SUMMER TRAINING

at

AMERICAN ONCOLOGY INSTITUTE, JAMMU

(June 1st to July 21st, 2021)

A Report

by

Devanshi Gupta

MBA Hospital & Health Management

2020-2021

Indian Institute of Health Management Research

AMERICAN ONCOLOGY INSTITUTE
PRECISION CANCER CARE

AOI/Intern/2021-22/033 **Dated: 21st July 2021**

TO WHOMSOEVER IT MAY CONCERN

This is to certify that Ms. Devanshi Gupta D/O Sh. Late.Sh. Surinder Gupta student of Indian Institute of Health Management Research, Jaipur (IIHMR) has successfully completed her internship in the department of Operations from **1st June 2021 to 20th July 2021.**

During her training / Internship period, she completed the following projects: -

1. Turn around time of Chemotherapy patients.
2. Internal File Audit for MRD files for non-compliance.
3. Study on GDA effectiveness in IPD department.
4. Patient Satisfaction survey in daycare chemotherapy ward.

During her internship period she has met the expectation of the organization and has been a dedicated and sincere worker.

We wish her all the best for her future endeavors, and we are sure she will be an asset to any organization that she joins.

For Cancer Treatment Services Hyderabad Private Limited.

Dr. Mayank Puri
Unit Head
American Oncology Institute
At ASCOMS Hospital, Jammu

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ACKNOWLEDGEMENT

With great satisfaction, I express my sincere appreciation to **Dr. Dhirendra Kumar** (Dean, IIHMR University) and **Mr. Anshul Goyal** (Placement & Training Head, IIHMR University) along with his entire placement crew for giving me the lucky break to undergo training at **American Oncology Institute, Jammu.**
I am extremely honor-bound to all the professionals and staff members at **American Oncology Institute** for educating me earnestly and committing their invaluable time to me during the entire summer training.

I am sincerely appreciative to **Dr. Nikita Dutta, Operations Manager**, for being my mentor in the entire training process, and nurturing me with first rate possibilities to acquire insights about management of a healthcare organization by customizing right exposure of all the departments of this cancer unit. Her robust perseverance in operations widened my learning and helped me convert my academic knowledge to a more realistic one with significant experience, giving me the boost to excel in the major responsibilities.
Big thanks to **Dr. Mayank Puri, Unit Head, American Oncology Institute** for his prompt pointers and invaluably efficacious suggestions during my tenure at AOI.

I am additionally thankful to all the heads in each department as without their lively co-operation the study could no longer had been completed.

Lastly, I would thank the entire system of IIHMR, for providing me education even in the time of the pandemic. Sincere thanks to my mentor **Dr. Arindam Das, Associate Professor, Associate Dean (Health Management), Chairperson (Ph D program), IIHMR University, Jaipur for** his valuable lessons and constant superintendency. Without him, I would not have been able to recognize my true spirit and how to manage this true self to get the most of everything. A great thanks to my entire batch 2020-22, for providing me moral, mental and emotional growth.

Table of content

ABBREVATIONS

- **C**: COMPLIANCE
- **PC**: PARTIAL COMPLIANCE
- **NC:** NON-COMPLIANCE
- **NA:** NOT APPLICABLE
- **TAT:** TURN AROUND TIME
- **LAMA:** LEAVE AGAINST MEDICAL ADVICE
- **DAMA:** DISCHARGE AGAINST MEDICAL ADVICE
- **ICU:** INTENSIVE CARE UNIT
- **OT:** OPERATION THEATRE
- **GDA:** GENERAL DUTY ASSISTANTS
- **PACU:** POST ANESTHESIA CARE UNIT
- **DY:** DAYCARE
- **IP:** IN-PATIENT
- **R.S.O:** RADIATIONS SAFETY OFFICER
- **MRN:** MEDICAL RECORD NUMBER
- **BIS:** BASIC INFORMATION SYSTEM

OBSERVATIONAL LEARNING

INTRODUCTION

Life does not stop when cancer strikes!

About The Hospital:

AOI with versatile team of doctors and cancer specific technologies is making a way towards new life for the cancer patients, following US standards for planning at various levels. It is guided by the experts in US for proper accuracy and efficiency of the treatment as per the body of individuals to combat side effects. It conducts weekly meets in India to ensure the best treatment of complex cancers, collectively come up with a solution and a plan pathway of treatment based on protocols followed by US and review the treatment and states periodically.

AOI, the pre-eminent cancer care centre across South Asia. It was assembled by a group of emerging oncologists at University of Pittsburgh Medical center, Us. The distinguished hospital has lengthened its community across the world with India and south Asia through its approach in treating innumerable patients via personalized treatment protocols. The personalized treatments helped us scatters our wings of precision care. Here, we believe that energy person at every level is responsible in providing precise treatment to our patients.

So, we have experienced nursing staff that is trained beyond their qualifications and experience, to treat oncological patients. Making them aware about patient's history let us deliver the care wholly to the innermost levels. We thrive in maintaining 1:4 ratio of Nurses for best support and wardship.

Our staff is well trained at examining the medical history of each patient for providing them the evidence-based treatment. Doctors team access this information to design a roadmap for specific patients differently. They access the US experts in planning the cure considering all the vitals, diagnosis and then estimating the time and common and rare toxicities of those treatments which helps us maintain and curb all the possible long-term effects timely. Hence, this voluminous group work in close coordination with the specialists around the world to help the deadly disease.

Environment at AOI is made patient centric to make them feel friendly and comfortable in acquiring the aid, all according to US benchmarks. AOI provides India with unique global equipment that helps in advance the currents versions and cure the patients in a better way following the same protocols as the top American Universities.

AOI, (Sidhra)Jammu is present positioned within the reachability of the entire Jammu to give access to all the needy patients in the area. This hospital includes the main treatment services for major cancer types i.e. Surgical Oncology, Medical Oncology, Nuclear medicines along with Radiation Oncology and the necessary diagnostic equipment in association with the ASCOMS hospital.

Vision

AOI was started with an aim to close the gap between standards of cancer care in South Asia and the Western World through transporting the rich lineage of its parent organization in offering Precision Cancer Care.

Mission

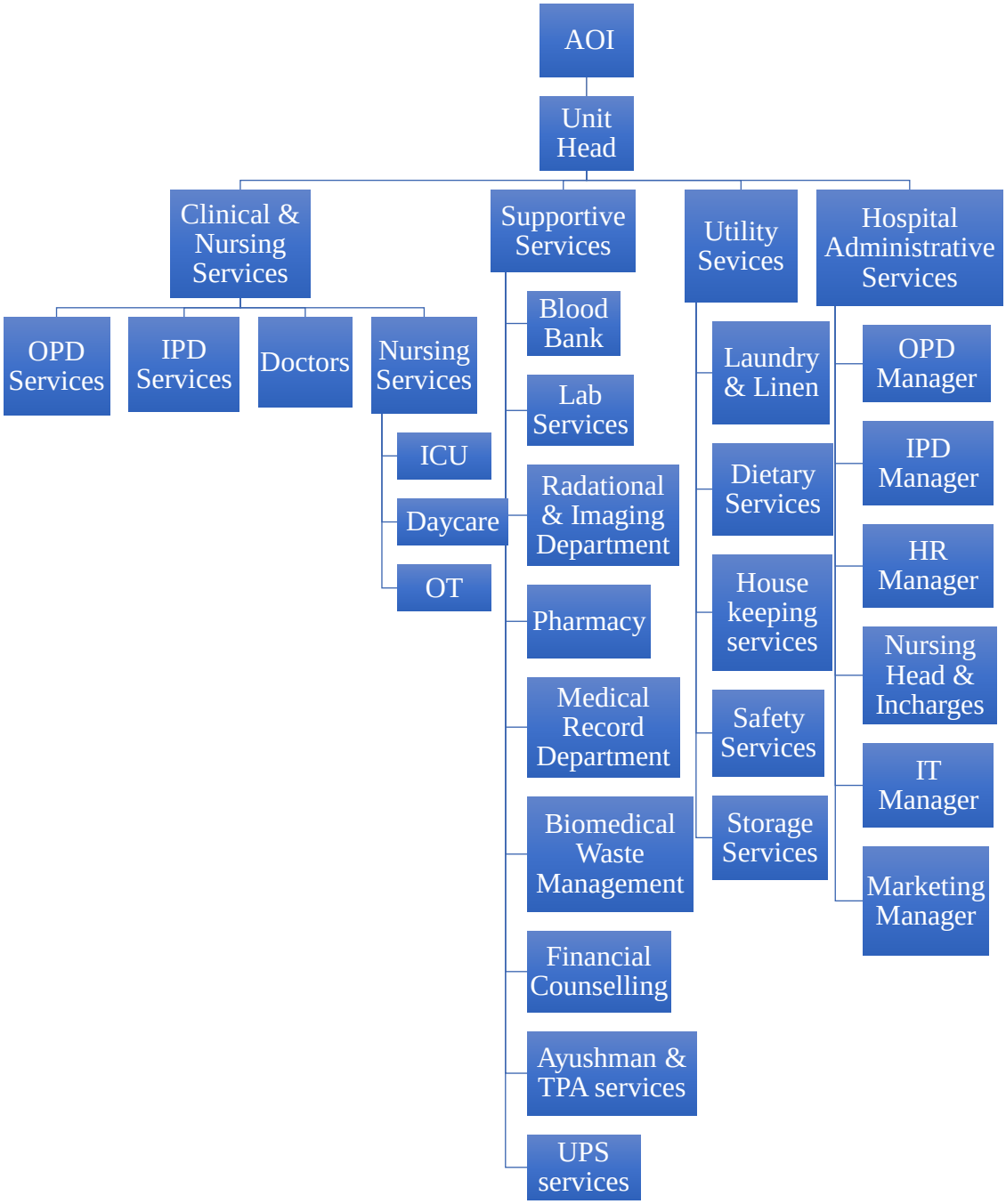
AOI's mission is to provide comprehensive cancer management that is powered by clinical excellence, world class technology as well as international pathways and protocols for treatment planning and execution, providing never-before quality in cancer care across South Asia.

MODE OF DATA COLLECTION

The data collection was done via discussions with the staffs present at each level, both primary as well as secondary data has been used in this entire process.

Primary data	Secondary data
This has been collected via daily observations and interactions within the unit staff.	This has been provided by the employees through their processes on the Medibus and Citrix software and by the site/brochures of the hospital. It was also collected through the trackers maintained by the staff.

ORGANIZATION HIERARCHY

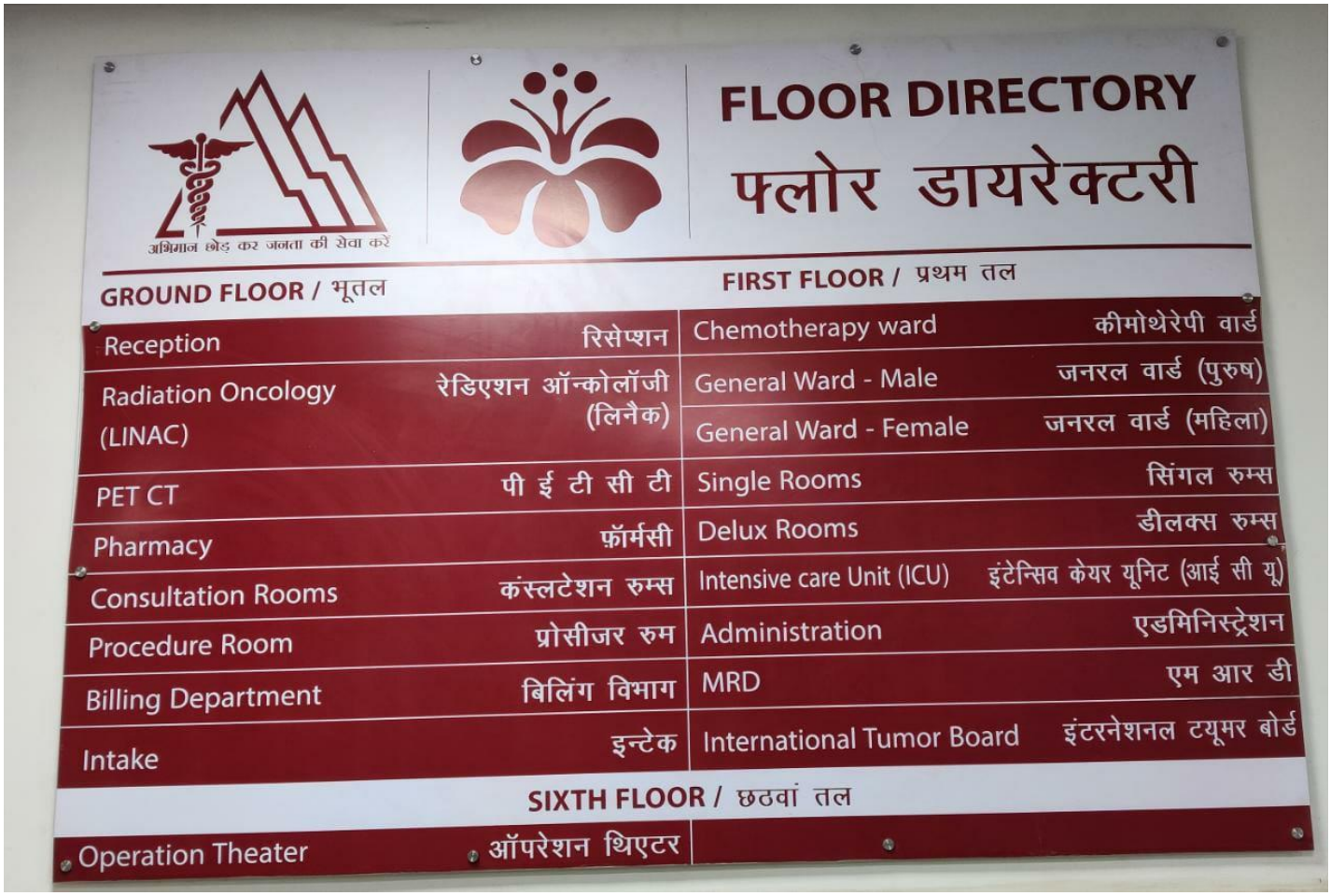


OBSERVATIONAL LEARNINGS

HOSPITAL LAYOUT

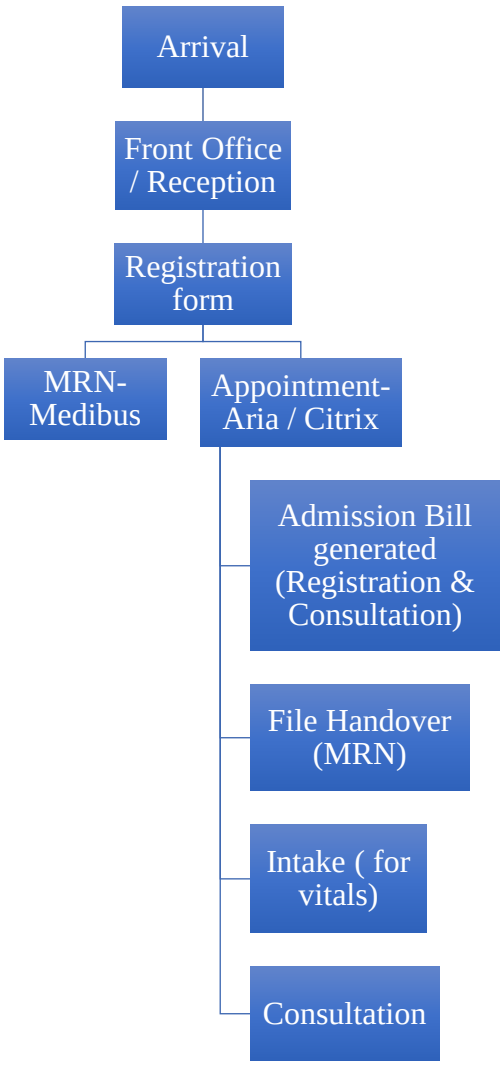
It is a 50 bedded hospital with 2 floors and one OT in the associated unit. Patient needs are given the foremost importance and they are provided with the best possible services within the premises. This flood directory is there in the OPD/mail entrance to provide patients with the introduction of the hospital and help them guide their way inside.

The staff uses 3 main languages: Hindi, English & Dogri (local language) to communicated vocally without any barrier to direct the patients/attendants.



RECEPTION DESK

On the first floor the reception desk takes care of all the patients who come for admission or consultation. The patient/attendant is provided with a registration form on their first arrival to take their necessary information and emergency contact numbers. MRN is generated in Medibus and then admission appointment is done in Citrix or Aria. Then the file with generated MRN is handed over to them with the admission bill. They are guided for their next process in their convenient language.

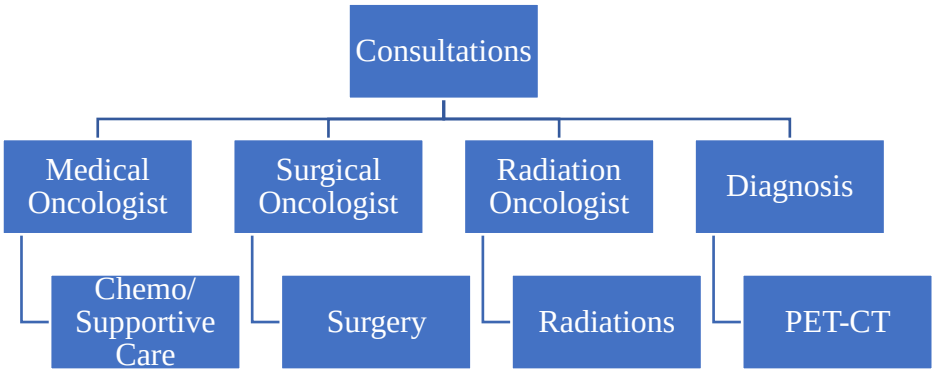


INTAKE

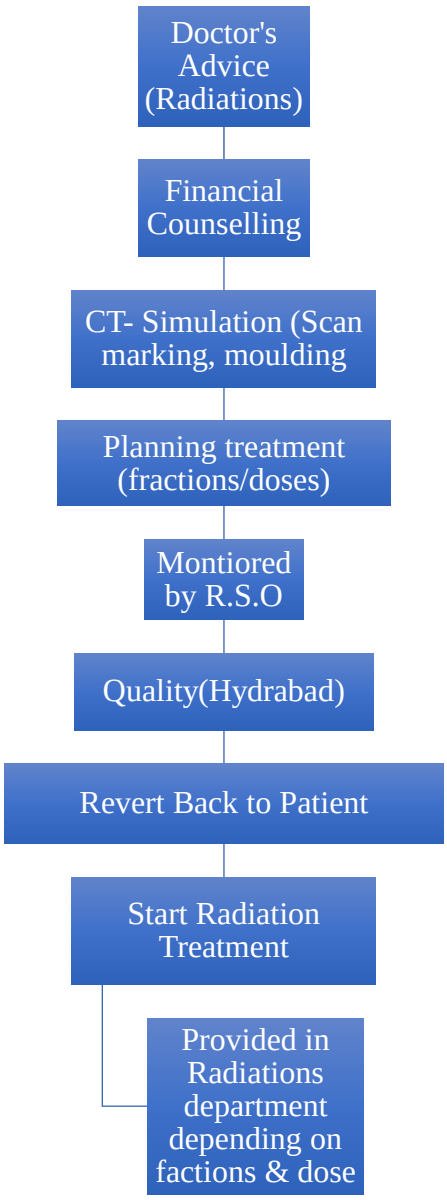
In intake all the vitals of the patient are checked for further information. The patients wait for their turn in OPD. The nurse calls the MRN and patient's history and necessary information is noted.

CONSULTATION ROOMS

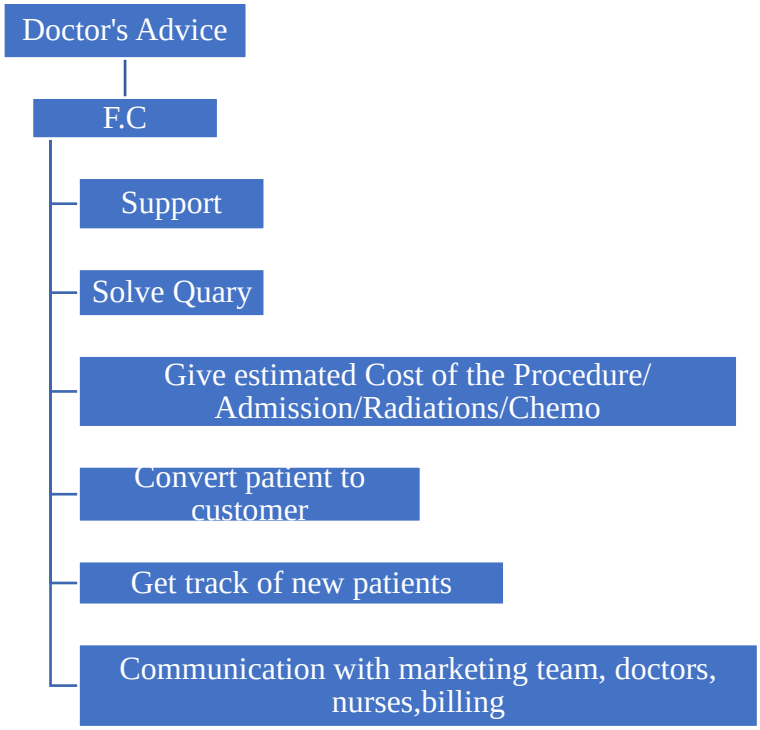
After intake patient is guided for their consultation with their scheduled doctor. Doctor accesses the necessary information and plans the patient's journey if something susceptible is observed.



PET-CT

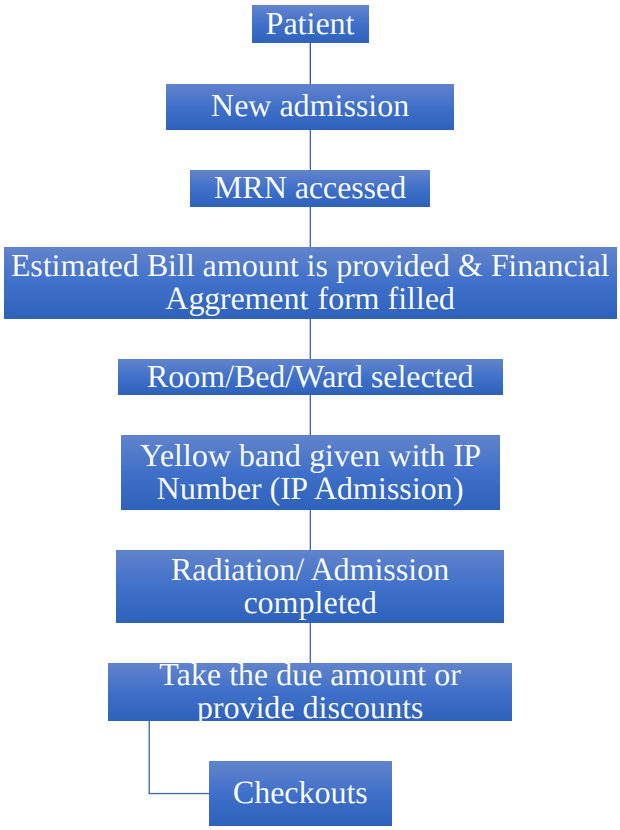


FINANCIAL COUNSELLING



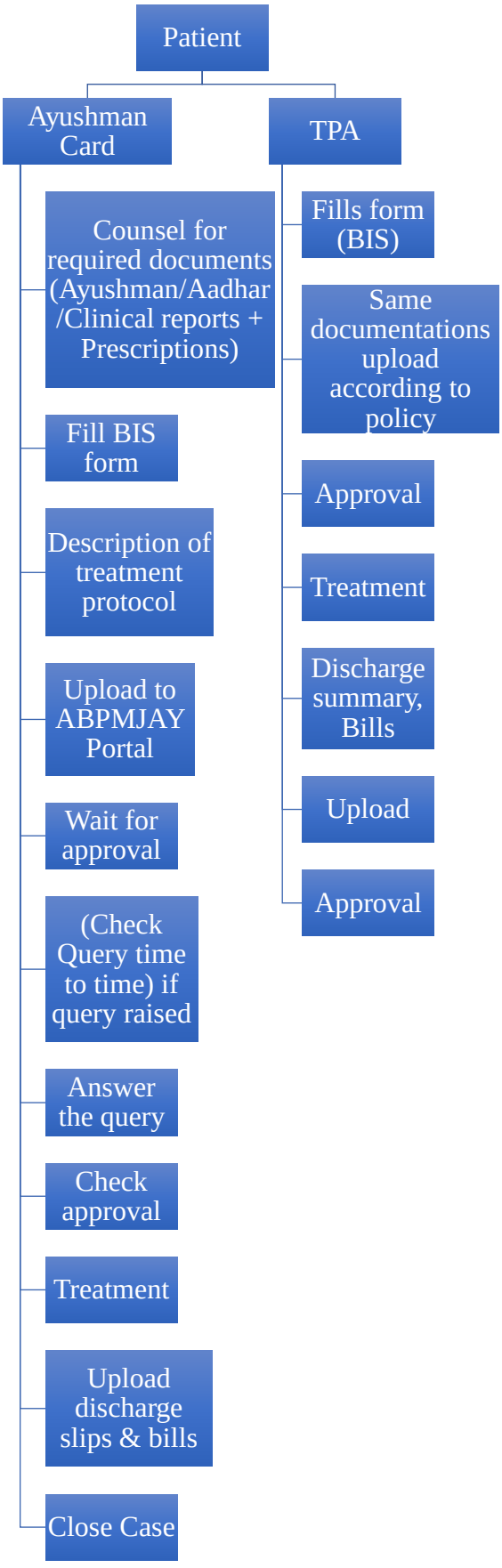
BILLING DEPT

Billing of all the patients whether it's a simple procedure/surgery, chemotherapy & radiations is done under this department.

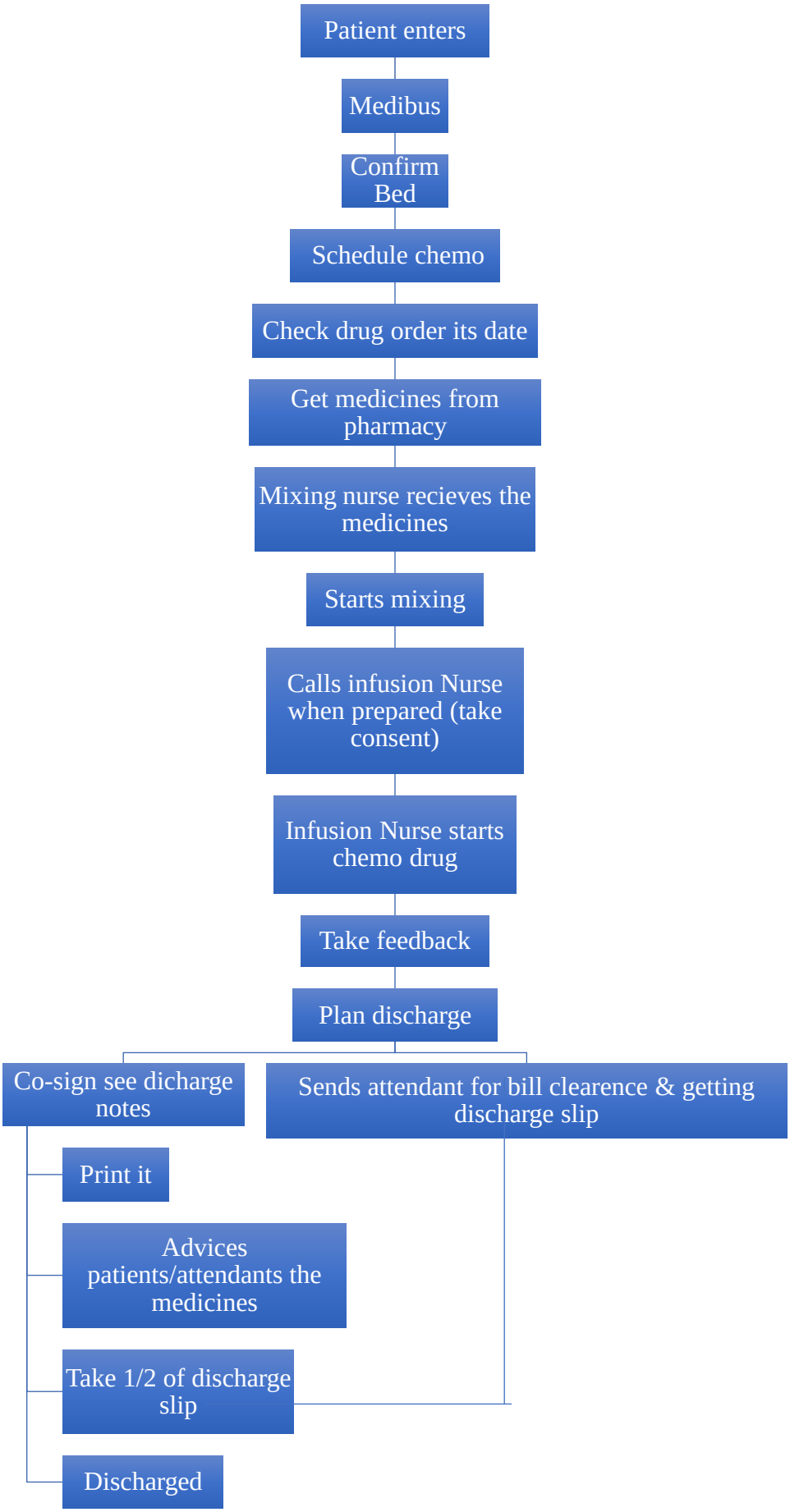


AYUSHMAN BHARAT/ TPA

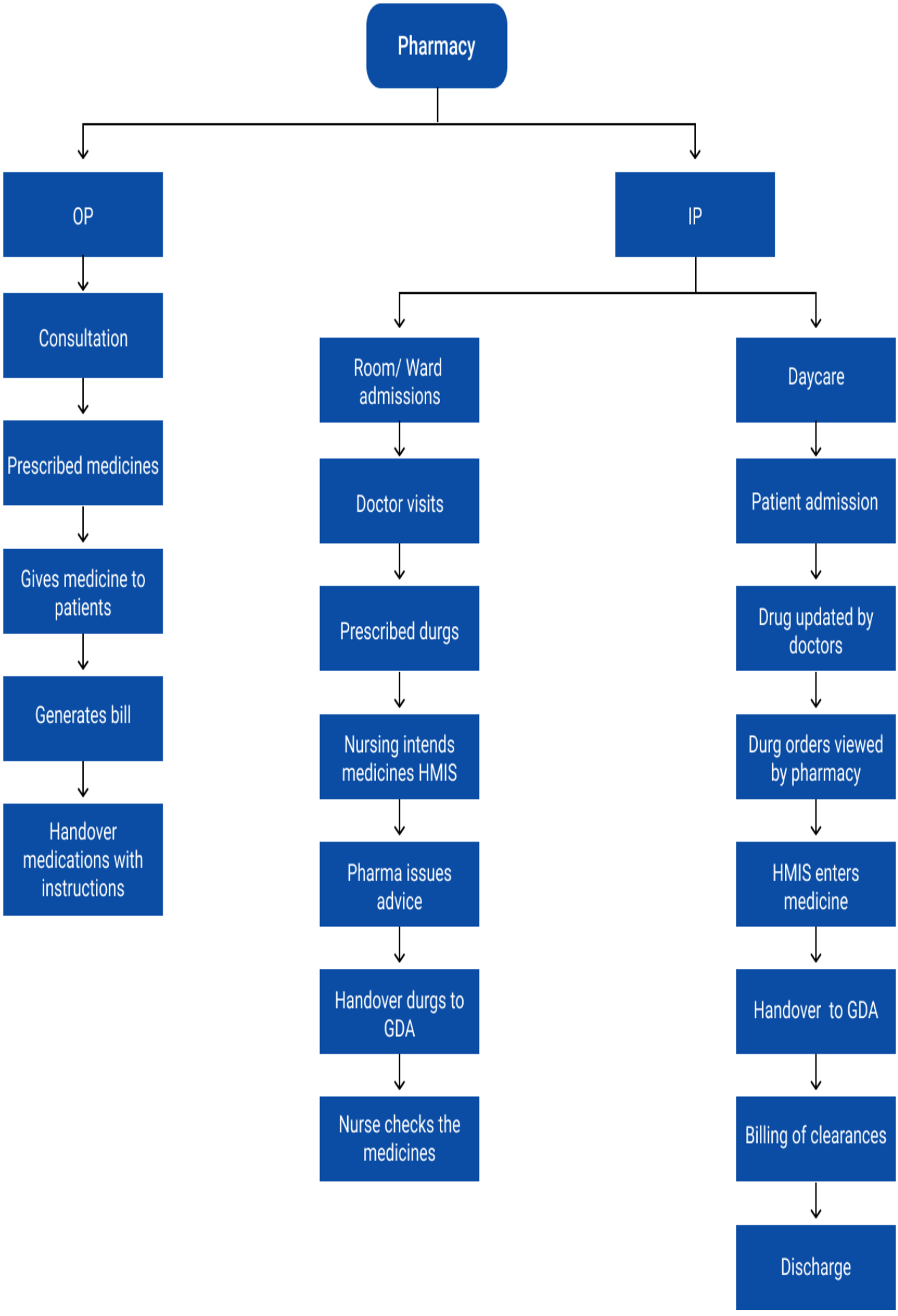
Under Ayushman all the necessary clinical documents need to be stamped or signed by the doctor. Here 3 photographs are clicked on patient arrival, during treatment & after discharge.



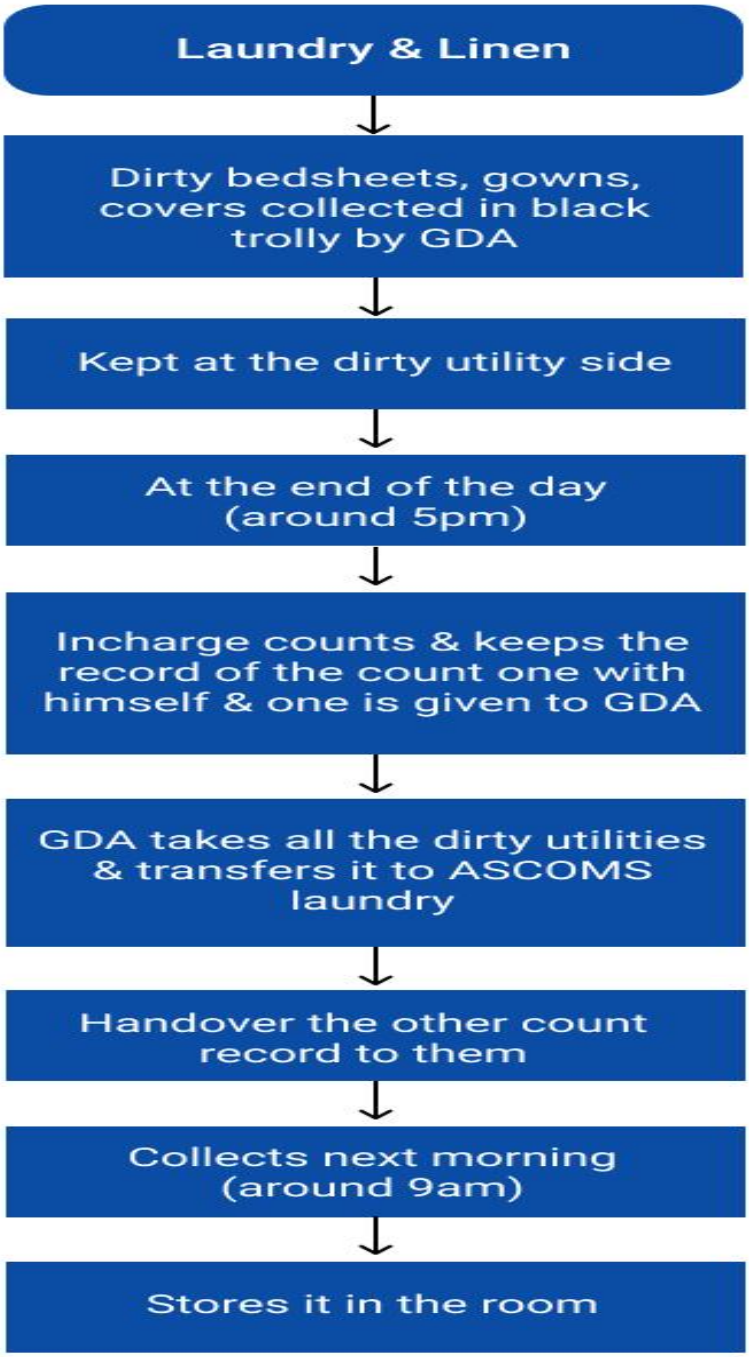
DAYCARE


Patient enters
Medibus
Confirm Bed
Schedule chemo
Check drug order its date
Get medicines from pharmacy
Mixing nurse recieves the medicines
Starts mixing
Calls infusion Nurse when prepared (take consent)
Infusion Nurse starts chemo drug
Take feedback
Plan discharge
Co-sign see dicharge notes
Sends attendant for bill clearence & getting discharge slip
Print it
Advices patients/attendants the medicines
Take 1/2 of discharge slip
Discharged

PHARMACY

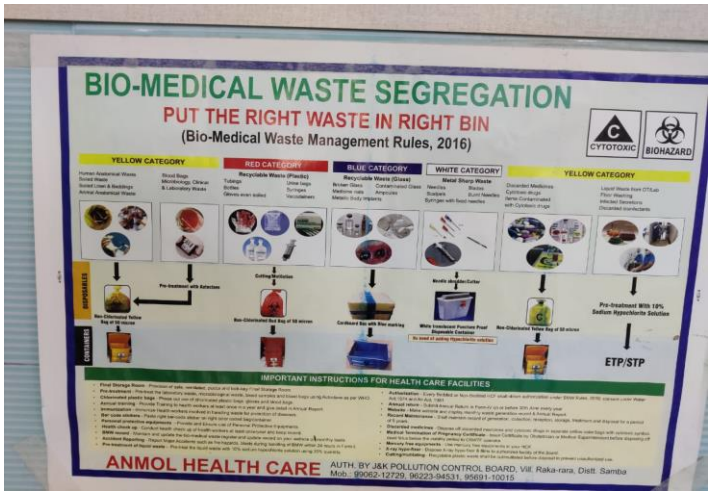

Pharmacy
OP
IP
Consultation
Prescribed medicines
Gives medicine to patients
Generates bill
Handover medications with instructions
Room/ Ward admissions
Doctor visits
Prescribed durgs
Nursing intends medicines HMIS
Pharma issues advice
Handover durgs to GDA
Nurse checks the medicines
Daycare
Patient admission
Drug updated by doctors
Durg orders viewed by pharmacy
HMIS enters medicine
Handover to GDA
Billing of clearances
Discharge

LAUNDRY AND LINEN



BIOMEDICAL WASTE SEGREGATION & HAND WASH HYGIENE.

As hospitals are the prime source of this waste it is important to segregate it at the site of its use. These are classified into different categories and should be segregated accordingly. The staff of AOI is aware of this segregation and has planned to help each staff and the patients in this segregation by using pictorial presentations at the site of disposal. Similar is the case for handwash hygiene. Nurses are often observed teaching this to the GDAs in the department and they themselves follow it whole heartedly.



PROJECT-1

Study on Turnaround Time of Chemotherapy from the arrival of patient till the initiation of the first drug

INTRODUCTION:

From the past year's cancers have proven to be the deadliest disease for mankind. As some causes of cancer cannot be cured fully from the environment like suppressor genes duction or other composure to radiations. It is important to work on suppressing the ill effects of disease, after surgery & radiations therapy chemotherapy has been the widely used method to cure specific patients by the use of certain drugs irrespective of their stage.

To curb the ill effects of this disease a systematic & proactive approach for solving complex cases is required. This will only be possible through the combined efforts of all the doctors, nurses and each staff of the hospital, keeping safety of the administered drugs in mind according to the patient's needs.

For a specialized cancer treatment hospital, chemotherapy remains the utmost important treatment area. With the increase in wait time associated with treatment, hospital's management system is questioned the most in cases of delayed chemo initiation. This may further affect patient's adherence to the specific hospital & can potentially prove to be a great loss for hospitals. Hence it is important to find out if the chemo drugs are administered within time, following all the necessary precautions to deliver the best experience to patients & allow their attendants to be satisfied. And if the process is not falling under the time frame, what could be the possible reasons associated with this. So that the system could learn to learn certain delays.

There are a total of 8 steps that are performed after the arrival of patient in the unit. Which are depicted in the image below

Time	T1	T2	T3	T4	T5	T6	T7	T8
Standard time	0	2	10	2	2	8	2	4
Process	Receiving the patient to daycare	Approval in aria from pharmacy	Dispense in Medibus	Physical dispense of medicine	Mixing nurse receiving the medicine	Drug mixing time	Infusion nurse will receive the mixed drug from the Admixture room	Infusion nurse initiates the chemo

The process was divided into 2-2 steps each (e.g., T2-T1, T3-T2 etc.) to check if the process is falling under the specified standard time. At last, T8-T1 was done to check if the whole process falls under the 30 minutes time span.

LITERATURE REVIEW

Seema Gulia[1] et al. in article 'National Cancer Control Programme in India: Proposal for organization of Chemotherapy & Systemic Therapy services' (June 2017) talked about the inequity in delivery of service for cancer in India. This article focuses on the inequal ratio of oncologist & their patients, which furthers leads to mismanagement & maladministration of the hospital staff for Indian patients. The article also puts pressure to systemic care delivery & building staff through interconnected trainings at different stages of delivery.

Mernant Mahrous[4] et al. in the study 'decreasing prolonged wait time for chemotherapy administration for patients with cancer' (2018) tried to decrease the waiting time for chemo initiation up to certain defined minutes over a period of 10 month. Simultaneously determined the causes, results of delays & recommended the reduction of those. This article was concluded by main recommendation to combat the delay i.e., Collaborative approach by all the team members to improve the efficiency of this process.

Arjun Gupta[2] et al. in the study 'Reducing wait time between admission & chemotherapy initiation' (2018) talked about the delay associated with initiation process & found way to reduce it over a 6-month period by implementing the advancement strategies for rejuvenation of the process using PDSA cycles approach. This study also concentrated on the effects of the long length of stay to the hospital, patients & its resources.

Megan Lafferty[3] et al. in the study 'Cause & Consequences of chemotherapy delays in Ambulatory Oncology Practices: A Multisite Qualitative Study' (2020) identified causes & its effects on patients for the restoration of Quality of service provided to chemo patients. In this study interviews, observations & surveys were conducted to get aligned with the process, observations & suggestions from the staff at each rank of the system with in depth survey & interviews led them to determine the reasons behind each lag. Through this study they found out that communication, testing delays & preparation of treatment plan were the root cause of time lag in chemo initiation.

RATIONALE:

- Hospital's management system is questioned the most in cases of delayed chemo initiation.
- Affect patient's adherence to the specific hospital
- Loss for hospital.
- Attendants' satisfaction for positive word of mouth.

RESEARCH QUESTION

What is the turnaround time of chemotherapy initiation from the arrival of patient till the administration of first chemo drug and the delays associated with it in the Daycare unit for the months of May and June?

OBJECTIVE

- To check if the turnaround time is falling under 30 minutes of standard time.
- To access the possible reasons if the chemo initiation process is not falling under the standard timing

RESEARCH METHODOLOGY:

Both primary and secondary data was collected in this study. To collect the data simple random probability sampling was used and to note the delays only primary data has been accessed based on daily observations in the unit.

Primary data collection was done in June using MS Excel & secondary data of May month was collected from the daycare unit staff which was also collected using MS Excel. A total of 120 samples were collected from both the months in which both primary and secondary data had 60 samples each on all the working days between 10am to 5pm.

For data analysis both MS Excel & Minitab was used.

ANALYSIS AND INTERPRETATION

For the first 2 steps (T2-T1)/ Approval in aria from pharmacy

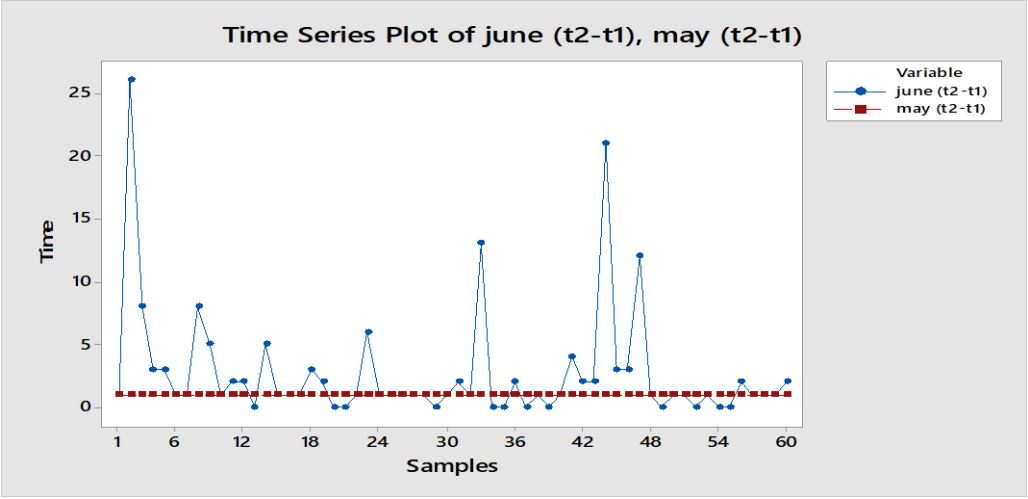
Descriptive Statistics: June (t2-t1), May (t2-t1)

Statistics

Variable	N	N*	Mean	SE Mean	StDev	Minimum	Q1	Median	Q3	Maximum
June (t2-t1)	60	0	2.750	0.609	4.714	0.000	1.000	1.000	2.750	26.000
May (t2-t1)	60	0	1.0000	0.000000	0.000000	1.0000	1.0000	1.0000	1.0000	1.0000

Variable	Skewness
June (t2-t1)	3.43
May (t2-t1)	0.29

Time Series Plot of June (t2-t1), May (t2-t1)



One-way ANOVA: june (t2-t1), may (t2-t1)

Method

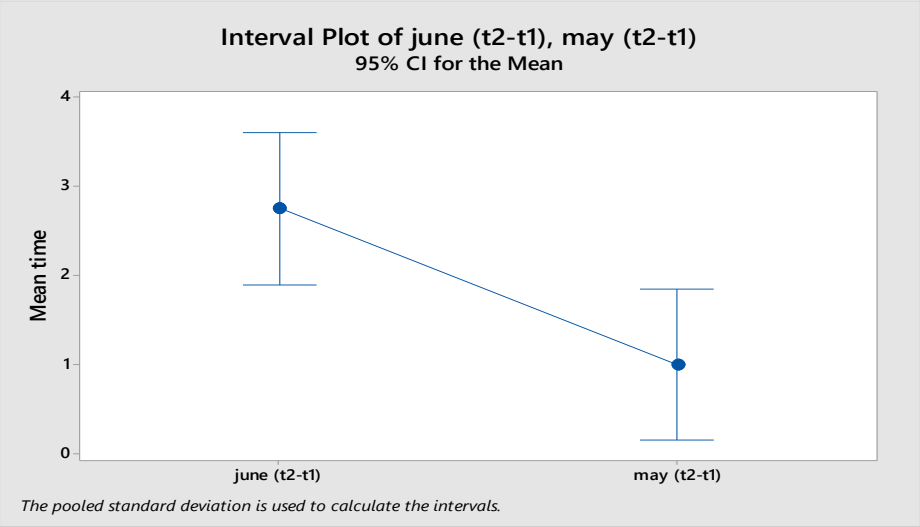
Null hypothesis	All means are equal
Alternative hypothesis	Not all means are equal
Significance level	α = 0.05

Equal variances were assumed for the analysis.

Means

Factor	N	Mean	StDev	95% CI
June (t2-t1)	60	2.750	4.714	(1.898, 3.602)
May (t2-t1)	60	1.00000	0.00000	(0.14778, 1.85222)

Pooled StDev = 3.33351



Interpretation:

- The means of both the months differ significantly from each other as the may month shows no deviation from the mean and June shows a significant standard deviation from the mean as the process varies with each sample.
- The third quartile differs from that of median showing that the upper halves median is higher than that of both the lower halves. It differs from the first quartile showing the inter quartile range as 1.75 depicting the amount of spread in data of June month.
- Majority of the T2 task were performed under 2.7 minutes but some outliers are observed in this step.
- The data of June month is positively skewed, meaning the mean is greater than that of middle value indicating there is significant observations greater than the median.

For the next 2 steps (T3-T2)/ Dispense in Medibus

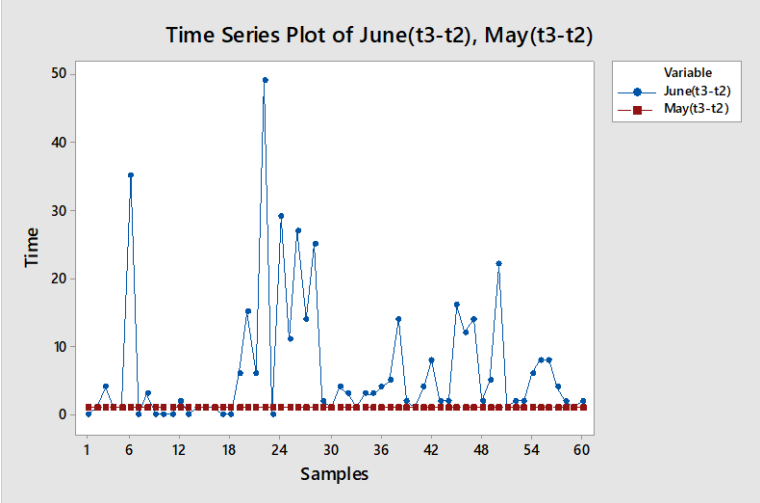
Descriptive Statistics: June(t3-t2), May(t3-t2)

Statistics

Variable	N	N*	Mean	SE Mean	StDev	Minimum	Q1	Median	Q3	Maximum
June(t3-t2)	60	0	6.63	1.25	9.67	0.00	1.00	2.50	8.00	49.00
May(t3-t2)	60	0	1.0000	0.000000	0.000000	1.0000	1.0000	1.0000	1.0000	1.0000

Variable	Skewness
June(t3-t2)	2.43
May(t3-t2)	-0.38

Time Series Plot of June (t3-t2), May (t3-t2)



One-way ANOVA: June(t3-t2), May(t3-t2)

Method

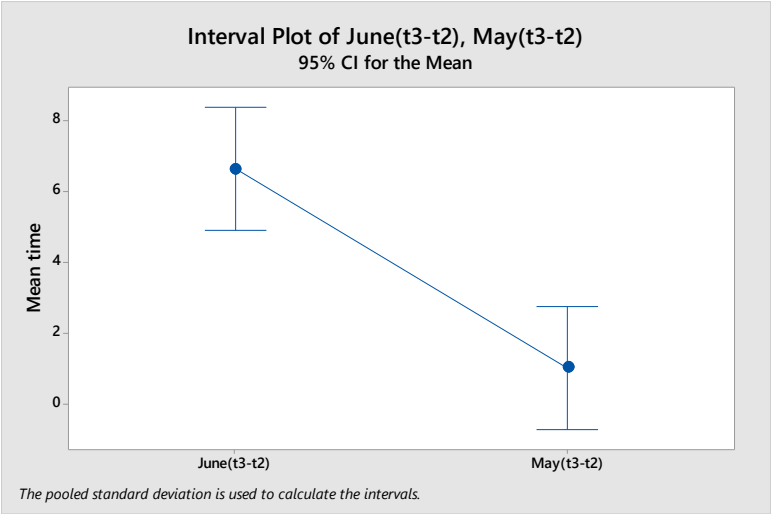
Null hypothesis	All means are equal
Alternative hypothesis	Not all means are equal
Significance level	α = 0.05

Equal variances were assumed for the analysis.

Means

Factor	N	Mean	StDev	95% CI
June(t3-t2)	60	6.63	9.67	(4.89, 8.38)
May(t3-t2)	60	1.00000	0.00000	(-0.74790, 2.74790)

Pooled StDev = 6.83705



Interpretation:

- The means of both the months differ significantly from each other as the May month shows no deviation from the mean and June shows a significant standard deviation from the mean as the process varies with each sample.
- The third quartile differs from that of median showing that the upper halves median is higher than that of both the lower halves. It differs from the first quartile showing the inter quartile range as 7 depicting the amount of spread in data of June month.
- Majority of the observations were performed under 10 minutes making the process fall under standard timings but some outliers are observed in this step.
- The data of June month is positively skewed, meaning the mean is greater than that of middle value indicating there is significant observations greater than the median.

For the next 2 steps (T4-T3)/ Physical dispense of medicine

Descriptive Statistics: June (t4-t3), May (t4-t3)

Statistics

Variable	N	N*	Mean	SE Mean	StDev	Minimum	Q1	Median	Q3	Maximum
June (t4-t3)	60	0	6.667	0.447	3.462	2.000	4.000	6.000	8.000	18.000
May (t4-t3)	60	0	1.0000	0.000000	0.000000	1.0000	1.0000	1.0000	1.0000	1.0000

Variable	Skewness
June (t4-t3)	1.21
May (t4-t3)	0.21

One-way ANOVA: June (t4-t3), May (t4-t3)

Method

Null hypothesis	All means are equal

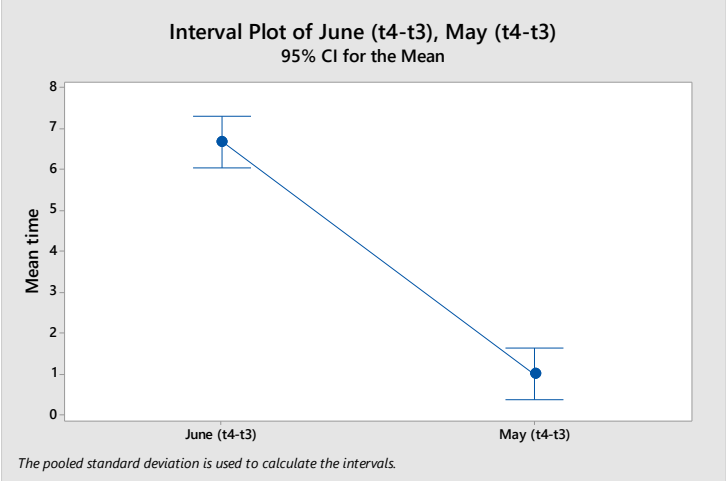
Alternative hypothesis	Not all means are equal
Significance level	α = 0.05

Equal variances were assumed for the analysis.

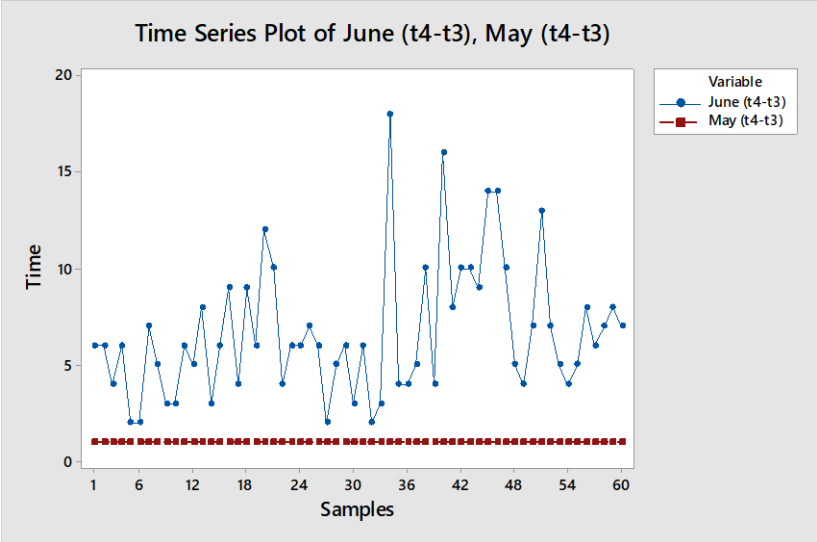
Means

Factor	N	Mean	StDev	95% CI
June (t4-t3)	60	6.667	3.462	(6.041, 7.293)
May (t4-t3)	60	1.00000	0.00000	(0.37408, 1.62592)

Pooled StDev = 2.44834



Time Series Plot of June (t4-t3), May (t4-t3)



Interpretation:

- The means of both the months differ significantly from each other as the May month shows no deviation from the mean and June shows a significant standard deviation from the mean as the process varies with each sample.

- The third quartile differs from that of median showing that the upper halves median is higher than that of both the lower halves. It differs from the first quartile showing the inter quartile range as 4 depicting the amount of spread in data of June month.
- Majority of the observations were performed under 7 minutes making the process incapable for standard timings with some outliers.
- The data of June month is positively skewed, meaning the mean is a bit greater than that of middle value indicating there are few observations greater than the median.

For the next 2 steps (T5-T4)/ Mixing nurse receiving the medicine

Descriptive Statistics: June (t5-t4), May(t5-t4)

Statistics

Variable	N	N*	Mean	SE Mean	StDev	Minimum	Q1	Median	Q3	Maximum	Skewness
June (t5-t4)	60	0	2.450	0.399	3.094	0.000	1.000	1.000	2.000	18.000	3.14
May(t5-t4)	60	0	8.57	1.11	8.63	2.00	4.00	7.00	9.00	53.00	3.50

One-way ANOVA: June (t5-t4), May(t5-t4)

Method

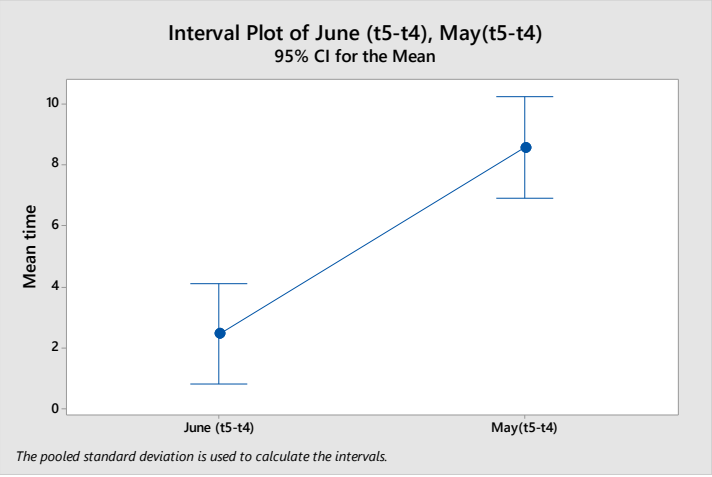
Null hypothesis	All means are equal
Alternative hypothesis	Not all means are equal
Significance level	α = 0.05

Equal variances were assumed for the analysis.

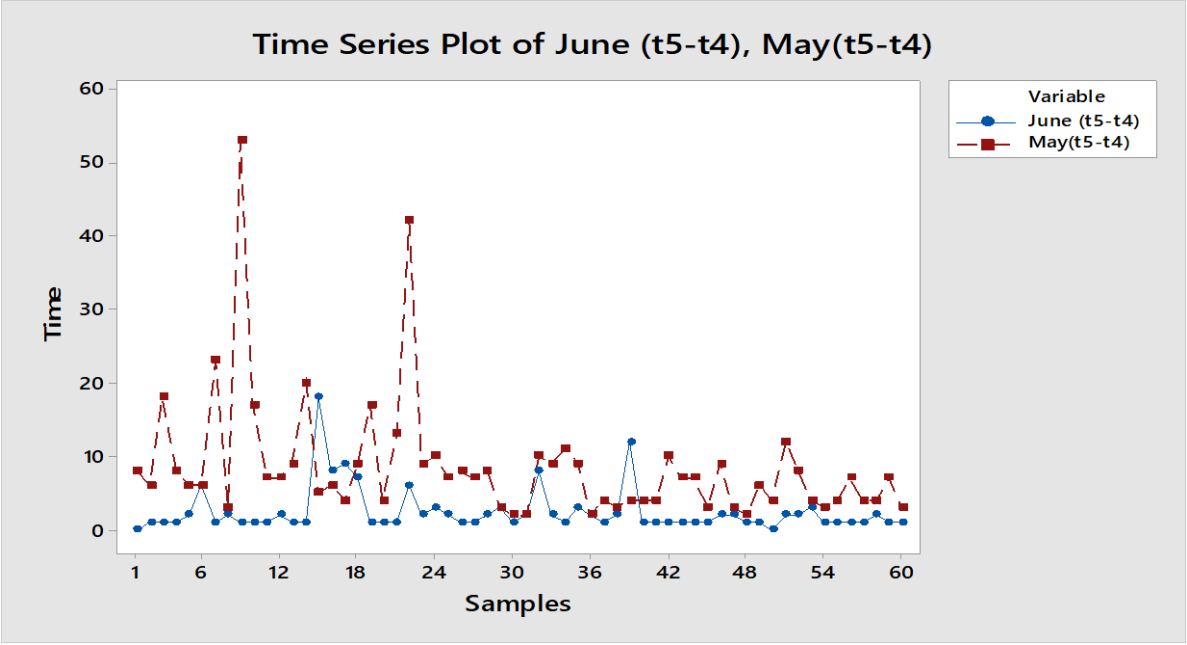
Means

Factor	N	Mean	StDev	95% CI
June (t5-t4)	60	2.450	3.094	(0.793, 4.107)
May(t5-t4)	60	8.57	8.63	(6.91, 10.22)

Pooled StDev = 6.48178



Time Series Plot of June (t5-t4), May(t5-t4)



Interpretation:

- The means of both the months differ significantly from each other as the May month shows significant deviation from the mean and June shows a little standard deviation from the mean with each sample.
- The third quartile of May month differs from that of median showing that the upper halves median is higher than that of both the lower halves. It differs from the first quartile showing the inter quartile range as 5 depicting the amount of spread in data of the month. Whereas no significant difference is observed in the June data.
- Majority of the observations for June were performed under 2.5 minutes making the process capable to fall under the standard timings with few outliers. Whereas for May it was under 8.5 minutes with significant standard deviations.
- The data of both months is positively skewed, meaning the mean is greater than that of middle value indicating there are few observations greater than the median.

For the next 2 steps (T6-T5)/ Drug mixing time

Descriptive Statistics: June (t6-t5), May (t6-t5)

Statistics

Variable	N	N*	Mean	SE Mean	StDev	Minimum	Q1	Median	Q3	Maximum
June (t6-t5)	60	0	19.42	1.79	13.85	0.00	8.25	15.50	26.75	68.00
May (t6-t5)	60	0	1.0000	0.000000	0.000000	1.0000	1.0000	1.0000	1.0000	1.0000

Variable	Skewness
June (t6-t5)	1.24
May (t6-t5)	-0.26

One-way ANOVA: June (t6-t5), May (t6-t5)

Method

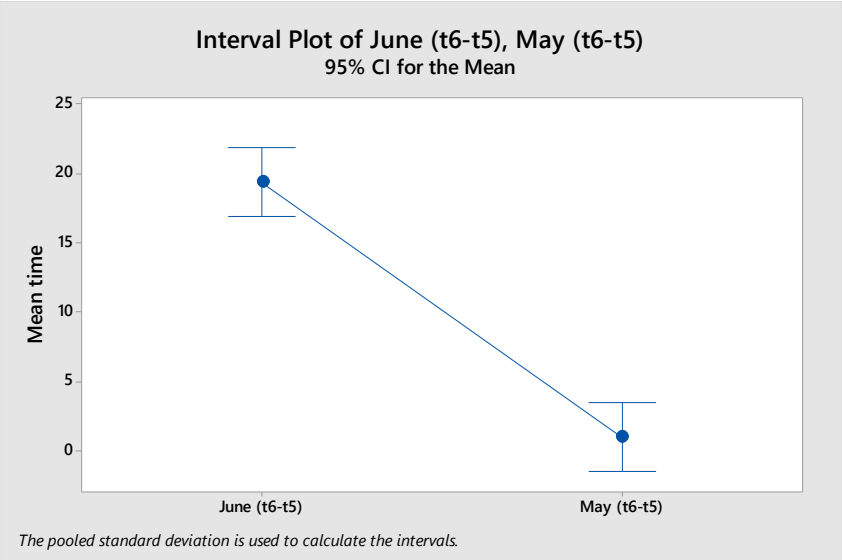
Null hypothesis	All means are equal
Alternative hypothesis	Not all means are equal
Significance level	α = 0.05

Equal variances were assumed for the analysis.

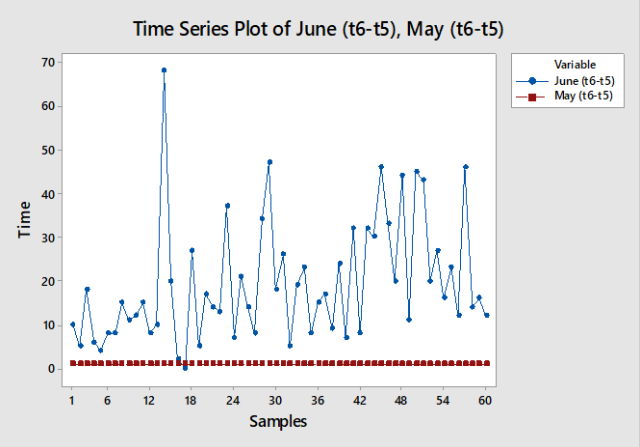
Means

Factor	N	Mean	StDev	95% CI
June (t6-t5)	60	19.42	13.85	(16.91, 21.92)
May (t6-t5)	60	1.00000	0.00000	(-1.50449, 3.50449)

Pooled StDev = 9.79648



Time Series Plot of June (t6-t5), May (t6-t5)



Interpretation:

- The means of both the months differ significantly from each other as the May month shows no deviation from the mean and June shows a significant standard deviation from the mean as the process varies with each sample.
- The third quartile differs from that of median showing that the upper halves median is higher than that of both the lower halves. It differs from the first quartile showing the inter quartile range as 18.5 depicting a high amount of spread in data of June month.
- Majority of the observations were performed under 19.5 minutes making the process incapable for standard timings suggesting outliers.
- The data of June month is positively skewed, meaning the mean is a greater than that of middle value indicating some observations greater than the median.

For the next 2 steps (T7-T6)/ Infusion nurse will receive the mixed drug from the Admixture room

Descriptive Statistics: June (t7-t6), May (t7-t6)

Statistics

Variable	N	N*	Mean	SE Mean	StDev	Minimum	Q1	Median	Q3	Maximum	Skewness
June (t7-t6)	60	0	5.27	1.02	7.91	0.00	1.00	2.00	5.00	34.00	2.24
May (t7-t6)	60	0	7.817	0.194	1.501	3.000	8.000	8.000	8.000	15.000	0.85

One-way ANOVA: June (t7-t6), May (t7-t6)

Method

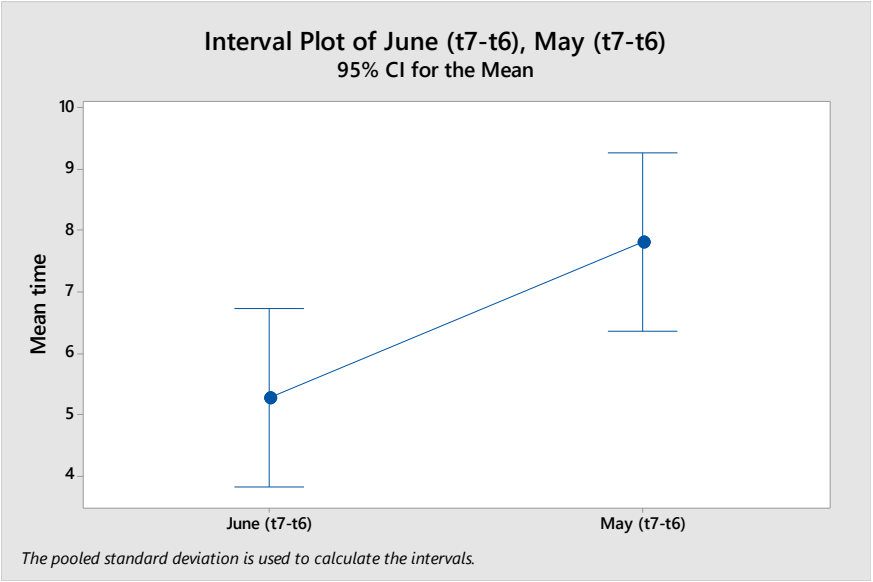
Null hypothesis	All means are equal
Alternative hypothesis	Not all means are equal
Significance level	α = 0.05

Equal variances were assumed for the analysis.

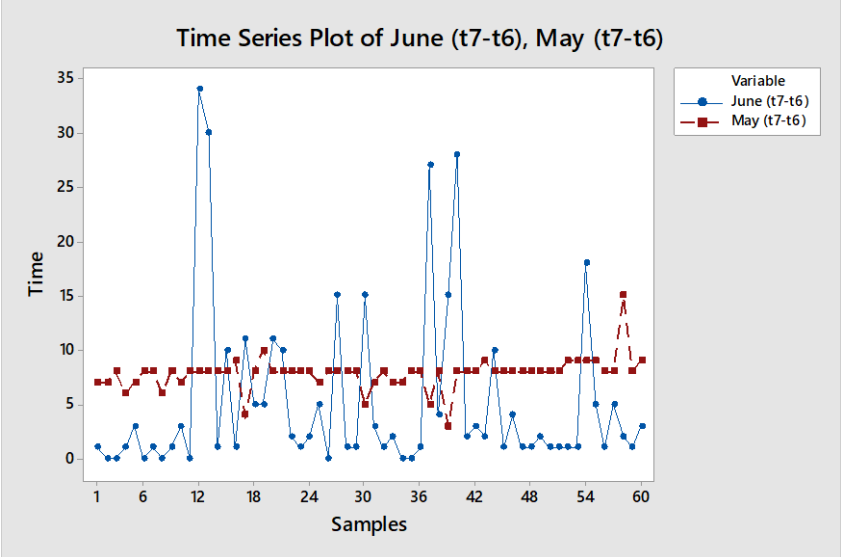
Means

Factor	N	Mean	StDev	95% CI
June (t7-t6)	60	5.27	7.91	(3.81, 6.72)
May (t7-t6)	60	7.817	1.501	(6.360, 9.273)

Pooled StDev = 5.69621



Time Series Plot of June (t7-t6), May (t7-t6)



Interpretation:

- The means of both the months differ significantly from each other as the May month shows little deviation from the mean and June shows a higher standard deviation from the mean with each sample.
- The third quartile of May month same as that of median. It does not differ from the first quartile showing the inter quartile range as 0 depicting no amount of spread data of the month. Whereas significant difference is observed in the June data. The third quartile differs from that of median showing that the upper halves median is higher than that of both the lower halves. It differs from the first quartile showing the inter quartile range as 4 depicting the amount of spread in data of June month.

- Majority of the observations for June were performed under 5.3 minutes making the process incapable to fall under the standard timing. Whereas for May it was under 8 minutes with lesser standard deviations than June.
- The data of both months is positively skewed, meaning the mean is greater than that of middle value indicating there are few observations greater than the median.

For the next 2 steps (T8-T7)/ Infusion nurse initiates chemo therapy.

Descriptive Statistics: June (t8-t7), May (t8-t7)

Statistics

Variable	N	N*	Mean	SE Mean	StDev	Minimum	Q1	Median	Q3	Maximum	Skewness
June (t8-t7)	60	0	2.150	0.416	3.220	0.000	1.000	1.000	2.000	22.000	4.50
May (t8-t7)	60	0	1.767	0.270	2.094	0.000	1.000	1.000	2.000	11.000	3.51

One-way ANOVA: June (t8-t7), May (t8-t7)

Method

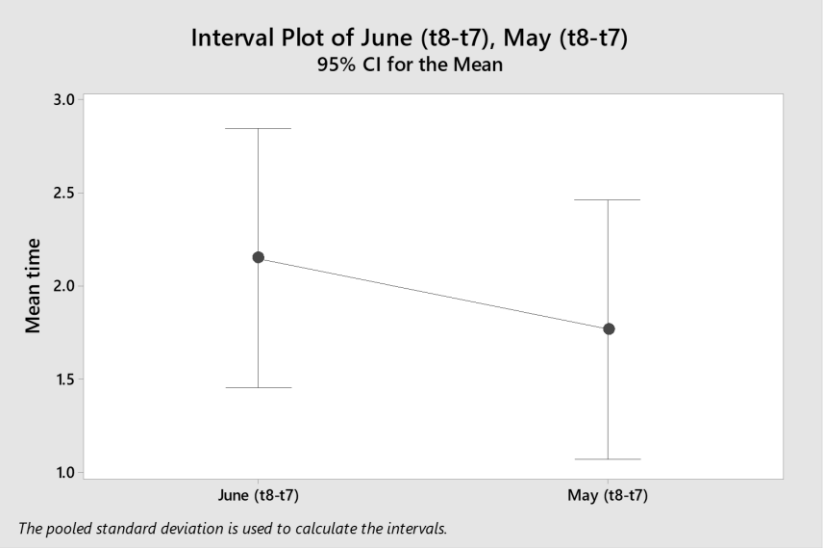
Null hypothesis	All means are equal
Alternative hypothesis	Not all means are equal
Significance level	α = 0.05

Equal variances were assumed for the analysis.

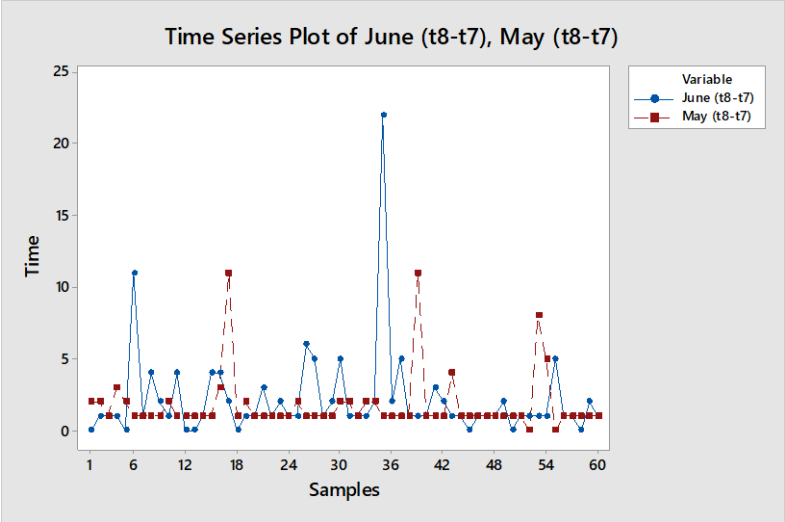
Means

Factor	N	Mean	StDev	95% CI
June (t8-t7)	60	2.150	3.220	(1.456, 2.844)
May (t8-t7)	60	1.767	2.094	(1.072, 2.461)

Pooled StDev = 2.71590



Time Series Plot of June (t8-t7), May (t8-t7)



Interpretation:

- The means of both the months differ a bit from each other as the May month shows little deviation from the mean and June shows a more standard deviation from the mean as the process varies with each sample.
- The third quartile of both the months differs a bit from that of median showing that the upper halves median nearly equal to both the lower halves. It differs from the first quartile showing the inter quartile range as 1 depicting a low amount of spread in data of both months.
- Majority of the observations were performed under 2 minutes making the process capable for standard timings suggesting few outliers.
- The data of both the months is positively skewed, meaning the mean is a greater than that of middle value indicating many observations greater than the median.

OVERALL Process T8-T1

Descriptive Statistics: June T8-T1, May T8-T1

Statistics

Variable	N	N*	Mean	SE Mean	StDev	Minimum	Q1	Median	Q3	Maximum	Skewness
June T1-T8	60	0	42.83	2.12	16.39	15.00	28.00	43.00	54.00	81.00	0.27
May T1-T8	60	0	21.93	1.13	8.73	13.00	17.00	20.50	23.00	66.00	3.25

One-way ANOVA: June T8-T1, May T8-T1

Method

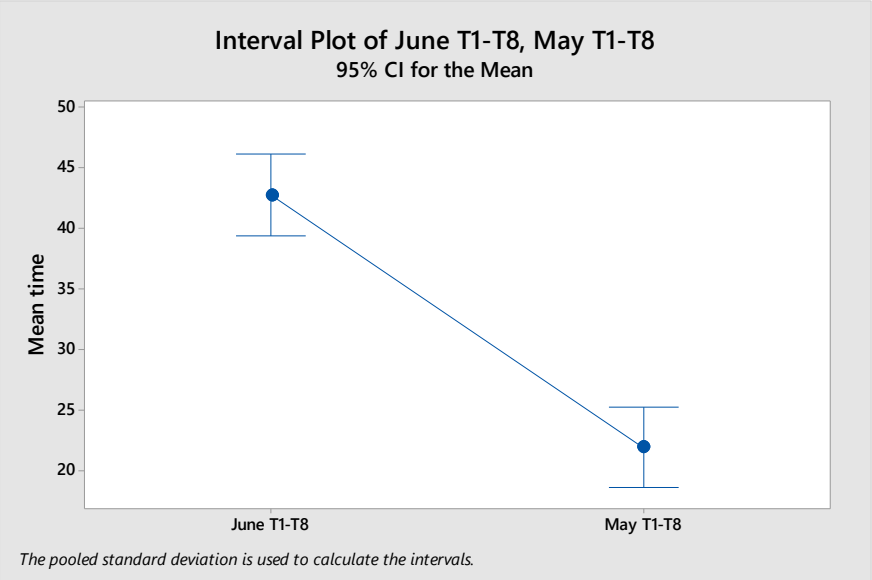
Null hypothesis	All means are equal
Alternative hypothesis	Not all means are equal
Significance level	α = 0.05

Equal variances were assumed for the analysis.

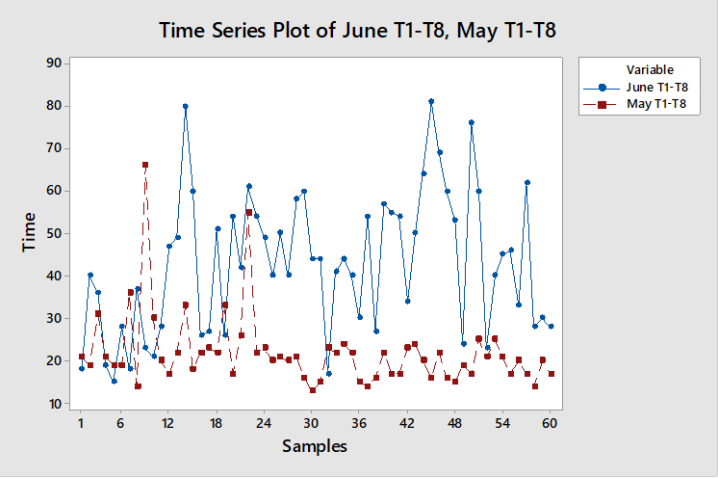
Means

Factor	N	Mean	StDev	95% CI
June T1-T8	60	42.83	16.39	(39.48, 46.19)
May T1-T8	60	21.93	8.73	(18.58, 25.29)

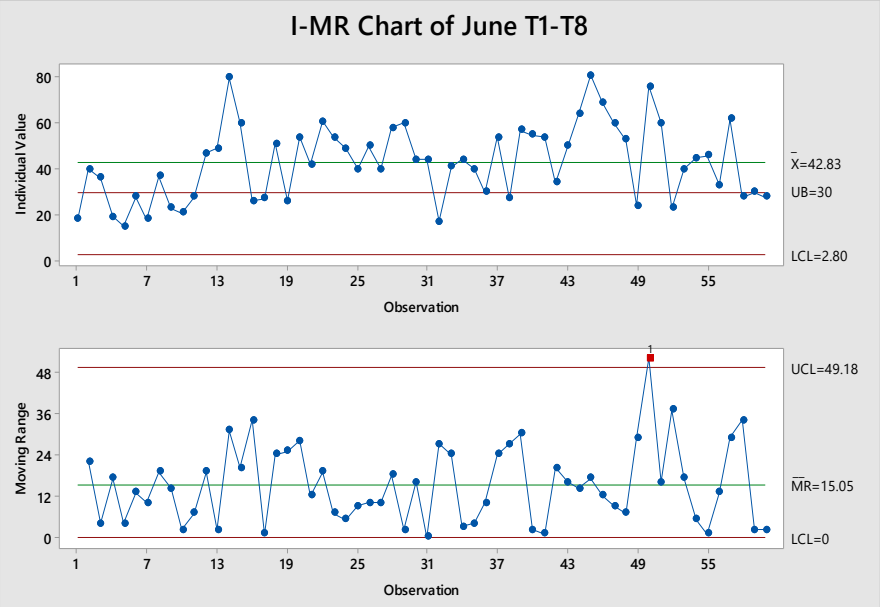
Pooled StDev = 13.1317



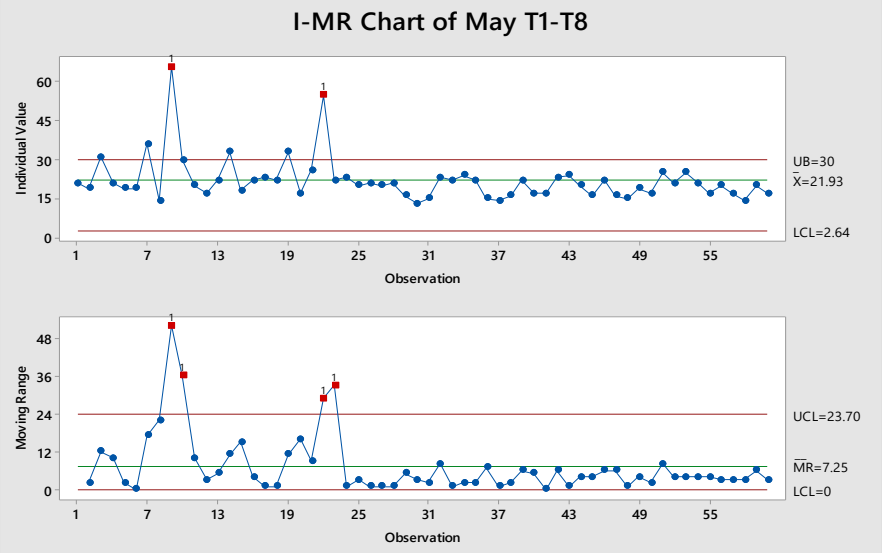
Time Series Plot of June T8-T1, May T8-T1



I-MR Chart of June T8-T1



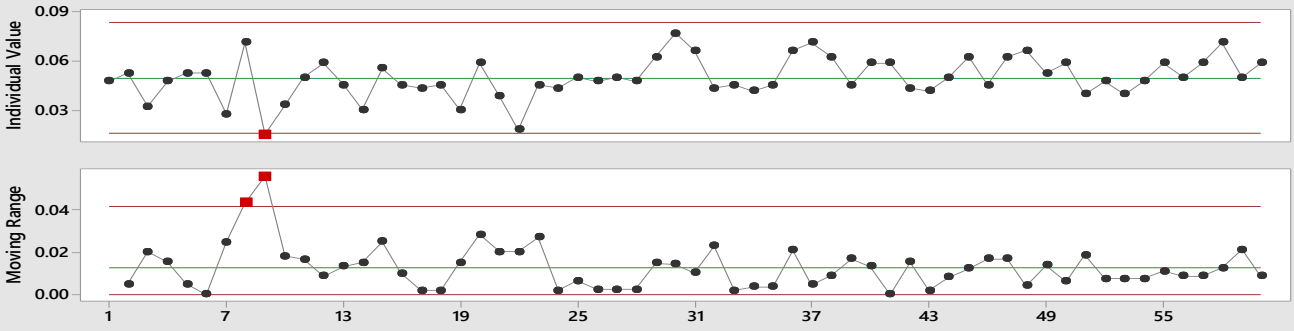
I-MR Chart of May T8-T1



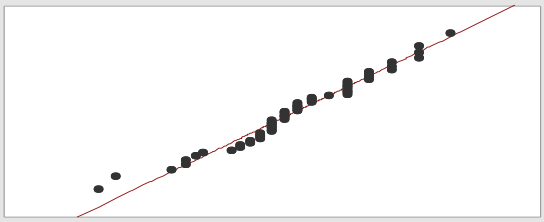
Capability Analysis for May T8-T1

Capability Analysis for May T1-T8
Diagnostic Report

I-MR Chart (transformed)
Confirm that the process is stable.



Normality Plot (λ = -1.00)
The points should be close to the line.

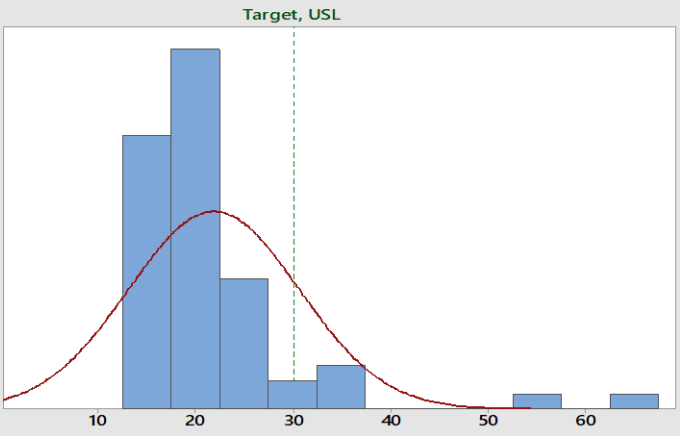


Normality Test (Anderson-Darling)

	Original	Transformed
Results	Fail	Pass
P-value	< 0.005	0.086

Capability Analysis for May T1-T8
Process Performance Report

Capability Histogram
Are the data below the limit and close to the target?



Actual (overall) capability is what the customer experiences.

Potential (within) capability is what could be achieved if process shifts and drifts were eliminated.

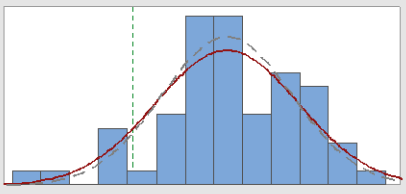
Process Characterization

Total N	60
Subgroup size	1

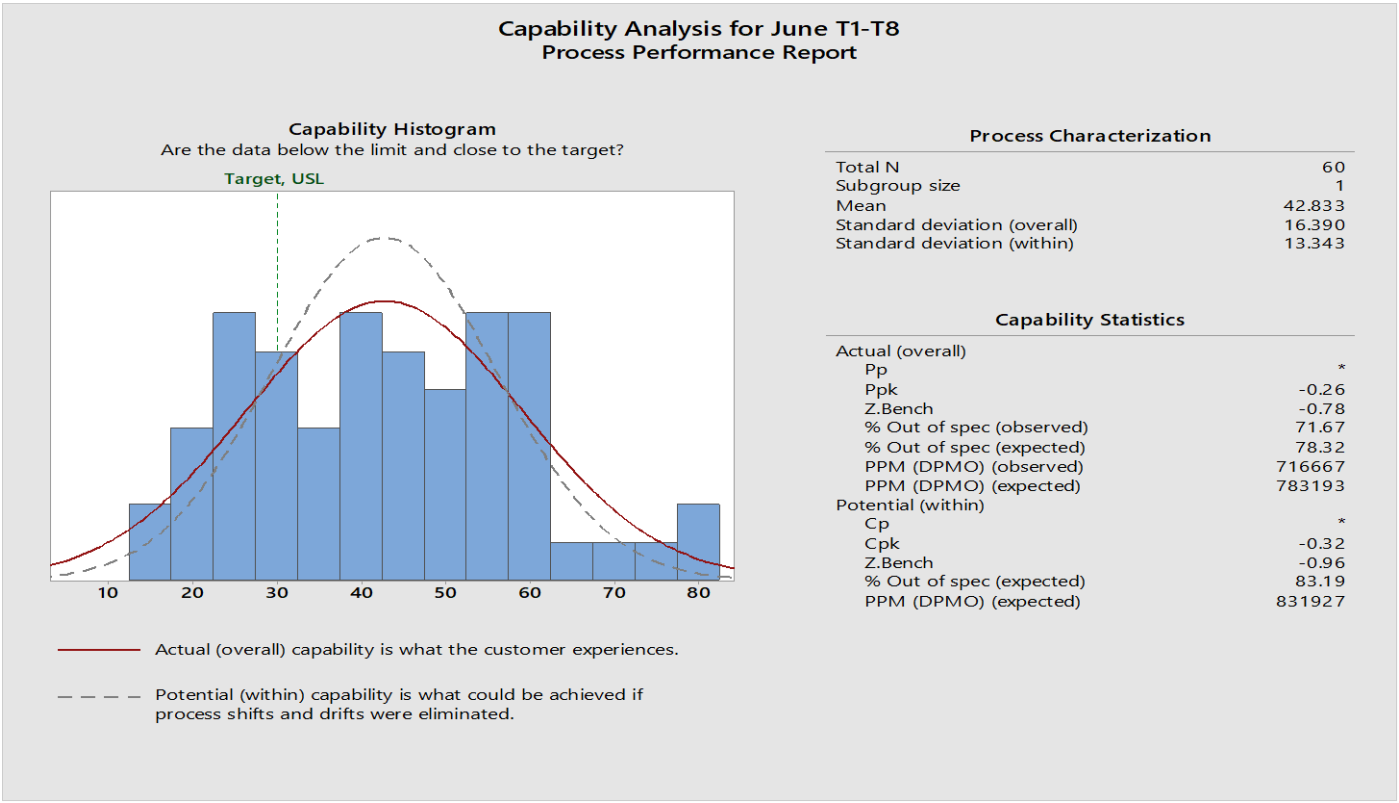
Capability Statistics

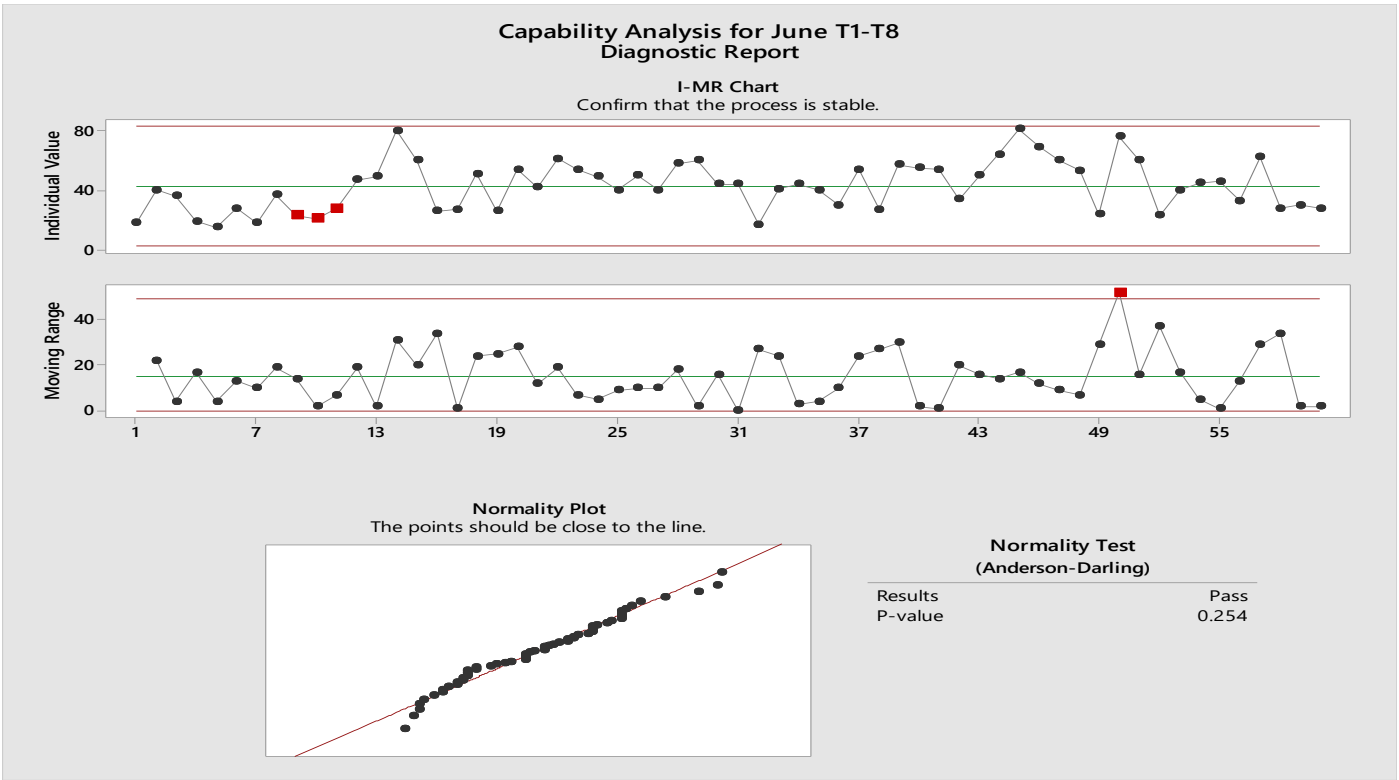
Actual (overall)	
Pp	*
Ppk	0.44
Z.Bench	1.32
% Out of spec (observed)	10.00
% Out of spec (expected)	9.28
PPM (DPMO) (observed)	100000
PPM (DPMO) (expected)	92793
Potential (within)	
Cp	*
Cpk	0.48
Z.Bench	1.45
% Out of spec (expected)	7.33
PPM (DPMO) (expected)	73328

Transformed Data



Capability Analysis for June T8-T1





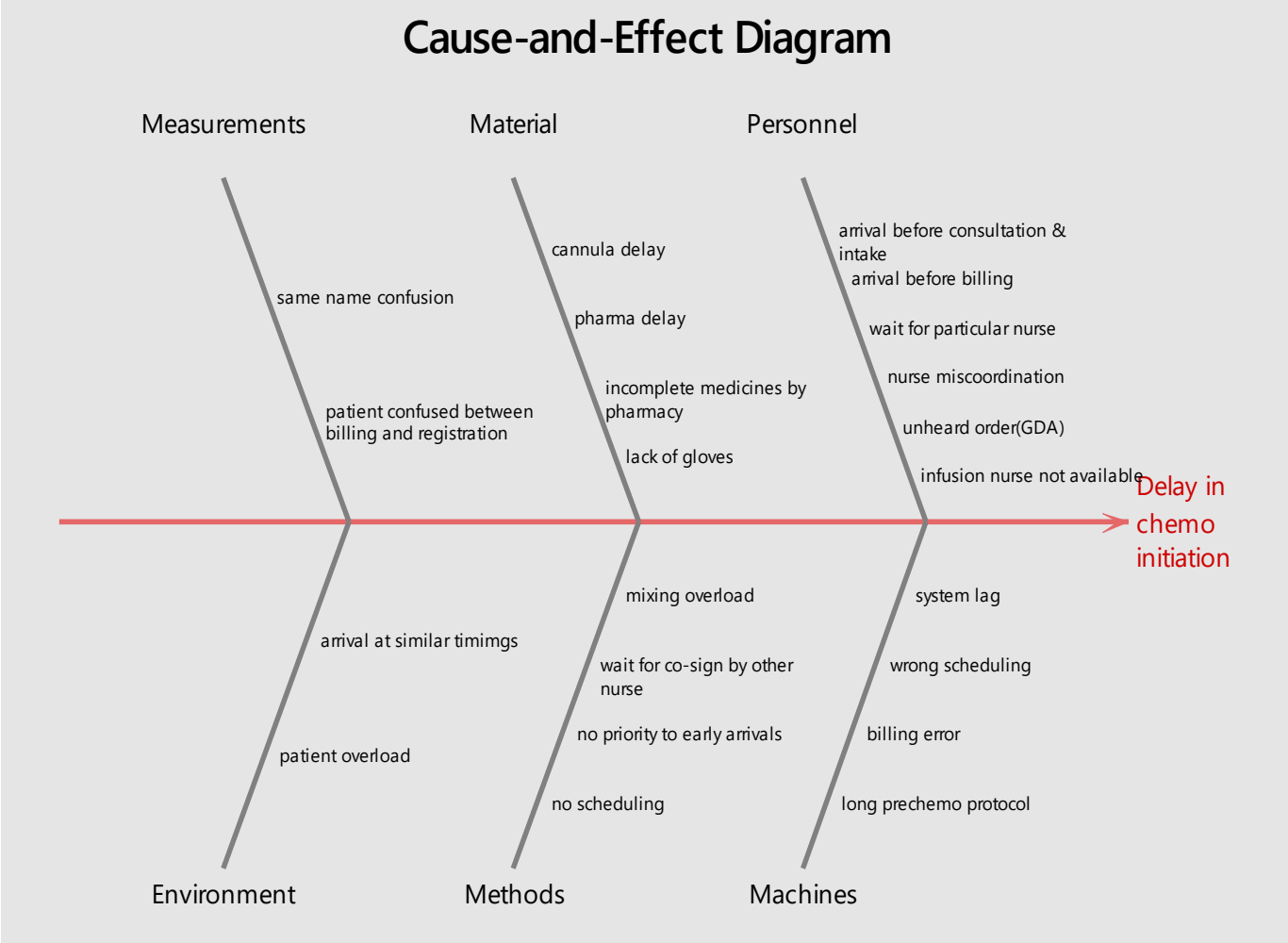
Overall Interpretation:

- Mean of both the months differ from one another, the standard deviation of both differs enormously as the standard deviation of June month is nearly twice the standard deviation of May.

- Median value of June is also nearly twice of that of May month.
- Both the months chemo turnaround time is stable but if we talk about the defects of both, June month has 60% higher defects than May. Since the observations for June month does not fall under the specified target of 30 minutes and a lot of variation is seen in June month's IMR chart & process capability. Whereas if we notice the May month data most observations fall under 30 minutes target and a lesser number of variations are seen in the IMR chart & process capability.

FINDINGS-

Cause-and-Effect Diagram



CONCLUSION:

The turnaround time of May month falls under the specified target minutes but for the month of June the process was incapable to fall in that target range.

Also, no variation in any observations of the May month data was observed except for the step 5 and 7, that were mixing nurse receiving the chemo drugs and infusion nurse receiving the mixed drug from the admixture

room. Whereas as per observations of June month data most time consuming steps were physical dispense from pharmacy and drug mixing time, that were step 4 & 6.

RECOMMENDATIONS:

- Inform patient in the front desk about their journey to avoid early arrivals without billing and same day consultation.
- Schedule patient a day before their expected chemo by informing them a particular time to avoid patient arrival at the similar timings. This can combat the mixing delays due to patient overload.
- Get the low hanging fruits first by maintaining proper patient protocols, avoid communication gaps.
- Check the daily tracker of chemo turnaround time weekly if it is maintained properly with each patient's arrival. To avoid typing errors or data fudging.

REFERENCES

1. Gulia S, Sengar M, Badwe R, Gupta S. National cancer control programme in India: Proposal for organization of chemotherapy and systemic therapy services. Journal of global oncology. 2017 Jun;3(3):271-4.
2. Gupta A, Li J, Tawfik B, Pham T, Pathak S, Singh P, Porsa E, Sadeghi N, Li HC. Reducing wait time between admission and chemotherapy initiation. Journal of oncology practice. 2018 May;14(5):e316-23.
3. Lafferty M, Fauer A, Wright N, Manojlovich M, Friese CR. Causes and Consequences of Chemotherapy Delays in Ambulatory Oncology Practices: A Multisite Qualitative Study. InOncology nursing forum 2020 Jul 1 (Vol. 47, No. 4, pp. 417-427). Oncology Nursing Society.
4. Mahrous M, El Shaer E, Rezik L, Taha S, Yosef A. Decreasing prolonged waiting times for chemotherapy administration for patients with cancer. Global Journal on Quality and Safety in Healthcare. 2018 Nov;1(2):44-8.

PROJECT-2
Internal File Audits

Background: Medical records are kept under medical record department of the hospital for all the patients who stay over a 24-hr. period of time in hospital premises. It is an essential document both when active as well as when closed, when active it is used to check the patient's daily status and avoid errors whereas for closed cases it is used to keep the track of patients, the quality of care provided to these patients, work as an audit for quality without actually being present in all the positions of a patient's journey. It can also prevent any legal actions if file is maintained and checked properly. Blue files are the active patients file that gets converted into yellow file once the patient is discharged.

Objective:

- To check the compliance, non-compliance and partial compliance of files based on hospital's checklist for quality purpose.

Methodology:

Both active and passive MRD data was collected in this study. To collect the data simple random probability sampling was used and to note the compliance, non-compliance and partial compliance of files.

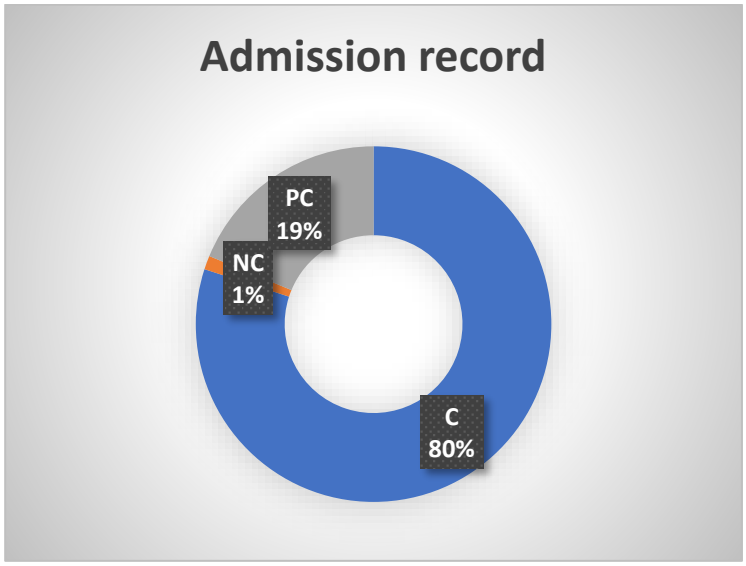
Active file audit collection was done in June's in-patients using MS Excel & Passive files audits collection was done on different months using MS Excel. A total of 80 samples were collected in which active files were 15 and passive files were 65 samples. Each were collected within 8 days from June till first week of July leaving Sundays.

All the files having more than 15% of non-compliance are documented in this project with a combined data at the end.

For data analysis MS Excel was used.

Analysis:

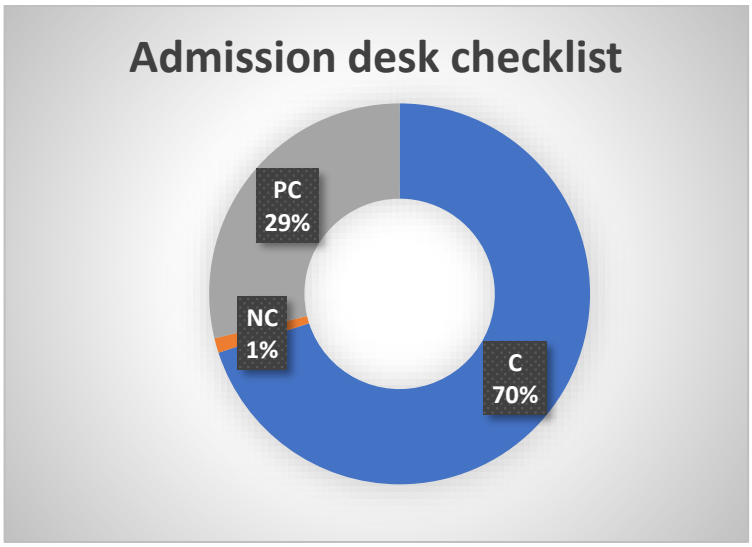
Admission record slip



admission record	Frequency	Percentage
C	64	80.00%
NC	1	1.25%
PC	15	18.75%
grand total	80	100.00%
NC+PC	16	20.00%

- Out of 80 accessed samples 20% fell under non-compliance and partial compliance. Reason for this NC & PC was signatures of the admission desk executive along with consultant's signatures.

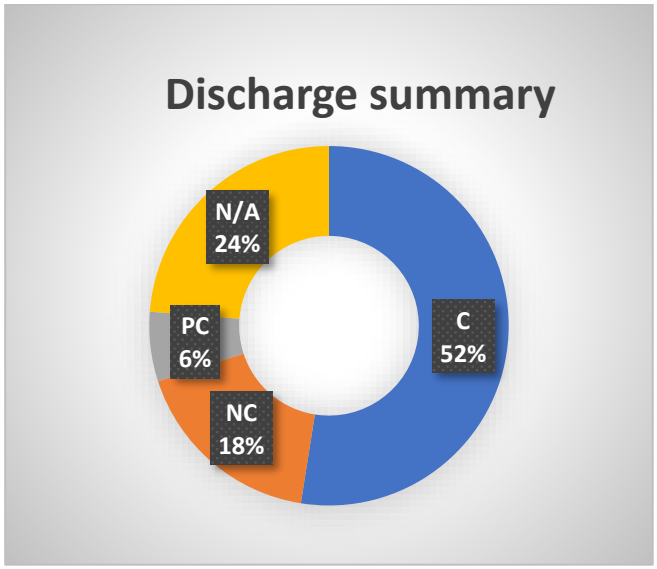
Admission desk checklist



Admission desk checklist	Frequency	Percentage
C	56	70.00%
NC	1	1.25%
PC	23	28.75%
grand total	80	100.00%
NC+PC	24	30.00%

- Out of 80 accessed samples 30% fell under non-compliance and partial compliance. Reason for this NC & PC was signatures of the PRE along with incomplete service of admission essentials.

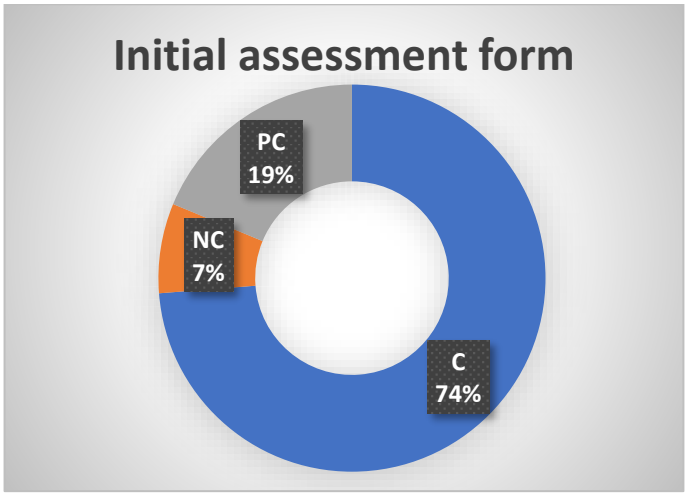
Discharge summary



Discharge summary	Frequency	Percentage
C	42	52.50%
NC	14	17.50%
PC	5	6.25%
N/A	19	23.75%
grand total	80	100.00%
NC+PC	19	23.75%

- Out of 80 accessed samples 23.7% fell under non-compliance and partial compliance. Reason for this NC & PC was signatures assigned nurse, patients' signatures and sometimes doctor's signatures.

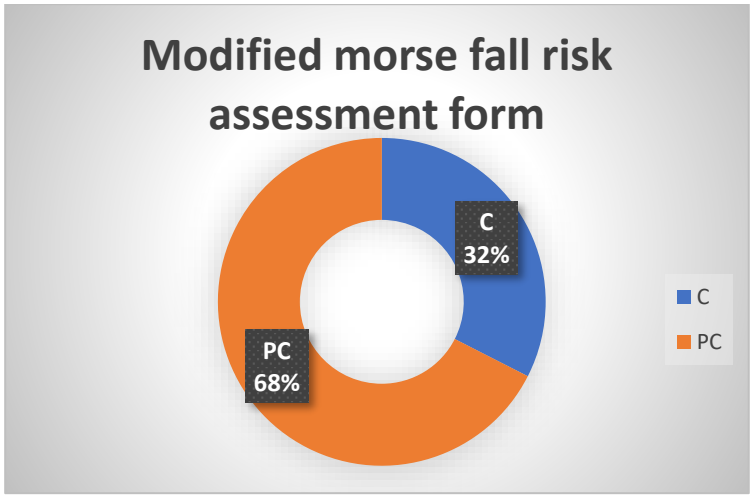
Initial assessment form



Initial assessment form	Frequency	Percentage
C	59	73.75%
NC	6	7.50%
PC	15	18.75%
grand total	80	100.00%
NC+PC	21	26.25%

- Out of 80 accessed samples 26.2% fell under non-compliance and partial compliance. Reason for this NC & PC were consultant's and patients' signatures.

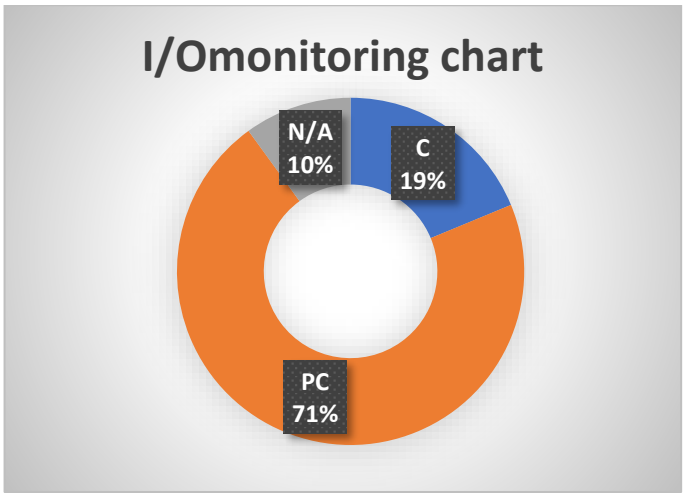
Modified fall risk assessment.



modified morse fall risk assessment form	Frequency	Percentage
C	26	32.50%
PC	54	67.50%
grand total	80	100.00%

- Out of 80 accessed samples 67.5% fell under partial compliance. Reason for this PC was signatures of the nursing staff and incomplete forms.

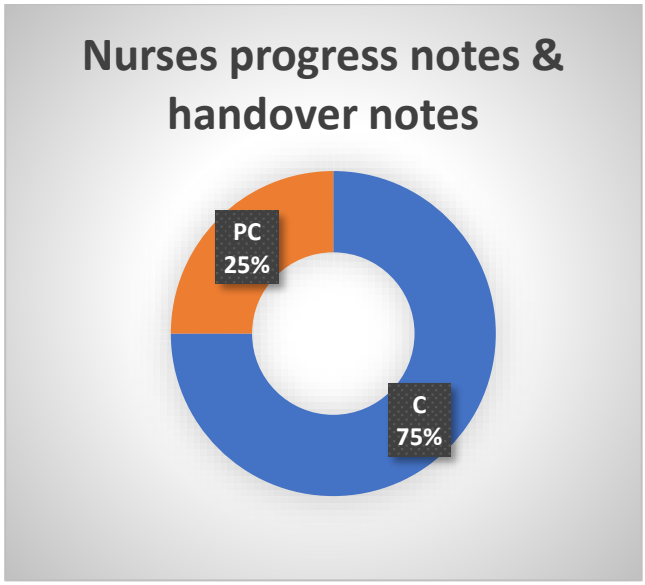
Input/Output monitoring chart



I/O monitoring chart	Frequency	Percentage
C	15	18.75%
PC	57	71.25%
N/A	8	10.00%
grand total	80	100.00%

- Out of 80 accessed samples 71.25% fell under partial compliance. Reason for this PC was signatures of nurse staff on daily basis.

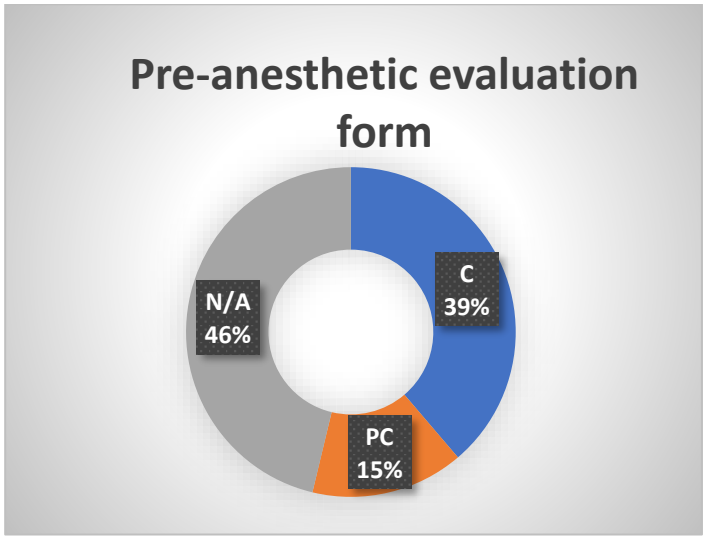
Nursing handover and progress notes.



Nurses progress notes & handover notes	Frequency	Percentage
C	60	75.00%
PC	20	25.00%
grand total	80	100.00%

- Out of 80 accessed samples 25% fell under partial compliance. Reason for this PC was signatures assigned nurse when handover is given and taken.

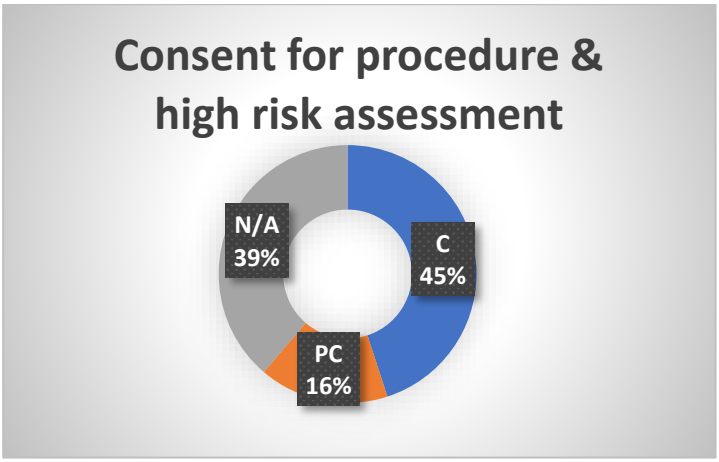
Pre- anesthetic evaluation



Pre anaesthesia evaluation form	Frequency	Percentage
C	31	38.75%
PC	12	15.00%
N/A	37	46.25%
grand total	80	100.00%

- Out of 80 accessed samples 15% fell under partial compliance. Reason for this PC wasdate and time of surgery and evaluation.

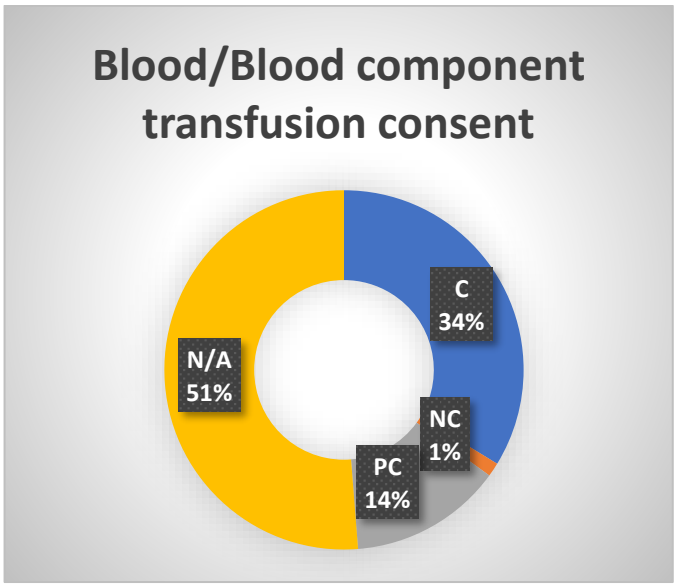
Consent for procedure and high-risk assessment



Consent for procedure & high risk assessment	Frequency	Percentage
C	36	45.00%
PC	13	16.25%
N/A	31	38.75%
grand total	80	100.00%

- Out of 80 accessed samples 16.25% fell under partial compliance. Reason for this PC was signatures of nurse, witness, doctor's signatures and date and time of consent.

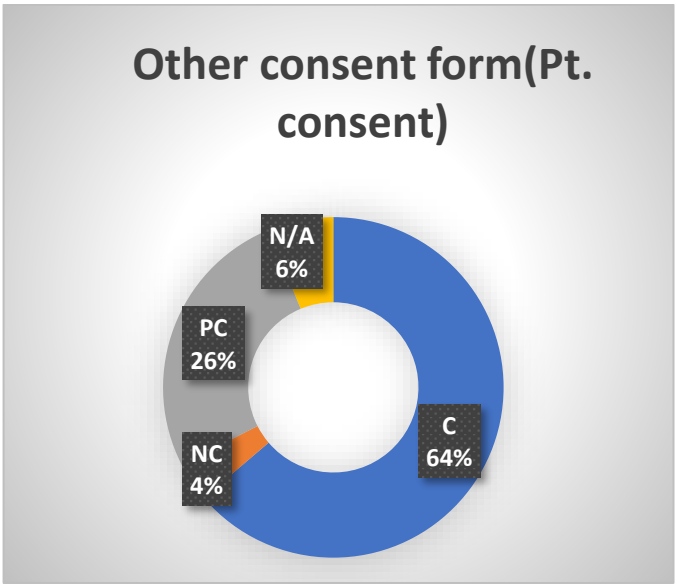
Blood transfusion consent



blood/blood component transfusion consent	Frequency	Percentage
C	27	33.75%
NC	1	1.25%
PC	11	13.75%
N/A	41	51.25%
grand total	80	100.00%
NC+PC	12	15.00%

- Out of 80 accessed samples 15% fell under non-compliance and partial compliance. Reason for this NC & PC was signatures of doctors.

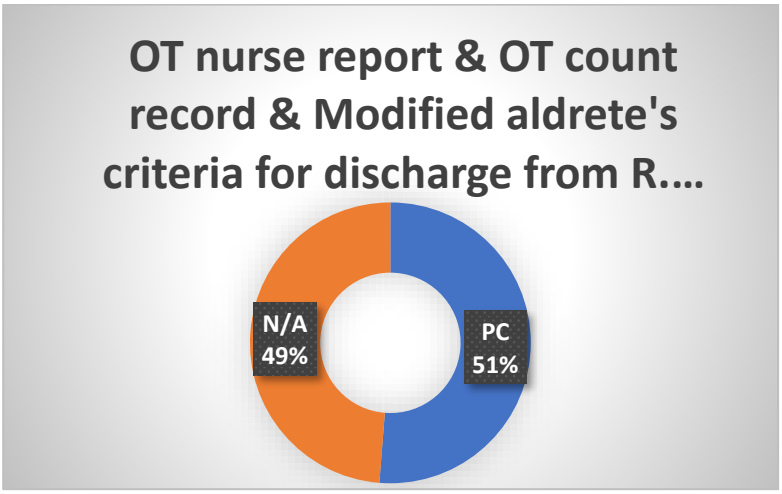
Other consent form (patients consent)



Other consent form (Pt. consent)	Frequency	Percentage
C	51	63.75%
NC	3	3.75%
PC	21	26.25%
N/A	5	6.25%
grand total	80	100.00%
NC+PC	24	30.00%

- Out of 80 accessed samples 30% fell under non-compliance and partial compliance. Reason for this NC & PC were patients' signatures, billing signatures & date and time of consent.

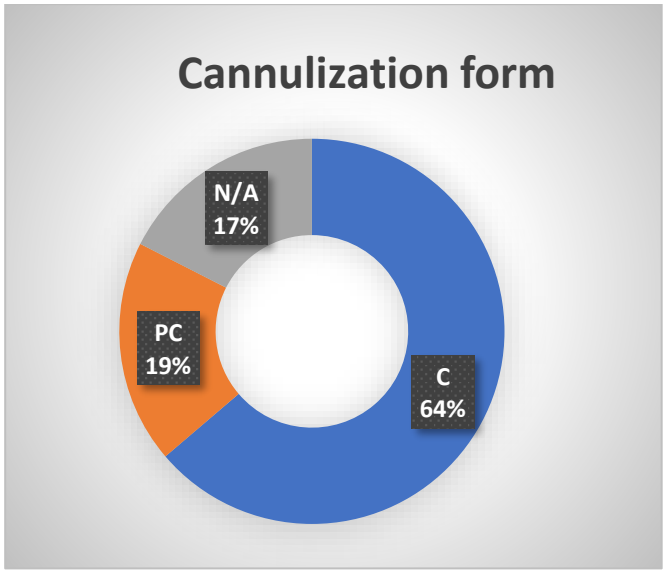
OT nurse report & OT count record & Modified Aldrete's criteria for discharge from R. room



OT nurse report & OT count record & Modified aldrete's criteria for discharge from R. room	Frequency	Percentage
PC	41	51.25%
N/A	39	48.75%
grand total	80	100.00%

- Out of 80 accessed samples 51% fell under partial compliance. Reason for this PC was signature of PACU and scrub nurse.

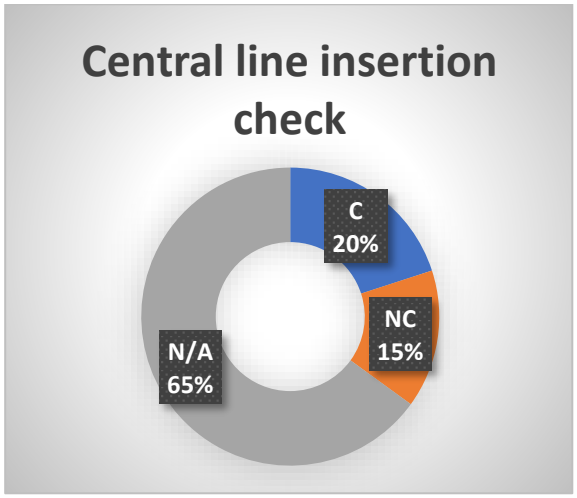
Cannulization form.



canulization form	Frequency	Percentage
C	51	63.75%
PC	15	18.75%
N/A	14	17.50%
grand total	80	100.00%

- Out of 80 accessed samples 18.7% fell under partial compliance. Reason for this PC was cannula removal signature.

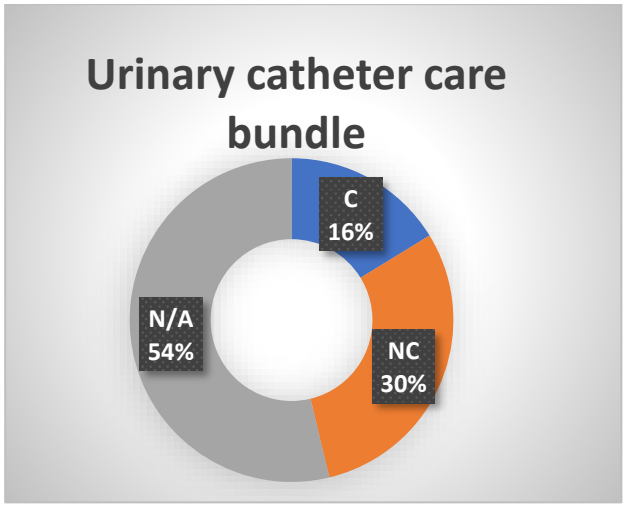
Central line insertion check



Central line insertion check	Frequency	Percentage
C	16	20.00%
NC	12	15.00%
N/A	52	65.00%
grand total	80	100.00%

- Out of 80 accessed samples 15% fell under non-compliance. Reason for this NC was name and signatures of Incharge and observer nurse.

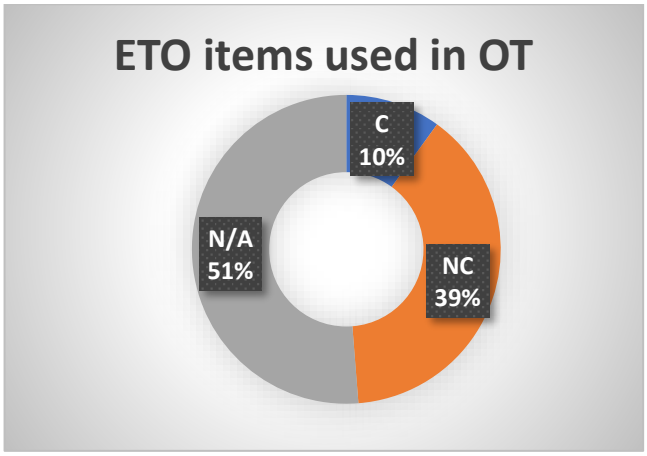
Urinary Catheter Care Bundle



Urinary catheter care bundle	Frequency	Percentage
C	13	16.25%
NC	24	30.00%
N/A	43	53.75%
grand total	80	100.00%

- Out of 80 accessed samples 30% fell under non-compliance. Reason for this NC was name and signatures of concerned nurse.

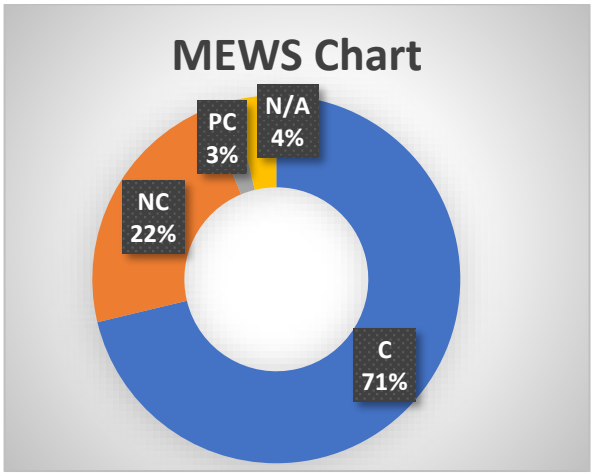
ETO items used in OT



ETO items used in OT	Frequency	Percentage
C	8	10.00%
NC	31	38.75%
N/A	41	51.25%
grand total	80	100.00%

- Out of 80 accessed samples 38% fell under non-compliance. Reason for this NC was absence of form from the OT closed file.

MEWS Chart



MEWS	Frequency	Percentage
C	57	71.25%
NC	18	22.50%
PC	2	2.50%
N/A	3	3.75%
grand total	80	100.00%
NC+PC	20	25.00%

- Out of 80 accessed samples 25% fell under non-compliance and partial compliance. Reason for this NC & PC were nurse signatures, date and time along with absence of MEWS forms.

OVERALL

Row Labels	Min of compliance	Min of partial compliance	Min of noncompliance
Admission checklist and pt. valuable checklist	90%	9%	1%
Admission desk checklist	70%	29%	1%
admission record	80%	19%	1%
blood/blood component transfusion consent	34%	14%	1%
Blood/blood component transfusion monitoring chart	28%	5%	3%
Cannulisation form	64%	19%	
Central line insertion check	20%		15%
checkout slip	69%		13%
Clearance for surgeries/procedures form	63%	6%	
Consent for anaesthesia	50%	1%	
Consent for procedure & high-risk assessment	45%	16%	
Diabetic chart	78%	4%	
Discharge summary	53%	6%	18%
Doctors progress notes	98%	1%	1%
Drug prescription chart	71%	13%	
ETO items used in OT	10%		39%
Financial counselling	86%		10%
General authorization for treatment form	88%	6%	6%
I/O Monitoring chart	19%	71%	
Initial assessment form	74%	19%	8%
MEWS	71%	3%	23%
modified morse fall risk assessment form	33%	68%	
Nurses progress notes & handover notes	75%	25%	
Nursing initial Assessment form	99%	1%	
Operations notes	45%	6%	
OT nurse report & OT count record & Modified Aldrete's criteria for discharge from R. room		51%	
Other consent form(Pt. consent)	64%	26%	4%
Pain assessment chart	93%		8%
Pre & Post opr. Checklist/Notes	45%	6%	
Pre-anaesthetic evaluation form	39%	15%	
Supportive care admission pt. counselling	10%		14%
Surgical safety checklist/ Surgical site infection checklist	40%	11%	
Urinary catheter care bundle	16%		30%

- Out of 80 accessed samples 100% C was observed in handwash hygiene, ICU admission notes, clinical chart, ICU monitoring chart, investigation reports, investigation result sheet, family education, anesthesia record, transfer & movement slip, test reports, nursing care plan, TRFs, billing, LAMA/DAMA & Death summary.

Conclusion:

- Majority of the NC & PC were because of lack of signatures and date and timings.
- Some were due to the non-availability of resources and non-seriousness of staff to maintain proper files without hampering patient's experience.

Recommendation:

- Educate staff about the necessity of the records maintenance
- Provide a file for reference at the in-patient department to guide the staff what a proper file comprises of.
- Provide a highlighted printout of NC & PC sheets on the nursing desk, to make them aware of the general things that lacks behind.

PROJECT-3

GDA Effectiveness in The In-patient Department

Background

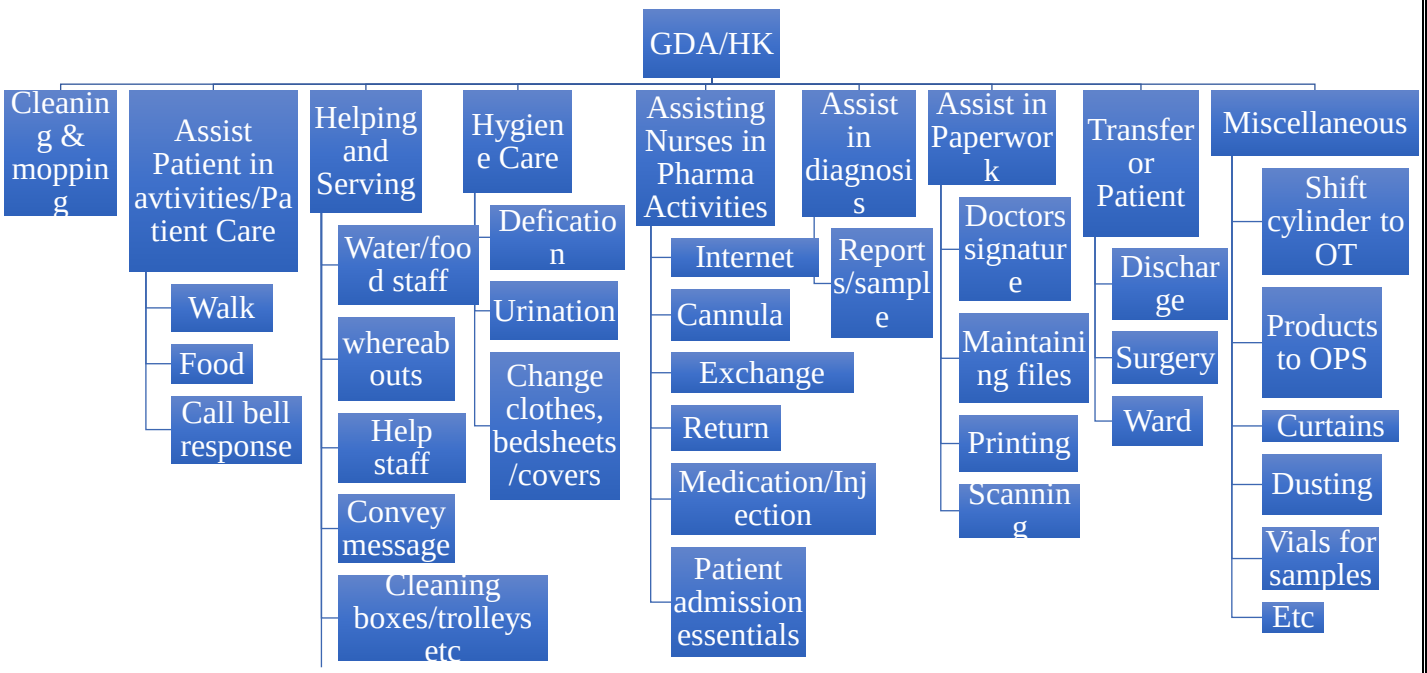
GDA Elaborated as general duty assistants, sometimes known as nursing assistants are a prime source of completion of nearly every task performed in hospitals. They directly or indirectly increase hospitals revenue and output by their ability to perform and learn tasks effectively. It is important to measure the number of tasks they perform to keep a track of every activity that is linked with patients.

Objective:

- To check the time taken by GDA and HK staff in various important tasks in the IP Department and see if there is any gap and recommend ways to curb it.

Methodology: To collect the data simple random probability sampling was used and to note the timings of 8 different types of activities majorly. It was done in June using MS Excel. A total of 320 samples were collected in which 15 samples were of HK staff and rest of daycare and IP department. For comparison of GDA(IP) & GDA(DY) 140 samples of each were separated, accounting a total for 280 samples for the main 8 activities. And rest were categorized under miscellaneous activities.

For data analysis both MS Excel and Minitab was used.



Analysis:

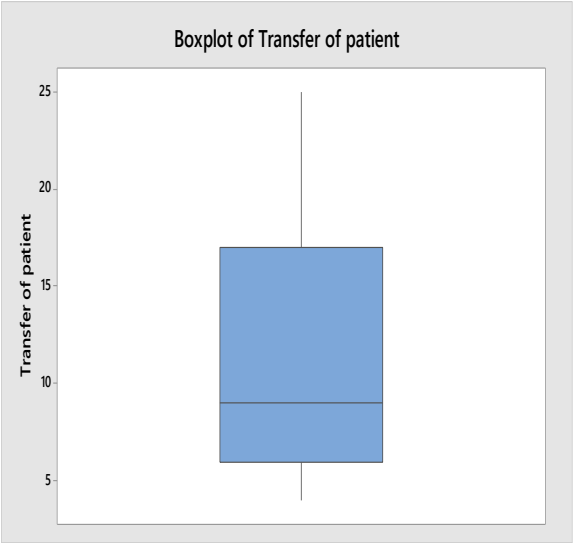
Descriptive Statistics: Cleaning & Mopping, Hygiene ... , Miscellaneous

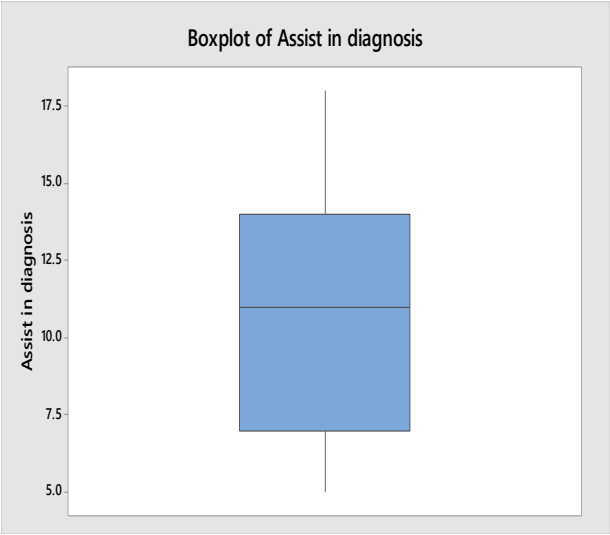
Statistics

Variable	N	N*	Mean	SE Mean	StDev	Minimum	Q1	Median	Q3
Cleaning & Mopping	20	0	9.95	1.11	4.96	4.00	7.00	9.00	10.75
Hygiene care	38	0	7.13	1.03	6.34	2.00	4.00	6.00	7.25
Assist pharma activities (IP)	40	0	6.325	0.633	4.002	1.000	3.000	5.000	8.000
Assist pharma activities (DY)	78	0	6.449	0.420	3.706	1.000	4.000	5.500	8.000
Assist in diagnosis	15	0	10.87	1.05	4.07	5.00	7.00	11.00	14.00
Paperwork	25	0	5.040	0.855	4.277	1.000	2.000	4.000	5.500
Transfer of patient	15	0	11.00	1.59	6.16	4.00	6.00	9.00	17.00
Assist pt. in activities	13	0	10.85	2.29	8.24	2.00	4.00	10.00	15.50
Helping/Serving	55	0	5.164	0.728	5.398	0.000	2.000	4.000	7.000
Miscellaneous	20	0	7.60	1.48	6.64	2.00	3.00	5.00	13.00

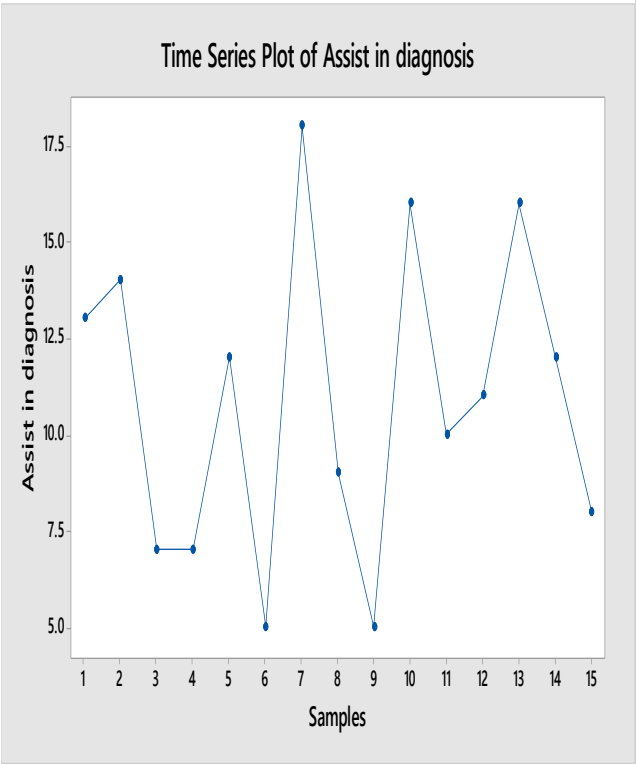
Variable	Maximum
Cleaning & Mopping	23.00
Hygiene care	37.00
Assist pharma activities (IP)	18.000
Assist pharma activities (DY)	18.000
Assist in diagnosis	18.00
Paperwork	20.000
Transfer of patient	25.00
Assist pt. in activities	30.00
Helping/Serving	25.000
Miscellaneous	22.00

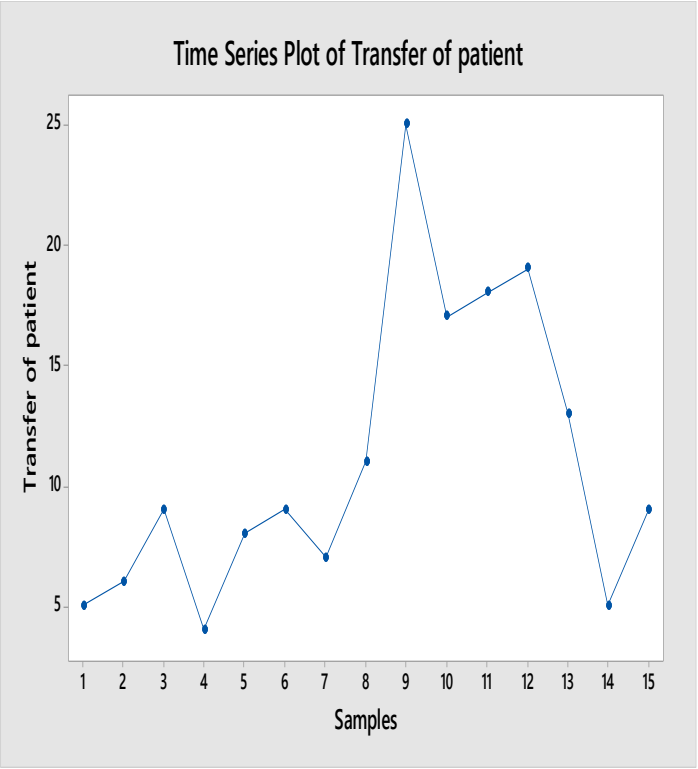
- Descriptive statistics of all the main activities are displayed with their mean time, standard deviation from mean and both maximum and minimum time involved in these activities.





- Activity with maximum interquartile range are transfer of patients and assisting nurse in diagnosis.





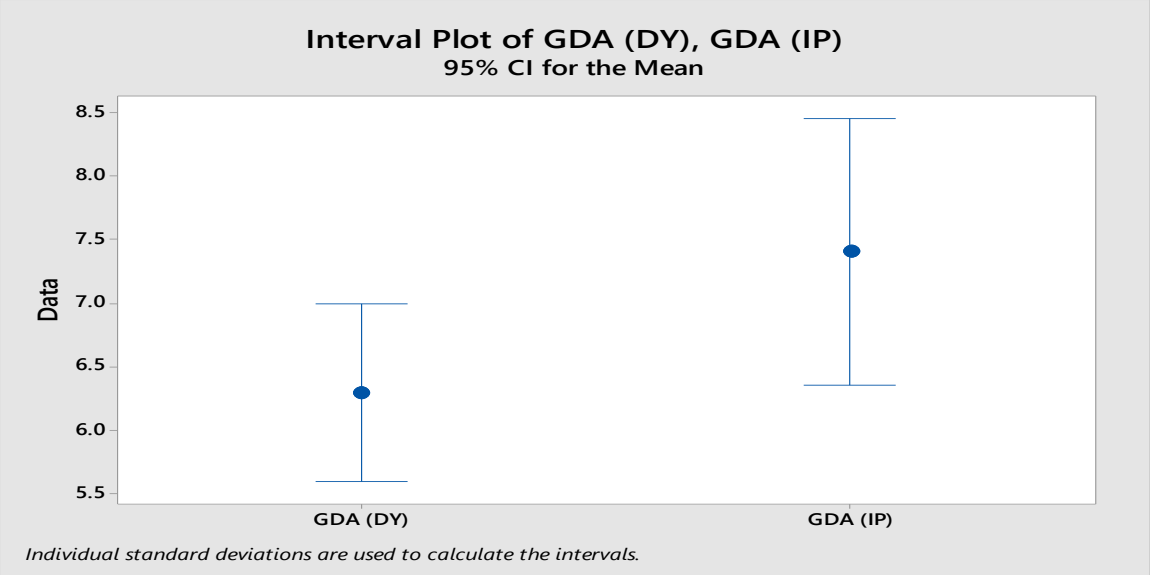
- **Sudden shifts were observed in the time series of diagnosis and transfer detecting high variability in the process.**

Comparing DY with IP

Descriptive Statistics: GDA (DY), GDA (IP)

Statistics

Variable	N	N*	Mean	SE Mean	StDev	Minimum	Q1	Median	Q3	Maximum
GDA (DY)	140	0	6.293	0.354	4.191	1.000	3.000	5.000	8.000	24.000
GDA (IP)	140	0	7.407	0.531	6.287	0.000	3.000	6.000	10.000	37.000



Conclusion

- The mean and standard deviation from mean of daycare is lesser than that of the In-patient. Meaning that the processes performed by the DY unit is more stable than that of IP.
- The most time taking process for both the GDAs were in transfer of patients and assisting in diagnosis. Except assisting patients for daily activities
- Maximum amount of time spent by both the GDAs was in the pharmacy activities and general help/service for the staff.

Recommendation

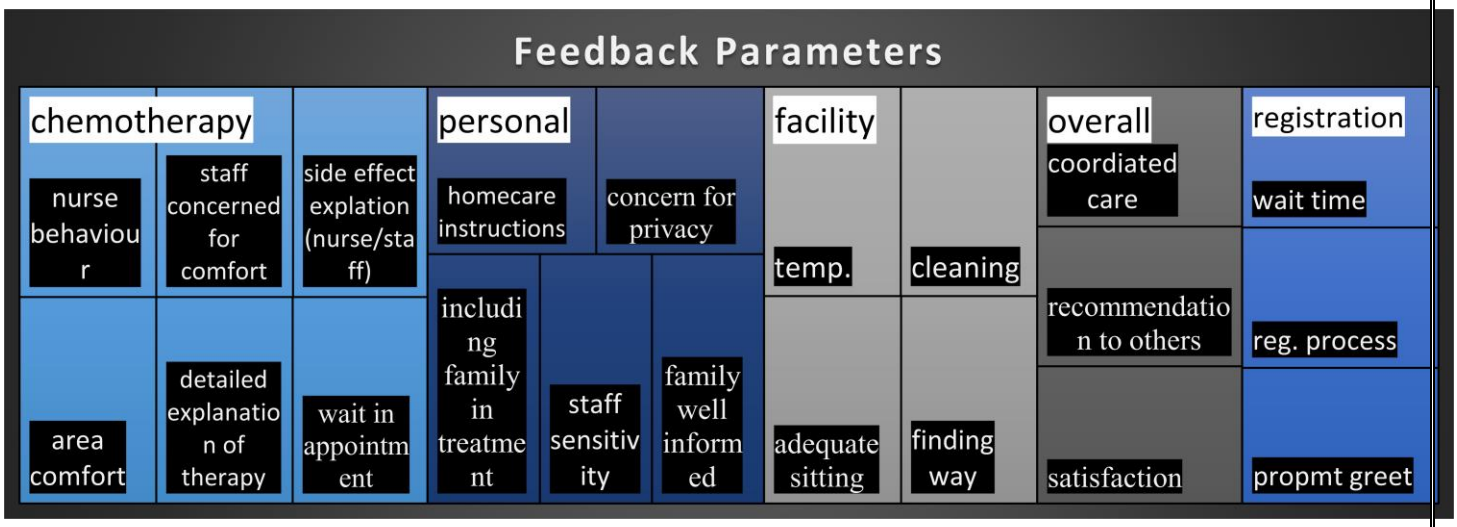
- Particular GDAs could be assigned for the transfer of patient and for assisting nurse in diagnosis.
- Confirmation of the reports of particular patient via a phone-call or message intimation can be done to reduce the travel and time involved with it, for diagnosis.
- Majority of times GDAs are found interrupted with other tasks by the other departments, if particular GDA could be assigned for a particular department & the delays related to that department and passing on of orders to other GDA could be reduced significantly.

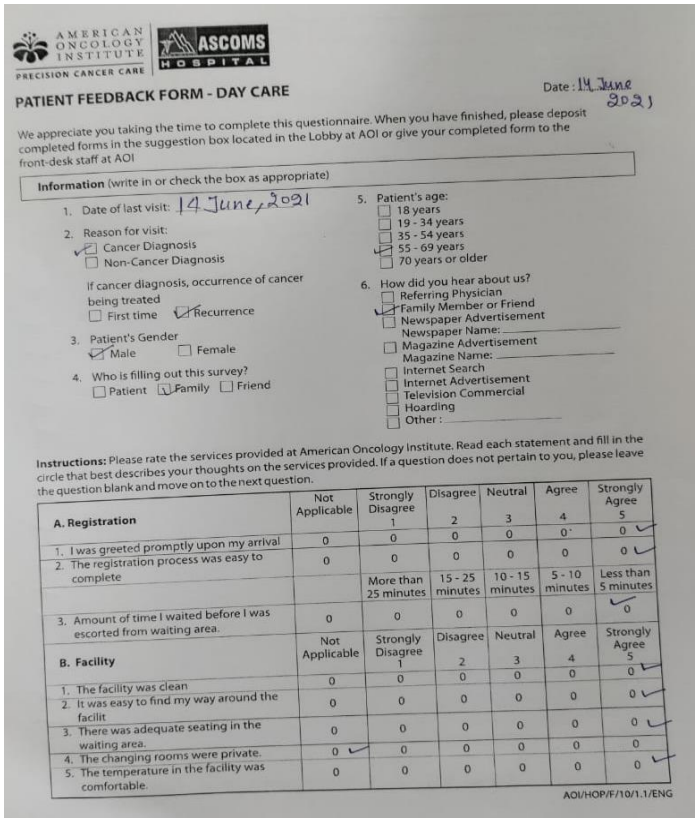
PROJECT-4
Patient Satisfaction Survey

Background

Patient satisfaction is the major factor that pulls the patients to a particular hospital. The environment, staff, pharmacy, GDA, HK are all important dots to link normal experience with that of excellent one, along with doctors and nursing staff. Patient satisfaction survey helps in keeping all the patient's/ attendant's needs under observation and helps in determining the status of the hospital in a customer's point of view.

Feedback parameters play a vital role in determining the accuracy of these surveys. AOI uses these 5 main parameters to access the experience of the patients/attendants in the daycare unit.





AMERICAN ONCOLOGY INSTITUTE — PRECISION CANCER CARE | ASCOMS HOSPITAL

PATIENT FEEDBACK FORM - DAY CARE

Date : 14 June 2021

We appreciate you taking the time to complete this questionnaire. When you have finished, please deposit completed forms in the suggestion box located in the Lobby at AOI or give your completed form to the front-desk staff at AOI

Information (write in or check the box as appropriate)

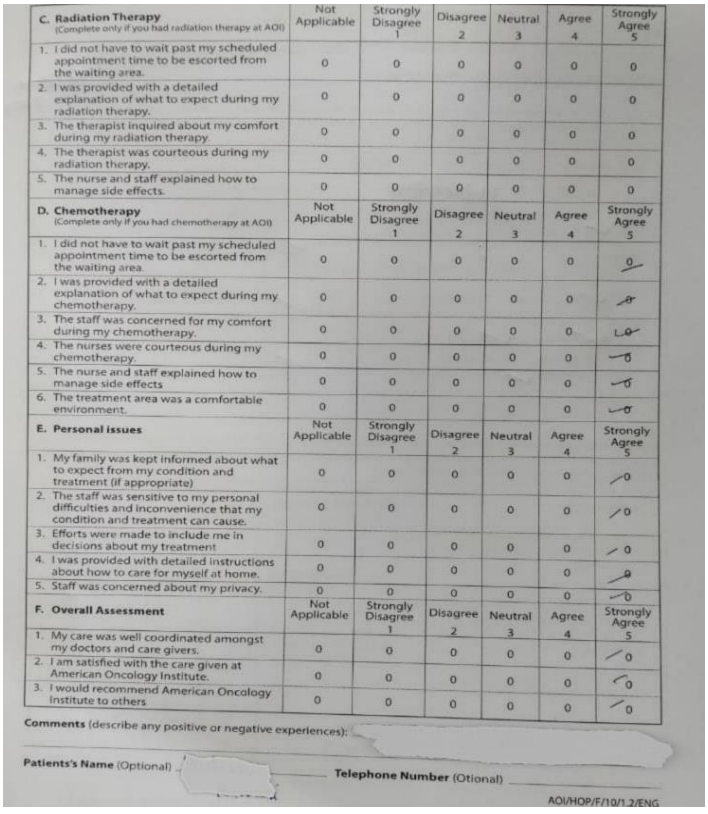
1. Date of last visit: 14 June 2021
2. Reason for visit:
   - [x] Cancer Diagnosis
   - [ ] Non-Cancer Diagnosis

   If cancer diagnosis, occurrence of cancer being treated
   - [ ] First time
   - [x] Recurrence
3. Patient's Gender
   - [x] Male
   - [ ] Female
4. Who is filling out this survey?
   - [ ] Patient
   - [x] Family
   - [ ] Friend
5. Patient's age:
   - [ ] 18 years
   - [ ] 19 - 34 years
   - [ ] 35 - 54 years
   - [x] 55 - 69 years
   - [ ] 70 years or older
6. How did you hear about us?
   - [ ] Referring Physician
   - [x] Family Member or Friend
   - [ ] Newspaper Advertisement
     Newspaper Name: _____
   - [ ] Magazine Advertisement
     Magazine Name: _____
   - [ ] Internet Search
   - [ ] Internet Advertisement
   - [ ] Television Commercial
   - [ ] Hoarding
   - [ ] Other : _____

Instructions: Please rate the services provided at American Oncology Institute. Read each statement and fill in the circle that best describes your thoughts on the services provided. If a question does not pertain to you, please leave the question blank and move on to the next question.

A. Registration	Not Applicable	Strongly Disagree 1	Disagree 2	Neutral 3	Agree 4	Strongly Agree 5
1. I was greeted promptly upon my arrival	0	0	0	0	0	0
2. The registration process was easy to complete	0	0	0	0	0	0
		More than 25 minutes	15 - 25 minutes	10 - 15 minutes	5 - 10 minutes	Less than 5 minutes
3. Amount of time I waited before I was escorted from waiting area.	0	0	0	0	0	0
B. Facility	Not Applicable	Strongly Disagree 1	Disagree 2	Neutral 3	Agree 4	Strongly Agree 5
1. The facility was clean	0	0	0	0	0	0
2. It was easy to find my way around the facilit	0	0	0	0	0	0
3. There was adequate seating in the waiting area.	0	0	0	0	0	0
4. The changing rooms were private.	0	0	0	0	0	0
5. The temperature in the facility was comfortable.	0	0	0	0	0	0

AOI/HOP/F/10/1.1/ENG



C. Radiation Therapy (Complete only if you had radiation therapy at AOI)	Not Applicable	Strongly Disagree 1	Disagree 2	Neutral 3	Agree 4	Strongly Agree 5
1. I did not have to wait past my scheduled appointment time to be escorted from the waiting area.	0	0	0	0	0	0
2. I was provided with a detailed explanation of what to expect during my radiation therapy.	0	0	0	0	0	0
3. The therapist inquired about my comfort during my radiation therapy.	0	0	0	0	0	0
4. The therapist was courteous during my radiation therapy.	0	0	0	0	0	0
5. The nurse and staff explained how to manage side effects.	0	0	0	0	0	0
D. Chemotherapy (Complete only if you had chemotherapy at AOI)	Not Applicable	Strongly Disagree 1	Disagree 2	Neutral 3	Agree 4	Strongly Agree 5
1. I did not have to wait past my scheduled appointment time to be escorted from the waiting area.	0	0	0	0	0	0
2. I was provided with a detailed explanation of what to expect during my chemotherapy.	0	0	0	0	0	0
3. The staff was concerned for my comfort during my chemotherapy.	0	0	0	0	0	0
4. The nurses were courteous during my chemotherapy.	0	0	0	0	0	0
5. The nurse and staff explained how to manage side effects	0	0	0	0	0	0
6. The treatment area was a comfortable environment.	0	0	0	0	0	0
E. Personal issues	Not Applicable	Strongly Disagree 1	Disagree 2	Neutral 3	Agree 4	Strongly Agree 5
1. My family was kept informed about what to expect from my condition and treatment (if appropriate)	0	0	0	0	0	0
2. The staff was sensitive to my personal difficulties and inconvenience that my condition and treatment can cause.	0	0	0	0	0	0
3. Efforts were made to include me in decisions about my treatment	0	0	0	0	0	0
4. I was provided with detailed instructions about how to care for myself at home.	0	0	0	0	0	0
5. Staff was concerned about my privacy.	0	0	0	0	0	0
F. Overall Assessment	Not Applicable	Strongly Disagree 1	Disagree 2	Neutral 3	Agree 4	Strongly Agree 5
1. My care was well coordinated amongst my doctors and care givers.	0	0	0	0	0	0
2. I am satisfied with the care given at American Oncology Institute.	0	0	0	0	0	0
3. I would recommend American Oncology Institute to others	0	0	0	0	0	0

Comments (describe any positive or negative experiences): _____

Patients's Name (Optional) _____ **Telephone Number** (Otional) _____

AOI/HOP/F/10/1.2/ENG

Objective

- To access the patient satisfaction with the help of this survey and analyze the results.
- To get the feedback of the daycare patients or help patients/attendants fill the survey and try to solve their issues/concerns by putting their voice forward.
- To check which parameter is lacking behind in the entire survey.

Methodology

To collect the data simple random probability sampling was used and the data was collected on hospital's feedback forms and then was taken from the feedback tracker staff of the unit. It was done in the daycare unit in the month of June. A total of 230 samples were collected. All the parameters were then segregated accordingly for better analysis.

For data analysis MS Excel was used.

Analysis:

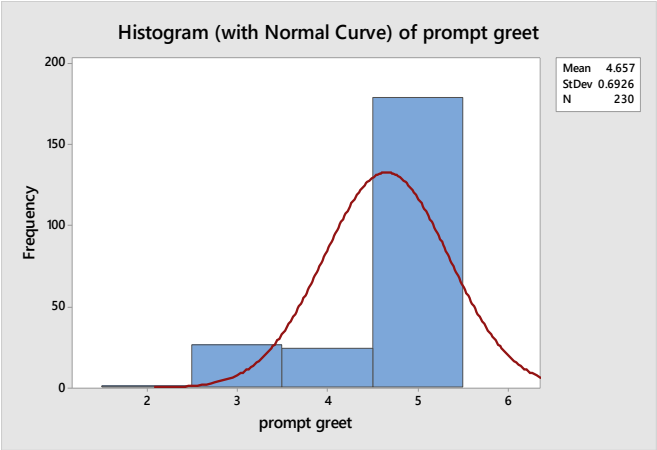
Registration process

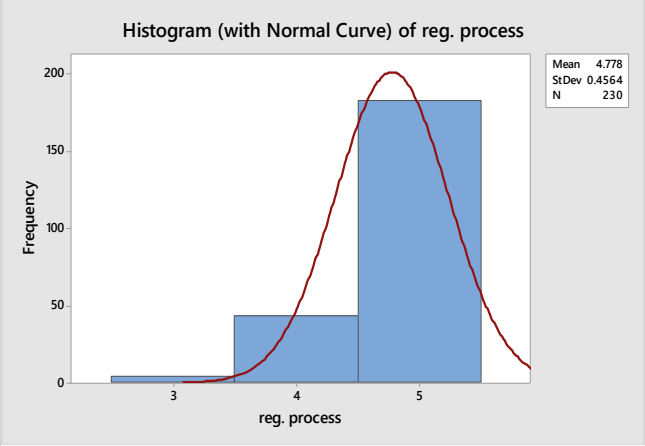
Descriptive Statistics: prompt greet, reg. process, wait time

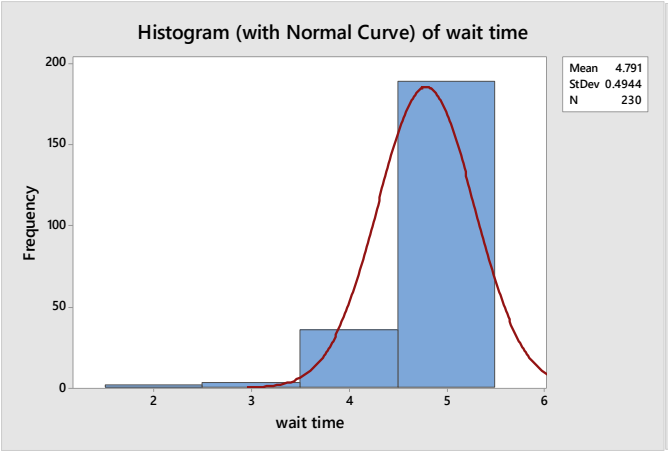
Statistics

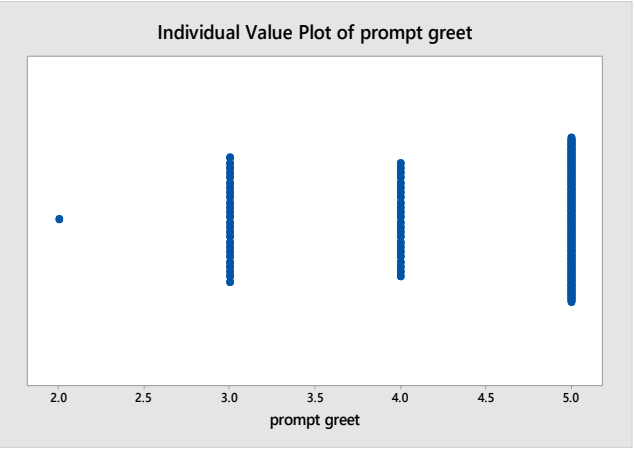
Variable	N	N*	Mean	SE Mean	StDev	Variance	Minimum	Q1	Median	Q3
prompt greet	230	0	4.6565	0.0457	0.6926	0.4798	2.0000	5.0000	5.0000	5.0000
reg. process	230	0	4.7783	0.0301	0.4564	0.2083	3.0000	5.0000	5.0000	5.0000
wait time	230	0	4.7913	0.0326	0.4944	0.2445	2.0000	5.0000	5.0000	5.0000

Variable	Maximum	Skewness
prompt greet	5.0000	-1.81
reg. process	5.0000	-1.89
wait time	5.0000	-2.80









- A high deviation from mean of the prompt greet by the registration staff is seen. After 5 rating second highest rating of 3 has been given, depicting that the patients were treated neutrally on arrival.

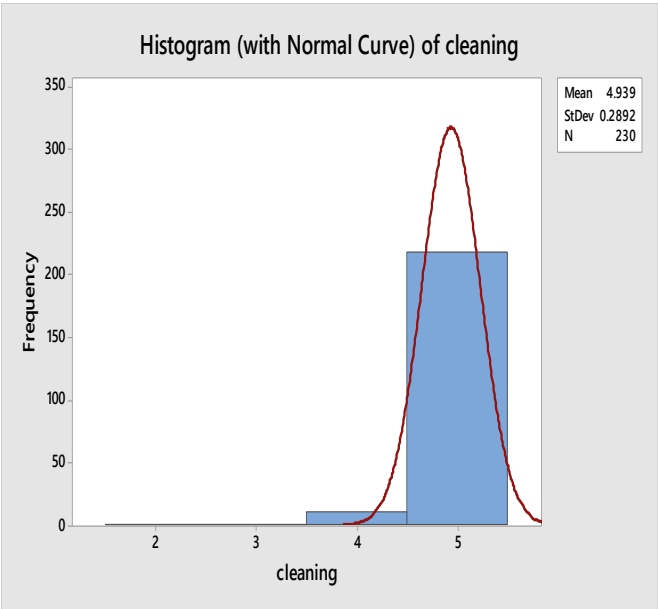
Facility

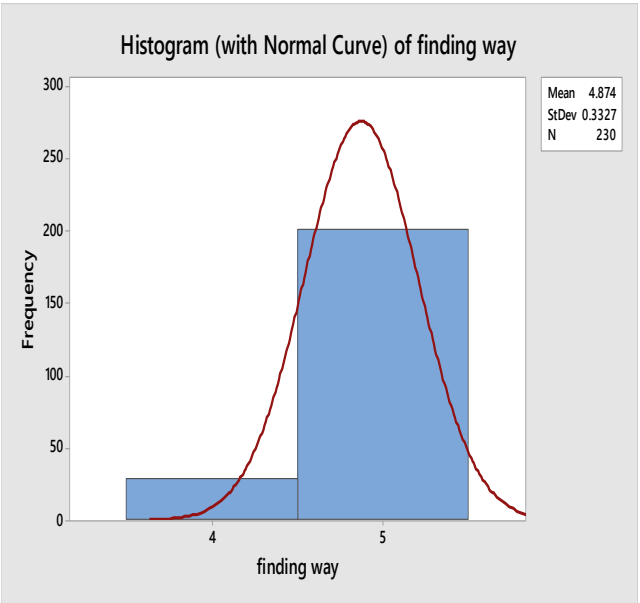
Descriptive Statistics: cleaning, finding way, adequate sitting, temp.

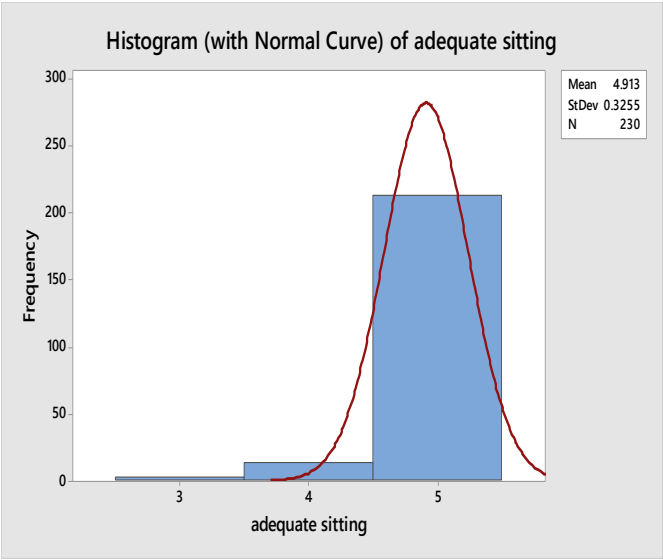
Statistics

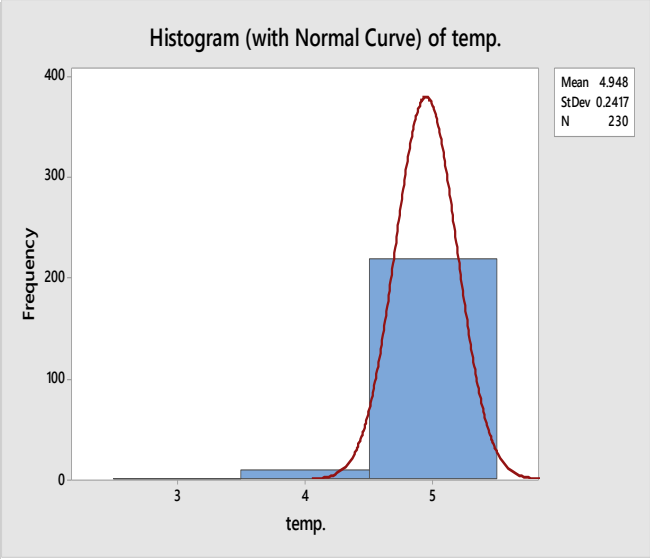
Variable	N	N*	Mean	SE Mean	StDev	Variance	Minimum	Q1	Median	Q3
cleaning	230	0	4.9391	0.0191	0.2892	0.0836	2.0000	5.0000	5.0000	5.0000
finding way	230	0	4.8739	0.0219	0.3327	0.1107	4.0000	5.0000	5.0000	5.0000
adequate sitting	230	0	4.9130	0.0215	0.3255	0.1059	3.0000	5.0000	5.0000	5.0000
temp.	230	0	4.9478	0.0159	0.2417	0.0584	3.0000	5.0000	5.0000	5.0000

Variable	Maximum	Skewness
cleaning	5.0000	-6.28
finding way	5.0000	-2.27
adequate sitting	5.0000	-4.03
temp.	5.0000	-4.95









- Majority of the 230 samples were satisfied by the facility given by the hospital and hence shows less standard deviation from the mean.

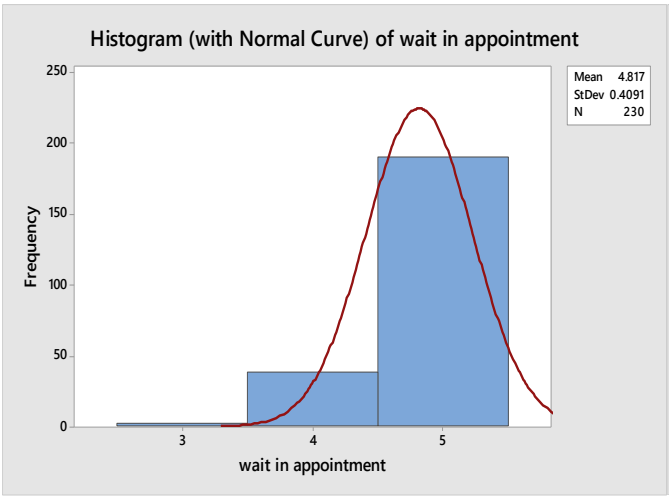
Chemotherapy

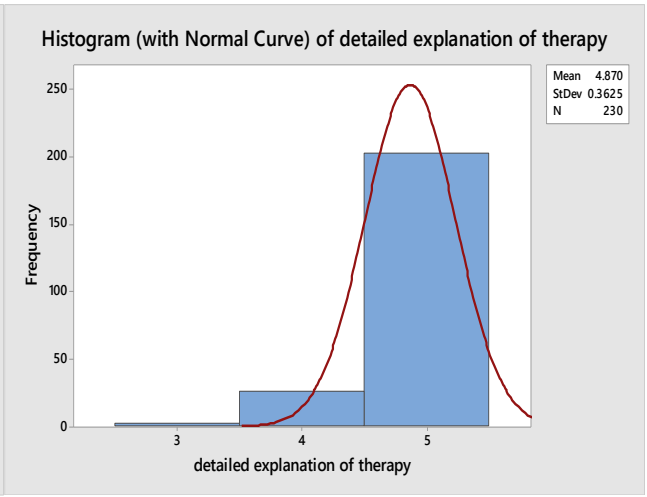
Descriptive Statistics: wait in appointment, detailed ... f), area comfort

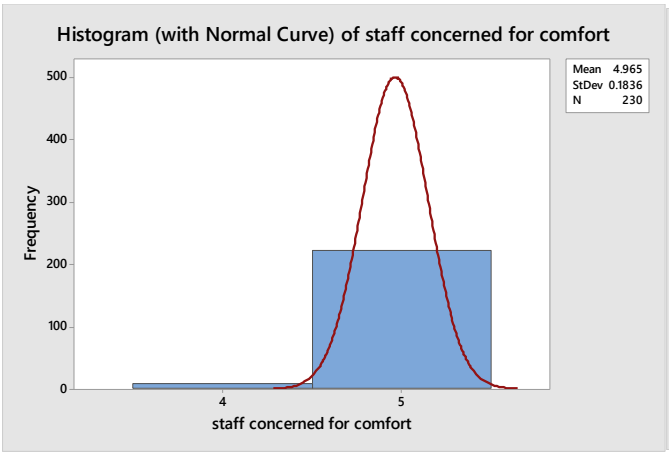
Statistics

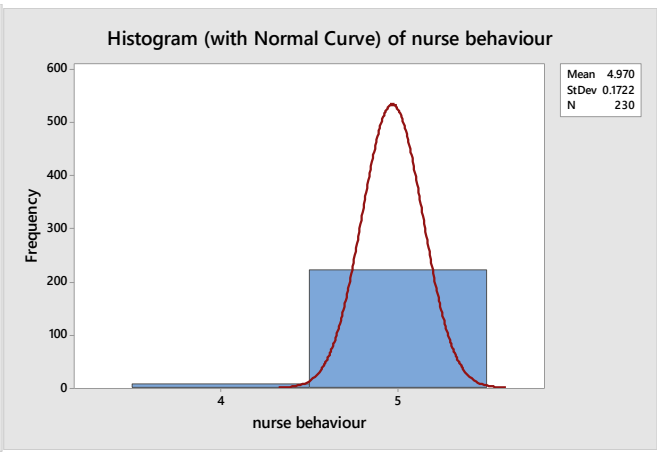
Variable	N	N*	Mean	SE Mean	StDev	Variance	Minimum	Q1	Median
wait in appointment	230	0	4.8174	0.0270	0.4091	0.1674	3.0000	5.0000	5.0000
detailed explanation of therapy	230	0	4.8696	0.0239	0.3625	0.1314	3.0000	5.0000	5.0000
staff concerned for comfort	230	0	4.9652	0.0121	0.1836	0.0337	4.0000	5.0000	5.0000
nurse behavior	230	0	4.9696	0.0114	0.1722	0.0296	4.0000	5.0000	5.0000
side effect exp. (nurse/staff)	230	0	4.9000	0.0233	0.3540	0.1253	3.0000	5.0000	5.0000
area comfort	230	0	4.8826	0.0213	0.3226	0.1041	4.0000	5.0000	5.0000

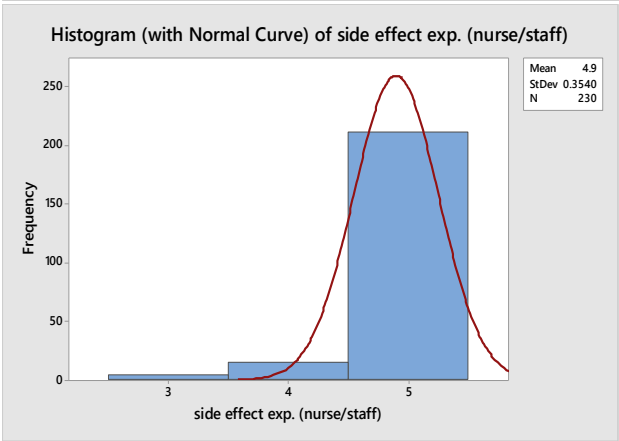
Variable	Q3	Maximum	Skewness
wait in appointment	5.0000	5.0000	-2.03
detailed explanation of therapy	5.0000	5.0000	-2.75
staff concerned for comfort	5.0000	5.0000	-5.11
nurse behavior	5.0000	5.0000	-5.50
side effect exp. (nurse/staff)	5.0000	5.0000	-3.79
area comfort	5.0000	5.0000	-2.39

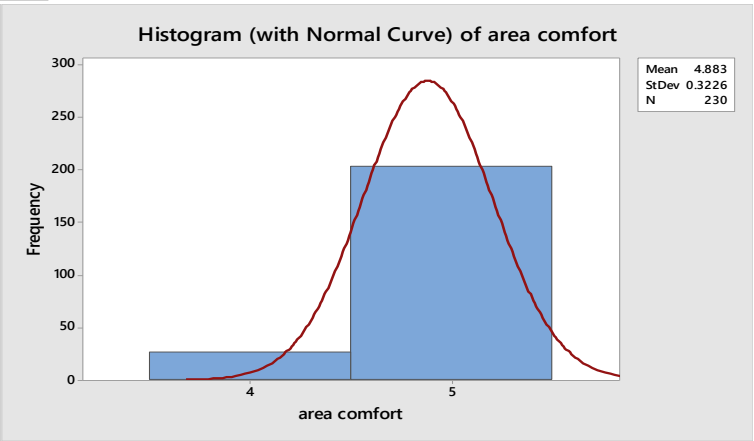

Histogram (with Normal Curve) of wait in appointment
Mean 4.817
StDev 0.4091
N 230
Frequency
wait in appointment

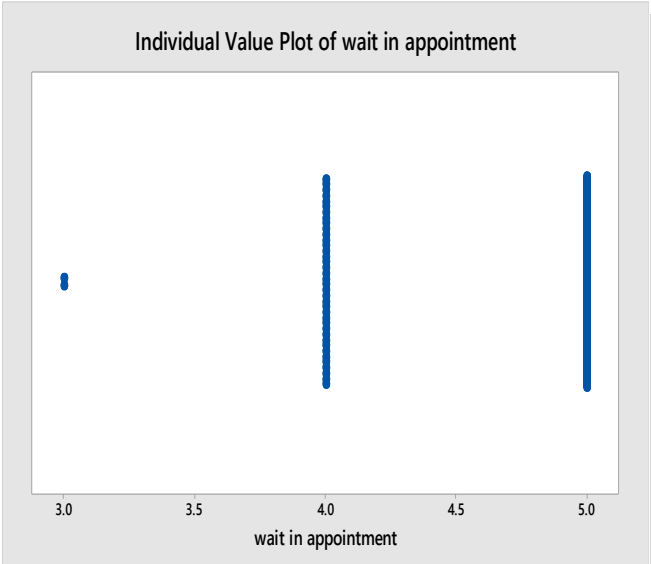

Histogram (with Normal Curve) of detailed explanation of therapy
Mean 4.870
StDev 0.3625
N 230
Frequency
detailed explanation of therapy

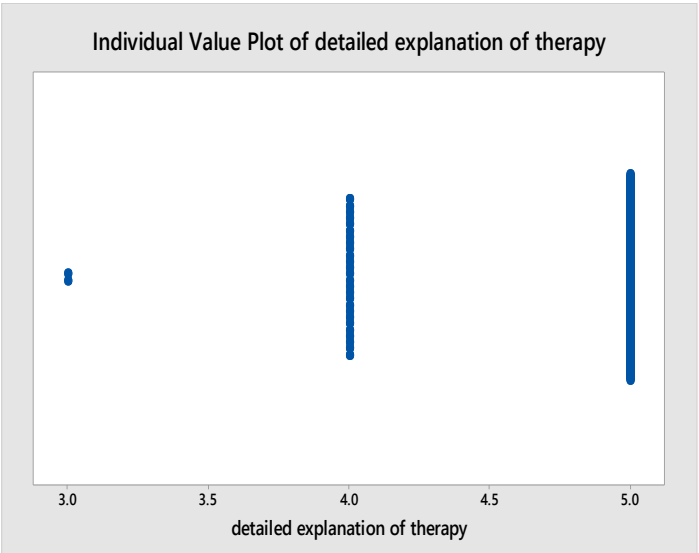

Histogram (with Normal Curve) of staff concerned for comfort
Mean 4.965
StDev 0.1836
N 230
Frequency
staff concerned for comfort

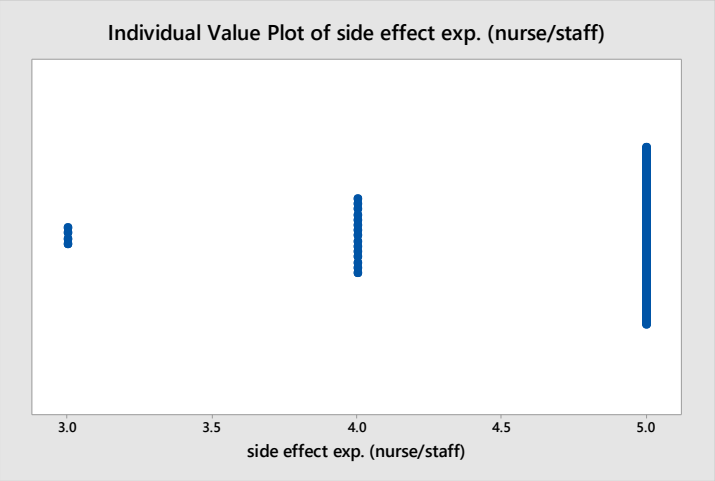

Histogram (with Normal Curve) of nurse behaviour
Mean 4.970
StDev 0.1722
N 230
Frequency
nurse behaviour


Histogram (with Normal Curve) of side effect exp. (nurse/staff)
Mean 4.9
StDev 0.3540
N 230
Frequency
side effect exp. (nurse/staff)


Histogram (with Normal Curve) of area comfort
Mean 4.883
StDev 0.3226
N 230
Frequency
area comfort


Individual Value Plot of wait in appointment
wait in appointment


Individual Value Plot of detailed explanation of therapy
detailed explanation of therapy



- Majorly all mean values show little standard deviation except wait in appointment, detailed explanation of therapy & side effect explanation. Depicting few samples experience low results under these subcategories.

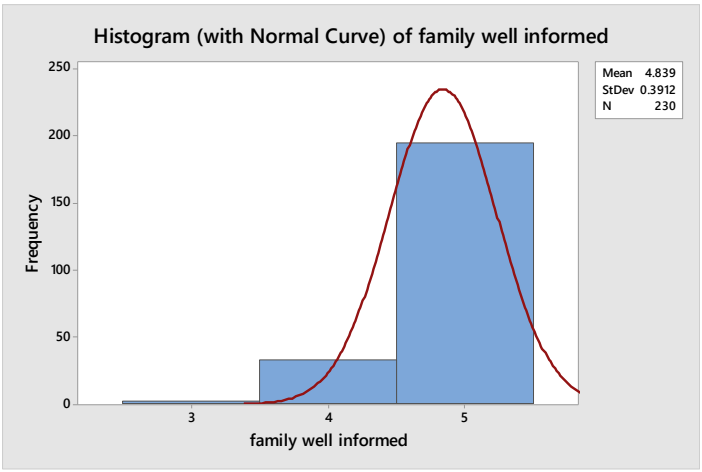
Personal

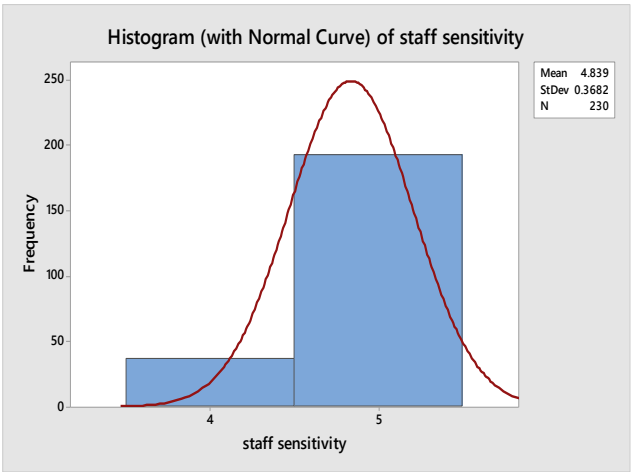
Descriptive Statistics: family well informed, staff ... concern for privacy

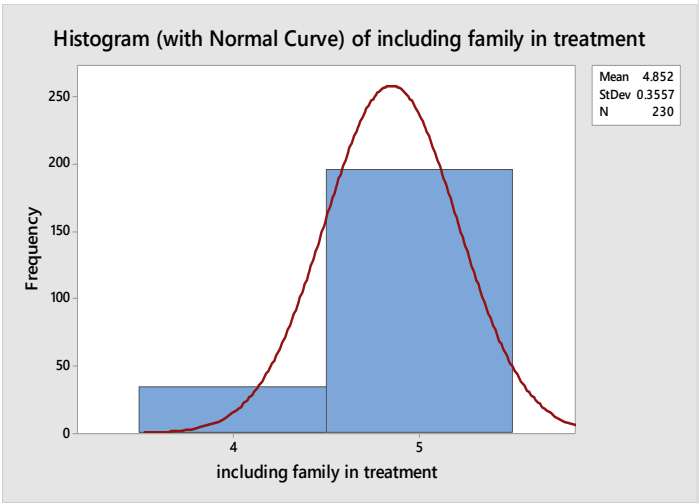
Statistics

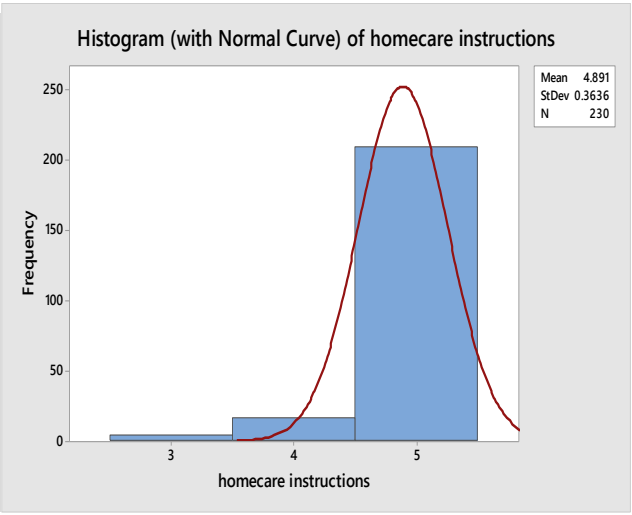
Variable	N	N*	Mean	SE Mean	StDev	Variance	Minimum	Q1	Median
family well informed	230	0	4.8391	0.0258	0.3912	0.1530	3.0000	5.0000	5.0000
staff sensitivity	230	0	4.8391	0.0243	0.3682	0.1356	4.0000	5.0000	5.0000
including family in treatment	230	0	4.8522	0.0235	0.3557	0.1265	4.0000	5.0000	5.0000
homecare instructions	230	0	4.8913	0.0240	0.3636	0.1322	3.0000	5.0000	5.0000
concern for privacy	230	0	4.8609	0.0229	0.3468	0.1203	4.0000	5.0000	5.0000

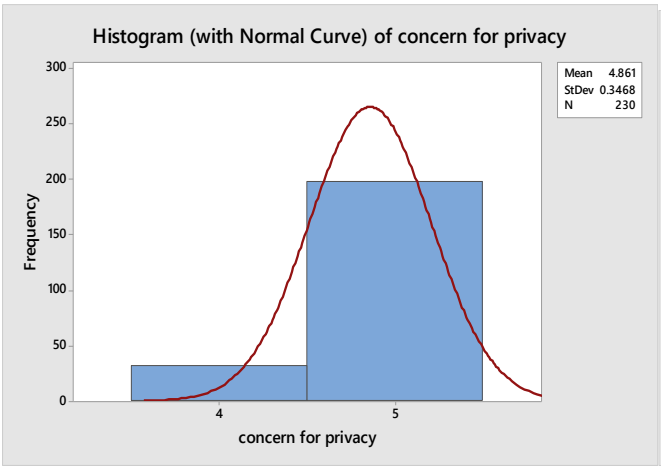
Variable	Q3	Maximum	Skewness
family well informed	5.0000	5.0000	-2.29
staff sensitivity	5.0000	5.0000	-1.86
including family in treatment	5.0000	5.0000	-2.00
homecare instructions	5.0000	5.0000	-3.56
concern for privacy	5.0000	5.0000	-2.10

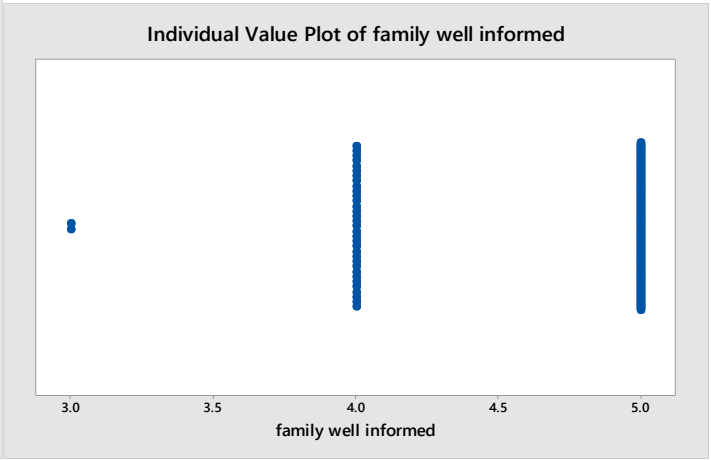

Histogram (with Normal Curve) of family well informed
Mean 4.839
StDev 0.3912
N 230
Frequency
family well informed

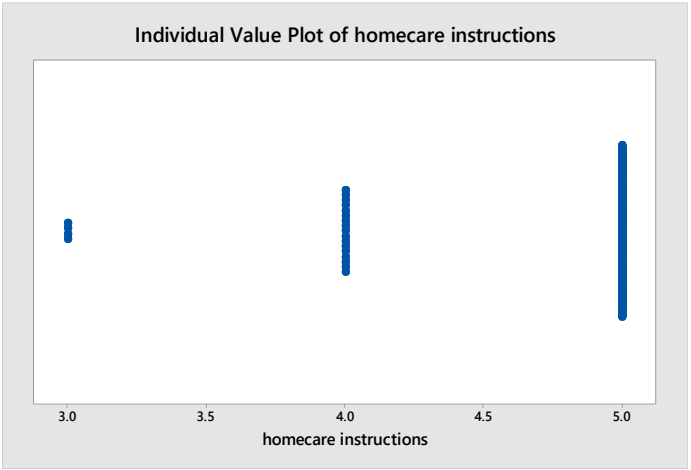

Histogram (with Normal Curve) of staff sensitivity
Mean 4.839
StDev 0.3682
N 230
Frequency
staff sensitivity


Histogram (with Normal Curve) of including family in treatment
Mean 4.852
StDev 0.3557
N 230
Frequency
including family in treatment


Histogram (with Normal Curve) of homecare instructions
Mean 4.891
StDev 0.3636
N 230
Frequency
homecare instructions


Histogram (with Normal Curve) of concern for privacy
Mean 4.861
StDev 0.3468
N 230
Frequency
concern for privacy


Individual Value Plot of family well informed
family well informed


Individual Value Plot of homecare instructions
homecare instructions

- Majority of the samples falls in the value of mean and show little standard deviation from the mean except family well informed and homecare instructions. Depicting theses personal subcategory requires attention.

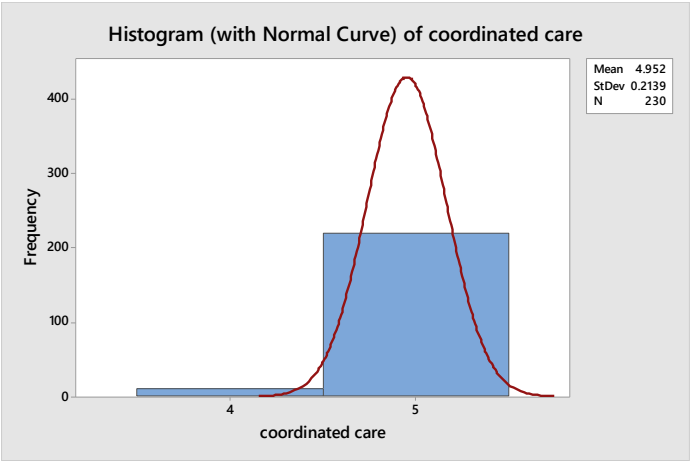
Overall

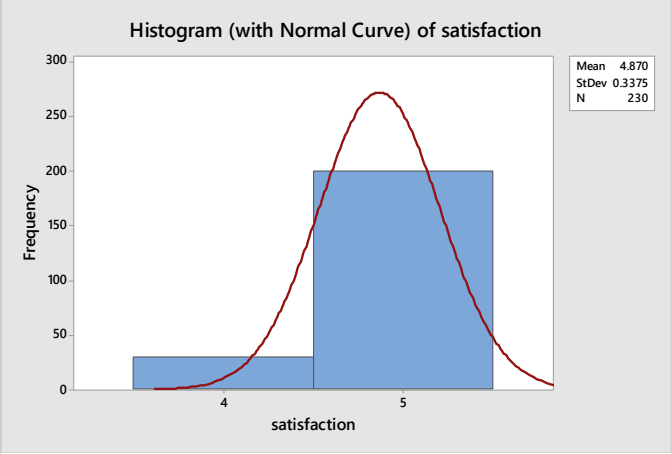
Descriptive Statistics: coordinated care, satisfaction, ... ation to others

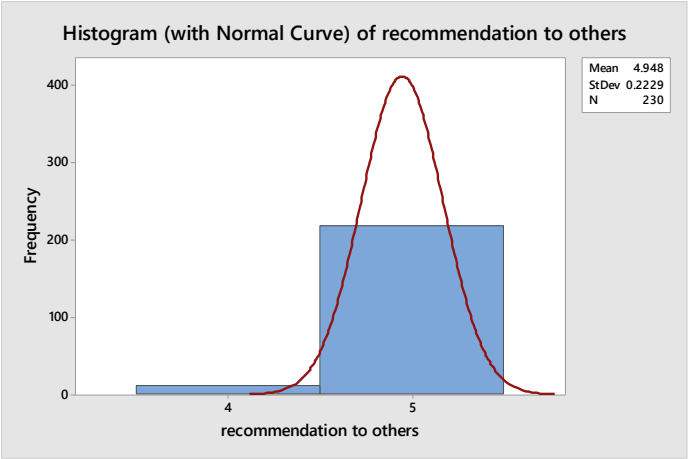
Statistics

Variable	N	N*	Mean	SE Mean	StDev	Variance	Minimum	Q1	Median
coordinated care	230	0	4.9522	0.0141	0.2139	0.0457	4.0000	5.0000	5.0000
satisfaction	230	0	4.8696	0.0223	0.3375	0.1139	4.0000	5.0000	5.0000
recommendation to others	230	0	4.9478	0.0147	0.2229	0.0497	4.0000	5.0000	5.0000

Variable	Q3	Maximum	Skewness
coordinated care	5.0000	5.0000	-4.27
satisfaction	5.0000	5.0000	-2.21
recommendation to others	5.0000	5.0000	-4.05

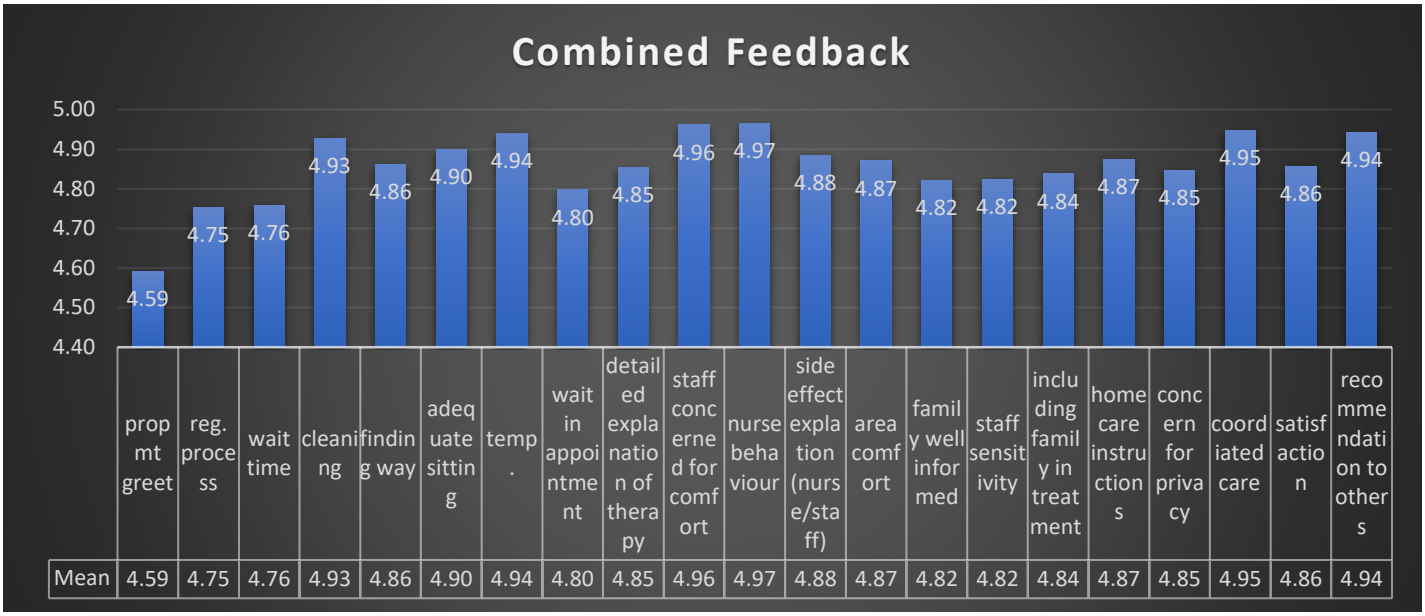




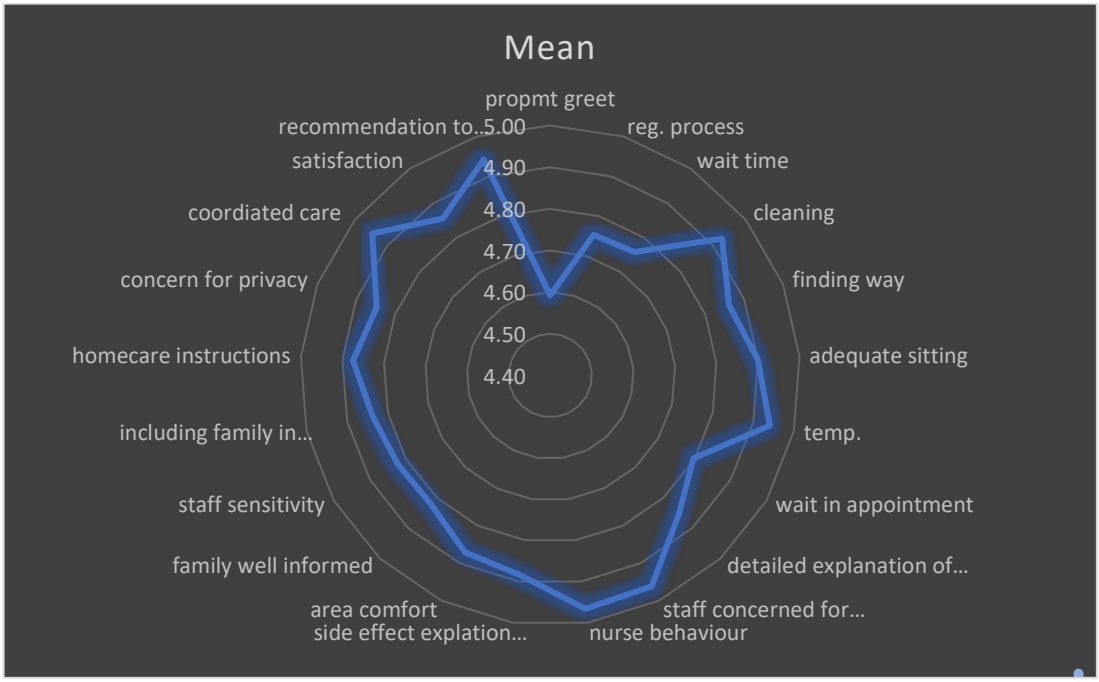


- Majorly all mean values show little standard deviation except. Depicting few samples experience low results under these subcategories of Overall.

Combined feedback



	propmt greet	reg. process	wait time	cleaning	finding way	adequate sitting	temp.	wait in appointment	detailed explanation of therapy	staff concerned for comfort	nurse behaviour	side effect explation (nurse/staff)	area comfort	family well informed	staff sensitivity	including family in treatment	home care instructions	concern for privacy	coordiated care	satisfaction	recommendation to others
Mean	4.59	4.75	4.76	4.93	4.86	4.90	4.94	4.80	4.85	4.96	4.97	4.88	4.87	4.82	4.82	4.84	4.87	4.85	4.95	4.86	4.94



- Radar graph shows which subcategory of the parameter requires attention of the administration.

Conclusion:

- Prompt greeting on arrival, registration process, wait time in registration & wait for chemo appointment requires immediate focus as the overall feedback of the hospital may decrease based on this.
- information to family, sensitivity of staff also requires attention as it can be controlled effectively without any resource utilization.

Recommendation

- Happy faces are the home to the customers. Staff can be made aware to nurture every patient from their time of arrival to the hospital.
- Only urgent phone calls should be answered during the working hours.
- Priority to prior arrival patient should be given.
- Patient can be counselled in OPD and Daycare to utilize their wait times.
- Feedback form can be edited to make it look less lengthy for the daycare unit. A separate feedback form can be created to take daily feedback of chemo patients with the major important parameters only.