

Infusor Rate Error Causes Checklist

We occasionally encounter Elastomeric Infusors that have either run too fast or too slow. How can we determine what caused this?

The following checklist can be used to determine possible causes of deviations from the expected infusion rates for Infusors:

Elastomeric Infusor Checklist for Identifying Causes of Rate Errors

..	<p>Was the deviation from rate within the expected tolerance range?</p> <p>Infusors flow within plus or minus 10% of the labelled flow rate. For example, it is generally considered acceptable for 46- or 48-hour Infusors to run out within plus or minus 5 hours of the intended infusion time.</p> <p>If an Infusor runs out too quickly, determine if the patient was given an overdose. A <i>fluorouracil Infusor overdose</i> is defined as the administration of fluorouracil via Infusor at greater than or equal to 2 times the intended rate, with completed delivery of greater than 50% of the intended total fluorouracil dose. In the event of an overdose, follow procedures as outlined in BC Cancer Management Guideline – Management of Fluorouracil infusion overdose.</p> <p>If an Infusor runs out faster than the expected tolerance range, but not fast enough to be considered an overdose, the patient is still at risk for adverse effects. The ordering physician should be consulted to make a clinical decision about whether any action is required.</p>
..	<p>Was the wrong Infusor selected?</p> <p>Compare the Infusor code on the BC Cancer pre-printed order to the one on the Infusor (SV2, LV1.5, LV2, LV5 or LV10).</p> <p>SV Small volume (maximum capacity of 130 mL)</p>

- LV** Large volume (maximum capacity of 300 mL)
- 1.5** 1.5 mL/hr fixed flow rate
- 2** 2 mL/hr fixed flow rate
- 5** 5 mL/hr fixed flow rate
- 10** 10 mL/hr fixed flow rate

If the pre-printed orders list more than one Infusor, ensure that the correct Infusor was selected for the dose. Protocols may use different sized Infusors with different rates depending on the dose. In all cases, care should be taken to select the correct rate Infusor to allow the fluorouracil dose to be infused over the time interval specified by the protocol.

NOTE: The option to use SV2 Infusors no longer exists in BC Cancer protocols or pre-printed orders. Additionally, all gastrointestinal BC Cancer protocols that include a 46-hour infusional fluorouracil treatment have been standardized to include dose banding with Baxter LV5 Infusors™. See the [Dose Banding FAQ](#) for more information.

46-Hour Infusion

Dose Banding:

§ LV5 for all doses

No Dose Banding:

§ LV5 for all doses (recommended)

§ OR select either:

- SV2 for doses less than or equal to 4400 mg
- LV5 for doses greater than 4400 mg

48-Hour Infusion:

§ LV5 for all doses (recommended)

§ OR select either:

- SV2 for doses less than or equal to 4600 mg
- LV5 for doses greater than 4600 mg

Was the Infusor filled with the correct volume?
 Infusors should be filled to levels that fall within the minimum and maximum volumes, which are listed on the infusor. An under-filled infusor will infuse faster

	than the intended rate.
..	<p>Was normal saline used instead of D5W?</p> <p>Normal saline would make the Infusor infuse approximately 10% faster than with the intended D5W due to viscosity changes.</p>
..	<p>Were there any leaks that may have contributed to an Infusor running out early?</p> <p>If leaks were present, this would explain why the Infusor ran out early.</p>
..	<p>Was the access system (i.e. catheter) used to connect the Infusor 22 gauge or larger?</p> <p>Anything smaller than 22 gauge may decrease the flow rate.</p>
..	<p>Was Infusor positioned correctly on the patient? Including at night?</p> <p>Elastomeric Infusor should be stored close to the same height as the luer lock connector. During the day, Infusors are generally kept in a fanny packs carried around the waist. At night, Infusors are kept at bed height. Under the pillow is often recommended. If Infusors are placed on the floor below the bed the flow rate will be decreased. If they are placed on a dresser that is higher than the bed the flow rate will be increased.</p>
..	<p>Was the flow restrictor taped securely to the skin to maintain the correct temperature?</p> <p>If the flow restrictor is not taped securely to the skin, the temperature may drop leading to a decreased flow rate.</p>
..	<p>Were any sources of obstruction present that could slow or stop flow?</p> <p><u>Examples Include:</u></p> <ul style="list-style-type: none"> § Infection (redness, firmness or swelling at the IV site) § Kinks or clamps in the tubing § Air in tubing
..	<p>Was the Infusor stored at room temperature?</p> <p>Baxter Infusors will infuse faster in the heat or slower in the cold due to viscosity changes.</p>

References:

1. Baxter elastomeric pumps patient guide. Mississauga, ON: Baxter Corporation; 2010.
2. Baxter elastomeric Pumps Clinician guide. Mississauga, ON: Baxter Corporation; 2010.
3. Adam Jones, Personal communication. Baxter Corporation, Sr. Marketing Manager Elastomerics. 27 March 2017.

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