FAROOQ GENERAL HOSPITAL

Infection Prevention & Control (IPC) SOPs

Standard Operating Procedures for 15-Bed Clinical Facility

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Policy Purpose & Scope

This document outlines strict Infection Prevention and Control (IPC) protocols for Farooq General Hospital. These procedures apply to all medical, nursing, diagnostic, and sanitary staff to eliminate healthcare-associated infections (HAIs), safeguard healthcare workers from occupational exposure, and ensure sterile clinical environments across our 15-bed inpatient unit, operation theater, and outpatient services.

SOP 1: HAND HYGIENE PROTOCOL (WHO STANDARDS)

Hand hygiene is the single most effective measure to prevent cross-contamination and HAIs. All healthcare workers must strictly adhere to the WHO "5 Moments for Hand Hygiene."

A. The WHO 5 Moments

1. **Before patient contact** – To protect the patient against harmful germs carried on hands.
2. **Before clean/aseptic procedures** – To protect the patient against harmful germs, including their own, from entering their body.
3. **After body fluid exposure risk** – To protect healthcare workers and the healthcare environment from harmful patient germs.
4. **After patient contact** – To protect healthcare workers and the hospital environment after touching a patient.
5. **After touching patient surroundings** – After touching any object or furniture in the patient's immediate zone.

B. Technique & Timing

- **Alcohol-Based Hand Rub (ABHR):** Rub hands thoroughly for **20 to 30 seconds** covering all surfaces (palms, back of hands, interdigital spaces, thumbs, fingertips, and wrists). Use when hands are not visibly soiled.
- **Soap and Water Wash:** Wash hands for **40 to 60 seconds** under running clean water using liquid soap. Mandatory when hands are visibly dirty, after using the restroom, or after caring for patients with spore-forming organisms or suspected infectious diarrhea.
- **Nail & Jewelry Policy:** Artificial nails, nail polish, and hand/wrist jewelry (rings, watches) are strictly prohibited for clinical staff in OT, IPD, and procedural zones.

SOP 2: ENVIRONMENTAL SURFACE DISINFECTION

Systematic cleaning and disinfection prevent the survival and transmission of pathogens on environmental surfaces and medical equipment.

- Before & after each surgical case; Deep clean daily

ZONE / AREA	DISINFECTANT AGENT & CONCENTRATION	FREQUENCY	RESPONSIBLE STAFF
High-Touch Clinical Surfaces (Bed rails, IV poles, nurse call buttons, door handles)	0.1% Sodium Hypochlorite (1000 ppm chlorine) or 70% Isopropyl Alcohol	Twice daily and upon patient discharge	Housekeeping / Ward Attendant
Low-Touch General Surfaces (Floors, walls, windows, office desks)	Neutral Detergent followed by 0.05% Sodium Hypochlorite solution	Once daily (Floors); Weekly (Walls/Windows)	Sanitary Staff
Operation Theater & Isolation Units	0.5% Sodium Hypochlorite (5000 ppm) or Quaternary Ammonium Compounds	OT Technician & Housekeeping	

ZONE / AREA	DISINFECTANT AGENT & CONCENTRATION	FREQUENCY	RESPONSIBLE STAFF
Blood & Body Fluid Spills	0.5% Sodium Hypochlorite (5000 ppm chlorine)	Immediately upon spill detection	Trained Housekeeping Staff

Blood & Body Fluid Spill Management Procedure

1. Don heavy-duty utility gloves, plastic apron, surgical mask, and eye protection.
2. Cover the spill completely with absorbent paper towels to contain liquid spread.
3. Pour 0.5% Sodium Hypochlorite solution over the absorbent paper towels and allow a **contact time of 10 minutes**.
4. Remove paper towels and discard directly into a **Yellow Biohazard Bag**. Clean the area with detergent and water.

SOP 3: NEEDLE STICK & SHARPS INJURY MANAGEMENT

Immediate action is mandatory in the event of a percutaneous exposure (needle stick, cut) or mucocutaneous exposure (splash to eyes/mouth) to blood or body fluids.

> **Immediate First-Aid Protocol (First 5 Minutes)**
>
> - **Percutaneous Injury:** Wash the site immediately under running tap water with soap for 3–5 minutes. Allow gentle bleeding. *Do NOT squeeze, rub, or suck the wound. Do NOT use harsh antiseptics like bleach or iodine on open skin.*
> - **Mucous Membrane / Splash:** Flush eyes or mouth immediately with abundant normal saline or water for 10–15 minutes.

Reporting, Evaluation & Post-Exposure Prophylaxis (PEP) Workflow

1. **Immediate Incident Reporting:** Report the exposure to the Duty Medical Officer (DMO) and Infection Control Officer (ICO) within **1 hour**.
2. **Source & Exposed Worker Assessment:** Screen the source patient (if known) and the exposed healthcare worker for Hepatitis B (HBsAg), Hepatitis C (Anti-HCV), and HIV (with informed consent).
3. **PEP Initiation:**
   - **HIV PEP:** If the source is HIV-positive or high-risk, initiate 3-drug PEP antiretroviral regimen within **2 hours** (maximum cutoff 72 hours). Duration: 28 days.
   - **Hepatitis B PEP:** Administer Hepatitis B Immunoglobulin (HBIG) and/or Hepatitis B Vaccine booster within 24 hours based on the worker's baseline antibody status (Anti-HBs level).
4. **Documentation & Follow-Up:** Complete the NSI Register. Conduct mandatory follow-up testing for the exposed staff member at 6 weeks, 3 months, and 6 months post-exposure.

SOP 4: INSTRUMENT REPROCESSING & STERILIZATION

All reusable critical surgical instruments and diagnostic tools must pass through standard Central Sterile Services Department (CSSD) workflows.

Reprocessing Stages

1. **Decontamination & Washing:** Submerge instruments in enzymatic detergent solution immediately after use. Scrub manually with soft brushes under water surface to remove organic bioburden. Rinse thoroughly with purified water.
2. **Inspection & Drying:** Inspect instruments for cleanliness, alignment, and functionality. Dry using lint-free cloths or compressed air.
3. **Packaging:** Pack surgical sets in medical-grade sterilization pouches or double-wrap linen. Insert an internal chemical indicator (Class 5/6 strip) inside every pack and seal properly.
4. **Autoclaving (Moist Heat Sterilization):**
   - **Standard Operational Cycle:** 121°C (250°F) at 15 psi for 30 minutes, OR 134°C (273°F) at 30 psi for 15 minutes.
   - **Drying Cycle:** Minimum 20-minute post-sterilization vacuum drying step.

5. **Sterilization Quality Monitoring:**
    - **Physical Indicators:** Check autoclave digital printout/gauge for temperature, pressure, and exposure time on every load.
    - **Chemical Indicators:** Verify color change on external pouch tape and internal Class 5 integrating indicator.
    - **Biological Indicators (Spore Tests):** Run *Geobacillus stearothermophilus* spore vials **weekly** and with every load containing implantable devices.

SOP 5: OPERATION THEATER DISINFECTION, FUMIGATION & FOGGING

Maintaining sterile air and surface parameters in the OT suite is vital to prevent surgical site infections (SSIs).

A. Decontamination & Fogging Protocol

- **Frequency:** Routine environmental fogging is performed **weekly** or immediately following any infected/septic surgical case.
- **Fumigation/Fogging Agent:** Use hydrogen peroxide (11% w/v with 0.01% silver nitrate solution) applied via an automated ultra-low volume (ULV) cold fogger, OR micro-aerosolized disinfectant solution. Formaldehyde gas fumigation is strictly restricted due to toxicity.
- **Pre-Fogging Steps:** Thoroughly clean all surfaces with detergent and disinfectant. Seal all OT doors, exhaust vents, and AC grilles with heavy masking tape. Turn off forced ventilation units.
- **Execution & Dwell Time:** Run the automated fogger calculated according to OT volume (m^3). Allow a minimum contact/seal time of **4 to 6 hours** (or overnight).
- **Post-Fogging Aeration:** Unseal vents and run the HVAC system/exhaust fans for 30–60 minutes before re-entry. Conduct surface particle and microbiological surveillance prior to clinical use.

B. OT Environmental Microbiological Surveillance

Air sampling using settle plates (SAB/PDA agar plates exposed for 1 hour at 5 strategic points in OT) and surface swab cultures must be performed **monthly** and after any major OT renovation or outbreak.