ICU-Medicine-Anesthesiology Liaison Report (March 30, 2020)

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The ongoing COVID-19 pandemic is expected to place extreme stress on our acute care medical infrastructure. Pre-surge stage postponement of elective non-cancer surgery has helped prepare hospitals for the upcoming increase in moderate to severe COVID-19 cases requiring hospitalization. We are expected to witness significant increases in patients requiring acute care admission by next week and further reduction in operating room workload can be expected. While each site will need to maintain anesthesiology coverage for emergency surgical procedures and delivery of obstetrical care, we will be left with a large workforce in a position to assist colleagues outside of the operating room. Even with extensive public health measures in place we are witnessing exponential growth of COVID-19 cases and the question has turned from if our traditional system will break, to when it will break. Given that context we will all be expected to adapt and respond.

For those of us concerned about increased personal susceptibility to the effects of COVID-19, redeployment to areas with less, or no, clinical exposure can be expected. The remainder of our department will present a highly skilled, relatively large, physician workforce with experience and training well matched to helping our acute care colleagues.

Expected critically ill patient volume will require significant expansion of intensive care unit capacity. In general, this expansion will take the form of cohorting patients 2 per traditional ICU room, and overflow to non-traditional critical care environments (CCU, PCUs, PARR, ORs, etc). Current ICU mapping projects a zone wide increased critical care capacity of 24% (minor surge), 116% (moderate surge), 218% (major surge) and 633% (large scale surge).

Caring for this substantial increase in patients will require additional physician resources. With an eye to leveraging our unique skillset, maintaining physicians within their scope of practice (when able), responding to identified need, and maximizing our overall impact on the system, our current plan is to focus our departmental efforts in supporting our ICU colleagues in the following manner:

Airway/Response teams

The current model calls for an ICU response team made up of 2 anesthesiologists and 1 intensivist. This team would be responsible for ~ 10 patients in the ICU and would be the team primarily responsible for attending to codes/consults on the ward and in the emergency department. When admission to ICU and airway management was indicated the following clinical process would occur:

- Airway team activation
  - The team would consist of:
    - 2 attending anesthesiologists

        - 1 OR RT (likely concurrently working in ICU)
        - 1 RN – ICU/OR/PACU
- Patient assessment of suitability for transfer prior to airway management.
    - Transport possible: patient moved to a predetermined COVID OR for intubation, invasive line placement, and initial resuscitation.
    - Transport not possible: movement of entire airway team and equipment to the patient
        - Location of subsequent invasive line placement to be determined based on current resources, and transport considerations.
- Transportation of patient from OR to ICU
- Admission to ICU completed by the ICU-anesthesiologist

<u>Additional Roles and Responsibilities</u>

- Practice and prepare for airway management with airway team as needed
    - drilling PPE procedures
    - airway management plans
    - team organization
- Undertake procedural tasks on patients managed by other teams in the intensive care unit.

- Main benefits
    - Skill practitioners working within their current scope of practice freeing up other skilled practitioners to work efficiently within their scope of practice
        - Offloading procedural tasks from other ICU teams increases their ability to round on additional patients and increases the pool of non-ICU physicians willing and able to assist with traditional ICU patient care
    - Single patient encounter resulting in intubation, arterial line, and central line placement which will reduce PPE usage and time to complete necessary tasks

- Requirement/triggers
    - 2 staff anesthesiologists in-house 24/7 from surge stage 3 onwards in each adult hospital in the zone
        - This requirement occurs in surge stage 2 for FMC and PLC
            - This could occur as soon as April 3rd
    - As the situation is fluid and the exact needs are unpredictable this should be viewed as an estimate only and exact dates cannot be provided. Instead we need to be flexible to the demands of the system.