

DPOTMH-J-P14
12-31-2021
Policy
1 of 4
Pharmacy Division
STANDARD USE OF PNEUMATIC TUBE FOR MEDICATION

PURPOSE:

- To facilitate rapid delivery of sensitive items such as medications to patient care units around the hospital.
- To maximize safety and effectiveness of patient care by decreasing travel time and transportation error.

LEVEL:

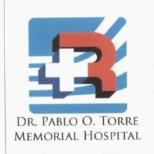
All Physicians, Nurse, Pharmacists and other Healthcare Professionals of Riverside Medical Center Incorporated (RMCI).

DEFINITION OF TERMS:

Pneumatic Tube System (PTS) – also known as pneumatic post system- is a system in which cylindrical containers called "carriers" are propelled through a network of tubes by compressed air or vacuum. Tubes connect various departments in a building. The objects are placed in an appropriate sized canister, which is tightly closed.

POLICY:

- 1. Not all types of medications shall be delivered by the PTS.
- 2. Education to all users about this medication delivery method shall be done to ensure safe and proper handling and to prevent any delays due to breakage.
- 3. Pharmacy carriers (Green) shall **NOT** be used by the nursing staff in sending any **blood or any biological samples to laboratory department** and other department.
- 4. Carriers shall only be used for STAT and PRE-OP medication requests if unit carrier is not available



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- 5. The following shall be considered when transferring medications:
 - 5.1. Sensitive to motion or agitation
 - 5.2. Time delays in transportation
 - 5.3. Reliability of the delivery system
 - 5.4. Safety or hazardous potential of the material
 - 5.5. Dimensions of materials
 - 5.6. Size and weight of materials
 - 5.7. Security requirements
 - 5.8. Cost
 - 5.9. Proper packaging of fragile materials and medications
- 6. Hand hygiene technique shall be practiced at all times after handling any carriers of the PTS.
- 7. All empty carriers shall be returned immediately to specific stations. Each station should immediately open all incoming carrier in the event that:
 - 7.1. The transfer of the content (e.i., medication) was not completed.
- 8. Do not overload carriers. Do not exceed a total weight of greater than 500 grams.
- 9. Do not force carrier closures. Do not have a translogic pouch protruding from carrier.
- 10. Do not use carrier in sending liquids and IVF such as dextrose, NSS, etc.
- 11. Do not send more than two (2) bottles of syrups or solution at a time.
- 12. The originating department of a carrier tube which contained a spill shall be responsible for the cost of disinfecting/replacing the carrier tube.
- 13. Only one carrier shall travel at a time in the pipe (carrier conduit).



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DOCUMENTATION:

New Policy

DISSEMINATION:

Hospital Communicator

REFERENCES:

- 1. Pneumatic Tube System Guidelines, mglabtest partners
- $2. \ \ Transportation_of_specimens_using_pneumatic_tube_system_oct10$
- 3. National Health Policy, use of PTS
- 4. Collection Guide, LHSC Lab



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PURPOSE:

To establish a documented procedure for the implementation of the standard use of the pneumatic tube for medication dispensing and to ensure that the procedure is done accordingly.

SCOPE:

Applies to all Pharmacy Division staff of Dr. Pablo O. Torre Memorial Hospital

PERSON RESPONSIBLE:

Medical Staff, Registered Nurses, Pharmacist, and Allied healthcare professionals, Biomedical Department, Pharmacy and Therapeutics Committee

GENERAL GUIDELINES:

- 1. The following medications are not allowed in the pneumatic tube system (PTS) from pharmacy or nursing station:
 - 1.1. Chemotherapeutic/cytotoxic drugs
 - 1.2. Controlled substances
 - 1.3. Albumin
 - 1.4. Insulin
 - 1.5. Expensive medications
 - 1.6. Oral liquids (greater than 4 ounces)
 - 1.7. Large volume IV greater than 1 liter (1 liter bags with overwrap are not deliverable)
 - 1.8. Glass bottles with ampoule(s)
 - 1.9. Glass bottles greater than 100 ml
 - 1.10. Total Parenteral Nutrition(TPN)
 - 1.11. Protein based drugs (e.i., Aranesp ®, Insulin)
 - 1.12. Large aerosol containers



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- 1.13. Anything greater than 4 lbs or weight of one liter IV bag
- 1.14. Anything that has a "DO NOT SHAKE" label
- 2. Reasons for NOT delivering Medication via PTS:
 - 2.1. **Alteration** there is potential for alteration of the active ingredient or vehicle, such as protein denaturation, cracking of emulsions, etc.
 - 2.2. **Breakage** use caution with medications in glass bottles or large containers that cannot be adequately secured or padded during transport due to breakage.
 - 2.3. Chemotherapy- biohazards material including chemotherapy, radiopharmaceuticals or other cytotoxic medications may contaminate the entire tube system.
 - 2.4. **Controlled substances** the security of controlled substances cannot be guaranteed and the risk of diversion is increased.
 - 2.5. **Expense** substantial monetary or labor loss if the medication is "lost" during the transport process.
 - 2.6. Flammable explosive or flammable substances shall not be transported.
 - 2.7. Living living therapeutic modalities may be harmed during transport.
 - 2.8. Stains due to the chance of breakage, stains or dyes shall not be transported.
- 3. Bulk liquids shall not be packaged in a zip-lock bag with the plastic envelope or bubble wrap.
- 4. All other medications (e.g., orals, topical, non-compounded injectables) can be transported through the PTS.



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PROCEDURE:

- 1. Check that the medication to be sent are not included in the list of medication not allowed in the PTS.
- 2. Place all contents (e.i., medication) to be sent in a carrier using universal precautions, making sure that both ends of carrier are securely closed and placed an outgoing pad. Leakage/breakage due to:
 - 2.1. Improper packaging and immobilization of contents.
 - 2.2. Use of non-leak proof containers or failure to tighten container lids.
- 3. Sending a Carrier and/or Redirecting Empty Carriers from the Station:
 - 3.1. Check the "System ON" lamp on the station. If the lamp is off, the system is not operational. If the lamp is on, proceed.
 - 3.2. Place the carrier into the dispatcher (guide arm).
 - 3.3. Insert one end of the carrier into the upper end of the dispatcher and rest the end of the carrier on the bottom of the dispatcher. (Make sure that you have closed the carrier securely.)
 - 3.4. Set the control panel to the destination station number.
 - 3.5. Select station number for automatic redistribution of empty carrier. Refer to PTS Station List
 - a) When the carrier is placed into the tube station the computer program detects the carrier immediately
 - 3.6. Press the **send** button after selecting the station number.
- 4. If you decide not to send the carrier; add to the carrier; or change the destination station; the carriers can be removed or the transaction be cancelled while the dispatcher is still in the received position.
 - 4.1. To cancel the transaction, press the **cancel** key on the control panel. **Do not try to remove the carrier if the dispatcher is in the transmit position.**
- 5. Report PTS failure to the Biomedical Department immediately.



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	KEY TASKS	PERSON RESPONSIBLE
1.	Checks that the medication to be sent are not included in the list of medication not allowed in the PTS.	
2.	Places all contents (e.g., medication) to be sent in a carrier using universal precautions, making sure that both ends of carrier are securely closed and placed an outgoing pad.	
3.	Checks the "System ON" lamp on the station. If the lamp is off, the system is not operational. If the lamp is on, proceed.	
4.	Places the carrier into the dispatcher (guide arm).	Di / Di
5.	Inserts one end of the carrier into the upper end of the dispatcher and rest the end of the carrier on the bottom of the dispatcher.	Pharmacist/ Pharmacy Technician on duty
6.	Sets the control panel to the destination station number.	
7.	Selects station number for automatic redistribution of empty carrier.	
8.	Presses the send button after selecting the station number.	
9.	Reports PTS failure to the Biomedical Department immediately.	

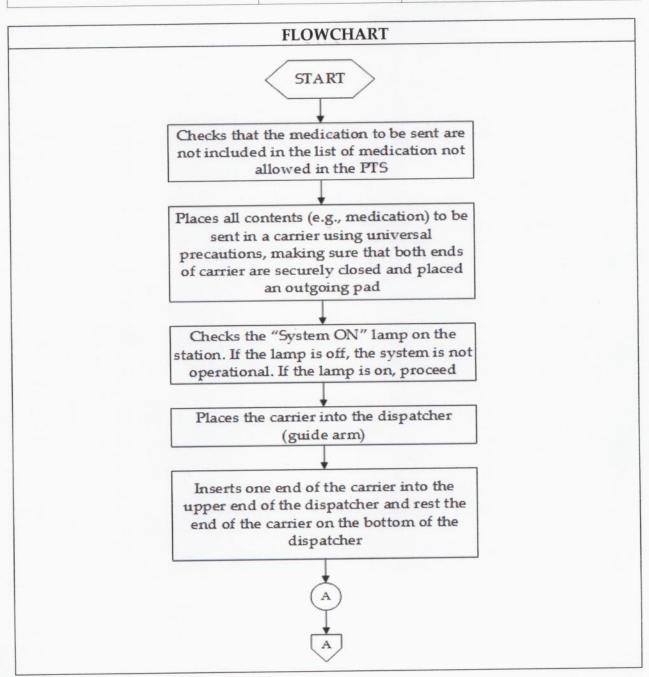


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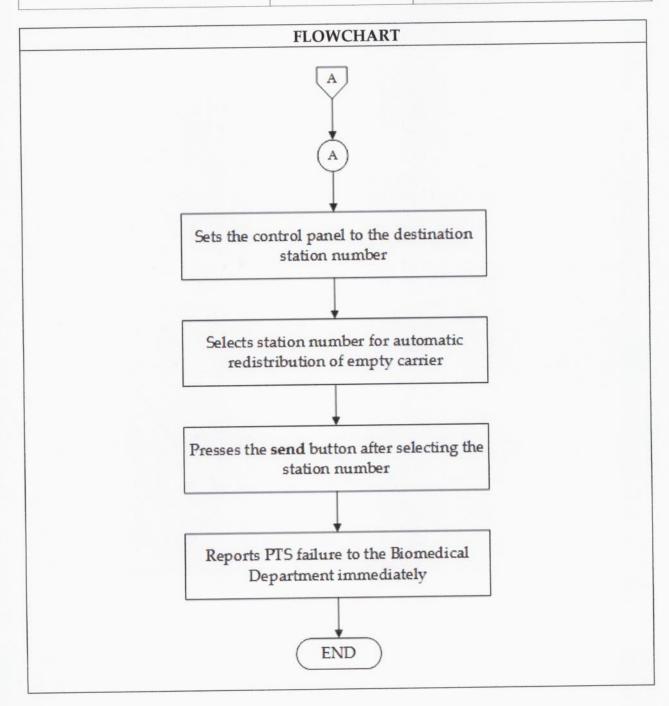


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