



<b>Department:</b>	Anesthesia Care		
<b>Document:</b>	Departmental Policy and Procedure		
<b>Title:</b>	Cleaning/Disinfecting of Anesthesia Machine		
<b>Applies To:</b>	All Anesthesia Staff, Anesthesia Technician and Nursing Staff in Operating Room		
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## 1. PURPOSE:

- 1.1 To establish quality standard in disinfecting and cleaning procedure for anesthesia machine to prevent infection transmission to patient.

## 2. DEFINITIONS:

- 2.1 This is the cleaning and disinfection process and manual for anesthesia machine.

## 3. POLICY:

- 3.1 **Anesthesia Technicians** – are responsible for the cleaning and disinfecting anesthesia machines, anesthesia breathing circuits and surfaces and monitoring according to the next procedure.

## 4. PROCEDURE:

### 4.1 The Anesthesia Machine

Although there is no direct contact between anesthesia machine controls and the patient, microorganisms can be transferred between the machine and patient by the healthcare provider.

4.1.1 Cleaning and disinfecting the anesthesia machine.

4.1.2 Pasteurizing or autoclaving of valves.

4.1.3 Disassembling and disinfecting adjustable pressure-limiting valves.

### 4.2 Anesthesia Machine Surfaces and Carts

Clean, then spray or wipe anesthesia machine surfaces and knobs with an appropriate germicide between cases and at the end of each day.

4.2.1 Take protective measures to prevent materials stored on the anesthesia machine from becoming inadvertently contaminated by airborne debris (e.g., blood).

4.2.2 Remove equipment from drawers, clean and disinfect drawers regularly.

4.2.3 Place a clean covering on the top of the anesthesia cart at the beginning of each case.

4.2.4 Wipe small surfaces with 70 percent isopropyl alcohol to reduce bacterial contamination.

4.2.5 Clean carbon dioxide and soda lime absorbers when the absorber is changed and remove debris from the screens.

### 4.3 Anesthesia Breathing System

**Filters Breathing System** – filters are single – use items that are assessed according to their bacterial filtration efficiency (BFE) and viral filtration efficiency (VFE). The efficacy of filtration for bacterial contaminants is higher than for viral particles. Aside from patients with an active Mycobacterium Tuberculosis Infection, no recommendation is made for the routine use of breathing system filters due to inconclusive data demonstrating their efficacy in reducing the risk of patient infection. However, when a patient with a respiratory infection must be given inhalational anesthesia, a filter should be used.

4.3.1 Practitioners may choose to place a high-efficiency filter on the inspiratory limb of the breathing circuit to protect the patient from the anesthesia machine, and to place a high-efficiency filter in

the expiratory limb to protect the anesthesia machine from the patient. • Filters may be interposed between the endotracheal tube and the Y-piece.

4.3.2 Use circuit filters and follow-up with post-anesthesia machine disinfection after caring for patients with known pulmonary infection or trauma.

#### 4.4 Carbon Dioxide Absorbers

4.4.1 Cleaning, and sterilization of carbon dioxide absorbers :

4.4.1.1 Clean canisters when the absorbent is changed and carefully remove debris from the screens.

4.4.1.2 Discard disposable plastic canisters.

4.4.1.3 Bellows, unidirectional valves, and carbon dioxide absorbers should be cleaned and disinfected periodically.

#### 4.5 Circuits Anesthesia

4.5.1 Circuits may be manufactured as either single patient use items or multiple patient use items (provided that a new breathing system filter is placed between the Y-piece and endotracheal tube after sterilization or high level disinfection).

4.5.2 Anesthesia professionals should pay close attention to anesthesia circuit product labelling.

4.5.2.1 At a minimum, provide high-level disinfection for multiple-patient use breathing circuits.

4.5.2.2 The outer surface of the circuit can become easily contaminated when the system is not changed between patients and therefore should be disinfected between each use.

4.5.2.3 End- tidal carbon dioxide tubing should be changed between patients.

4.5.2.4 Following anesthesia care of a patient with pulmonary infection or trauma, disinfection of the internal and respiratory system anesthesia machine components is mandatory.

4.5.3 Heat and Moisture Exchangers: Heat and moisture exchangers alone are not effective in decreasing the transmission of microorganisms to the anesthesia breathing system.

### 5. MATERIALS AND EQUIPMENT:

5.1 The approved cleaning materials from IPC department.

### 6. RESPONSIBILITIES:

6.1 Nurses

6.2 Anesthesia Technician

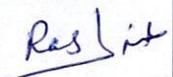
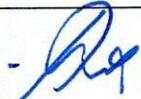
### 7. APPENDICES:

N/A

### 8. REFERENCES:

8.1 American Society of Anesthesiology.

**9. APPROVALS:**

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