ECG Monitoring

ECG monitoring = a waveform on the screen, shows how the electrical conduction through the heart creates a certain type of rhythm

- Can be reflected in different ways (depends on how the anesthetist/care provider places the electrode patches on the patient's chest)
- Detects aberrant or abnormal rhythms on the screen. May require advance knowledge of such rhythms in order to physically treat them.
- Both 3 and 5 lead ECG monitor cables and functions available on the PRITI5.

How to: To choose which leads to monitor, press or just touch the ECG waveform. Several options to change the reading on the screen will appear. Choose the option for *change lead* and then choose which leads to monitor in.

Background=Lead II and V are common with a 5 lead system (3 and 5 leads refer to the number of electrodes paced on the patient and the different views the monitor 'picks' up from the heart's electrical conduction), but choose best for patient & *visualization* (ask consultants if this term is used by care providers) of the rhythm.

Choose the option for *change size* and then either increase or decrease the size of the waveform. Choose the color option to visualize the waveform on the monitor. Several choices available. Select the option for ST segment monitoring, if desired and appropriate for the case and patient type.

Other selections print rhythm strips and display delayed recordings of changes to the rhythm.

IMPORTANT Alarm values/volumes come preset in the PRITI5.
To change default alarms and/or volumes: touch the screen display either on the individual waveform/readout or the right lower corner to bring up the pop-up list.

Non Invasive Blood Pressure Monitoring (NIBP)
Non-invasive = external device. NIBP measures blood pressure with a cuff on the patient's arm or leg.

- Normal BP 120/80 for adult sized, (top number is systolic pressure & bottom number is diastolic)
- Pediatric patients = lower blood pressures & require different sized cuffs for accurate measurement.
- Anesthesia delivery can alter blood pressure significantly: emphasize the importance of a proper measurement

How to: Select appropriate BP cuff size for the patient & attach the cable to the cuff. Touch NIBP selection on the screen & choose: manual or automatic readings. Select

the NIBP selection on the screen & set the time limits to activate the cuff.

Press start and reading will appear within 15 seconds on the screen. If using the cuff as a tourniquet, activate the venous stasis button under the NIBP selection using the touch screen to get there. Don't forget to deactivate the cuff when completed with the task

Arterial Line Monitoring
= form of monitoring BP:

- Anesthesia person inserts IV-like catheter into the radial artery (wrist?) & attaches it to a special tubing and cable system that produces a specific picture on the monitor screen = more accurate reading of the BP.
- Emphasize remembering to recalibrate the system to each patient when attaching line to the patient. Arterial line, Central Venous, and Pulmonary Artery waveforms: all can be interchanged on the screen depending on the view required for accurate monitoring of the specific patients.

How to:
Attach appropriate module & cable to the monitoring system. Arterial line waveform section will appear on monitor screen with placement of module. Select the *arterial line* (ART) by touch screen to set label for the screen. Options include ALINE, ABP and ART. Select the color choice & size of the waveform using touch screen. Calibrate or "zero" the waveform using hospital system procedures & opening the line to air while touching the "zero" button on the screen. The monitor verifies the calibration with an audio tone and message on screen below the waveform.

Oximeter Monitoring
= measures oxygen delivery at the capillary level & depicted by number on the screen from 0-100%.

- Normal readings = 95-100%, but can be lower if patient has pulmonary disease or requires O2
- Measured on an extremity (finger, toe, ear). Affected by low perfusion & temperature of extremity.
- Oximeter one of the most important monitors in anesthesia because it gives advance warning regarding changes in the patient's oxygen levels.

How to:

- Attach oximeter device to patient. Several different types of attachments available, including finger, toe, nasal, ear, forehead and wrist depending on the needs of the patient. Also, different sizes are available for all patients.
- Visualize the waveform. Perfusion capability = a number that appears on the screen to tell the anesthesia provider how well the device will read the patient's oxygen values based on the perfusion of the extremity. PC through the oximeter will be noted on the screen. Identified through numerical reading. A

PC of 1 = poor perfusion, 5 = excellent. The better the perfusion reading, the more accurate the signal and number. Temperature typically doesn't affect our oximeters. But we recommend that if the reading is low, try an alternate attachment.

- If anesthetist needs to take the oximeter with the patient to another area, just press the button at the top of the monitor & the device will pop out of the module for transport use.

Anesthesia Gas Analyzer

Measures the quantity and type of gases being delivered to the patient—both inhaled and exhaled.

How to:

- Attach gas analyzing cables to monitor and patient
- Machine will then calibrate and self analyze the agent being used within 15 seconds of activation
- When changing anesthetic agents during a case, analyzer will detect the changes within a 20 second period—emphasize do not touch the screen while the analyzer detects the agent.
- Select the gas analyzer waveform on the touch screen to set the color choice & waveform display height for proper visualization.