

IMPROVING TIMELINESS TO INPATIENT CHEMOTHERAPY ADMINISTRATION

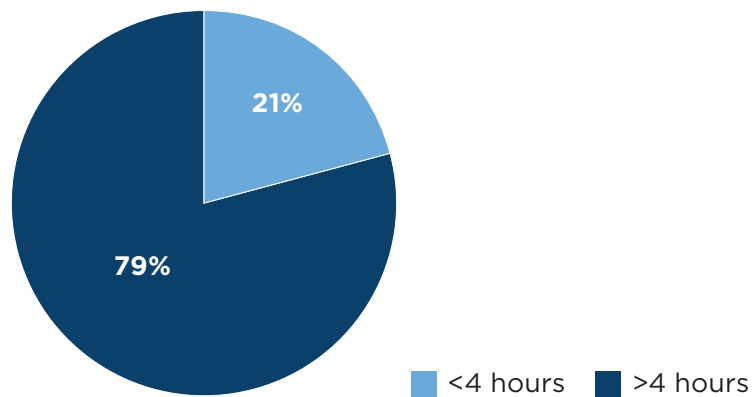
The Commission on Cancer (CoC) is a consortium of professional organizations dedicated to improving survival and quality of life for cancer patients through standard setting, prevention, research, education, and the monitoring of comprehensive quality care. Each calendar year, the cancer committee, develops,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

**TIMELINESS OF INPATIENT CHEMOTHERAPY QUALITY PROJECT
PHARMACY LOG**

Patient initials: _____ Patient HAR #: _____ Date: _____

1. Time orders were verified by decentralized pharmacist: will be obtained electronically.
List reasons for delay, if any: (working on other orders, at ADT rounds, off the floor, etc.)

2. Time decentralized pharmacist wrote up chemotherapy cards: _____
List reasons for delay, if any: (working on other orders, at ADT rounds, RN does not want medication right away, etc.)

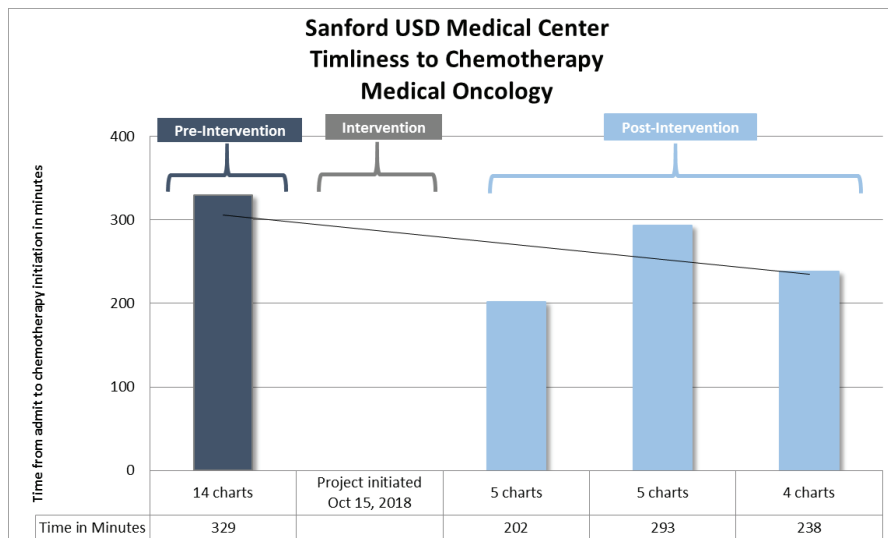
3. Time second pharmacist double checked: _____
List reasons for delay, if any: (heavy workload in IV room, only pharmacist in IV room, etc.)

4. Dispense prep and check times: will be obtained electronically.
List reasons for delay in preparing or checking premeds/chemotherapy, if any:
(hood not available, IV technician not available, pharmacist not available, medication not available, etc.)

5. Time chemotherapy and/or premeds brought out front for deliver: _____
Time chemotherapy and/or premeds delivered to floor: _____
Was an RN notified of delivery: yes or no
Time premeds tubed if not delivered with chemo: _____
List reasons for delay, if any: (technician not available, tubes not working, etc.)

6. Time pre-meds received from pharmacy _____
Time pre-meds started _____
Time chemo delivered to the floor _____
Time chemo started _____
List reasons for delay, if any:

7. Any treatments, labs or procedures delaying chemotherapy administration?

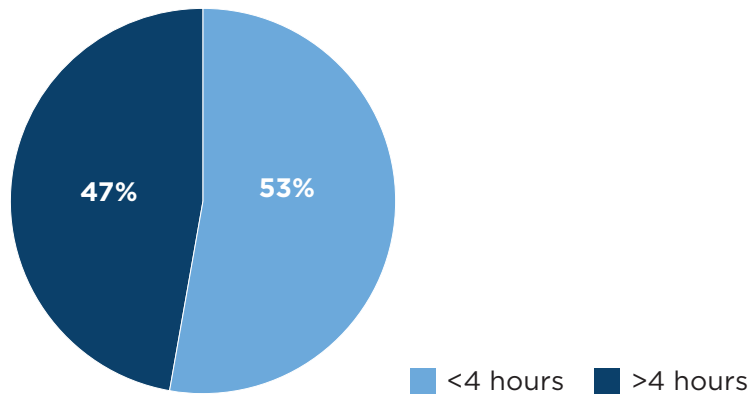


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Post Intervention Outcomes: We reviewed 15 post intervention charts and worksheets for improvement. Evaluation found 53% (8/15) of patients had a time of admission to chemotherapy administration of less than 4 hours. Upon evaluation, one patient's 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:

Time from admit to chemotherapy initiation



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.