa into a peripheral vein in the upper arm; with the internal tip located level at or near the level of the axilla and distal to the shoulder.

Inserted into basilic, cephalic, brachial veins and enters superior vena cava.

Used for medications and solutions such as antimicrobials, fluid replacement, and analgesics with characteristics that are well-tolerated by peripheral veins.

Can stay in place for weeks or months

Typically used for infusion and short-term intravenous therapies ≤ 15 days

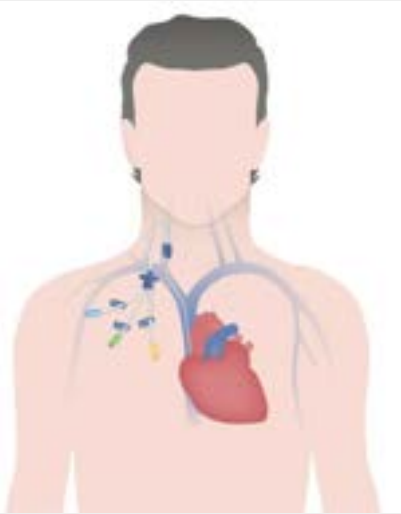
Can feature more than one lumen.

Do not use midline catheters for continuous vesicant therapy or parenteral nutrition

Can be used to administer IV fluids or medications which may irritate peripheral veins (chemotherapy, TPN).

**REMOVAL OF MIDLINE OR PICC LINE:
CONSISTENT WITH ORGANIZATIONAL POLICY, TRAINING AND STATE BOARD OF NURSING SCOPE OF PRACTICE.**

NON-TUNNELED



- **NO CUFF**
- Short term
- Typically used for day to - weeks for all types of IV therapy and blood draws
- Percutaneously inserted into central veins (subclavian, internal jugular (IJ), femoral)

- 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**
- 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**
- **NOT REMOVED IN THE HOME**

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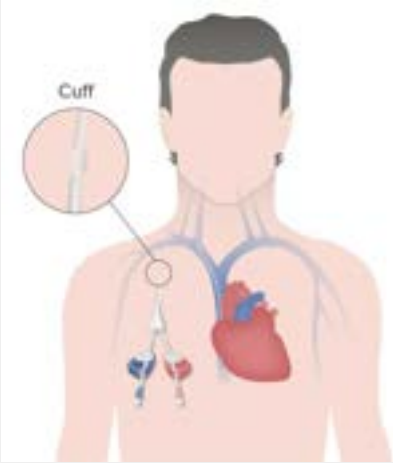
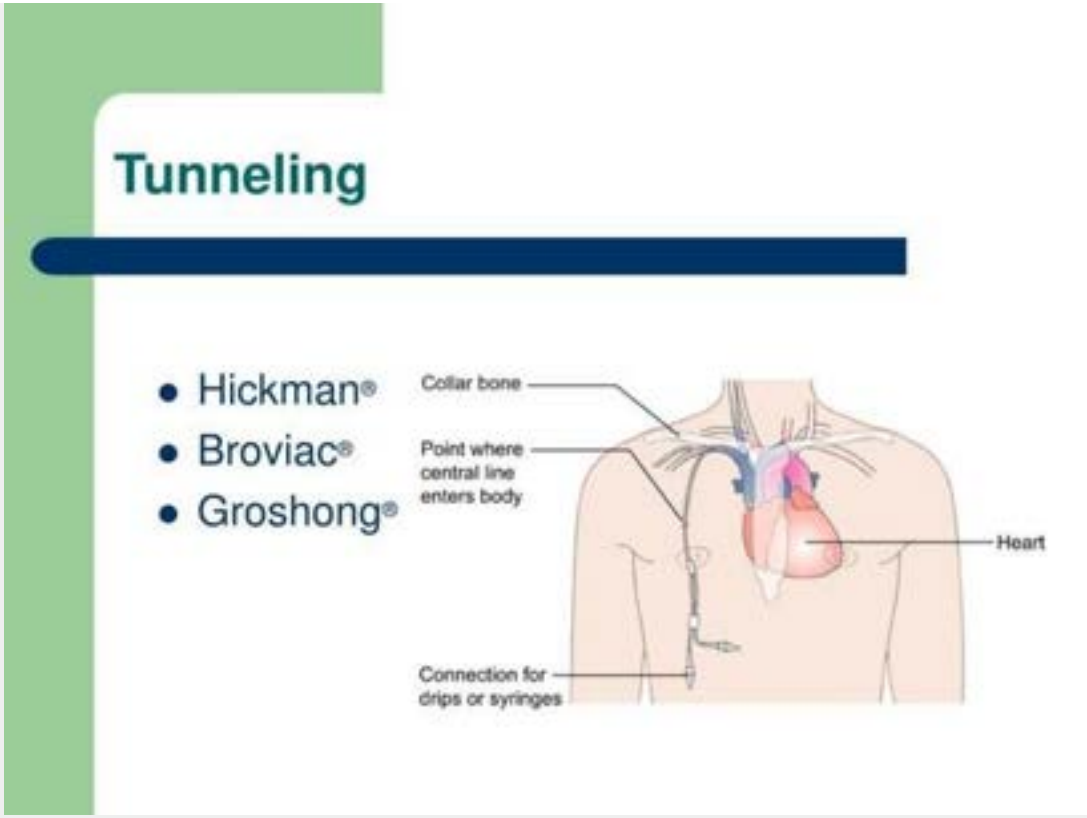
TUNNELED CATHETERS (CVC)

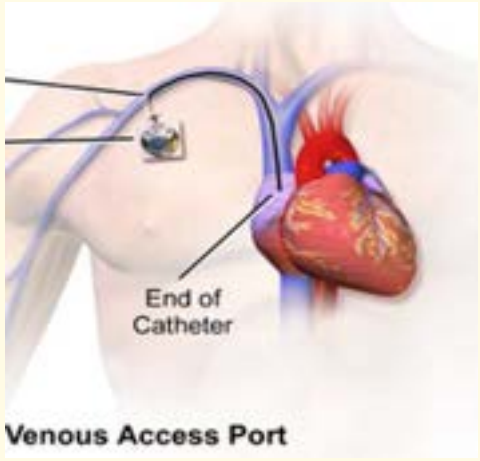


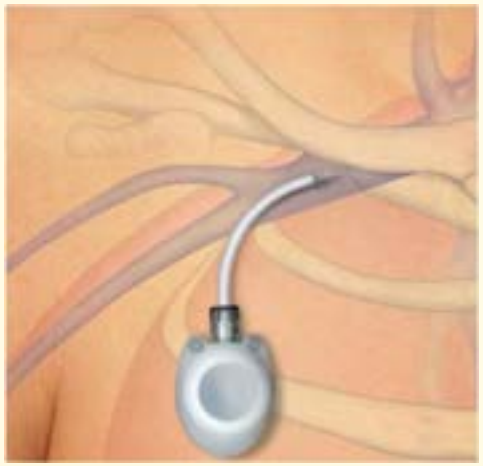
- Dacron cuff encourages tissue growth to provide catheter stability and serves as a barrier to prevent infection
- Long term therapies: TPN, chemo
- Examples: aPheresis catheter, Hickman, Broviac, Groshong
- Percutaneously inserted into central veins (subclavian, internal jugular (IJ), femoral)



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.

MUST BE SURGICALLY REMOVED.





Implanted Ports

Surgically implanted & removed

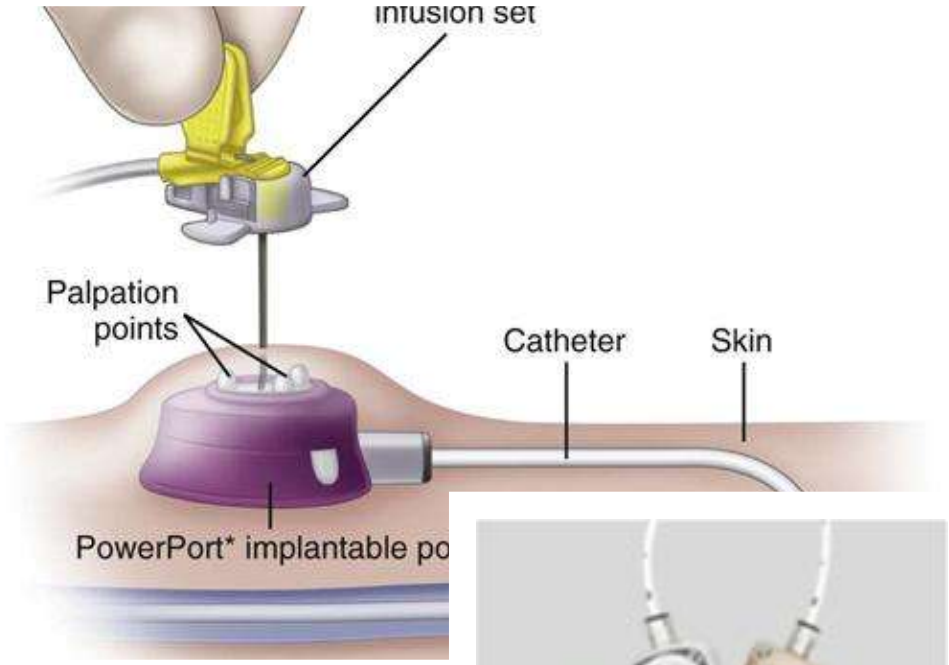
- Attached to a catheter that is threaded into the superior vena cava, subclavian or internal jugular vein

Removed surgically

Long-term use

Usually placed in the chest

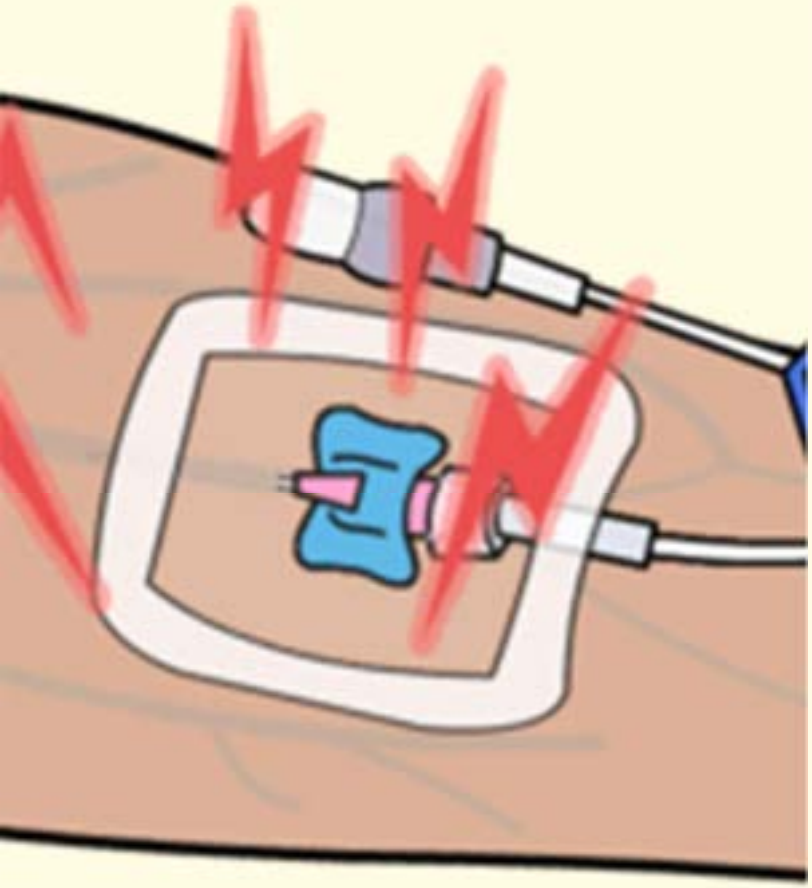
- Other locations: Arm, Thigh, Abdomen, ribs/side



ACCESSING IMPLANTED PORTS

NON-CORING needles must be used to access the self-sealing implanted injection port.

Vascular Access Device (VAD) Care



Peripheral Line Care

NO MORE 72 HOUR RULE!

Line can remain as long as:

- ❑Flushes easily
- ❑Positive blood return
- ❑Site without swelling, redness or drainage
- ❑Site without pain

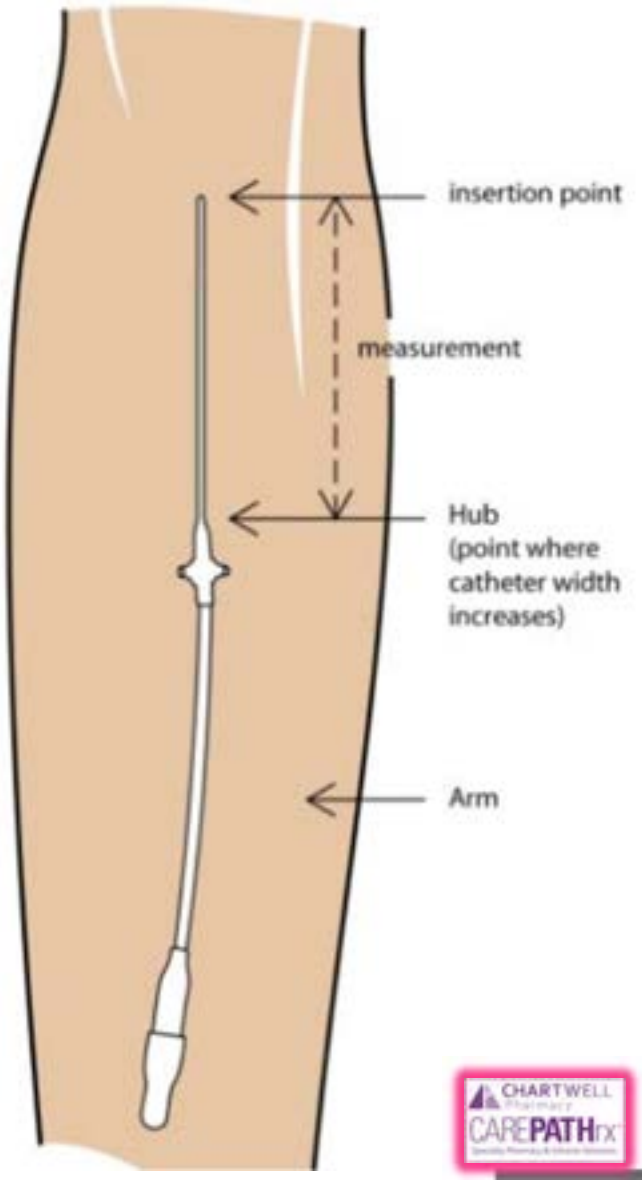
Dressing changes weekly and PRN

Change with every dressing change:

- Securement devices
- Extension sets
- Injection caps
- CHG disc (Biopatch)

Measure Every Dressing Change

- ❑ **2cm or more increase since SOC → indicates line migration**
- ❑ **Notify Ordering Provider and Infusion Pharmacist**



Assess

- ❑ **Assess site for swelling, pain, redness and blanching**

Circumference

- ❑ **3cm or more midarm circumference increase from SOC → associated with CA-DVT (adults)**

Chlorhexidine impregnated disc.

Reduces site infections, CLABSI, and skin colonization of microorganisms.

To be changed with each dressing change.

Letters Up!!

Securement Devices.

- Stabilizes the catheter, eliminates the chance of pull.
- Sometimes double securement is appropriate (StatLock + Sorbaview dressing).
- To be changed with each dressing change – at least 1 time per week

3M PICC/CVC SECUREMENT

https://youtu.be/-KmppMxkmJY

GRIPLOCK

https://youtu.be/lo4_o6x7UTE

STATLOCK

https://youtu.be/5XUpQLOtM9M

WINGUARD

https://youtu.be/-IV7OS7yGJU

SORBA VIEW SHIELD

https://youtu.be/dURvIi9OwE0

Tubing Changes

- Change Tubing Daily for intermittent infusions
- Change Tubing M-W-F for continuous infusion

Y-sites

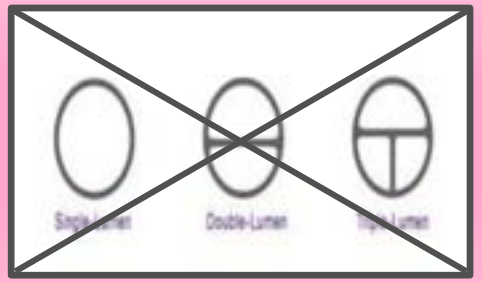
Y-sites are different from lumens!

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.

Medications **MUST BE COMPATABLE!**

- Pharmacist will verbally or in writing communicate y-site compatible medications.
- Document pharmacist y-site recommendations.



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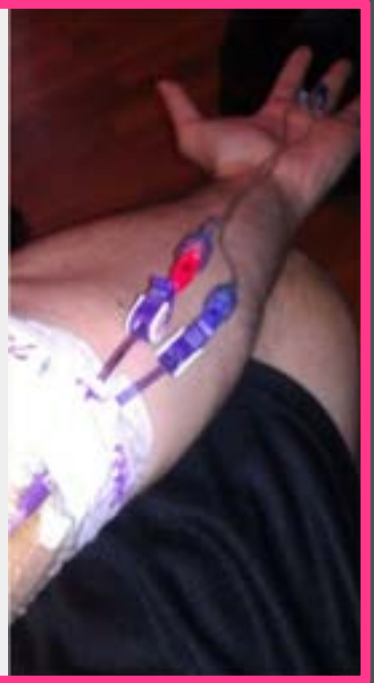
Catheter Injection Caps & Extension Tubing

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

Injection caps may be:
Positive pressure
Neutral pressure

Negative displacement–flush, clamp, disconnect
Positive displacement–flush, disconnect, clamp
Neutral and anti-reflux–flush, no specific sequence required

Extension tubing allows for the patient to self-administer medications with 2 hands.



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Midline & PICC Removal

Implement precautions to prevent air embolism during removal of CVADs including, but not limited to:

Place	Place the patient in a supine flat or Trendelenburg position
Instruct	Instruct the patient to perform a Valsalva maneuver at the appropriate point during catheter withdrawal.
Apply	After removal, apply digital pressure with a sterile dry gauze pad at and just above the insertion site until hemostasis is achieved by using manual compression
Apply	Apply an air-occlusive dressing to the access site for at least 24 hours for the purpose of occluding the skin-to-vein tract and decreasing the risk of retrograde air emboli.
Assess	Assess the removed catheter to ensure it is fully intact, after planned or inadvertent CVAD removal. If a retained fragment is suspected, notify the provider immediately.

Centrally inserted catheters must be removed in a controlled setting (clinic)

Flushing the Catheter

WHEN IT IS TIME TO FLUSH YOUR LINE:

1. Clean work area and placemat with a disinfectant wipe.
2. Gather equipment on placemat.
3. Wash hands for 20 seconds with soap and water.
4. Prepare flushes, syringes, and have several alcohol wipes nearby per your teaching sheet.
5. Follow the patient teaching sheet and plan of treatment, located in your patient handbook, to flush your IV catheter.

S - SALINE

A - ADMINISTER MEDICATION

S - SALINE

H - HEPARIN

IMPORTANT

Not all patients will complete every step when flushing the catheter.
Your nurse will let you know which steps to complete based on your specific therapy orders.

NEVER TOUCH THE TIP OF ANY SYRINGE.
If touched, discard syringe.

S	A	S	H
SALINE	ADMINISTER MEDICATION	SALINE	HEPARIN
 	 Administer Medication (if prescribed)	 	 

SASH Method

1 . Follow physician orders on POT for flushing volumes.

2. Flush before AND after every dose of medication.

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.

Leave 0.5 – 1mL in the syringe for the final (heparin) flush

Continuous Infusions:

- Only flush when tubing is being changed – otherwise the continuous infusion is flushing the lumen
- Cardiac, Pain & Blinctyo Continuous Therapies: Never Flush – If need to troubleshoot the line, remove the extension set/injection cap and withdraw as much as possible before flushing.

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

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Alcohol Caps

Alcohol kills microorganisms by the *friction* of scrubbing the hub and *drying*.
Increased scrubbing and drying time reduces infection risk.

Facility Hub Scrub

- Scrub for 5 seconds
- Allow to dry for 15 seconds
- Scrub once for flushes and medication

Need Alcohol Caps

Home Infusion Hub Scrub

- Scrub hub for 30 seconds
- Allow to dry for 60 seconds
- Scrub with new alcohol wipe for each line access (4 alcohol wipes for SASH)

Does NOT Need Alcohol Caps

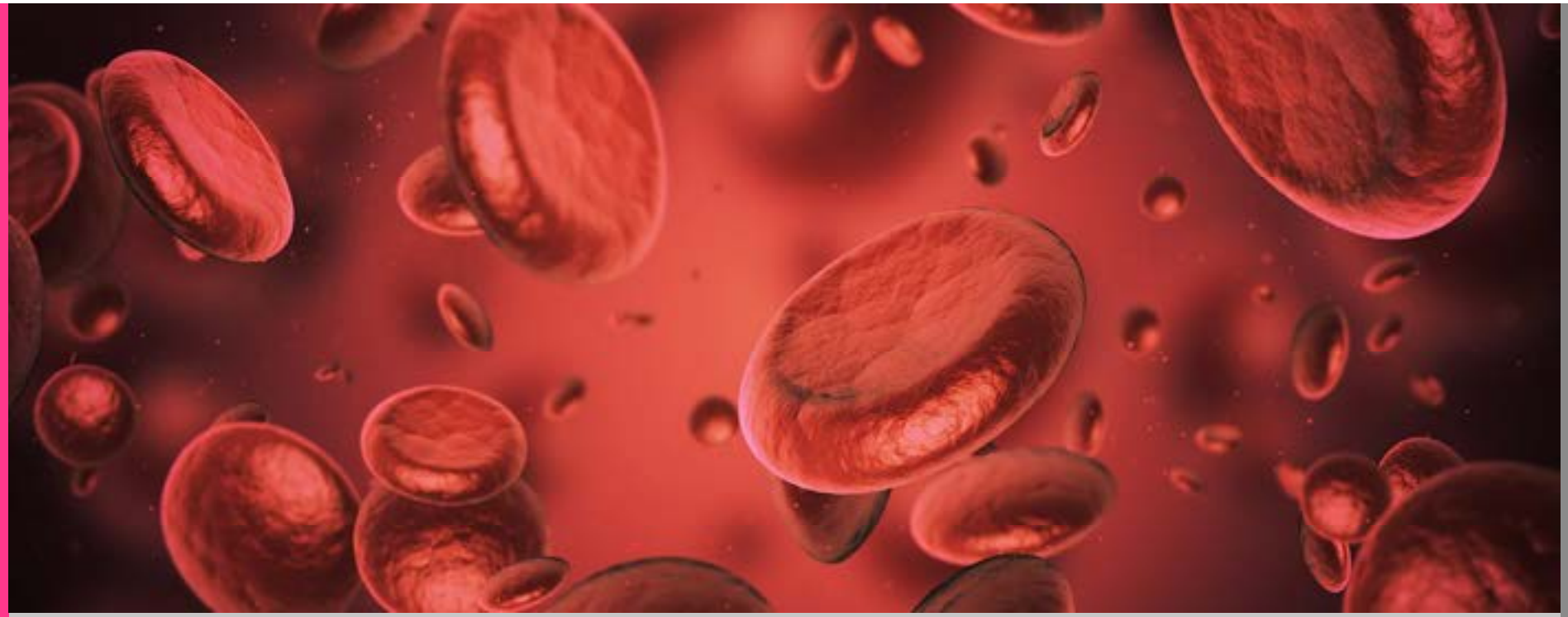
- ❑ **Alcohol caps clean the hub and cover the injection port. Once alcohol dries, anti-infective is ineffective.**
- ❑ **Caps are single use only**

CLABSI
(central line associated bloodstream infection)
Prevention

The catheter hub is a known source of line infections are related to bloodstream infections

SCRUB the HUB!!!!! 30 second scrub, 60 second dry before EVERY IV hub access

Teach the patient Hand Hygiene and how to maintain aseptic technique



Drawing Blood

Blood Draw Tips:

ALWAYS stop infusion prior to lab draw

Blood Waste: peds 3-5ml, adult 5-7ml

Flushing the line:

- 5-10ml before lab draw
- 10-20ml after lab draw

Draw hub to hub for best results

- Remove extension sets
- Attach new sterile caps/extension set after lab draws

Trough…draw immediately prior to next dose

- Do not draw from same line medication is infusing
- Reschedule lab if dose was administered

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Blood Sparing Technique (Push-Pull Method)

Check for blood return, flush with 10ml NSS

Using same syringe, aspirate 4-6ml of blood

Keeping syringe attached, instill blood back through catheter

Repeat process for 3 to 5 cycles

You are now ready to draw blood samples

Lab Requisition Documentation

- Provider and pharmacy fax number
- Patient Insurance Information
- Last dose for drug levels

DROP OFF

- Any lab near the patient and par with insurance
- Alert Chartwell to where the labs were taken:

Voicemail – 412-733-1996

Fax – 412-906-4307

Common Lab Orders

Troughs

to be drawn immediately prior (within 30 minutes) of the next dose

Peaks

to be drawn 30 minutes after previous dose completion

- Therapeutic levels monitored
  - Vancomycin
    - Trough
  - Gentamicin
    - Trough
    - Peak
  - Tobramycin
    - Trough
  - Amikacin
    - Trough
    - Peak

- Standard testing
  - CBC with diff
  - CMP
  - *ESR (optional)
  - *CRP (optional)
  - **CPK (daptomycin only)

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Medication Delivery
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Pharmacy Delivery: Refrigerated and Non-Refrigerated Items

Refrigerated Items

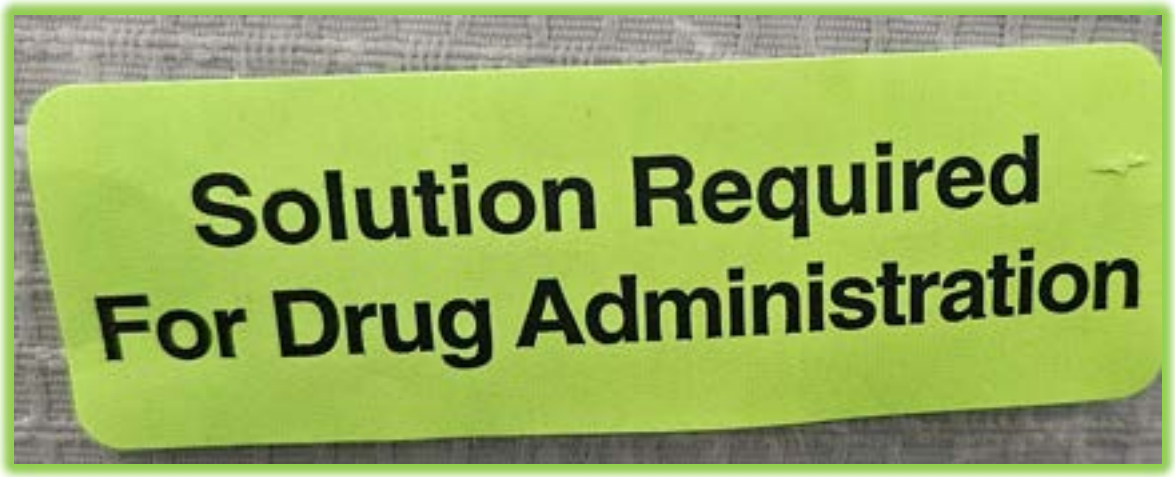
- Examples: refrigerated drug product or compounded diluent bags
- Packaged in a cardboard shipping box with cold packs to maintain appropriate temperatures

Room Temperature Items

- Examples: stock diluent bags, supplies, etc.
- Packaged in white delivery bag
  - If shipped via UPS, may be further packaged in a box

When patients receive a delivery from Chartwell, they may receive multiple packages.

Please ensure that these locations are checked and/or validated with patient/family member prior to notifying the pharmacy of a product omission.



Keep an Eye Out!

Affixed to diluent bags required for home mix medications

Supply Reordering

Call pharmacy to schedule delivery!

- **Pharmacy requires the following:**
  - **List of supplies/medications/formula needed**
  - **Inventory of supplies/medications/formula in home**
  - **Patient response to therapy**
  - **Order changes require a script**
  - **Date of next MD appointment**

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Modes of Administration

- IV Push
- Elastomeric
- Freedom 60
- Gravity
- Ambulatory Pumps

Medication Temperature

Medication should be room temperature when infused

Remove medication from refrigerator 30min-2hours prior to infusion.

Elastomeric Device remove from refrigerator 6-12 hours prior to infusion

Do **NOT** warm medication in the microwave!!!!!

VS

IV Line Filters

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

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

- Follow manufacturer's instructions for priming technique

Invert filter ARROW UP during priming

Do NOT invert filter for priming. 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
- Allows larger molecules to pass to the patient.

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IV Push

- One of the easiest for the patient
- Administer IV push medication at the rate specified in the prescribed order or as directed on the product label.
- Follow with an appropriate volume of 0.9% sodium chloride flush at the same injection rate to ensure entire dose reaches the bloodstream and to prevent a bolus of medication.
- Administer IV push medications through the injection port closest to the patient
- Check compatibility of IVP medication with solutions or medications in primary continuous infusion, if present.

Elastomeric Device

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 F	• 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

Gravity Infusions

Straight IV tubing set

Use drip rate conversion tables to adjust flow

$$\text{IV Drip Rate (gtt/min)} = \frac{\text{Volume (mL)}}{\text{Time (minutes)}} \times \text{Drop Factor (gtt/mL)}$$

Dial A Flow

- Flow regulator for gravity infusions.
- The dial is manually turned to the ordered infusion rate to allow for an easier regulation of flow than drip rates.
- Many external factors impact the rate of flow; it is appropriate for the home nurse to verify the infusion rate with a drip rate calculation.

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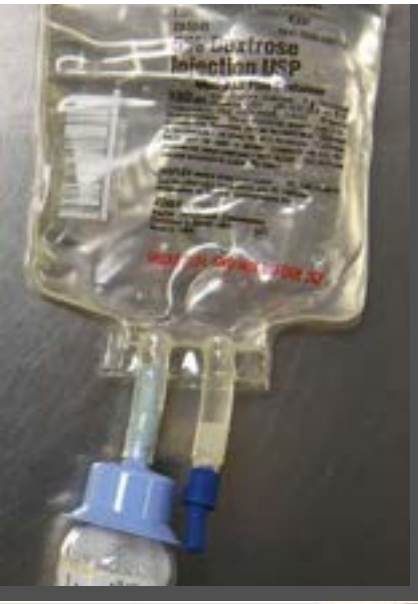
Reference Chart of Drops per Minute

For use with Flow Regulator or Gravity Infusion.

IV Tubing Drop Factor	Desired Hourly Rate: ML / HR																IV Tubing Drop Factor
	20	25	30	50	60	70	75	80	100	110	120	125	130	150	175	200	
10 DROP/ML	3	4	5	8	10	11	12	13	16	18	20	21	22	25	30	34	10 DROP/ML
15 DROP/ML	5	6	7	12	15	17	18	20	25	27	30	31	32	38	44	50	15 DROP/ML
20 DROP/ML	6	8	10	16	20	22	24	26	32	36	40	42	44	50	60	68	20 DROP/ML
60 DROP/ML	20	25	30	50	60	70	75	80	100	110	120	125	130	150	175	200	60 DROP/ML
IV Tubing Drop Factor	Drops Per Minute																IV Tubing Drop Factor

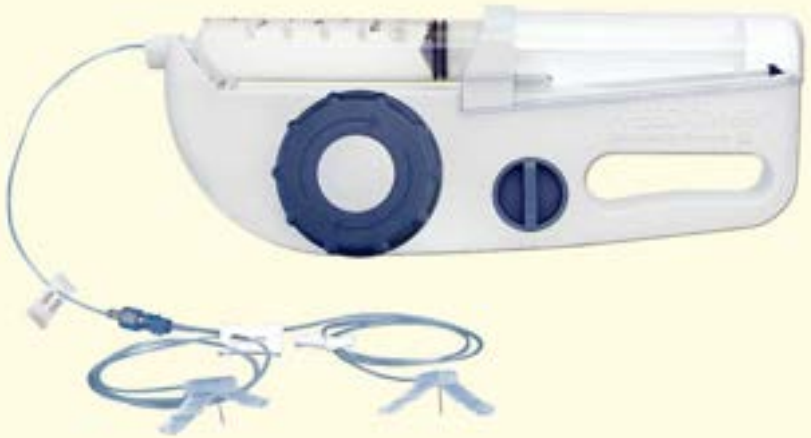


Minibag Plus, Vialmate & ADD EASE

- Always use with filtered tubing.
- Usually given via gravity method
- If on a pump will need to be pole mounted
  - Partial dose given on a pump
- Used for therapies with short stability after compounding

Freedom 60 Pump

- Syringe pump
- 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 Prizm Pump

Powered by 1 9-volt battery

- External power pack is used with the 9-volt battery in the pump for TPN and Hydration
- 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 programed with the patient’s orders.

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

CADD Solis Pump

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 programed with the patient’s orders. Always confirm pump setting against orders prior to starting the pump

Prime on side with lever side DOWN

Sapphire Pump

Powered Internal Rechargeable Battery

- Plug in pump for 6 hours each day to fully charge rechargeable battery
- External Power Pack with 6 – AA batteries for emergency use.

Passcode: 7770

Click: Repeat Infusion

- Do not select: Start New Infusion

Click: Screen Lock

- Do not select: Patient Lock Out

AVOSET pump

Powered 3- AA Batteries

Passcode: 298

Click: Review to confirm pump settings

Pump Returns

pumps are not disposable!!!

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.

Chartwell will contact the patient & arrange pump picked up by UPS.

- UPS will bring 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 Chartwell for equipment return.

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Sharps Container Disposal

- Sharps and Chemo containers arrive to patients in boxes labeled for disposal return.
- Instruct your patients to keep the box the container arrives in for return and disposal of sharps and chemotherapy.
- Once the box is filled to the full line:

1. Inform the pharmacy you need a new chemo or sharps container sent with your next delivery Return the container to the box
2. Use the twist tie in the box to secure the internal bag closed
1. Close the box
   a. Take the box to any United States Post office or scan the QR code to schedule pick up from your home

Home Enteral Therapy

ENTERAL NUTRITION

Enteral Nutrition: Using a tube (tube feeding) to deliver nutrition to the gastrointestinal (GI)tract

Reasons: Bowel obstruction, short bowel syndrome, Crohn's disease, ulcerative colitis, cancer or with dysphagia in stroke patients.

Short Term: Feeds with a tube entering the nose into the stomach (nasogastric tube).

Long Term: A tube entering the stomach from outside the abdomen (a gastrostomy tube) might be appropriate.

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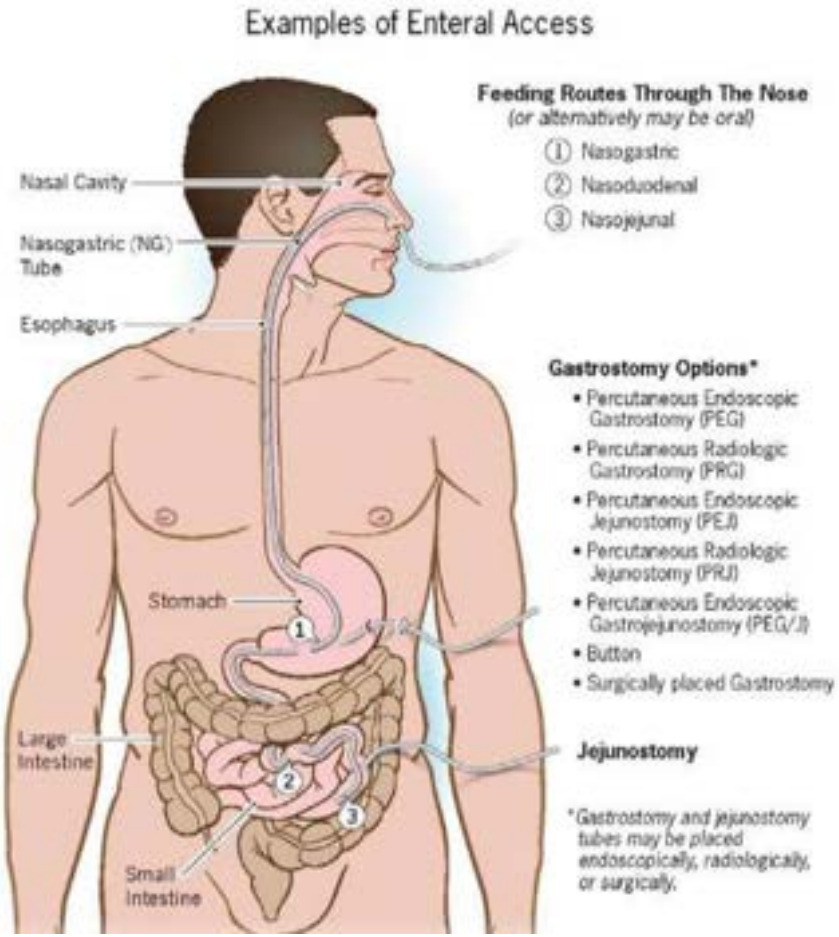

Nasogastric: tube passes through the nose, down the throat and esophagus and ends in the stomach

Gastrostomy: tube is inserted directly in the stomach

Jejunostomy: tube is surgically inserted into the jejunum, the middle section of the small intestines

Enteral Feeding Complications

- aspiration
- constipation
- diarrhea
- improper absorption of nutrient
- nausea, vomiting, dehydration
- electrolyte abnormalities
- high blood sugar
- vitamin and mineral deficiencies,
- decreased liver proteins

Nasogastric or Nasoenteric Tubes complications:

- irritation of nose/throat
- acute sinus infections
- ulceration of larynx or esophagus

Gastrostomy or Jejunostomy tube complications:

- clogged or displaced
- wound infections can occur.

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Formula Storage

Unopened	Opened Liquid formula	Opened Cans of powdered formula
• Room Temperature • Dry area • No direct sunlight • Until expiration date	• Can be stored in the refrigerator according to manufacture recommends. • 24-48 hours • This included reconstituted powered formula.	• Room Temperature • Dry area • No direct sunlight • Lid on securely • Until 1 month after opening

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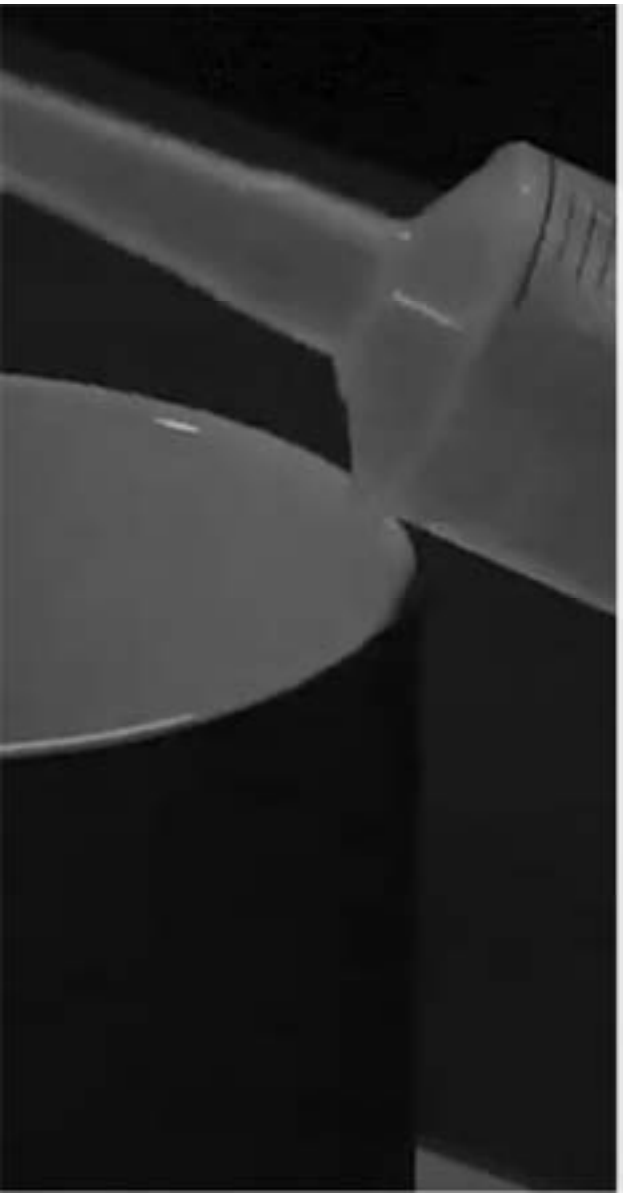

Free Water Flushes

- 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.

  Every 6 hr bolus = QID waking hrs

  Every 4 hr bolus = Feed and Flush

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

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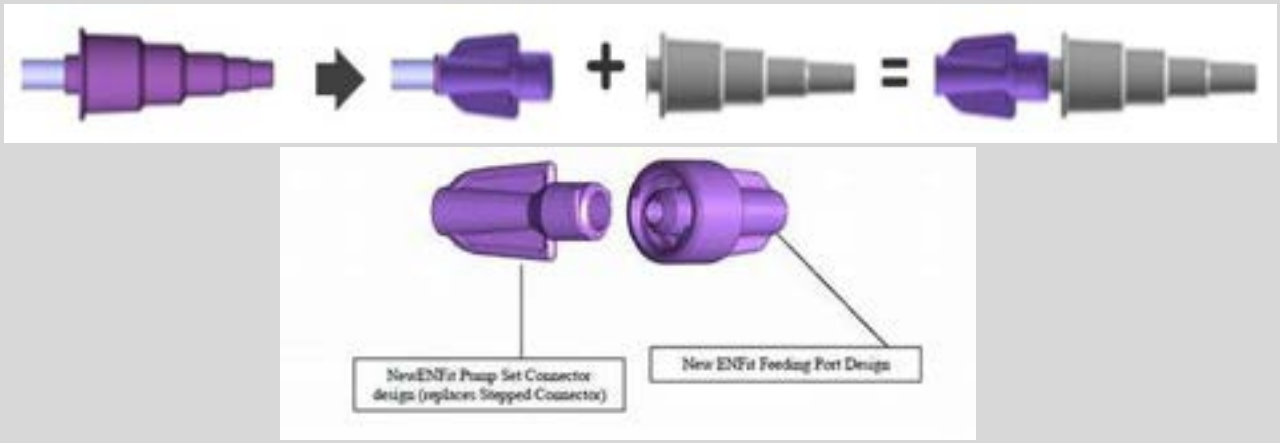
Tubing

- Change Bags Daily
  - Formula hang time at room temperature
    - 8 hours for adult
    - 4 hours for pediatric and neutropenic patients

EnteraLite Infinity Feeding set

Kangaroo Omni Feeding Sets

Traditional Tubes & ENFit Tubes



Specific syringes and tubing sets connect to traditional and ENFit tubes.

Many health systems are transitioning to ENFit feeding tubes.

Legacy (traditional) ends are packaged separately

Supplies

Piston Syringes

- Rinsed with water after each use
- Changed weekly

Lopez Valves & Dale Ace Connectors

- Change monthly or PRN for occlusions.
- Not needed but makes flushing easier.





Enteral Pumps

EnteraLite Infinity Pump

Rate/Dose button to set pump

- Rate – the rate the formula infuses
- Dose – the amount of formula to infuse
  - INF Mode – push the + button until INF appears for infinity feeding.

Clean under door with damp cloth or run under water, with pump turned off and unplugged.

Step by step Infinity pump programing

Press ON/OFF
Make sure RATE is displayed in the lower left corner of the screen.

Press the + and – buttons to adjusts the feeding rate.

Press RATE/DOSE and make sure DOSE is displayed at the bottom of the screen.

- Dose is the feeding volume (volume to be infused).

Press the + and – buttons to adjust the volume to be fed.

- If feed volume is controlled by formula in the feeding bag increase the dose to INF.
  - If the dose does not go into INF, must clear the Feed Interval.

Link to Operator's Manual:
MOOG ENTERALITE INFINITY OPERATOR'S MANUAL Pdf Download | ManualsLib

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Backpack

Moog backpack For INFINITY pump. This pack holds the Infinity enteral feeding pump with either a 500ml or 1200ml feeding bag. Also included in this pack is a pocket that may be used to hold an ice pack.

Cardinal Kangaroo OMNI Pump

Nurse to program feeding settings

Cassette color based on function

Video Instructions:
Kangaroo OMNI™ Inservice Video (youtube.com)
Teaching Guide:
ADMINISTRATION SET INFORMATION SHEET

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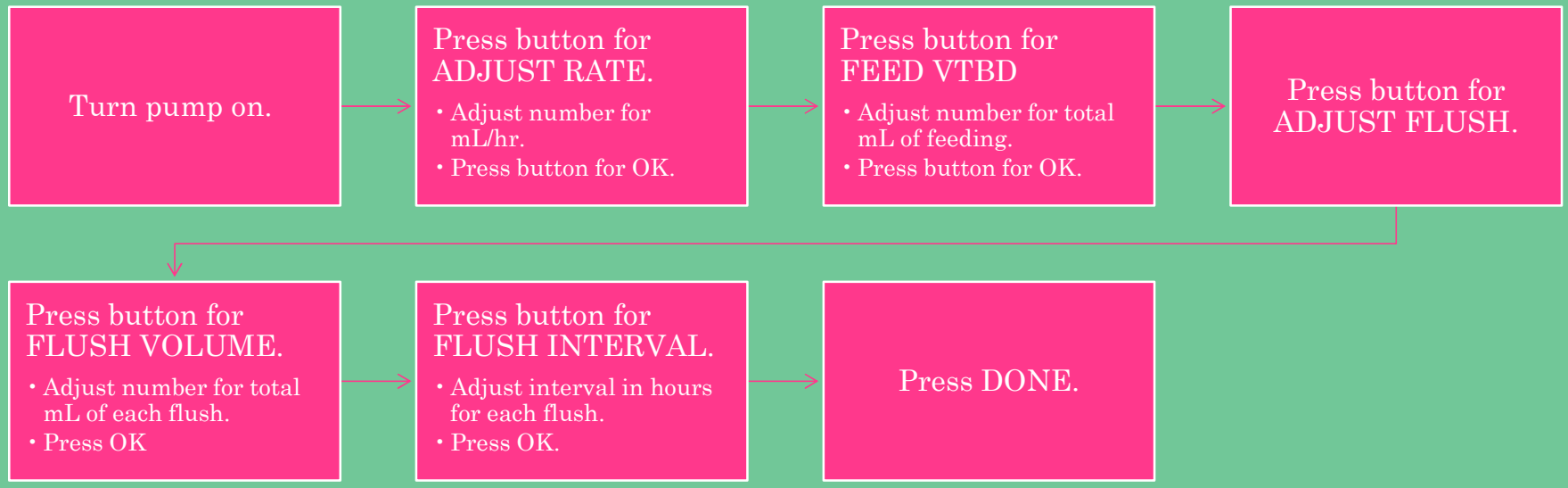
Continuous Feed & Flush Programing



Kangaroo Joey Pump

EZMode

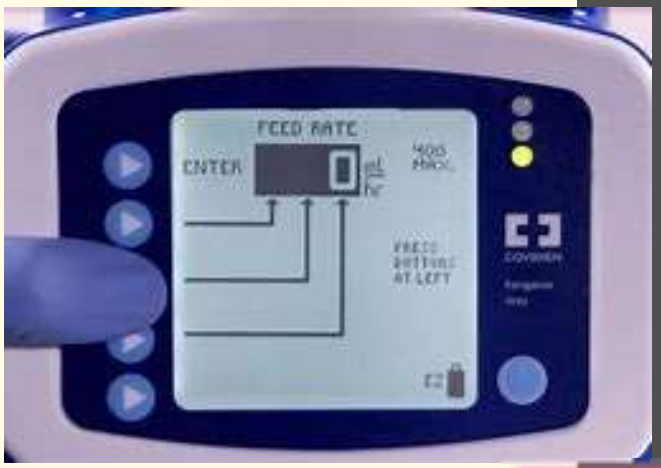
- Only adjust rate, no volume to be delivered

Intermittent

- Bolus feedings at programmed time intervals and Volume/Rate
- Feed and Flush

Continuous Mode

- Continuously at a steady rate. Can set VTBD
- Feed and Flush



Clean under door with damp cloth, when pump is turned off and unplugged.

Continuous Feed & Flush Programing

- Turn pump on (button at bottom right).
- Press button for CLEAR SETTINGS.
- Press button for ADJUST FEED.
  - Press button for FEED RATE.
    - Adjust number for mL/hr.
    - Press button for ENTER.
  - Press button for FEED VTBD
    - Adjust number for total mL of feeding.
    - Press button for ENTER.
- Press button for ADJUST FLUSH.
  - Press button for FLUSH VOLUME.
    - Adjust number for total mL of each flush.
    - Press button for ENTER
  - Press button for FLUSH INTERVAL.
    - Adjust interval in hours for each flush.
    - Press button for ENTER.
- Press DONE.
- Press Done again.

Link to resources and operating manual:
Operating & User Manuals - Enteral Feeding | Cardinal Health

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THANK YOU FOR ATTENDING!!!

QUESTIONS?

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PLEASE REACH OUT WITH QUESTIONS OR FOR INFORMATION ON ADDITIONAL TRAINING OPPORTUNITIES