YOU HAVE BEEN DEPLOYED TO A COVID UNIT, NOW WHAT ?

Since late March 2020, areas facing rising volumes of COVID-19 related admissions such as New York, have predicted major shortages in medical staff to help manage COVID patients. This impending shortage during the anticipated COVID surge has triggered state-wide calls for qualified health and related professionals to increase hospital capacity to care for patients. A State Disaster Emergency has been declared and executive orders have been issued waiving numerous regulatory requirements to enable hospitals and clinicians to promptly care for the massive influx of patients. As a result, Health care workers volunteers from all over the United states are currently assisting in the care of COVID patients. Meanwhile, surgical departments have been preparing by organizing and training surgical teams for deployment which was initiated at a number of hospitals 2 weeks ago. Surgical teams have been sent to increase front-line staffing of units caring for COVID patients including the emergency department, ICU, step down units and medical floors. Surgical departments have maintained a core of surgeons to cover surgical consults, inpatient and outpatient emergencies.

Where will I (most likely) be deployed

The majority of surgical teams thus far have been deployed in Emergency Departments, ICU, step-down units and medical floors. Deployments has preferentially occurred to smaller hospitals affiliates that have become overwhelmed with COVID patient flow and become short-staffed due to a rising number of healthcare workers on quarantine or recovering at home from COVID infection. While some surgeons have been deployed by themselves, many are part of a surgical team that has included surgical residents, fellows, physician assistants, medical assistants and nurses or nurse practitioners. Larger institutions with a higher number of COVID patients in ICU's have asked surgical and critical care teams to organize specialized services on call 24 hours per day such line services (central lines), tracheostomy services, PD catheter service (in renal failure patients) and proning/supine rolling teams.

How should I prepare myself and my team for deployment?

In preparation for deployment, surgical teams are receiving training ranging from online didactics on proper use of PPE, fundamentals of ICU care, ventilator management, and treatment of COVID-19 patients. Most institutions have incorporated quick access to COVID-19 specific training resources on their website with links to training modules and other didactic materials. Pre-deployment training should incorporate

-N95 mask fit testing

-Training on essential PPE when caring for COVID-19 patients including instructional videos on how to donn and doff PPE

-Easily accessible digital access to updated institutional protocols and algorithms on the management of COVID-19 patients. Specific protocols on

-step-up approach for ventilatory support in hypoxic patients and algorithm for when to escalate to intubation (NC > non-rebreather face mask > high-flow nasal cannula > BIPAP > intubation)

-ventilator management (ED, ICU) and maneuvers to improve respiratory mechanics (proning, PEEP)

-COVID-19 order sets and interpretation of inflammatory marker levels and QTc interval

-treatment algorithms based on severity of COVID-19 (Chloroquine, antibiotics, anticoagulants, anti-IL6 agents, steroids)

-Names and contact information (cell phone or pagers) of unit supervisors and team leaders, respiratory therapists on call, transport, medical admitting, consult services (ID, cardiology, renal and GI), pulmonary critical care staff on call

How often will I (and should I) be deployed

The frequency and duration of deployment varies across institution and is usually based on site needs. The majority of surgical teams deployed have been asked to work 8 to 12 hour shifts, 3 to 4 days per week. It is essential that deployment schedules minimize the risk of extreme fatigue and burnout, particularly among the staff with the least training and experience with critical care management. In the context of repeated high-risk exposure to COVID-19 patients, burnout of the staff can increase the risk of contamination (decreased attention to proper use of PPE during high-risk exposures) and negatively impact team performance in the care of critically ill patients.

What task should I be expected to perform during my deployment?

It is helpful for the team being deployed to have some understanding of the anticipated needs and expectation of their assigned unit. This will greatly reduce the stress and anxiety of working in an unfamiliar environment. When possible, contact the team that you are replacing to gain information on

-anticipated tasks that you will be expected to perform
-typical day or night workflow of the team/unit that you are joining
-access to and status of critical supplies (surgical scrubs, PPE, pocket O2 sats monitors, etc)
-nurse to patient ratio
-Method used for patient signout (EMR signout list, verbal signout etc)

COVID ICU, SDU, medical floors

Most units (ICU, SDU, medical floors) will need "extra sets of hands" to help manage the daily work load of COVID patients (rounding, notes, orders, checking labs and imaging, calling consults, admission, transfer or discharges, communications with family, bedside procedures). While some environments (ICU, SDU) are more likely to have clear roles assigned to the surgical teams, there may be less clarity of the role of surgical teams on other units. Assigned tasks may differ significantly between day and night shifts, and it is essential for the well-functioning of the teams for every member of the surgical team deployed to be flexible and to make themselves available. Most of the tasks delegated to the surgical teams are "intern-level" activities, and the nurses of often in need of assistance. It is important to remember that medical teams, hospitalists, intensivists and critical care teams are very appreciative for the assistance provided by surgical teams and volunteers coming to help during the COVID crisis.

ED

The least predictable environment for deployment is the ED, particularly ED of smaller hospitals where the ED staff has been overwhelmed with 2-4 time increase in volume of patients. Surgical teams should be prepared to be flexible and assist the ED staff with any tasks that can facilitate triage and management of COVID-19 patients, in particular with the management of intubated patients awaiting transfer to the ICU. Tasks will range from coordinating and expediting transfer of patients to other units, monitoring oxygenation and the rest of vital signs, adjusting ventilator settings accordingly, titrating drips (propofol and vasopressors), performing procedures (NGT, chest tube, Foley, central line placement), transport to the ICU or radiology, calling patients' families and obtaining DNR orders. In addition, co-existing medical conditions may require urgent treatment need urgent management (hyperkalemia, DKA). However, nursing shortages are common in the ED environment, and it is not uncommon for surgeons to be called upon to assist with nursing tasks such as cleaning patients, drawing blood, monitoring vital signs, hanging drips, placing IV's etc.

Other useful information

Currently deployed surgical teams have provided some tips and tricks to improve communications:

-create a team list on whatsApp for easy communications among team members

-designate one member of the team every day to call patient families after rounds to provide updates
-bring a "team backpack" with supplemental PPE in the event of shortages
-In areas where you are expected to stay in full PPE all day, bring marking pens to write your name, and any critical information on gowns/scrubs
-make sure the nurses know how to find/reach you promptly
-anticipate that some SDUs may not have telemetry units or centralized O2 sat monitoring of patients. Teams should be prepared to organize a schedule for frequent checks to supplement nursing evaluations.

Useful Guidelines, Protocols, and Recommendations*

GUIDELINES

CDC Clinical care -Summary of clinical presentation, course and treatment of COVID-19 infection [1]
Disposition of COVID-19 patients [2]
Guidance on infection control [3]
Strategies to conserve PPE [4]

DoD Department of Defense -COVID-19 practice management guide [5]

WHO Clinical Management of acute COVID-19 respiratory infection [6]

UK ICS UK intensive care Society -Clinical Guidance (incl airway management and critical care) [7]

SSCM Society of Critical Care Medicine -Management of critically ill adults with COVID-19 [8]

IDSA Infectious Diseases Society of America guidelines on the treatment of COVID-19 [9]

PROTOCOLS

Brigham and Women's COVID-19 protocols [10]

UW Medicine COVID-19 protocols [11]

Evergreen (Seattle) COVID-19 lessons learned [12]

Zhejian University Guidebook of COVID-19 outbreak hospital response strategy [13]

Google Resources Coronavirus Tech Handbook [14]
Frontline COVID-19 Guide [15]

SSCM Critical care for the non-ICU clinician [16]

RECOMMENDATIONS

SAGES Recommendations for reusing N95 masks [17]

SAGES Basics of Mechanical Ventilation for Non-Critical Care MDs [18]

ACS Deployment of surgeons for out-of-specialty patient care [19]

*Courtesy of Linda Zhang MD (https://www.mssurg.com/covid)