



IV Nurse Consultants

“ROLL BACK” NAME CHANGE - SAME SERVICE

IV Nurse Consultants Inc. was our original name when our company was first started. In 1996 our company took on a number of other services, including becoming one of American Heart Associates largest designated Training Center, a worldwide GSA contract with the government and a couple years later became a vocational college. Because of our versatile services we kept the IV Nurses Consultants name but took on and referred to ourselves as Medical Training Consultants. Over many years, each of the areas have grown substantially. With the attempt to better define our services we have decided to have our IV nursing services go back to it's original name of IV Nurse Consultants and our GSA portion of our company be referred to as Medical Training Consultants and our college was renamed to College of Medical Training a number of years ago. When you hear the name change, remember it is the same company. We look forward to our continued servicing of your IV, in-services and educational needs in the future.

YOUR IV NURSE CONSULTANTS TEAM AT WORK



SPRING EDITION 2009

PROVIDED BY: SUSANNE SUTTICH RN, BSA

To our pharmacies and facilities:

To further our goals of education, cooperation, and good will, I.V. Nurse Consultants Inc. is developing a newsletter for the purpose of better communication, education, understanding and servicing its clients.

The newsletter will provide;

1. Information on current I.V. Standards.
2. Forum for communication of questions, concerns and answers reviewed in the newsletter.
3. In-service training. Dates and locations.
4. I.V. Standards and protocols.

Suggestions and ideas will be welcomed to create an informative newsletter as a positive resource for the administrator's of our facilities, their staff and the pharmacies that service them.

THANK YOU!!

First, I would like to take this opportunity to thank our hospitals, clinics, and pharmacies that contract with us and our facilities we service through our pharmacies. Thank you for your dedication as a health care professional and your commitment in using our IV Nurse Consultants services. Surprisingly time goes by fast and in looking back over many years I realize, we have pharmacies and facilities we have serviced for more than 17 years.

We are very pleased to serve you and feel you will not be disappointed in our excellent service as we continue to service your IV needs in the future. The long term satisfaction with both our pharmacies and our facilities we service is of the greatest importance to our team. If you ever have any questions, suggestions, or want to provide feedback please feel free to call, or fax me and I will respond as soon as possible.

Office phone number (253) 566-8282 or fax (253) 566-8262. These numbers are not to be confused with our IV Nurse Triage number.

OUR IV TEAM SPECIALIZES IN:



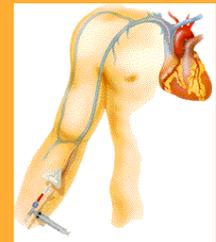
Peripheral IV Starts

Instead of sending your patients out for IV access, call us to place those difficult lines.



Lab Draws

If you are having difficulty getting your blood work drawn, contact us for an IV nurse to come to your facility for a lab draw.



Midline & PICC placements

If access is needed for one week, eight weeks or longer call us to place a longer term line.

If your patient's catheter has broken at the hub, we can usually repair it, or do an exchange over a guide wire using the Modified Seldinger Technique.

MEETING YOUR NEEDS!

Recently I contacted a number of pharmacies and facilities, telling them about our new newsletter I am developing. I asked each of them if there were areas they would like to see us review. I had an overwhelming response of interest for receiving this newsletter as well as a list of requested areas to be review. I will not be able to cover all of the areas within this first newsletter, so I will pick questions that were most frequently asked during my calls. In the future newsletters I will continue to cover more areas.

1st Question most frequently asked?

- If heparin is used, at what concentration?
- How often should a line be flushed?
- What size syringe should be used to flush?

FLUSHING

January/February 2006 edition of the most recent Journal of Infusion Nurse. The Official Publication of the Infusion Nurses Society (INS) Standards of Practice publication. Stated on pages S55 & S56, it addresses this issue: “Flushing with a heparin flush solution to ensure and maintain patency of an intermittently used central vascular access catheter should be performed at established intervals; the concentration of heparin should not interfere with the patient’s

clotting factors. The concentration of heparin should be the lowest possible that will maintain patency.”

Although the INS does not specify 10u/ml Heparin as the lowest possible concentration that will maintain patency, we have successfully utilized this as part of our policy for many years and believe it to be in our patient’s best interest, as it decreases the opportunities for a patient to be exposed to excessive amounts of Heparin. It is our experience that the prevention of clot formation in PICC lines/ Midlines is more dependent on the flush technique and frequency of flush rather than depending on a higher concentration of Heparin. Therefore, in teaching Nurses about PICC lines and Midlines, we emphasize correct flush techniques in the prevention of clot formation and maintenance of patency of these lines, rather than teaching them to rely on stronger concentrations of Heparin, which could have an adverse affect on a patient. (Heparin induced thrombocytopenia; Journal of Infusion Nursing 1989;12(6):15-6) and Occlusion Reduction and Heparin Elimination Trial Using an Antireflux Device; Journal of Infusion Nursing 2009; 33.

HOW TO MAINTAIN A HEP-LOCK OR IV-LOCK?

Saline locks or **heparin locks** (once called **heparin wells**) are merely peripherally placed IV devices that have no IV tubing’s or IV solutions continuously attached to them. They are IV cannulas that are capped. In order to maintain their patency (freely open and functional) they must be (1) capped off, and (2) primed with a solution to prevent blood from entering the shaft of the cannula of the IV device and clotting it off so it loses its patency. Saline and weak solutions of heparin are used to accomplish this.

Maintenance includes regularly monitoring and caring for the IV site and the equipment attached to it in order to avoid complications (infection, phlebitis, infiltration).

- The IV site should be assessed every 1 to 2 hours (this is an INS-Intravenous Nurse’s Society —standard)
 - ▶ you should know the type and length of the device that has been inserted because this determines the area of the patient’s arm that you need to examine (the length of the vascular device should be documented on the dressing)
 - ▶ assess for the presence of any pain or tenderness which is a precursor of phlebitis
 - ▶ assess for swelling at or above the venipuncture site **even if you are able to ascertain a blood return**. If in doubt that swelling is present have the patient hold both arms together and compare them visually.
 - ▶ if there is a transparent dressing properly positioned so the insertion site is observable you should be able to assess for much of the following:

HOW TO MAINTAIN A HEP-LOCK OR IV-LOCK? -

- assess for blanching (white, shiny appearance) at and above the insertion site. This is a sign that infiltration of injected solution has occurred
- look for the leakage of any fluid from the insertion site or the skin surrounding the length of the IV device. This is a sign of infiltration or cellulites.
- assess for redness at or above the insertion site.
- The IV device should be removed and placed in another location if there is any evidence of pain, tenderness, phlebitis or infiltration
- The IV device should be removed and placed in another location after 72 hours (this is an INS standard)
- A dressing should only be changed if it is soiled, wet or the IV site is being changed. Disturbing the dressing that was placed at the time the IV was inserted increases the likelihood of phlebitis occurring and the introduction of bacteria. IVs should not be remaining in place longer than 72 hours.
 - ▶ it is done as a sterile procedure
 - ▶ once the old dressing is removed, assess for redness, swelling, leakage and any streaking—if any is found, D/C the IV device
 - ▶ otherwise, carefully clean around the IV site with providone-iodine or alcohol or chlorhexidine using a circular motion working from the center and moving outward
 - ▶ allow the area to air dry
 - ▶ re-tape the device in place
 - ▶ apply the new dressing so that the IV site can be seen
 - ▶ mark the dressing with the date the IV was inserted, the type and length of the catheter, the date of the dressing change and your initials
 - ▶ document your observations and the dressing change in the patient's chart.
- The changing of the cap on the device is usually done at the time of a dressing change. It can be changed if it is gunky with blood. Remember it is a point at which bacteria can be introduced into the patient so it should be a sterile procedure. To prevent backflow of blood from oiling everything, place a sterile 2x2 below the hub of the cannula and using the finger of one hand place pressure over the vein at the point where the tip of the end of the cannula will be seated in the patient's vein. This will occlude backflow of blood into the cannula as you remove the old cap. Make sure the new cap is tightened sufficiently. Flush.
- A saline or heparin lock should be flushed on a regular basis to maintain its patency. Every facility will have a protocol for flushing the saline lock. Flushing the lock is how you maintain the patency of the device. Documentation of flushing is usually done on the MAR (Medication Administration Record)
 - ▶ This is what INS and Roxanne Perucca, RN, CRNI has to say about flushing: “When a vascular device is flushed, positive pressure must be maintained on the lumen of the cannula to prevent reflux of blood into the cannula lumen. Positive pressure is maintained by keeping a forward motion on the syringe plunger as the syringe is removed from the injection port. If resistance is met during flushing, no further attempts to flush should be made. Pressure should not be exerted on the catheter to restore patency; applying pressure to an occluded catheter can dislodge the clot into the vascular system or rupture the catheter.... The cannula should be flushed when [it] is left in place for intermittent therapy. If a catheter is capped off and no medication is being administered intravenously, the catheter must be flushed to maintain patency. The frequency of flushing... varies from institution to institution... many institutions have established standardized flushing protocols to be used for various vascular access devices,” (page 398, Intravenous Therapy: Clinical Principles and Practice, by Judy Terry, Leslie Baranowski, Rose Anne Lonsway and Carolyn Hedrick, published by the Intravenous Nurses Society, 1995)

SAS—Saline—Antibiotic (or other medication) - Saline

OUR IV TEAM SPECIALIZES IN:



Our I.V. Nurse team is proficient in the latest innovations in portable ultrasound equipment!

Portable ultrasound equipment is of *great* benefit to our clients by further reducing the need for costly and inconvenient trips to a hospital for interventional placement of PICC or Midlines. By using this technology our team can consistently decrease IV complications. Avoid many such results as local phlebitis which can result in the line being removed and restarted elsewhere. When the Midline or PICC is placed a few inches above the antecubital fossa it is not subjected to the stress and irritation of the arm being bent at the elbow during normal daily activities.

Patients can now be accessed through ultrasound technology, conveniently performed at their bedside by our registered nurse I.V. consultants

WHAT IS A PICC OR MIDLINE CATHETER?

PICC and/or Midline's are a special intravenous infusion catheter that is put into a vein near the bend of the elbow known as the Antecubital area or higher up in the upper arm.

The PICC is then threaded to the largest vein in your body just above your heart, called the Vena Cava. Peripherally inserted central catheters (kath-uh-ters) (PICC) are used when the patient needs IV medicines and fluids. The catheter is a small flexible plastic tube. The catheter is put in through a vein under the skin. A vein carries blood from the body to the heart. The catheter is usually put into a vein on the inside of the arm. Then it is tunneled up towards and sometimes past the shoulder until it is within the SVC.

A Midline catheter is similar to a PICC, but it is shorter in length and is threaded into a large vein in your Antecubital or upper arm and

ends before the shoulder. Your patients physician has ordered a PICC or Midline to give medications directly into a vein (intravenously). Midlines and PICC's are used for long term lines and/or when fluids and/or medication are not recommended for short term peripheral lines due to their effect on the inner layer wall of the vessels. A PICC, and in some situations a midline catheter, is also used as an access to get blood samples. This is only recommended when the size of the PICC and/or Midline is large enough to prevent the catheter from clotting off. (Usually recommend a 4 Fr or larger) The PICC/Midline allows you to give the medications needed for your patients and to have blood samples drawn without repeated needle sticks in their arms.

PICC/MIDLINE FREQUENTLY ASKED QUESTIONS?

How do I know if my patient has a Midline or PICC?

---it is impossible to know the length of the internal catheter from what is visible externally. The only way to know is by seeking documentation by the I.V. Nurse or MD who placed the line and being certain it is included in your patient's medical record. It is not safe for your patient, to assume instead of verify.

Why does the I.V. Nurse call me and/or ask me to call them for CXR results after a PICC is placed?

---for patient safety and documentation. The I.V. Nurse is required to make follow up calls to verify placement of all PICC lines as usable placement. It also gives the staff Nurses an opportunity to ask questions about the CXR results or the PICC line.

How often do I change my patient's Midline / PICC dressing?

---the dressing that is applied by the I.V. Nurse after insertion should stay in place for 24 hours unless it becomes loose and/or soiled with blood. At 24 hours, it should be carefully removed, the skin surrounding the site should be assessed, cleansed using sterile technique, and a full dressing change completed and a clear dressing (i.e. Tegaderm) placed using sterile technique. The clear dressing should be replaced every 5-7 days and PRN if soiled, moist, or not intact. *Remember to wash your hands before and after, this is a high risk time for transmission of disease from Nurse's hands to patient, or from patient to Nurse!* Time, date, and initial your dressings.

Do I need to change the Clave connector?

---yes, the Clave should be changed every 5-7 days routinely, PRN for malfunctions, soiling, or breaks. Wash your hands and don gloves before this procedure. Use caution not to introduce air into the line or otherwise introduce contaminants into the line during this procedure.

My patient has a Midline that has been used for Ceftriaxone therapy. Now the Primary C are change by the Physician Vancomycin. Can I go ahead and use the Midline for this?

---no, your patient will need a PICC line for Vancomycin due to the pH of that medication.

MORE PICC/MIDLINE FREQUENTLY ASKED QUESTIONS

I think my patient's PICC line has been pulled out a little bit /or a lot, what do I do?
---anytime your patient's PICC is dislodged, discontinue use, secure the line, Positive Pressure flush with Normal Saline, and contact your I.V. Nurse for consult. Your patient's PICC is placed to precise measurements for Central Venous placement. *Never try to advance the line back into the patient's arm. This action has great potential to harm your patient.*

I think my patient's Midline has been pulled out a little bit /or a lot, what do I do?
---discontinue infusion, secure the line, Positive Pressure flush with Normal Saline, and contact your I.V. Nurse for consult. *Do not try to advance the line back into your patient's arm. This action has great potential of causing harm to your patient.*

My patient has a Midline and c/o pain each time I run the antibiotic through it, what do I do?

---assess your patient's affected extremity for erythema and edema. If these are present, contact I.V. Nurse for consult. Otherwise, are you infusing medication that you removed from the refrigerator without allowing it to warm to room temperature? Cold infusions cause venous spasm and are painful to your patient. Consider applying warm moist heat to the upper extremity for 20 minutes and see if your patient gets relief from the discomfort.

My patient's Midline / PICC is clotted.

---check if tubing is clamped or catheter is kinked or bent, change Clave connector. If these actions do not work: Do not remove line, do not attempt to force flush line, do not use 3cc syringe to flush line. The I.V. Nurse has specialized techniques used to de-clot the line which may include the use of Heparin or Activase (Cathflo). Contact your I.V. Nurse for consult.

My patient's Midline / PICC is leaking from a tiny hole I can see.

---discontinue use of the line immediately; clamp the line between the hole and the patient, secure line. To clamp the line, you may fold the line if possible and use a rubber band, use teeth less forceps, or protect the line with 2x2 gauze and use forceps over the gauze. The goal is to prevent the introduction of air into the line, as well as bacteria.

Midline Incompatible Solutions

The Infusion Nursing Standards of Practice, published in November of 2000, identify medications and solutions that should not be infused through short peripheral or midline IV catheters. These include continuous vesicant chemotherapy infusions, parenteral nutrition formulae (TPN) exceeding 10% and/or 5% protein solutions. IV solutions or dedications with a pH less than 5 or greater than 9 (Vancomycin, AmphotericinB) and solutions with an osmolarity greater than 500 mOsm/L. (Diluted vancomycin (Vancocin) has a pH of 2-5 to 4-5, diluted nafcillin (Nafcil, Unipen) has a pH of 6.0 to 8.5.

-Not sure if the medication to be infused is compatible with Midline Catheter uses? Contact your Pharmacist or I.V. Nurse for further information.

PICC

YES =AMPHOTERICIN-B

YES =VANCOMYCIN

YES =SYNERCID

YES=LONG TERM ABO THERAPY

YES =CHEMOTHERAPY

(per MD discretion)

YES=TOTAL PARENTERAL NUTRITION

YES= LONG TERM HYDRATION THERAPY

MIDLINE

NO=AMPHOTERICIN-B

NO=VANCOMYCIN SYNERCID

NO=LONG TERM ABO THERAPY CHEMOTHERAPY

NO=TPN

LONG TERM HYDRATION

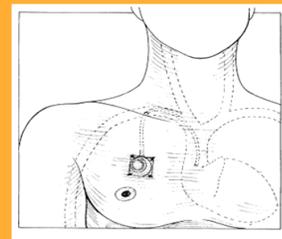
=**Depending on length (Usually no longer than 10 days)**

OUR IV TEAM SPECIALIZES IN:



Navigator

This truly is a great technological aid for accurately placing PICC lines. The Navigator System, made by Viasys Healthcare Medsystems, is designed to aid in the placement of central venous catheters (CVCs). By using this tool we can determine the ap-



Port-a-Cath Access Central Line Care & Maintenance

The crucial elements in IV therapy are education, training, responsibility and accountability. Call us to provide our highly trained specialized nurse experts to enhance your skilled nursing facility.

Specialty Services

IV Fusion Services

Vascular Access Nurse Specialist available 24 hours a day 7 days a week

24 hour phone consultation

I.V. Nurse Consultants Inc. &
Medical Training Consultants
9100 Bridgeport Way SW
Lakewood, WA 98499
Susanne Suttich RN, BSA
IV Nurse Administrator



IV Nurse Consultants

We're on the Web!
IVNurseConsultants.com

IV Courses Offered:

Basic Concepts and Technology in I.V. Therapy:

Covering Site selection, venipuncture procedure, patient assessment, nursing assessment and actions related to routine care and maintenance, clinical considerations, equipment review, hands on practice.

Advanced Concepts and Technology in I.V. Therapy:

Central Venous Catheters, Ports and P.A.S. Ports, site care and maintenance, flushing, syringe selection & PSI, dressing changes, occlusion, catheter repair, blood sample collection, catheter removal and post insertion complications, hands on practice.

Mid/PICC Insertion

(call for more details)

IV Refresher Course

(call for more details)

**Let Our Vascular Access Specialists
Meet Your IV Insertion Needs!**

Triage Nurse Call: 1-888-IV DEPT-1

(1-888-483-3781)

*For all other inquiries please call our
main office number*

253-566-8282

IV In-Services:

TPN
IV Pump
Port Access
Midline/PICC maintenance review
Basic IV Start Review
Dressing Changes
Site Selection
Central Line
PICC
Positive pressure flushing
Possible complications in infusion
Prevention of patient pulling lines

Additional Courses Available:

- **TNCC** (Trauma Nursing Core Course)
- **ACLS** (Advanced Cardiac Life Support)
- **PALS** (Pediatric Advanced Life Support)
- **PHTLS** (Pre-hospital Trauma Life Support)
- **BLS for HCP** (Healthcare Provider CPR)
- **FIRST AID**
- **HIV**
- **BLOOD BORNE PATHOGENS**
- **NAC** (Nurses Aid Certified)
- **EMT** (Emergency Medical Technician)

FOR MORE COURSES OFFERED

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