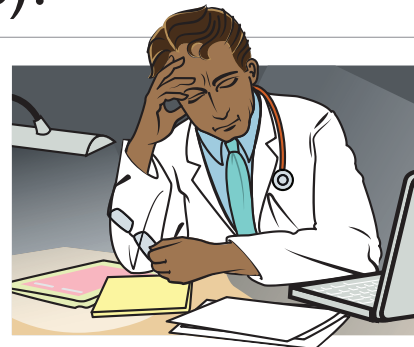


# What is Burnout Syndrome (BOS)?

First described in the 1970s, BOS is a work-related constellation of symptoms that usually occurs in individuals without any prior history of psychological or psychiatric disorders. BOS is triggered by a discrepancy between the expectations and ideals of the employee and the actual requirements of their position. In the initial stages of BOS, individuals feel emotional stress and increasing job-related disillusionment.



Subsequently, they lose the ability to adapt to the work environment and display negative attitudes toward their job, their co-workers, and their patients. Ultimately, three classic BOS symptoms develop: exhaustion, depersonalization, and reduced personal accomplishment.

- 1. Exhaustion:** is generalized fatigue that can be related to devoting excessive time and effort to a task or project that is not perceived to be beneficial. For example, a feeling of exhaustion, particularly emotional exhaustion, may be caused by continuing to care for a patient who has a very poor chance of recovery.
- 2. Depersonalization:** is a distant or indifferent attitude towards work. Depersonalization manifests as negative, callous, and cynical behaviors; or interacting with colleagues or patients in an impersonal manner. Depersonalization may be expressed as unprofessional comments directed toward co-workers, blaming patients for their medical problems, or the inability to express empathy or grief when a patient dies.
- 3. Reduced personal accomplishment** is the tendency to negatively evaluate the worth of one's work, feeling insufficient in regard to the ability to perform one's job, and a generalized poor professional self-esteem.

Individuals with BOS may also develop non-specific symptoms including feeling frustrated, angry, fearful, or anxious. They may also express an inability to feel happiness, joy, pleasure, or contentment. BOS can be associated with physical symptoms including insomnia, muscle tension, headaches, and gastrointestinal problems.

## Magnitude of the Problem

Healthcare professionals at the front line of care (family medicine, emergency medicine, general internal medicine, and critical care) report the highest rates of BOS; in excess of 40%. Working in an Intensive Care Unit (ICU) can be especially stressful due to high patient morbidity and mortality, challenging daily work routines, and routine encounters with traumatic and ethical issues. This level of nearly continuous stress can rapidly accelerate when caregivers perceive that there is insufficient time or limited resources to properly care for patients. Unfortunately, critical care healthcare professionals have one of the highest rates of BOS. Based upon multiple studies, approximately 25-33% of critical care nurses manifest

symptoms of severe BOS, and up to 86% have at least one of the three classic symptoms. When compared to other types of nurses, BOS occurs more commonly in critical care nurses. BOS is also common in critical care physicians. Up to 45% of critical care physicians reported symptoms of severe BOS. Among pediatric critical care physicians the prevalence of BOS is 71%, more than twice the rate in general pediatricians.

## How to Measure and Detect BOS

Burnout syndrome is most commonly measured with the Maslach Burnout Inventory (MBI-HS). The MBI-HS is a 22-item self-report questionnaire that consists of three independently scored dimensions (emotional exhaustion, depersonalization and a lack of personal accomplishment). The questions on the MBI-HS classify feelings related to an individual's work environment on a 7-point Likert scale. The emotional exhaustion scale includes 9 items and identifies individuals who are emotionally exhausted or who feel overextended at work, the depersonalization scale includes 5 items and identifies those who have an impersonal response to patients they are taking care of and the personal accomplishment scale includes 8 items and assesses a lack of accomplishment and success related to work.

## Risk factors

Both individual and organizational risk factors are associated with an increased susceptibility to develop BOS.

### Individual risk factors:

- having poor self-esteem
- maladaptive coping mechanisms
- younger adults with an idealistic worldview
- unrealistically high expectations
- having financial issues

### Organizational risk factors:

- heavy workload
- conflicts with coworkers
- diminished resources
- lack of control or input
- effort-reward imbalance
- understaffing
- rapid institutional changes

### Specific to the critical care environment, risk factors for nurses:

- variability in work schedules
- rapid turnover of patients
- end-of-life events

Critical care physicians share many of the same risk factors as nurses but struggle most with the amount of uninterrupted

work they are expected to complete (weekend and night coverage).

### Consequences of Burnout Syndrome

BOS in critical care healthcare professionals may result in post-traumatic stress disorder (PTSD), alcohol abuse, and even suicidal ideation. PTSD is manifest by intrusion, avoidance, negative alterations in cognition and mood, and marked alterations in arousal and reactivity. PTSD can occur in response to one catastrophic event or after chronic or repetitive exposure to traumatic episodes. Between 22-29% of critical care nurses have symptoms of PTSD, and up to 18% of critical care nurses meet the diagnostic criteria for PTSD.

The development of BOS may result in healthcare professionals leaving their profession. Excessive turnover rates increase healthcare costs, decrease productivity, diminish staff morale, and reduce the overall quality of care as experienced professionals who leave the ICU must be replaced. In ICU nurses, turnover occurs frequently with reported annual rates ranging between 13-20%: the 2013 U.S. average annual turnover rate for all types of employees was 10.4%.

BOS also results in decreased clinical effectiveness and poor work performance that may impact patient care. BOS in

prevent and treat BOS. The six standards include:

- having skilled communication
- collaboration
- effective decision-making
- appropriate staffing
- meaningful recognition
- authentic leadership

A small randomized controlled trial of resilience training was conducted in ICU nurses. Validated surveys were used to measure resilience, PTSD, anxiety, depression and burnout syndrome. The intervention arm included a two-day educational workshop, written exposure therapy, mindfulness-based stress reduction (MBSR), exercise and event triggered cognitive behavioral therapy sessions. The control arm did not have any interventions dictated by the protocol. The results suggested the intervention was feasible and acceptable. There was also improvement in resilience scores, PTSD symptom scores and symptoms of depression. Larger randomized controlled trials are needed that are powered to reach statistical significance.

Additional research is needed to identify strategies and interventions that prevent and treat burnout syndrome and other psychological disorders such as PTSD, anxiety and depression in pulmonary and critical care healthcare professionals.

**Authors:** Meredith Mealer, PhD, Marc Moss, MD, Vicki Good, RN, MSN, CENP, CPPS, David Gozal, MD, MBA, Ruth Kleinpell, PhD RN FAAN FCCM, Curtis Sessler, MD, FCCP, FCCM  
**Reviewers:** Marianna Sockrider, MD, DrPH, Christopher Slatore, MD, MS



Cost of replacing an ICU nurse is > \$65,000



Cost of replacing an ICU physician > \$250,000

nurses is associated with lower quality of care, lower patient satisfaction, increased number of medical errors, increased rates of health-care associated infections, and higher 30-day mortality rates. There is a strong “dose-response” and “bi-directional” relationship between burnout scores and medical errors: errors lead to distress and distress leads to errors

### Potential Treatment or Prevention for BOS

Evidence-based interventions to treat and prevent BOS are currently not available in critical care healthcare professionals. Interventions focused on both the individual and organizational interventions should be developed. Resilience is a psychological characteristic that enables an individual to adjust in a healthy way after a traumatic event. Resilience has been recognized as a mechanism to mitigate symptoms of and the development of PTSD following trauma and may prevent and treat of BOS. While there are innate or inherent qualities of resilience, there are qualities of resilience that can be learned. Examples of resiliency techniques include: being optimistic, developing cognitive flexibility, establishing and maintaining a supportive social network, mindfulness training, and exercising.

Organizational interventions should be aimed at sustaining a healthy work environment. The American Association of Critical Care Nurses (AACN) has identified six standards to establish and sustain a healthy work environment that could be targeted to

## Rx Action Steps

1. Understand that there are ways you can manage your work-related stressors that put you at risk for burnout syndrome.
2. Engage the support of management, co-workers and friends that may help you cope with stress at work and burnout syndrome.
3. Take breaks from work. Go outside for a walk or fresh air. Exercise is known to enhance your physical state and mood.
4. Understand what you enjoy about work and focus on your interests and passions.
5. Practice techniques such as reframing and optimism when dealing with stressful work experiences.

## Additional Resources

Maslach, C., Schaufeli, W. & Leiter, M. (2001). Job Burnout. *Annual Review of Psychology*, 397-422.

Mealer, M. et al. (2014). Feasibility and acceptability of a resilience training program for intensive care unit nurses. *American Journal of Critical Care*, 23(6), 97-105.

**American Association of Critical Care Nurses**  
[www.aacn.org](http://www.aacn.org)

**Maslach Burnout Inventory (MBI)—abbreviated version, available at**  
[https://www.aap.org/en-us/Documents/soim\\_abbreviated\\_maslach\\_burnout\\_inventory.pdf](https://www.aap.org/en-us/Documents/soim_abbreviated_maslach_burnout_inventory.pdf)

This information is a public service of the American Thoracic Society. The content is for educational purposes only. It should not be used as a substitute for the medical advice of one's health care provider.

