

UF Health Jacksonville Perioperative Evidence Based Practice COVID-19 Reactive Care Model

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Background

UF Health Jacksonville Level One Trauma Academic Medical Center Perioperative Team implemented evidence based strategies in response to the COVID-19 pandemic to mitigate risk of exposure to caregivers while maintaining the highest standard of perioperative practice. The related risk of COVID-19 to healthcare workers is not well known as the incidence of community vs. work acquired exposure is difficult to determine. COVID-19 virus exists in both aerosol and droplet form, therefore, the risk of the exposure in the perioperative environment is high due to repeated exposure to Upper Aero Gastrointestinal and High Risk Aerosol Generating Procedures (AGP).

Objectives of project

The team of professionals developed a proprietary reactive COVID-19 model (PRMC) with common coded language to convey critical patient information. This training emphasized viral pathophysiology, basic principles of airborne and droplet precautions, personal protective equipment, as well as pre procedure to post procedure environmental controls. A specialty team was chosen to represent all phases of perioperative care to actualize COVID-19 PRMC implementation. In addition, a PRMC team checklist, roles and responsibilities grid, and a smart phone application were utilized to assist with best practice compliance. The model implementation allows for nursing to practice in a reactive manner without direct orders from the provider.

PPE for COVID-19+/PUI/AGP: N95 mask, water impermeable gown, gloves (double glove if scrubbed in), face shield-goggles/ eye protection (personal eye glasses are not acceptable), head cover, and shoe covers

COVID-19 Cart
Housed in hallway near anesthesia work room. **Supplies:** Zip ties, large plastic bags, small plastic bags, plastic wrap, isolation gowns, COVID-19 resources

UF Health Perioperative COVID-19 Common Coded Language

Used to communicate critical decision making points in the care of the COVID-19+ patient and PUI. Streamline for process decisions, reduce risk of transmission, and reduces communication errors and omissions throughout the phases of care.

Pre Procedure Decision Intubation Code:

- P1: Patient is currently intubated, or will be intubated on his/her assigned unit
P2: Patient will be intubated in a negative pressure room outside of the OR (Location TBD)
P3: Patient will be intubated in assigned OR

Operating Room Prep Code:

- A: High-risk Upper Aero-Digestive Procedure, Equipment Risk, High-risk Aerosol Generating Procedure (OR prep optional)
C: COVID-19+ or PUI (OR prep required per Surgical Chairs)

Patient Recovery Code:

- R1: Patient recovered in OR (PACU Assist or Anesthesia Team)
R2: Patient is transferred intubated or extubated to receiving unit after Anesthesia Team deems ready
*Patients who are extubated are transferred to receiving unit with airborne and droplet precautions from any location.

Best Practice Alert: COVID-19+ and PUI should be recovered in OR to minimize exposure. Airway complications in the PACU isolation room could potentially expose staff, patients, visitors, and equipment

Post Procedure Environmental Care (Cleaning, Disinfection, and UV)

1. Bag all procedural and anesthesia garbage including plastic used to wrap/cover high touch areas
2. Tie bags closed
3. Instruments are gathered in case cart and sprayed with enzymatic
4. Leave procedure room for specified amount of time to achieve 99.9% efficiency (complete air exchange). OR-21 min. Procedural areas-if 15 air exchanges per hour allow 28 min
5. After appropriate air exchange staff may enter the room to clean/disinfect. PPE-gown, mask (may use N95), and gloves
6. Remove closed garbage
7. Use CDC approved environmental cleaning agent, pay close attention to contact time for the product used
8. Call for UV treatment of procedure room after environmental terminal cleaning complete



Process of Implementation

To evaluate the success of the PRMC implementation after formal didactic, the perioperative nursing leadership team audited perioperative staff related to model compliance, gave in the moment feedback, facilitated case debriefing, and surveyed pre and post knowledge acquisition from simulation and drill scenarios. Post training evaluation indicated an 83% improved knowledge base for care of the COVID-19 patient.

Statement of Success

A minimum of 136 known COVID-19+ and 550 person under investigation (PUI) patients have been cared for utilizing the PRMC since April 15, 2020. **To date, no positive conversion from exposure** has occurred to any perioperative staff including Registered Nurses (RNs), Surgical Technologists, Environmental Services Associates, Preoperative RNs and Post Anesthesia Care Unit (PACU) RNs since model implementation.

Implications for practice

The PRMC is reproducible for containment of high risk infectious disease processes. The PRMC has been replicated within the UF Health Jacksonville procedural areas. Use of adult learning theory has translated to core practice changes, establishing competency standards, communication tools, nurse led infection control process, enhanced critical thinking and adaptation at the point of care.