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Surgi-View

A SPECIALIST NEWSLETTER ON SURGICAL AND OPERATING ROOM TOPICS FOR HEALTHCARE PROFESSIONALS

Risk Reduction In Minimally-Invasive Surgery: How Does Integration Help

MIS (minimally-invasive surgery) is a surgical technique that is growing in leaps and bounds. The goal of MIS is to perform surgical procedures with the least amount of injury to the body, to reduce pain and complications and to decrease the time it takes for the patient to recover from surgery.

Today we perform complex MIS procedures that require complex set ups, intricate instruments, multiple monitors, information technology and telecommunications. Minimally-invasive surgery can also include robotics and interventional radiology, and may be performed in general or hybrid operating rooms (OR). A number of hospitals around the world are upgrading their ORs to be state-of-the-art facilities enabling MIS and drawing surgeons and patients to their hospitals. These upgrades are being done because of the growth in number of MIS procedures being performed and the demand for high-definition technology. It is estimated that more than 60% of the surgical procedures performed in the USA are performed using MIS.

The AORN has made a number of best practice recommendations in order to avoid - or reduce - the risks associated with new technologies in the OR, and one of the most important recommendations is that it is important that the peri-operative practitioner plays a role in the design and set up of a MIS theatre. The OR practitioner will take into account a number of potential risks that need to be avoided.

Slips and Falls

In order to minimise the risk of tripping or falling, it is important to maximise the view of the floor and equipment, ensure adequate space and to control fluid or spills on the floor. Having equipment on hydraulic booms is one way to minimise the amount of equipment on the floor.

Lighting

MIS is performed in a low lightening environment to better visualise the operative site on the monitor. The room lighting should, however, be sufficient to allow visualisation of the floor to prevent trips and falls. Some ORs use blue or green ambient lighting to reduce the glare for the staff viewing the monitors, yet allow enough light to see the floor.

Room Access and Ergonomics

It is important to work in an OR that is big enough to hold all the required equipment for MIS. A suggestion is to standardise the workflow. For example placing equipment in the same place of the OR for each procedure (depending on the surgical discipline). If the room is too small, it will increase the chances of contaminating the sterile field. If the room is too large the electrical cords on the equipment may not be long enough to reach the plug points. Using ceiling suspended equipment is ideal in an MIS operating room.

Equipment and Electrical Safety

Place equipment near the sterile field in a manner that there is no stress on the cords, and ensure that the cords don't block the path of the traffic. Ensure all cords are free of knots, kinks or bends that can cause current accumulation or over heating - a potential fire hazard. Remove plugs from the socket by grabbing the plug itself not the cord. Remove and repair any equipment with frayed cords. Protect all electrical cords from fluid spills.

cont. page3

Integration For The Most Demanding Surgical Environments

STERIS and SafMed recognise the challenges facing today's ORs:

- Achieving efficient workflow through tools that are easy to use
- Keeping a focus on the patient to deliver excellent care instead of diagnosing OR equipment issues
- Connecting the devices, systems and teams needed to achieve better outcomes
- Increasing procedural turnaround and the hospital's bottom line

Through our OR Integration Systems, we focus on supporting patients and hospital teams alike, now and into the future, through easy-to-use and scalable technology that supports the operative workflow.

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Fire Prevention

Fibre optic cables are a potential fire hazard. When it is not in use, one should turn off the light source to which the fibre optic cable is attached. Ensure fibre optic cables are long enough. Ensure all flammable skin cleaning/prep solutions have dried before draping the patient. Turn the light source off when disconnecting the fibre optic cable.

Hybrid OR

Both surgery and interventional radiology are performed in hybrid operating rooms. The design of the hybrid theatre is complex and must take into account radiation safety, infection prevention and enough space for the performance of surgical procedures.

OR Integration

OR integration can be described as centralised control of audio-visual equipment and information. The best form of OR integration is one that has an open architecture - meaning it can work with any make of camera or source of data. Some describe different levels of OR integration and maintain that it begins with ceiling-mounted equipment. OR integration provides an infrastructure through which a variety of signals and communications will be routed. Integration systems can also facilitate the routing of images and data from the OR to other areas of the hospital such as a conference room, for example. OR integration plays an important role in facilitating quicker theatre turnover.

References:

Akridge J. 2005. *Integrated operating rooms up the ante.* Health Purchasing News. August.

Morton P. 2012. *Implementing AORN Recommended Practices for MIS.* AORN. 96 (4) 378-395

Hospital-Acquired Pressure Ulcers: What Happens In The Operating Room?

Hospital-acquired pressure ulcers are a major concern for patients, doctors, nurses and hospital management. It is estimated that between 0.4% to 38% of patients in acute care hospitals in the USA develop hospital-acquired pressure ulcers. Global statistics of pressure ulcers are easily available but South African statistics are much harder to find. In one report, it was estimated that R2-million would be spent per year on pressure ulcers in the Cape Province. It was also noted that 7.6% of patients with spinal cord injury in SA develop pressure ulcer complications.

The term pressure injury is more inclusive and incorporates the pressure damage that a surgical patient may develop post-operatively. This includes damaged nerves, deep vein thrombosis or a pressure ulcer. A pressure ulcer, per say, is defined as 'localised injury to the skin or underlying tissue, usually over a bony prominence as a result of pressure, or pressure in combination with sheer'.

In the Operating Room (OR)

There is an increase in the number of pressure ulcers or pressure injuries sustained peri-operatively. There has been great focus in the past on hospital-acquired pressure injuries, but less focus on those acquired in the OR. Recent research, however, indicates that the majority of pressure ulcers begin in the OR. Pressure ulcers may not develop until two to four days post-operatively, so the incidents and statistics regarding OR-acquired pressure ulcers are not always accurate. The National Pressure Ulcer Advisory Panel estimates that between 5% and 53.4% of peri-operative patients develop a pressure ulcer.

Pressure ulcers are more difficult to prevent and treat in developing countries where risk factors such as poverty, limited activity and malnutrition are high. Pressure ulcer rates can be decreased with good nursing care, improved pressure part support accessories, and education.

Patient Positioning in the OR

When positioning a patient for surgery, a number of factors need to be considered including the prevention of pressure injuries.

- What is the patients overall condition?
- How long will the procedure last?
- What techniques will be used during the procedure (C-Arm/X-Ray for example)?
- How much exposure of the operative site is required?

While the patient is on the table or being moved and positioned, four external factors can cause injury, including:

- Pressure
- Friction
- Sheer
- Maceration

Operating tables are designed with care in order meet the needs of safe anatomical patient positioning. A general operating table can be adjusted for height and length and can be tilted from side to side as required. These days the design of general operating tables makes them versatile enough for most surgical procedures. However, care must be taken when positioning patients as the incorrect positioning could compromise the patients' skin integrity, lead to the formation of pressure ulcers and could cause neuromuscular damage.

References:

Fawcet DL. 2016. *New collaboration for pressure injury prevention.* AORN, 104, 4 P17

Giaquinto-Cilliers M, Kotze J. 2014. *Pressure ulcers: surgical intervention.* Wound Healing Southern Africa, 7(2) 45-52

Interoperative patient positioning: its more than just comfort. STERIS study guide 02

Zakrasek EC , Creasey G & Crew JD. 2015. *Pressure ulcers in people with spinal cord injury in developing nations.* Spinal Cord, 53, 7–13

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A superior operating table is the foundation for better patient outcomes. Versatile, easy-to-use and built for today's procedures, STERIS's wide range of surgical tables, exam tables, and orthopedic tables provide a solution for every operating room and budget.

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