

Department of Anesthesia

Title:

Clinical Alarm
Management & Safety

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POLICY:

It is the policy of Medstar Georgetown University Hospital's Department of Anesthesia to ensure proper use of, response to and audibility of clinical alarms.

DEFINITIONS:

As anesthesia professionals, we interact with many monitors, machines, infusion pumps and other equipment; many of these devices have audible and/or visual alarms for life threatening events. A list of clinical equipment capable of generating an alarm is kept in Clinical Engineering and Individual Default Configurations of Anesthesia Machine Workstations are kept in the Department. Individual Anesthesia Medication Library and Default Alarms Parameters on Smart Pumps is kept and maintained by the Pharmacy

PROCEDURE:

I. Training :

It is the policy of the Department of Anesthesia to ensure adequate training and orientation is provided to staff that are directly responsible for using any new equipment or devices or patient monitoring equipment. Human vigilance is emphasized and it reinforces default alarm settings on machines and monitoring equipment.

II. Maintenance:

1. If the alarms and/or anesthesia equipment is non-functional, it is immediately replaced or removed from use.
2. All anesthesia equipments are maintained by Clinical Engineering Department during annual preventive maintenance.
3. Anesthesia Machine Workstations have annual preventive maintenance by the manufacturer in collaboration with the Clinical Engineering Department

III. Alarm System Settings:

Anesthesia Machine Workstation:

1. It is the policy of anesthesia department to comply with default alarms on the anesthesia machine and the alarms are automatically enabled whenever the machine is turned on. Alarms of high priority are set by the manufacturer for apnea, low airway pressure, high pressure, sustained high pressure, sub-atmospheric pressure

and 120s alarm silence countdown timer. “Structured Alarm Settings” for individual parameters give indication of three separate levels of warning (high), caution (medium) or advisory (low). These audio alarms cannot be turned off.

2. Individual Default configurations are set by super users in the Department for both Adult and Pediatrics, and for different ventilator modes, and for alarm settings for FiO₂, O₂, CO₂, TV, MV, anesthetic agents and for Volume-Apnea. A copy of Individual Default Configuration is maintained in the Department. There are both audio and visual alarms for these parameters, however the settings only allow for audio to be turned off but NOT visual.
3. Anesthesia providers should adjust Alarm Settings as appropriate for a particular patient prior to starting an anesthetic. The provider should not indefinitely silence or disable alarms on any device.

Anesthesia Monitoring Systems:

1. Default Parameters are set by the super users in the Department for both Adult and Pediatric Settings and Alarms, and for HR, SPO₂, NIBP, ST segment analysis, arrhythmias amongst others. The parameters are enabled whenever the monitor is turned on. The alarms are preset for Escalating, High or Medium tones.
2. The audible Pulse-OX Tone Conveys Vital Information of pulse rate, pulse regularity, and changes in SpO₂ and should be enabled at all times.
3. The provider should not indefinitely silence or disable alarms on any device.

Infusion Pumps:

1. Smart infusion pumps have factory default alarm settings that are always enabled and maintained by annual preventive maintenance inspections.
2. Super users in the Department have set individual Anesthesia Medication library and default alarm parameters on the smart pumps.
3. Anesthesia Library on the Smart Pumps is maintained by Pharmacy.

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