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## Kathy Ferrell: Medical-Legal Consulting Newsletter June 2006

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### Greetings!

I hope that you find my newsletters helpful. I also would like to once again mention an upcoming seminar to be held on June 29 at the Wynfrey Hotel in Birmingham. I will be one of the two presenters for this seminar entitled "Select Topics for Legal Staff in Alabama." Continued education credits will be offered for this seminar from the Certifying Board for Legal Assistants of the National Association of Legal Assistants and the National Federation of Paralegal Associations. For more information please feel free to contact me or Lorman Education Services. ([www.lorman.com](http://www.lorman.com)) I hope to see you and/or members of your staff at the seminar.

## VENIPUNCTURE - A Clinical Challenge

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Venipuncture is the most frequently performed invasive medical procedure. Nurses are asked to perform venipuncture in all health care settings, such as homes, offices, out patient clinics and hospitals. The procedure is usually benign and causes only transitory mild pain; but injuries can and do occur from this procedure and nurses are often faced with medical malpractice claims. Complications of IV therapy can include acute nerve injuries leading to Complex Regional Pain Syndrome Type II (CRPS-II), or causalgia, infiltration, abscess, thrombophlebitis, bacteremia, circulatory overload, air embolism, hemorrhage, venous thrombosis, and tissue necrosis (tissue death). Nurses should be adequately trained and possess the skills to avoid or minimize these complications.

The Standards of Care have been broadened and better defined in the past five or so years in response to the increase in litigation. A complete discussion of the standards of care can be obtained from the Intravenous Nurses Society. Infusion nursing standards. Journal of Intravenous Nursing. 23 (65):1- 88, November-December 2000.

<http://www.ins1.org> Among the standards of care are the following:

**Competency** Nurses who are improperly trained to perform venipuncture or who are inadequately supervised in the procedure can inflict permanent injury on patients. The employer, whether a hospital or other agency, must determine that the nurse is competent to perform these procedures before the nurse is allowed to work independently. Each health care facility should have a policy in place to determine how the nurse demonstrates competency and what procedures are included. It is the responsibility of the nurse to be familiar and to follow the agency's policy and procedures for venipunctures. This may be limited to venipuncture for blood draws, but it could include IV medication administration, use of electronic infusion pumps and blood

administration. Evidence of such training and annual assessment of these skills should become a part of the nurse's personnel file.

**Assessment** (Selecting a vein). Site selection should be established in organizational policies and procedures. Also, manufacturers' guidelines of each catheter type will include recommendations concerning site selection. Before starting IV therapy, the nurse should consider duration of therapy, type of infusion, condition of veins, and medical condition of the patient to assist in choosing an IV site and type of catheter. Short peripheral catheters are the most common and they are used when the IV therapy lasts 6 days or shorter, when the fluids and medications have a pH between 5 and 9, and when the osmolarity is less than 500mOsm/liter (solutions such as normal saline, glucose, Ringer's Lactate). The Infusion Nurses Society (INS) recommends that the nurse start with the most distal site in the upper extremity and move up the arm with each subsequent cannulation. That means, for most adults, assess the hand veins first. The most common veins used for the adult are the metacarpal and dorsal veins on top of the hand. This rule does not apply to older adults who have lost subcutaneous tissue around the veins or for patients who need their hands for getting in and out of the bed frequently. Infusion of vesicant medications is also contraindicated because of the danger of tissue necrosis and the loss of hand function from damage to tendons and ligaments. Most adults have many venipuncture sites on both sides of the forearm. Using these veins is a good option for short-term IV therapy because hand and arm mobility aren't restricted. The cephalic vein which lies along the thumb side of the arm is often used. Care must be taken to perform venipuncture 4 to 5 or more inches above the level of the wrist due to close proximity of the radial nerve. (Recent research has demonstrated that the superficial branch of the radial nerve crosses the cephalic vein at least once and up to three times as it extends from the wrist to the forearm.) The accessory cephalic vein branches off of the cephalic vein and is located on the top of the forearm. The median vein in the forearm is also a good choice for venipunctures. It originates in the palm of the hand and extends along the underside of the arm. Veins in the wrist should not be used for venipuncture because of their close proximity to nerves. Besides the risk of causing pain and damaging nerves, preventing movement at these sites may be impossible, increasing the risk for complications. Use of veins in the antecubital fossa (inside bend of the elbow) may limit the patient's range of motion, increase the risk of phlebitis and infiltration, and interfere with blood sampling. Other sites to avoid are veins below a previous IV infiltration, veins below a phlebotic area, sclerosed or thrombosed veins, veins in areas of skin with inflammation, disease, bruising or breakdown. Never start an IV in an arm affected by a radical mastectomy, edema, blood clot, infection or an arm with a fistula/shunt for use in hemodialysis.

**Monitor the Patient** After initiation of an IV, the nurse must monitor the patient frequently for:

- Signs and symptoms of sluggish flow or infiltration
- Signs of phlebitis or infection
- Correct solution, medication, volume and rate
- Dwell time of the catheter and the need to be changed
- Condition of the catheter dressing and the need to change
- Fluid and electrolyte balance
- Signs and symptoms of fluid overload and dehydration
- Patient satisfaction with mode of therapy

**Documentation** As in all areas of medical care, documentation is critical. Adequate

documentation includes:

- The date and time of the procedure
- The type, length, and gauge of the catheter used
- The number of attempts made
- The exact location of each attempt and the final successful site
- The type of dressing applied
- The patient's response to the procedure
- The condition of the IV site
- The types of fluids and medication infused through the catheter including the infusion rate, dose and diluent for all medications and additives
- If and why you applied an armboard
- Patient teaching
- If an incident does occur, complete an incident report, notify your supervisor and ask a physician to assess the patient.

Patients can be injured by venipuncture and they do sue their healthcare providers for those injuries. The prudent nurse is aware that documentation is the only permanent record of the event and inclusion of each detail above is necessary to ensure the safety of the patient and support of the nurse in the event of a complication.

Sources:

- Hadaway L. et al. "On the Road to Successful I.V. Starts." Nursing 2003, Vol. 35; supplement 1, May 2005
- Pfenninger P. "Don't Let Venipuncture Stick You with Litigation." Nursing Spectrum
- Intravenous Nurses Society. Infusion Nursing Standards. Journal of Intravenous Nursing. 23 (65); 1-88, November-December, 2000

<http://www.ins1.org>

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