

“In Australia there is often a delay from ordering to delivery of up to two to three days for a seven day supply of compounded elastomeric pumps, particularly over weekends and public holidays.” Dobson et al (2014).

Reference:

Dobson, P.M., Loewenthal, M. and Harris, L.M. (2014) The Safety of Nurse Compounding of Elastomeric Devices for 24 Hour Infusion. HNE Handover for Nurses and Midwives. 7(1).

[Full text available here.](#)

The safety of nurse compounding of elastomeric devices for 24 hour infusion

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Abstract:

Elastomeric pumps are disposable infusion devices generally used in the Hospital in the Home (HITH) setting to infuse antibiotics through a central venous catheter as a continuous 24 hour intravenous (IV) infusion. To ensure sterility of the contents, the elastomeric pumps are compounded with an antibiotic and saline solution in a sterile compounding facility or aseptic suite that is accredited by the Therapeutic Goods Administration for Good Manufacturing Processes. In HITH services whose local pharmacy does not have the capacity to undertake compounding in an aseptic suite, a week’s supply of patient-specific elastomeric pumps containing a prescribed daily dose of antibiotics is ordered from a commercial compounding facility. This order is repeated weekly until the antibiotic course is completed.

In Australia there is often a delay from ordering to delivery of up to two to three days for a seven day supply of compounded elastomeric pumps, particularly over weekends and public holidays. This delivery gap can be suboptimal in the following situations: Scenario 1. A patient is directly admitted to a HITH service from the Emergency or Outpatients Department within hours of presentation, rather than having a number of inpatient days before transfer to HITH. Scenario 2. Patients admitted to a HITH service for a number of days or weeks and need an immediate dose alteration of their intravenous antibiotic due to deteriorating renal function or in the case of a sub-therapeutic or supra-therapeutic glycopeptide target level. Scenario 3. Patients who develop an adverse drug reaction or allergy and need an immediate change of IV antibiotic during their HITH treatment course.

As these scenarios were a frequent occurrence, our service determined that an alternative solution to fill the gap period between ordering and supply of compounded elastomeric pumps was required. A potential solution was for the HITH nurses to compound antibiotics into pre-loaded sodium chloride (normal saline) elastomeric pumps. As this had never been done in Australia before, we needed to determine the feasibility of this solution.

[Full text available here.](#)

Other intravenous and vascular access resources that may be of interest (External links - IVTEAM has no responsibility for content).

- [Guide for intravenous chemotherapy and associated vascular access devices from Macmillan.](#)
- [CancerUK IV chemotherapy information.](#)

