Quality Cancer care
Many patients undergoing treatment for colorectal cancer, pancreatic cancer, head & neck cancers and others, are prescribed chemotherapy regimens that require prolonged continuous infusion. Receiving these infusions at home, using a portable infusion device is preferable to the option of an extended hospital stay. Our existing home infusion process required referring patients to one of several home infusion therapy companies, who would deliver the compounded medications and infusion pumps to our clinic to be connected to patients on the day of their clinic visit. Over time, challenges surfaced including inconsistent practices between companies as to compounding, packaging and labeling of medications, communication challenges, delays in patient care and patient inconvenience. This caused us to investigate better, safer alternatives.

Evaluate the impact
Avoiding errors was paramount in the initiative. Having BIDMC Pharmacy provide the chemotherapy infusion was felt by all to be optimal. Although many safety checks were in the place, the potential for problems and a poor-quality patient experience were still concerning. We also sought to improve the quality of care to our patients by improving the workflow. We determined that insourcing to our pharmacy and providing on-site availability of infusion equipment via a pump consignment (InfuSystem) would reduce risk, extended wait times and inefficiencies in workflows.

The Team
- Outpatient Hematology/Oncology nursing & staff Shapiro 9
- Holly Dowling, RN, BSN Outpatient Hematology Oncology Nurse Manager
- Linda Yanes, RN Outpatient Hematology/Oncology Nurse Case Manager
- Outpatient Hematology/Oncology pharmacy staff Shapiro 9
- Frank Mitrano, M.S., R.Ph., Director, Pharmacy Services
- Denise Arena, RPh, Clinical Pharmacist Supervisor
- Peggy Stephan, RPh, MS, Clinical Pharmacist Supervisor
- Zaven Norigian, PharmD, BCOP Clinical Pharmacy Coordinator – Oncology
- Holly Creveling, Pharm. D., Clinical Pharmacist Supervisor
- Mike Carvalho, RPh
- Tim White, RPh
- Outpatient Hematology/Oncology nursing staff 7 Stoneman
- Toni Abren, RN BSN 7Stoneman Unit Based Educator
- Oncology Management System Team in collaboration with Jon Gersh (IS)

The Change: a smaller, lighter, quieter pump
- Assessment of what tools and resources are required by all departments and clinicians to support the change.
- Pharmacy assessment of resources required to provide home infusion medications and programming of infusion pumps.
- Nursing and Physician meetings to anticipate patient and staff obstacles to changing such as the need to have patients return to the medical center for pump disconnect.
- “Dry Run” sessions where physicians, pharmacists, nurse practitioners, case manager and nursing staff verbalize steps in the new process from ordering, compounding and verification to patient education, communication and disposal.
- Communicated in GI Team meetings, nursing staff meetings and by email.
- Coordinate training of all nursing and pharmacy staff in use of the new pump
- Gain IT support to incorporate IPad teaching tool
- Collaboration with Oncology Management System team to revise home infusion chemotherapy orders/create “auto-fax” for communication with InfuSystem
- Partner with distribution to incorporate InfuSystem supplies into the supply chain

What else can we do?
- Patients on clinical trials requiring home infusion chemotherapy are transitioning to the system, but would benefit from electronic chemotherapy ordering.
- A process for evaluating which patients are appropriate for self-disconnect of the chemo pump, and define teaching/competency assessment of the patient.