ASCO Quality Training Program

Decreasing Inpatient Chemotherapy Initiation Delays at Memorial Regional Hospital

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Institutional Overview

"The Memorial Cancer Institute is South Florida's preeminent comprehensive and integrated cancer healthcare system, using our unique model for the prevention, treatment, and research of cancer. Delivering outstanding outcomes, we will be both nationally and internationally recognized for the safe, compassionate, and innovative care we provide to our patients and their families during treatment and through survivorship."

Overall Services

Malignant Hematology and Cellular Therapy
Imaging Services
Surgical Oncology
Medical Oncology
Radiation Oncology
Integrative Medicine
Palliative Care
Pain Management
Psychology
Supportive Care Services

Institutional Overview

- Memorial Cancer Institute is a Quality Oncology Practice Initiative certified institution.
- In 2017, Memorial Cancer Institute established a partnership with Moffitt.
- There are 4 institutes located between Broward and Dade county, servings as one of the largest cancer institutes in Florida.
- In all of the Memorial Cancer Institute clinics there were ~71,000 visits in the FY19 of which ~5,400 were new patients.

Team members

Team Leader:

Michel Vulfovich, MD - Medical Director, Quality Initiatives Memorial Cancer Institute

Team Members:

- Core Team Members:
  - Matthew Salzberg, MD – Medical Oncologist
  - Khang Pham, PharmD – Director of Clinical Oncology Pharmacy
  - Marie Louis-Jeune, PharmD, BCPS - Pharmacy Safety and Quality Coordinator
- Extended Team Members:
  - Jessica Jacques, MSN, APRN, FNP-BC, AOCNP - Advanced Practice Provider Supervisor
  - Vlonda Lanier, RN – MRH 8 Central Nurse Manager

Project Sponsor:

Vedner Guerrier, MBA – Vice President, Oncology Services

Improvement Coach:

Amy Morris, PharmD - Clinical Pharmacist, Hematology/Oncology

Kelly King, MBA, CTR – Director, Quality & Patient Safety

Problem Statement

Between June and December 2019, hematology-oncology patients admitted for elective chemotherapy at Memorial Regional Hospital had a median delay of 10 hours to initiate chemotherapy infusion from time of admission. This contributes to increased cost to the healthcare system and patient dissatisfaction.

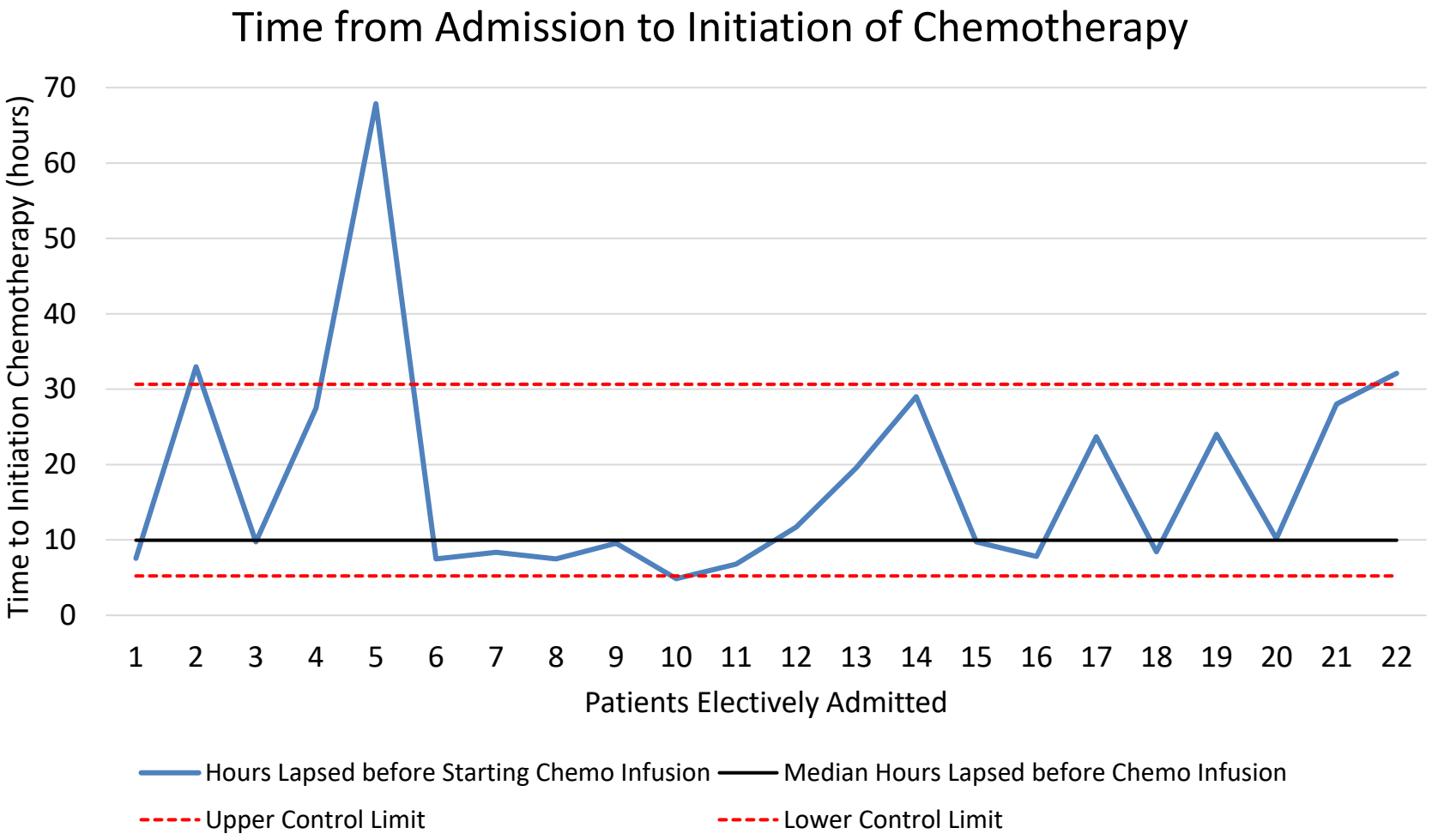
Outcome Measure

Baseline data summary

Item	Description
Measure:	Time from admission to initiation of chemotherapy in Hem/Onc patients.
Patient population: *(Exclusions, if any)*	Patients who are electively admitted for chemotherapy. *Patients electively admitted by non MCI oncologist.*
Calculation methodology: *(i.e. numerator & denominator)*	Time stamp of admission to time stamp of 1st IV chemotherapy charted in the EHR MAR.
Data source:	EPIC EHR Software DoseEdge Pharmacy IV Workflow Software
Data collection frequency:	Weekly
Data limitations: *(if applicable)*	Electively admitted patients may develop neutropenia or have other clinical reasons for chemotherapy delay.

Outcome Measure

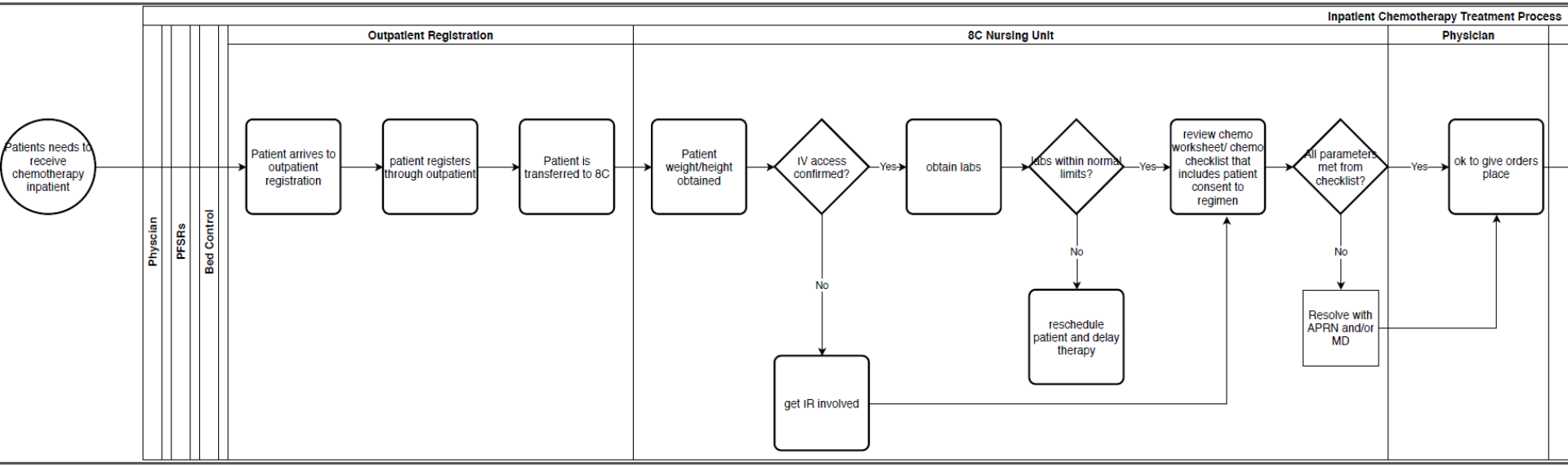
Baseline data



Aim Statement

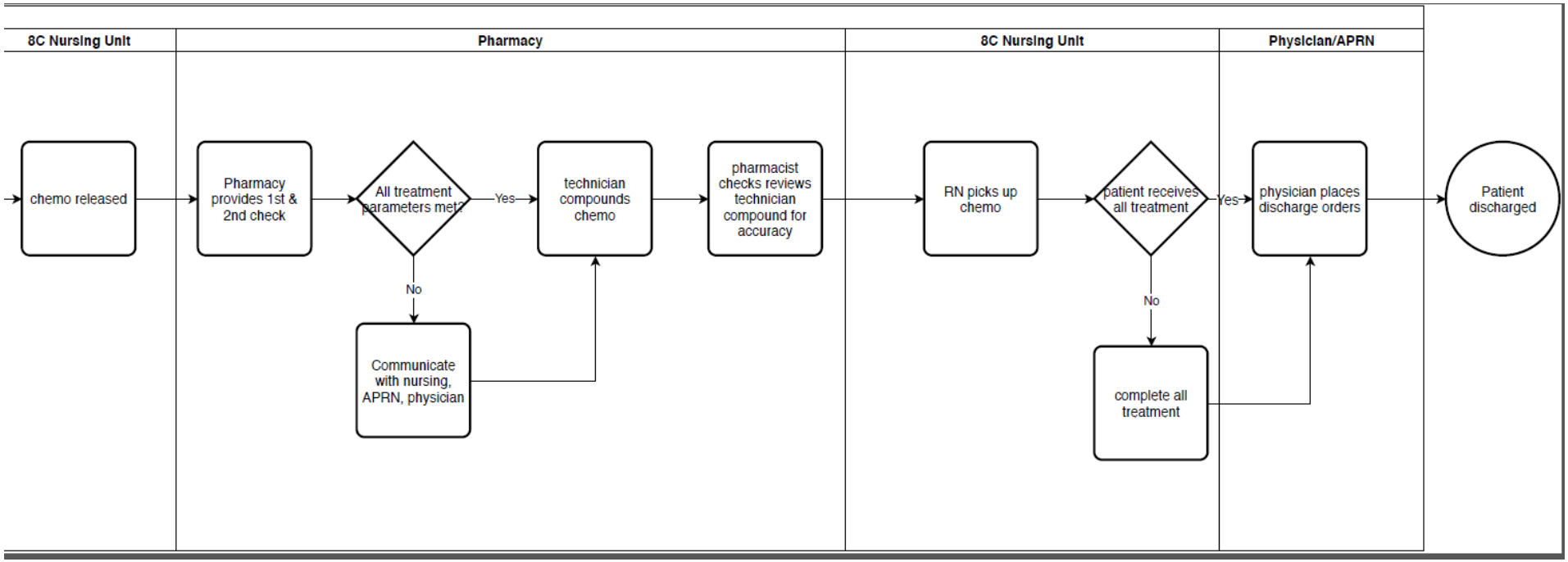
By September 2020, elective inpatient median time from admission to chemotherapy initiation at Memorial Regional Hospital will be reduced by 20%.

Process map



MDs are under the impression pertinent labs are complete prior to admission, but 100% of the cases reviewed identified labs ordered and completed after admission.

Process map



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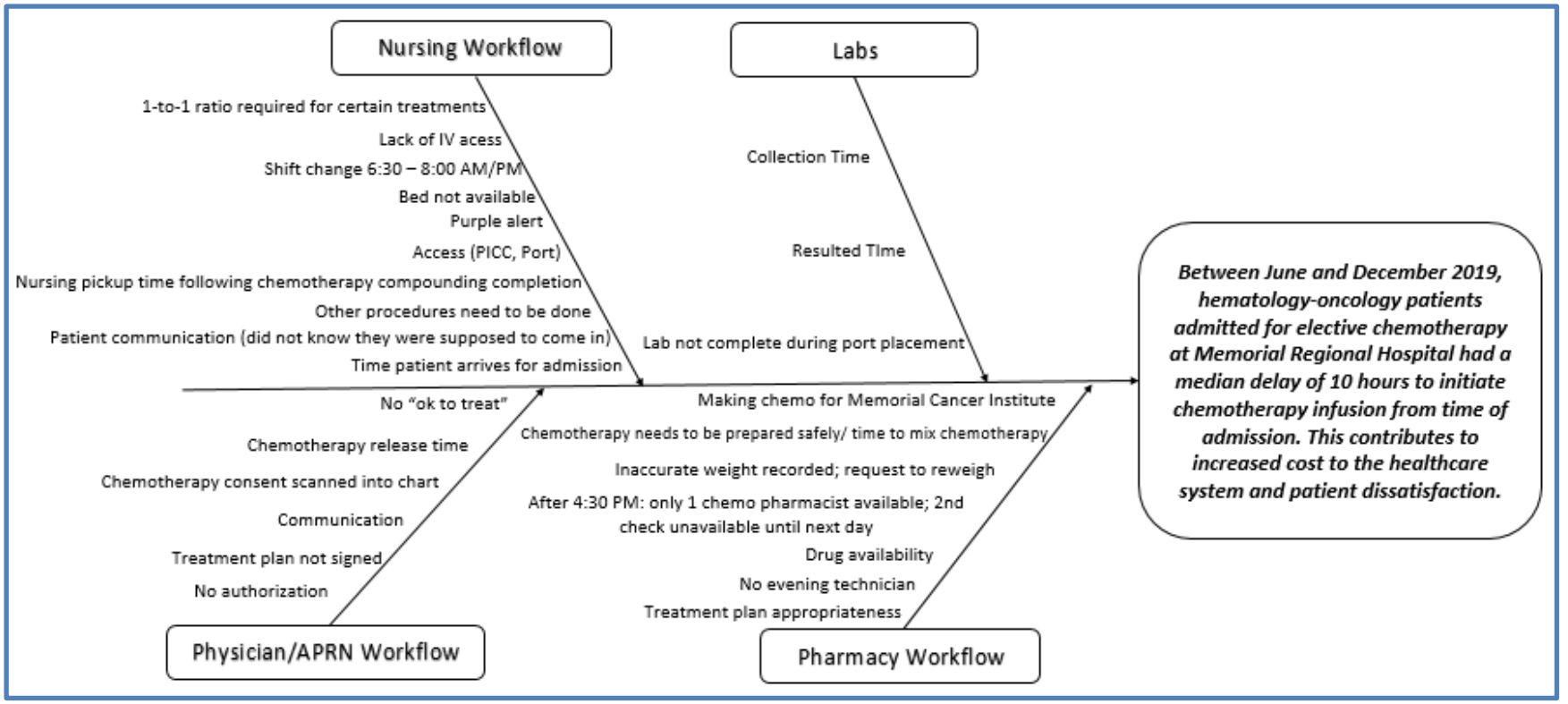
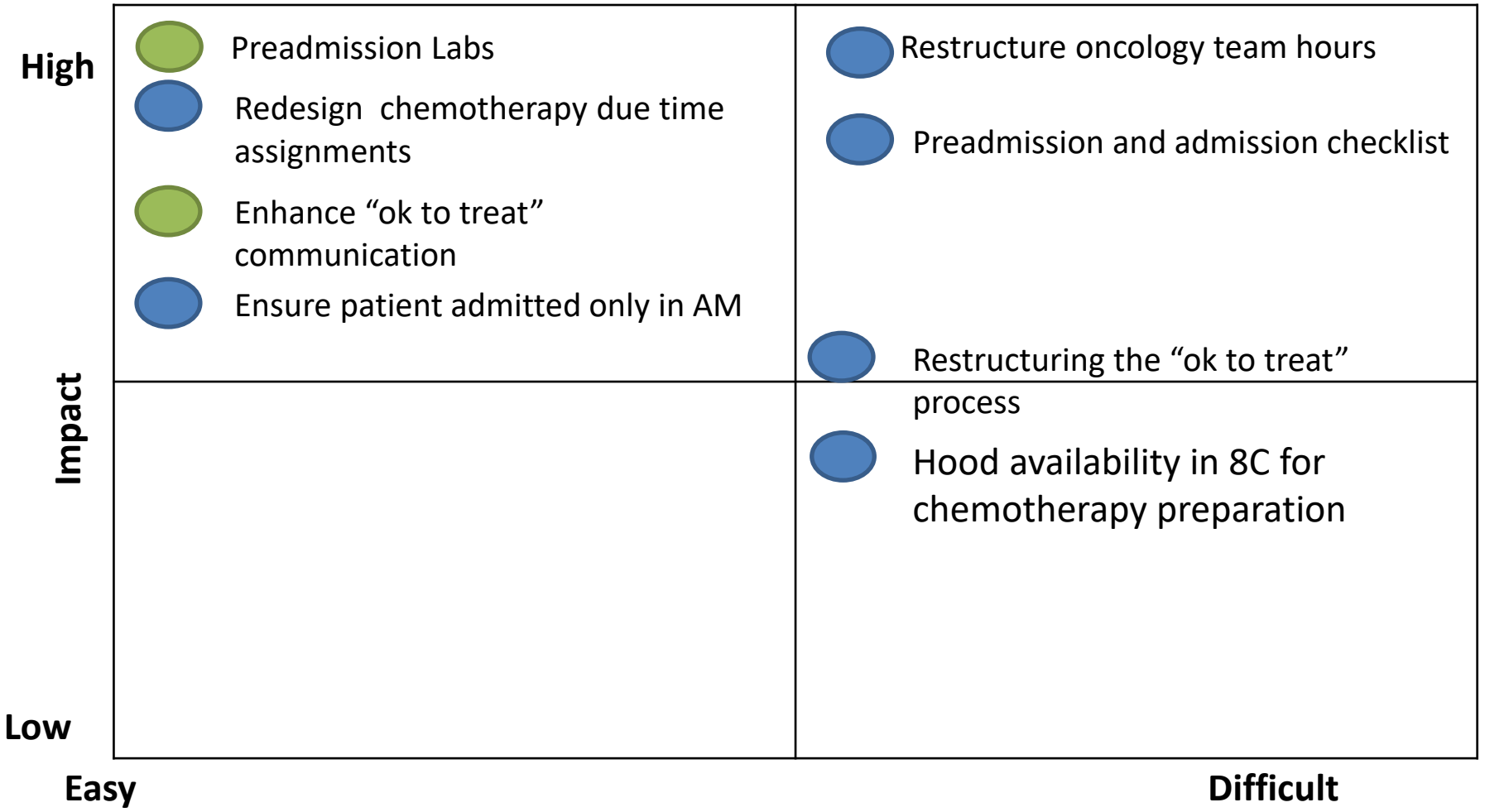
Cause and Effect diagram



Key decision points obtained during the afternoon hours such as, lab resulted time and ok to treat, have led to delays into the following day.

Priority / Pay-off Matrix

Countermeasures



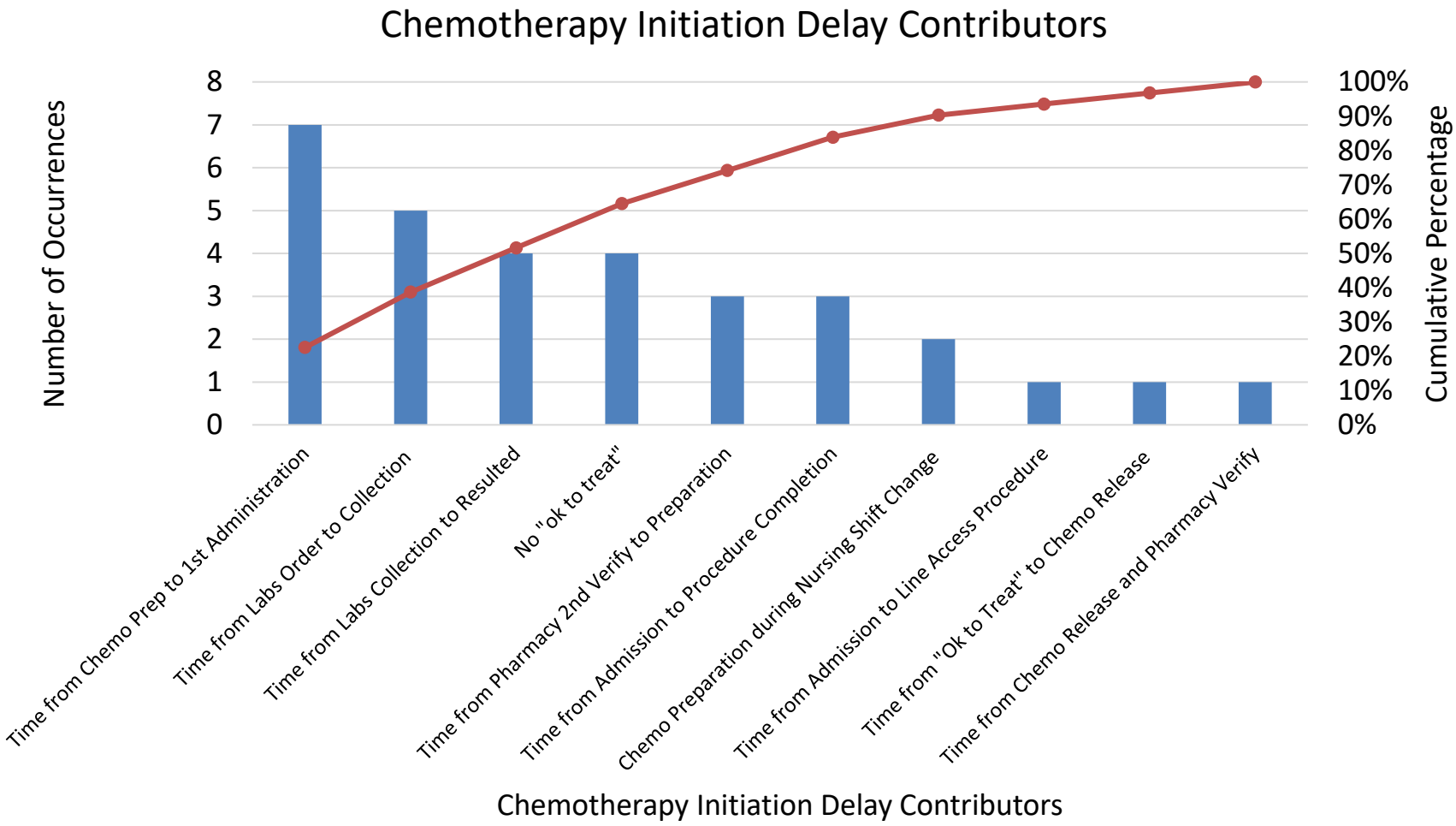
Process Measure

Diagnostic Data summary

Item	Description
Measure:	Longest time lapse between each process leading to the administration of chemotherapy
Patient population: *(Exclusions, if any)*	Patients who are electively admitted for chemotherapy in 8C
Calculation methodology: *(i.e. numerator & denominator)*	Time stamp between each process from admission to administration of 1st IV chemotherapy. Longest process for each patient was counted as an occurrence/contributor to delay.
Data source:	EPIC EHR Software DoseEdge Pharmacy IV Workflow Software
Data collection frequency:	Weekly
Data limitations: *(if applicable)*	Identifying if the exact time patient was scheduled to be admitted vs the time the patient arrived. A target goal time has not been identified to utilize as a reference.

Process Measure

Diagnostic Data

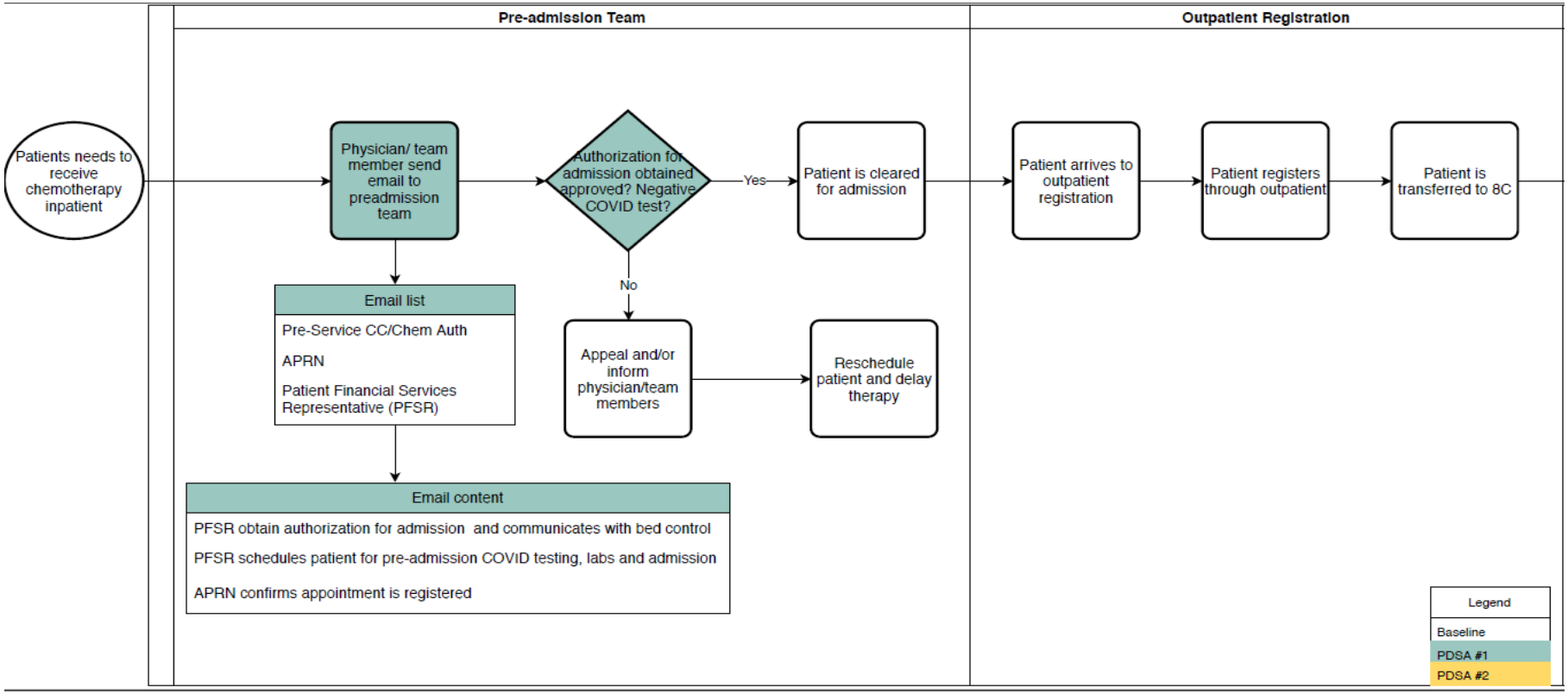


Test of Change

PDSA Plan

Date	PDSA Description	Result
March 2020 – August 2020	Obtain labs 24-48 hours prior to admission.	Reduction in lab contribution to delay in chemotherapy start except for patients requiring day of labs due to fluctuating values. Reduction in number of samples due to COVID-19.
August 2020 - current	Enhance “ok to treat” communication.	*In progress*

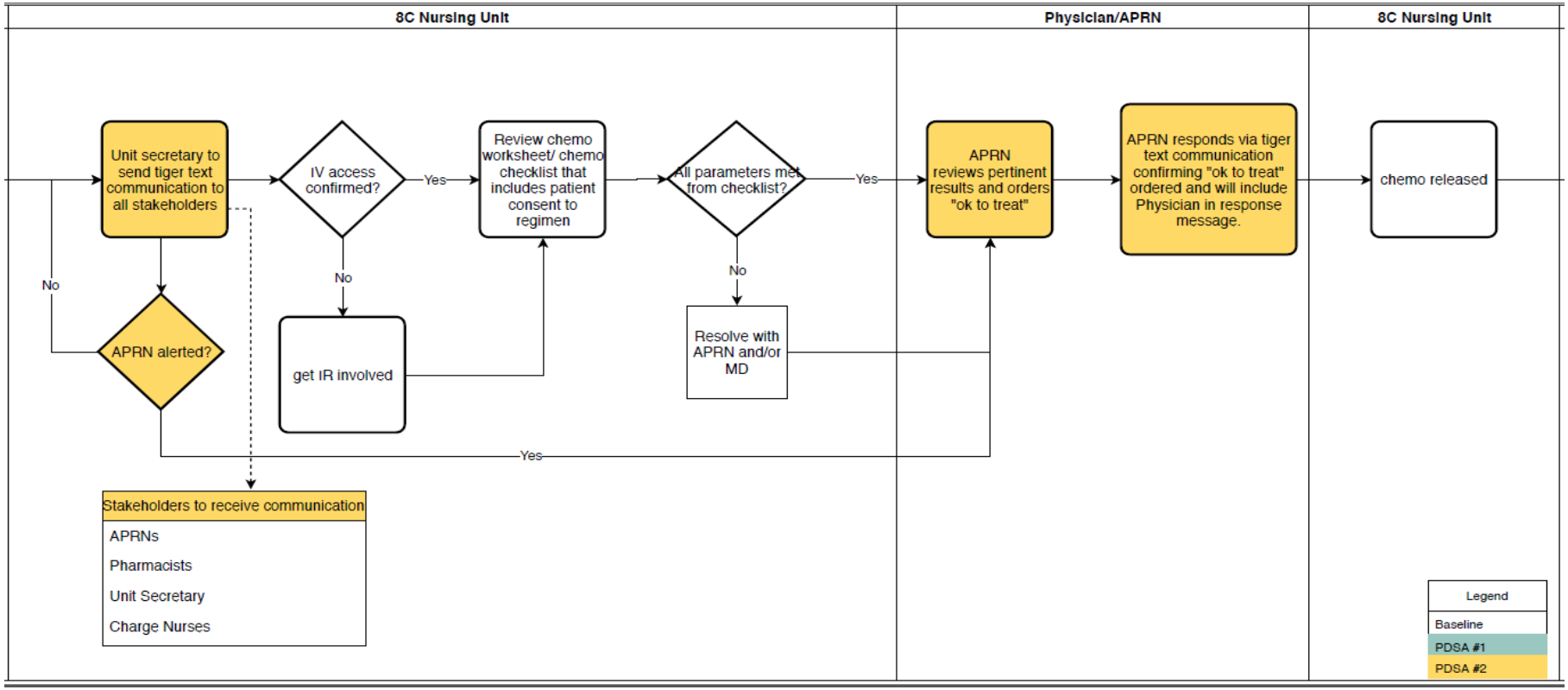
Ideal Process Map



Pre-admission communication currently includes a manual process.

During PDSA # 1 pre-admission labs being order only included CBC w/ diff and CMP

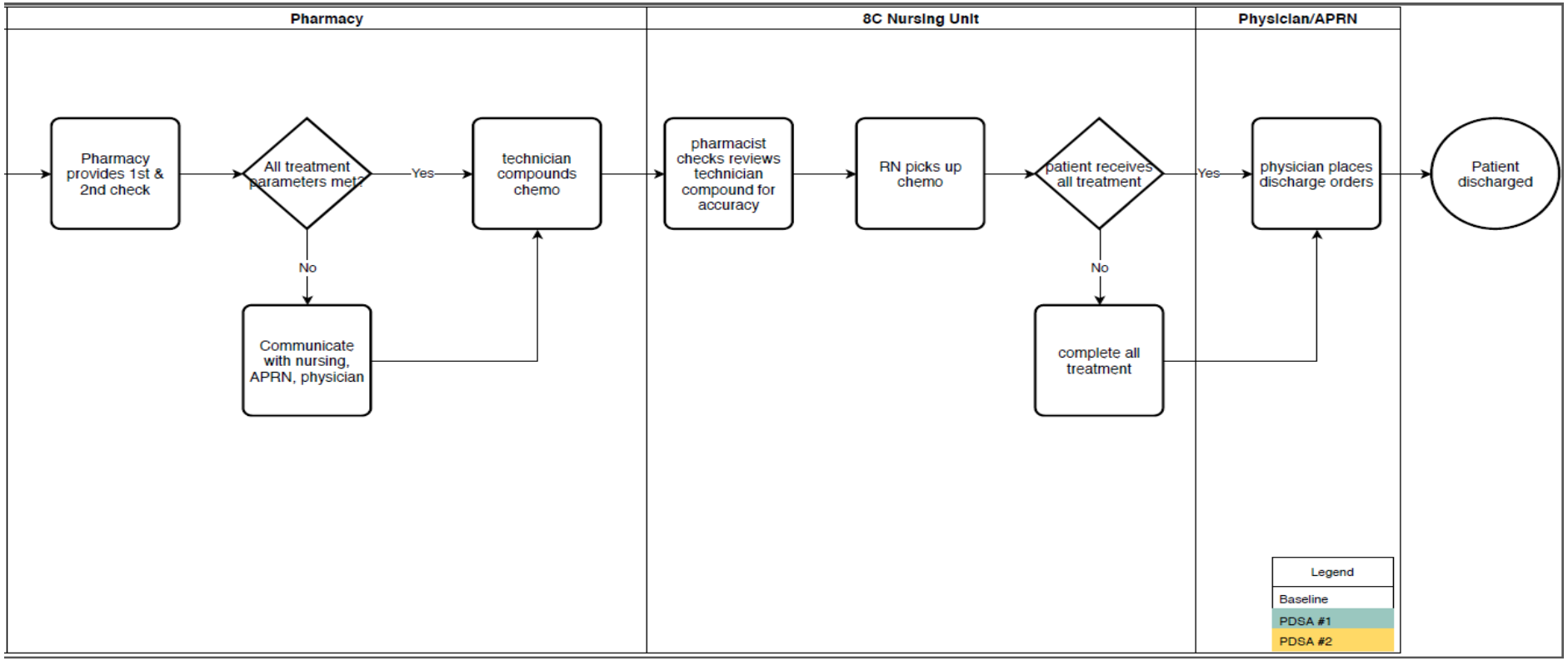
Ideal Process Map



PDSA #2 incorporated an extra step, that is manual, once the patient arrives.

However, it encompass the multidisclipinary team in this to be alerted once the patient arrives.

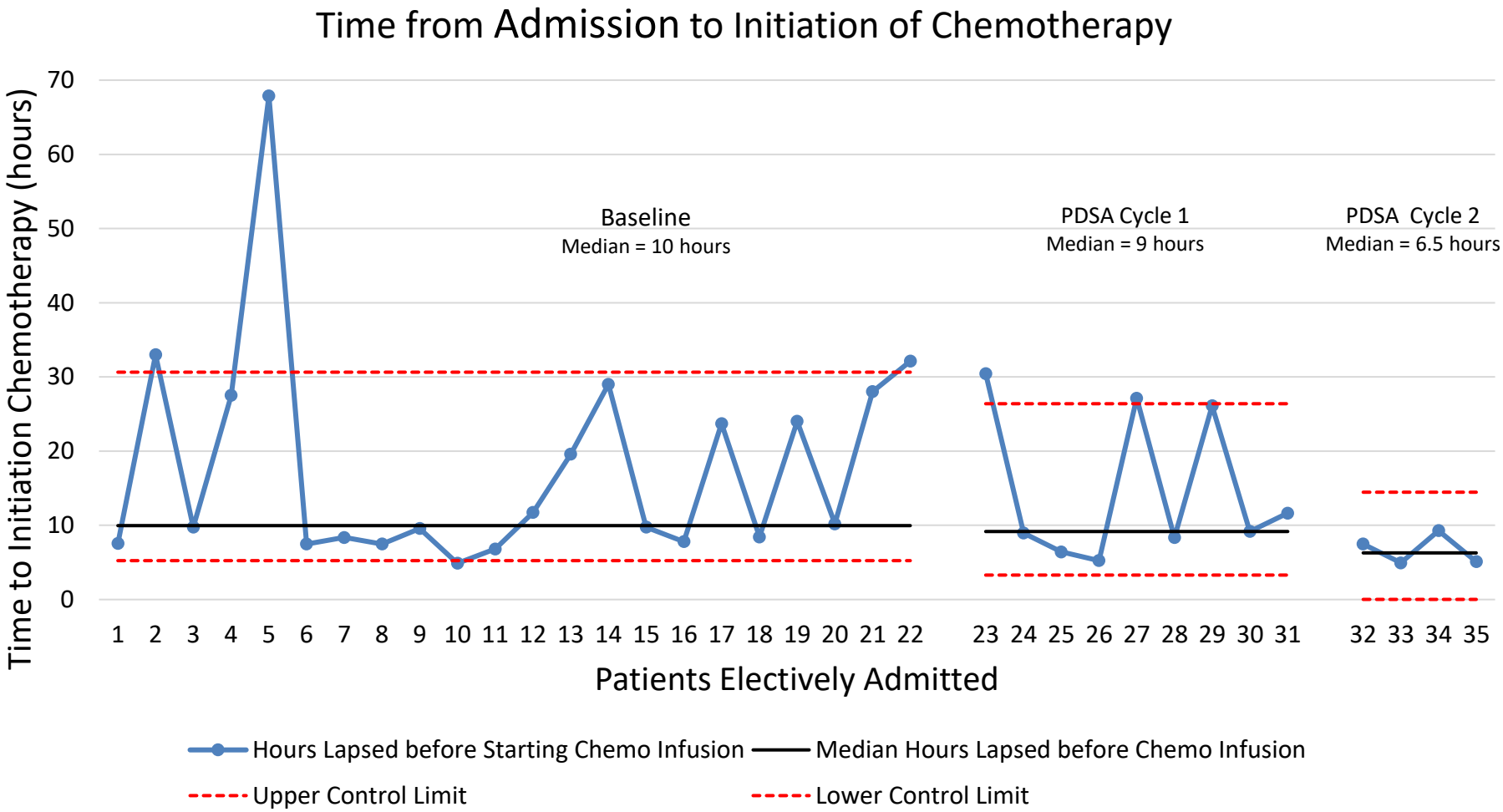
Ideal Process Map



Although, the Pareto chart identified pharmacy as a contributor to the delays, we found that focusing on the processes prior to order verification potentially provided a high impact to reach our aim.

Outcome Measure

Change Data



Next steps

Sustainability Plan

Next Steps	Owner
On-going evaluation of obtaining pre-admission labs. Eliminate manual process of scheduling patient for pre-admission labs. Identify method to incorporate standing orders into BEACON plan.	BEACON/IT
Physician buy-in	Medical Director, Quality Initiatives
Adhering to policy PH 80-01 on efficiently obtaining “ok to treat”	Pharmacy Clinical Manager
Obtaining and measuring the data (data mining)	IT

Conclusion

- As PDSA #2 is still in progress, data collection continues to determine if results are robust and if we have achieved our aim of 20% reduction in time to chemotherapy initiation from admission time.
- Contributions of chemotherapy delays were identified in various steps of the current process.
- While studying/acting on one of the major contributors, delays continued to be seen in other aspects that fall within the 80%.
- With many of the process improvements incorporated relying on manual input, the sustainability plan will focus on eliminating the manual and introducing electronic processes.