

Internship at
Max Super Specialty Hospital, Shalimar Bagh, New Delhi

By

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INTRODUCTION:

Max Super Specialty Hospital, Shalimar Bagh, New Delhi was started in the year 2011. It is a 250 bedded hospital with bed occupancy rate of 75 to 80%. It offers services across the specialties of Cardiology, Neurosciences, Oncology, Urology, Kidney transplant, Bariatric surgery.

It is equipped with high-tech medical equipment such as MRI 1.5 Tesla, 16 Slice CT Scanner, Echo Machine Philips – IE33, Holmium Laser 100W, Neurosurgical Microscope. It is incorporated with the latest advancements in radiation therapy including Intensity Modulated RT (IMRT), Image Guided RT (IGRT), Stereotactic Body Radiation (SBRT) , SRS (Stereotactic Radiosurgery) and all kinds of Brachytherapy including Intraoperative RT (IORT). The experts at the Comprehensive Cancer Centre also offer Breast Conservation Surgeries (BCS), Cosmetic Reconstructive Surgery, Limb Conservation Surgery, Minimally Invasive Surgery, Sphincter Preservation Surgery and Hyperthermic Intraoperative Peritoneal Chemotherapy. Apart from these services, department of Nuclear Medicine and Radiation Oncology recently got approved, licensed and operationalised with the services of brachytherapy, linear accelerator, PET-CT scanning.

It is technologically well upgraded ensuring patient safety and continuous quality improvement. It has electronic medical record installed from the time of its inception along with PACS, HIMS, RIS and LIS. This aids in proper storage and retrieval of medical records. Facility of bar coded administration of drugs for compliance of right patient, right drug, right time and right dosage.

Accreditations :

- First global Green OT accreditation.
- NABL and NABH accredited.

INTERNSHIP GOALS

1. To have a thorough exposure and ground experience of functioning of a NABH accredited multi super specialty hospital.
2. To enhance communication, team building and leadership skills.
3. To improvise problem solving and decision making skills.
4. To work with integrity and understand inter departmental coordination and issues faced in implementing various policies, protocols in a hospital setting.

Organization Profile

Vision:

To deliver International Class healthcare with a total service focus, by creating an institution committed to the highest standards of medical & service excellence, patient care, scientific knowledge and medical education.

Mission:

- Create exceptional standards of Medical & Service Excellence
- Care Provider of FIRST CHOICE
- Principal choice for physicians

- Create international Centre for excellence for select Super Speciality
 - Safety - Patient, Customer, Staff

Values :

1. Excellence
2. Credibility
3. Sevabhav

To reinforce the values and recognize the efforts, mails of sevabhav stories of the employees are circulated to all the Max employees through intranet.

Proper protocols, framed policies and system is present in the hospital setting fulfilling the need and implementation of quality. To aware its employees regarding these, HR department conducts training program at the day of joining.

Human Resource Department: It is involved in ensuring adequate training and education to all its employees. During the course of internship, initial induction and training on improvising communication skills, Sparsh sessions were conducted. Sparsh sessions included meditation, positive energy values discussion and its incorporation.

Induction programs included discussions on various policies in the hospital as listed below.

- POSH Policy (prevention of sexual harassment policy)
- Grievance Redressal Policy
- Disciplinary Policy
- Performance Appraisal Policy
- Leave Policy

To ensure safe work practices below listed policies are followed:

1. Needle stick injury policy which includes first aid, reporting, testing titres and result ie prophylaxis as per doctors if needed.
2. Five moments of hand hygiene
 - Before touching the patient
 - Before clean/aseptic procedure
 - After body fluid exposure risk
 - After touching a patient
 - After touching patient surrounding.

3. Various Emergency Codes :

- Code Blue: Cardiac arrest/ Unresponsive patient
- Code Black : Bomb Threat
- Code Red : Fire
- Code Yellow : External disaster
- Code Violet: Violent person
- Code RRT: Deteriorating patient
- Code Pink : missing child/child abduction

In any of the above mentioned scenarios, 55 code to be dialed and assistance can be obtained by informing the location, floor, room etc.

- Code Grey : Crisis Management Team

This code recently got introduced which was to be activated in 33 scenarios. It mainly included in case of patient's expiry anywhere in the hospital, ambulance, in cases of patients leaving against medical advice to seek the necessary assistance from the medical administration.

4. Proper Biomedical waste management as per BMW policy 2016 guidelines.

5. Fire and Safety

Principle of fire fighting

Rescue, Alarm, Confine , Extinguish/evacuate

Principle of using fire extinguishers

- Pull the pin
- Aim at the base of fire
- Squeeze the handle
- Sweep from side to side

6. Vulnerable patient identification:

- All patients above 65 years, infants and children i.e minor below the age of 18 years.

- Patients with limited mobility.
- Differently abled ones.
- Unconscious, wheeled, or those requiring walking aids.
- Post-operative patients.

7.Sentinel Events and Incident reporting policy

8. Spill management policy

Services Provided:

OPD services in various specialties from Monday to Saturday from 8 am to 8pm

Emergency services is available 24*7 along with 24*7 MAX pharmacy

VALET PARKING- Non Paid Parking Available

Availability of blood bank. Blood donation day was conducted in March to encourage its staff for voluntary donations.

DIAGNOSTICS SERVICES in Pathology, Radiology, Cardiology, Nuclear Medicin

HEALTH CHECKUPS

Executive, Specialty (Cardiac, Cancer, Diabetes), Corporate, Pre-Employment Check and

Pre-Insurance Check ups done

SPECIALISED DIALYSIS UNIT

- A Specialised Dialysis Unit Conforming with international standards
- Haemodialysis for patients with end-stage kidney disease/requiring renal replacement therapy

For EWS (ECONOMICALLY WEAKER SECTION)

- Provision for Economically Weaker Section (EWS)
- 25 beds are allocated for EWS patients which includes 16 Non Critical and 09 Critical beds.

Layout of the organization:

- The organization has OPD's in ground floor. Along with presence of sample collection room, non invasive cardiology, radiology and emergency, triage, cafeteria and washrooms.
- First floor has OT complex which includes 9 operation suites, 1 cath lab. Anesthesia office, TSSD room and OPD services of Pulmonology, gastroenterology also available
- Second floor comprises of HDU, MICU 1 and MICU 2, Neuro ICU, NICU, PICU, Dialysis centre and Blood bank services.
- Third floor has facilities of doctor's lounge, laboratory services.
- Fourth comprises of SICU, CCU1 AND CCU2. In addition to this, department of administration, operation, quality, human resource and accounts is located on fourth floor.
- Fifth to ninth floor has inpatient ward services.
- Fifth floor has Labor room, labor delivery suites and operation theatre for caesarian sections.
- Upper basement has department of, physiotherapy, Nuclear medicine.
- Lower basement comprises of department of radiation oncology and onco day care.
- Departments of CSSD, EWS OPD, security control room are also located in basement.

- Along with nursing administration office, mortuary, IP pharmacy, Uniform issue room, Housekeeping office.

Departments visited:

1. On routine basis, departments of radiology, non-invasive cardiology were visited with the aim of reducing waiting time by adhering to schedule.
2. Operation theatre complexes to improvise its utilization.
3. ICUS's to handle administrative and operational issues. Also was part of Multi-disciplinary team meetings.
4. Department of nuclear medicine which was recently started. Aided in understanding issues faced during the set up of a department.
5. Laboratory to ensure TAT compliance, reduce rejection and repeat samples.
6. CSSD , Blood bank and dialysis department were visited occasionally in case of incident raise.
7. In patient Wards to handle patients complaints and was a part of discharge process.
8. OPD's to solve patients queries.
9. Emergency department in cases of patients going LAMA to check and ensure proper filling of LAMA forms.
10. Security control room to understand the functioning of 281 cameras situated in different corridors, nursing counters, ICU's , billing counter and video conferencing room.
11. Labor room to monitor maintenance of records of birth register, delivery register, still birth register.

PROJECT ON FUNCTIONING OF LABORATORY :

Objective:

- To understand and reduce the various causes of sample rejection, sampling errors.
- To avoid unnecessary delay in sample transportation, sample processing and ensure TAT compliance.

Problem Statement:

Functioning of laboratory timely and without errors in reporting is extremely important in the diagnosis and treatment of patients. As number of sample rejections and error in sampling were found, a short analysis was done to ensure TAT compliance and enhance quality of patient services.

Type of study:

Prospective observational study.

Period of Study:

For TAT of sample transportation: from 7.04.2018 to 22.04.2018

For TAT of sample processing: March and April 2018

Sample Size:

For sample transportation- 50 random samples from different wards. Below tabular column represents the number of samples from different wards and ICU's

For sample processing, all IPD samples were taken into account.

Data Collection:

For sample transportation :

Data of 50 random samples whose turn-around time i.e time between sample collected and sample acknowledged in the laboratory appeared longer in the laboratory information system was taken from the period of 7.04.2018 to 22.04.2018.

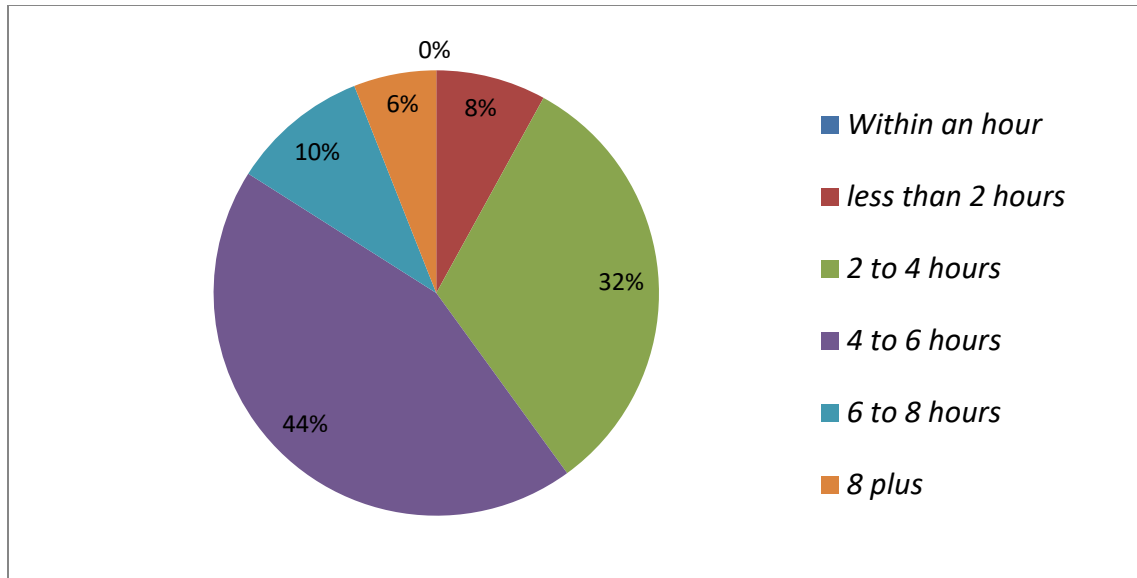
For sample processing: Data generated in LIS for all the IPD samples.

Observations and Data Analysis:

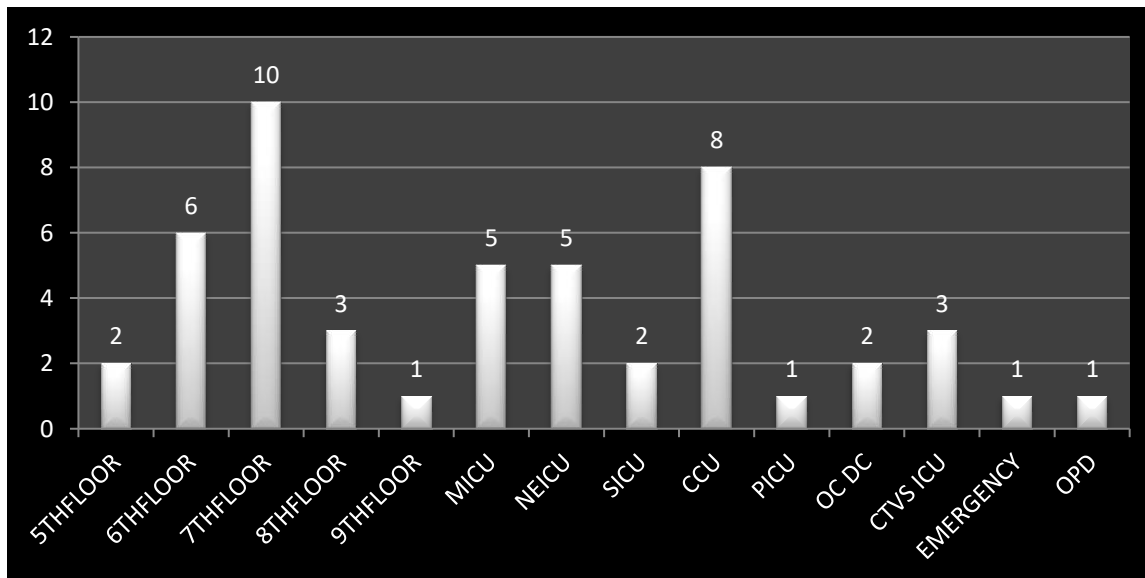
Data was analyzed using Microsoft excel.

- It was found that it took an average TAT of 4 hours 12 minutes for transportation of samples.

Below pie diagram depicts that 44% of samples transported within 4 to 6 hours where as only 8% within 2 hours.



- On further analysis, it was found that maximum delays came from 7th floor(10 samples), followed by CCU(8 samples) and the rest as can be seen in the figure below.



- On noting the shift in which maximum delays happened, it was found that during the night shift transportation of samples took longer time than the day time.

The process of sample collection was carefully observed in various wards to reason out delays.

Root cause analysis was done to find causes of delay and errors.

Causes of delay:

1. Acknowledging the sample vial using barcode scanner long before collecting it.
2. Delay in communicating to the general duty assistant to transport it to the laboratory.
3. Delay by the general duty assistant staff in transporting the sample to the lab.

Causes of errors:

1. Wrong labeling of either patient's name, test or IP number.
2. Unrecognized samples.
3. Interchanged bar coding.
4. Wrong or no barcode sticker.

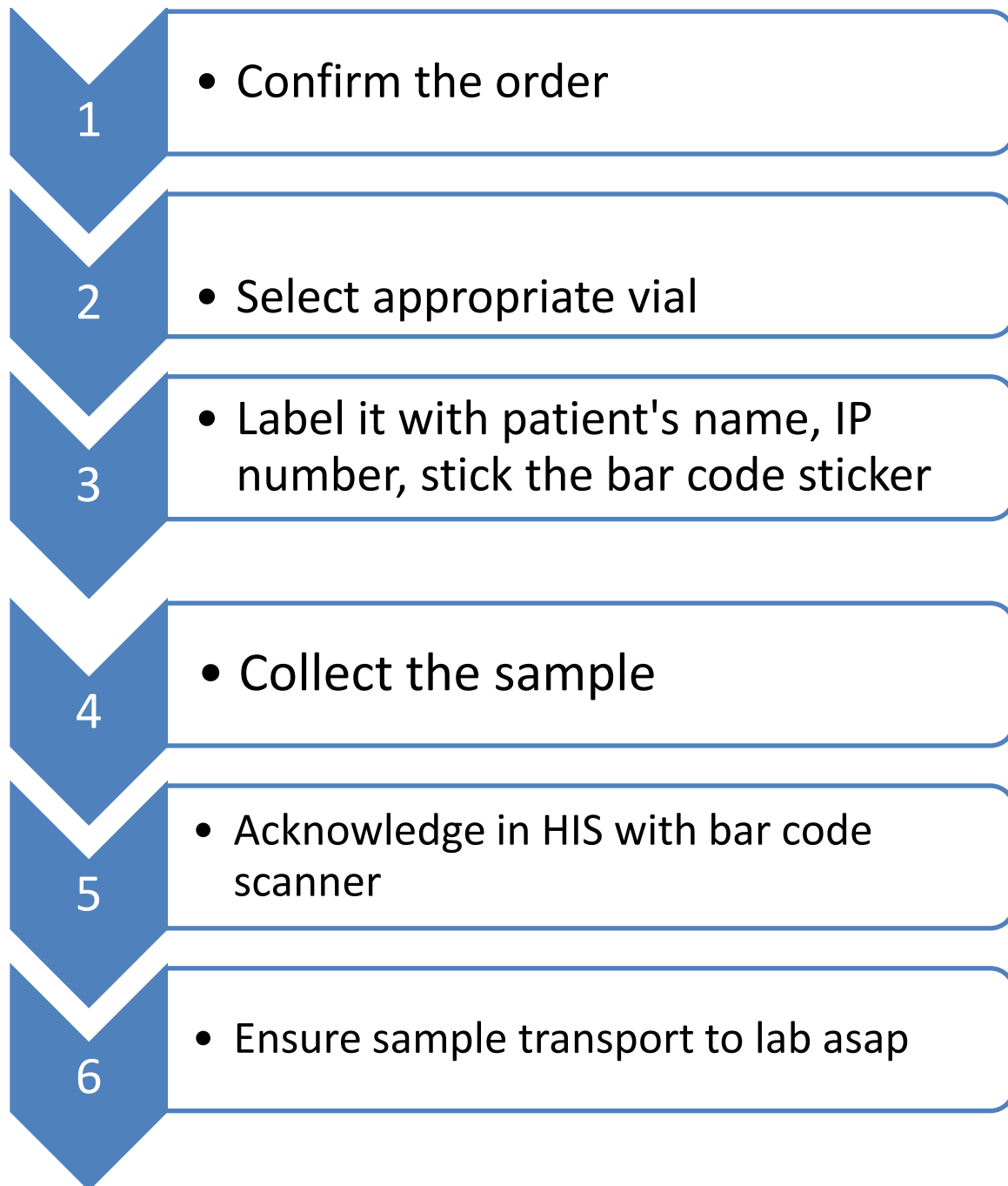
ACTIONS TAKEN TO REDUCE DELAY IN TRANSPORTATION:

- Sample process was mapped and given to the nursing staff educator to ensure training.
- Each ward was visited and the staff was communicated about proper sample collection and transportation method.
- Each ward was provided with a display on PROCESS OF SAMPLE COLLECTION AND TRANSPORTATION to further ensure its effective implementation.

(The display is attached in the below page)

- Daily rounds were done to different wards and staff awareness on the revised sample process was checked.
- Reinforcement on proper sample collection and timely transportation method was done.
- Incident forms were raised on regular basis for sample rejections and errors. Reporting of incidents and enquiring about it created alertness in the staff to do it right way.

PROCESS OF SAMPLE COLLECTION AND TRANSPORTATION:



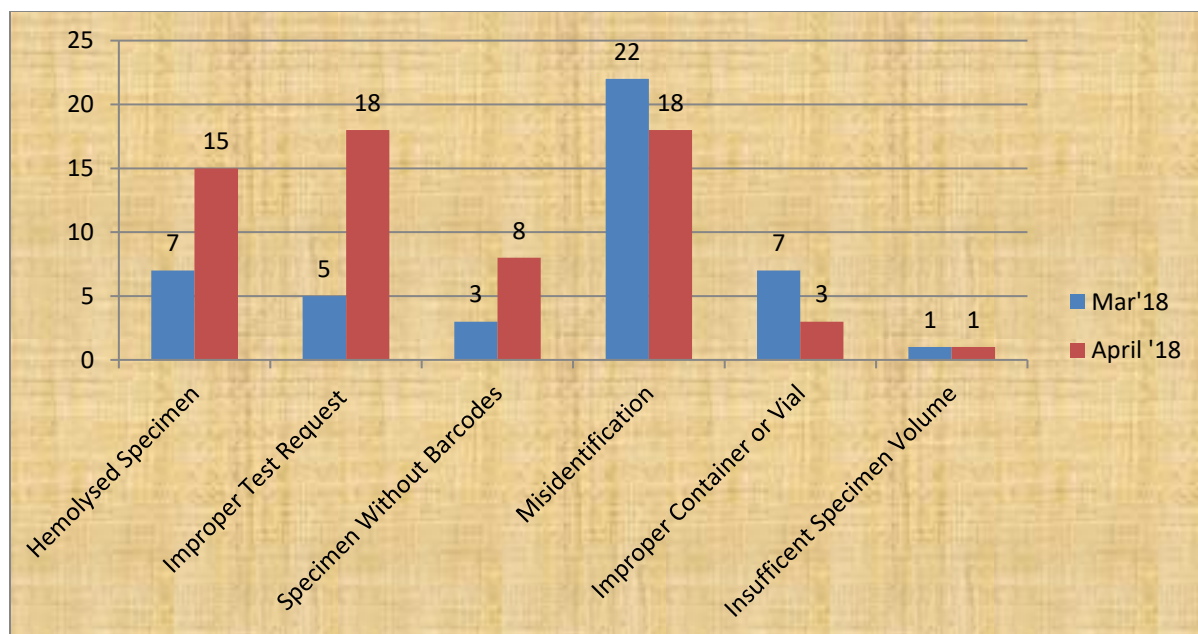
Causes of sample rejection:

Based on the number of incident forms raised for sample rejection, various causes were identified during the period of March and April as depicted in tabular column.

Reasons Of Rejection	Mar'18	April '18
<i>Hemolyzed Specimen</i>	7	15
<i>Improper Test Request</i>	5	18
<i>Specimen Without Barcodes</i>	3	8
<i>Misidentification</i>	22	18
<i>Improper Container or Vial</i>	7	3
<i>Insufficient Specimen Volume</i>	1	1
Total Sample Rejection	45	63
percentage of rejection	0.07%	0.15%

As it can be seen, percentage of sample rejection increased in April.

- Number of hemolysed samples increased from 7 to 15 in number.
- Improper test request went up to 18 from 5 which includes sending of inappropriate investigation form, improper documentation of the investigation to be done in the test request form and transporting the samples without request form.
- Decline in misidentification of samples seen.
- Decline in usage of improper container or vial seen.



TAT of processing and percentage of delays observed in March and April:

Time period between sample acknowledged by the lab to sample processed and report generated in the LIS.

<i>Month</i>	<i>March</i>	<i>April</i>
<i>Total samples</i>	<i>63019</i>	<i>39646</i>
<i>delay</i>	<i>268</i>	<i>156</i>
<i>% of delay</i>	<i>0.41</i>	<i>0.39</i>
<i>TAT of processing</i>	<i>99.59%</i>	<i>99.61%</i>

As observed, TAT compliance of 99.59% seen in March and 99.61% in April.

Recommendations and actions taken to reduce sample rejection:

- Continuous training and education of the nursing staff and general duty assistant staff on the importance of proper method of sample collection, timely transportation and processing of samples in the right way.
- Cross checking and regular visits to the ward to follow up the implementation of revised sample process.
- Monitoring and evaluation of turn-around time of transportation and turn-around time of processing of samples.
- Regular root cause analysis of sampling errors, rejection and repeat samples.