

# Staying Focused on Radiologist Wellness

Mary Beth Massat

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Elizabeth Krupinski, PhD

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Preventing radiologist burnout and achieving wellness were important topics long before COVID-19 ravaged the country and world. Although most radiology staff are not on the front lines of the pandemic like their colleagues in emergency rooms and intensive care units, they are not immune to this virus, as evidenced by news that Ohio State University Wexner Medical Center Director of Radiology Jeannie Danker succumbed to the disease.

David Fessell, MD, Professor of Radiology in the Division of Musculoskeletal Radiology at the University of Michigan, co-authored an opinion in the *Journal of the American College of Radiology* on micropractices for burnout prevention and emotional wellness in this era of COVID-19 and beyond.<sup>1</sup> As an executive coach and previous director of the Leadership Curriculum for the University of Michigan Medical School, he has helped lead workshops on emotional intelligence and wellness for physicians in his healthcare system.

“There are small things that people can do that are helpful for mindfulness,” Dr. Fessell says. These include a niche of “micropractices” that can be tied to common activities, such as mindfulness while hand washing. As Dr. Fessell and co-author Cary Cherniss, PhD, wrote in the *JACR*, practicing proper hand hygiene presents an opportunity for self-awareness, self-management and self-connection—from focusing on one’s breathing, to visualizing calmness for the next patient, to ensuring proper hydration. One of Dr. Fessell’s popular workshop micropractices is to name an emotion, something that has some science behind it.

“Functional MRI has showed [that] when people can name their emotions—whether it was

being upset, frustrated, angry, or exasperated—and get the right word on it is sort of like hitting a bullseye,” he explains. “The study showed the blood flow in the brain moved from the amygdala, the emotional center of the brain, to the prefrontal cortex, or the brain region for higher-order thinking where we have more access to our creativity, insights, and perspectives.”

Diaphragmatic breathing can also help reduce stress and lower blood pressure. Dr. Fessell suggests taking three breaths, counting five seconds during each inhale and five seconds for each exhale.

Another technique that Dr. Fessell recommends is writing down three things for which a person is grateful several times each week. A study of this technique found that it has significant positive benefits on burnout and depression as well as promoting happiness and a work-life balance.<sup>2</sup>

## The Added Stress of COVID-19

Although radiology exam volumes are down at many centers during the COVID-19 pandemic, the stress of going to work in a health care setting during the pandemic still exists.

“The problem now is more on the emotional and mental stress of having to go to work and encounter patients who may be infected,” says Elizabeth Krupinski, PhD, Professor and Vice Chair for Research, Department of Radiology and Imaging Sciences, Emory University School of Medicine.

While some diagnostic radiologists are able to work from home, many, including interventional radiologists and imaging technologists, must still have personal contact with patients. With the lag in testing for the novel coronavirus,

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patients who may unknowingly be infected with the novel coronavirus could be entering imaging departments across the US, Dr Krupinski explains.

"[These clinicians] worry about being exposed, plus there's the added stress of who will take care of their children and family if they get infected, as well as the strain of everyone in the family sheltering-in-place," Dr. Krupinski says.

The lack of personal protective equipment and testing kits can further compound the stress on all healthcare workers. In the absence of sufficient testing, one has to assume that the number of affected patients is higher than the reported numbers, Dr. Krupinski says.

"Up to 25 percent of people infected with COVID-19 have no symptoms," she says. "With a 15-minute test, we could evaluate everyone coming through the healthcare system."

Dr. Krupinski is a member of the Association of University Radiologists Radiology Research Alliance Task Force on "Promoting Health and Wellness for Radiologists." The task force has published a review article on the prevalence, causes, and impact of burnout in radiology, along with strategies for dealing with burnout and promoting overall health and wellness. They reported that heavy workload, the isolated work environment for many radiologists, poor communication, and loss of professional autonomy were among the primary reasons nearly half of the radiologists who completed two surveys reported burnout.<sup>3</sup>

Burnout can also hurt accuracy of image interpretation. According to Dr. Krupinski, several studies have shown statistically significant effects on diagnostic accuracy after an eight-hour period of image interpretation. While the effects are more pronounced in residents than in more experienced radiologists, they still exist.

"Fatigue is one cause of burnout, and it does impact accuracy," she adds, noting there are ways for radiologists to combat fatigue and burnout. These include taking periodic breaks to refresh themselves and their eyes, as well as taking walks. Proper ambient conditions and ensuring that not too much air is blowing, which can dry out the eyes, are important departmental or organizational considerations.

Interruptions from other providers or technologists or manually retrieving patient information from medical records, can also lead to frustration and burnout, Dr. Krupinski says.

### Radiologists Addressing Wellness

The Radiological Society of North America has also addressed the issue of radiology wellness by hosting sessions at its annual meeting and convening a working group to write and publish an SA-CME activity, "The Road to Wellness: Engagement Strategies to Help Radiologists Achieve Joy at Work."<sup>4</sup>

Michael DC Fishman, MD, Breast Imaging Section Chief at Boston Medical Center, was part of the group that developed the CME abstract and manuscript. Dr. Fishman says the CME activity was a response to emotional and psychological challenges faced by many healthcare facilities across the country. Based partly on published paradigms and members' own experience, the article lays out a seven-step approach to achieving wellness. It also includes strategies from the American College of Radiology Commission on Human Resources to address inadequate staffing, poor efficiency, prolonged stress, and others risk factors for burnout.<sup>4</sup>

"The first building block is to have a champion who advocates for change and wants to create something that benefits the entire group or institution," says Dr. Fishman, who notes that his getting

involved with the working group was sparked in part on his own previous experience of emotional exhaustion and other symptoms of burnout.

“You also need leadership that is empathetic and sensitive to burnout and well-being, in general,” he says, noting that strong department leadership is essential, as are time and financial resources.

## It Takes a Team to Fight Burnout

While radiologists can certainly perform micropractices and other techniques to reduce stress, fatigue, and burnout, participation from throughout an organization is required to fully achieve physician wellness. Dr. Fishman and his co-authors recommend making wellness a strategic imperative of every healthcare facility and radiology practice. One way is to develop an organization-wide committee that includes radiologists and encourages a facility’s entire staff to prioritize a team approach to reduction of stress and burnout.

“Each team member should be encouraged to share tips, tools, and micropractices to deal with burnout at an individual level and then scale that to a department or institution,” Dr. Fishman says. “It’s important to have a model where failure is not only OK, but also the expectation. That’s part of design thinking: focus on the iterative process in finding the right solutions for the team.”

The effective use of technology can also have a positive impact on radiologist well-being.

“Technology can be a double-edged sword, but imagine what our quarantines and shelter-in-place orders would be like without it,” says Dr. Fishman, who envisions using artificial intelligence to help address radiologist shortages and case triage.

“Companies are trying to develop algorithms that can perform specific triaging functions ... so the radiologist can focus on the most challenging and suspicious cases,” he says. “If 90 out of 100 chest X-rays are negative, a tool that helps us focus on those 10 most complex cases is beneficial.”

Dr. Krupinski also highlights the importance of strong information technology. “If an EHR interferes with their ability to access information, read images, and issue a report, then the job becomes increasingly frustrating and that leads to burnout,” she says, also stressing the need for

sufficient staffing to prevent the need for outsourcing or unreasonable shift length.

“Identifying bottlenecks and inefficiencies can go a long way toward creating a positive environment with better processes and where frustrations won’t occur (as often),” she says.

Efforts are even underway to help medical students prepare for and avoid burnout once they reach the workplace. Dr. Fishman implemented a program at Boston Medical Center to help trainees focus on professional development—a tool he says he didn’t have during his own education and residency.

Dr. Fessell, meanwhile, encourages department leaders to leverage interactive digital video platforms to engage staff while self-quarantining, particularly as radiology volumes fall due to postponements of non-essential exams.

“Focus on what is within your control,” he says. “We can’t take on COVID-19 all by ourselves, but we can spread calm. That, too, can be contagious.”

Dr. Fessell also recommends resources from the Center for Positive Organizations (<https://positiveorgs.bus.umich.edu/>) and the Positive Psychology Center (<https://ppc.sas.upenn.edu/>), for additional insights into enhancing well-being, personal empowerment, and resilience in the midst of challenging times.

“There is no one-size-fits-all solution,” says Dr. Krupinski. “Organizations need [to make] a variety of tools available to faculty, staff, and residents so they can explore what is best for them.”

## REFERENCES

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