AMITY HEALTHCARE GROUP

Wound irrigation, home care

Revised: February 17, 2022

Introduction

Wound irrigation involves directing a steady flow of an irrigation solution across an open wound to assist with visual examination, hydrate the wound, and remove debris and surface pathogens *to facilitate healing*.[1] Wound irrigation can be performed using a catheter-tip syringe with a 19G angiocatheter or a commercial wound irrigation device.[2] Irrigation pressure should be adequate to clean the surface of the wound without causing trauma to the wound bed; 5 to 15 psi (0.35 to 1.05 kg/cm^2) generally is considered safe and sufficient for cleaning an open wound.[1] [2] [3]

Equipment

- Fluid-impermeable pad
- Emesis basin
- Gloves
- Gown
- Mask with face shield or mask and goggles
- Wound irrigation solution (sterile normal saline solution or another prescribed irrigation solution)
- Irrigation container
- Wound irrigation device (35-mL catheter-tip syringe with 19G needle or angiocatheter or a commercial wound irrigation device)
- Gauze pads
- Dressing supplies
- Written educational materials
- Sealable waterproof trash bag
- Optional: prescribed pain medication, wound measurement device, puncture-resistant sharps container, protective skin barrier, prescribed topical wound treatments

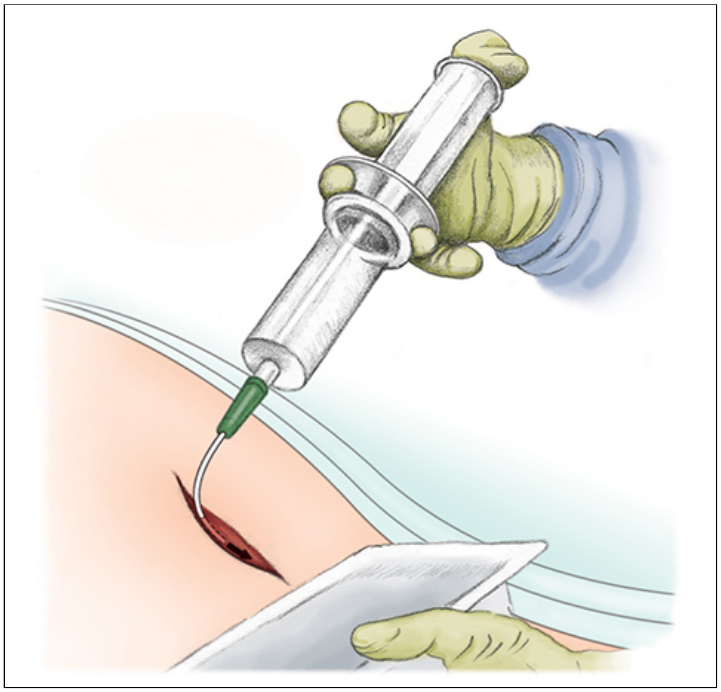
Preparation of Equipment

Inspect all equipment and supplies. If a product is expired, is defective, or has compromised integrity, remove it from patient use, label it as expired or defective, and report the expiration or defect as directed by your agency. Follow the manufacturer's recommendations and your agency's guidelines regarding the shelf life of solutions after they have been opened. Ensure that the irrigation solution is at room temperature or slightly warmer *to reduce pain associated with wound cleaning*.

Implementation

- Review referral information, plan of care, and prior home visit documentation, if available. Note the type of wound, prior assessment data, and past and current interventions used for the patient's wound and their effectiveness.[4]
- Verify the practitioner's order.[5] [6] [7] [8]
- Gather and prepare the necessary equipment and supplies.
- Introduce yourself, and state the purpose of your home visit.
- Confirm the patient's identity using at least two patient identifiers.[9]
- Ask the patient and family (if appropriate) about any recent changes in the patient's health status, including practitioner visits, tests, and changes in medications, diet, or activity level.[4]
- Perform hand hygiene.[10] [11] [12] [13] [14]
- Explain the procedure to the patient and family (if appropriate) according to their individual communication and learning needs *to increase their understanding, allay their fears, and enhance cooperation*.[15] [16] [17] [18]

- Screen for and assess the patient's pain using agency-defined criteria that are consistent with the patient's age, condition, and ability to understand.[19]
- Treat the patient's pain, as needed and ordered, using nonpharmacologic, pharmacologic, or a combination of approaches. Base the treatment plan on evidence-based practices and the patient's clinical condition, past medical history, and pain management goals.[19] *Because wound care can be painful*, ensure that the patient has premedicated with prescribed pain medication.[2] [20] If not, administer pain medication as needed and prescribed following safe medication administration practices,[21] and allow adequate time for the medication to take effect.
- Organize the equipment and supplies on a clean surface. Place a fluid-impermeable pad between the environment and the equipment and supplies, if necessary.[10] [22] Pour the wound irrigation solution into the irrigation container. Arrange the equipment and supplies according to the order of use *to avoid cross-contamination while performing wound care*.[23]
- Place a sealable waterproof trash bag within reach *to discard soiled dressings*.
- Perform hand hygiene.[10] [11] [12] [13] [14]
- Put on gloves, a gown, and a mask with face shield or mask and goggles, as needed, *to comply with standard precautions because splashing may occur during pressurized irrigation*.[10] [24] [25] [26] [27]
- Assist the patient to a position that maximizes comfort while allowing easy access to the wound. Expose only the wound and surrounding area t*o maintain the patient's warmth and privacy*.[28]
- Place a fluid-impermeable pad under the wound *to prevent soiling*.
- Instruct the patient to call a time-out if the pain becomes intolerable *to halt wound irrigation temporarily*.
- Remove the existing dressing carefully by pulling it gently on a horizontal plane away from the patient's skin while stabilizing the skin simultaneously *to avoid trauma to the patient's skin*.[29] If necessary, loosen the existing dressing using a small amount of sterile normal saline solution *to decrease the pain of dressing removal and trauma to the patient's skin and wound*.
- Inspect the soiled dressing, noting the type and amount of drainage.[20]
- Discard the soiled dressing in the sealable waterproof trash bag.[26]
- Assess the wound, wound edges, and surrounding tissue. Note the wound's type, anatomic location, shape, size, and color, as well as the presence of necrotic tissue (eschar or slough), odor, and moisture. As appropriate, measure the wound using a disposable wound measurement device *to determine whether the wound is improving, worsening, or remaining stable*.[2] [20] (See the "Wound assessment, home care" procedure.)
- Remove and discard your soiled gloves.[26]
- Perform hand hygiene.[10] [11] [12] [13] [14]
- Put on new gloves.[24] [25] [26] [27]
- Place an emesis basin below the wound *so that the irrigation solution flows from the wound into the basin and drains from the clean to the dirty area of the wound*.
- Fill a syringe or commercial wound irrigation device with sterile normal saline solution or another prescribed wound irrigation solution. If you're using a 35-mL catheter-tip syringe and 19G needle or angiocatheter, attach the needle or angiocatheter to the syringe.[2]
- Irrigate the wound with the wound irrigation solution (shown below). Hold the wound irrigation device just above the wound edge, apply sufficient irrigation pressure to clean the wound without damaging tissue, and direct the flow from the clean to the dirty area of the wound *to prevent contamination of clean tissue by the exudate*. Ensure that the irrigation solution reaches all areas of the wound and the surrounding skin.



- Refill the wound irrigation device with the wound irrigation solution and repeat the wound irrigation process as needed, continuing to irrigate the wound until you've administered the prescribed amount of irrigation solution or until the solution returns clear. Note the amount of irrigation solution administered.
- Discard the syringe (if used) in a puncture-resistant sharps container.[30]
- Maintain the patient's position until all the wound irrigation solution drains into the emesis basin.
- Pat the wound dry with a gauze pad; discard the used gauze pad in the sealable waterproof trash bag.[26]
- Apply a protective skin barrier as needed and ordered, and allow it to dry completely *to prevent skin breakdown and infection*.[20]
- Apply topical wound treatments as prescribed.
- Redress the wound as ordered. (See the "Wound dressing application, home care" procedure.)
- Seal the waterproof trash bag, and discard used supplies and the used wound irrigation solution in appropriate receptacles.[25][26][31][32] (See the "Visit-generated waste disposal, home care" procedure.)
- Remove and discard your gloves and other personal protective equipment.[26]
- Perform hand hygiene.[10][11][12][13][14]
- Reassess and respond to the patient's pain by evaluating the response to treatment and progress toward pain management goals. Assess for adverse reactions and risk factors for adverse events that may result from treatment.[19]
- Review progress toward the goals in the patient's plan of care with the patient and family as appropriate.[4][33]
- Make arrangements for the next home visit as appropriate, and ensure that the patient and family have adequate supplies for self-care until then.
- Provide and review written educational materials, the home visit schedule, and contact information should concerns arise between home visits.[34][35][36][37]
- Report changes in the patient's condition and any progress made toward goals to the practitioner as appropriate.[38][39][40][41]
- Coordinate care with other services (such as a wound, ostomy, and continence nurse) as appropriate.[42][43][44][45]
- Document the procedure.[46][47][48][49]

Special Considerations

- Sterile normal saline solution most commonly is used to irrigate wounds because it's isotonic and nontoxic and, therefore, doesn't cause tissue damage. However, potable tap water can be used as an alternative

because of its low cost and availability in the home care setting and because it isn't associated with increased infection rates or delayed healing. If potable tap water isn't available, boiled and cooled tap water or distilled water can be used instead.[23] [50] [51] [52] Other less commonly used wound irrigation solutions include detergent-based commercial wound cleansers and antiseptic solutions, such as povidone-iodine, hydrogen peroxide, and sodium hypochlorite.[2]

- Sterile technique may be required to irrigate and perform other wound care in select clinical situations, such as for patients with surgical wounds that have dehisced or for patients at increased risk for infection.[23]
- Never substitute a skin cleanser for a wound cleanser; *skin cleansers may be toxic to the wound tissue.*

Patient Teaching

Teach the patient and family about the normal healing process. Discuss the causes of wounds, as well as the strategies used to manage them, including pain management, skin care, repositioning, and adequate nutrition and hydration. If the patient or family will be performing wound irrigation and other wound care independently, have them perform a return demonstration or teach-back as appropriate. Instruct the patient and family to notify the practitioner if wound symptoms (such as pain, drainage, or odor) worsen despite treatment or if signs of a systemic infection (such as fever and chills) develop.[53]

Complications

Wound irrigation may cause excoriation and increased pain. Poor technique may increase the risk of infection. Irrigation pressure over 15 psi may cause trauma to the patient's wound and may direct pathogens back into the tissue.[2]

Documentation

Record the date and time of wound irrigation. Document your assessment of the wound before and after the procedure. Also, document the patient's pain assessments, tolerance of the procedure, and any interventions implemented, including medications administered. Record the amount and type of wound irrigation solution used, any skin care performed around the wound, and the dressing applied. If you contacted the practitioner, record the name of the practitioner, the date and time of notification, and the information conveyed, as well as any information received. Document teaching provided to the patient and family (if applicable), their understanding of the teaching, and any need for follow-up teaching.

This procedure has been co-developed and reviewed by the National Association for Home Care & Hospice.

HOMECARE & HOSPICE
National Association for Home Care & Hospice

References

(Rating System for the Hierarchy of Evidence for Intervention/Treatment Questions)

1. Mak, S. S., et al. (2015). Pressurised irrigation versus swabbing method in cleansing wounds healed by secondary intention: A randomised controlled trial with cost-effectiveness analysis. *International Journal of Nursing Studies, 52*(1), 88–101. Retrieved January 2022 from https://doi.org/10.1016/j.ijnurstu.2014.08.005 (Level II)
   Abstract | Complete Reference
2. Baranoski, S., & Ayello, E. A. (2020). *Wound care essentials: Practice principles* (5th ed.). Wolters Kluwer.
3. Wound, Ostomy, and Continence Nurses Society™ (WOCN®). (2016). *Guideline for prevention and management of pressure ulcers (injuries): WOCN clinical practice guideline series 2*.
4. Community Health Accreditation Partner. (2018, updated 2019). Standard APC.7.I.M1. *Home health standards of excellence*. (Level VII)
5. Accreditation Commission for Health Care (ACHC). (2021). Standard HH5-3B. *ACHC accreditation standards*. (Level VII)
6. Community Health Accreditation Partner. (2018, updated 2019). Standard CDT.4.I.M1. *Home health standards of excellence*. (Level VII)

7. Centers for Medicare and Medicaid Services. (2020). Condition of participation: Care planning, coordination of services, and quality of care. 42 C.F.R. § 484.60(b)(1).
8. The Joint Commission. (2022). Standard PC.02.01.03. *Comprehensive accreditation manual for home care*. (Level VII)
9. The Joint Commission. (2022). Standard NPSG.01.01.01. *Comprehensive accreditation manual for home care*. (Level VII)
10. Accreditation Commission for Health Care (ACHC). (2021). Standard HH7-1A. *ACHC accreditation standards*. (Level VII)
11. Centers for Disease Control and Prevention. (2002). Guideline for hand hygiene in health-care settings: Recommendations of the Healthcare Infection Control Practices Advisory Committee and the HICPAC/SHEA/APIC/IDSA Hand Hygiene Task Force. *MMWR Recommendations and Reports, 51*(RR-16), 1–45. Retrieved January 2022 from https://www.cdc.gov/mmwr/pdf/rr/rr5116.pdf (Level II)
12. Community Health Accreditation Partner. (2018, updated 2019). Standard IPC.3.I.M1. *Home health standards of excellence*. (Level VII)
13. The Joint Commission. (2022). Standard NPSG.07.01.01. *Comprehensive accreditation manual for home care*. (Level VII)
14. World Health Organization (WHO). (2009). *WHO guidelines on hand hygiene in health care: First global patient safety challenge, clean care is safer care*. Retrieved January 2022 from https://apps.who.int/iris/bitstream/handle/10665/44102/9789241597906_eng.pdf (Level IV)
15. Accreditation Commission for Health Care (ACHC). (2021). Standard HH2-8A. *ACHC accreditation standards*. (Level VII)
16. Community Health Accreditation Partner. (2018, updated 2019). Standard APC.8.I.M1. *Home health standards of excellence*. (Level VII)
17. Centers for Medicare and Medicaid Services. (2020). Condition of participation: Patient rights. 42 C.F.R. § 484.50(f).
18. The Joint Commission. (2022). Standard RI.01.01.03. *Comprehensive accreditation manual for home care*. (Level VII)
19. The Joint Commission. (2022). Standard PC.01.02.07. *Comprehensive accreditation manual for home care*. (Level VII)
20. Craven, R. F., et al. (2021). *Fundamentals of nursing: Concepts and competencies for practice* (9th ed.). Wolters Kluwer.
21. The Joint Commission. (2022). Standard MM.06.01.01. *Comprehensive accreditation manual for home care*. (Level VII)
22. Community Health Accreditation Partner. (2018, updated 2019). Standard IPC.6.I.M1. *Home health standards of excellence*. (Level VII)
23. Wound, Ostomy, and Continence Nurses Society™ (WOCN®). (2012). Clean vs. sterile dressing techniques for management of chronic wounds: A fact sheet. *Journal of Wound, Ostomy and Continence Nursing, 39*(Suppl. 2), S30–S34. Retrieved January 2022 from https://doi.org/10.1097/WON.0b013e3182478e06 (Level VII)
24. Community Health Accreditation Partner. (2018, updated 2019). Standard IPC.1.I.M1. *Home health standards of excellence*. (Level VII)
25. The Joint Commission. (2022). Standard IC.02.01.01. *Comprehensive accreditation manual for home care*. (Level VII)
26. Occupational Safety and Health Administration. (2012). *Bloodborne pathogens, standard number 1910.1030*. Retrieved January 2022 from https://www.osha.gov/laws-regs/regulations/standardnumber/1910/1910.1030 (Level VII)
27. Siegel, J. D., et al. (2007, revised 2019). *2007 guideline for isolation precautions: Preventing transmission of infectious agents in healthcare settings*. Retrieved January 2022 from https://www.cdc.gov/infectioncontrol/pdf/guidelines/isolation-guidelines-H.pdf (Level II)
28. The Joint Commission. (2022). Standard RI.01.01.01. *Comprehensive accreditation manual for home care.* (Level VII)
29. Taroc, A. (2017). A guide for adhesive removal: Principles, practice, and products. Combining skill and knowledge ensures safe removal. *American Nurse Today, 12*(10), 24–26. Retrieved January 2022 from https://www.myamericannurse.com/adhesive-removal/

30. American Nurses Association and U.S. Food and Drug Administration. (n.d.). *Safe disposal of medications and sharps in the home setting.* Retrieved January 2022 from Accessed January 2021 via the Web at https://www.nursingworld.org/~4af37c/globalassets/practiceandpolicy/work-environment/health--safety/safe_disposal_at_home_082312-2.pdf

31. Accreditation Commission for Health Care (ACHC). (2021). Standard HH7-6B.01. *ACHC accreditation standards*. (Level VII)

32. Community Health Accreditation Partner. (2018, updated 2019). Standard IPC.6.I.M2. *Home health standards of excellence*. (Level VII)

33. Accreditation Commission for Health Care (ACHC). (2021). Standard HH5-3A. *ACHC accreditation standards*. (Level VII)

34. Accreditation Commission for Health Care (ACHC). (2021). Standard HH5-3C. *ACHC accreditation standards*. (Level VII)

35. Community Health Accreditation Partner. (2018, updated 2019). Standard APC.8.I.M3. *Home health standards of excellence*. (Level VII)

36. Centers for Medicare and Medicaid Services. (2020). Condition of participation: Care planning, coordination of services, and quality of care. 42 C.F.R. § 484.60(e).

37. The Joint Commission. (2022). Standard PC.02.03.01. *Comprehensive accreditation manual for home care*. (Level VII)

38. Accreditation Commission for Health Care (ACHC). (2021). Standard HH5-8B. *ACHC accreditation standards*. (Level VII)

39. Community Health Accreditation Partner. (2018, updated 2019). Standard APC.9.I.M3. *Home health standards of excellence*. (Level VII)

40. Centers for Medicare and Medicaid Services. (2020). Condition of participation: Care planning, coordination of services, and quality of care. 42 C.F.R. § 484.60(c)(1).

41. The Joint Commission. (2022). Standard PC.02.01.05. *Comprehensive accreditation manual for home care*. (Level VII)

42. Accreditation Commission for Health Care (ACHC). (2021). Standard HH5-4A. *ACHC accreditation standards*. (Level VII)

43. Community Health Accreditation Partner. (2018, updated 2019). Standard APC.9.I.M4. *Home health standards of excellence*. (Level VII)

44. Centers for Medicare and Medicaid Services. (2020). Condition of participation: Care planning, coordination of services, and quality of care. 42 C.F.R. § 484.60(d)(3).

45. The Joint Commission. (2022). Standard PC.02.02.01. *Comprehensive accreditation manual for home care*. (Level VII)

46. Accreditation Commission for Health Care (ACHC). (2021). Standard HH5-1A. *ACHC accreditation standards*. (Level VII)

47. Community Health Accreditation Partner. (2018, updated 2019). Standard IM.7.I.M1. *Home health standards of excellence*. (Level VII)

48. Centers for Medicare and Medicaid Services. (2020). Condition of participation: Clinical records. 42 C.F.R. § 484.110(a).

49. The Joint Commission. (2022). Standard RC.01.03.01. *Comprehensive accreditation manual for home care*. (Level VII)

50. Fernandez, R., & Griffiths, R. (2012). Water for wound cleansing. *Cochrane Database of Systematic Reviews. (Level I)*

51. Queirós, P., et al. (2014). The effectiveness of cleansing solutions for wound treatment: A systematic review. *JBI Database of Systematic Reviews & Implementation Reports, 12*(10), 121–151. Retrieved January 2022 from https://doi.org/10.11124/jbisrir-2014-1746 (Level V)

52. Resende, M. M., et al. (2016). Tap water versus sterile saline solution in the colonisation of skin wounds. *International Wound Journal, 13*(4), 526–530. Retrieved January 2022 from https://doi.org/10.1111/iwj.12470 (Level VI)
Abstract | Complete Reference

53. Kirkland-Kyhn, H., et al. (2018). Teaching wound care to family caregivers. *American Journal of Nursing, 118*(3), 63–67. Retrieved January 2022 from https://nursing.ceconnection.com/ovidfiles/00000446-201803000-00029.pdf

Additional References

- Centers for Medicare and Medicaid Services. (2019). *Outcome and assessment information set OASIS-D guidance manual*. Retrieved January 2022 from https://www.cms.gov/Medicare/Quality-Initiatives-Patient-Assessment-Instruments/HomeHealthQualityInits/Downloads/OASIS-D-Guidance-Manual-final.pdf

Rating System for the Hierarchy of Evidence for Intervention/Treatment Questions

The following leveling system is from *Evidence-Based Practice in Nursing and Healthcare: A Guide to Best Practice* (2nd ed.) by Bernadette Mazurek Melnyk and Ellen Fineout-Overholt.

Level I:	Evidence from a systematic review or meta-analysis of all relevant randomized controlled trials (RCTs)
Level II:	Evidence obtained from well-designed RCTs
Level III:	Evidence obtained from well-designed controlled trials without randomization
Level IV:	Evidence from well-designed case-control and cohort studies
Level V:	Evidence from systematic reviews of descriptive and qualitative studies
Level VI:	Evidence from single descriptive or qualitative studies
Level VII:	Evidence from the opinion of authorities and/or reports of expert committees

Modified from Guyatt, G. & Rennie, D. (2002). Users' Guides to the Medical Literature. Chicago, IL: American Medical Association; Harris, R.P., Hefland, M., Woolf, S.H., Lohr, K.N., Mulrow, C.D., Teutsch, S.M., et al. (2001). Current Methods of the U.S. Preventive Services Task Force: A Review of the Process. American Journal of Preventive Medicine, 20, 21-35.