RIGEL MEDICAL
GMC-INSTRUMENTS GROUP

Why perform patient simulations?

Vital signs are crucial in communicating a patient's condition and severity of a disease to health care clinicians. Patient monitors observe these vital signs continuously and provide warnings in the case of a serious event. It's important any anomalous vital sign values alert clinicians, and to some extent, provide direct physiological input data to control connected life support devices.
A surge in patient flow and reduction in clinicians has increased the demand for patient monitors worldwide; which has led to an increase in the overall number of performance testing being implemented.
Patient simulation is a key part of performance test procedures, ensuring that patient monitoring devices are measuring correctly and accurately, by conforming to the manufacturer's specifications and international standards.

Why do we test each parameter? What's its significance?

NIBP (Blood pressure measurement)

- To determine transducer linearity and static pressure is within specification.
- Leaks can occur within the cuff or pressure system so leakage tests required.
- An overpressure test to ensure the pop off valve safeguards against a build-up of pressure.

IBP (Blood pressure measurement)

- To test pressure transducer performance for its linearity
- Dynamic pressure testing for blood pressure variations

(hypotension/hypertension)

SpO2 (Oxygen saturation measurement)

- Testing for faulty probes. i.e LED degradation, contaminated lenses or damage to wiring
- Ensuring accurate calibration of SpO2 monitor
- Verifying the audible alarms

ECG (Heart rate measurement)

- Linearity test for heart rate amplitude and frequency
- Determining correct arrhythmia recognition
- Gain change sensitivity test

Temperature

- Linearity testing of temperature measurement
- Ensuring the correct temperature sensor is selected (YSI400/YSI700)

Respiration

- Accurate detection of sleep apnoea and verifying alarms
- Linearity testing of respiration rates

If you require more help, please contact us at https://www.seaward.com/gb/enquiry/.