## Pneumatic Tube System Medication Guide

**Special Precautions for Pharmacy Items in the Tube System**

Do Not send the following general categories via the pneumatic tube system:

<table>
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<th>Category</th>
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| Drugs that can be altered by shaking.         | Examples:  
- Carbonated products (Magnesium Citrate)  
- Emulsions (fat emulsion, propofol)  
- Package insert of product states: “Do not shake, swirl, or agitate”  
- Products that foam (Caspofungin, Micafungin, Temsirolimus)  
- Protein/blood products (denaturation)  
  Examples: albumin, erythropoietin, filgrastim, immune globulin, monoclonal antibodies “-mabs”, 4F-PCC (Kcentra) |
| PLEASE NOTE: Insulin: Follow your organizations policy concerning the tubing of insulin. Some manufacturers state that insulin can be delivered via pneumatic tube one time. |
| Chemotherapy/hazardous Drugs/radioactive medications or agents. | These medications may contaminate the entire tube system creating unintentional exposure to healthcare workers.  
Please refer to your organizations specific hazardous drug handling policy. |
| Heavy items                                   | Follow the size/weight limit for your organizations tube station.                                                                                                                                                     |
| Listed vaccines and those that have been reconstituted by the pharmacy. | Examples: Herpes zoster†‡, MMR†‡, MMRV†‡, Poliovirus, Rotavirus, Typhoid, Varicella†‡, and Yellow Fever†‡.  
†‡Ok to tube powder, but not the reconstituted product. |
| Breakable or Items that could leak: glass bottles/ampules/meds dispensed catheter tip syringes. | Examples: IV acetaminophen, magnesium citrate, methylergonovine ampules, propofol, talc and alteplase for chest tube instillation.                                                                               |
| Flammable/explosive/aerosol containers/volatile liquids | Examples: benzocaine spray, collodion, medical or anesthetic gases for surgery, nitroglycerin spray.                                                                                                                   |
| Medications that are difficult to replace and/or pose confidentiality issues. | Examples:  
- Patient’s Own Medications  
- Employee/Outpatient prescriptions  
- Research or Investigational Medications  
- Expensive items  
- Medications in short supply  
- Cell phones/Electronics  
**Medications from isolation rooms could be contaminated and should not be returned to pharmacy. Follow your organizations policy.** |
| Living therapeutic modalities or creatures     | Examples: Leeches, maggots                                                                                                                                                                                             |
| Controlled substances                         | Controlled substances should only be transported using a secure transaction mode of operation if available.                                                                                                          |
| Limited High Alert Medications                | Agents that should be hand delivered to an authorized clinician and not left out for clinical staff to put away. Examples: Epidurals, Neuraxial Opioids, Neuromuscular blockers |

### References:

- Wang P, Nguyen L, Update to delivering medications via a pneumatic tube system, AJHP. 2017; 1521-1522
- Peak A, Fleming M, Rykovich, L. Medications that should not be transported via pneumatic tube systems-wall chart. Thomas Land Publishers Inc. 2011

*Eli Lilly and Novo Nordisk indicate that product can be delivered one time via pneumatic tube.

- This guide serves only as a resource and is to be used at the discretion of the user.