

## Half of Med School Graduates Beginning Surgical Residency Feel Unprepared



Written by  
**Skeptical Scalpel**

A survey of 3,693 first- and second-year surgical residents found that 48.1% said medical school did not adequately prepare them for the rigors of surgical residency. Although the more overnight calls a student participated in, the more significantly likely they were to have felt adequately prepared for residency, only 51.6% reported taking call less than twice per month, as did 43.3% during sub-internships. However, one-third of those who took call more than four times per month still felt unprepared. Other factors limiting preparedness included rules and regulations limiting what students could do during clerkships and students acting as observers only when taking overnight call. Meanwhile, residents who felt well prepared for surgical training reported significantly fewer symptoms of emotional exhaustion, depersonalization, and burnout.

The paper, published in *JAMA Surgery*, surveyed residents who were training at hospitals that participated in the Flexibility in Duty Hour Requirements for Surgical Trainees (FIRST) trial.

A faculty member interview as part of the investigation noted that in the current culture, medical students were not allowed to write progress notes. A program director said, "I think that we've done a real disservice to the medical students at this point, giving them an improper perception of what residency means and what going into surgery means in general."

These findings did not surprise me. In one of my first blog posts in 2010, I wrote, "The third-year surgery rotation in medical school is not necessarily a good simulation of what it's like to be a surgical resident." The school I was with at the time had mandated that the students be allowed to go to bed at 11:00pm and only be awakened for major cases. I further explained this in a 2012 post, saying, "I believe a major cause [of attrition] is that medical students do not understand what surgical residency training is really like. In some schools, third-year [surgical] clerkships are as short as 4 to 6 weeks, and part of that time may be spent on clinic or subspecialty rotations." I also pointed out that many schools limited the amount of overnight call for students to once per week, resulting in "an unrealistic picture of what a surgical residency is like."

The authors of the *JAMA Surgery* paper concluded, "Adequate exposure to the necessary realities of surgical training and independent practice, particularly overnight call during the medical school clerkship, may [my emphasis] contribute to improved preparedness, lower attrition, and lower rates of burnout in general surgery residency."

I hope the paper is widely read by medical and surgical educators. ■

## Assessing Pulmonary Rehab Outcomes in Frequent Exacerbators of COPD



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Patients with COPD who experience recurrent exacerbations (frequent exacerbators) are recognized as a distinct clinical phenotype requiring targeted treatment, explains Alex Jenkins, PhD. Although evidence suggests that COPD exacerbations play a key role in poor pulmonary rehabilitation completion, whether frequent exacerbators are more likely to drop out of pulmonary rehabilitation is unclear. "And although observational evidence suggests that pulmonary rehabilitation can help reduce COPD exacerbation incidence, the underlying mechanisms behind this are unclear," adds Dr. Jenkins. With research in healthy populations indicating that moderate exercise can help reduce respiratory infection risk—suggested to be due to the immune-enhancing effects of exercise—Dr. Jenkins and colleagues felt translating these findings to patients with COPD may provide a mechanistic link underpinning the observational evidence base to date.

### Comparing Pulmonary Rehabilitation Responses

For a study published in *COPD*, the researchers sought to explore how frequent exacerbators responded to pulmonary rehabilitation, in terms of clinical outcome and immune responses, compared with patients with COPD who do not experience recurrent exacerbations. Based on past-year exacerbation history, participants with mild-very severe COPD (FEV<sub>1</sub> pred, 52 ± 18%) were categorized as frequent (≥2 exacerbations/year) or infrequent (≤1 exacerbation/year) exacerbators. "We were particularly interested in examining the responses in a clinical setting so that we could show clinical applicability of our findings," Dr. Jenkins says. "To do this, we took blood samples at the first and last class of a community pulmonary rehabilitation program for the assessment of inflammatory markers, as well as collected clinical outcomes (eg, exercise capacity and health-related quality of life) from initial and final assessments for analysis."

Both frequent and infrequent exacerbators benefited from pulmonary rehabilitation in similar fashion—as defined by improvements in classic clinical outcomes such as exercise capacity and health-related quality of life—and should be referred for treatment if eligible, stresses Dr. Jenkins.

Table Pre- & Post-Pulmonary Rehabilitation Blood Cell Counts

Variable	Frequent	Infrequent	p-values Time x group Group
Daily beclomethasone equivalent (µg)	815 ± 524	771 ± 554	0.805
Total leukocytes (10 <sup>9</sup> L <sup>-1</sup> )			0.032*
Pre-Rehab	8.1 ± 2.0	6.9 ± 1.2	0.041**
Post-Rehab	6.7 ± 1.1	6.9 ± 1.2	0.222
Neutrophils (10 <sup>9</sup> L <sup>-1</sup> )			0.057
Pre-Rehab	4.9 ± 1.0	4.1 ± 1.1	0.036**
Post-Rehab	3.8 ± 1.0	4.1 ± 1.1	0.485
Eosinophils (10 <sup>9</sup> L <sup>-1</sup> )			0.723
Pre-Rehab	0.2 ± 0.1	0.2 ± 0.1	0.846
Post-Rehab	0.2 ± 0.1	0.2 ± 0.1	0.479
Lymphocytes (10 <sup>9</sup> L <sup>-1</sup> )			0.115
Pre-Rehab	2.2 ± 0.6	2.0 ± 0.4	0.570
Post-Rehab	2.0 ± 0.5	1.9 ± 0.4	0.454
Neutrophil/Lymphocytes			0.524
Pre-Rehab	2.4 ± 1.0	2.2 ± 1.0	0.123
Post-Rehab	2.1 ± 0.8	2.3 ± 0.8	0.916

Data presented as mean ± stand deviation.  
\*Significant main effect on time ( $p < 0.05$ ).  
\*\*Significant time x group interaction ( $p < 0.05$ ).

Source: Adapted from: Jenkins A, et al. *COPD*. 2020;17(3):253-260.

"However, our findings show that frequent exacerbators of COPD are less likely to complete pulmonary rehabilitation," he adds. "Also, in terms of immune responses, we found that pulmonary rehabilitation reduced inflammatory markers more in the frequent exacerbators group, which warrants further attention in defining the mechanistic link between pulmonary rehabilitation and a reduced incidence of exacerbations. Based on this data, pulmonary rehabilitation may stand to have anti-inflammatory properties, especially in phenotypes characterized as having heightened inflammation (ie, frequent exacerbators)."

Dr. Jenkins notes that leukocyte and neutrophil counts—inflammatory markers known to be influenced by exercise in healthy populations—were reduced with pulmonary rehabilitation in frequent exacerbators of COPD only (Table). "Despite no significant differences between the groups in terms of basal inflammation, this could be attributed to the visually higher leukocyte and neutrophil counts in frequent exacerbators at baseline," he says. "Other blood cell counts, including lymphocytes, eosinophils, and neutrophil/lymphocyte ratio, were not significantly affected by pulmonary rehabilitation. Those with heightened basal inflammation stand to have the

greatest reductions in inflammatory cells counts with pulmonary rehabilitation."

### Looking to the Future

pulmonary rehabilitation should be referred for treatment, given the outlined benefits for both frequent and infrequent exacerbators of COPD. He notes, however, that frequent exacerbators of COPD may need extra support to aid completion of pulmonary rehabilitation.

"From a research perspective, it is too early to suggest what these approaches may be, and the same applies to interpreting the immune responses to rehabilitation in a clinical context," says Dr. Jenkins. "The immune response to exercise aspect is a hypothesis-generating area currently, with much high-quality research required before any evidence can be applied to a clinical context. There is a clear shift in the field of pulmonary rehabilitation research to looking at approaches for characterizing people with COPD into subgroups based on clinical needs associated with disease characteristics. It is accepted that subsets of people with COPD do not respond as well to pulmonary rehabilitation, and it is important to identify the traits underpinning this so that treatment can be better tailored and personalized." ■



## Is it Worth Clearing Up a Wrongful, but Won, Patient Complaint?

*A patient made a completely baseless complaint about me to the state medical board. The complaint was rapidly dismissed by the board after it requested and reviewed the relevant parts of her records. But the patient told many people about her complaint, so there is gossip in our small town that can be harmful to my practice. I don't want to give new life to this, but I would at least like to clear things up. Is the material that was released to the board still under full HIPAA protection? Does it matter that I am no longer her doctor?*

HIPAA permits a doctor to disclose PHI to a medical board making an inquiry that impinges on the public health. The board may also even override a patient's objections to a PHI release. However, such releases of PHI are strictly limited to the board's inquiry into the complaint.

Your obligations to maintain the privacy of a patient continue even after they leave your practice, whether that is amicably or not. Taking both factors into account, you should therefore start from the premise that, as far as your role as the physician, the obligation to maintain privacy outside the actual ruling of the now-resolved case still applies under both HIPAA and state confidentiality laws, which are not infrequently stricter than HIPAA. This would be so even if the board has a policy of maintaining a publicly accessible file of its actions or of posting its decisions on an open website. The board is not a fiduciary for the patient, but you are.

This applies in malpractice actions as well, by the way. That a plaintiff put their medical record into evidence as part of putting their care in issue is a limited waiver of their privacy, not a general release of their PHI.

The likelihood that—because you feel so ill-used by this patient—you will say more than the precisely limited material in the case and so create a privacy breach is just too high. This individual is likely even angrier at you now that she lost and would be only too pleased to have another go at you when comments that you made inevitably get back to her by the same small town grapevine, and while her original claim was false, that you released PHI without authorization would not be.

Just tell people that the matter was resolved in your favor...and stop there. Your inclination to not re-ignite this is the right one. Savor your victory, and don't risk a sanction on which you will actually lose.

*This article was written by Dr. Medlaw, a physician and medical malpractice attorney. It originally appeared on SERMO, which retains all rights to it.*



## In Case You Missed It ATS Issues Guideline on Home Oxygen Therapy for COPD, ILD

In an official American Thoracic Society clinical practice guideline, published in the *American Journal of Respiratory and Critical Care Medicine*, recommendations are presented for the use of home oxygen therapy for adults with chronic lung disease. The authors created six research questions relating to delivery of home oxygen therapy to appropriate patients with COPD and interstitial lung disease (ILD). They found that the quality and availability of the evidence varied. For patients with COPD with severe chronic resting room air hypoxemia, long-term oxygen therapy (LTOT) is strongly recommended (moderate-quality evidence); LTOT is not suggested for adults with COPD with moderate chronic resting room air hypoxemia. Ambulatory oxygen is suggested for adults with COPD with severe exertional room air hypoxemia. For adults with ILD, LTOT is strongly recommended for those with severe chronic resting room air hypoxemia, while ambulatory oxygen is suggested for those with severe exertional room air hypoxemia (very low-quality and low-quality evidence, respectively). Portable liquid oxygen is suggested for patients with chronic lung disease who are mobile outside the house and require continuous oxygen flow rates greater than 3 L/min during exertion. Patients prescribed home oxygen therapy and their caregivers should receive instruction and training on use and maintenance of oxygen equipment and oxygen safety. "We urge the research community and funding agencies to work together to develop a stronger evidence base that will guide clinical practice for oxygen prescription," the authors write.

## Cannabinoid Use Tied to Adverse Outcomes With COPD

New cannabinoid use is associated with elevated rates of adverse outcomes among older adults with COPD, according to a study published in *Thorax*. Researchers used administrative data (2006 to 2016) to identify 185,876 individuals aged 66 and older with COPD. New cannabinoid users (defined as individuals dispensed either nabilone or dronabinol, with no dispensing history for either drug in the year previous) and controls (new users of a noncannabinoid drug) were matched for 36 factors, and respiratory-related morbidity and mortality were compared between the groups (2,106 in each group). Rates for hospitalization for COPD or pneumonia did not significantly differ between the groups (hazard ratio [HR], 0.87). There were significantly higher rates of all-cause mortality among new cannabinoid users versus controls (HR, 1.64). Compared with controls, individuals receiving higher-dose cannabinoids had both increased rates of hospitalization for COPD and pneumonia (HR, 2.78) and all-cause mortality (HR, 3.31). "Older adults with COPD represent a group that would likely be more susceptible to cannabinoid-related respiratory side-effects, since older adults less efficiently break down drugs and hence, drug effects can linger in the body for longer—and since individuals with COPD have pre-existing respiratory troubles and respiratory compromise," a co-author said in a statement. ■

