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The last 2 years created a nursing environment that added new complexities to an already fragile state. As the COVID-19 pandemic started to wane, data began coming out that nurses were experiencing symptoms of post-traumatic stress. These studies cautiously revealed current pain points, predictions for the future highlighting an ever-shrinking workforce, increases in clinician suicide, and caregiver burnout at all-time highs. As leaders began looking for new solutions, a growing consensus about nature and awe rose to the top, identifying that these experiences transform the stress and struggles of daily living. In the midst and aftermath of the experience of awe, daily personal concerns—small, ordinary events causing anxiety, distress, and pain—seem to diminish in their significance, offering a solution that the nursing profession can adopt to help individuals heal and continue on.

It’s overtime, the clock is winding down. You’ve played from behind the entire game, never quite catching up. Now, the team is within striking distance. Up to this point, this is the most important game of the year. The team has a lot on the line. The outcome of this game will set the trajectory for the next several weeks and months. You look around and teammates are exhausted and defeated. They are not going to be much help. All eyes are on you. As the clock continues to wind, chaos ensues, there’s a lot of motion and noise in the arena as you line up to execute the game winner. It’s a miss. Game over. You hang your head as you are overcome with a rush of emotions. You’re filled with grief, disappointment, and embarrassment. Similarly, you see your teammates hang their heads. You let them down. The pain hurts and is felt deep in your soul. Doubt begins to creep in your head. Do you belong here? Are you good enough? Your curious brain wonders how you could feel so lonely while being surrounded by so many people. You could quit and avoid this sense of failure ever again. You feel tears forming and a desperate need to crawl into bed and never get out.

A sense of failing at something you love is painful. When it’s a team sport and others are impacted, the pain is compounded. When failure coincides with a person living or dying, this is nursing. Like a favorite record on repeat, the scenario described is all too common for nurses during the pandemic. Shift after shift, sometimes multiple times in the same shift, nurses felt they missed the game winner over and over again. Despite what we’re told and taught, nurses take their work home with them. At the end of each shift nurses reflect on what they couldn’t get done or what they could have done better. The COVID-19 pandemic intensified these feelings of inadequacy. The last 2 years created a nursing environment that had never been seen or felt before. Supplies, staffing, and bed shortages created new complexities to an already complex environment that always played out under the ever-present black cloud of death. As the COVID-19 pandemic started to wane, data began coming out that nurses
were experiencing symptoms of post-traumatic stress. These studies cautiously revealed current pain points, predictions for the future stating that 31% of clinicians globally, and 47% of US health care workers, plan to leave their current role within the next 2 to 3 years.1 This is a call to action to identify new approaches to employee and self well-being.

**PANDEMIC AND POST-TRAUMATIC STRESS**

SARS-CoV-2, otherwise known as COVID-19, stemmed from a beta-coronavirus in the sarbecovirus group that infects bats and scaly anteaters in Asia.2 It appeared in November 2019 in China and was subsequently declared a pandemic by the World Health Organization in March 2020.3 As of May 13, 2022, the Centers for Disease Control and Prevention (CDC) cite 999,574 deaths due to COVID-19 in the United States alone.4 The World Health Organization (WHO) report 517,648,631 confirmed cases and 6,261,708 deaths worldwide, making this the most lethal respiratory pandemic since the Spanish flu of 1918.3

Though most people infected with COVID-19 experience mild illness, approximately 15% endure severe illness, and 5%, critical illness, which culminates in an increased number of hospitalizations.5 At times, surges have overwhelmed health care systems.6 For example, US hospitalizations reached a pandemic high of 145,982 hospitalizations secondary to the omicron variant in January of 2022.6 As frontline workers, nurses bear astonishing pressure due to physical exhaustion, increased workload, inadequate personal protective equipment, intrahospital transmission, and moral distress.8 As a result, nurses are susceptible to depression, anxiety, emotional distress, fear, insomnia, burnout, and post-traumatic stress disorder (PTSD).9

Given the high likelihood that sarbecoviruses will arise again, it is imperative that nurse leaders learn from this pandemic and implement strategies that support our current at-risk workforce while maintaining force readiness for the future.2

**POST-TRAUMATIC STRESS DISORDER**

The COVID-19 pandemic has increased the exposure of nurses to morbidity and mortality while heightening fears that nurses themselves and/or family members would become infected. In fact, nurses accounted for 500 of the 3600 deaths of health care workers in the United States in the first year of the pandemic alone.9 The WHO recommends that the physical, mental, and psychosocial health of health care workers be assessed and managed.10

Psychologist Maria J Serrano-Ripoll completed a systematic review investigating occupational, sociodemographic, and social factors correlated with the probability of developing mental health problems for health care workers on the frontline. Working in a high-risk environment, higher perception of threat and lack of specialized training correlate with anxiety and PTSD.7 A high-risk environment was defined as “being in direct contact with infected patients, either providing care or being responsible for cleaning and disinfection.”8 Multiple studies found that nurses were at increased risk of developing PTSD.7,10 Other risk factors for PTSD include job stress, less job experience, younger age, and isolation.8

Post-traumatic stress disorder, as defined by the Diagnostic and Statistical Manual of Mental Disorders,11 is characterized by the following criteria:

1. Exposure to actual or threatened death, serious injury, or sexual violence.
2. Presence of 1 or more intrusion symptoms associated with the traumatic event beginning after the event occurred.
   a. Distressing memories, dreams, flashbacks, psychological distress, physiological reactions.
3. Persistent avoidance of stimuli associated with the traumatic event, beginning after the traumatic event occurred.
4. Negative alterations in cognitions and mood associated with the traumatic event.
   a. Inability to remember, exaggerated negative beliefs, persistent negative emotional state, diminished interest in activities, feelings of detachment or estrangement from others, persistent inability to feel positive emotions.
5. Marked alterations in arousal and reactivity associated with the traumatic event.
   a. Irritable behavior, reckless behavior, hypervigilance, exaggerated startle response, problems with concentration, sleep disturbance.
6. Duration of the disturbance is greater than 1 month.
7. Disturbance causes clinically significant distress or impairment in social, occupational, or other important areas of functioning.

Multiple potential sequelae of PTSD exist. For example, suicide rates among nurses were predicted to
increase during the COVID-19 pandemic. In addition, evidence points to increased nurse burnout characterized by exhaustion and disengagement from work. Costs of burnout include, but are not limited to, decreased quality of patient care, increased nurse turnover, and negative consequences for the health of nurses.

As the pandemic progresses, reaches an endemic stage, and in preparation for the next pandemic, there are steps that may be taken by organizations to mitigate risk factors. These include implementation of long-term institutional preparedness programs and constant communication between managers and health care workers with the goal of improving knowledge, confidence, and alleviating social isolation. Although these may be protective over the long run, what do we do for those nurses who continue to care for critically ill patients in the intensive care units and emergency departments? Equally important, what do we do for those who have been battling symptoms of PTSD?

“In the woods we return to reason and faith. There I feel that nothing can befall me in life, no disgrace, no calamity which nature cannot repair.” – Ralph Waldo Emerson

**NATURE AS A SOLUTION**

A growing consensus about nature and awe is that these experiences transform the stress and struggles of daily living. In Emerson’s quote, awe from nature repairs “life’s calamities.” In the midst and aftermath of the experience of awe, daily personal concerns—small, ordinary events causing anxiety, distress and pain—seem at least phenomenologically, to diminish in their significance.

Along with Emerson, it can be argued that naturalist John Muir pioneered the thinking that nature both heals and inspires moments of awe. In the century since Muir first began publishing his views, a meta-review of 59 review papers found that contact with nature can reduce stress and promote a more robust health profile. Furthermore, nature has been shown to reliably and robustly elicit awe, and this collective research shows that people report a more positive affect after time in the outdoors. These awe-inspiring experiences in nature are the pinnacle of many distinct emotions. For example, when ascending a high-altitude peak, one can experience awe at the expansive view, fear at the threat of falling, contentment after a hearty meal by the campfire, or pride at having accomplished an impressive feat. Another study showed that when participants asked to recall a time they felt awe, people most often described nature experiences. With science beginning to back these claims, additional studies proved that even reading an awe-inspired passage was shown to increase momentary life satisfaction and in a daily diary study, nonthreatening experiences of awe led to reports of increased daily well-being. Moreover, awe has also been associated with more adaptive physiological profiles as indicated by lower markers of inflammation and greater activation of the vagus nerve. Taken together, these independent lines of research find that nature reliably elicits awe and that awe is related to improvements in well-being.

It’s difficult to measure the amount of stress nurses faced during the pandemic years. Record high workforce turnover, increase in clinician suicides, and poor health system engagement scores give us quantifiable data that all point to an excessive burden of stress among the workforce. Stress is ubiquitous and consequential. It arises when individuals encounter events they perceive as threatening or harmful and is experienced in terms of subjective feelings of lack of control and hopelessness. Comments and descriptions like these were too common in the pandemic environment. Data now prove that these experiences, regardless of where they are experienced, are closely associated with depression, anxiety, physical risks, and lifestyle problems. All of us are thinking about the future and imagining a healthy and engaged workforce. How realistic is it to expect team members to engage when these are the emotions they’re experiencing? Understanding when and why stress responses emerge, and how to reduce their magnitude, are the central focus in the literature on mental health and well-being. More relevant to present focus on positive emotion, studies have found that the cultivation of gratitude, laughter, and love can reduce levels of stress, often through shifts of appraisals of the self and social environment. Awe, on the other hand, is an emotional state that arises when people feel that they are in the presence of something grand that transcends their current frame of reference.

Long before nurses were struggling to heal and cope following a global pandemic, others had begun using awe in nature and nature-based therapy to heal. One such study investigated the impact of an outdoor adventure camp on the mental health and well-being of undergraduate university students. The study specifically focused on those with depression and anxiety, the 2 most common mental illnesses that are becoming more prevalent throughout the world and are rampant among caregivers post-pandemic. Depression accounts for 4.3% of the global burden of disease, with an increase of 18.4% over a 10-year period and is ranked as the single largest contributor of disability worldwide. Therapeutic use of recreation (TR) is considered as a health care approach that delivers recovery-oriented care, as well as reduces the disabling effect of mental illness. It is claimed that there are 3 ways in which exposure to nature can positively influence mental health and well-being. Firstly, participation in physical activity in a nature-based setting can enhance positive mood and lessen psychological distress levels. Secondly,
mental well-being is improved through increased opportunities for organized and spontaneous social engagement. Thirdly, nature-based settings can provide restoration from stressful activities and positively affect stress hormone levels. More specifically, the components of TR that enhance well-being while simultaneously overcoming barriers that inhibit mental health recovery are increasing physical activity, increasing cognitive abilities, savoring positive emotions, increasing social and spiritual connections, developing mindfulness skills, and engaging in altruism. These are all strength-based interventions designed to focus on a person’s intrinsic resources and build their capacity, rather than focusing on their problems or disability. Therapeutic recreation activities are often designed to focus on a person’s internal locus of control and facilitate goal setting, self-determination, and autonomy. The true benefit of undertaking TR in nature-based settings is that it acts as a buffer to life’s stresses, enhances resilience, and aids in overcoming past negative, life experiences. The results of this study revealed a measurable increase in life satisfaction, happiness, mindfulness, and self-efficacy, and a decrease in perceived stress among all participants.

As the research begins to mount, doctors are taking note and taking action. Health care professionals in 4 Canadian provinces can now prescribe time in the national park system to boost people’s mental and physical health. In this initiative, Parks Canada is collaborating with a program called Parks Prescriptions where doctors, nurses, and other licensed health care professionals who register with the program can prescribe nature—and even a Parks Canada Discovery Pass to their patients. As Canada grapples with the aftermath of the pandemic, it’s a critical time for health care professionals to promote the mental and physical health benefits of heading outdoors, stating that research shows that children and adults who are more connected to nature are not only more likely to work to conserve it, but also engage in other pro-environmental behaviors.

Without delving into the literature, many nurses who endured a 2-year pandemic battle, found solace and connection in the outdoors.

BIOS

Kit Bredimus, CNO – Texas
Even before the pandemic, getting outdoors has been my refuge. I have to travel to be in scenic nature, so I became more intentional about scheduling time to get to the mountains, lakes, and woods. During an especially tough time in my life, I had an epiphany while solo hiking a mountain, the metaphor of my life. There are seemingly insurmountable challenges and some setbacks along the way. The trail is long and winding, but keep moving forward. You will be able to achieve something spectacular and look down to see how far you have come.

Jeremy Mabis-Rowe, CRNA – Wisconsin
A strong memory I have during the peak of the pandemic was the emptiness of my hospital’s waiting room. Each day I had to walk through the abandoned area that normally was filled with family members of loved ones having surgery. The unsettling irony was that on the other side of the locked doors was a busy health care warzone fighting the battle against COVID. As a CRNA, my job became more challenging as I managed patient’s airways. These patients...
required more time and attention as they unfortunately needed care but posed a threat to staff members and other patients in the hospital. I remember the anxious and panicked look on their faces as I met them in their intensive care unit (ICU) beds after being called for their emergent intubations. More times than I care to remember, I became the last person these COVID-positive patients would see or talk to before I sedated them and placed their breathing tubes. The overall changes to health care delivery were challenging and a true battle, which took a toll on my mental health and well-being. A natural cure for me during any of life’s challenges has always been getting outside and exploring nature. So, whenever the opportunity presented itself, I took trips to reset in the outdoors. Following guidelines, I was able to spend a week hiking and exploring the state of Oregon. Additionally, I was able to paddle and camp in the Boundary Waters Canoe Area Wilderness of northern Minnesota. It was important for me as a health care provider to take these trips and focus on my state of well-being. Oftentimes, health care providers can easily miss warning signs of burnout as we dedicate ourselves and passions to caring for others. I am thankful for these needed outdoor adventures as they truly are a necessary tool in restoring peace and balance in my life.

Taylor Sloan, RN, PCU | Megan Parsons, RN, PCU | Shalyse Ahl, RN, PCU (Travel Nurses)

The 3 of us met on our journey as travel nurses. A spirit of adventure as an escape is a common connection, we all found. Our adventures have taken us to summit Mount Humphrey, Arizona’s highest peak, to this trip, hiking down to the Little Colorado outside of Grand Canyon National Park. I am always someone who likes to look at the silver lining, not only to help my patients cope with hard times, but also in my own life. My pandemic silver lining is having more time to be outside in nature, where you inherently begin to practice mindfulness. Watching an ant carry up to 5000X its weight in food and keep moving forward, hearing the power of the river as it surges over rocks, feeling the wind as it snakes through the canyon, focusing on the here and now, the challenges in front of us, allow our body’s nervous center to take a break. Although it is sometimes physically challenging, I come back mentally renewed and able to provide the care my patients need from me.

Rosamond Garcia, RN, ICU – Texas

The amount of death and unfavorable outcomes over the past 2 years has far exceeded the victories we have experienced. Caring for long-term ICU patients whose stories still ended tragically, even after all of our efforts, I found myself becoming extremely cynical and calloused—even as a new nurse. Where we once contributed to success stories and happy homecomings, we were consistently only seeing the deaths of patients dying alone. I soon realized that coping with these losses involved spending time with those who know exactly the struggles that I had faced as an individual. The CCU (critical care unit) team created a group dedicated to team members to schedule outings in our area to enjoy outdoor healing. During a hike at McKittrick Canyon in the Guadalupe Mountains, the moment we reached “The Notch,” the physical accomplishment provided an emotional victory in contrast to the grief. I continue to prioritize time outdoors when needing an outlet from the stresses of the ICU setting.
After meeting in new employee orientation at University of Colorado Health in 2014, the coauthors, Brian and Carey, bonded immediately over their love of sports, nursing, and family. During a later lunch, a friend suggested we “climb something.” Seated with 2 others, we decided on a winter climb of Mt. Bierstadt in blizzard conditions with a summit temperature of −19 degrees Fahrenheit. Since then, climbing became a passion and an outlet to the stressors of life. This spirit of adventure has taken us to the most remote wildernesses of Colorado, to the summit of iconic US peaks, Mt Rainier and Mt Whitney, climbs on 2 other continents, and summer plans to travel to the Alps to climb the Matterhorn and Mont Blanc.

As the pandemic hit, we were fortunate to have support systems and a channel to vent frustrations and manage emotions. As a leader of a nursing workforce and a supportive medicine nurse practitioner preceding and throughout the pandemic, we can speak personally to the benefit of the outdoors to maintain health physically, mentally, and emotionally. It is simultaneously spiritual and meditative, and has been life changing.

CONCLUSION
Throughout the pandemic, Banner Health’s chief clinical officer, Marjorie Bessel, constantly reminded team members that all pandemics come to an end, and that this one will, too. She was right, this one did (so far), though we are ever at risk for the next pandemic. It was a long 2 years that brought constant new waves of emotions and stress. These scars are still present, and team members are still trying to cope with these demons while simultaneously facing the new threats of the day. Regardless whether the impending stressors are acute or chronic, it’s imperative that individuals have mechanisms to deploy that can mitigate emotional and physical harm while paving the way for a better tomorrow.

Nurse leaders have an opportunity to innovatively contribute to the utilization of nature as a solution. Though certainly not exhaustive, the following are ideas to consider:

- The radiation oncology department at University of Colorado Health’s North region hosts an annual hike up 1 of Colorado’s 14,000 foot peaks called, “Take a Hike Cancer.”
- As an alternative to a gift card recognizing good work, the nurse leader may consider gifting a daily admission to a state or national park.
- Host a photo contest with nature as a theme, thus encouraging nurses to venture further afield in an effort to win a prize and in the process benefit from the majesty that awaits.
- Encourage outside meetings or team-building activities.
- Create a social community via Facebook or Virgin Pulse app where team members can highlight pursuits of awe and cheer each other on as they progress towards goals.

Overwhelming evidence now shows that in the presence of something vast that transcends one’s understanding of the current context, we are often in a state of awe. As this profound feeling may shift our attention away from focus only on the self toward vastness vis-à-vis the self, the bothersome daily concerns seem to be less salient, and daily stress becomes less intense, as Emerson long ago observed.14

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