

SUMMER INTERNSHIP PROGRAM
at
MAX SUPER SPECIALITY HOSPITAL, MOHALI

From 13-05-2025 to 25-07-2025

A REPORT BY
Akshita Sharma
Master of Business Administration
Hospital and Health Management
Roll no. 1899

2024-26

under the Mentorship of
Dr. Vinod Kumar SV, Professor



CERTIFICATE

OF ACHIEVEMENT



Max Institute of Medical Education

Certifies that

Akshita Sharma

has completed Internship in the department of
Quality

at Max Super Speciality Hospital, Mohali, Punjab
from 13th May 2025 to 25th July 2025

A handwritten signature in black ink, appearing to read "S. M. Singh", written over a horizontal line.

Head of the Department

A handwritten signature in black ink, appearing to read "Vinitaa Jha", written over a horizontal line.

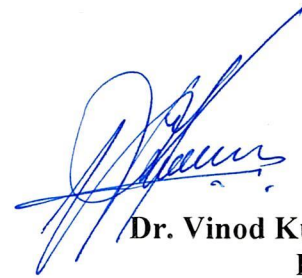
Dr Vinitaa Jha
Director - Research & Academics
Max Healthcare Institute Ltd

IIHMR University Faculty Mentor Approval

This is to certify that **Dr. Akshita Sharma** of academic year 2024-26 **Institute of Health Management Research, IIHMR University Jaipur** has prepared a poster with respect to her summer internship held during May-July 2025.

She has carried out work as per the guidelines. Her poster is approved for presentation.

Date: 29/07/2025

A blue ink signature of Dr. Vinod Kumar SV, consisting of stylized, overlapping loops and lines.

Dr. Vinod Kumar SV
Professor

IIHMR University, Jaipur

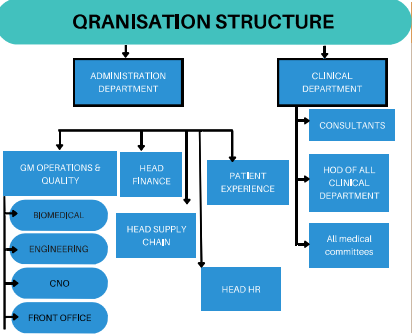
Organisation Mentor –Dr Swati Marwaha

Presented by -AKSHITA SHARMA, 1899 HM-29

University Mentor–Dr Vinod Kumar SV

ABOUT THE ORGANISATION

Max Super Speciality Hospital, Mohali (Unit of Hometrail Buildtech Pvt. Ltd.) is a NABH & NABL-accredited, ISO-certified hospital with 217+ beds, including 83 ICU beds and 8 modular OTs. It offers expert care in Neurosciences, Cardiac Sciences, Cancer, Orthopaedics, and more, supported by 80+ doctors and 350+ nurses using advanced medical technology.



VISION AND MISSION

VISION –To be the most well regarded healthcare provider in India committed to the highest standards of Clinical Excellence and Patient Care supported by the latest technology and cutting edge research.

MISSION – To serve, to excel

WHAT IS SMR

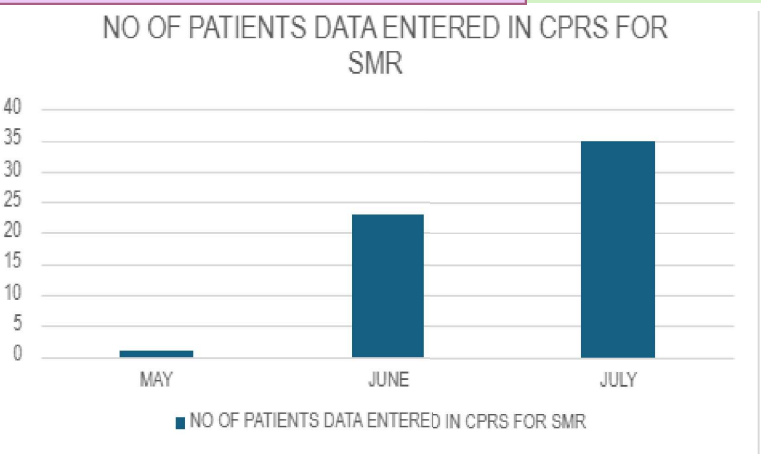
- It is the ratio of actual deaths in ICU to predicated deaths in ICU.
- $SMR = \frac{ACTUAL DEATHS}{PREDICTED DEATHS}$

OBJECTIVES

To implement Standardized Mortality Ratio (SMR) monitoring in the ICU by promoting the use of the existing digital scoring system in CPRS, aligning it with NABH 6th edition quality indicators, and identifying challenges in clinical adoption and documentation.

WHAT ALL WAS DONE FOR IMPLEMENTATION

- DAILY MEETINGS
- DAILY DATA COLLECTION
- ONLINE TRAINING – Via video training
- OFFLINE ONE TO ONE TRAINING WITH DOCTORS



Theoretical Knowledge	Practical Learning
SMR as indicator exists	Understood how digital systems like CPRS already have inbuilt scoring tools and the challenges in clinical adoption
Hospital workflow is in coordination	Experienced inter-departmental coordination, especially in implementing quality-related tools
Ideal communication flow	Faced real-time challenges like clinical resistance, time constraints, and staff sensitization

LEARNINGS DURING THE INTERNSHIP

- Exposure to hospital operations
- Practical application of NABH standards
- Learned how documentation gaps can directly affect data tracking and quality metrics

SWOT	TOWS
S - NABH & NABL Accredited, ISO Certified - Advanced Medical Technology - Expert Team of doctors	SO - Leverage NABH/NABL accreditation & tech to push digital transformation - Promote expert doctors to attract international patients (medical tourism)
W - Lack of Regular Staff Training - Resistance from Clinical Staff - Time-consuming Discharge Process - Long waiting time in OPD and less no of chairs in waiting area	ST - Showcase certifications & expert team to meet rising patient expectations and enhance trust. - Use strong brand reputation to attract and retain skilled staff, reducing turnover.
O - Scope for Full Digital Transformation - Medical Tourism Growth	WO - Implement digital tools to streamline discharge and OPD processes - Use digital platforms to provide regular staff training
T - High Operational Costs - Patient Expectations - High staff turnover	WT - Introduce staff retention programs & training to reduce turnover - Improve waiting areas and services to meet patient expectations



CHALLENGES

- SMR software exists (as per NABH requirement) but there is underutilization of software for SMR entry
- Time constraints during busy ICU shifts
- Difficulty in getting predicted mortality
- Lack of integration with routine reporting processes
- Inconsistent form-filling
- Resistance from clinical team – Initially many clinicians were hesitant to adopt SMR tracking viewing it as extra task.

SUGGESTIONS

- Regular staff training.
- More staff is needed
- Need to optimise the consultant schedule so that patient does not sit in OPD waiting .

Reporting Format (Weekly)

Name of the Organisation: MAX Super Speciality Hospital, Mohali

Area/ Department/ Project of Summer Internship Program: Medical Quality Department

Name of the Student: Dr Akshita Sharma

Roll no: 1899

Stream: MBA (Hospital and Health Management)

Week no: 1

From: 13.05.2025 To 17.05.2025

Activity Done	Holistic overview of the hospital. Studied and discussed IPSG Guidelines. Carried IPSG –1 audit in Ward and SICU on Max QMS application. Studied and discussed radiation safety guidelines. Carried radiation safety audit in Cath lab, radiology and endoscopy department. Studied and discussed Handover register formats according to ISBAR principle.
Linking theory (Classroom learning) with practice at your organisation	Application of Essential hospital services in understanding the hospital and department layout.

Gaps identified on the working area.	During the audit on QMS app on IPSG –1 staff was not sure where to put the bands in case of people missing both the limbs. Patient positioning charts absent in cath labs. No proper storage for TLD badges in endoscopy department. PPE was missing at the time of procedure in radiology department.
Suggestions for improvement	Staff training in understanding the IPSG guidelines properly. Provide proper storage for TLD badges.
Plan for the next week	Learn and observe the work assigned by the organisation mentor.

Signature of the Student – AKSHITA SHARMA

Approved by the IIHMR University’s Mentor

Reporting Format (Weekly)

Name of the Organisation: MAX Super Speciality Hospital, Mohali

Area/ Department/ Project of Summer Internship Program: MEDICAL QUALITY DEPARTMENT

Name of the Student: Dr. AKSHITA SHARMA

Roll no: 1899

Stream: MBA HM

Week no: 2 **From:** 19.05.2025 to 24.05.2025

Activity Done	Studied about and visited and with understood all the internal and external QC's of: 1. CSSD 2. BLOOD BANK 3. LABORATORY Carried the audit of CSSD, BLOOD BANK AND LABORATORY on MAX QMS application. Read and studied about the E-prescriptions. Studied about Mobile X-ray machine and safety application according to the quality department.
Linking theory (Classroom learning) with practice at your organisation	Application of Essentials of Hospital management in understanding the CSSD, BLOOD BANK, LABORATORY departments and their functions with the layout.
Gaps identified on the working area.	NSI charts were absent in the blood banks Round charts/graphs for temperature collection were missing in the refrigerators of the laboratories.

Suggestions for improvement	Training of the LAB staff. Assign daily responsibility for temperature logging to specific staff with weekly supervisor review. Conduct regular audits to check if NSI charts are present and understood by staff.
Plan for the next week	Learn and observe the work assigned by the organisation mentor.

Signature of the Student – AKSHITA SHARMA

Approved by the IIHMR University's Mentor

Reporting Format (Weekly)

Name of the Organisation: MAX Super Speciality Hospital, Mohali

Area/ Department/ Project of Summer Internship Program: Medical Quality Department

Name of the Student: Dr Akshita Sharma

Roll no: 1899 **Stream:** MBA (Hospital and Health Management)

Week no: 3 **From:** 26.07.2025 To 31.07.2025

Activity Done	Studied about the blue code. Studied and had a look what is crash cart. Studied about code RRT. Carried IPSG-3 audit on MAX QMS app.
Linking theory (Classroom learning) with practice at your organisation	Importance of emergency codes in hospital. Essentials of hospital services.
Gaps identified on the working area.	IPSG-3 guidelines were not known by staff. Nursing staff were not attending patients properly. Lot of patients were waiting in OPD due to mishandling and ineffective communication.
Suggestions for improvement	Staff should be trained regularly as the staff was unaware about many things including the codes and IPSG guidelines.
Plan for the next week	Work on my project.

Signature of the Student – AKSHITA SHARMA

Approved by the IIHMR University's Mentor

Reporting Format (Weekly)

Name of the Organisation: MAX Super Speciality Hospital, Mohali

Area/ Department/ Project of Summer Internship Program: Medical Quality Department

Name of the Student: Dr Akshita Sharma

Roll no: 1899 **Stream:** MBA (Hospital and Health Management)

Week no: 4 **From:** 02.06.2025 To 07.06.2025

Activity Done	Conducted doctor handover register audit on Max QMS application in the following departments: 1. MICU 2. NICU 3. PICU 4. MSP'S 1-4 5. EMERGENCY Studied and discussed about PROM and PREM. Studied about the crash cart and its application. Studied about the mortality rates and its application.
Linking theory (Classroom learning) with practice at your organisation	Application of Essential hospital services. But many things were new.

Gaps identified on the working area.	During the audit on QMS app on doctor handover register the following were missing: • Proper details of doctor were missing like name and registration number. • Handover registers were not maintained in few MICU. • In emergency department the registers did not include the patient's UHID.
Suggestions for improvement	Training of the doctors in filling and maintaining the handover register.
Plan for the next week	Learn and observe the work assigned by the organisation mentor. Start working on the project.

Signature of the Student – AKSHITA SHARMA

Approved by the IIHMR University's Mentor

Reporting Format (Weekly)

Name of the Organisation: MAX Super Speciality Hospital, Mohali

Area/ Department/ Project of Summer Internship Program: Medical Quality Department

Name of the Student: Dr Akshita Sharma

Roll no: 1899 **Stream:** MBA (Hospital and Health Management)

Week no: 5 **From:** 09.06.2025 To 14.06.2025

Activity Done	Started working on the project. Went on rounds in all the ICUs to tell the doctors how to add SMR on the system. Studied and discussed about OT. Studied about the management of medication. Studied about the mortality rates and its application in my project.
Linking theory (Classroom learning) with practice at your organisation	Application of Essential hospital services in understanding the management of medication. But many things were new.
Gaps identified on the working area.	Doctors did were not using the mortality rate scales and were not entering the data in system.

Suggestions for improvement	Training of the doctors in filling and maintaining the mortality rates while telling its importance.
Plan for the next week	Learn and observe the work assigned by the organisation mentor.

Signature of the Student – AKSHITA SHARMA

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Reporting Format (Weekly)

Name of the Organisation: MAX Super Speciality Hospital, Mohali

Area/ Department/ Project of Summer Internship Program: Medical Quality Department

Name of the Student: Dr Akshita Sharma

Roll no: 1899 **Stream:** MBA (Hospital and Health Management)

Week no: 6 **From:** 16.06.2025 To 21.06.2025

Activity Done	Started collecting the data for my project with focus on implementation of project. Went on rounds in all the ICUs to tell the doctors how to add SMR on the system. Did hospital safety audit. Read and understood about the quality indicators stated by NABH with the mentor. Conducted HAZMAT safety audit on Max QMS application.
Linking theory (Classroom learning) with practice at your organisation	All subjects and work were new to my knowledge.
Gaps identified on the working area.	HAZMAT cupboards were not maintained properly. Quality indicators stated by the NABH were not being maintained by most of the departments. Doctors did were not using the mortality rate scales and were not being entering the data in system had to request them to enter the data.

Suggestions for improvement	Training of the doctors in filling and maintaining the mortality rates while telling its importance. Many quality indicators were not being maintained by the departments as doctors and nurses both denied to enter the data due to workload.
Plan for the next week	Learn and observe the work assigned by the organisation mentor. Work on my project.

Signature of the Student – AKSHITA SHARMA

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Reporting Format (Weekly)

Name of the Organisation: MAX Super Speciality Hospital, Mohali

Area/ Department/ Project of Summer Internship Program: Medical Quality Department

Name of the Student: Dr Akshita Sharma

Roll no: 1899 **Stream:** MBA (Hospital and Health Management)

Week no: 7 **From:** 23.06.2025 To 28.06.2025

Activity Done	Did radiation safety audit on QMS application in CATH lab, endoscopy, radiology, and OT. Observed robotic surgery in OT. Started collecting the data for my project with focus on implementation of project. Went on rounds in all the ICUs to tell the doctors how to add SMR on the system. Studied for spill management.
Linking theory (Classroom learning) with practice at your organisation	All subjects and work were new to my knowledge.
Gaps identified on the working area.	Quality indicators stated by the NABH were not being maintained by most of the departments. Doctors did were not using the mortality rate scales and were not being entering the data in system had to request them to enter the data.

Suggestions for improvement	Training of the doctors in filling and maintaining the mortality rates while telling its importance.
Plan for the next week	Learn and observe the work assigned by the organisation mentor. Work on my project.

Signature of the Student – AKSHITA SHARMA

Approved by the IIHMR University's Mentor

Reporting Format (Weekly)

Name of the Organisation: MAX Super Speciality Hospital, Mohali

Area/ Department/ Project of Summer Internship Program: Medical Quality Department

Name of the Student: Dr Akshita Sharma

Roll no: 1899 **Stream:** MBA (Hospital and Health Management)

Week no: 8 **From:** 30.06.2025 To 05.07.2025

Activity Done	Made presentation on CODE RED. Went to Max med centre to teach the staff about code red and code pink. Collected the data for SMR. Studied about STEMI and went to collect the STEMI forms. Went to Max med centre to check for the documentation for upcoming NABH.
Linking theory (Classroom learning) with practice at your organisation	All subjects and work were new to my knowledge.
Gaps identified on the working area.	Nursing staff and regular staff at the med centre were unaware about the codes. Maximum documentations were missing at the med centre. Doctors were still missing in maintaining the SMR data.

Suggestions for improvement	Training of the doctors in filling and maintaining the mortality rates while telling its importance. Med Centre staff should be trained regularly as the staff was unaware about many things.
Plan for the next week	Will visit the med centre for training of staff on CODE YELLOW, patient safety and patient rights and the remaining documentation work. Work on my project.

Signature of the Student – AKSHITA SHARMA

Approved by the IIHMR University's Mentor

Reporting Format (Weekly)

Name of the Organisation: MAX Super Speciality Hospital, Mohali

Area/ Department/ Project of Summer Internship Program: Medical Quality Department

Name of the Student: Dr Akshita Sharma

Roll no: 1899 **Stream:** MBA (Hospital and Health Management)

Week no: 9 **From:** 7.07.2025 To 12.07.2025

Activity Done	Visited max med centre for training of staff on CODE YELLOW, patient safety and patient rights and the remaining documentation work. Collected data for my project. Did doctor handover audit for the month of July. Did lab safety and radiation safety audit for the month of July.
Linking theory (Classroom learning) with practice at your organisation	Importance of emergency codes in hospital. Quality parameters
Gaps identified on the working area.	Maximum documentations were missing at the med centre. Doctors were still missing in maintaining the SMR data. Nursing staff and regular staff at the med centre were unaware about the codes.
Suggestions for improvement	Training of the doctors in filling and maintaining the mortality rates while telling its importance. Med Centre staff should be trained regularly as the staff was unaware about many things including the codes and IPSC guidelines.

Plan for the next week	Work on my project.
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Signature of the Student – AKSHITA SHARMA

Approved by the IIHMR University’s Mentor

Reporting Format (Weekly)

Name of the Organisation: MAX Super Speciality Hospital, Mohali

Area/ Department/ Project of Summer Internship Program: Medical Quality Department

Name of the Student: Dr Akshita Sharma

Roll no: 1899 **Stream:** MBA (Hospital and Health Management)

Week no: 10 **From:** 14.07.2025 To 19.07.2025

Activity Done	• Collected data for SMR project and explained the new doctors about the SMR. • Conducted IPSG audit on MAX Qms application. • Conducted an audit to know how much staff on ward floor know about the patient rights and responsibilities. • Read about the antibiogram and its application. • Studied about the POCT implementation and importance.
Linking theory (Classroom learning) with practice at your organisation	Importance of antibiogram. Quality parameters Patient rights and responsibilities.
Gaps identified on the working area.	SMR data filling was missing as many times as possible critical values were not available. Staff did not know about the patient rights and responsibilities. IPSG – many things were not known to staff.

Suggestions for improvement	Training of the doctors in filling and maintaining the mortality rates while telling its importance. Nursing staff training should be regular as they don't remember much knowledge about the IPSPG, patient rights and responsibilities.
Plan for the next week	Work on my project. To make final presentation on my project.

Signature of the Student – AKSHITA SHARMA

Approved by the IIHMR University's Mentor

Compiled Report

Activity Done	1. Holistic Overview of the Hospital During the week, I began with a holistic understanding of the hospital structure, including clinical and non-clinical departments. I studied the interdepartmental workflow, patient journey from admission to discharge, and hospital layout. Understanding the structure provided me with a foundational perspective to assess quality and patient safety in a real-time hospital setting. 2. IPSG Guidelines – Study, Discussion, and Audit IPSG stands for International Patient Safety Goals, and it forms a core part of quality and patient safety initiatives in accredited. The goals aim to: • Identify patients correctly • Improve effective communication • Improve the safety of high-alert medications • Ensure correct-site, correct-procedure, correct-patient surgery • Reduce the risk of healthcare-associated infections • Reduce the risk of patient harm resulting from falls I studied and discussed these six IPSGs in detail and their implementation in different units like wards, MICU, SICU and MSP's. Audit Conducted: • Departments: Ward and Surgical Intensive Care Unit (SICU) • Tool Used: Max QMS (Quality Management System) Application
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	• IPSG 1 Focus: Correct Identification of Patients using two identifiers (Name and UHID) • Observed bedside verification practices, patient ID bands, and documentation accuracy. 3. Radiation Safety Guidelines – Study, Discussion, and Audit Radiation safety is crucial for staff and patient protection in areas involving diagnostic and interventional radiology. Key Guidelines Studied: • ALARA Principle (As Low as Reasonably Achievable) • Use of lead aprons, thyroid shields, and dosimeters • Periodic quality checks • Radiation warning signage and restricted access protocols Audit Conducted In: • Cath Lab • Radiology Department • Endoscopy Department (for C-arm usage) Findings focused on staff compliance, availability and condition of protective gear, and signage display. 4. Handover Register – ISBAR Format Studied and discussed the handover communication method based on the ISBAR principle: • I – Identification • S – Situation • B – Background • A – Assessment
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- **R – Recommendation**

Examined handover registers across nursing and doctors shift and evaluated how effectively staff communicated critical information. Emphasis was placed on avoiding information gaps that could lead to patient safety incidents.

5. Quality Control Processes – Internal and External

Visited and studied the internal and external Quality Control (QC) mechanisms in key departments:

a) CSSD (Central Sterile Supply Department)

- Studied sterilization cycle documentation (Bowie-Dick test, Biological Indicators, Chemical Indicators)
- Observed packing and tagging procedures
- Understood external QC through vendor-maintained equipment calibration logs

b) Blood Bank

- Observed temperature monitoring for storage units
- Studied procedures for component separation, cross-matching, and blood issue logs
- QC practices: Regular serological testing.

c) Laboratory

- Understood IQC and EQC documentation
- Saw various machines.

Audit Conducted Using Max QMS on all three departments for compliance against hospital policies and NABH standards

6. E-Prescriptions – Study

- Studied the digital prescription system used in the hospital which gives benefits include better patient safety, reduction in medication errors, and faster turnaround.
- Collected E prescription for quality department.

7. Mobile X-ray Machine – Quality and Safety Application

Studied the operation and safety protocols associated with mobile X-ray units:

- Correct positioning and distance maintenance
- Shielding practices for patients and staff
- Use of signage while operating
- Role of quality team in tracking preventive maintenance and radiation dose safety

8. Hospital Safety Audit Conducted on Max QMS Application

I conducted comprehensive **Hospital Safety Audits** using the **Max QMS application**, focusing on physical infrastructure, fire safety, biomedical waste segregation, staff safety practices, emergency preparedness, and availability of safety signage.

The following departments were audited:

❖ All MSPs

- Includes housekeeping, security, laundry, dietary services, maintenance.
- Audit focused on fire extinguisher presence, MSDS (Material Safety Data Sheet) availability for chemicals, use of PPEs, and waste segregation.
- Ensured safe practices for handling cleaning agents, biomedical waste, and electrical equipment.

❖ Medical ICUs (MICU)

	• Checked oxygen safety, clutter-free corridors, proper labeling of drugs and equipment. • Verified presence of crash carts, fire extinguishers, and hand hygiene supplies. • Ensured proper disposal of sharps and biomedical waste. ❖ PET Scan Area • Radiation safety protocols including warning signage, restricted entry, lead shielding were checked. • Assessed staff awareness about exposure limits and PPE usage. • Verified maintenance of radioactive waste disposal guidelines. ❖ Emergency Department • Verified presence of emergency exit signage, disaster code charts, and fire extinguishers. • Ensured that the emergency team is aware of code protocols. • Checked the accessibility of evacuation maps and trolleys. ❖ Cath Lab • Focused on radiation safety, PPE use (aprons, thyroid shields), signage, and lead door functionality. • Ensured all chemical and contrast agents had MSDS available. • Fire extinguishers and spill kits checked. ❖ CICU (Cardiac Intensive Care Unit) • Verified presence of safety signage, waste bins, clean and sterile environment.
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	• Checked whether beds were grounded (to avoid shocks), and fire exits were accessible. • Ensured that Code Blue and fire safety procedures were understood by staff. ❖ Labour Room • Focused on infection control practices, linen segregation, safe newborn transport. • Fire safety equipment, proper ventilation, and biomedical waste segregation were checked. • Verified oxygen pipeline safety and sharps disposal practices. 9. Studied About HAZMAT and MSDS HAZMAT (Hazardous Materials) • Refers to chemical substances that pose a threat to health, property, or the environment. • Includes cleaning agents, disinfectants, medical gases, radioactive materials, and lab reagents. • Learned the color-coded labeling system, HAZMAT handling protocols, and the need for appropriate PPEs. MSDS (Material Safety Data Sheet) • A document that provides detailed information about a chemical, including: - o Composition - o Handling and storage - o First aid measures - o Fire-fighting measures
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- o Toxicological information

- Studied how MSDS are kept in relevant departments like Housekeeping, Cath Lab, and CSSD to ensure staff awareness and chemical safety.

Studied Disaster Codes

Hospitals use color-coded codes to handle various emergencies. I made presentation on CODE RED, YELLOW AND BLUE.

Code	Meaning
Code Red	Fire
Code Blue	Cardiac Arrest
Code Pink	Infant Abduction
Code Yellow	Internal Disaster
Code Black	Bomb Threat
Code Orange	Hazardous Material Spill
Code Green	Evacuation
Code Brown	External Disaster / Mass Casualty

- Understood the roles of various staff members during disasters.
- Studied the location and use of disaster management kits and evacuation plans.

10. Studied PCRA and ICRA Forms

PCRA (Pre-Construction Risk Assessment)

- A tool used before initiating any construction, renovation, or maintenance activity in the hospital.
- Ensures that patient care areas are protected from:
 - o Dust and air contamination
 - o Noise
 - o Utility outages

- o Safety risks

ICRA (Infection Control Risk Assessment)

- Evaluates infection risks associated with activities like construction, patient movement, or new procedure introduction.

11.Studied and discussed about OT (Operation Theatre)

A thorough understanding of **Operation Theatre (OT)** processes is essential for ensuring infection control, patient safety, and efficient workflow.

Key Areas Studied:

- **Zoning of OT** – Unrestricted, semi-restricted, and restricted areas.
- **Aseptic Protocols** – Scrubbing techniques, sterile gowning, surgical site preparation.
- **OT Scheduling & Handover Practices**
- **Biomedical Waste Management in OT**
- **OT Indicators** – Surgical site infection rate, on-time start, cancellation rate, antibiotic prophylaxis timing.

Also observed how quality checks are implemented:

- Sterility of instruments (coordination with CSSD)
- Air quality monitoring (HEPA filters and Laminar flow systems)

Topics Studied:

- **High-Alert Medications:** Storage and labelling protocols (e.g., insulin, potassium chloride)
- **LASA Drugs (Look-Alike, Sound-Alike):** Segregation and color-coded labeling to prevent medication errors.

- **Storage Guidelines:** Cold chain maintenance, expiry checks, FIFO system (First In, First Out)
- **Prescription Practices:** Legibility, e-prescription benefits, abbreviation errors.

11.SPILL MANAGEMENT:

Types of Spills:

- Blood/body fluids
- Cytotoxic agents
- Hazardous chemicals (cleaning agents, lab reagents)
- Mercury (from broken thermometers)

Spill Management Process:

- Containment and isolation of the spill
- Use of appropriate PPEs
- Use of spill kits with absorbent material and disinfectant
- Waste segregation and disposal as per BMW guidelines
- Documentation of the incident and preventive follow-up

Spill management plays a crucial role in preventing infections, chemical exposure, and environmental hazards.

Studied About Antibigram and Its Application

Studied the concept of **Antibiogram**, a summary of antimicrobial susceptibility data used

12. Studied POCT (Point-of-Care Testing) Implementation and Importance

Learned about **POCT (Point-of-Care Testing)**, which refers to rapid diagnostic tests performed near the patient.

Benefits:

- Faster diagnosis and treatment decisions
- Useful in ICUs, emergency, and rural settings
- Devices include glucometers, ABG analyzers, rapid cardiac markers

13. IMPLEMENTATION OF SMR

- It is the ratio of actual deaths in ICU to predicated deaths in ICU.

$$\text{SMR} = \text{ACTUAL DEATH} / \text{PREDICTED DEATHS}$$

- Frequency of data collection – MONTHLY
- Sampling – NO
- Started with the implementation of the standardized mortality ratio in various ICU like MICU, NICU, SICU.
- Training of doctors online via video recording and offline one to one training of doctors was done, weekly meetings were done, daily data collection was done.
- Training period was – 01.06.2025 to 16.06.2025
- Data collection period – 17.6.2025 to 21.07.2025

Linking theory (Classroom learning) with practice at your organisation	Essentials of Hospital Services: • Helped in understanding the layout of the hospital and department layout like CSSD, BLOOD BANK, LABORATORY. • Importance of antibiogram. • Quality parameters • Patient rights and responsibilities. Human Resource Management: • That how HR team is responsible for training of the staff and organisation culture since the staff was not trained properly. Principles of management: • Project completion group work helped me understand the planning, organising and team coordination. Behaviour change and communication: • Since many challenges were hidden in ineffective communication reflected how important is the role of communication. Digital Health: • While implementing the SMR saw the importance of digital work over the paperwork that how it can use the workload and helps in time saving. And how easy it makes the work.
Gaps identified on the working area.	During the audit on QMS app on IPSC –1 • Staff was not sure where to put the bands in case of people missing both the limbs. • Patient positioning charts absent in cath labs. • No proper storage for TLD badges in endoscopy department.

	• PPE was missing at the time of procedure in radiology department. • NSI charts were absent in the blood banks round charts/graphs for temperature collection was missing in the refrigerators of the laboratories. During the audit on QMS app on Hospital safety audit the following were missing. • HAZMAT cupboards were not locked. • HAZMAT not stored in fireproof cabinets . • Some departments did not display the Material Safety data sheet and sticker outside the hazmat cupboards. • All equipments did not have PM and calibration as per the hospital schedule. During the audit on QMS app on doctor handover register the following were missing: • Proper details of doctor where missing like name and registration number. • Handover registers were not maintained in few MICU. • In emergency department the registers did not include the patient's UHID. During the SMR IMPLEMENTATION • Training of the doctors in filling and maintaining the mortality rates while telling its importance. • Resistance from clinical team – Initially some clinicians were hesitant to adopt SMR tracking viewing it as extra task. • Time constraints during busy ICU shifts • No standard workflow for SMR • Lack of integration with routine reporting process
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Suggestions for improvement	• Training of the doctors in filling and maintaining the mortality rates while telling its importance. • Med Centre staff should be trained regularly as the staff was unaware about many things. • Staff training in understanding the IPSP guidelines properly. Provide proper storage for TLD badges. • Training of the LAB staff. Assign daily responsibility for temperature logging to specific staff with weekly supervisor review. • Conduct regular audits to check if NSI charts are present and understood by staff. • Staff training in understanding about Hazardous materials and its safety. • Training of doctors in implementing the SMR and telling its importance. • Training of hospital staff in understanding the importance of quality and NABH accreditation.
Key learnings	• Understood by NABH- what does it means and how the documentation is done. • Exposure to live project of SMR implementation. • Improved communications skills with the staff of all the levels. • Did various type of audits • Understood how in reality work is done and implemented with the various real time challenges faced.

Signature of the Student – AKSHITA SHARMA

Approved by the IIHMR University's Mentor

Compiled Report

Activity Done	1. Holistic Overview of the Hospital During the week, I began with a holistic understanding of the hospital structure, including clinical and non-clinical departments. I studied the interdepartmental workflow, patient journey from admission to discharge, and hospital layout. Understanding the structure provided me with a foundational perspective to assess quality and patient safety in a real-time hospital setting. 2. IPSG Guidelines – Study, Discussion, and Audit IPSG stands for International Patient Safety Goals, and it forms a core part of quality and patient safety initiatives in accredited. The goals aim to: • Identify patients correctly • Improve effective communication • Improve the safety of high-alert medications • Ensure correct-site, correct-procedure, correct-patient surgery • Reduce the risk of healthcare-associated infections • Reduce the risk of patient harm resulting from falls I studied and discussed these six IPSGs in detail and their implementation in different units like wards, MICU, SICU and MSP's. Audit Conducted: • Departments: Ward and Surgical Intensive Care Unit (SICU) • Tool Used: Max QMS (Quality Management System) Application
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- **IPSG 1 Focus:** Correct Identification of Patients using two identifiers (Name and UHID)
- Observed bedside verification practices, patient ID bands, and documentation accuracy.

3. Radiation Safety Guidelines – Study, Discussion, and Audit Radiation safety is crucial for staff and patient protection in areas involving diagnostic and interventional radiology.

Key Guidelines Studied:

- ALARA Principle (As Low as Reasonably Achievable)
- Use of lead aprons, thyroid shields, and dosimeters
- Periodic quality checks
- Radiation warning signage and restricted access protocols

Audit Conducted In:

- **Cath Lab**
- **Radiology Department**
- **Endoscopy Department** (for C-arm usage)

Findings focused on staff compliance, availability and condition of protective gear, and signage display.

4. Handover Register – ISBAR Format

Studied and discussed the handover communication method based on the **ISBAR** principle:

- **I** – Identification
- **S** – Situation
- **B** – Background
- **A** – Assessment

- **R – Recommendation**

Examined handover registers across nursing and doctors shift and evaluated how effectively staff communicated critical information. Emphasis was placed on avoiding information gaps that could lead to patient safety incidents.

5. Quality Control Processes – Internal and External

Visited and studied the internal and external Quality Control (QC) mechanisms in key departments:

a) CSSD (Central Sterile Supply Department)

- Studied sterilization cycle documentation (Bowie-Dick test, Biological Indicators, Chemical Indicators)
- Observed packing and tagging procedures
- Understood external QC through vendor-maintained equipment calibration logs

b) Blood Bank

- Observed temperature monitoring for storage units
- Studied procedures for component separation, cross-matching, and blood issue logs
- QC practices: Regular serological testing.

c) Laboratory

- Understood IQC and EQC documentation
- Saw various machines.

Audit Conducted Using Max QMS on all three departments for compliance against hospital policies and NABH standards

6. E-Prescriptions – Study

- Studied the digital prescription system used in the hospital which gives benefits include better patient safety, reduction in medication errors, and faster turnaround.
- Collected E prescription for quality department.

7. Mobile X-ray Machine – Quality and Safety Application

Studied the operation and safety protocols associated with mobile X-ray units:

- Correct positioning and distance maintenance
- Shielding practices for patients and staff
- Use of signage while operating
- Role of quality team in tracking preventive maintenance and radiation dose safety

8. Hospital Safety Audit Conducted on Max QMS Application

I conducted comprehensive **Hospital Safety Audits** using the **Max QMS application**, focusing on physical infrastructure, fire safety, biomedical waste segregation, staff safety practices, emergency preparedness, and availability of safety signage.

The following departments were audited:

❖ All MSPs

- Includes housekeeping, security, laundry, dietary services, maintenance.
- Audit focused on fire extinguisher presence, MSDS (Material Safety Data Sheet) availability for chemicals, use of PPEs, and waste segregation.
- Ensured safe practices for handling cleaning agents, biomedical waste, and electrical equipment.

❖ Medical ICUs (MICU)

- Checked oxygen safety, clutter-free corridors, proper labeling of drugs and equipment.
- Verified presence of crash carts, fire extinguishers, and hand hygiene supplies.
- Ensured proper disposal of sharps and biomedical waste.

❖ **PET Scan Area**

- Radiation safety protocols including warning signage, restricted entry, lead shielding were checked.
- Assessed staff awareness about exposure limits and PPE usage.
- Verified maintenance of radioactive waste disposal guidelines.

❖ **Emergency Department**

- Verified presence of emergency exit signage, disaster code charts, and fire extinguishers.
- Ensured that the emergency team is aware of code protocols.
- Checked the accessibility of evacuation maps and trolleys.

❖ **Cath Lab**

- Focused on radiation safety, PPE use (aprons, thyroid shields), signage, and lead door functionality.
- Ensured all chemical and contrast agents had MSDS available.
- Fire extinguishers and spill kits checked.

❖ **CICU (Cardiac Intensive Care Unit)**

- Verified presence of safety signage, waste bins, clean and sterile environment.

- Checked whether beds were grounded (to avoid shocks), and fire exits were accessible.
- Ensured that Code Blue and fire safety procedures were understood by staff.

❖ **Labour Room**

- Focused on infection control practices, linen segregation, safe newborn transport.
- Fire safety equipment, proper ventilation, and biomedical waste segregation were checked.
- Verified oxygen pipeline safety and sharps disposal practices.

9. Studied About HAZMAT and MSDS

HAZMAT (Hazardous Materials)

- Refers to chemical substances that pose a threat to health, property, or the environment.
- Includes cleaning agents, disinfectants, medical gases, radioactive materials, and lab reagents.
- Learned the color-coded labeling system, HAZMAT handling protocols, and the need for appropriate PPEs.

MSDS (Material Safety Data Sheet)

- A document that provides detailed information about a chemical, including:
 - o Composition
 - o Handling and storage
 - o First aid measures
 - o Fire-fighting measures

- o Toxicological information

- Studied how MSDS are kept in relevant departments like Housekeeping, Cath Lab, and CSSD to ensure staff awareness and chemical safety.

Studied Disaster Codes

Hospitals use color-coded codes to handle various emergencies. I made presentation on CODE RED, YELLOW AND BLUE.

Code	Meaning
Code Red	Fire
Code Blue	Cardiac Arrest
Code Pink	Infant Abduction
Code Yellow	Internal Disaster
Code Black	Bomb Threat
Code Orange	Hazardous Material Spill
Code Green	Evacuation
Code Brown	External Disaster / Mass Casualty

- Understood the roles of various staff members during disasters.
- Studied the location and use of disaster management kits and evacuation plans.

10. Studied PCRA and ICRA Forms

PCRA (Pre-Construction Risk Assessment)

- A tool used before initiating any construction, renovation, or maintenance activity in the hospital.
- Ensures that patient care areas are protected from:
 - o Dust and air contamination
 - o Noise
 - o Utility outages

- o Safety risks

ICRA (Infection Control Risk Assessment)

- Evaluates infection risks associated with activities like construction, patient movement, or new procedure introduction.

11.Studied and discussed about OT (Operation Theatre)

A thorough understanding of **Operation Theatre (OT)** processes is essential for ensuring infection control, patient safety, and efficient workflow.

Key Areas Studied:

- **Zoning of OT** – Unrestricted, semi-restricted, and restricted areas.
- **Aseptic Protocols** – Scrubbing techniques, sterile gowning, surgical site preparation.
- **OT Scheduling & Handover Practices**
- **Biomedical Waste Management in OT**
- **OT Indicators** – Surgical site infection rate, on-time start, cancellation rate, antibiotic prophylaxis timing.

Also observed how quality checks are implemented:

- Sterility of instruments (coordination with CSSD)
- Air quality monitoring (HEPA filters and Laminar flow systems)

Topics Studied:

- **High-Alert Medications:** Storage and labelling protocols (e.g., insulin, potassium chloride)
- **LASA Drugs (Look-Alike, Sound-Alike):** Segregation and color-coded labeling to prevent medication errors.

- **Storage Guidelines:** Cold chain maintenance, expiry checks, FIFO system (First In, First Out)
- **Prescription Practices:** Legibility, e-prescription benefits, abbreviation errors.

11.SPILL MANAGEMENT:

Types of Spills:

- Blood/body fluids
- Cytotoxic agents
- Hazardous chemicals (cleaning agents, lab reagents)
- Mercury (from broken thermometers)

Spill Management Process:

- Containment and isolation of the spill
- Use of appropriate PPEs
- Use of spill kits with absorbent material and disinfectant
- Waste segregation and disposal as per BMW guidelines
- Documentation of the incident and preventive follow-up

Spill management plays a crucial role in preventing infections, chemical exposure, and environmental hazards.

Studied About Antibigram and Its Application

Studied the concept of **Antibiogram and its application.**

12. Studied POCT (Point-of-Care Testing) Implementation and Importance

Learned about **POCT (Point-of-Care Testing)**, which refers to rapid diagnostic tests performed near the patient.

Benefits:

- Faster diagnosis and treatment decisions

- Useful in ICUs, emergency, and rural settings
- Devices include glucometers, ABG analyzers, rapid cardiac markers

13. IMPLEMENTATION OF SMR

- It is the ratio of actual deaths in ICU to predicated deaths in ICU.

SMR = ACTUAL DEATH /PREDICTED DEATHS

- Frequency of data collection – MONTHLY
- Sampling – NO
- Started with the implementation of the standardized mortality ratio in various ICU like MICU, NICU, SICU.
- Training of doctors online via video recording and offline one to one training of doctors was done, weekly meetings were done, daily data collection was done.
- Training period was – 01.06.2025 to 16.06.2025
- Data collection period –17.6.2025 to 21.07.2025

Linking theory (Classroom learning) with practice at your organisation	Essentials of Hospital Services: • Helped in understanding the layout of the hospital and department layout like CSSD, BLOOD BANK, LABORATORY. • Importance of antibiogram. • Quality parameters • Patient rights and responsibilities. Human Resource Management: • That how HR team is responsible for training of the staff and organisation culture since the staff was not trained properly. Principles of management: • Project completion group work helped me understand the planning, organising and team coordination. Behaviour change and communication: • Since many challenges were hidden in ineffective communication reflected how important is the role of communication. Digital Health: • While implementing the SMR saw the importance of digital work over the paperwork that how it can use the workload and helps in time saving. And how easy it makes the work.
Gaps identified on the working area.	During the audit on QMS app on IPSPG –1 • Staff was not sure where to put the bands in case of people missing both the limbs. • Patient positioning charts absent in cath labs. • No proper storage for TLD badges in endoscopy department.

- PPE was missing at the time of procedure in radiology department.
- NSI charts were absent in the blood banks round charts/graphs for temperature collection was missing in the refrigerators of the laboratories.

During the audit on QMS app on Hospital safety audit the following were missing.

- HAZMAT cupboards were not locked.
- HAZMAT not stored in fireproof cabinets .
- Some departments did not display the Material Safety data sheet and sticker outside the hazmat cupboards.
- All equipments did not have PM and calibration as per the hospital schedule.

During the audit on QMS app on doctor handover register the following were missing:

- Proper details of doctor where missing like name and registration number.
- Handover registers were not maintained in few MICU.
- In emergency department the registers did not include the patient's UHID.

During the SMR IMPLEMENTATION

- Training of the doctors in filling and maintaining the mortality rates while telling its importance.
- Resistance from clinical team – Initially some clinicians were hesitant to adopt SMR tracking viewing it as extra task.
- Time constraints during busy ICU shifts
- No standard workflow for SMR
- Lack of integration with routine reporting process

Suggestions for improvement	• Training of the doctors in filling and maintaining the mortality rates while telling its importance. • Med Centre staff should be trained regularly as the staff was unaware about many things. • Staff training in understanding the IPSP guidelines properly. Provide proper storage for TLD badges. • Training of the LAB staff. Assign daily responsibility for temperature logging to specific staff with weekly supervisor review. • Conduct regular audits to check if NSI charts are present and understood by staff. • Staff training in understanding about Hazardous materials and its safety. • Training of doctors in implementing the SMR and telling its importance. • Training of hospital staff in understanding the importance of quality and NABH accreditation.
Key learnings	• Understood by NABH- what does it means and how the documentation is done. • Exposure to live project of SMR implementation. • Improved communications skills with the staff of all the levels. • Did various type of audits • Understood how in reality work is done and implemented with the various real time challenges faced.

Signature of the Student – AKSHITA SHARMA

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