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Mitigating Pressure Injury Challenges When Placing Patients in a Prone Position

A View From Here

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INTRODUCTION

The pandemic created by the novel coronavirus has created a global crisis for health care. We believe the health care landscape has been irrevocably changed as clinicians struggle to keep up with the demand for absorbing new knowledge in this rapidly evolving pandemic while sorting out fact from fiction. Care providers face a simultaneous imperative to provide highest-quality care for the patients with severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) infection, while keeping their family members informed. Despite these challenges, we have observed a mixture of uncertainty and fear that is tempered by camaraderie and togetherness during this fundamental shift in day-to-day operations of our nation's hospitals. The pandemic has quickly pushed organizations to be as prepared as possible for the surge of SARS-CoV-2 infection across the United States. This View From Here focuses on one aspect of care during the pandemic—prone positioning.

PRONE POSITIONING

We have found that prone positioning is frequently used to manage adult respiratory distress syndrome (ARDS) manifestations. Nevertheless, this practice carries its own challenges. One of the common complications observed when placing patients in a prone position is an increased risk for pressure injury. Based on our experience in this rapidly evolving of care, we believe that the following strategies will help prevent pressure injury complications in patients maintained in a prone position. Our recommendations are based on our experiences, and influenced by the current state of limited resources, the need to bundle patient care activities in order to minimize use of personal protective equipment (PPE) and the need to rapidly adopt alternative models for care delivery.

We acknowledge that managing patients in a prone position for a prolonged period of time creates multiple challenges. Literature suggests placement of the patient in a prone position for 12 or more hours, which further puts the patient at risk for pressure injures if protective prevention measures are not implemented.[1] A variety of manual methods for prone positioning are available, along with a mechanical bed designed for this purpose, but all have strengths and limitations. Protecting the skin while the patient is placed in a prone position is also challenging when care is increasingly bundled to minimize use of PPE, resulting in less frequent contact with patients. In order to meet this challenge, we have found that the use of a static air overlay mattresses, and strategic placement of foam dressings over pressure points, is beneficial for pressure injury prevention. We have observed that the use of static air overlay support surfaces has eased repositioning the patient while prone and maintaining needed pressure redistribution to key areas of the body. This method also supports securement of the endotracheal tube with a commercial device that allows the tube to be frequently repositioned, thus reducing the likelihood of a medical device–related injury to the lip or nares. In addition, manual prone positioning in the COVID-19 patient enhances visualization of critically ill patients from a distance, as needed.

When caring for patients in a prone position, it is important to ensure all team members caring for the patient employ preventive strategies such as fecal and urine containment to help reduce moisture-associated skin damage. In addition, we assert that every team member should assess for potential harm mitigation when opportunity rises and hand off any noted concerns to the team lead; this includes threats to skin integrity such as pressure injury.

Despite the multiple novel challenges posed by the pandemic, we recommend adopting evidence-based practices whenever possible. As clinical nurse specialists (CNSs) in an intensive care unit (ICU) setting, the use of prolonged prone positioning was not a new intervention; nevertheless, its widespread use in this context was a bit unfamiliar. With no effective antiviral to treat COVID-19 to date, treatment of these patients focuses on prevention of disease progression and provision of supportive care. It is a fundamental CNS trait to examine the evidence and ensure best practice is translated at the bedside. In a recent editorial, an early warning system was created to identify patients at high risk for progressing to critical condition.[2] Multiple interventions were suggested for patients with ARDS and extensive pulmonary effusion was demonstrated on a computed tomographic scan, including prone positioning in the nonventilated COVID-19 patients. While our collective experience remains limited, the authors of the editorial described prone positioning in the awake patient as a promising intervention, improving oxygenation and alleviating heterogeneous pulmonary attenuation. Early adoption of such treatments for some patients may help reduce the number

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of COVID-19 patients who become critically ill, therefore reducing pressure injury risk factors resulting from hypotension (vasopressors and poor perfusion), fever (increased moisture and body temperature), and most importantly complete and prolonged immobility.

RELATED STAFFING CHALLENGES

Given the rapid spread of SARS-CoV-2 and its demands on acute care, we strongly recommend preparations to optimize staffing capacity. Specifically, we recommend planning for a surge or sudden reduction in health care workforce. We experienced the use of alternative care delivery models such as team or tiered nursing to manage treatment in the setting of the current pandemic. We found that this approach optimizes the use of both ICU and non-ICU trained staff, and it may include other nursing disciplines such as perioperative, outpatient/ambulatory, or WOC nurses who do not regularly provide care in a critical care setting. Because elective appointments, surgeries, and procedures have been cancelled, we recommend considering how to best use available workforce and specialties. If not at the front line, the WOC nurse consultant may increase use of FaceTime or secure applications for sharing, teaching, and related activities. We have found that the need to increase reliable communication and just-in-time education for those who may be in new settings while caring for COVID-19 patients is essential. The use of visual and telecommunications has never been as important since the care teams, some of them may have never worked together prior to this crisis, must adjust to care in a new and rapidly changing environment. For example, team members must learn to bundle care in order to limit entry and exit into the rooms of patients with COVID-19.

We further recommend communicating with colleagues early and often. Unit leaders must role model effective, open communication in order to provide the highest level of team member and patient safety. We urge you to consider intentional huddles throughout the shift to check in with team members and ensure all are equally informed.

CONCLUSIONS

We must embrace our innovative selves to think outside of the box and continually seek out and share proactive interventions that can help support the high-risk, complex, and unfamiliar population produced by the COVID-19 pandemic. We assert that partnerships among professional organizations and business entities will be imperative to ensure a robust supply of the best surfaces and/or procedures for prone positioning, along with strategies for incontinence management, and nutritional support needed to assist patients recover from COVID-19 and return to their homes where they belong. We understand and are forever grateful for those in the front lines adapting to new models of care delivery. As clinicians, we should reflect on our passion, skills, and competencies, whether supporting those on the front lines, providing just-in-time education, or generating the latest evidence, for we are all needed and are all in this together.

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