TEXAS TECH UNIVERSITY
HEALTH SCIENCES CENTER™

Ambulatory Clinic Policy and Procedure

Title:	**Extravasation Management**	Policy Number:	**3.11**
		Version Number	**4**
Regulation Reference:	**The Joint Commission: PC.02.01.09; Current Nursing Skills Test**	Effective Date:	**7/2016**
		Original Approval:	**4/2002**

POLICY STATEMENT:

It is the policy of Texas Tech University Health Science Center (TTUHSC) Ambulatory Clinics, where applicable, to safely administer vesicant or irritant agents and to minimize damage to tissues secondary to infiltration of these agents.

SCOPE:

This policy applies to all TTUHSC Ambulatory clinics operated through its schools.

PROCEDURE:

1. **Definitions.**
   a. Vesicant Extravasation:
      1) Results when chemotherapeutic or any vesicant or irritant agents, capable of causing tissue necrosis, infiltrate from the vein into the subcutaneous tissue and cause progressive, severe tissue damage.
      2) Infiltration can result in pain, hyperpigmentation, induration, burning, inflammation, sloughing, necrosis, and ulcerations.
   b. Irritant:
      1) Any agent that causes pain and local inflammation, but not tissue necrosis, if infiltrated.
      2) May cause intravascular irritation or local skin reactions resulting in pain and chemical phlebitis when infused through intact veins.
   c. Flare Reaction: This is a venous inflammatory response with subsequent histamine release.
      1) Characterized by local edema, venous streaking, and pruritis along the vein, does not result in tissue damage.
      2) Incidence is usually about 3% and the duration of flare is usually less than 45 minutes.
2. **Risk Factors.**
   a. Fragile, small or sclerosed veins.
   b. Superior vena cava syndrome.
   c. Lymphedema.
   d. Previous surgical or irradiation areas.
   e. Peripheral neuropathy.
   f. Medications that produce somnolence or altered mental status.

g. Inability to cooperate with infusion (young or agitated patients).

h. Potential for sudden movements for uncontrolled emesis or urgency to void during hydration.

i. Recent venipuncture proximal to current site of drug administration.

j. Improper placement of CVC catheters.

k. Long infusions of vesicant drugs.

3. Prevention Strategies include:

a. Knowledge of patient-related risk factors.

b. Knowledge of drug-related risk factors.

c. Knowledge of peripheral intravenous lines.

1) Select optimal sites for venipunctures.

2) Use appropriate gauze angiocaths or butterfly infusion sets.

3) Avoid venipuncture sites distal to previous venipuncture sites.

4) Anchor needles securely.

5) Administer drugs over as brief a period time as is safely possible while constantly observing patient.

6) **Validate presence of blood return prior to and during infusion.**

7) **Never administer any chemotherapy peripherally if there is no blood return.**

d. Knowledge of Central Venous Access Devices.

1) Tunneled/Subcutaneous Catheters.

a) Examination of chest for signs of venous thrombosis.

b) Note any change in catheter length or appearance of catheter cuff below the exit site, which could indicate catheter displacement.

c) Inspect catheter for leaks, areas of wear, and tears.

d) Assess if ability to infuse has changed.

e) Validate presence of blood return prior to and during infusion.

f) **Any swelling and/or subjective complaints require withholding the infusion and notifying the attending physician.**

2) Implanted Ports.

a) Examine ipsilateral chest for signs of venous thrombosis.

b) Ensure proper and secure Huber needle placement in the port septum.

c) Assess if ability to infuse has changed.

d) Outpatients using ambulatory infusion devices should receive clear instructions regarding vesicant extravasation potential, and monitoring frequency should be established.

e) Confirm presence of a blood return.

f) Exercise caution when infusing vesicants into ports with known lack of blood return.

g) Confirmation of catheter placement and leakage should be established by x-ray and dye study prior to use if no blood return is obtained.

h) **Any swelling and/or subjective complaints require withholding the infusion and notifying the attending physician.**

4. Treatment Recommendations.

a. Peripheral Extravasation.

1) At the first signs of infiltration, stop administration of the vesicant and IV fluids.

2) **Leave the needle in place.**

3) Gently aspirate any residual drug and blood in intravenous tubing needle and suspected extravasation site: disconnect tubing or syringe. Note: If unable to aspirate residual drug from intravenous needle, remove needle.

4) Notify physician.

5) Open extravasation kit and administer the appropriate antidote, if known, and initiate the appropriate nursing-management measure.

6) Apply warm or cold compresses as indicated.

7) Instruct the patient to rest and elevate the site for 48-hours and then resume normal activity.

8) Assess the need for a plastic surgery consult.

9) Avoid pressure to the extravasation site.

10) Photograph the extravasation site.

11) Document the following in the patient record:

a) Patient's name, date, time.

b) Needle type and size.

c) Insertion site, location, and description.

d) Drug name, concentration and estimated volume extravasated.

e) Patient symptoms and nursing assessment.

f) Nursing interventions and patient response.

g) Physician notification.

h) Plastic surgery consultation/notification if indicated.

i) Follow-up instructions given to patient.

j) Date of return visit.

k) Nurse's signature.

l) Monitor site at 24-hours, one week, two weeks, and as necessary for pain, redness, swelling, ulceration, or necrosis. Follow-up with **<u>several</u>** photographs, if possible.

b. Central Venous Extravasation.

1) If the patient complains of changes in sensation, pain, burning, or swelling at the CVC site or in the ipsilateral chest or if change in the IV flow rate occurs, immediately discontinue chemotherapy and IV fluids.

2) Determine cause of extravasation if possible.

a) Accidental dislodgment of needle for port septum.

b) Thrombus formation/backtracking.

c) Catheter damage.

d) Catheter dislodgment/migration.

e) Consider checking:

(1) CXR for catheter location.

(2) Venogram through catheter.

(3) Monitoring for presence/absence of blood return.

(4) Ability to infuse may or may not change.

f) If extravasation has occurred or is suspected, also:

(1) Estimate amount of drug extravasated.

(2) Aspirate any remaining drug from catheter and infiltrated site.

(3) Apply cold compresses to affected area. (Apply warm compresses to plant alkaloid meds only).

g) Administer the appropriate antidote, if known, and initiate the appropriate nursing measures.

h) Follow-up instructions given to patient.

i) Date of return visit.

j) Nurse's signature.

3) Monitor site at 24-hours, one week, two weeks, and as necessary for pain, redness, swelling, ulceration, or necrosis. Follow-up with **<u>several</u>** photographs, if possible.

APPROVAL AUTHORITY:

This policy shall be recommended for approval by the Joint Ambulatory Policy Committee to the Council of Deans.

RESPONSIBILITY AND REVISIONS:

It is the responsibility of the Joint Ambulatory Policy Committee to review and initiate necessary revisions based on collaboration and input by and through Quality Improvement/Performance Improvement, Risk Management and the Office of Institutional Compliance.

RIGHT TO CHANGE POLICY:

TTUHSC reserves the right to interpret, change, modify, amend or rescind this policy in whole or in part at any time to reflect changes in policy and/or law.

CERTIFICATION:

This policy was approved by the Council of Deans on July 21, 2016.