

# **DOMINICAN HOSPITAL**

## **2017 Quality Improvement Study**

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Study population: Dominican Hospital Infusion Center Chemotherapy Patients

Total number: 46

### **PROBLEM IDENTIFIED/SUMMARY:**

Chemotherapy infusions given at the Dominican Hospital Infusion Center are at times being delayed up to 3+ hours. Delays in starting a chemotherapy regimen are a cause of distress for patients and staff alike, and may extend the length of patient stay beyond regular business hours, to the potential detriment of patient safety. Factors causing these delays from admission to chemotherapy may occur for a number of reasons. A literature review resulted in multiple published studies performed by staff in well-known cancer programs, i.e.; Cleveland Clinic's Taussig Cancer Institute; MD Anderson Cancer Center; the Sidney Kimmel Comprehensive Cancer Center at Johns Hopkins Hospital (etc), in which common themes emerged. These themes are: inefficiency of registration process; unavailability of labs upon admission; incomplete physician orders; and lack of sufficient intravenous access. It is necessary to determine the causes of delays at Dominican Hospital Infusion Center, and put a process into place to mitigate these causes toward the purpose of improving patient care, patient satisfaction, and nurse satisfaction.

### **CRITERIA USED TO STUDY PROBLEM:**

A random audit was performed of 46 patient charts who received chemotherapy at the Dominican Hospital Infusion Center during the 4<sup>th</sup> quarter of 2016. The time in which the order was received, the time when the patient arrived to the infusion center treatment area after registration, and the time in which the initial infusion was started were compared.

### **FINDINGS:**

Of the 46 patient charts that were audited, 16 patients received their infusion within 30 minutes of arrival and 18 patients received their infusion between 30 minutes and 1 hour of their arrival. 5 patients received their infusion between 1 hour and 1.5 hours after arriving, 2 patients received their infusions between 1.5 hours and 2 hours after arriving, 3 patients received their infusions between 2 hours and 2.5 hours after arrival, and 2 patients received their infusion longer than 2.5 hours after their arrival. This means that 74% of patients received their infusion within 1 hour of arrival to the infusion center, 85% received their infusion within 1.5 hours of arriving, and 89% received their chemotherapy within 2 hours of arriving. The mean time of all cases was 56.24 minutes from admission to treatment start.

Of the 12 patients who took longer than 1 hour to receive their infusion after they arrived to the infusion center, 8 did not receive orders until after the patient had arrived to the Infusion Center for treatment. A deeper look at the primary causes for delay of treatment for the 12 patients follows:

- Orders received 1-3 hours after patient has been brought into the treatment area – 5
- Having to wait for lab results prior to treatment – 3
- Pharmacy delays in processing – 2
- Incomplete orders – 1
- Patient condition – 1

### **NATIONAL BENCHMARKS USED:**

HCAHPS Scores on patient satisfaction and quality of care.

Dominican Hospital Infusion Center overall HCAHPS scores for the 4<sup>th</sup> quarter 2016:

- October 2106 – 73.2
- November 2016 – 77.8
- December 2016 – 79.8

Goal would be to increase patient satisfaction scores to the 85<sup>th</sup> percentile

Additional goal to reduce patient mean wait time by 50%

### **OUTCOME/DISCUSSION:**

The primary reason for the majority of patient extended chair time was caused by a delay in receiving orders until after the patient arrived to the Infusion Center. Orders received 1 day prior to patient arrival would ensure that the medication is available and verified. This will enable the pharmacy verification process to occur prior to patient arrival and prevent delays in medication preparation. Arrival of orders the day prior also gives nursing staff additional time to obtain additional documentation or clarification needed to prevent delays in medication administration. Additionally, having orders a day early would more likely ensure that necessary patient labs have been drawn and reviewed by the ordering physician.

Had this process been in place in the 4<sup>th</sup> quarter 2016, all but one of the 12 patient delays in time to chemotherapy of greater than 1 hour would have been mitigated.

### **ACTION TAKEN:**

Request that chemotherapy orders be received from the ordering physician office to the Infusion Center by 1300 the day prior to the planned administration. Deviations from this request should occur with clear communication with the Infusion Center leadership (manager and/or charge nurse).

The request for complete chemotherapy orders by 1300 the day prior to the planned treatment has been added as Procedure item #9 to the Dominican Hospital policy 8610c-501, Guidelines for Chemotherapy Ordering, approved by the Dominican Hospital Cancer Committee on March 16, 2017.

### **PLAN TO MONITOR FOLLOW UP:**

Repeat random audit of 3<sup>rd</sup> quarter 2017 patient records to ensure compliance with Dominican Hospital policy regard chemotherapy ordering and measure impact of patient wait time and HCAHPS scores.

Report results to the Cancer Committee in the 4<sup>th</sup> quarter 2017.