**Fire Prevention Assessment:**

A fire prevention assessment will be completed by the RN circulator prior to the procedure.

The results of the fire assessment will be shared with all members of the surgical team during the “time out” or other facility designated time.

**The following is a list of interventions that may be completed for each of the questions in the Fire Prevention Tool. The interventions to be performed are based on the results of the assessment; not all interventions are required to be performed.**

1. **Is an alcohol-based skin antiseptic or other flammable solution being used preoperatively?**

**I**f No, move on to question B.

If Yes, complete the interventions below as applicable, and then move on to question B.

* Review the applicable safety data sheet (SDS) for the skin antiseptic being used to determine the flammable or combustible rating. If not flammable, move on to B.
* Use reusable or disposable sterile towels to absorb drips and excess solution during application.
* Remove materials that are saturated with the skin antiseptic agent before draping the patient.
* Wick excess solution with a sterile towel to help dry the surgical prep area completely.
* Allow flammable skin antiseptics to dry completely and fumes to dissipate before surgical drapes are applied and before using a potential ignition source (eg, electrosurgical unit [ESU], laser).
1. **Is the operative or other invasive procedure being performed above the xiphoid process or in the oropharynx?**

If No, move on to question C.

If Yes, complete the interventions below as applicable, and then move on to question C.

* Cover the head and facial hair near the surgical site with water-soluble gel.
* Use an adhesive incise drape between the surgical site and the oxygen source.
* Use a laryngeal mask airway or an endotracheal tube when the patient requires supplementary oxygen greater than 30%, unless using the tube is contraindicated by the procedure.
* Inflate the endotracheal tube cuff with tinted solutions (eg, methylene blue) during surgical procedures involving the airway.
* Pack wet radiopaque sponges around the back of the patient’s throat during surgical procedures involving the airway.
* Evacuate accumulated anesthetic gas using a metal suction cannula before an ignition source is used in or near an oxygen-enriched environment.
* Evacuate surgical smoke in small or enclosed spaces (eg, back of the throat) when using electrosurgery or a laser near the endotracheal tube.
* Suction the oropharynx deeply before using an ignition source if oxygen is used.
* Check the anesthesia circuits for possible leaks.
1. **Is open oxygen or nitrous oxide being administered?**

If No, move on to question D.

If Yes, complete the interventions below as applicable, and then move on to question D.

* Verify that the anesthesia circuit is free of leaks.
* The surgeon should notify the anesthesia professional prior to using an ignition source in the area of the face, head, or neck.
* Use the lowest possible concentration of oxygen that provides adequate patient oxygen saturation.
* The anesthesia professional should stop or reduce the delivery of supplemental oxygen to the minimum required to avoid hypoxia for 1 minute before the use of electrosurgery; battery-powered, hand-held cautery units; or lasers for head, neck, or upper chest procedures.
* The anesthesia professional should stop or reduce the delivery of nitrous oxide for 1 minute before the use of electrosurgery; battery-powered, hand-held cautery units; or lasers for head, neck, or upper chest procedures.
* The anesthesia professional should inform the surgeon when it is okay to activate the ignition source.
* The anesthesia professional should evacuate accumulated anesthetic gas before an ignition source is used in or near an oxygen-enriched environment.
* Place drapes, including warming blankets with attached head drapes, over the patient’s head in a manner that allows the oxygen to flow freely and not accumulate under the drapes.
* Deliver 5 to 10 L/minute of medical air under the drapes to flush out excess oxygen via a second delivery system.
* Turn off the flow of oxygen at the end of each procedure.
1. **Is an ESU, laser, or fiber-optic light being used?**

If No, move on to question E.

If Yes, complete the interventions below as applicable, and then move on to question E.

***Interventions when using an ESU:***

* Place the ESU in a location that does not put stress on the electrical cord.
* Keep the electrical cord dry and free of kinks, knots, and bends.
* Inspect the ESU cord before use, and do not use it if there is any evidence of breaks, nicks, or cracks in the outer insulation coating.
* Keep the active electrode cord free of kinks and coils during use.
* Only the person controlling the active electrode should activate the ESU.
* Use the lowest possible power setting for the ESU.
* Store the active electrode in a clean, dry, non-conductive safety holster when it is not in use.
* Keep surgical drapes or linens away from the activated ESU.
* Moisten drapes (if absorbent), towels, and sponges used near the active electrode tip.
* Do not use an ignition source to enter the bowel or the trachea.
* Keep the ESU active electrode away from oxygen, nitrous oxide, or combustible anesthetic gas sources if possible.
* Do not activate the active electrode in the presence of flammable agents until the agents are dry and vapors have dissipated (eg, alcohol-based skin antiseptics, tinctures, de-fatting agents, collodion, petroleum-based lubricants, phenol, aerosol adhesives, uncured methyl methacrylate).
* Keep the active electrode tip clean.
* Use active electrode tips according to the manufacturer’s instructions.
* Use only active electrodes or return electrodes that are compatible with the ESU.
* Seat the active electrode tip securely into the electrosurgical hand piece.
* Do not alter the active electrode tip (eg, by bending, by using insulation sheaths made from flammable materials such as rubber catheters).
* Activate the active electrode only when it is in close proximity to the target tissue and away from other metal objects that could conduct heat or cause arcing.
* Inspect minimally invasive electrosurgical instruments for impaired insulation and remove them from service if the insulation is not intact.
* Use cut or blend settings instead of coagulation when possible.
* Apply the protective cap to the hand held electrocautery device.
* Remove the active electrode tip from the electrosurgical hand piece before discarding it.
* Remove the batteries or disable the cautery tip before disposing of battery-powered, hand-held cautery units.
* Use according to the manufacturer’s instructions for use and applicable professional guidelines.
* Use water-soluble lubricants (eg, eye lubricant) near the surgical site.

***Interventions when using a laser:***

* Place the laser in a location that does not put stress on the electrical cord.
* Keep the electrical cord dry and free of kinks, knots, and bends.
* Inspect the laser cord before use, and do not use it if there is any evidence of breaks, nicks, or cracks in the outer insulation coating.
* Only the person controlling the laser beam should activate the laser.
* Do not activate the laser in the presence of flammable agents until the solutions are dry and vapors have dissipated (eg, alcohol-based skin prep antiseptics, tinctures, de-fatting agents, collodion, petroleum-based lubricants, phenol, aerosol adhesives, uncured methyl methacrylate).
* Place the laser in standby mode when it is not in active use.
* Use a laser-resistant endotracheal tube during upper airway procedures.
* Place wet sponges around the endotracheal tube cuff if the laser is being operated in close proximity to the endotracheal tube.
* Fill the endotracheal tube cuff with tinted solutions (eg, methylene blue) during laser procedures involving the patient’s airway or aerodigestive tract.
* Keep moist sponges, towels, and drapes around the surgical site for all laser procedures.
* Keep wet towels and saline on the sterile field during all laser procedures.
* Verify that water or saline and the appropriate type of fire extinguisher are immediately available before using the laser.
* During perineal surgery, use moistened radiopaque sponges to cover or pack the anus.
* Use the laser according to the manufacturer’s instructions for use and applicable professional guidelines.
* Use water-soluble lubricants (eg, eye lubricant) near the surgical site.

***Interventions when using a fiber-optic light:***

* Place the light source in standby mode or turn it off when the cable is not in use.
* Inspect light cables before use and remove them from service if broken light bundles are visible.
* Connect all fiber-optic light cables before activating the light source.
* Place the light source on standby when disconnecting fiber-optic light cables.
* Secure the working end (ie, the end that is inserted into the body) of the endoscope or cord on a moist towel or away from any drapes, sponges, or other flammable materials.
* Use the fiber-optic light according to the manufacturer’s instructions for use and applicable professional guidelines.

**E: Are there other possible contributors?**

If No, move to Report.

If Yes, complete the interventions below as applicable, and then move on to Report.

* Select defibrillator paddles that are the appropriate size for the patient.
* Use only manufacturer-recommended lubricants for defibrillator paddles and pads.
* Use appropriate defibrillator paddle placement to allow optimal skin contact.
* Slowly drip saline on a moving drill, burr, or saw blade.
* Place drills or saws on the Mayo stand or back table when they are not in use.
* Use equipment according to the manufacturer’s instructions for use and applicable professional guidelines.

**Report:**

* **Report to the perioperative team the results of the fire prevention assessment and discuss the interventions that should be performed to prevent a fire.**

**References:**

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