

Project Title: Decreasing Chemotherapy Administration Delays in
Electively Admitted patients to a Hematology-Oncology Unit

Presenter's Name: Adolfo Enrique Diaz, MD, MSc

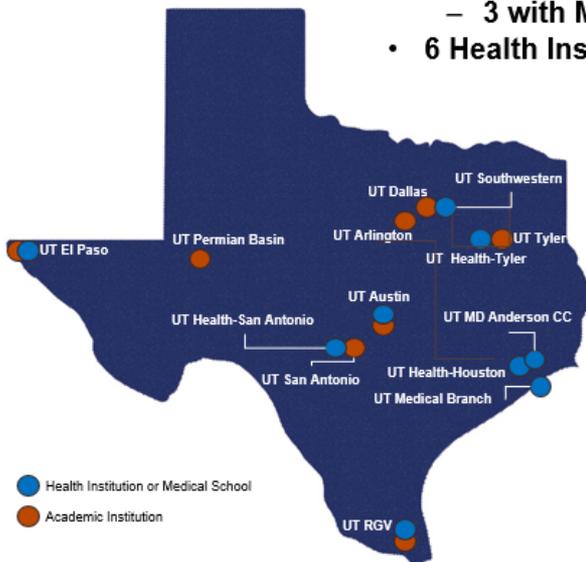
Institution: UT Health San Antonio / Mays Cancer Center

Date: 06/18/21

Institutional Overview

UT System

- 15 Institutions
 - 9 Academic Institutions
 - 3 with Medical Schools
 - 6 Health Institutions



We are 69% Hispanic:

- 4.9 M people (31% NHW, 4% AA)
- Catchment Area: 38 Counties
- 4200 new oncology cases per year
- NCI Cancer Designated Center
- Unique population characteristics:
 - Age (40% < 25 years of age)
 - Language (41% speak Spanish as primary language)
 - Income (24% in poverty; \$30,135 per capita personal income)
 - Education (26% No HS education)
 - Military veterans (9%)

Team members



Mary Salazar, DNP, MSN, RN
Director of Oncology Patient Experience
Team Member



Jeremy Viles, DNP, MBA, RN
Chief Nursing Officer
Team Member



Nikos Papanikolaou, PhD
Professor Radiation Oncology.
Chair Radiation Physics
Team Member



Geary Delgado, MSN, RN
Patient Care Coordinator UHS
Team Member



Enrique Diaz, MD, MSc
Assistant Professor of Medicine
Hematology-Oncology
Team Leader



Valorie Harvey, BSN, MBA
QTP Coach

Problem Statement

An average of 20-25 patients were electively admitted to UHS per month in 2019 for inpatient chemotherapy administration. The median time between the patient is admitted to UHS and chemotherapy is started is 19.1 hours. This delay results in an increased LOS and resource utilization along with decreased patient satisfaction.

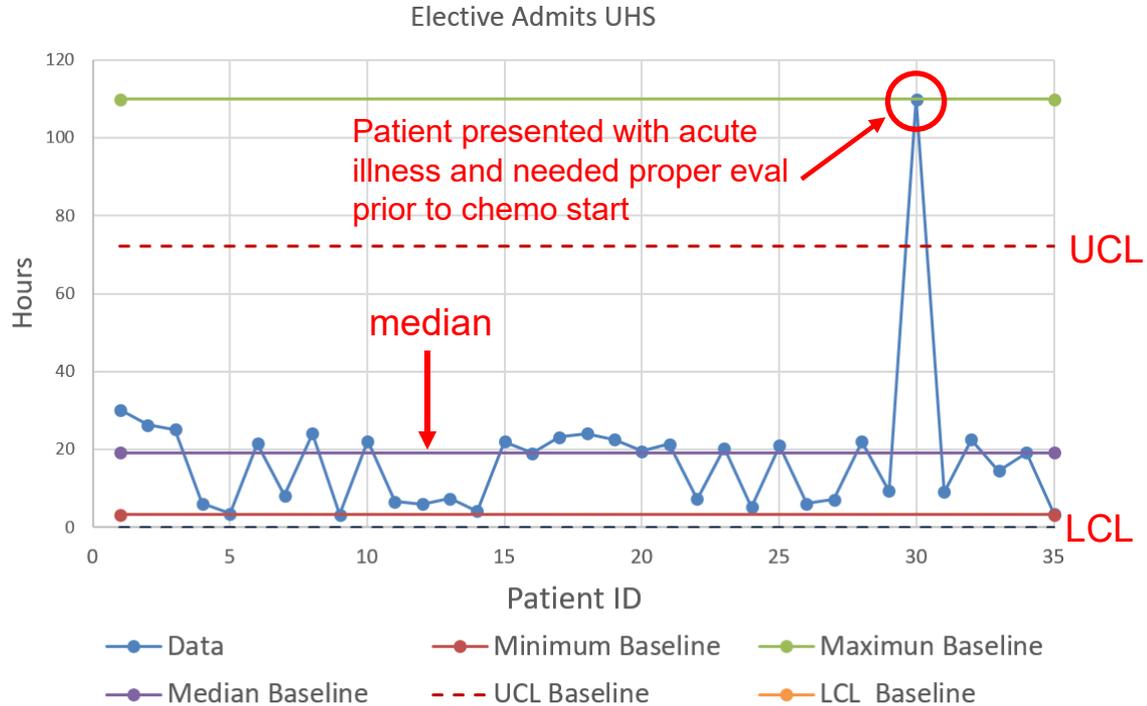
Outcome Measure

Baseline data summary

Item	Description
Measure:	Time from admission to UHS to time of chemotherapy initiation.
Patient population: (Exclusions, if any)	Patients seen at MCC and electively admitted to UHS for chemotherapy. 18 y.o and older
Calculation methodology: (i.e. numerator & denominator)	(Time of administration of chemo – Time of arrival to hospital) on each elective admit / # of patients
Data source:	EMR
Data collection frequency:	March of 2019 / Pre COVID-19 era / Weekly
Data limitations: (if applicable)	Limited sample Manual abstraction

Baseline Data March 2019 X Chart

- Minimum 3.28h
- Maximum 110h
- Median 19.4h



Aim Statement

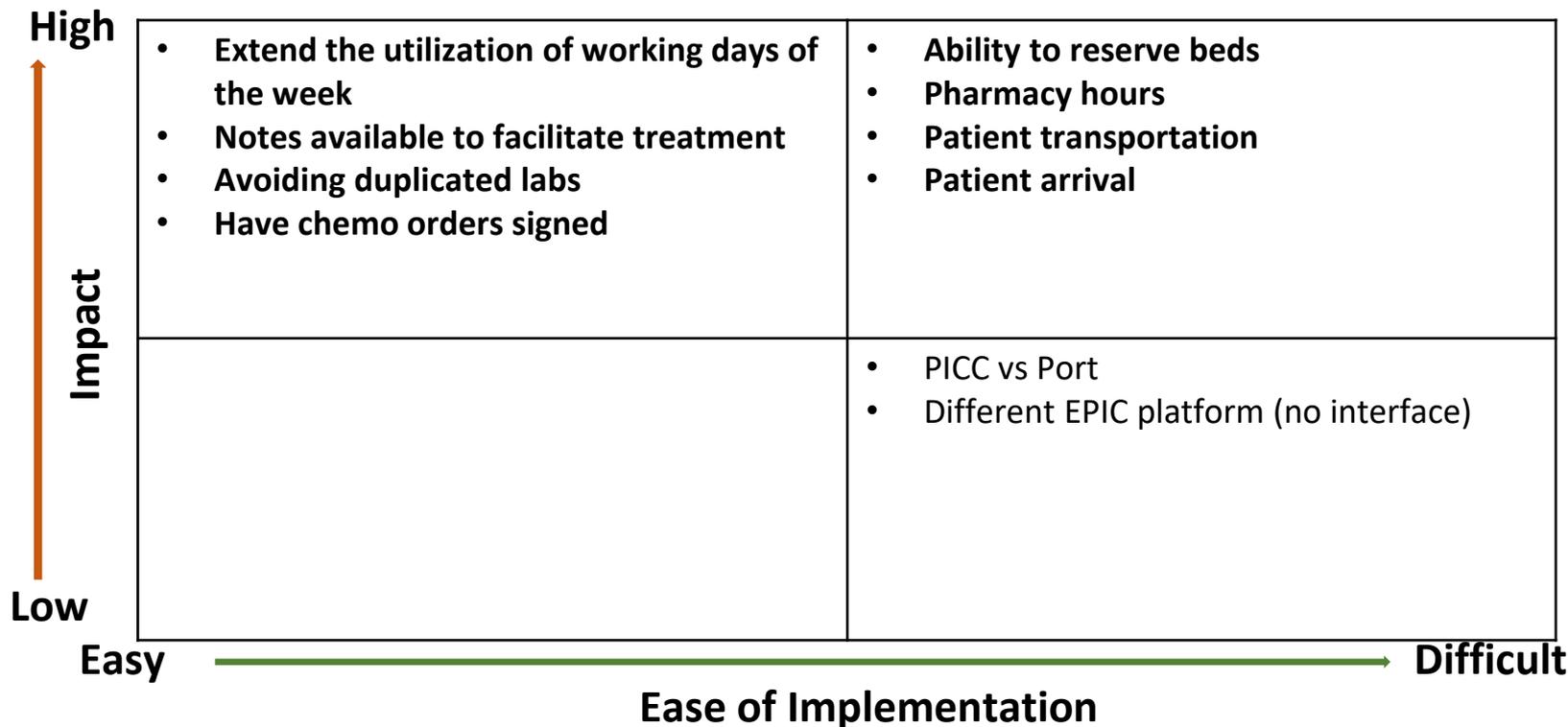
- **AIM STATEMENT**

A decrease by 10% in the current 19.4 hours as median time of chemotherapy start is projected by June 1st 2021

Process map



Priority / Pay-off Matrix Countermeasures

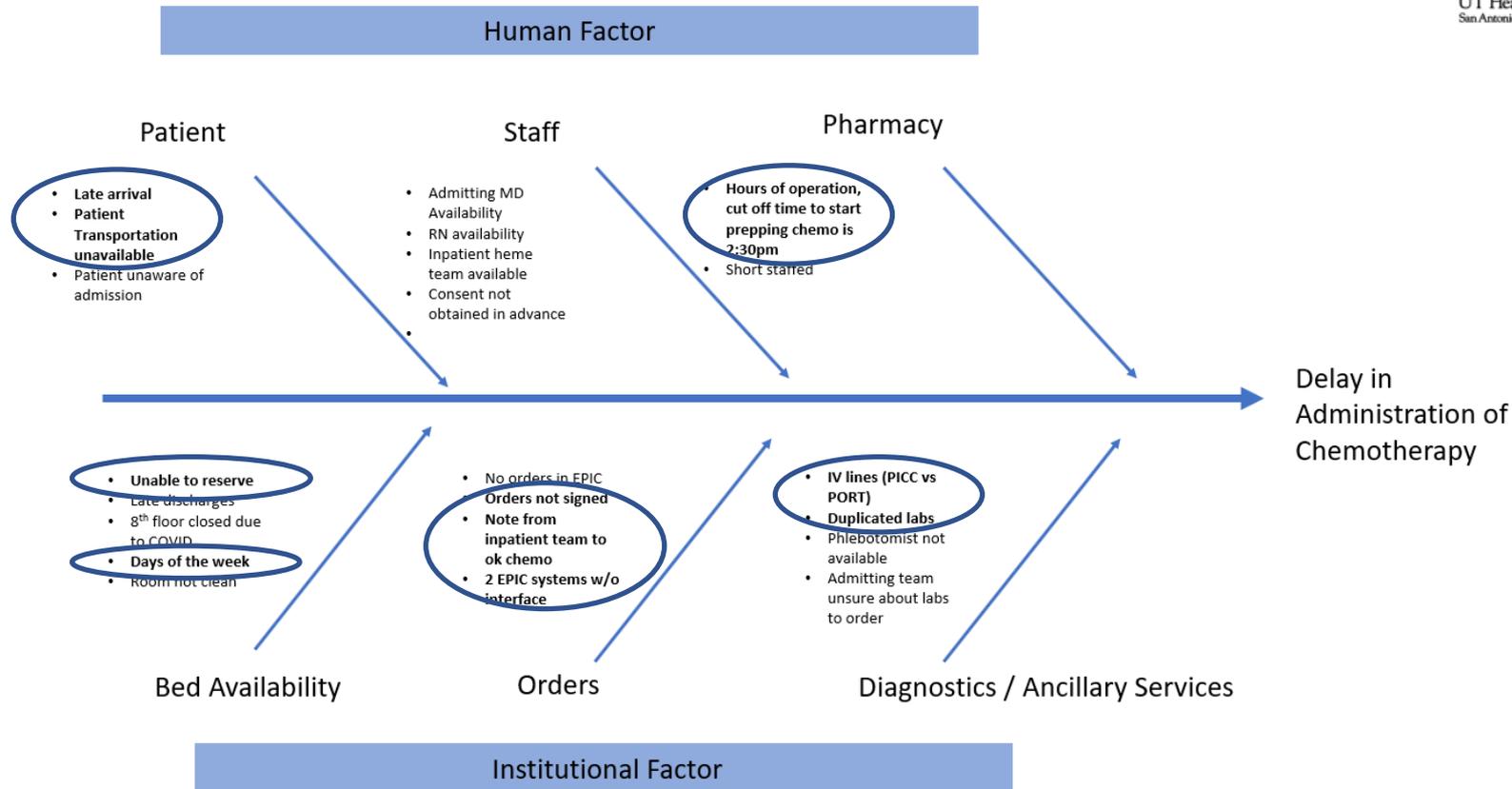


The diagram is a 2x2 matrix. The vertical axis is labeled 'Impact' with 'High' at the top and 'Low' at the bottom, indicated by an orange arrow pointing upwards. The horizontal axis is labeled 'Ease of Implementation' with 'Easy' on the left and 'Difficult' on the right, indicated by a green arrow pointing to the right. The matrix is divided into four quadrants by a horizontal and a vertical line. The top-left quadrant (High Impact, Easy Implementation) contains a list of five countermeasures. The top-right quadrant (High Impact, Difficult Implementation) contains a list of four countermeasures. The bottom-left quadrant (Low Impact, Easy Implementation) is empty. The bottom-right quadrant (Low Impact, Difficult Implementation) contains a list of two countermeasures.

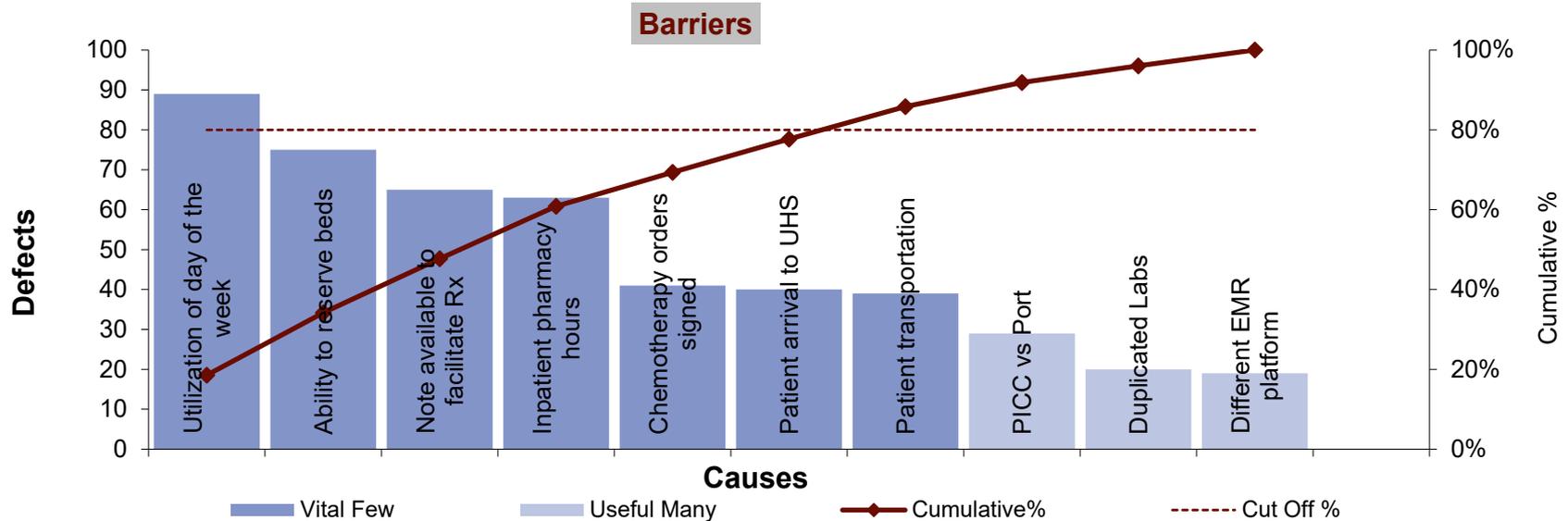
High	<ul style="list-style-type: none">• Extend the utilization of working days of the week• Notes available to facilitate treatment• Avoiding duplicated labs• Have chemo orders signed	<ul style="list-style-type: none">• Ability to reserve beds• Pharmacy hours• Patient transportation• Patient arrival
Low		<ul style="list-style-type: none">• PICC vs Port• Different EPIC platform (no interface)
	Easy	Difficult

Ease of Implementation

Cause and Effect diagram



Process Measure Diagnostic Data



Process Measure

Diagnostic data summary

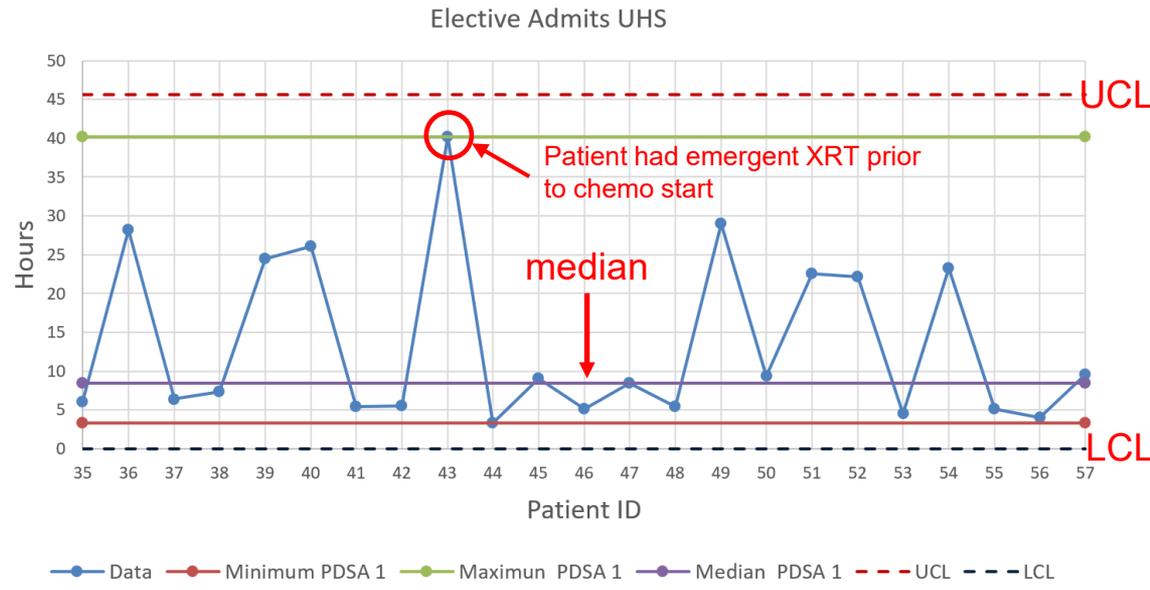
Item	Description
Measure:	Time from admission to UHS to time of chemotherapy initiation.
Patient population: <i>(Exclusions, if any)</i>	Patients seen at MCC and electively admitted to UHS for chemotherapy. 18 y.o and older
Calculation methodology: <i>(i.e. numerator & denominator)</i>	(Time of administration of chemo – Time of arrival to hospital) on each elective admit / # of patients
Data source:	EMR
Data collection frequency:	2021 data on monthly basis
Data limitations: <i>(if applicable)</i>	Manual abstraction Limited sample

Test of Change PDSA Plan

Date	PDSA Cycle	PDSA Description
03/12/21 – 03/31/21	1	Reserve beds for elective admits on Mondays and Tuesdays
04/01/21 – 04/30/21	2	<ul style="list-style-type: none">• “OK” note from inpatient to give chemotherapy• Distribute patients uniformly throughout all working days of the week

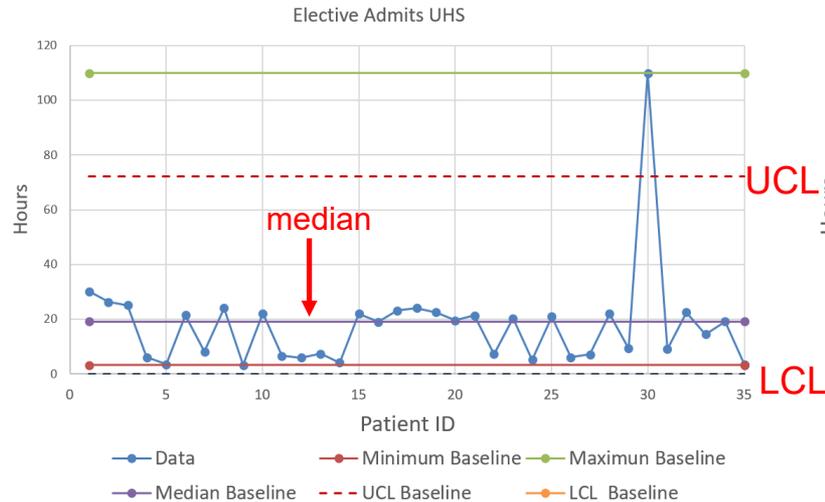
Change Data PDSA 1 / March 2021 X Chart

- Minimum 3.3h
- Maximum 40.2h
- Median 8.5h

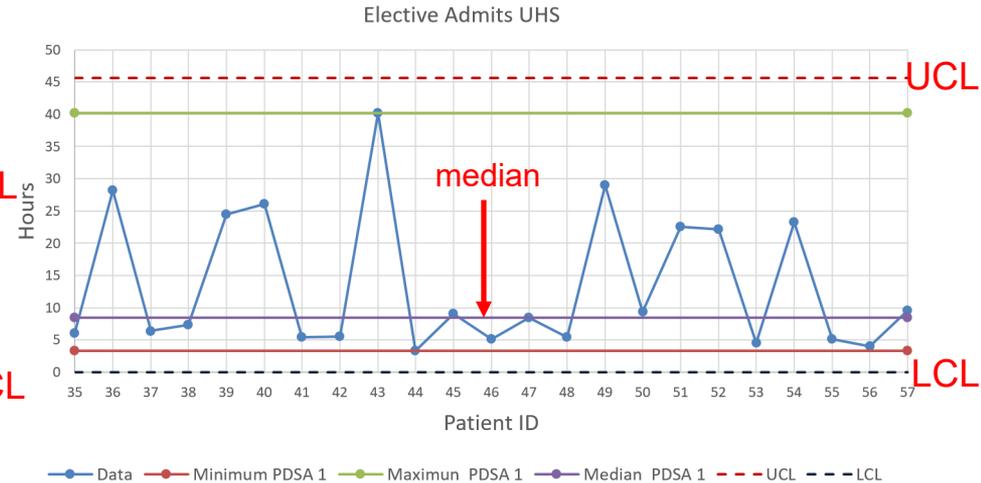


Outcome Measure

Baseline / X Chart

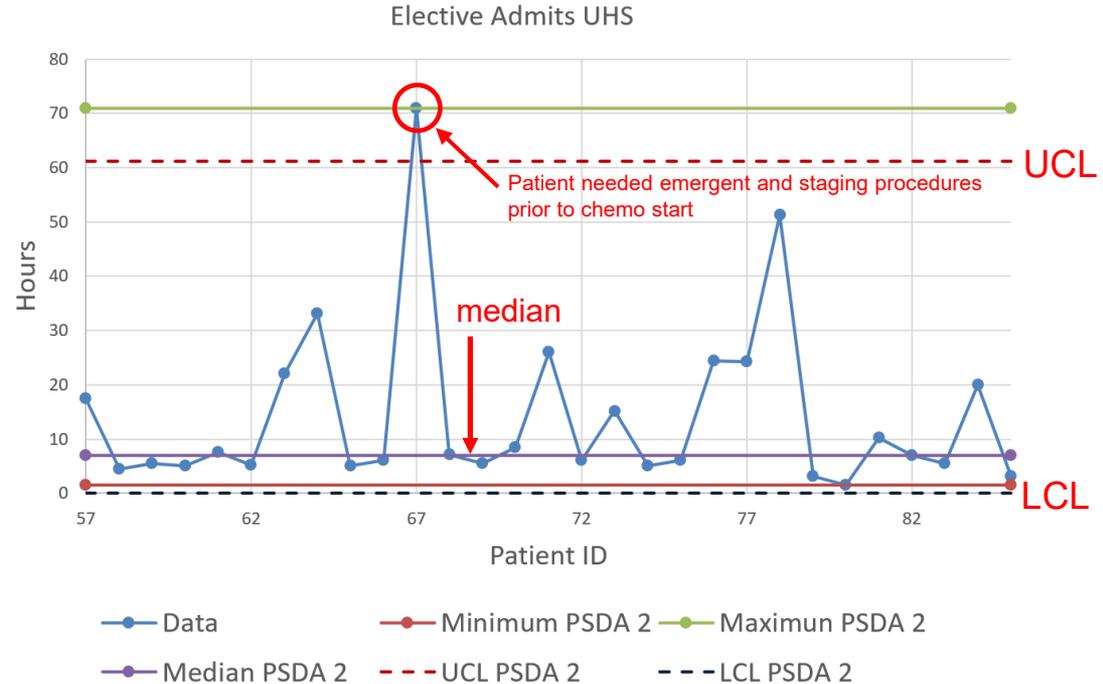


PDSA 1 / X Chart



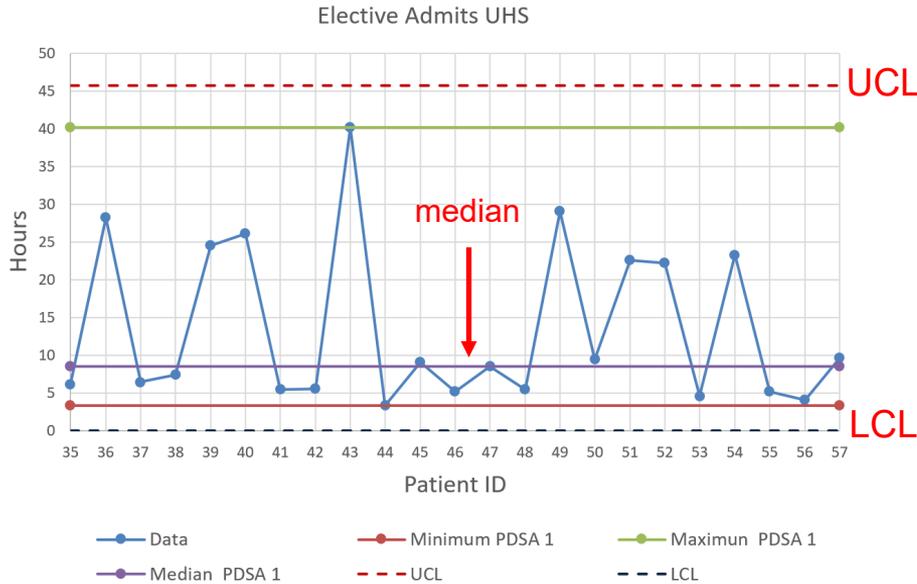
Change Data PSDA 2 / April 2021 X Chart

- Minimum 1.52h
- Maximum 71 h
- Median 7.03h

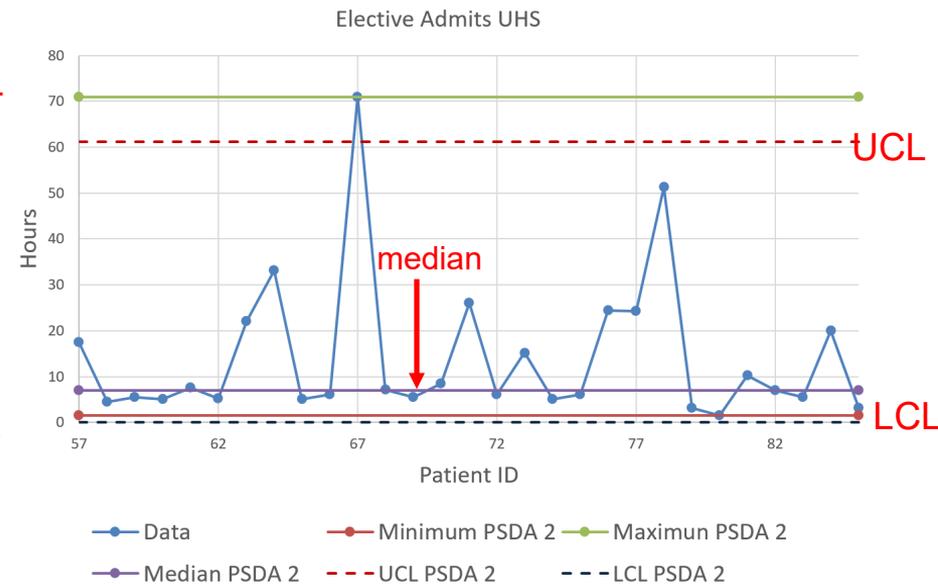


Outcome Measure

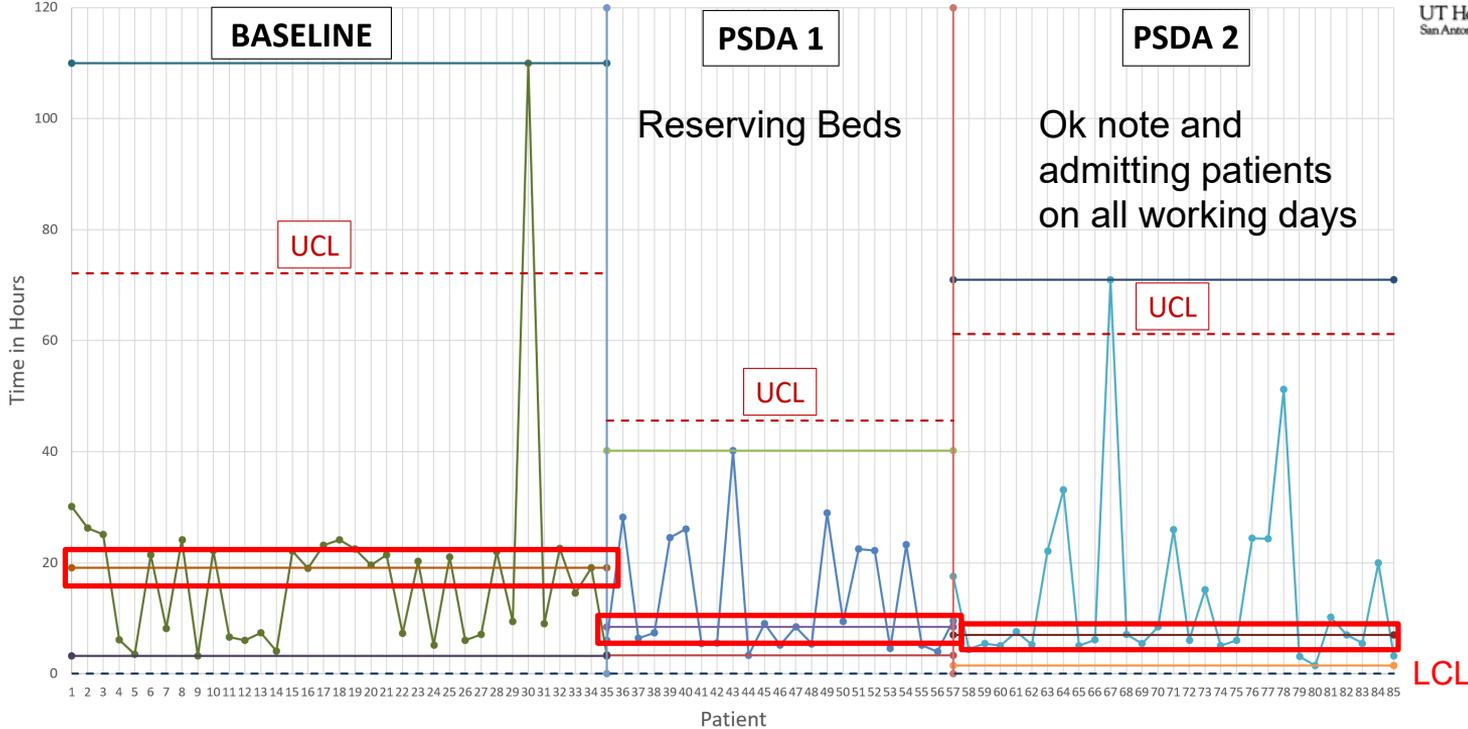
PDSA 1 / X Chart



PDSA 2 / X Chart



Outcome Measure / March 2019 – April 2021 / X Chart



- Data PSDA 1
- Minimum PSDA 1
- Maximun PSDA 1
- Median PSDA 1
- Data PSDA 2
- Minimum PSDA 2
- Maximun PSDA 2
- Median PSDA 2
- Data Baseline
- Minimum Baseline
- Maximun Baseline
- Median Baseline
- - - UCL
- - - LCL

Test of Change PDSA Plan

Date	PDSA Cycle	PDSA Description	Result	Action Step
03/12/21 – 03/31/21	1	Reserve beds for elective admits on Mondays and Tuesdays	Improvement	Adopt
04/01/21 – 04/30/21	2	<ul style="list-style-type: none"> • “OK” note from inpatient to give chemotherapy • Distribute patients homogeneously throughout all working days of the week 	Modest Improvement	Adopt

Next steps Sustainability Plan

Next Steps	Owner
Continue to work with UHS leadership to get the ability to reserve beds for all working days.	Enrique Diaz / Kate Lathrop
Approach pharmacy leadership to work on more flexible / late cut-off time for chemotherapy mix.	Enrique Diaz / Gary Hill

Conclusions

- Over a 3-month period, we achieved our goal by reducing the median time from patient arrival to initiating chemotherapy from **19.4 hours to 7.3 hours.**
- The biggest impact was achieved by the ability to reserve beds for elective admissions.
- Meaningful improvements in chemotherapy delays can only be achieved by the coordinated work of a multidisciplinary team and investment of key stakeholders.



Thank you