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Treading Lightly in a Pandemic

#Zentensivist Reflections on COVID-19



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Facing an unprecedented pandemic, intensive care clinicians feel obligated to intervene to prevent, modulate, or reverse coronavirus disease 2019 (COVID-19) and to avert death. Human nature is to err in favor of intervention rather than thoughtful inaction, commission over omission. As a result, we have seen widespread adoption of a variety of (primarily pharmacologic) interventions with little or no supportive evidence. The temptation of bioplausibility has again emerged in critical care medicine (CCM), despite a negative track record of results for pharmacologic therapies in multicenter trials.¹ Given limitations in resources as well as evidence, we need to tread lightly in the ICU more than ever.

ABBREVIATIONS: CCM = critical care medicine; COVID-19 = coronavirus disease 2019; HFNC = high-flow nasal cannula; IMV = invasive mechanical ventilation; RCT = randomized controlled trial

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Over the past year, a common theme of care has emerged in social media discussions under the hashtag #zentensivist, describing a combination of Zen-like philosophy with intensive care medicine. These concepts seemingly are at odds with one another. Zen philosophy emphasizes mindful speech, reflection, and action. Intensive care conjures images of invasiveness and aggressive care. In combination, the #zentensivist approach focuses on minimally burdensome ICU care that is grounded in pragmatism, humanism, and tolerance of risk in facing the abnormal and unknown. Here we describe how this perspective can best be applied to the care of the critically ill COVID-19 patient.

Minimally Invasive, Maximally Attentive

Early guidance on hypoxemic respiratory failure during the COVID-19 outbreak has been largely based on expert opinion and has mostly advocated early consideration of invasive mechanical ventilation (IMV). These recommendations, at least in part, are due to observation of rapid clinical deterioration, high reported rates of IMV in this population,^{2,3} and concerns for aerosol generation with high-flow nasal cannula (HFNC) or noninvasive positive pressure ventilation. A lower threshold than normal to initiate IMV creates two potential issues: iatrogenic harm and depletion of finite resources, namely ventilators.

Consider a patient with the commonly seen “silent hypoxemia” phenotype of COVID-19, who does not otherwise show signs of respiratory failure. A minimally invasive, yet maximally attentive approach could involve placement of HFNC, with consideration of awake prone positioning⁴ to attempt to reduce the likelihood of requiring IMV, which is physiological, supported by studies, and poses minimal risk to patients. In this scenario, the awake patient can participate in many aspects of their care and bond with the care team,⁵ without experiencing potentially deleterious effects of IMV and sedation. Meanwhile, the *zentensive* care team maintains high vigilance in case of deterioration but otherwise allows restitution to unfold.

Finally, patient-specific characteristics need to be carefully considered. In COVID-19 as well as other causes of respiratory failure requiring IMV, there is an increasing mortality burden with increasing age.⁶ With

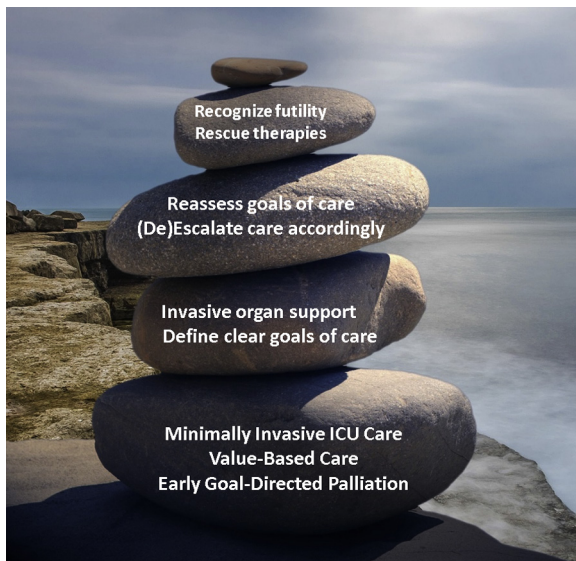


Figure 1 – *Zentensivist pillars of care in the age of COVID-19. At the foundation, care starts with minimally invasive action, high-value care, and early palliation and goal clarification. As disease progresses, we move up the rock mound, either adding or subtracting invasive interventions as patient preference and medical appropriateness dictate. Photo credit: <https://pixabay.com/photos/feng-shui-zen-stones-texture-1927584/>, license-free image.*

increasing frailty and burden of comorbidities across the population, sometimes the best course of action is “early goal-directed palliation,” focusing on symptom management, appropriate expectations, and goals of care based on patient values and likelihood of benefit from our interventions (Fig 1).

Pragmatism Over Neophilia

The history of CCM does not support magic bullets. In fact, clinical trialists are quick to note that medications with strong bioplausible foundations have not yielded positive results in phase III randomized controlled trials (RCTs). Early reports of medications directed at COVID-19 have often been small, nonrandomized, and retrospective, with questionable benefit. Even past positive single-center trials have been near impossible to show benefit once replicated in multicenter RCTs.⁷ Before we rush to each “new exciting treatment” for COVID-19, we have to remember our history, and execute well-designed RCTs.

What is the bedside clinician to do, given intense desire to help a growing number of critically ill patients in this pandemic? Understandably, many of us feel compelled to act, which introduces the temptation to broadly apply unproven interventions. In the short term, the answer is not to be found in off-label therapies or unvalidated biomarkers. The *zentensivist* mindfully attends to the

core group of interventions with proven impact on patient outcomes, for instance, lung-protective ventilation, conservative fluid management, and the ABCDEF (Assess, prevent, and manage pain, Both spontaneous awakening trials (SAT) and spontaneous breathing trials (SBT); Choice of analgesia and sedation; Delirium: assess, prevent, and manage; Early mobility and exercise; and Family engagement and empowerment) bundle.⁸ While additional data are gathered on this admittedly novel condition, we must concentrate on time-tested tools to liberate patients from the burdens of our environment.

Conclusion

COVID-19 presents unique clinical and logistical challenges to CCM practitioners as well as health systems. From all angles, the pressure to add interventions to change the course of illness is heaped on the bedside clinician. This inertia unfortunately puts us and our patients at high risk for future medical reversal,⁹ whereby current practices will be shown to be ineffective or even harmful by future studies. The stress of the pandemic requires us to practice “clinical mindfulness,” a tenet of *zentensivism* that emphasizes learning from our past experiences, understanding the limitations of medical science as well as our therapeutic options. The key message of the #*zentensivist* to those on the front lines against COVID-19 is not novel: less is more. Less is likely to work for more patients; however, more may be needed in fewer patients who have the reserve to survive extraordinary intensive care support and to thrive once they survive their critical illness. If we devote our efforts to humanistic, minimally-invasive care that is focused on core interventions, we can create an environment that facilitates ICU liberation and recovery.

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