ERCAST Show Notes

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COVID-19: Code Blue

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In this episode we speak with Chris Hicks, a Canadian emergency physician and trauma team leader who is a master of teaching the cognitive skills of resuscitation. Chris shares several protocols from his hospital regarding code blue and intubation in the era of COVID-19 including: the pre-brief process, communication during a code in PPE, preparing for a code (when you have time), what to do when there's a surprise arrest and the team isn't in PPE, how to effectively use an airway checklist, and how to find your anchor when you're stressed.

- **Many of us "pregame" and have psychological skills that prepare us for whatever stressors we may encounter during a shift. Similarly, we have scripts for most of the things we do in EM. Our script for the process of resuscitating patients does not work in the COVID-19 era. Everything has changed.**
    - COVID has kept us in system 2 thinking, which is time-consuming, labor intensive, and not efficient when you have to make quick decisions.
    - Everything around preparation, PPE, role designation, and process is now strange.
    - Since it's an unfamiliar situation, we have to help our team understand process and structure in a scenario with no script.
- **When resuscitating COVID-19 patients who are code blue, an organized structure and consistency is essential. Here are some recommendations:**
    - Have a team based pre-brief.
        - This is a deliberate discussion before you enter the room which stresses the importance of cross-monitoring and establishes the rules.
        - The team gathers around a code blue protected airway cart which contains airway equipment and PPE.
        - Above the cart is a poster-sized infographic which details the pre-brief process.
        - One physician is assigned the team leader. He/she recaps what they know about the case.

        - Roles are assigned.
            - Inside the room are 2 MDs, 1 RN, and 1 RT.
            - Outside the room are 2 RNs (One is charting and in PPE in case he/she needs to enter the room. Another is a runner).
            - 1 safety officer (MD or RN)
        - Donning and doffing buddies are assigned.
        - Team members check each other's PPE to ensure they're protected.
        - A safety officer observes the process and makes sure there are no lapses in the PPE protocol.
        - Decisions are made in advance regarding what will be brought into the room (drugs, drips, other supplies).
        - A plan is made for contingencies.
        - This whole process can take less than a minute.
    - Communication during a code in full PPE must be deliberate, succinct, and directive.
        - This scenario forces you to use closed-loop communication techniques.
        - Baby monitors can be an effective means of communicating to team members outside the resuscitation room.
- **What happens in the scenario where there's an unanticipated arrest and you feel there's no time to prepare?**
    - While it's admirable and brave to want to rush into the room to care for the patient unprotected, that cannot be the case in this era. We must put staff safety ahead of patient care.
    - Hick's institution has developed a process for protected code blue which has 5 key messages.
        - Ensure airborne PPE for all providers before initiating BLS/ACLS.
            - **If nobody is in PPE, then nobody responds**. Consensus opinion is that if you don't have appropriate PPE, you cannot be providing high risk procedures.
            - If 1 person is in PPE, they can enter the room, put a mask on the patient (surgical mask or a high oxygen mask with a filter), and start compression-only CPR while others don PPE.
        - Apply a non-rebreather mask with a filter when starting CPR.
        - No BVM ventilation prior to intubation.
            - If BVM is necessary, it should be a two person, four handed technique.
        - Prioritize intubation using a protected airway process.

        - Airway is prioritized much earlier in the process compared with a standard cardiac arrest.
        - Endotracheal intubation is preferred over a supraglottic airway, assuming there's a skilled provider available to do it.
    - Pause chest compressions during intubation.
- **We are cautioned against using the BVM as it is considered highly aerosolized. Where does that happen in the circuit?**
    - With BVM ventilation, you run the risk of the patient's airway secretions getting out of the BVM unless you have an interposing mechanical filter.
    - Their BVMs also have a side port where a PEEP valve is meant to fit. They routinely attach a PEEP valve to prevent any passive flow of secretions from escaping.
- **Another cognitive offloading tool is a detailed protected airway checklist.**
    - The airway checklist is run by the 2nd physician/team leader, not the airway operator.
    - It's a call and response process, double checking that all necessary supplies are available and a reminder of things that will not be done ("We will not be inserting an airway. We will not be topicalizing medications. etc".)
    - For the intubator, it is reassuring to have somebody else watching out for you, supporting you to make sure the process is safe.
    - See also: **protected airway equipment checklist.**
- **During one of Hick's first intubations, he found himself unusually stressed while he was waiting for the paralytic to take effect.**
    - He handled this by visualizing every step of the procedure, feeling his two feet on the ground, and quietly reminding himself to be "steady". This mental rehearsal helped center and ground himself. He went from feeling like he might pass out to feeling ready to go.
    - This situation accentuated the importance of having psychological tools to use when you feel scared, afraid, and stressed. And of the need to have a sense of humility when confronted with new situations. It was a nice reminder that pregaming actually works.
- **Link** to a pre-departure checklist for critically ill patients being transferred to the ICU,