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**TITLE:                   OUTPATIENT PARENTERAL THERAPY**

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**APPLICABILITY:**   All sites and facilities delivering outpatient parenteral therapy in outpatient centres, emergency departments and client homes.

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**RELATED POLICIES:**   1-16-1-090: [First Dose Home IV Antibiotic Therapy](#)  
1-17-2-1-010: [Initiation and Use of Vascular Access Devices](#)  
1-20-6-4-090: [Medication Adaptation](#)  
1-20-6-1-100: [Pharmacist Managed Pharmacokinetic Monitoring and Dosing of Vancomycin and Aminoglycosides](#)

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**DEFINITIONS:**       [Refer to definitions at end of document](#)

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**COMPETENCY REQUIREMENTS:**   All nurses must complete required education and competencies to administer intravenous medications ([see Appendix A](#))

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**DOCUMENT QUICK LINKS**

- [Regional Orders Set: IV Therapy for Outpatients and Home IV](#) (10-111-5051)
- [Antibiotics Parenteral Therapy Flowsheet](#) (10-130-5001)
- [The ABC's of Central Line Care](#) (10-000-6235)
- [Peripherally Inserted Central Catheter \(PICC\) orders](#) (10-111-5116)
- [Vascular Access Device \(VAD\) Assessment & Maintenance Record](#) (10-000-5068)
- Patient Brochures:
  - [Outpatient IV Patient Information Brochure](#) (10-023-6006)
  - [Managing Your Home IV \(CADD Pump\)](#) (10-023-6007)
  - [Managing Your Home IV \(PICC Line\)](#) (10-023-6008)
  - [Managing Your Home IV \(Docking Medication to Mini Bag\)](#) (10-023-6009)
  - [Managing Your Home IV \(Infusion Device\)](#) (10-023-6010)

**KEY POINTS**

- This clinical practice standard supports the standardization of the delivery and management of outpatient parenteral therapy (OPT) in outpatient centres, emergency departments and client homes across Northern Health.
- The objective of outpatient parenteral therapy is to facilitate the discharge or prevent admission to an acute care facility of a select group of appropriate clients. Outpatient

and Home IV administration could potentially decrease barriers to care for clients and families, including those self-identifying as Indigenous (e.g. First Nations (including status and non-status), Inuit, or Metis).

- The principal advantages of outpatient parenteral therapy relative to inpatient therapy include enhanced patient quality of life, reallocation of hospital resources for patients of a higher acuity status, and prevention of nosocomial infections.
- This clinical practice standard is derived from published standards of practice for outpatient parenteral therapy, which with adherence to published standards, is as safe and effective as inpatient care. Deviation from such standards may increase the risk of adverse reactions, (re)admission to hospital, and/or mortality.

## **POLICY STATEMENT (ALL STAFF MUST COMPLY)**

Any facility or community supported by the Northern Health authority shall abide by the recommendations within this clinical practice standard both for selection of appropriate clients for this service as well as for standardized operation and provision of IV medications and infusions in the outpatient setting.

A Northern Health hospital pharmacy may dispense formulary parenteral medications if a patient requires the drug parenterally and meets the eligibility criteria outlined below. Oral ancillary medications will not be dispensed (with exception of probenecid). All medications will be entered onto pharmanet by pharmacy staff. The medications may be administered at home or in the emergency department or an outpatient department. The cost of medications will not be billed directly to the client [unless they do not have BC Medical Services Plan (MSP) coverage and services are not otherwise covered by a third party service (e.g. WCB)].

All infusions administered via continuous ambulatory drug delivery (CADD) pump or elastomeric infuser bottle, must be through a central line (i.e., peripherally inserted central catheter (PICC) line). Do not administer through peripheral lines.

## **CLINICAL PRACTICE STANDARD (ALWAYS USE PROFESSIONAL JUDGMENT AND DOCUMENT ANY DEVIATION FROM THE STANDARD)**

### **Client Evaluation and Selection**

- For each client, complete the [Community IV Eligibility Screen and Referral Process](#) (10-510-5022)
- Eligibility criteria includes, but is not limited to:
  - Client's infectious process/clinical status is appropriate for outpatient antimicrobial management, such as:
    - Cellulitis
    - Diabetic foot infection
    - Osteomyelitis

- Septic arthritis or bursitis
- Prosthetic joint infection
- Endocarditis (continuation of therapy initiated as inpatient)
- Other skin and soft tissue infections
- **Note:** Clients with pneumonia requiring IV antibiotics are **not suitable** for outpatient management due to the potential for rapid deterioration and need for close monitoring until improved enough for oral therapy
- **Note:** All CADD pumps and elastomeric infuser bottles require a PICC line to prevent the possibility of adverse interstitial administration of medications. Despite CADD pumps being equipped with pressure sensors, there is risk of a large volume of medication being delivered interstitially before the pump or patient notices.
- Client is enrolled with the BC MSP or have coverage for cost of service through third party billing services (e.g., WCB, ICBC)
- Parenteral medication ordered is within the Northern Health pharmacy service criteria and is available in the client's community (see **Antimicrobial Selection and Administration**)
- Client would otherwise be admitted to the hospital to receive therapy.
- The care needs of the client are otherwise able to be managed safely and effectively in an outpatient setting.
- Perform a thorough assessment of clients and caregivers prior to initiation of outpatient parenteral therapy. Client or their caregivers should:
  - Be able to assume responsibility for the care of the Peripherally Inserted Central Catheter (PICC) or other vascular access device (VAD), and the care of the catheter infusion site.
  - Be able to safeguard loaned programmable infusion pump
  - Be able to recognize and report new problems (e.g., adverse reactions, worsening signs of infections, infusion site infection) to the healthcare team.
  - Have mechanisms for rapid and reliable communication between the client and/or caregiver and the outpatient parenteral therapy team.
- Ensure clients and caregivers are fully informed about the nature of, and the risks and benefits associated with outpatient parenteral therapy by providing relevant patient information booklets ([see document quick links](#)).

### Key Elements of an Outpatient Parenteral Therapy Program

- Outpatient parenteral therapy interdisciplinary teams should include, at a minimum:
  - A most responsible prescriber (MRP) that follows the patient throughout their entire course of therapy

- A nurse
- Access to a hospital pharmacist
- Access to an infectious diseases physician for potential consultation if patient being ordered an antimicrobial
- Access to social workers, physical therapists, dietitians, and occupational therapists, if available, when required.
- Provision of therapies and IV supplies as per the *Hospital Insurance Act*
- Creation of contingency plans for sites without seven day a week services (e.g. nursing and pharmacy)
- Outpatient parenteral therapy programs should have documented agreements that outline the responsibilities of the team members. For example:
  - Prescriber:
    - Assists with client and/or caregiver suitability assessment ([Community IV Eligibility Screen and Referral Process](#) (10-510-5022))
    - Reviews client and devises a treatment plan
    - Orders scheduled bloodwork as required
    - Approves changes in treatment orders
    - Intermittently assesses patient throughout treatment for both clinical response and adverse reactions
    - Reviews client at conclusion of therapy for adequate resolution of infection
    - Determines appropriate vascular access device in collaboration with nurse
    - Inserts PICC line if specialized PICC certified nurse not available
  - Nurse (as per scope of practice)
    - Assesses client and/or caregiver suitability [refer to [Community IV Eligibility Screen and Referral Process](#) (10-510-5022)]
    - Assesses client throughout treatment for both clinical response and adverse reactions
    - Inserts PICC line if nurse has received appropriate certification
    - Determines appropriate vascular access device in collaboration with prescriber
  - Pharmacist
    - Assesses appropriateness of parenteral therapy
    - Makes necessary changes to therapy as per [Pharmacist Medication Adaptation Policy](#), or recommend changes to MRP
    - Orders scheduled bloodwork as required for monitoring of response to medication

- Assumes responsibility of aminoglycoside and vancomycin dosing as per [Pharmacist Managed Pharmacokinetic Monitoring and Dosing clinical practice standard](#)
- Assesses ability of the treatment site to supply the medication; considerations if the product requires compounding by another site pharmacy for pick-up/dispensing
- Outpatient parenteral therapy programs need systems for communication between prescribers, nurses, pharmacists, and clients/caregivers.
  - All team members should have access to the documented care plan.
  - Regularly communicate the care plan to the clients and/or caregivers.
  - Also communicate the care plan and documentation on administration of therapy to the client's family practice physician if different from the most responsible prescriber.
- Provide client and caregiver education materials. This includes, but is not limited to:
  - Specific information about the care team, a list of emergency access telephone numbers, information regarding precautions and risks of outpatient parenteral therapy (see patient information handouts in [document quick links](#))
  - General information about [parenteral antimicrobial therapy](#)
  - PICC or other VAD care
  - Infusion pump device operation and trouble-shooting
- All outpatient parenteral therapy team members use a clear, multidisciplinary, standardized tool (i.e., [Parenteral Therapy Flowsheet](#) (10-130-5001) which is available and accessible to all team members.

### **Antimicrobial Selection and Administration**

- The most responsible prescriber is accountable for the treatment plan, which includes choice and dose of antimicrobial agent, frequency of administration, and duration of therapy. Where appropriate, the most responsible prescriber should also take into account flexibility based on clinical response.
- Use [Regional Order Set: IV Antimicrobial Therapy for Outpatient Home IV](#) for all outpatient parenteral antimicrobial therapy orders. Any orders for outpatient parenteral therapy not included on this regional order set should be on the Northern Health Authority formulary and can be included in the additional orders section of the above order set or be written on a separate physician order page. All orders should include documentation of the indication, including suspected/confirmed infection source for antimicrobial orders.
- Send all orders to responsible pharmacy (regardless of need for supply) so that antimicrobial choice is subject to review by a pharmacist.

- The outpatient parenteral therapy team is responsible for the choice of IV access for each client. Considerations include, but are not limited to :
  - Client's overall clinical status, age, and vein condition
  - Diagnosis
  - Current vascular access
  - Medications prescribed and duration of therapy
  - Need for a programmable infusion pump
- Consideration of a PICC line to be individualized for each client. Factors to consider include, but are not limited to:
  - Choice of medication
  - Anticipated duration of therapy
  - Potential transfer to home IV therapy
  - Client tolerability of peripheral IV access
  - Client infection risk
  - IV substance use disorder: weigh risks versus benefits; if central line access given, provide client with instructions for safe access to mitigate risk of infection and document patient understanding/consent.
- For assistance with PICC line assessments and monitoring please contact the IV therapy department at **UHNBC 250-565-2592** (hours of service 0730 to 1630, seven days a week including stat holidays)
- Selection of antimicrobial therapy includes consideration for the following:
  - Infectious source (suspected or confirmed) and microbiological susceptibilities when available
  - Dosing frequency – agents should only be chosen if can be provided with once daily dosing or via an infusion pump/elastomeric bottle if multiple doses per day required and pharmacy able to compound
    - For sites without capacity for on-site pharmacy non-hazardous compounding ensure ability to have product shipped from another site/community within the beyond use dating (i.e. expiry) of the medication
  - Site/community's ability to provide timely monitoring of therapeutic drug levels if required.
  - If the selected agent has an equivalent oral form of high bioequivalence and the patient is able to tolerate and absorb oral medications, the IV agent will be **excluded** from provision in the outpatient setting. These include but are not limited to:
    - Metronidazole
    - Fluoroquinolones (ciprofloxacin, levofloxacin, moxifloxacin)

- Clindamycin
- Azithromycin
- Fluconazole
- Linezolid
- Medications may be returned to stock if they have not left the hospital (i.e. have not gone to patient's home or off site clinic).
- A nurse will document all administered doses of parenteral antimicrobial therapy on the [Parenteral Therapy Flowsheet](#), which is available and accessible to all members of the outpatient parenteral therapy team.
- A pharmacy team member will ensure all courses of outpatient parenteral therapy are recorded within Northern Health outpatient pharmacy software that uploads outpatient prescription details to PharmaNet (e.g., WinRx or equivalent)

### Monitoring Clinical and Laboratory Aspects

- Determine the frequency of reassessment by the most responsible prescriber and other outpatient parenteral therapy care team members at the outset of a client's course of therapy.
  - Document reassessment schedule on the client care plan.
- Perform blood tests at a frequency appropriate for the antimicrobial agent used. Blood tests for common outpatient parenteral antimicrobial therapy antimicrobials are located on the [Regional Orders Set IV Antimicrobial Therapy for Outpatient Home IV](#) (10-111-5051).
- Most responsible prescriber should assess the client after the completion of therapy to ensure clinical resolution and absence of adverse reactions.

### DOCUMENTATION

- Client's treatment plan including initial prescriber assessment, active orders, nursing assessments, prescriber reassessments and recent interventions are required to follow standardized procedures for inpatient care and be maintained within a client chart both electronic and paper in-home/clinic chart that is accessible to all members of the care team and available at all transitions of care.
- Clinical pharmacist assessment and recommendations for optimization and monitoring of therapy should be documented in SOAP (Subjective, Objective, Assessment, Plan) note format within the shared client chart
- Use standardized forms [e.g., [Parenteral Therapy Flowsheet](#) (10-130-5001)] to document client progress.

### DEFINITIONS

**Antimicrobials** – refers to antibiotics, antifungals and antivirals

**Most responsible prescriber (MRP)** – refers to the physician, nurse practitioner, or team that is overseeing the patient’s antimicrobial therapy

**Nurse** – any person licensed or registered by a nursing regulatory body with a professional designation of Registered Nurse (RN), Registered Psychiatric Nurse (RPN), Licensed Practical Nurse (LPN)

**Outpatient Parenteral Therapy (OPT)** - provision of parenteral therapy including antimicrobials in at least 2 doses on different days without intervening hospitalization.

**Outpatient Parenteral Therapy Team (OPT team)** - All members of the health care team involved in the delivery of OPT at a site/in a community. This does not have to be a formal, structured “team”.

**Peripherally Inserted Central Catheter (PICC)** - a catheter that is commonly used when venous access is required for greater than one week, if the client is having difficulty maintaining peripheral IV access or when the medication or solution is contraindicated for peripheral IV access.

**Prescriber** – any person working within a professional designation that is authorized to prescribe medications to clients (i.e. Physician, Nurse Practitioner, Registered Midwife, Dentist)

**Vascular Access Device (VAD)** - a catheter, cannula, or infusion port, which may be designed for, repeated access to the vascular system

## APPENDIX A

### Nursing Scope of Practices

Registered Nurses (RNs), Registered Psychiatric Nurses (RPNs) and Licensed Practical Nurses (LPNs) with an order, may insert and administer medication via peripheral vascular access devices, upon completion of [NHA-CL-Community IV Therapy CAPE Tool](#) (LearningHub course #24568).

RNs may with an order and with additional education insert midline and central venous catheters. **It is out of scope for an RPN or LPN to insert a midline or central catheter.**

RNs and RPNs may administer, with an order medication via peripheral and midline venous access devices, upon the completion of the Northern Health IV therapy education. **It is out of Scope for an LPN to administer medication via midline venous access device**

RNs may administer with an order medication via central venous access devices upon completing additional education. Currently within Northern Health, RPNs are not authorized to administer medication via central line – the necessary education is being reviewed and may be available in the future. **It is out of scope for LPNs to administer medication via central venous access devices. Note: it is also out of scope for LPNs to change dressings on central venous access devices or central venous lines.**



<b>Nursing Activity</b>	<b>BCCNM/NH Limits and Conditions for RNs</b>	<b>BCCNM/NH Limits and Conditions for RPNs</b>	<b>BCCNM/NH Limits and Conditions for LPNs</b>
Autonomous Nursing Practice: Diagnosing and Treating Conditions	Entry to practice skill	Entry to practice skill	Required completion of LearningHub module: <a href="#">Autonomous Practice: Diagnosing and Treating Conditions</a> (#18699)
Anaphylaxis Initial Emergency Treatment by Nurses (Adult & Pediatric)	Entry to practice skill	Required completion of LearningHub module: <a href="#">Anaphylaxis Initial Emergency Treatment</a> (#19708)	Required completion of LearningHub module: <a href="#">Anaphylaxis Initial Emergency Treatment</a> (#19708)
Safe Medication Administration Standards	Entry to practice level	Entry to practice level	Entry to practice level
Insert Venous Access Device (Peripheral- PVAD)	Entry to practice skill	Has achieved competency through employer and does not require an order	Has achieved competency through employer and does not require an order
Insert Venous Access Device Midline Catheters (PICC)	Has achieved competency through employer and requires an order	Out of scope	Out of Scope
Insert Venous Access Device (Central- CVAD)	Has achieved competency through employer and requires an order	Out of Scope	Out of Scope
Venipuncture Phlebotomy for Blood collection	Has achieved competency through employer and does not require an order	Has achieved competency through employer and does not require an order	Has achieved competency through employer, only on clients 14 years and older and requires an order
IV Medication Administration via peripheral venous access device	Entry to practice skill	Entry to practice skill	Has achieved competency through employer and requires an order
IV Medication Administration via Central Access Device	Entry to practice skill	Entry to practice skill	Out of Scope
IV Fluids (with or without Potassium)	Entry to practice skill	Entry to practice skill	Has achieved competency through employer and requires an order
Administer IV Push Medication	Entry to practice skill	Entry to practice skill	Out of Scope
Blood Sampling from Vascular Access Devices	Has achieved competency and does not require an order	Out of Scope	Out of Scope

*(Update any changes to this table in First Dose Home IV Antibiotic clinical practice standard and Community IV Program Guiding Principles)*

## REFERENCES

1. Chapman, A. L. N., Seaton, R. A., Cooper, M. A., Hedderwick, S., Goodall, V., Reed, C., ... BSAC/BIA OPAT Project Good Practice Recommendations Working Group. (2012). Good practice recommendations for outpatient parenteral antimicrobial therapy (OPAT) in adults in the UK: a consensus statement. *The Journal of Antimicrobial Chemotherapy*, 67(5), 1053–1062. <http://doi.org/10.1093/jac/dks003>
2. Dargan, S., Zvonar, R. K., & Saginur, R. (2007). A Review of Outpatient Parenteral Antimicrobial Therapy Practices and Experience at The Ottawa Hospital. *ResearchGate*, 60(60). Retrieved from [https://www.researchgate.net/publication/228657641\\_A\\_Review\\_of\\_Outpatient\\_Parenteral\\_Antimicrobial\\_Therapy\\_Practices\\_and\\_Experience\\_at\\_The\\_Ottawa\\_Hospital](https://www.researchgate.net/publication/228657641_A_Review_of_Outpatient_Parenteral_Antimicrobial_Therapy_Practices_and_Experience_at_The_Ottawa_Hospital)
3. [ISMP Canada. Gaps in Transition: Management of Intravenous Vancomycin Therapy in the Home and Community Settings. \(2016\). \*ISMP Canada Safety Bulletin\* 16\(4\)](#)
4. Ministry of Health Hospital policy Manual. <https://ournh.northernhealth.ca/PoliciesProcedures/DST%20Published%20Policies/Governement%20of%20BC%20Hospital%20Policy%20Manual.pdf>
5. Muldoon, E. G., Snyderman, D. R., Penland, E. C., & Allison, G. M. (2013). Are we ready for an outpatient parenteral antimicrobial therapy bundle? A critical appraisal of the evidence. *Clinical Infectious Diseases: An Official Publication of the Infectious Diseases Society of America*, 57(3), 419–424. <http://doi.org/10.1093/cid/cit211>
6. Shah, P. J., Bergman, S. J., Graham, D. R., & Glenn, S. (2015). Monitoring of Outpatient Parenteral Antimicrobial Therapy and Implementation of Clinical Pharmacy Services at a Community Hospital Infusion Unit. *Journal of Pharmacy Practice*, 28(5), 462–468. <http://doi.org/10.1177/0897190014544786>
7. Tice, A. D., et al. IDSA. (2004). Practice guidelines for outpatient parenteral antimicrobial therapy. IDSA guidelines. *Clinical Infectious Diseases: An Official Publication of the Infectious Diseases Society of America*, 38(12), 1651–1672. <https://doi.org/10.1086/420939>

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	May 26, 2022	Minor revision to clarify the need for central line with pump (page 2 and 3)	Antimicrobial Stewardship Program Coordinator
	March 31, 2022	Major revision; comprehensive changes to align with adjacent community IV guidance	Antimicrobial Stewardship Program Coordinator; Regional Director Pharmacy Services; Interim Chief Nursing Officer
	March 2007	Issued	NH Pharmacy and Therapeutics Committee; NH MAC
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