

Nurse-Led Codes: Practical Application in the Emergency Department during a Global Pandemic

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Abstract : Resuscitation during cardiopulmonary (CPA) arrest is dynamic, high stress, high acuity situation, which can easily lead to communication breakdown, and errors. The care of these high acuity patients has also been shown to increase physiologic stress and task saturation of providers, which can negatively impact the care being provided. These difficulties are further complicated during a global pandemic and pose a significant safety risk to bedside providers. Nurse-led codes are a relatively new concept that may be a potential solution for alleviating some of these difficulties. An experienced nurse who has completed advanced cardiac life support (ACLS), and additional training, assumed the responsibility of directing the mechanics of the appropriate ACLS algorithm. This was done in conjunction with a physician who also acted as a physician leader. The additional nurse-led code training included a multi-disciplinary in situ simulation of a CPA on a suspected COVID-19 patient. During the CPA, the nurse leader's responsibilities include: ensuring adequate compression depth and rate, minimizing interruptions in chest compressions, the timing of rhythm/pulse checks, and appropriate medication administration. In addition, the nurse leader also functions as a last line safety check for appropriate personal protective equipment and limiting exposure of staff. The use of nurse-led codes for CPA has shown to decrease the cognitive overload and task saturation for the physician, as well as limiting the number of staff being exposed to a potentially infectious patient. The real-world application has allowed physicians to perform and oversee high-risk procedures such as intubation, line placement, and point of care ultrasound, without sacrificing the integrity of the resuscitation. Nurse-led codes have also given the physician the bandwidth to review pertinent medical history, advanced directives, determine reversible causes, and have the end of life conversations with family. While there is a paucity of research on the effectiveness of nurse-led codes, there are many potentially significant benefits. In addition to its value during a pandemic, it may also be beneficial during complex circumstances such as extracorporeal cardiopulmonary resuscitation.

Keywords : cardiopulmonary arrest, COVID-19, nurse-led code, task saturation

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