# IMPROVING TIMELINESS TO INPATIENT CHEMOTHERAPY ADMINISTRATION

The Commission on Cancer (CoC) is a consortium of professional organizations dedicated to improving survival and quality of life for cancer patients through standard setting, prevention, research, education, and the monitoring of comprehensive quality care. Each calendar year, the cancer committee, develops, analyzes, and documents studies that measure the quality of care and outcomes for cancer patients.

Literature is limited, but data suggests that a chemotherapy regimen should be initiated within 4 hours from admission (Gupta, et al, 2018). Data suggests that delays in initiating chemotherapy results in prolonged hospital length of stay, increased risk for hospital acquired conditions, and decreased patient satisfaction (Accordino et al, 2017). Reasons for delays cited in the literature include orders not being signed by physicians, gaps in communication between nursing and pharmacy, and lack of urgency among staff (Mahrous et al, 2018).

A problem was identified that we have a delay from time of admission to time of initiation of chemotherapy for patients admitted to the hospital for chemotherapy. Review of internal data found that of the 15 admissions for inpatient chemotherapy evaluated 21% (3/14, one outlier removed due to poor clinical status) received chemotherapy in less than 4 hours. The average time from admit to chemotherapy initiation was 5 hours and 29 minutes (329 minutes), therefore more than the four hour goal of time from admission to initiation of chemotherapy.

#### **Pre Intervention:**



### Time from admit to chemotherapy initiation Sanford Medical Center

### **Quality Improvements were implemented:**

- 1. Created a worksheet which included both pharmacy and nursing actions to evaluate workflows and measure outcomes.
- 2. Pharmacy began sending pre-medications separately to the nursing unit before sending chemotherapy to the unit. Nursing hung pre-medications prior to chemotherapy arriving on the unit.



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## **Workflow Evaluation:**

Each chemotherapy given was reviewed by nursing and pharmacy for areas for efficiency and outcomes.

TIMEL	INESS OF INPATIENT CHEMOTH	HERAPY QUALITY PROJECT
	PHARMACY LO	OG
Patient initials:	Patient HAR #:	Date:
	verified by decentralized pharmacist ay, <b>if any:</b> (working on other orders	
	i pharmacist wrote up chemotherap ay, <b>[f any:</b> (working on other orders ght away, etc.)	
	nacist double checked: ay, <b>if any:</b> (heavy workload in IV roc	m, only pharmacist in IV room, etc.)
List reasons for de	check times: <u>will be obtained electr</u> ay in preparing or checking premed e, IV technician not available, pharm	s/chemotherapy, if any:
Time chemotherap Was an RN notified Time premeds tub	y and/or premeds brought out fron y and/or premeds delivered to floor lof delivery: yes or no ed if not delivered with chemo: ay, <b>if any:</b> (technician not available,	r
Time pre-meds sta		
7. Any treatments, la	bs or procedures delaying chemothe	erapy administration?



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Post Intervention Outcomes: We reviewed 15 post intervention charts and worksheets for improvement. Evaluation found 53% (8/15) of patients had a time of admission to chemotherapy administration of less than 4 hours. Upon evaluation, one patient's data was removed due to a significantly long alkalization prior to high dose methotrexate. Average time from admit to chemotherapy initiation was 4 hours and 5 minutes (n=14) (245 minutes). Overall improvement of average time to chemotherapy was 1 hour and 24 minutes.

#### **Post Intervention:**



# Upon reviewing our post intervention data, there were two distinct factors we did not control for:

- 1. Regimen delays due to components of the treatment plan which must be given prior to chemotherapy (IV hydration, alkalization, etc.)
- 2. PICC line placement delays due to waiting for the IV team for placement.

We will continue to work to achieve 4 hours to chemotherapy, taking into consideration that some regimens may have components other than chemotherapy which delay time to chemotherapy, but the overall treatment plan is initiated in that window. We will also try to inform the IV team of PICC placement need prior to patient admit to decrease time to line placement.

