

**Summer Training at
Asian Institute of Medical Sciences (Aims), Faridabad
(April 3 to June 2, 2017)**

Turn Around Time Analysis in Clinical Services

**By
Abhishek Surolia**

**Under the guidance of
Dr. Chetan Choithani**

**MBA Hospital & Health Management
2016-2018**


Institute of Health Management Research
**The IIHMR University, Jaipur
2017**

CERTIFICATE

This is to certify that **Dr. Abhishek Surolia** has undergone summer training in **Asian Institute of Medical Sciences, Faridabad** from 3rd April to 2nd June 2017.

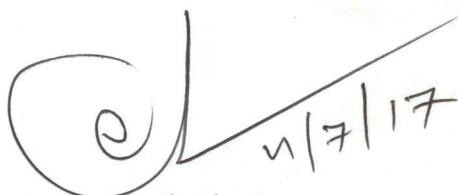
The candidate himself completed the project assign to her during summer training. His approach to the project was sincere and proactive. This summer training is in partial fulfillment of the course requirement recommended for the award of MBA in Hospital and Health Management.

I wish him success in all his future endeavors.


Col. (Dr.) Ashok Kaushik

Dean (Academic & Student Affair)

The IIHMR University, Jaipur


Dr. Chetan Choithani

Assistant Professor

The IIHMR University, Jaipur

AIMS/Fbd/HR/AS/17

Date: 3rd June '17

TO WHOM IT MAY CONCERN

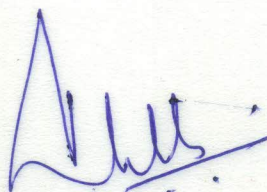
This is to certify that Dr. Abhishek Surolia S/o Mr. Subhash Chandra, student of MBA in Institute of Health Management & Research.

He has successfully undergone his internship in the department of Medical Operations from 3rd April 2017 to 2nd June 2017 on Topic "Turn around time analysis in clinical services"

We wish him all the best.

Yours truly,

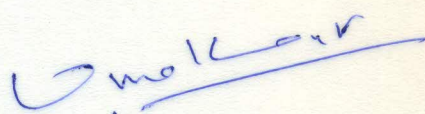
For Asian Institute of Medical Sciences



Rajeev Khatri

Group Head – Human Resources

Rajeev K. Khatri
Group Head - Human Resources



Dr. Umakant Sharma

AGM – Medical Administration

Asian Institute of Medical Sciences
(A Unit Of Blue Sapphire Healthcares Pvt. Ltd.)
Badkhal Flyover Road, Sec-21A
Faridabad-121001

ACKNOWLEDGEMENT

I am exceptionally thankful to all the professionals at **ASIAN INSTITUTE OF MEDICAL SCIENCES (AIMS)** for sharing generously their knowledge and precious time. We owe a great debt to **Dr. Hilal Ahmed** (Medical Superintendent and Regional Director) for sharing their valuable views in spite of their busy schedule. It has been my privilege to work under his dynamic supervision in the hospital.

We express our sincere gratitude to **Dr. Umakant Sharma** (Assistant General Manager Medical Operations) and we would also like to grab the opportunity to thanks Dr. **Sachin Arora** (Assistant General Manager Medical Services) and **Puspendra Vishvakarma** (MOD) for their helping hand, keen interest and valuable suggestions in the compilation of the report without their guidance and regular encouragement my project would not have been compiled.

I would also like to grab the opportunity to thanks **Dr. Uma Rani** (H.O.D Blood bank, Lab) and her whole team of **Bio-Medical team** and **Mr. Lokesh Sharma** (Deputy Manager Pharmacy) and **Mr. Sumer Mehta** (Assistant Manager Pharmacy) and their whole team of IPD Pharmacy and **Sister Sarama Mathai** (Nursing officer) and **Sister Ancy Methew** (IPD Ward Incharge) and her whole team for helping in data collection and my learning would have not been possible without in depth discussion with them.

I am highly grateful to all the departmental heads and staff for giving us time and helped in learning the process. Without the active cooperation and participation of **ASIAN TEAM** it would not have been possible to accomplish my project .

Most importantly we would like to thank our college Mentor **Dr. Chetan Choithani** (Assistant Professor) for guiding and supporting us on our given project work and **FACULTY OF IIHMR UNIVERSITY JAIPUR** for providing facilities for our study.

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HOSPITAL PROFILE



ASIAN INSTITUTE OF MEDICAL SCIENCES, a 425 bedded super specialty tertiary care hospital is truly futuristic in its services & technology and brings together some of the most talented medical professionals in India. The hospital has been accredited with NABH and NABL accreditations and is equipped with state-of-the-art technology . The hospital provides preventive, diagnostic, therapeutic, rehabilitative, and palliative and support services all under one roof and is designed to meet patient care and research requirements of the new millennium .

Situated in the national capital region of Delhi, the hospital is centrally located in Sector 21A, Faridabad, easily accessible from New Delhi International airport, New Delhi Railway station and New Delhi Interstate bus terminal .

ASIAN INSTITUTE OF MEDICAL SCIENCES, has been rated eighth best hospital in Delhi NCR by “The Week” magazine as per the “A C Nielson Survey”. The hospital is the vision of Padmashri awardee, Dr. Narendra Kumar Pandey, FRCS (Edinburgh), FRCS (Glasgow) FACS, FICS. Dr. Pandey is also recipient of Dr.B.C Roy National Award, the highest award in medicine instituted by the Government of India. He was honored for his pioneer work in Video Assisted Thoracoscopic Surgery (VATS)

Asian Institute of Medical Sciences provides comprehensive multi-specialty tertiary care facilities through its thirteen centers of excellence .

The ASIAN CANCER CENTRE offers end to end services – from prevention, early detection to comprehensive treatment and Palliative care. The first hospital in North India to deploy the Varian’s Rapid Arc on a Trilogy system along with several high end equipment’s such as PET/CT, DUAL head Gamma Camera and HDR brachy-therapy among others

The ASIAN HEART CENTRE provides comprehensive cardiac care including non-invasive, interventional and surgical facilities. The hospital runs the most advanced cardio thoracic vascular surgery program including Bypass, open heart and valvular heart surgery. The Centre is equipped with the most advanced cath-lab for angiography and angioplasties.

The ASIAN CENTRE FOR ADVANCED SURGERY is manned by highly skilled surgeons, fitted with ultra-modern surgical and diagnostic tools to tackle the most complicated surgical procedures. The 11 modular operation theatres are equipped with LED lights, media bridges, laminar air flow, operating microscopes, image intensifiers, laparoscopic equipment, harmonic, RFA, Hepa-filters, Laser, Cusa etc.

The ASIAN CENTRE FOR NEUROLOGY AND NEUROSURGERY is fully equipped to treat all kinds of disorders of the brain and spine. The department is equipped with latest high end machines like Digital EEG, EMG etc .

The ASIAN CENTRE FOR UROLOGY & KIDNEY TRANSPLANT is a state of the art facility providing excellent care for all urological conditions such as kidney stones, prostate, laparoscopic urology & uro-oncology.

The ASIAN CENTRE FOR RENAL DISEASES offers all forms of dialysis-haemodialysis, SLED, CRRT, Peritoneal dialysis and provision to dialysis hepatitis and HIV+ patients. The centre is also successfully running Renal Transplant programs.

The ASIAN CENTRE FOR BONE & JOINTS offers one of the most COMPREHENSIVE treatments of bone and joint ailments. The hospital offers extensive expertise in joint replacement surgeries like knee, hip and other joints.

The high end and innovative technologies in the ASIAN CENTRE FOR ADVANCED IMAGING gives patients access to a reliable and intensive diagnosis. The Imaging department of the hospital is equipped with state of the art Phillips equipment including a 1.5T MRI, Mammography, Bone Densitometer, 4 D Ultrasound and Digital X Ray. The centre has PET/ CT and dual head Gamma camera installed for early detection of cancer.

THE ASIAN CENTRE FOR GASTROENTEROLOGY is a state of the art facility providing excellent diagnostic and curative facilities in gastro intestinal problems, with the most experienced specialists for a wide spectrum of Gastro intestinal problems like: Gaseous Distension, Dyspepsia, Jaundice, Constipation, Bleeding from mouth & rectum .

VISION

“To be the most trusted healthcare partner for people through our unsurpassed quality & care and by striving to provide **accessible, affordable** and best **available** healthcare services in India”.

MISSION

- To give world class patient care.
- To revolutionize our healthcare services by genuinely caring.
- To be an active participant in the local community and provide the very best medical expertise for general welfare & well-being.
- To make specialized medical care available to every individual.

MOTO

Will to Serve...

....Skill to Cure

PUNCH LINE

Caring for what matters most

ORGANIZATION STRUCTURE

DEPARTMENT OF CRITICAL CARE

Components: ICU, IMCU

Layout: 3rd Floor

ICU ADMISSIONS

Admission in ICU can occur from:

- Inpatient wing of the hospital
- OT
- Emergency complex
- From other hospitals
- Transfer from IMCU
- Sometimes directly from OPD
- Rarely from Bronchoscopy, Endoscopy, Dialysis unit

Ownership of patient care in ICU:

- ICU & IMCU are running under **“Semi-Open Model”**.
- Patients are admitted under consultants of various medical and surgical specialties.
- Thereafter, patients are managed jointly by: **ADMITTING TEAM & CCM TEAM**.
- All admissions must be notified by Duty Doctor to both the teams.

Patient admission procedure in ICU

Physician

(Desiring admission of a patient in ICU)



Contacts Admission Office



Contacts for Bed Availability with



ICU (Nurse – Ward Supervisor)



Beds Available



Admission done



No ICU Bed available



Admission office contacts

Nursing Administrator



Nursing Administrator starts ICU patients "status evaluation"



Any patient can be shifted

none can be

To IMCU/ Wards/ CCU

shifted



Patient shifted to ICU



Patient is stabilized



After one patient shifted to IMCU/ Wards
Nursing Supervisor contacts

Administrator on-call



He authorize transfer of
patient to other hospital**

**AIMS Physician is responsible to locate a physician who will admit the patient to another hospital.

DEATH PROTOCOL

In case of clinical death



Duty doctor informs both Admitting & CCM team

Before declaring death



Family informed of death



Doctors on duty issues a Death Certificate ASAP after death



Body is duly packed in fresh sheet & retained in ICU**



Family is requested to clear bills (Hospital + Pharmacy + any other)
& fill Dead Body Form



After receiving Dead Body Form, body handed over to family

** Body retained in ICU for a maximum of 1 hr. after death and upto 4 hrs in exceptional situation on orders of Duty Doctor & beyond that on orders of GM (Admin). Thereafter body is sent to Mortuary and security is informed.

If MLC case, packed body is sent to mortuary & handed over to police by security.

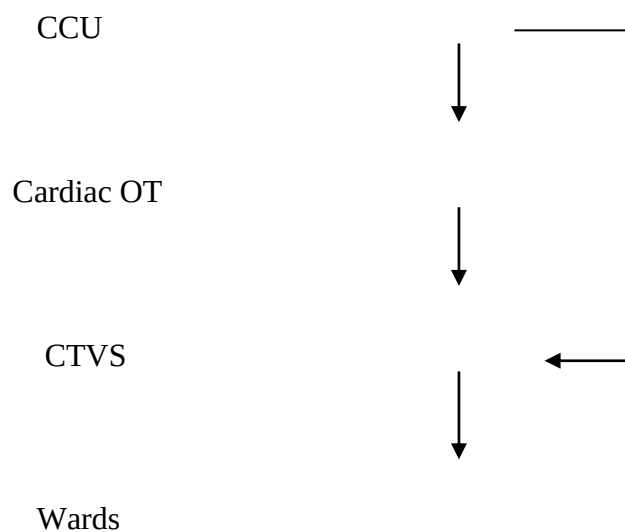
GAPS:-

- Nursing handover is not filled by nursing staff.
- Pacemaker functioning is not checked daily.

CTVS

- **Layout:** 3rd floor
- **Beds:** 6
- **Store room:** 1
- **Doctor's room:** 1
- **Clean utility room:** 1
- **Dirty utility room:** 1

Workflow:



GAPS:

- No signage for attendants to wear mask and head cap before entering CTVS.
- No signage of CTVS- ICU at entrance.

EMERGENCY COMPLEX

Layout: -1 Basement

N:P Ratio: 1:1

AMBULANCE SERVICE FLOW

Call centre executive attends the emergency call



Transfer the call to Emergency's CMO



Notes down necessary details like:

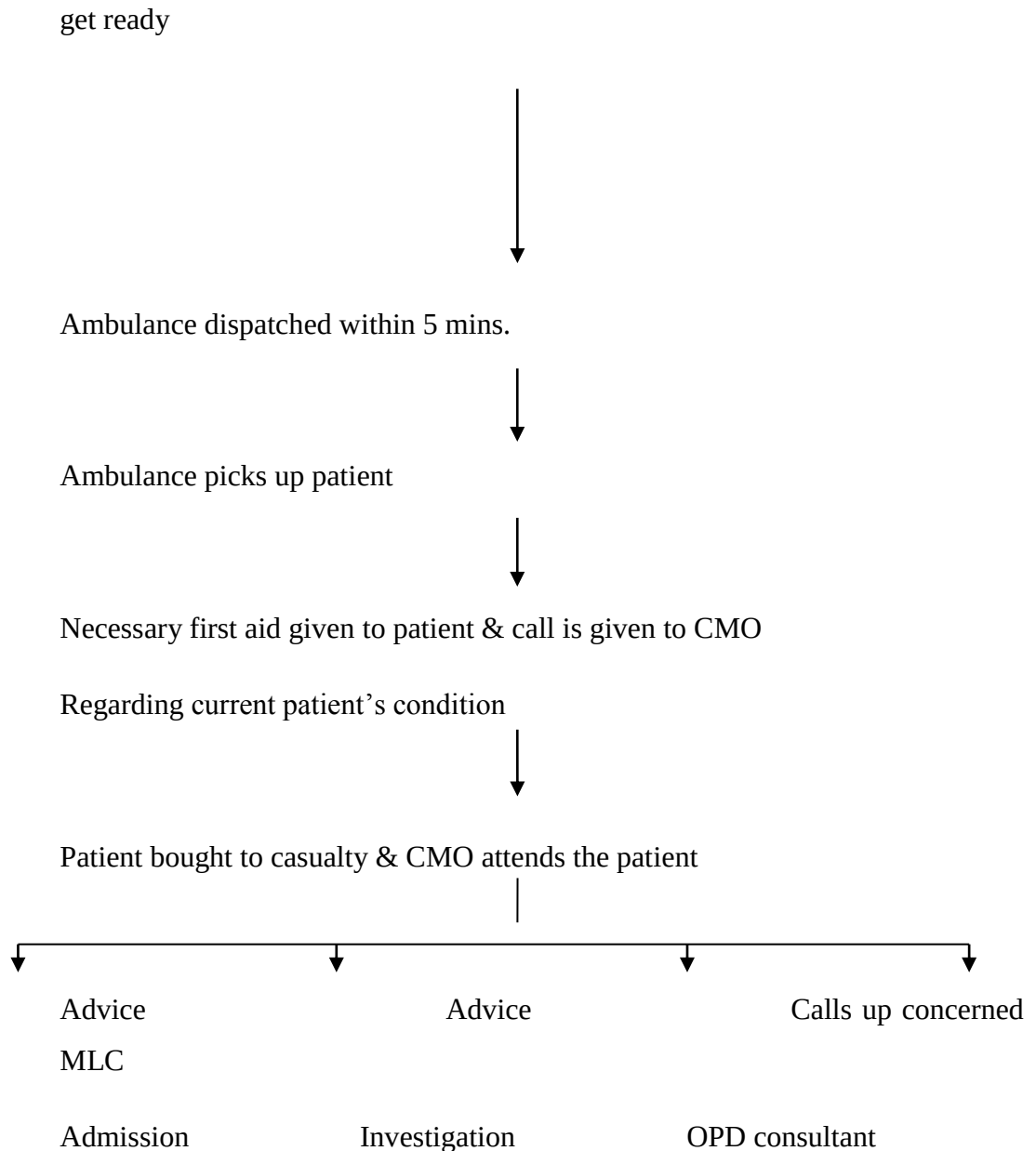
- Place/address
- Time of call received
- Details of call
- Name & contact no of caller



Informs Casualty Nurse in charge



2 male nurse + 2 ward boys + 1 RMO (if required)



STRENGTH:

- Staff is trained and competent.
- Records are maintained properly.
- Jump kit and disaster kit is stored properly.

GAPS:

- Sitting arrangement for nursing staff poor.
- Shortage of almirahs & racks.
- Only 1 fire extinguisher in whole ER Complex.

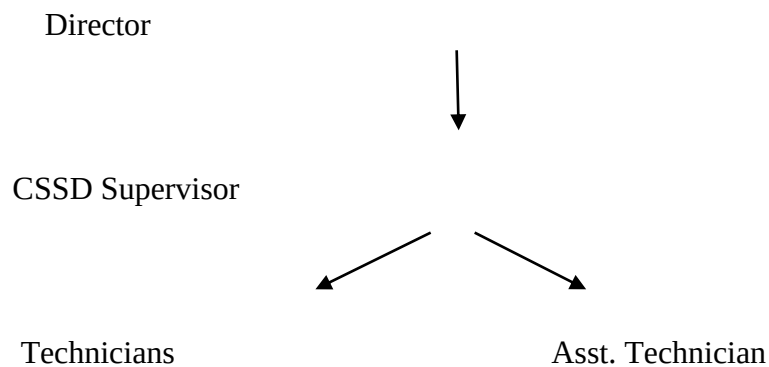
- City's & NCR region map not available with ambulance driver.

CSSD

(Central Sterile Supply Department)

Layout: 4th floor (“U” shaped layout)

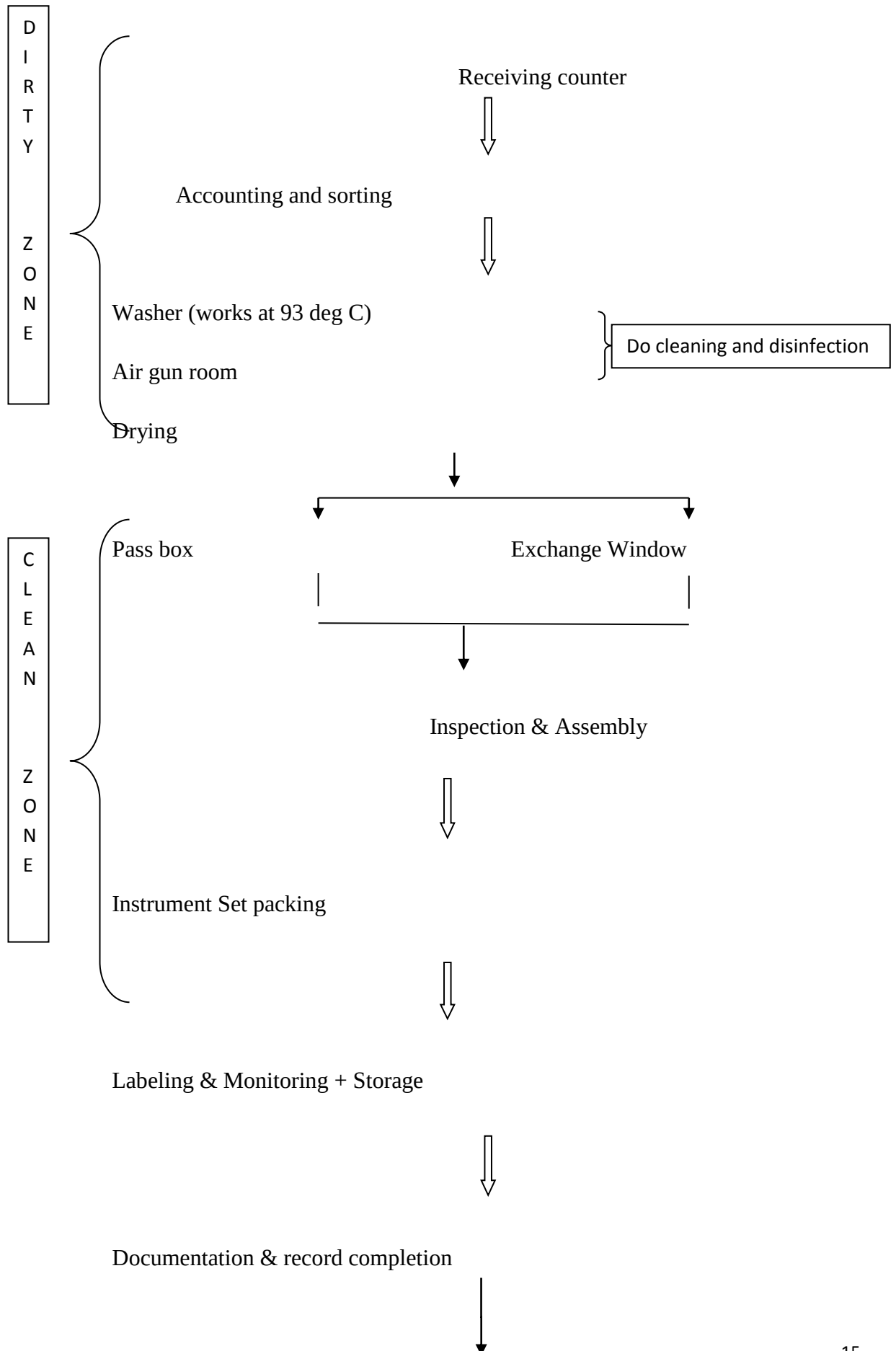
Organogram:

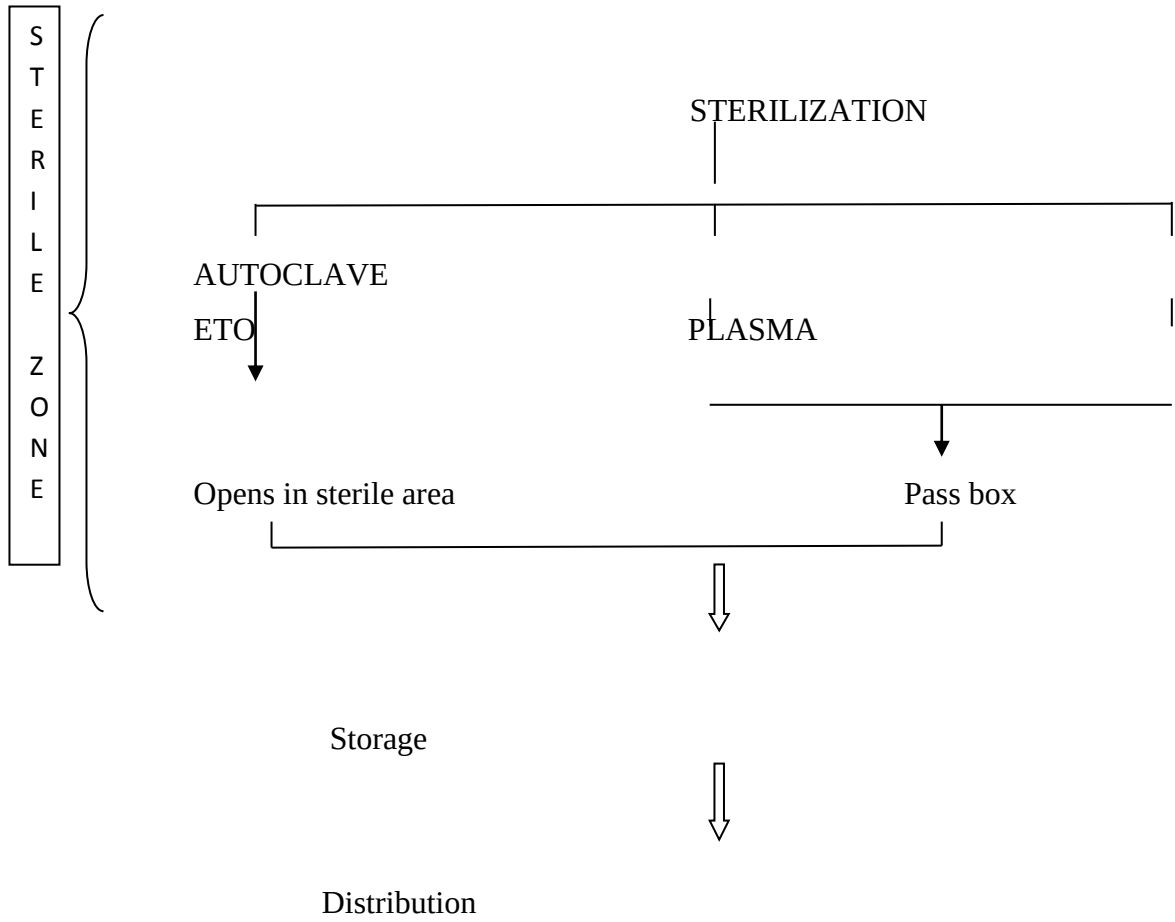


Infrastructure:

- Desktop -1
- Intercom -1
- Printer -1
- Autoclaves (Pulse vacuum type) -2
- ETO -1
- Plasma sterilizer -1
- Steam boiler -3
- Auto sealer -1
- Loader -2

DEPARTMENT WORK FLOW:



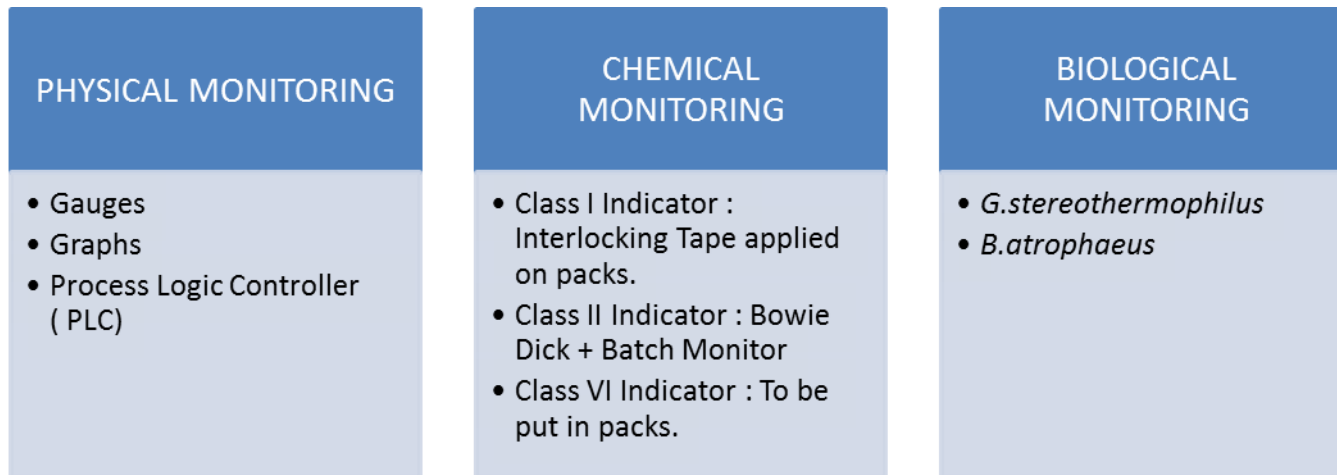


METHODS OF STERILIZATION USED:

<u>AUTOCLAVE</u> <u>(Steam sterilization)</u>	<u>ETO</u>	<u>PLASMA</u>
- No. of autoclaves – 2 - Type – Pulse vacuum type - No of cycles per day – Acc. to load. <u>Temp/time/pressure.</u> 121 deg C/ 15 mins/ 1.2 kg 134 deg C/ 4 mins/ 2.2 kg STERILIZATION CHECK : a) <u>Bowie Dick Indicator</u> (<u>Chemical Indicator</u>) Once a day	- Number – 1 - No of cycles – usually 1 / day (But can vary acc. to load) <u>Temp</u> – 54 deg C 12 hour cycle STERILIZATION CHECK : ✓ <u>Biological indicator</u>	- Number – 1. - Not regularly used. Used in case of emergency; when ETO not in use. <u>Temp</u> – 45 deg C 50 min cycle. STERILIZATION CHECK : ✓ As such no biological indicator available. ✓ Therefore, its use is limited and only for emergency purpose.

b) <u>Biological Indicator</u> : <u><i>G. Stereothermophilus</i></u> Once a week	<u><i>Bacillus atrophaeus</i></u> : Each load.	✓ But <i>Bacillus atrophaeus</i> can be used.
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MONITORING:



Packing paper used :

1. Linen
2. Medical grade paper: - Used for ETO
- Lasts up to 6 months
3. Tyvec paper: - Used for plasma
Expensive

Strength:

- State of art equipments.
- Experienced staff
- Strong focus on sterilization, its monitoring and continuous physical, chemical, biological monitoring is done.

IPD PHARMACY

Layout:- Basement 2

Hierarchy:

Director medical services



Director Paediatrics



Manager pharmacy



Deputy Manager



Accountant



Purchase



Pharmacy assistant

Staffing:-

- Senior pharmacist → 2
- Pharmacist → 6
- Purchase assistant → 1
- Assistant pharmacist → 5
- Non pharmacist → 2

Infrastructure and Equipment Required:-

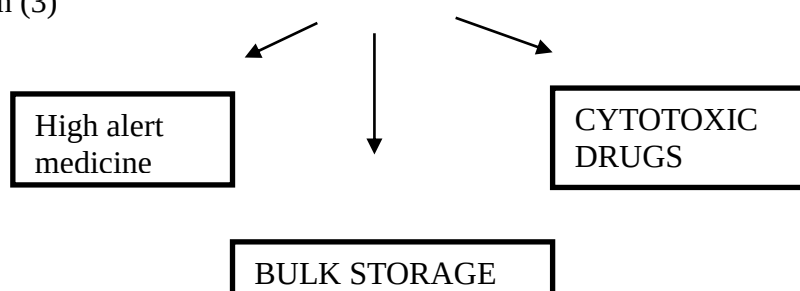
AREA :-

- 180 square feet
- 10 feet height

EQUIPMENT:-

- Billing software Navision
- Printer → 2
- System → 3
- Racks for storage of drugs → above 20
- Walking cooler → 1 → temp. 2 to 8°C → Onco drugs, vaccines.
- Fridge → 1 → Insulin, high risk drugs.

Almirah (3)



Colour Coding and Labelling:-

(Look Alike ,Sound Alike drugs [LA SA]):-

- LA drugs are GREEN color coded.
- SA drugs are YELLOW color coded.
- LASA drugs have been identified and stored separately, read back procedure being followed for verbal order,
- Fast Moving Drugs:- stored in separate rack and labeled.
- Medicines are arranged in alphabetically order.
- High risk drugs are coded by RED colour.
- Cut piece of medicine is stored in different sealed bag marked with batch number , expiry date, brand name in same box of medicine.

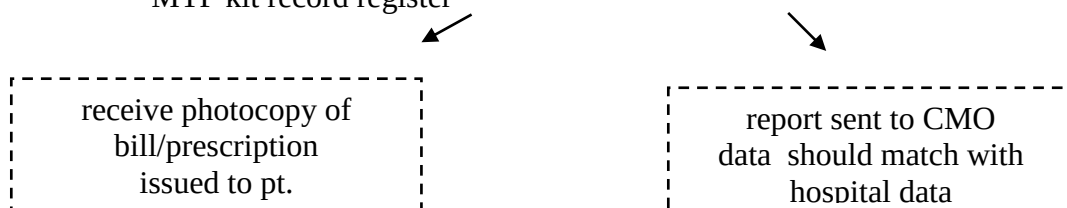
Analysis:-

- ABC analysis has been done for all medicine regularly...
- FIFO(first in first out)

Record Maintain Register:-

- Room temperature log book
- Fridge -1 temperature register [High Risk Alert]
- Fridge -2 temperature register
- Verbal order registers → doctor order medicine on telephone to pharmacy.

MTP kit record register



Licenses:-

- 4 main license is issued by the drug controller office
- Distributing and sales form no:- 21
- Schedule `X drug form no:-20
- Narcotics form no:-24 under NDPS rule, 1985

Storage of Drugs:-

- Emergency drug:- about 10 patient stalk of drug stored in I.P.D Pharmacy and about 50 pt. stalk of drug are stored in emergency dept.
- High risk drug:- stored in different LOCK & KEY at separate place (cytotoxic drugs ,high alert medicine.
- Narcotic drug:- stored in DOUBLE LOCK \$ KEY almira.
- Oncology drugs and vaccines:- are stored in walking fridge at 2 to 8`C
- High nutrient meal:- under table they are light sensitive.
- Cool & dry place:- general medication at room temperature 22 to 28`C

Work Flow:

In-Patient Wards, All ICU's, OT, Emergency, CTVS, Cath Lab

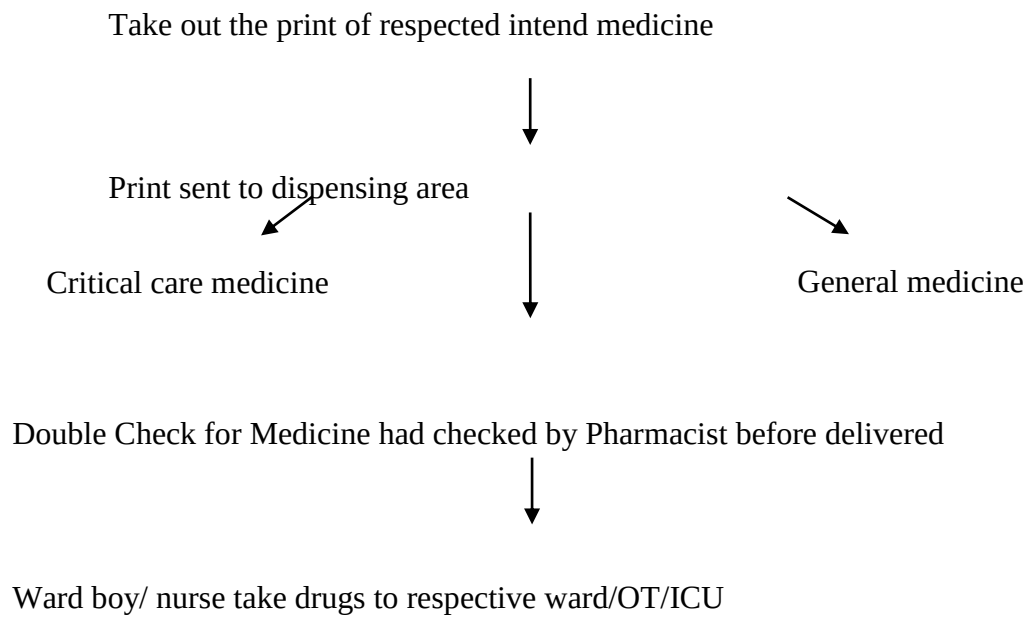


Ward boy/Nurse brings Request for Drug indentation through “**HIS or Indoor Patient Drug Requisition Form**”



IPD Pharmacy





STRENGTH:

- Drugs are kept in organized manner, LASA drugs are kept separately and inventory is managed by ABC analysis.
- High risk and narcotics drugs are kept under lock & key.

GAPS:

- Space constraints.

BLOOD BANK

Layout: 4th Floor

Staffing:-

- Director- Dr. Ramesh Chandra
- Medical officer- Dr. Uma rani
- Technical supervisor- vishwajeet sarkar
- Laboratory technician- 8

Area required:-

- Total → 150 square feet
- 100 m sq. for its operations
- 50 m sq. for preparation of blood components.

Storage and shelf life:-

WHOLE BLOOD→450 or 350 ml (>60kg)→blood loss→1-4°C→35 to 42 days,→(-40°C→1 Year)

RBC→250 ml red cell, 100ml SAGM~CPD→O₂ transport→1 to 6°C→42 days.

Platelets apheresis→200-300ml→20 to 22°C→5 days

Cryoprecipitate→-80 to -40°C→1 Year

Fresh frozen plasma→-40 to -80°C→1 Year

Labelling on bag:-

1. Color scheme:-

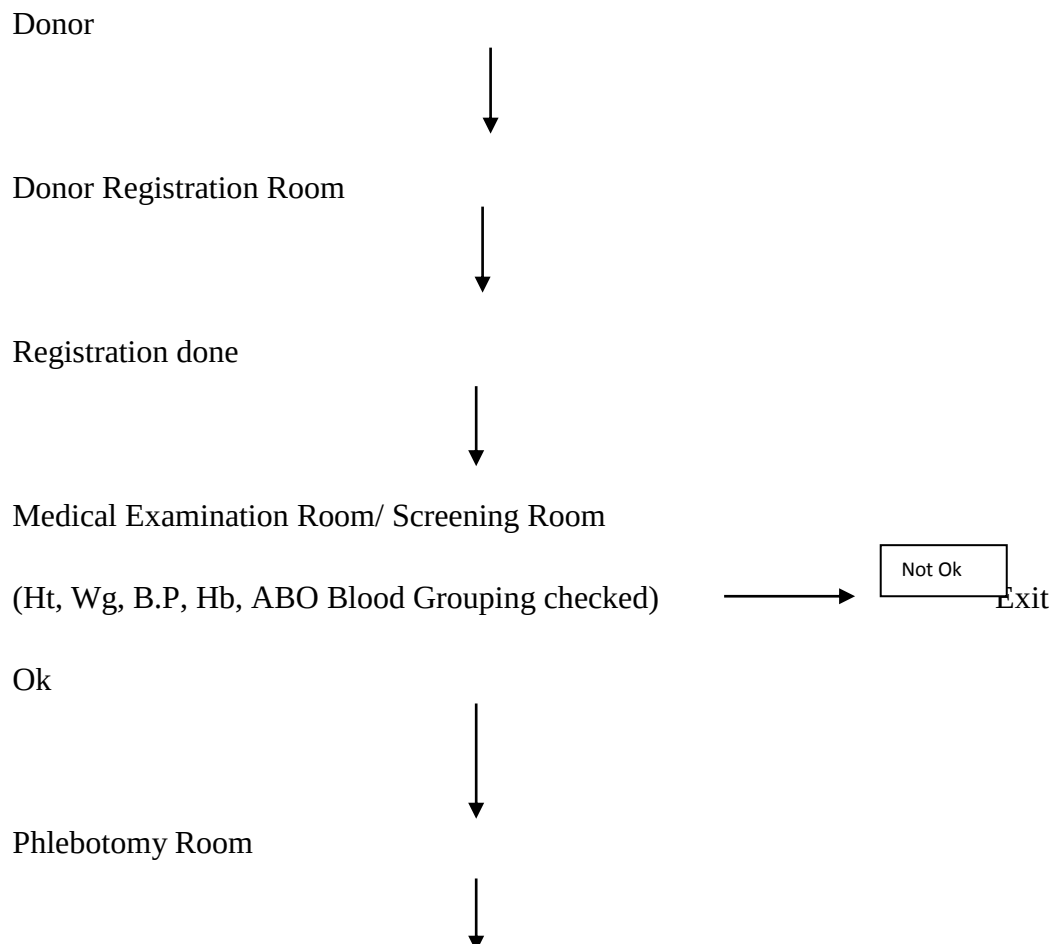
- Blood group O- Blue
- Blood group A- yellow
- Blood group AB- white
- Blood group B- pink

2. Storage temperature, expiry date, Rh type
3. Name, address and manufacturing license number
4. Volume of blood.
5. Type of donor

License for Blood Bank:-

- Licensed by State Drug Controlle. (panchkula, Haryana.)
- Regulated by Drugs and Cosmetic's Act.
- Licensed for processing whole blood and for prepration of its components. [lic. No.680B(H)]

FLOW OF DONOR:



Recovery Couch (If required)



Refreshment Room



Instructions Given



Exit

Movement of Donor's Blood:

Blood collected from donor in blood bag + temporary labeling in Phlebotomy Room

(If Required)

Blood Component

Aphaeresis

Area

Room

(PRBC, FFP, Platelet Concentrate)

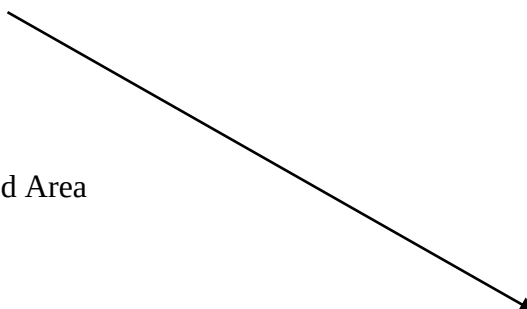
Apheresis



Quarantine Area



Tested Blood Area



3 Pilot Tubes		
Tube	2 Plain Tubes	1 EDTA
-	One tube sent to Malaria & TTI Room/Infectious Grouping Marker Room for VDRL, HIV I & II, Hepatitis B & C.	- Sent for Forward

Cross Matching Room/ Red Cell Serology

(ABO Grouping & Rh Compatibility done)



Labelling of blood bag



Storage

If tested +ve, then blood bag is brought to **WASH ROOM**.

Autoclaved

Discarded as per laid down rules.

Label Colour codes to be used -

- | | |
|----------|------|
| - Yellow | - A |
| - Pink | - B |
| - Blue | - O |
| - White | - AB |

Infrastructure of the blood bank:-

- **Donor Registration Room**
- **Medical Examination Room**
- **Donor room/Phlebotomy/Bleeding room-** Blood is collected in this room.
- **Aphaeresis Room**
- **Refreshment Room-** After donating the blood, refreshments are provided here.
- **Component Room:** Here collected blood is formed into different components.
- **TTI/ Infectious Markers Room-** Here Blood is checked to rule out any kind of infection in the collected blood.
- **Cross matching Room (Serology room) -** Here Blood is tested & cross matched.
- **Store Room/ Record Room-** All the records and inventories are stored here.
- **Wash & sterilization Room-** Here any blood tested +ve for any infection or **unmatched** blood is discarded.

Strength:-

- Staffs are trained and competent.
- Record maintenance was excellent.
- Preventive maintenance sticker was placed on all equipment's.

Gaps:-

- Blood bags are not carried in trays or thermocol boxes.
- Post care instructions are not written in bilingual language.

BIO MEDICAL ENGINEERING DEPARTMENT

(GAS MANIFOLD)

Location:- 2 Basement

Staffing:- 3

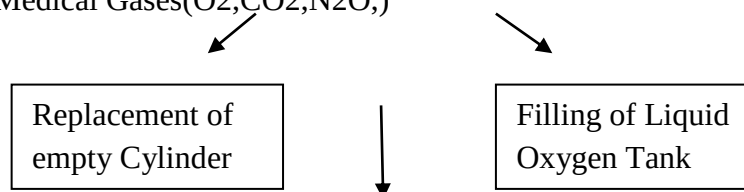
Supervisor:- Mr.Mishra

Records Maintained:-

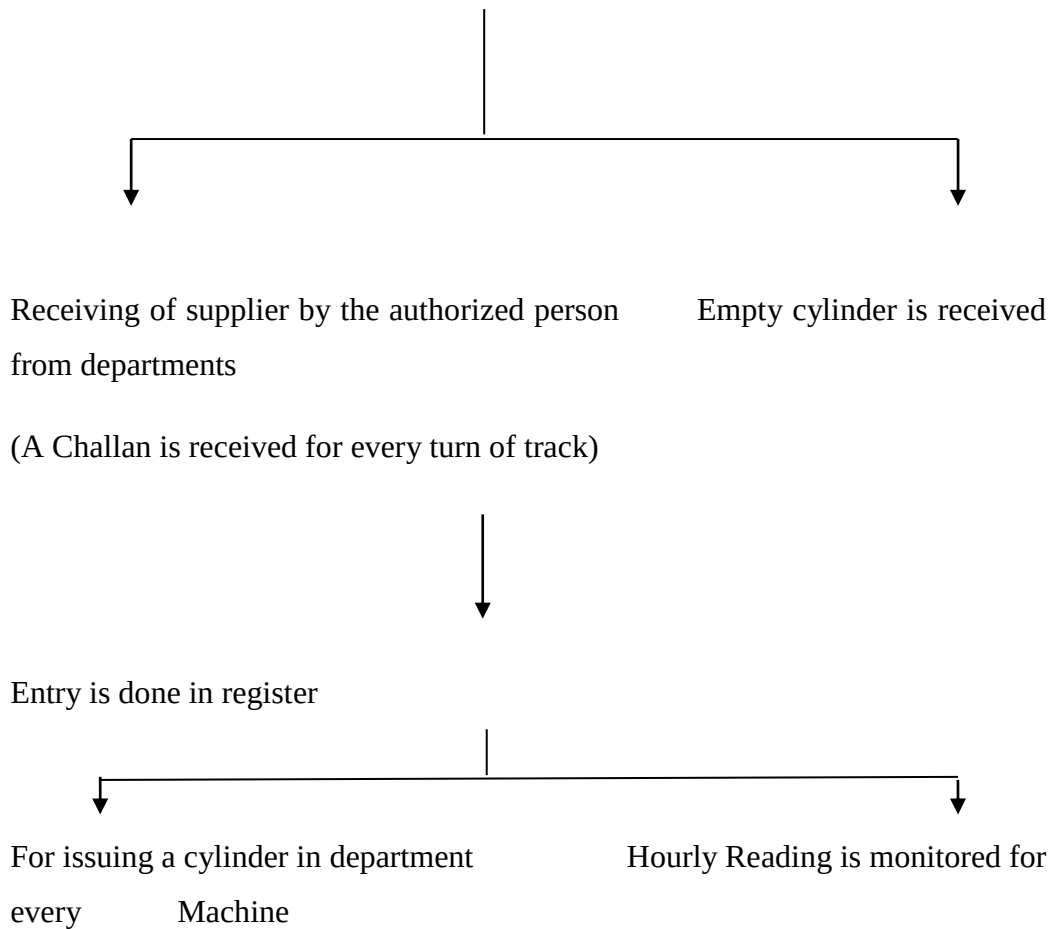
- Gas Manifold Log Book for Oxygen, Nitrous Oxide
- Complaint Register
- Cylinder Issue Register
- Cylinder (Out Party) Register
- Shift Register

WORK FLOW

Order for Medical Gases(O₂,CO₂,N₂O,)



Receiving



Gaps:-

- No CCTV Camera is present in gas manifold area
- Liquid oxygen tank is not covered by shed
- Poorly sitting arrangement for staff
- Maintenance sheet is not filled on time

Strength:-

- Trained and Competent staff and every morning training is provided to the GDA's regarding handling of cylinder

- Medical gas supply systems are often monitored by various alarm systems
- Medical air is supplied by a special air-compressor, through a dryer(in order to maintain correct dew point levels)
- Inlets and outlets are colour coded
- Pin index safety system is used to prevent errors of identification of cylinders
- Standardized colour coding is done on cylinder.

STORES

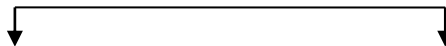
Layout: -2 Basement

Hierarchy:-

Assistant Manager



Store Supervisor



Computer Executive

GD

WORK FLOW

Department in need of material

Through HIS Indentation

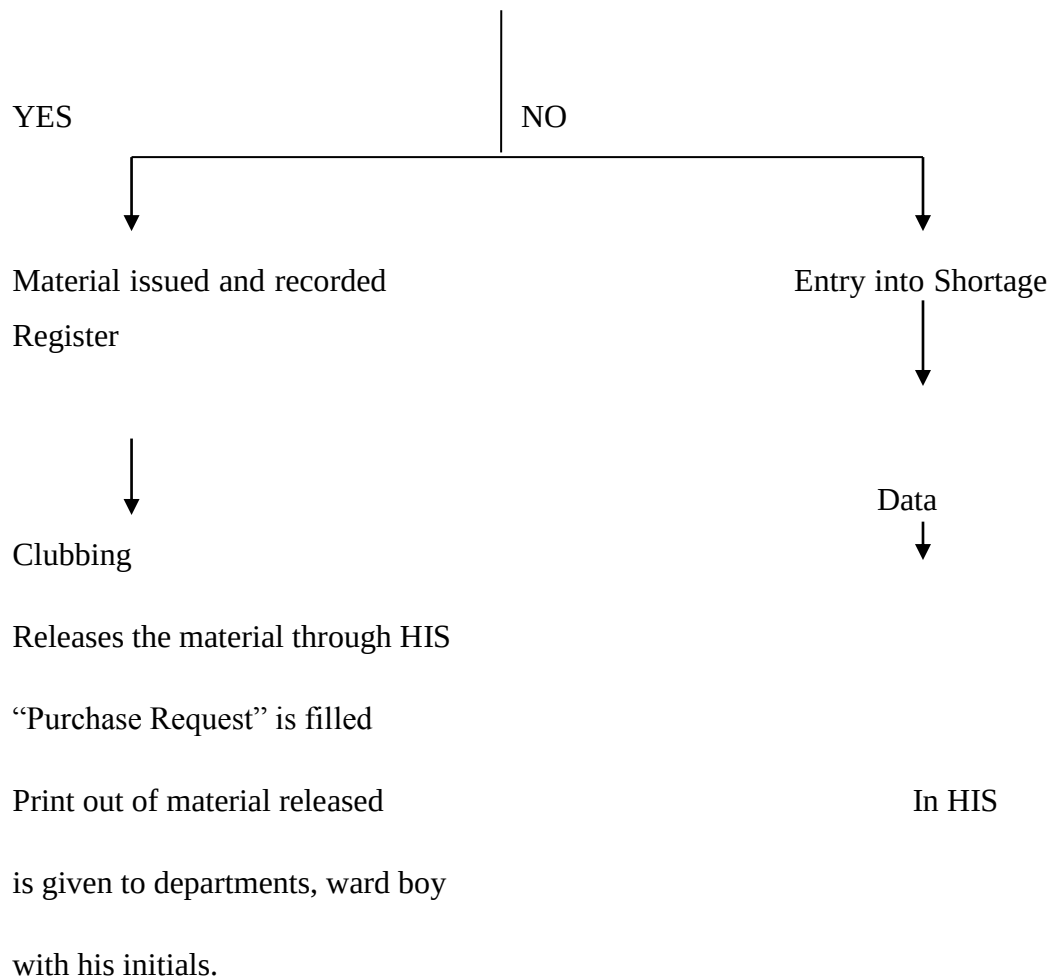
or Requisition slip



Store



Store checks for the required material and the quantity



Gaps:-

- Space constraint
- Inventory is poorly organized

Strength:-

- ABC analysis is done for the inventory by the quality department

MEDICAL RECORD DEPARTMENT

Layout: -1 Basement

Functions of MRD

- To ensure that the AIMS Hospital has complete & accurate medical record for every patient.
- Public dealings wrt. to TPA **queries, Bill verification, MLC cases and dealing with Summons to the doctors, hospital.**
- To maintain high level of confidentiality as far as patient's records are concerned.
- To ensure that the records are Identified and stored safely to prevent unauthorized changes and easily retrieved whenever required.
- Issuing **Emergency, Medical, Birth & Death certificates.**
- To generate **Bed Occupancy reports** (daily & monthly), **P.N.D.T, M.T.P** reports (monthly).

Record Retention Periods:

- | | | |
|------------------------|---|--|
| • IP Record | : | 05 years |
| • Emergency Register | : | 02 years |
| • MLC Records | : | Not to be destroyed |
| • Birth/Death Register | : | Not to be destroyed |
| • OPD documents | : | Handed over to the patient's Relatives |

WORKFLOW:

Admission & Discharge Report generation

of previous day by MRD Officer



MRD Peon collects from each ward:

Daily Floor Census

+

Discharge File of discharged patients



Assembling & Deficiency check by MRD Officer/ MRD Assistant



Completion of Incomplete documents by the MRD Officer or concerned Doctor/Nurse



Daily Admission & Discharge analysis



Coding (acc. To ICD-10) & Indexing



Filing

Filing Order:

1. Face sheet
2. Patient's Discharge Records
3. Discharge sheet (Discharge, DOR, LAMA, Death)
4. Emergency & OPD card
5. History sheet
6. Investigation flow chart
7. Consultation form
8. Informed consent
9. Valuable handover form
10. Undertaking for payment Primary/ ADHOC PTCA
11. Angiography- Angioplasty Checklist
12. Cardiac Anesthetic Record
13. Consultation for surgical & medical treatment
14. Pre-operative instruction checklist
15. Anesthesia record
16. Surgical safety checklist

17. Operation note, Delivery note
18. Post-operative evaluation form
19. Labor chart
20. Progress note
21. Temperature chart
22. Intake output chart
23. Blood sugar
24. Diabetic Monitoring chart
25. Drug prescription & Administration Record
26. NICU Observation Chart
27. Nurses Record
28. ICU & CCU Observation chart
29. Medical Certificate cause of death
30. Release of dead body certificate
31. Final Bills (MLC case)
32. Any other relevant document concerning to patient

GAPS:

- No color coding format (for year identification) followed.

CLINICAL NUTRITION & DIETICS DEPARTMENT

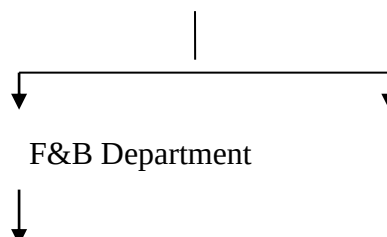
Layout: -2 Basement

Head Dietician: Dr. Shilpa Thakur

Organogram:

Head Dietician

Assistant Dietician



Trainee Dietician

Functions:

- Catering to Inpatients, Hospital staff, Patient attendants.
- Diet counseling
- Education
- Smooth provision of laid out 9 diets to the patients.
- To check the patient, Attendant & Staff food for quality, preparation, presentation and packing.
- Coordinating closely with the Nursing shift in charges for changes in the patient's diet or new admissions etc.

Areas in Kitchen

- **Receiving & Storage Area**
- **Preparation Area:** For peeling, cutting, chopping, slicing, mincing.
- **Cooking Area**
- **Tray Layout & Packing Area**
- **Service Area:** From here food is transferred to patient's on trolleys.

Other Areas:

- Dish washing & pot washing area
- Dietician Room

	<u>Diet Card Color</u>	<u>Tray Color</u>
Normal	White	Red
Diabetes Mellitus	Yellow	Yellow
Chronic Renal Failure	Green	Green
Renal Stone	Pink	

Flowchart of Dietician and Inpatient Interaction:

The Dietician takes details of new patients such as name, UHID, doctor's name, diagnosis and diet prescribed.



Then Dietician takes a detailed round wherein she meets every patient and determines patients' actual intake. Dietician then provides nutritional counseling and education, ensures patients' compliance to recommended diet. She also recognizes personal eating and food preferences.



Afterwards, the dietician does nutritional screening in order to know about patients' clinical condition, appetite and tolerance to food and acceptance to hospital diet, personal preferences, disliking and food allergies if any.



After the rounds, detailed food summary sheets are planned and prepared for every patient keeping in mind medical history and preferences of patient as well.

Flowchart of Dietician & Nursing staff interaction:

Dietician receives a daily diet requisition once a day from all nursing station.



Dietician cross-checks received diet requisition from time to time with nurse both during rounds and on phone constantly.



Dietician updates changes with respect to new admissions/ transfers/ discharges/ changes. in diet

Gaps:-

- Gloves were not used by food handlers.
- Food handlers had long nails.
- Daily temperature was not recorded for walking cooler.
- Daily cleaning sheet was not filled for food trolley.

LAUNDRY SERVICES

Layout: -2 Basement

Records Maintained:

- Department Register
- Items Received register
- Items issued register
- Detergent register
- Machine records

GAPS:

- No barrier between soiled linen & infected linen.
- No sewing machine for repair

INTRODUCTION

As an integral part of the **MBA course**, the summer training helps us in understanding the overall functioning of the hospitals from a managerial point of view. Keeping this factor in view, I tried to visit different hospital departments of **ASIAN INSTITUTE OF MEDICAL SCIENCES (AIMS)** with a special focus on understanding the various procedures in place. I visited different departments, met the department In-charge and interacted with the doctors, nurses and other staff.

The **Aim** of the summer training was:

“To study the functioning of ASIAN INSTITUTE OF MEDICAL SCIENCES (AIMS) by undertaking the special projects” .

Objectives:

- ☐ To learn the daily operational management of the Organization and its various departments / areas.
- ☐ To identify issues / problems associated with some specific departments / areas.
- ☐ To undertake the projects / special tasks assigned to us.

- ☐ **PROJECT REPORT NO.1**
- ☐ **TURN AROUND TIME ANALYSIS IN CLINICAL SERVICES**

1. Background

TAT is one of the important measures to understand whether the performance of hospital is improving or it is below par the published norms. Turnaround time can be defined as the time when the order is given and the result comes out. Turnaround time is one of the crucial factors to improve quality of a hospital. Efficiency of the process relies on good communication and alertness of staff. The better the tat of the hospital, better is the quality provided by it. For advice medication it, consists of when the doctor comes for round, when the written orders are prescribed for medicine, the time taken by nurse for indenting and time taken for issuing of medicine, travel time of the ward boy, and finally the receiving time by nurse. Furthermore, the dependence of patient's management on laboratory data highlights the need for ensuring the quality of these services. The joint commission has underlined this fact by stating that the lab is required to systematically assess and improve important functions and work process and their outcomes. The intervals from order placement to specimen collection as well as the time necessary for transport to lab . Moving onto the final part of clinical services, the referral system whose tat can be measured as when the referral is ordered and the referred doctor is reverting back.

Delays in any of the above can lengthen patient recovery and can badly hit the quality of the hospital. Though medications, procedures and investigations are prescribed on daily basis and at any point of time we need to make sure that it doesn't coincide with the routine ones.

Delays during medication transport or investigation can harm the other procedures to be done. Delay in the medication transportation leads to delay in giving medicine to patient have been identified by NPSA(National patient safety agency) as being significant patient safety issue , as documented in their Rapid Response alert-1183 A. Furthermore, if the patient has come for any procedure, delays in investigation can affect the OT scheduling and the discharge process.

2. REVIEW OF LITERATURE:

There are various way in which TAT has been defined. It has been classified in different way like by test, priority, population served etc,. Population is the highly dynamic and variable area in reporting TAT. The steps of laboratory test as outlined by Lundberg has nine steps i.e., Ordering, Collection, Identification, Transportation, Preparation, Analysis, Reporting, Interpretation, and Action. The testing laboratory should include all the steps, Some laboratory defines their own TAT based on the activity they perform others restrict their definition of TAT to some other factors. Such approach underestimates TAT. The NON analytical delay is responsible for up to 96% of total Tat. In the ED delay in review or result by clinical practitioner is greatest component of perceived TAT. It is being advocated that electronic processes for medication ordering and pharmacy verification are more efficient than paper based systems it is because they deliver instantly delivered the pharmacy as opposed to manually written by the physician, to the appropriate department by the clerk, transcribed to medication administration record by nurse and processed by the pharmacy, Hospital patients experience delay because of delay in care due to delays in medication administration. Health care IT facilitates the transmission of medication by improving the quality of care by ensuring patients receive their prescribed medications in a timelier manner. The growing research data suggest that computerized provider order entry often integrated with other health IT applications can decrease the total medication turnaround time.

In a study, researchers found that first doses of antibiotics were administered 56 percent faster using CPOE with clinical decision support (CDS) compared to paper based methods. Accuracy, precision, timeliness, and authenticity are the four pillars of efficient laboratory services. The clinicians sometimes overlook timeliness as an important attribute and instead concentrate on improving the analytical intricacies of sample processing. However, timeliness which is expressed as TAT is often used by the clinicians as the benchmark for laboratory performance. Clinicians depend on fast TATs to achieve early diagnosis and treatment of their patients and to achieve early patient discharge from emergency departments or hospital in-patient services. Hence faster TATs have a role in curtailing general expenditure incurred by the exchequer. The study also attempts to evaluate the contribution of analytical versus the pre- and post-analytical phases of processing towards the turnaround time

3. Rationale

This study is done to understand the areas of improvement during the complete process which is one of the very important activities required in Asian hospital, Faridabad. The rationale for this study is based on the fact that turnaround time decides the fate of any hospital as it is a measure of quality services provided by it.

4. Objective of the Study

To determine turnaround time for the clinical services at Asian institute of medical sciences, Faridabad for a period of two months, from April 03, 2017, to June 03, 2017 .

4. Operational Definitions

Quality:

Quality can be defined as the ability of a product or service to satisfy the needs and expectations of the customer.

Turnaround

Time:

The time it takes to process an order, carry it out, and report the results, e.g., the time between ordering and reporting laboratory results.

5. Materials and Methods

5.1 Study Design

It is descriptive analytical study based on primary data collected within a specified period.

5.2 Study Setting

The study is conducted in ASIAN INSTITUTE OF MEDICAL SCIENCES, which is a 350 bed super specialty tertiary care hospital is truly futuristic in its services & technology and brings together some of the most talented medical

professionals in India. The hospital has been accredited with NABH and NABL accreditations and is equipped with state-of-the-art technology. The hospital provides preventive, diagnostic, therapeutic, rehabilitative, and palliative and support services all under one roof and is designed to meet patient care and research requirements of the new millennium .

Situated in the national capital region of Delhi, the hospital is centrally located in Sector 21A, Faridabad .

5.3 Duration of Study

The study is conducted for a period of 30 days (one month), from April 11th, 2017 to May 11th 2017.

5.4 Study subjects

Laboratory, IPD pharmacy

5.5 Sampling Technique

Details of all the areas has been calculated like, indenting time, receiving time of indented medicine and report generation time. The calculated sample size are total no. of patients.

Sample size:

Total sample size is-105

5.6 Data collection: Data was collected on every day basis and a template is formed which is attached in the annexure. All the cases were followed individually and the indenting time of medicine, report generation time has been closely observed.

5.7 Tools: Template was constructed keeping in mind the objective of the study as well as the variables

6. Data analysis plan:

Based on primary data.

Data was collected and cross checked through registers and patients files maintained on a daily basis by the staff for any incomplete or partial filling. Using Microsoft Excel 2013, the collected data was then edited, coded, and calculated into various frequency distribution and graphs.

Results and discussions:

6.1 Data analysis:

For IP pharmacy:

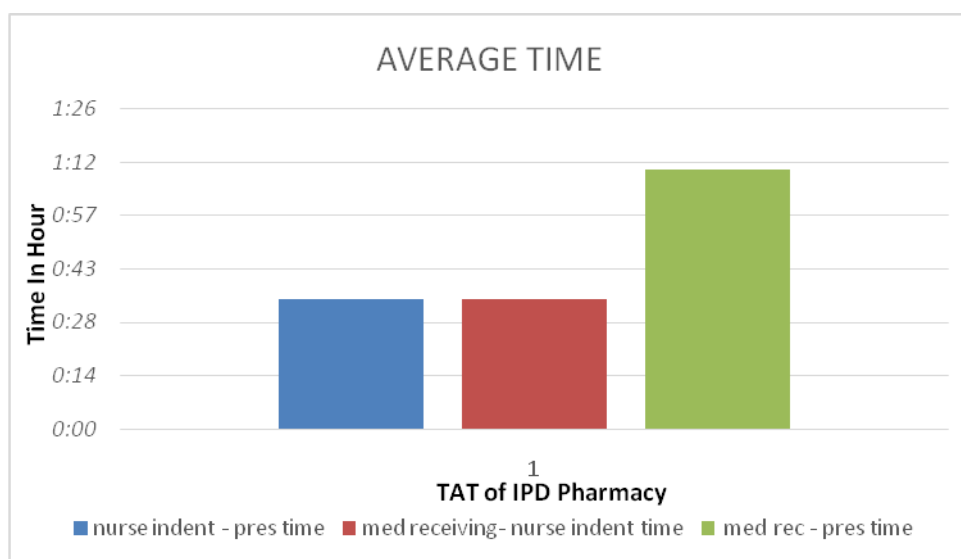


Fig 1: Depicts the average time-(a) Nurse indent-prescription advice time (b) medicine receiving time-nurse indent time (c) medicine recording time-prescription time.

For laboratory

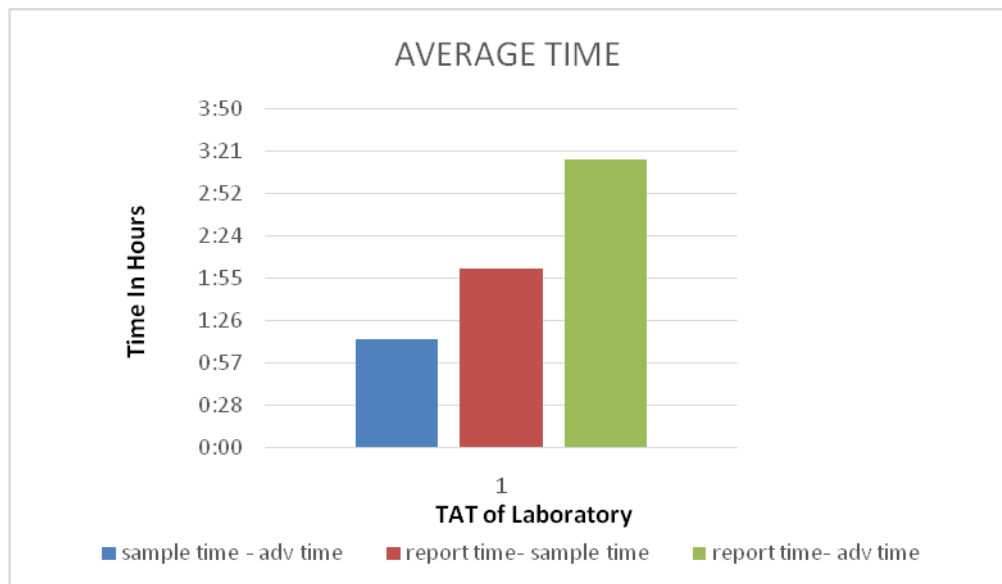


Fig 2: Depicts the average time for ab services - (a) Sample time-advice time (b) report receiving time-sample sending time (c) report receiving time-advice time.

7. Findings:

a) For ipd pharmacy services it has been observed that the average time between medicine receiving time and nurse indenting time was much more than the average time of the others.

b) For laboratory services the average time between report receiving time and advice time of investigations by surgeons showed inclined trend as when compared with others.

8. Limitations:

- Limitation for the study is that only new patients have been taken.
- Secondly, GDA travel time was not calculated.
- Due to lack of time for the study period around 30 patients which were same for both the ip and laboratory services.

9. Conclusions:

Patient safety needs to be ensured in every step of the process, from choosing the medication, to writing prescription, to dispensing the medication. On a management level, the results of this study can be used to improve and

strengthen administration and nursing, physician support. From this study, we can obtain information about management of in-patient pharmacy.

10. Recommendations:

- The average time taken from indenting till receiving of items (medicines and consumables) in wards was found to be 1hr 10 minutes which is nearly same as the hospital standard of 1hr.
- The reason which we found for the delay is sudden rushes of indent in pharmacy at a particular time and delay in registration of indents through hospital software.
- The nursing staff ordering drugs for patient should indent the complete order at once, instead of indenting numerous incomplete orders again and again.
- Training sessions should be undertaken for the nurses and staff and proper dispensing of medication was tried to maintain.
- The reason which we found for the delay in receiving laboratory report are Re-dos, sampling errors like taking insufficient amount of the sample, wrong labelling.
- Training sessions arrange for the technicians and staff for taking adequate amount of sample and labelling of the vials.

11. Dissemination of the Study Findings

Based on the study findings, the final report would be presented to the concerned panel at the IIHMR University, Jaipur. Also, the results would be disseminated in Asian hospital Faridabad.

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ANNEXURE:-[ASIAN.xlsx](#)