# STUDY ON HEALTHCARE ASSOCIATED INFECTIONS (CAUTI, CLABSI, AND VAP) IN ICUs. AIIMS, BHOPAL.

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## BRIEF HISTORY

AIIMS Bhopal, established in 2012 under the Pradhan Mantri Swasthya Suraksha Yojana, is a leading tertiary care hospital in central India. It provides advanced diagnostic, treatment, and critical care services to patients from Madhya Pradesh and neighboring states. The hospital is equipped with modern ICUs, specialty departments, and state-of-the-art facilities for complex medical care. With a high patient load, it plays a crucial role as a referral center for the region. Over the years, AIIMS Bhopal has expanded its infrastructure and services, strengthening its role in delivering quality healthcare.

## VISION

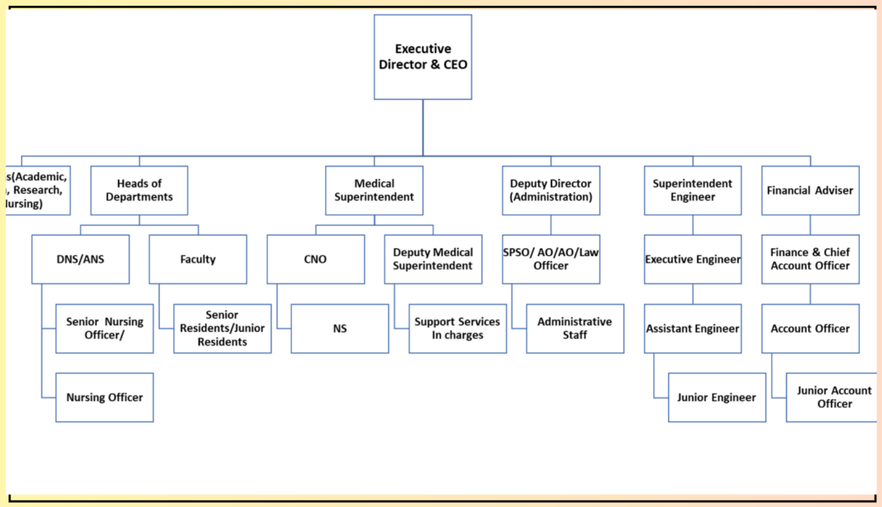
To realise inceptional mandate as under by contributing in:

- Correcting regional imbalances in the availability of affordable and reliable tertiary health care services
- Augmenting facilities for quality medical education creating a critical mass of doctors
- Conducting research in the country relevant to the Central India and beyond

## MISSION

- To provide tertiary health services to the public of Central India.
- To extend excellent education and research opportunities at par with highest in the field.
- To provide research opportunities of par excellence with national and international collaboration.


## ORGANISATION STRUCTURE



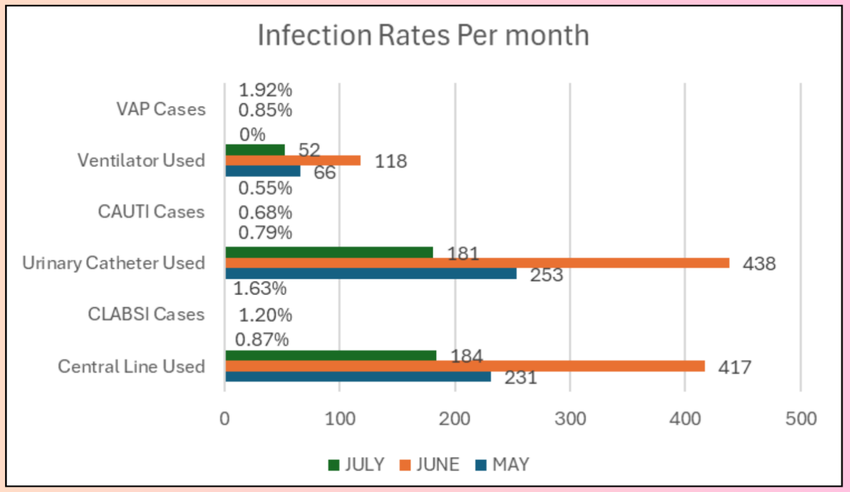

## OBJECTIVE

Healthcare-Associated Infections (HAIs) such as CLABSI, CAUTI, and VAP are significant contributors to morbidity, mortality, and prolonged ICU stay. Regular surveillance is essential to monitor trends and strengthen infection control measures.
This study aims to:

- Determine the incidence rates of CLABSI, CAUTI, and VAP in ICUs.
- Compare infection patterns across MICU, SICU, PICU, and NICU.
- Provide insights to guide infection prevention strategies at AIIMS Bhopal.

## METHODOLOGY

- Design: Cross setional descriptive study.
- Setting: MICU, SICU, PICU & NICU of AIIMS Bhopal (950 bedded NABH-accredited tertiary care hospital).
- Duration: May–July 2025.
- Sample Size: 1,940 device-days
- Data Source: Hospital Infection Control Department surveillance records.




## KEY FINDINGS

- Persistent manpower shortages across critical departments.
- Widespread issues with manual medical records and documentation errors.
- Significant deficiencies in critical resources and safety infrastructure.
- Identified gaps in hygiene and infection control practices.
- Challenges with coordination between key administrative and functional units.

## SUGGESTIONS

- Prioritize Recruitment: Address widespread manpower shortages by hiring more staff.
- Accelerate Digitalization: Speed up the shift to digital medical records and operational processes.
- Implement Rigorous Training: Provide staff with thorough training on proper documentation and hygiene.
- Invest in Upgrades: Allocate resources for critical equipment and improved safety infrastructure.
- Improve Coordination: Establish formal ways to enhance teamwork between departments.

## CHALLENGES

- Shortage of staff and many patients.
- Not enough important resources or good facilities.
- Mistakes in records and not enough computerization.
- Hygiene and infection control problems.
- Departments didn't communicate well.

## THEORITICAL UNDERSTANDING

- Hospital Operations Management: Applied in observing patient flow and departmental workflows.
- Quality Management & NABH Standards: Direct application through SOP reviews and accreditation assistance.
- Digital Health & HIS: Understood the practical use of hospital information systems (E-Sushrut, ABHA ID).
- Medical Records Management: Gained insights into the importance and challenges of accurate documentation.
- Infection Control & Biomedical Waste: Learned real-world protocols and HAI prevention strategies.

## SWOT

### STRENGTH

- Digitalization initiatives
- Strong commitment to NABH quality standards.
- Broad exposure to hospital departments.
- Proactive project involvement.
- Financial benefits from outsourced services.

### WEAKNESS

- Persistent manpower shortages.
- Gaps in documentation and digitalization.
- Insufficient resources and infrastructure.
- Hygiene and infection control issues.
- Poor inter-departmental coordination.

### OPPORTUNITIES

- Further digital transformation.
- Leverage NABH for improved reputation and funding.
- Optimize manpower through recruitment and training.
- Implement process improvements based on NABH.
- Upgrade technology and facilities.

### THREAT

- Budgetary constraints impacting operations.
- Risks to patient safety (e.g., HAIs, errors).
- Potential for reputational damage.
- Accreditation risks due to pending audits.
- Operational inefficiencies and staff burnout.

## TOWS

### Strengths-Opportunities (SO)

- Leverage digital initiatives and NABH commitment for quality and transformation.
- Utilize exposure and financial gains to optimize staffing and operations.

### Strengths-Threats (ST)

- Use NABH focus and project work to mitigate non-compliance and reputational damage.
- Employ digitalization to alleviate budget pressures and operational inefficiencies.

### Weaknesses-Opportunities (WO)

- Address manpower shortages and documentation errors through digital solutions and targeted recruitment.
- Overcome resource limitations and hygiene issues by implementing NABH guidelines and upgrading technology.

### Weaknesses-Threats (WT)

- Mitigate manpower shortages and burnout by seeking adequate budget allocation.
- Improve documentation and hygiene to reduce patient safety and reputational risks.

## PRACTICAL LEARNING

- Gained comprehensive insight into daily hospital operations and departmental workflows.
- Reviewed patient documentation to understand adherence to standards and identify gaps.
- Contributed to quality improvement initiatives and NABH accreditation processes.
- Acquired practical knowledge and experience in infection control and prevention strategies.
- Successfully performed a critical clinical audit, contributing directly to NABH accreditation.