



Management of Extravasation of Non-Chemotherapeutic Agents Adult/Pediatric- Inpatient/Ambulatory Consensus Care Model

For changes contact the Drug Policy Program

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Target Population: Adult and pediatric patients experiencing an extravasation event, i.e. the unintentional administration of a medication into the tissue surrounding the intended vascular channel. This summary addresses non-chemotherapeutic medications. See separate summary for management of chemotherapy extravasation.

Instructions for Management of Extravasation: Enter “Extravasation Management” into the search box in Lexicomp OR click the appropriate link depending on worksite:

[UW Health](#)

[Swedish American](#)

Guidance/Guideline Overview

The Lexicomp resource includes:

- Definitions
- Prevention tactics
- Steps for initial management
- Extravasation management for specific vesicant agents - including antidote and supportive management instruction
- Supportive management
- Detailed information on specific antidotes

Immediate Signs and Symptoms (not all signs and symptoms may be detected)

- Pain: burning, stinging, sensation of coolness, etc.
- Redness in area of administration site
- Swelling
- Loss of blood return from IV device
- Resistance during IV bolus
- Leaking around catheter or implanted port needle
- Temperature change in tissue surrounding infusion site

Supportive Management

- When specific guidance is not provided in Lexicomp or guidance is conflicting, follow recommendations below:

• Doxycycline	Apply dry cold compress ¹
• Erythromycin lactobionate	Apply dry cold compress ¹
• Phenobarbital	Apply moist heat compress ²
• Promethazine	Apply dry cold compress* ¹
• Verteporfin	Apply dry cold compress and protect area from light ³

*Because evidence is of low quality, resulting recommendations are weak; other alternatives may be equally reasonable.

Documentation
Recommended elements for documentation
<ul style="list-style-type: none"> • Date and time of occurrence
<ul style="list-style-type: none"> • Site of administration and condition of vein based on “touch, look, and feel assessment”; see https://uconnect.wisc.edu/clinical/references/infection-control/infection-control/hai/piv-complication-prevention/resources/name-143798-en.file
<ul style="list-style-type: none"> • Apparatus and method of administration
<ul style="list-style-type: none"> • Patient complaint and statements
<ul style="list-style-type: none"> • Extravasated medication
<ul style="list-style-type: none"> • Medications also administered in same time frame
<ul style="list-style-type: none"> • Treatments applied and/or administered including concentration and estimated volume extravasated
<ul style="list-style-type: none"> • Provider notification
<ul style="list-style-type: none"> • Completion of wound sheet
<ul style="list-style-type: none"> • Plan for follow up

Investigational Drug Instructions
<ul style="list-style-type: none"> • Vesicant potential may not be known during clinical trials. Known vesicants will be identified in the Health Link medication record. Vesicant precautions are required for investigational drugs which are known vesicants.
<ul style="list-style-type: none"> • Refer to the investigational drug monograph for additional information.
<ul style="list-style-type: none"> • Provider and study group must be notified of any extravasation involving investigational drugs

UW Health Resources
<ul style="list-style-type: none"> • Peripheral Intravenous (PIV) Bundle: https://uconnect.wisc.edu/clinical/references/infection-control/infection-control/hai/piv-complication-prevention/resources/name-145226-en.file
<ul style="list-style-type: none"> • UW Health Safety “What I Need to Know”: IV extravasation: https://uconnect.wisc.edu/clinical/patient-safety/patient-safety-program/safety-winks/resources/name-172719-en.file
<ul style="list-style-type: none"> • Healthcare Event Reporting Online (HERO): https://uconnect.wisc.edu/clinical/patient-safety/hero/

Selected General References
<ul style="list-style-type: none"> • Gorski et al. Infusion therapy standards of practice. <i>J Infus Nurs.</i> 2016.
<ul style="list-style-type: none"> • Gorski et al. Development of evidence based list of non-cytotoxic vesicant medications and solutions. <i>J Infus Nurs.</i> 2017.
<ul style="list-style-type: none"> • Reynolds et al. Management of extravasation injuries: focused evaluation of noncytotoxic medications. <i>Pharmacotherapy</i> 2014

Cited References
1. Hurst S, McMillan M. Innovative solutions in critical care units; extravasation guidelines. <i>Dimen Crit Care Nurs.</i> 2004;23(3):125.
2. Phenobarbital sodium [prescribing information]. West-Ward Pharmaceutical Corp.; Eatontown, NJ 2011.
3. Verteporfin (Visudyne®) [prescribing information]. Bausch and Lomb; Bridgewater, NJ. 2017.

Appendix A: Management of Extravasation: Chemotherapeutic and Non-chemotherapeutic Agents

Figure 1: Workflow algorithm

