Infection Prevention and Control Manual

Mycetoma Research Centre
(MRC)

University of Khartoum

WHO Collaborating Centre on Mycetoma
and Skin Neglected Tropical Diseases (NTDs)

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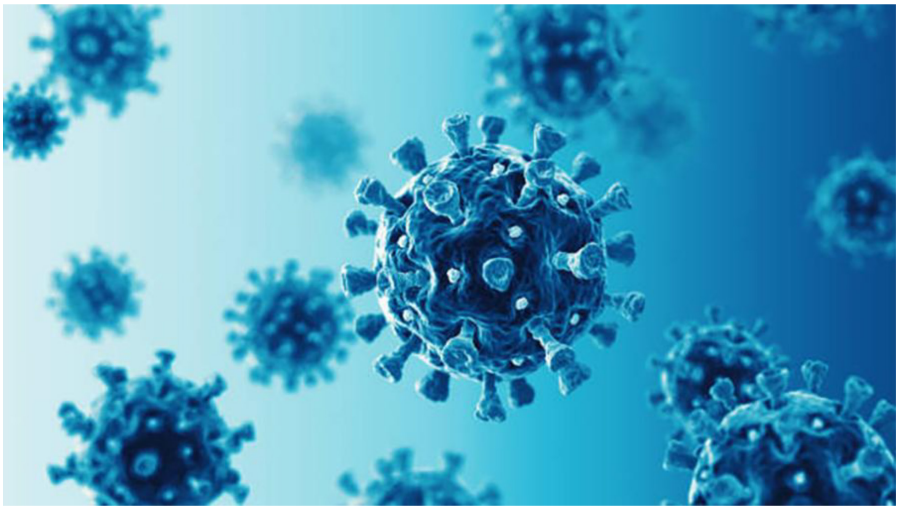

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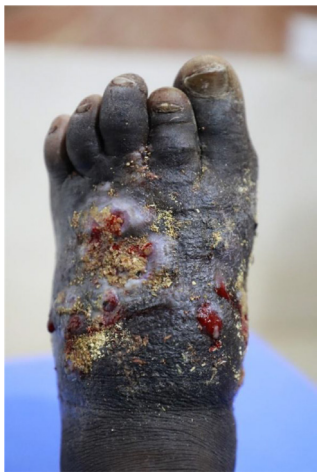
1. Introduction

Health-care associated infections (HAIs) represent a significant challenge to patient safety globally, particularly in low- and middle-income countries. The Mycetoma Research Centre (MRC), as a leading institution in mycetoma care and research, recognises the critical importance of implementing a comprehensive Infection Prevention and Control (IPC) programme to ensure safe, high-quality care.

Patients with mycetoma often present with chronic open lesions and require repeated surgical interventions and prolonged antimicrobial therapy, increasing the risk of infection transmission and antimicrobial resistance. This manual provides a structured framework for IPC implementation at MRC.



2.Purpose & Scope

Purpose :

To establish a comprehensive IPC system that:

- Reduces HAIs
- Protects patients, staff, and visitors
- Promotes safe clinical and research practices
- Supports antimicrobial stewardship

Scope :

This manual applies to:

- All healthcare workers
- Laboratory personnel
- Support staff
- Students and trainees
- Visitors within MRC facilities

3.Definitions

HAI	Infection acquired during healthcare delivery
Standard Precautions	Basic infection prevention measures are applied to all patients
Transmission-Based Precautions	Additional measures for specific infections
PPE	Personal Protective Equipment
IPC	Infection Prevention and Control

4.IPC Governance Structure

4.1 Infection Prevention and Control Committee (IPCC)

Chair: Director, MRC

Members:

- IPC Unit Head
- Microbiologist
- Surgeon

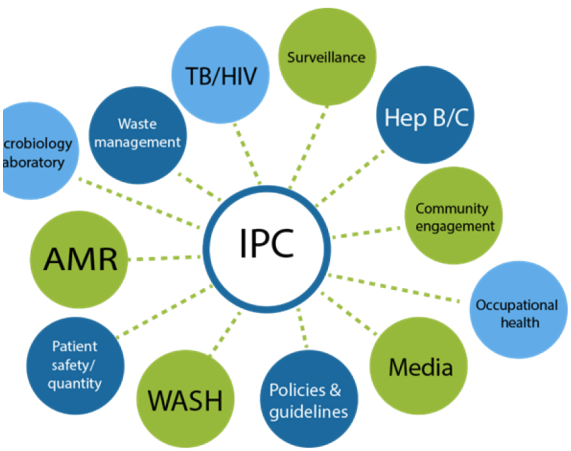
- Pharmacist
- Nursing Representative
- Laboratory Representative
- Public Health Expert

Functions

- Provide strategic oversight
- Approve policies and guidelines
- Review surveillance data
- Support resource allocation

4.2 IPC Unit Structure

- IPC Director
- Infection Control Physician
- Infection Control Nurses
- Microbiologist
- Pharmacist
- Environmental Health Officer
- Data Manager / Surveillance Officer
- IPC Coordinator



5. Standard Precautions

5.1 Hand Hygiene

- Perform hand hygiene at the five key moments:
    1. Before patient contact
    2. Before aseptic procedures
    3. After exposure to body fluids
    4. After patient contact
    5. After contact with patient›s surroundings
- Use:
    - Alcohol-based hand rub (preferred)
    - Soap and water when visibly soiled

5.2 Personal Protective Equipment (PPE)

- Select PPE based on risk assessment:
    - Gloves
    - Gowns
    - Masks
    - Eye protection
- Follow correct donning and doffing procedures

5.3 Safe Injection Practices

- Use sterile, single-use equipment
- Do not recap needles
- Dispose of sharps immediately

5.4 Respiratory Hygiene

- Provide masks for symptomatic patients
- Encourage cough etiquette
- Ensure patient triage

6.Transmission-Based Precautions

6.1 Contact Precautions

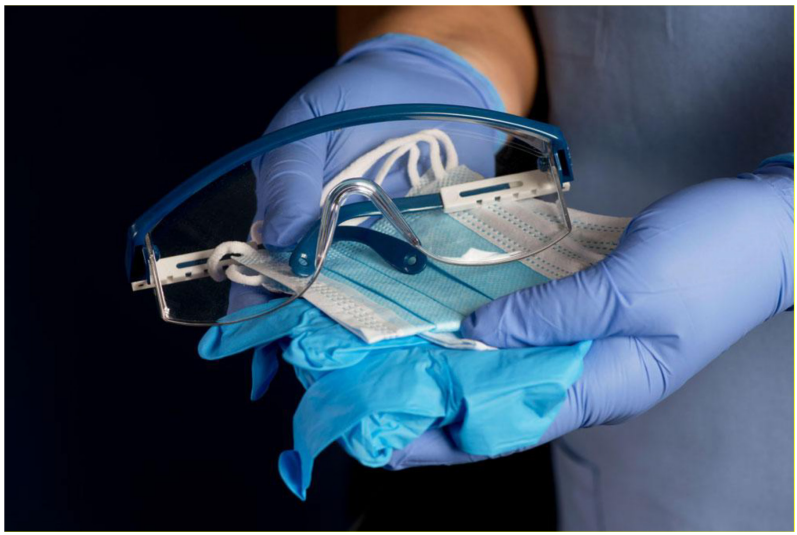
- For wound infections and mycetoma lesions
- Use gloves and gowns
- Dedicate equipment

6.2 Droplet Precautions

- Use surgical masks
- Maintain a safe distance

6.3 Patient Placement

- Isolate when required
- Cohort patients if necessary



7.HAI Surveillance System

Objectives

- Detect infections early
- Monitor trends
- Guide interventions

Procedures

- Use standard case definitions
- Collect data routinely
- Analyse monthly
- Report quarterly

Target Infections

- Surgical site infections
- Wound infections
- Laboratory-confirmed infections

8. Environmental Cleaning and Disinfection

- Establish cleaning schedules
- Use approved disinfectants
- Ensure proper cleaning of:
  - Operating theatres
  - Dressing rooms
  - Laboratories
- Monitor:
  - Water quality
  - Ventilation
  - Waste systems

9.Sterilisation and Disinfection

Classification :

- Critical items
- Semi-critical items
- Non-critical items

Procedures :

- Use autoclaving for critical instruments
- Monitor sterilisation cycles
- Maintain logs
- Store sterile items properly

10. Healthcare Waste Management

Segregation :

- Infectious waste
- Sharps
- General waste

Procedures :

- Use colour-coded bins
- Ensure safe transport and disposal
- Train staff

11. Occupational Health and Safety

- Provide vaccination (e.g., Hepatitis B)
- Implement post-exposure prophylaxis (PEP)
- Report occupational exposures
- Conduct regular health screening

12. Antimicrobial Stewardship

- Develop treatment guidelines
- Monitor antimicrobial use
- Conduct audits
- Promote rational prescribing

13. Training and Capacity Building

- Induction training for new staff
- Regular refresher courses
- Continuous professional development
- Community awareness programmes

14. Outbreak Preparedness and Response

- Develop outbreak response plans
- Establish alert thresholds
- Activate rapid response teams
- Conduct investigations
- Implement control measures

15. Monitoring and Evaluation

Key Indicators

- HAI rates
- Hand hygiene compliance
- PPE adherence
- Antimicrobial use
- Training coverage

Activities

- Conduct audits
- Provide feedback
- Implement corrective actions

16. Documentation and Reporting

- Maintain records of:
  - Surveillance data
  - Training
  - Audits
- Ensure confidentiality
- Report regularly to leadership

17. Integration with Clinical and Research Activities

- Embed IPC in clinical workflows
- Ensure IPC compliance in research
- Include IPC in training programmes
- Collaborate with national and international partners

18. Annexes

Annex 1: Hand Hygiene Audit Tool
Annex 2: PPE Compliance Checklist
Annex 3: HAI Surveillance Forms
Annex 4: Waste Management Guidelines
Annex 5: Outbreak Investigation Template

Approval

This manual is approved and endorsed by the leadership of the Mycetoma Research Centre and is effective as of the date indicated.

Signature: Fahal

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Director, MRC