

# SOP Template: Ventilator and Life Support Equipment Management

This SOP details the protocols for **ventilator and life support equipment management**, including equipment maintenance, user training, infection control, emergency troubleshooting, routine inspections, calibration procedures, and documentation standards. The goal is to ensure reliable operation and safety of ventilators and life support systems to support critical patient care effectively and minimize risks associated with equipment failure.

## 1. Purpose

To outline standardized procedures for effective management, operation, maintenance, and documentation of ventilator and life support equipment.

## 2. Scope

This SOP applies to all healthcare personnel involved with the use, maintenance, and management of ventilators and life support equipment within the facility.

## 3. Responsibilities

- **Biomedical Engineers:** Maintenance, calibration, and technical troubleshooting.
- **Nurses/Respiratory Therapists:** Daily inspections, basic troubleshooting, patient monitoring.
- **Clinical Staff:** User training, adherence to safety protocols, equipment operation.

## 4. Procedures

### 4.1 Equipment Maintenance

1. Follow manufacturer's schedules for preventive maintenance.
2. Document all maintenance activities in equipment logs.
3. Perform function checks after every maintenance or repair event.

### 4.2 User Training

1. Conduct mandatory initial and annual competency training for all users.
2. Provide hands-on demonstrations, simulation scenarios, and assessments.
3. Retain records of all training sessions and certified users.

### 4.3 Infection Control

1. Disinfect external surfaces after each patient use.
2. Replace disposable components (filters, circuits, masks) as per protocol.
3. Perform deep cleaning between patients as required.

### 4.4 Emergency Troubleshooting

1. Display emergency contacts and troubleshooting flowcharts at each point of use.
2. If malfunction occurs:
  - Ensure patient safety by initiating backup ventilation if needed.
  - Alert biomedical engineering immediately.
3. Log and report incidents according to incident reporting policy.

### 4.5 Routine Inspections & Calibration

1. Perform daily inspections for visible damage, alarms, and supply integrity.
2. Schedule and document periodic calibration using standardized tools.

## 5. Documentation Standards

- Maintain accurate logs for maintenance, inspections, and repairs.
- Record calibration results and user access.

- Store documentation securely as per institutional policies.

## 6. Review and Audit

- Conduct annual SOP review or as needed after major incidents or updates.
- Audit adherence to this SOP at scheduled intervals.

## 7. Records and Forms

Record/Form	Responsible Person	Retention Period
Maintenance Log	Biomedical Engineer	5 years
Training Records	HR/Education Dept.	3 years
Calibration Certificates	Biomedical Engineer	5 years
Incident Reports	Clinical Manager	As per policy

## 8. Related Documents

- Equipment Operational Manuals
- Infection Control Policy
- Incident Reporting SOP
- Staff Training Policy

## 9. Revision History

Date	Version	Description	Author
2024-06-10	1.0	Initial SOP template issued.	Medical Equipment Mgmt Team