Respiratory researchers examined whether anatomical structure could be behind some of the differences seen in the prevalence and clinical outcomes of chronic obstructive pulmonary disease (COPD) found between women and men. Their study showed that structural differences existed between the sexes in airways, specifically airway lumen sizes as quantified through chest CT. Overall, airways were found to be smaller in women than in men.

The findings, published in Radiology (2022 Aug 2. doi: 10.1148/radiol.212985), took into account height and lung size. The lower baseline airway lumen sizes in women conferred lower reserves against respiratory morbidity and mortality for equivalent changes, compared with results seen in men, according to the researchers.

Among the key findings seen in a secondary analysis of consecutive participants (9,363 ever-smokers and 420 never-smokers) enrolled in the Genetic Epidemiology of COPD (COPDGene) study, airway lumen dimensions were lower in never-smoker women than in men (segmental lumen diameter, 8.1 mm vs. 9.1 mm; $P < .001$).

In addition, ever-smoker women were also found to have narrower segmental lumen.

High plasma IgE predicts COPD exacerbation, mortality

BY WILL PASS
MDedge News

Patients with chronic obstructive pulmonary disease (COPD) with high plasma immunoglobulin E are more likely to have exacerbations and die from any cause, based on a Danish population-cohort study.

The predictive power of IgE was independent from blood eosinophil level, hinting at different subsets of patients with COPD, first author Yunus Çolak MD, PhD, of Copenhagen University Hospital, and colleagues reported.

"Additional biomarkers are necessary as blood eosinophils alone seem insufficient for risk stratification in COPD," the investigators wrote in Annals of Allergy, Asthma & Immunology (2022 Jul 11. doi: 10.1016/j.anai.2022.06.028).

"Since asthma and COPD share some pathophysiological mechanisms, a logical approach would be to investigate well-known biomarkers for asthma in COPD and vice versa," the researchers added.

Dr. Çolak and colleagues cited previous studies supporting this perspective. Specifically,
diameters than men (7.8 mm ± 0.05 vs. 8.7 mm ± 0.04; P < .001).

Of particular interest, the investigators found that a unit change in the wall thickness or lumen area resulted in more severe airflow obstruction, more dyspnea, worse respiratory quality of life, lower 6-minute walk distance, and worse survival in women, compared with men.

Epidemiologically, while COPD is diagnosed more often in men than women, continuing changes in smoking behavior and increasing urbanization have led to the prevalence of COPD in women fast approaching the rate found in men, according to the researchers.

“These findings highlight how the ‘one size fits all’ approach to COPD management of using exacerbation history alone to guide preventive therapies is incorrect.”

In addition, although the age-adjusted rates for COPD-related deaths have continued to decline in men, in women they have not. Indeed, the category of never-smoking women accounted for two-thirds of COPD as seen in a population-based study (Chest. 2011;139[4]:752-63).

COPDGene, a prospective, multicenter, observational cohort study, enrolled current and former smokers, as well as never-smokers, aged 45-80 years at 21 clinical centers across the United States from January 2008 to June 2011 with longitudinal follow-up until November 2020.

The investigators quantified airway disease through CT imaging using the following metrics: airway wall thickness of segmental airways, wall area percent of segmental airways, the square root of airway volume, and airway fractal diameter of segmental airways, wall area percent of segmental airway wall thickness of segmental airways, the square root of airways, lumen area percent of segmental airways, wall area percent of segmental airway disease through CT imaging of men were active smokers, and reported outcomes. "To me, first and foremost, the Bhatt et al. findings highlight how the ‘one size fits all’ approach to COPD management of using exacerbation history alone to guide preventive therapies is incorrect."

"These findings highlight how the ‘one size fits all’ approach to COPD management of using exacerbation history alone to guide preventive therapies is incorrect."

Not all sex differences in prevalence of COPD have been explained, and structural differences may explain some of these differences. Our findings may have implications for patient selection for clinical trials,” corresponding author Surya P. Bhatt, MD, associate professor of medicine and director of the University of Alabama Imaging Core at Birmingham, said in an interview. The investigators wrote: "Our findings have implications for airflow limitation and the consequent clinical outcomes. ... We confirmed that men have more emphysema than women with equivalent smoking burden, and our results suggest that the lower reserve conferred by smaller airways predisposes women to develop airflow limitation predominantly through the airway phenotype."

All airway remodeling changes were associated with more dyspnea, worse respiratory quality of life, and lower functional capacity in women than in men. The smaller airways in women can result in higher airflow resistance and more turbulent airflow, and thus place a higher ventilatory constraint during exertion. Alteration in each airway measure was also associated with worse survival in women than in men, partially explaining the comparable mortality between the sexes for COPD despite the differing degrees of emphysema."

“I think these findings highlight underappreciated sex differences in the natural history of COPD,” Mohsen Sadatsafavi, MD, PhD, associate professor, faculty of pharmaceutical sciences, at the University of British Columbia, Vancouver, said in an interview. "To me, first and foremost, the Bhatt et al. findings highlight how the ‘one size fits all’ approach to COPD management of using exacerbation history alone to guide preventive therapies is incorrect."

“These findings have the potential to change the management paradigm of COPD in the long term, but before getting there, I think we need to relate these findings to clinically relevant and patient-reported outcomes.” Noting study limitations, the authors stated that a higher proportion of men were active smokers, compared with women, and despite adjustments for smoking status, some of the airway wall differences may be from the impact of active cigarette smoking on airway wall thickness. Five study authors reported receiving support from various government and industry sources and disclosed conflicts of interest based on relationships with industry. The rest reported no conflicts of interest.
IgE-targeting monoclonal antibodies have shown promise in those patients with severe asthma as well as those in whom asthma-COPD overlap, whereas COPD with high IgE has been associated with a history of lung function decline and previous exacerbations.

The present study drew from a database of 46,598 adults enrolled in the Copenhagen General Population study. All participants underwent physical examination, completed a questionnaire, and provided blood for analysis. In this overall population, 1,559 individuals had COPD, among whom 446 had high plasma IgE (at least 76 IU/mL).

Over a median follow-up of 6.9 years in the COPD group, 224 severe exacerbations and 434 deaths of any cause occurred. Compared with COPD patients who had normal plasma IgE, those with high IgE were 43% more likely to have severe exacerbation (hazard ratio, 1.43; 95% confidence interval, 1.07-1.89) and 30% more likely to die of any cause (HR, 1.30; 95% CI, 1.06-1.62).

These risks were similar when excluding patients with IgE of 700 IU/mL or higher.

“These findings suggest that plasma IgE concentration may be a potential prognostic biomarker and treatment target for a subset of COPD patient,” wrote Dr. Çolak and colleagues.

The above risks increased moderately when the high-IgE group was trimmed to include only those with low eosinophils (less than 300 cells/µl), in this subgroup, risk of exacerbation was increased 62% (HR, 1.62; 95% CI, 1.17-2.24), while risk of all-cause mortality was increased 47% (HR, 1.47; 95% CI, 1.14-1.88).

“We were not able to show that individuals with higher blood eosinophils further stratified by IgE had higher risk of severe exacerbation or all-cause mortality,” the investigators wrote, although they noted “the relatively low statistical power in stratified analysis,” considering the wide confidence interval observed.

“Thus, we should be careful with interpreting the results in relation to blood eosinophils and IgE combined,” they suggested. “However, we believe that the mechanisms driving exacerbations through plasma IgE are different from those driving blood eosinophils, and we believe that plasma IgE may be a marker for a subset of COPD patients similar to blood eosinophils, which is compatible with the heterogeneity of patients with COPD.”

According to principal author Shoaib Afzal, MD, PhD, of Copenhagen University Hospital, the findings are “probably no surprise for practitioners that often observe overlap between asthma and COPD pathology.”

As smoking prevalence goes down in many countries, relatively more never-smokers are being diagnosed with COPD, Dr. Afzal said in a written comment, “which means that asthma as a risk factor for COPD is gaining importance.”

While patients with asthma can be treated with IgE-targeting omalizumab, a trial evaluating the same biologic for COPD patients with high IgE was withdrawn because of a lack of recruitment; however, Dr. Afzal suggested that this should not be the end of the story, since these new data imply that more patients could benefit than previously recognized.

“Our observational study has generated a hypothesis that needs to be tested by pulmonologists in randomized interventions trials designed with updated inclusion criteria,” he said.

Such trials are needed, Dr. Afzal went on, because they could help unlock the “huge” potential benefit that may come from characterizing COPD patients beyond “exposure, symptoms, and spirometry.”

“Sadly, the progress in establishing biomarkers in COPD for improving risk stratification and treatment allocation have been rather disappointing in the last decades, with the exception of small successes with eosinophils and perhaps FeNO,” Dr. Afzal said.

Nathaniel Marchetti, DO, medical director of the respiratory ICU at Temple University Hospital in Philadelphia, said the study by Dr. Afzal and colleagues is noteworthy because “biomarkers for COPD are desperately needed to help risk stratify patients for exacerbation risk and risk of disease progression and even mortality.”

In a written comment, Dr. Marchetti agreed with Dr. Afzal that the findings “open the possibility for intervention trials targeting IgE,” which could one day reshape the way patients with COPD are treated.

“I think that biomarkers will become vital in caring for patients with COPD in the future,” Dr. Marchetti said. “There will be medications that will be used to target different pathways of inflammation that drive disease progression and exacerbations. Biomarkers will be important in driving personalized medicine in COPD. We already know the disease seems to vary greatly from patient to patient.”

The study was supported by the Capital Region of Copenhagen, the Danish Lung Foundation, the Velux Foundation, and others.

The investigators disclosed relationships with Boehringer Ingelheim, AstraZeneca, Sanofi Genzyme, and others. Dr. Marchetti disclosed no conflicts of interest.

Air pollution mediates temperature’s impact on COPD

BY HEIDI SPLETE
MEdge News

Air pollution levels mediated the impact of temperature on oxygen saturation in adults with chronic obstructive pulmonary disease (COPD) based on data from 117 individuals.

COPD is attributed to environmental factors including air pollution, and air pollution has been linked to increased risk of hospitalization and mortality because of acute COPD exacerbation, wrote Huan Minh Tran, PhD, of Taipei (Taiwan) Medical University and colleagues. However, the effects of air pollution on climate-associated health outcomes in COPD have not been explored, they said.

In a study published in Science of the Total Environment (2022 Jun 25. doi:10.1016/j.scitotenv.2022.156969) the researchers identified 117 adult COPD patients at a single center in Taiwan. They measured lung function, 6-minute walking distance, oxygen desaturation, white blood cell count, and percent emphysema (defined as low attenuation area [LAA]) and linked them to 0- to 1-year, 0- to 3-year, and 0- to 5-year lags in exposures to relative humidity (RH), temperature, and air pollution. The mean age of the participants was 72.9 years; 93% were men.

Pollution was defined in terms of fine particulate matter (PM2.5). Overall, an increase in RH by 1% was associated with increases in forced expiratory volume in 1 second (FEV1), eosinophils, and lymphocytes. A 1% increase in RH also was associated with a decrease in the total-lobe LAA.

As for temperature, an increase of 1°C was associated with decreased oxygen desaturation and with decreases in right-, left-, and upper-lobe LAA values.

The researchers found that a 1-mcg/m³ increase in PM2.5 was associated with a decrease in the FEV1, as well as with an increase in oxygen desaturation. A 1-mcg/m³ increase in PM10 and PM2.5 was associated with increases in the total-, right-, left, and upper-lobe LAA, whereas COPD patients with low IgE had higher risk of severe exacerbation or all-cause mortality,” the investigators wrote, although they noted “the relatively low statistical power in stratified analysis,” considering the wide confidence interval observed.

"Thus, we should be careful with interpreting the results in relation to blood eosinophils and IgE combined," they suggested. "However, we believe that the mechanisms driving exacerbations through plasma IgE are different from those driving blood eosinophils, and we believe that plasma IgE may be a marker for a subset of COPD patients similar to blood eosinophils, which is compatible with the heterogeneity of patients with COPD."
CORONAVIRUS

Long COVID’s grip will likely tighten as infections continue

BY ELIZA PARTIKA

COVID-19 is far from done in the United States, with more than 111,000 new cases being recorded a day in the second week of August, according to Johns Hopkins University, and 625 deaths being reported every day (https://coronavirus.jhu.edu/region/united-states).

And as that toll grows, experts are worried about a second wave of illnesses from long COVID, a condition that already has affected between 7.7 million and 23 million Americans, according to U.S. government estimates.

“It is evident that long COVID is real, that it already impacts a substantial number of people, and that this number may continue to grow as new infections occur,” the U.S. Department of Health and Human Services (HHS) said in a research action plan released Aug. 4 (www.covid.gov/assets/files/National-Research-Action-Plan-on-Long-COVID-08012022.pdf).

“We are heading towards a big problem on our hands,” says Ziyad Al-Aly, MD, chief of research and development at the Veterans Affairs Hospital in St. Louis. “It’s a real problem. We needed to bring attention to this yesterday,” he said.

Bryan Lau, PhD, professor of epidemiology at Johns Hopkins Bloomberg School of Public Health, Baltimore, and co-lead of a long COVID study there, says whether it’s 5% of the 92 million officially recorded U.S. COVID-19 cases, or 30% – on the higher end of estimates – that means anywhere between 4.5 million and 27 million Americans will have the effects of long COVID.

Surveys showed more than half of adults with long COVID who worked before becoming infected are either out of work or working fewer hours.

“A conservative assumption of 100 million working-age adults have been infected, that implies 10 to 33 million may have long COVID,” Alice Burns, PhD, associate director for the Kaiser Family Foundation’s Program on Medicaid and the Uninsured, wrote in an analysis (https://www.kff.org/policy-watch/what-are-the-implications-of-long-covid-for-employment-and-health-coverage/).

And even the Centers for Disease Control and Prevention says only a fraction of cases have been recorded (www.cdc.gov/coronavirus/2019-ncov/cases-updates/burden.html).

That, in turn, means tens of millions of people who struggle to work, to get to school, and to take care of their families – and who will be making demands on an already stressed U.S. health care system.

The HHS said in its Aug. 4 report that long COVID could keep 1 million people a day out of work, with a loss of $50 billion in annual pay.

Dr. Lau said health workers and policymakers are woefully unprepared.

“If you have a family unit, and the mom or dad can’t work, or has trouble taking their child to activities, where does the question of support come into play? Where is there potential for food issues, or housing issues?” he asked. “I see the potential for the burden to be extremely large in that capacity.”

Dr. Lau said he has yet to see any strong estimates of how many cases of long COVID might develop. Because a person has to get COVID-19 to ultimately get long COVID, the two are linked. In other words, as COVID-19 cases rise, so will cases of long COVID, and vice versa.

Evidence from the Kaiser Family Foundation analysis suggests a significant impact on employment: Surveys showed more than half of adults with long COVID who worked before becoming infected are either out of work or working fewer hours.

Conditions associated with long COVID – such as fatigue, malaise, or problems concentrating – limit people’s ability to work, even if they have jobs that allow for accommodations.
Two surveys of people with long COVID who had worked before becoming infected showed that between 22% and 27% of them were out of work after getting long COVID. In comparison, among all working-age adults in 2019, only 7% were out of work.

Given the sheer number of working-age adults who have long COVID, the effects on employment may be profound and are likely to involve more people over time. One study estimates that long COVID already accounts for 15% of unfilled jobs (https://www.brookings.edu/research/is-long-covid-worsening-the-labor-shortage/).

The most severe symptoms of long COVID include brain fog and heart complications, known to persist for weeks for months after a COVID-19 infection.

A study from the University of Norway published in the July 2022 edition of Open Forum Infectious Diseases found 53% of people tested had at least one symptom of thinking problems 13 months after infection with COVID-19. According to the HHS’ latest report on long COVID, people with thinking problems, heart conditions, mobility issues, and other symptoms are going to need a considerable amount of care (www.covid.gov/assets/files/Services-and-Supports-for-Longer-Term-Impacts-of-COVID-19-08012022.pdf). Many will need lengthy periods of rehabilitation.

Dr. Al-Aly worries that long COVID has already severely affected the labor force and the job market, all while burdening the country’s health care system.

“While there are variations in how individuals respond and cope with long COVID, the unifying thread is that with the level of disability it causes, more people will be struggling to keep up with the demands of the workforce and more people will be out on disability than ever before,” he said.

Studies from Johns Hopkins and the University of Washington estimate that 5%-30% of people could get long COVID in the future. Projections beyond that are hazy.

“So far, all the studies we have done on long COVID have been reactionary. Much of the activism around long COVID has been patient led. We are seeing more and more people with lasting symptoms. We need our research to catch up,” Dr. Lau said.

Theo Vos, MD, PhD, professor of health sciences at University of Washington, Seattle, said the main reasons for the huge range of predictions are the variety of methods used, as well as different sample sizes. Much long-COVID data are self-reported, which makes tracking difficult. “With self-reported data, you can’t plug people into a machine and say this is what they have or this is what they don’t have. At the population level, the only thing you can do is ask questions. There is no systematic way to define long COVID,” he said.

Dr. Vos’s most recent study (www.medrxiv.org/content/10.1101/2022.05.26.22275532v1), which is being peer-reviewed and revised, found that most people with long COVID have symptoms similar to those seen in other autoimmune diseases. But sometimes the immune system can overreact, causing more severe symptoms, such as brain fog and heart problems. “There’s a wide diversity in severity. Someone can have long COVID and be fully functional, while others are not functional at all. We still have a long way to go before we figure out why,” Dr. Lau said.
Majority of younger adults diagnosed at later stages

BY JIM KLING
MDedge News

Advances have been made in earlier diagnosis and better overall survival among older patients with lung cancer, but younger adults have not experienced the same benefit, according to a new study.

The improvements in patients aged 55-80 are likely associated with the introduction in 2013 of low-dose computed tomography screening. “It was unknown whether young adults diagnosed with lung cancer, who are ineligible for screening, have experienced a similar shift to earlier stages of lung cancer. While previous studies have shown that young adults diagnosed with lung cancer have distinct tumor characteristics and survival compared to older adults diagnosed with lung cancer, no study has examined older adults diagnosed with lung cancer,” Ms. Potter told this news organization.

The study was presented by Chi-Fu Jeffrey Yang, MD, at a press conference held at the World Conference on Lung Cancer. Dr. Yang is a thoracic surgeon at Massachusetts General Hospital, Boston.

The difference might be explained by difference in tumor biology, as younger adults are often diagnosed with more aggressive cancers. Other factors include delayed diagnosis and a lack of early-detection strategies for this population. Older patients likely benefited from the onset of lung cancer screening, as well as an increase in non-screening chest CT use in hospital settings, which may lead to more incidental diagnoses, according to Ms. Potter, a research assistant at Massachusetts General Hospital and president of the American Lung Cancer Screening Initiative.

Investigators found that about three in four lung cancer diagnoses among adults aged 20-29 were stage IV disease, and only 8% in that group were stage I. “I was surprised” by the high frequency of stage IV cancer, said Ms. Potter. “I would also highlight that there has been no improvement in early diagnosis among patients aged 20-49 during the study period,” she added.

And although it is often assumed that patients diagnosed at a younger age have better survival, the study painted a grim picture. Five-year survival was 10%-15% among patients diagnosed at age 20-49 with stage IV cancer. “More research is needed to better understand the risk factors, diagnosis, treatment, and survival of lung cancer in young adults,” Ms. Potter said.

There are strategies in development, including biomarkers, machine learning analysis of CT scans, and risk prediction models, but none have yet borne fruit. “Once we are able to [identify high-risk young adults], this will allow us to offer lung cancer screening to these young adults who are at high risk for developing lung cancer,” she said.

The researchers analyzed data from the United States Cancer Statistics (USCS) database and the National Cancer Database (NCDB). They included patients aged 20-79 diagnosed with non–small cell lung cancer (NSCLC) between 2010 and 2018. The study included 1,328 individuals aged 20-29, 5,682 men and women aged 30-39, 39,323 individuals aged 40-49, 202,709 aged 50-59, 410,482 aged 60-69, and 447,366 aged 70-79.

Stage IV diagnoses were most common in the youngest group (76% versus 8% stage I), and steadily declined with age 30-39 (70% versus 10%), age 40-49 (60% versus 14%), 50-59 (52% versus 19%), 60-69 (45% versus 25%), and 70-79 (40% versus 25%; P < .001). The trend reversed among patients aged 80-89, with 45% of patients diagnosed with stage IV cancer, though the rising trend of stage I diagnoses continued at 29%. Between 2010 and 2018, there was a statistically significant increase in stage IV diagnoses among those aged 40-49, and a decrease among those aged 50-59, 60-69, and 70-79.

Five-year overall survival was lowest among patients aged 20-29 at 20%. It was 27%-28% among each 10-year age group up to age 69, then dropped to 24% among those aged 70-79 (P < .001).

The study was limited by a lack of data on disease- or recurrence-free survival, as well as use of biomarkers or targeted therapy.

Ms. Potter had no conflicts.
What are we missing when it comes to obstructive sleep apnea and atrial fibrillation?

BY HARSHA V. MUDRAKOLA, MD, MS; AND BERNARDO SELIM, MD, FCCP

Obstructive sleep apnea is a prevalent and underdiagnosed sleep-related breathing disorder. The estimated prevalence of OSA in the general population of North America ranges from 9% to 38%. This prevalence is higher in men, with a roughly 2:1 male to female ratio, and it also increases with age (Senaratna CV, et al. Sleep Med Rev. 2017;34:70-81). In large epidemiologic studies, the association between OSA and atrial fibrillation (AF) has been well established. The prevalence of OSA in patients with AF is high, with estimates ranging from 21% to 74%. In the OSA population, the Sleep Heart Health Study (Mehra R, et al. Am J Respir Crit Care Med. 2006;173[8]:910-16) and the Multi Ethnic Study of Atherosclerosis (Lin GM, et al. Am J Epidemiol. 2015;182[1]:49-57) found that patients with OSA had a twofold to fourfold increased risk of AF compared with those who did not have OSA. Therefore, the most current American Heart Association guidelines recommend assessing OSA symptoms in all patients with AF and screening for OSA in recurrent patients with AF.

The pathophysiology of OSA involves multiple physiologic stressors that may contribute to an increased propensity for atrial arrhythmias in this population. Among these factors are large changes in intrathoracic pressures that may cause atrial and ventricular wall stretching, recurrent oxidative stress, and a sympathetic surge associated with shortening atrial refractory periods and atrial extrasystoles. By occurring nightly over many years, these physiologic stressors may lead to permanent atrial dilatation and structural remodeling, eventually affecting the conduction system and producing a substrate conducive to reentrant circuits. Other common comorbidities in patients with OSA—such as hypertension, obesity, and metabolic syndrome—may also contribute to arrhythmogenicity (Linz D, et al. JAMA Cardiol. 2018;3[6]:532).

Does treating OSA with CPAP prevent the development of AF?

Previous case-control and retrospective observational studies suggested that having OSA makes treating AF more difficult. Patients with OSA had lower response rates to antiarrhythmic drugs, with the lowest in those with more severe OSA. Rhythm control with cardioversion and catheter-based pulmonary vein isolation was also less successful in patients with OSA due to higher rates of AF recurrence. According to one meta-analysis, patients with OSA had a 31% higher rate of AF recurrence after pulmonary vein isolation (Li L, et al. Europace. 2014;16[9]:1309-14).

Prospective studies using CPAP to treat OSA have not demonstrated a reduced risk of adverse cardiovascular outcomes. The SAVE trial is the most well-known of these studies. The primary endpoint was death from cardiovascular causes (myocardial infarction, stroke, or hospitalization for unstable angina, heart failure, or transient ischemic attack). There was no difference in this outcome between the CPAP and usual care groups. A secondary outcome in this study was new-onset AF detected by electrocardiography, and there was no difference between the CPAP and the usual care group. The low amount of CPAP usage in the treatment group was a commonly cited shortcoming of the SAVE trial—mean usage was 4.4 hours per night during the first month of treatment and subsequently decreased to 3.3 hours per night by the 12-month time point (McEvoy RD, et al. N Engl J Med. 2016;375[10]:919-31).

Capes and colleagues screened patients undergoing direct current cardioversion or catheter ablation. They chose those who were also positive for OSA by polysomnography (apnea-hypopnea index – AHI greater than five events per hour). Twenty-five patients were included in the study and were randomly assigned to either CPAP treatment or usual care. Body mass index, blood pressure, ejection fraction, AHI, and nocturnal desaturation levels were comparable between the two groups. The rate of recurrence of AF and the time point following randomization at which the AF recurred did not differ between the two groups (Capes SM, et al. Int J Cardiol. 2019;278:133-6).

A Norwegian trial by Traaen and colleagues included a larger sample of 108 patients with moderate to severe sleep apnea and paroxysmal AF who underwent catheter ablation. Patients were followed for 5 months before and 12 months after ablation. They were randomly assigned to either CPAP therapy plus usual care or usual care alone. The primary goal was to assess AF burden using implanted loop recorders. There was no significant difference in AF burden between the two groups from baseline to the final 3 months of the study (Traaen GM, et al. Am J Respir Crit Care Med. 2021;204[5]:573-82). These two prospective trials, which had AF recurrence or burden as primary outcomes, found no interaction between AF burden and CPAP use, at least within the first year of therapy. Both trials found that their participants used CPAP for more extended periods of time than the SAVE trial, with over 6 hours in the Capes and coworkers’ trial and nearly 5 hours in the Traaen and coworkers’ study.

Is the lack of efficacy due to starting CPAP too late in the course of OSA?

It has been proposed that there may be a critical early period after the onset of OSA when intervention with CPAP (or alternative therapies) will be most effective in preventing adverse cardiovascular outcomes. An answer will almost certainly necessitate a long-term prospective study enrolling people before they develop OSA. Additionally, the AHI is used in most trials to determine the presence and severity of OSA. However, the AHI has been shown to have a poor correlation with sleep-related symptoms, and it may fail to capture key OSA pathophysiologic stressors (e.g., hyperadrenergic drive, cyclical hypoxemia, etc), which may increase the risk of AF. Other disease characteristics and polysomnographic features may better capture disease severity and the cardiovascular risk factors associated with it. The respiratory arousal threshold, arousal index, degree of sleep loss, hypoxic burden, heart rate variability, and cardiopulmonary coupling are some examples of such features.

Another possible explanation is that AF is not causally related, and the demonstrated association between the two is because both conditions share risk factors such as age and BMI, among others. Or, if they are causally linked, OSA may be a minor contributor, and the magnitude of that contribution is insufficient to reduce the risk of AF significantly by treating OSA. More research is needed to define the salient intervenable aspects of OSA better and design the optimal timing and duration of intervention.
The LIVE CHEST Challenge Championship is back!

BY MAURICIO DANCKERS, MD, FCCP
Chair, CHEST Training and Transitions Committee

A bsentee does make the heart grow fonder. Three years have passed since our last in person CHEST Challenge Championship. It was CHEST 2019 New Orleans when we last saw the enthusiasm and camaraderie of talented fellow teams cheered on by that irreplaceable, engaged audience, creating moments and memories through that magical combination of education and entertainment (“edutainment”). We were blissfully ignorant then to the terrible challenges that would soon come with the pandemic.

Since its inception, now 21 years ago, the live CHEST Challenge Championship has become a highly anticipated capstone event at the annual scientific meeting. Fellows from across the country first compete in a challenging, secure online knowledge quiz from which top-performing programs are selected as finalists.

All along the way, the participants engage in social media challenges that build excitement and collegiality (see tweeted image above). A recent commentary in the CHEST journal highlighted the competition’s important milestones,¹ and organizers continue to innovate year after year.

Dr. William Kelly, creator of CHEST Challenge, noted, "Our 20th anniversary broadcast during CHEST 2021 was our most innovative, had the most generous prizes, and the largest, most interactive audience to date. Our team of amazing committee members, CHEST staff, and contributors are somehow going even bigger this year! When combining never-before-seen challenges, surprises, giveaways, and a special ‘opening act’ with the joy and energy of all of us being back together again in person – I just can’t wait."

“That necessary pivot to online-only events in 2020 and 2021 brought new challenges to the game but also provided lessons to be learned, inspired reflection, and gave us opportunities to interact, play, and learn together in new ways.”

¹Since first approval, studies have shown efficacy and safety of Nintedanib in IPF in 5% of OFEV patients versus 0 and less than 1% in placebo patients, respectively. Diarrhea led to permanent dose reduction in 11% and discontinuation in 5% of OFEV patients versus 0 and less than 1% in placebo patients, respectively. Diarrhea is the most common adverse event leading to dose reduction or discontinuation in clinical trials. Of the patients who experienced diarrhea, treatment was discontinued in 4% of OFEV patients compared with 0% in placebo patients. Diarrhea events were primarily mild to moderate in intensity and occurred within the first 3 months. In IPF studies, diarrhea was the most frequent gastrointestinal event reported in 62% versus 18% of patients treated with OFEV and placebo, respectively. Diarrhea led to permanent dose reduction in 11% and discontinuation in 5% of OFEV patients versus 0 and less than 1% in placebo patients, respectively. Diarrhea led to temporary dose interruption in 9%, temporary dose reduction in 10%, and discontinuation in 3% of OFEV patients versus 0, 0, and 0% in placebo patients, respectively. Diarrhea was generally not associated with other gastrointestinal symptoms, and the majority of patients who experienced diarrhea achieved symptom resolution with dose interruption or rechallenge after a symptom-free interval. Use cautiously in patients with a history of irritable bowel syndrome. Diarrhea has been reported in patients treated with other tyrosine kinase inhibitors. Nintedanib exposure increased with patient age, which may result in increased liver enzymes.

Patients with low body weight (less than 65 kg), patients who are Asian, and female patients may have a higher risk of liver enzyme elevations. Conduct liver function tests prior to initiation of treatment, at regular intervals during the first three months of treatment, and periodically thereafter or as clinically indicated. Measure liver function tests promptly in patients who report symptoms that may indicate liver injury, including fatigue, anorexia, right upper abdominal discomfort, dark urine, or jaundice. Dosage modifications, interruption, or discontinuation may be necessary for liver enzyme elevations.

Since first approval, studies have shown efficacy and safety of Nintedanib in IPF in 5% of OFEV patients versus 0 and less than 1% in placebo patients, respectively. Diarrhea led to permanent dose reduction in 11% and discontinuation in 5% of OFEV patients versus 0 and less than 1% in placebo patients, respectively. Diarrhea is the most common adverse event leading to dose reduction or discontinuation in clinical trials. Of the patients who experienced diarrhea, treatment was discontinued in 4% of OFEV patients compared with 0% in placebo patients. Diarrhea events were primarily mild to moderate in intensity and occurred within the first 3 months. In IPF studies, diarrhea was the most frequent gastrointestinal event reported in 62% versus 18% of patients treated with OFEV and placebo, respectively. Diarrhea led to permanent dose reduction in 11% and discontinuation in 5% of OFEV patients versus 0 and less than 1% in placebo patients, respectively. Diarrhea led to temporary dose interruption in 9%, temporary dose reduction in 10%, and discontinuation in 3% of OFEV patients versus 0, 0, and 0% in placebo patients, respectively. Diarrhea was generally not associated with other gastrointestinal symptoms, and the majority of patients who experienced diarrhea achieved symptom resolution with dose interruption or rechallenge after a symptom-free interval. Use cautiously in patients with a history of irritable bowel syndrome. Diarrhea has been reported in patients treated with other tyrosine kinase inhibitors. Nintedanib exposure increased with patient age, which may result in increased liver enzymes.

Patients with low body weight (less than 65 kg), patients who are Asian, and female patients may have a higher risk of liver enzyme elevations. Conduct liver function tests prior to initiation of treatment, at regular intervals during the first three months of treatment, and periodically thereafter or as clinically indicated. Measure liver function tests promptly in patients who report symptoms that may indicate liver injury, including fatigue, anorexia, right upper abdominal discomfort, dark urine, or jaundice. Dosage modifications, interruption, or discontinuation may be necessary for liver enzyme elevations.

Elevated Liver Enzymes and Drug-Induced Liver Injury (cont’d)

See how the clinical trial data adds up at OFEVhcp.com/experience
"As chair of the Training and Transitions Committee, I recall the innovations: CHEST Challenge has always been about innovation in medical education. "Two decades of history allowed pushing the boundaries into the online arena, allowing competitors to play from their own institutions, audience to join from home, and the camaraderie and support characteristics of the CHEST community to transcend virtual barriers. Using advanced, remote video recordings with virtual proctoring by judges, we were able to offer more extensive skills challenges. Highly engaged online audiences had contagious and hilarious chat room banter. And, virtual watch..."
CHALLENGE: continued from previous page

The CHEST Challenge:12

Cases of proteinuria persisted. Consider treatment interruption in patients treated with OFEV, more than placebo, were consistent with glomerular improvement in proteinuria has been observed after treatment as necessary.

For cases of proteinuria not responsive to treatment, consider discontinuation of therapy with OFEV. In such cases, patients should be monitored for signs of hypotension, edema, and other signs of renal dysfunction. Additional measures to reduce blood pressure and manage fluid and sodium balance may be required.


digestive system disorders

Cardiovascular system disorders:

• Increased risk of cardiovascular events (MACE) including MI, fatal events were reported in 0.6% of OFEV versus 1.8% in placebo patients.

Indicators: 1.

1. NRS5063605020

References:

1. Boehringer Ingelheim Pharmaceuticals, Inc; 2022.

Gastrointestinal perforation (cont’d):

• Treatment of chronic fibrosing interstitial lung diseases

INDICATIONS

• Slowing the rate of decline in pulmonary function in patients with systemic sclerosis-associated interstitial lung disease (SSc-ILD).

DRUG INTERACTIONS

• Drugs that are metabolized by the cytochrome P450 3A4 (CYP3A4) pathway: potent CYP3A4 inhibitors (e.g., ketoconazole, itraconazole, clarithromycin, nefazodone, ritonavir, indinavir) increase exposure to nintedanib by 100%. Concomitant use of potent P-gp and CYP3A4 inhibitors (e.g., erythromycin) with OFEV may increase exposure to nintedanib. In such cases, patients should be monitored for signs of hypotension, edema, and other signs of renal dysfunction. Additional measures to reduce blood pressure and manage fluid and sodium balance may be required.

• Nintedanib may increase the risk of bleeding. Monitor patients on full anticoagulation therapy and if bleeding occurs, discontinue therapy with OFEV.

• Nintedanib may increase the risk of myocardial infarction (MI). Patients with a history of MI, angina, or coronary artery disease may be at increased risk for MI while taking nintedanib. Monitor patients for symptoms of MI and discontinue therapy with OFEV if symptoms occur.

• Nintedanib may increase the risk of arrhythmias, including atrial fibrillation (AF). Monitor patients for symptoms of AF and discontinue therapy with OFEV if symptoms occur.

• Nintedanib may increase the risk of lung neoplasms. Monitor patients for signs of lung neoplasms and discontinue therapy with OFEV if symptoms occur.

• Nintedanib may increase the risk of pneumonitis. Monitor patients for signs of pneumonitis and discontinue therapy with OFEV if symptoms occur.

• Nintedanib may increase the risk of liver toxicity. Monitor patients for signs of liver toxicity and discontinue therapy with OFEV if symptoms occur.

• Nintedanib may increase the risk of kidney toxicity. Monitor patients for signs of kidney toxicity and discontinue therapy with OFEV if symptoms occur.

• Nintedanib may increase the risk of blood dyscrasias, including anemia, neutropenia, and thrombocytopenia. Monitor patients for signs of blood dyscrasias and discontinue therapy with OFEV if symptoms occur.

• Nintedanib may increase the risk of thromboembolic events, including deep vein thrombosis (DVT) and pulmonary embolism (PE). Monitor patients for signs of thromboembolic events and discontinue therapy with OFEV if symptoms occur.

• Nintedanib may increase the risk of seizures. Monitor patients for signs of seizures and discontinue therapy with OFEV if symptoms occur.

• Nintedanib may increase the risk of drug interactions.

• Nintedanib may decrease exposure to nintedanib. Concomitant use of potent P-gp and CYP3A4 inducers (e.g., rifampin, St. John’s wort) decrease exposure to nintedanib. In such cases, patients should be monitored for signs of hypotension, edema, and other signs of renal dysfunction. Additional measures to reduce blood pressure and manage fluid and sodium balance may be required.

• Nintedanib may decrease exposure to nintedanib by 50%. Concomitant use of potent P-gp and CYP3A4 inhibitors (e.g., erythromycin) with OFEV may decrease exposure to nintedanib. In such cases, patients should be monitored for signs of hypotension, edema, and other signs of renal dysfunction. Additional measures to reduce blood pressure and manage fluid and sodium balance may be required.

• Anticoagulants:

• Oral anticoagulants: concomitant use of OFEV and oral anticoagulants is not recommended.

• IV anticoagulants: if concomitant use of OFEV and IV anticoagulants is required, monitor patients closely for signs of bleeding and adjust the dosing of anticoagulants as necessary.

• Antiplatelet agents:

• Aspirin: concomitant use of OFEV and aspirin is not recommended.

• NSAIDs: concomitant use of OFEV and NSAIDs is not recommended.

• P2Y12 inhibitors: concomitant use of OFEV and P2Y12 inhibitors is not recommended.

• Smoking:

• Smoking was associated with decreased efficacy of nintedanib. Encourage patients to stop smoking prior to treatment with OFEV.
seats, holding their breath while teams play to win big in surprise hands-on simulation-based challenges during the Championship,” says Dr. Subani Chandra, who helped implement surprise simulation challenges into the live CHEST Challenge Championship in 2017 that are now an integral part of the experience.

On October 18, at CHEST 2022, championship fellow teams from New York Presbyterian Brooklyn Methodist, Mayo Clinic, and Brooke Army Medical Center, cheered on live by all of us, will compete in order to hoist the Rosen Cup and be declared the CHEST Challenge Champions!

Come experience for yourself the rapid-fire pulmonary, critical care, and sleep medicine knowledge review, the thrill of competition, and see the energy of some of our best and brightest fellows.

Being together in person again to support and learn with each other will be a big win for all of us.

Reference
Two new resources from SEEK, the self-education and knowledge assessment learning tool for chest medicine clinicians, are now available. CHEST SEEK™ Critical Care Medicine: 32nd Edition, the print book developed directly from the critical care medicine board subspecialty examination content blueprints, now includes QR codes that enable you to connect to video imaging with the scan of your phone. Updates also include a new table format for conventional and SI unit lab values, making the content easier to review and reference.

For those who prefer to learn in a digital format, the CHEST SEEK™ Library now offers 130 questions from the 32nd book edition, which
includes case-based questions on acid-base disorders, cerebrovascular disease, and mechanical ventilation. The library now allows you to select your confidence level in your answers when responding and offers a highlighter function to easily identify content for future reference.

According to Editor in Chief and Chair of CHEST SEEK® Critical Care Medicine: 32nd Edition, Steve M. Hollenberg, MD, FCCP, the updates to the print and electronic formats were designed to reflect the changing needs and expectations of learners. "This year’s critical care SEEK edition continues our adaptation to the needs of today’s learners. Even the formulation of the edition itself required adaptation, as COVID necessitated a hybrid in-person/virtual meeting for question review and discussion," he said. "The latest edition has also begun to tailor SEEK to the electronic world while keeping the print format as well," he added. "We are incorporating more videos, with QR codes embedded in the book with links to those videos. New SEEK digital flashcards are available in SEEK Library Plus SEEK continued on following page.
Asthma Control, Airway Mucus, and 129Xe MRI Ventilation After a Single Benralizumab Dose.
By Marrissa J. McIntosh, BSc, et al.

Influenza Testing and Treatment Among Patients Hospitalized With Community-Acquired Pneumonia.
By Abhishek Deshpande, MD, PhD, et al.

By Fernando Diaz del Valle, MD, et al.

Factors Associated With Spontaneous Awakening Trial and Spontaneous Breathing Trial Performance in Critically Ill Adults: Analysis of a Multicenter, Nationwide, Cohort Study.
By Michele C. Balas, PhD, RN, CCRN-K, et al.

Cough-Specific Quality of Life Predicts Disease Progression Among Patients With Interstitial Lung Disease: Data From the Pulmonary Fibrosis Foundation Patient Registry.
By Janet Lee, MD, et al.

Sex and Gender in Lung Disease and Sleep Disorders: A State-of-the-Art Review.
By Amik Sodhi, MBBS, MPH, et al.

Withdrawing Life Sustaining Therapies and the Conundrum of “Brain Death”: A Clinical Case at the Intersection of Spiritual and Clinical Care for Muslims.
By Aasim I. Padela, MD, MSc, FACEP, et al.

By Nicholas P.J. Romatowski, MD, et al.

Impact of Esophageal Pressure Measurement on Pulmonary Hypertension Diagnosis in Patients With Obesity.
By Ghaleb Khirfan, MD, et al.

How I Do It: Treating Severe Refractory and Augmented RLS.
By John W. Winkelman, MD, PhD
Getting to know the incoming CHEST President

Q and A with Doreen J. Addrizzo-Harris, MD, FCCP

Starting January 1, 2023, current President-Elect Doreen J. Addrizzo-Harris, MD, FCCP, will become the new President of the American College of Chest Physicians. Dr. Addrizzo-Harris is a pulmonary/critical care physician with an extensive background in bronchiectasis and nontuberculous mycobacterial infection and medical education working as a Professor of Medicine at the NYU Grossman School of Medicine.

Before she steps into the role of President, we spoke with Dr. Addrizzo-Harris for a glimpse into what she looks to bring to the CHEST organization.

What would you like to accomplish as President of CHEST?

For my presidency, I want to continue the great trajectory CHEST is on by focusing on increasing membership, expanding our educational offerings and advancing our communication strategies, and continuing the initiatives that strive to make diversity seamless and a part of everything we do.

As many know, I have a very strong passion for the work of the CHEST Foundation, and throughout my presidency, I will focus on how CHEST can support and integrate with the Foundation’s goal of improving patient care — whether it’s through supporting clinical research grants, expanding patient education and advocacy events, or through funding programs like the First 5 Minutes”, which touches on strengthening the rapport and trust between clinician and patient and enhances cultural competency by building an understanding of barriers to care. I can also see increasing patient involvement in CHEST to lend a unique perspective to upcoming initiatives.

Another key focus will be to strengthen and expand our membership through many venues. We will focus on increasing physician membership of both new members and lapsed members but will also focus on increasing membership of those other providers who help us care for our patients, including advanced practice providers, respiratory therapists and more. CHEST is already an inclusive organization to a variety of health care providers, but we can do more.

My presidency will also focus on increasing collaborations with our sister societies to find new ways to reach fellows-in-training, as well as residents and medical students who are interested in pulmonary, critical care, or sleep medicine.

“My presidency will also focus on increasing collaborations with our sister societies to find new ways to reach fellows-in-training, as well as residents and medical students who are interested in pulmonary, critical care, or sleep medicine.”

Don’t Miss the Jam-Packed Lineup at CHEST 2022

Make the most of your time at CHEST 2022. Explore the schedule of more than 300 educational sessions. Topics include:

- Controversies in pulmonary vascular disease, critical care, asthma, and sleep medicine
- Current concepts for imaging, diagnosis, and management of interstitial lung diseases
- How to approach difficult conversations with patients
- The impact of socioeconomic disparities in medicine
- The importance of race and gender in managing different disease states

View the full schedule

Register | chestmeeting.chestnet.org

INCOMING PRESIDENT continued following page
What do you consider to be the greatest strength of CHEST, and how will you build upon this during your presidency?

CHEST has many strengths, but I think our greatest is the strength of our team – our members, our faculty, our volunteer leaders, and our staff.

To build on this, my presidency will include a strong communications strategy to reach, educate, and share the variety of opportunities with our members. I want to build on some of the excellent initiatives Dr. David Schulum started this year to continue engaging and showing our newer members, or soon-to-be members, how to get involved with CHEST.

What are some challenges facing CHEST, and how will you address these challenges?

A challenge for all associations, CHEST included, will be redefining what associations look like in the wake of a global pandemic now that virtual and hybrid learning has become a part of what we do on a day-to-day basis. What will the CHEST Annual Meeting look like 3 years from now? What will keep learners coming to a physical meeting when so much is accessible on the internet? What will keep members engaged in settings where we no longer get together in person – like the board review that is now virtual? This will take a lot of strategy, which is already being worked on. It will include ideas like enhancing the networking opportunities to extend beyond the annual meeting, strengthening our international strategy, and continuing to innovate in the area of medical education.

And finally, what do you ask of the members and Fellows of CHEST to support you during your presidency?

I ask that everyone get involved. Please reach out if you have questions. I am (and all our leaders are) very accessible and we can connect you with the right people to get you engaged. Also, please spread the word. Tell your colleagues, trainees, etc., how great CHEST is and get them involved with CHEST too. We have so much to offer. #
Cancer in those with sleep apnea.14–16
have a five-fold increased risk of cancer, and the unique manifestations of pulmonary diseases in women and girls. Then, plan to join the W&P group for a Continuing the Conversation breakfast on Tuesday, October 18, or Wednesday, October 19, at 8:00 AM to learn even more.
Plus, donate $250 to the CHEST Foundation any time before December 31, 2022, to enter a giveaway for your chance to receive two first-class airline tickets, accommodations, and registration to CHEST 2023 in Hawaii. Don’t miss this opportunity to support a great cause and save your seat for next year’s event.

Starting off on the right step
Kick off your CHEST 2022 meeting experience with a with a step kick, a swivel, and a stomp at the Opening Reception on Sunday, October 16, 6:00 to 8:30 PM at Nashville’s famous Wildhorse Saloon. Attendees can learn line dancing steps on the largest dance floor in the downtown area while enjoying Nashville favorites, like Nashville hot chicken and a selection of entrees and desserts featuring a “Jack Daniels” single barrel whisky glaze in honor of the host location’s history of whisky distilling.

Are you a member of a CHEST Network or want to learn more about the groups? Attend the Network Mixer on the second floor of the Wildhorse, also from 6:00 to 8:30 PM to meet CHEST leaders, and learn more about each Section’s unique contributions on important topics in pulmonary, critical care, and sleep medicine.

Challenge accepted
One of the most popular and exciting events at every Fall Annual meeting, the CHEST Challenge Championship, is back in person, Tuesday, October 18, at 7:30 PM. At this Jeopardy-style challenge, watch the three finalist teams of fellows battle it out in a difficult test of their clinical knowledge that rivals even board review examinations. The first-place team will walk away with $5,000 for their fellowship program. Come and cheer your team on to victory!

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NEWS FROM CHEST

Everything but the education

Things to do at CHEST 2022 between education sessions

CHEST 2022 may offer unparalleled access to the newest research in pulmonary, critical care, and sleep medicine, but that’s not all you’ll have to see and do while onsite in Nashville this October. Check out just a few of the many other opportunities for education, networking, and entertainment you can expect to experience at this year’s event.

Have fun – and support important patient initiatives – with the Foundation

The CHEST Foundation is offering a host of opportunities for attendees at CHEST 2022 to reconnect with peers, support initiatives designed to improve the lives of patients with pulmonary diseases, and to have a lot of fun.

Women in the fields of pulmonary, critical care, and sleep medicine can connect with colleagues at the Women & Pulmonary Luncheon on Monday, October 17, from 12:00 to 1:30 PM. Attend this afternoon event to learn more about advancing your career as a woman in pulmonary medicine and the unique manifestations of pulmonary diseases in women and girls. Then, plan to join the W&P group for a Continuing the Conversation breakfast on Tuesday, October 18, or Wednesday, October 19, at 8:00 AM to learn even more.

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From the President

With just about a month to go until CHEST 2022, the Annual Meeting Innovations Group has been hard at work putting some finishing touches on the Nashville experience that we are very excited to unveil. And, while I will not go into great depth (to let others share their creations or, even better, for attendees to enjoy the novel experiences in real-time), I hope to use my space this month to at least whet your appetite for the kinds of things you can expect to see in October. There have long been numerous sessions at the annual meeting covering the newest scientific advancements and cutting-edge research. Contemporary meetings feature more novel session types, including interactive case-based sessions, pro-con debates (such as the popular Pardon the Interruption!), and in-depth reviews of clinical topics that help our members provide the best possible management for patients under their care. Having a variety of ways to learn not only improves content retention but also goes a long way to making the meeting a more enjoyable experience for everyone.

Over the last several years, CHEST meeting content has moved into some atypical spaces and formats, including presentations from our partners in the device and pharmaceutical industries and interactive, educational games you can play against your peers in our CHEST Games booth in the exhibit hall. Undoubtedly, these games represent the most fun you can have while at the meeting; in addition to some classics (like ASPIRATED! and Peer Pressure), we are rolling out two new live game shows where you can test your knowledge, play with (and against) other attendees, and win fabulous prizes! There will also be two new escape rooms, which will grow on the successful adventures that many of you embarked upon over the past 3 years.

For all of the wonderful experiences that we have planned, the best reason to join us in October is to catch up with colleagues. Opportunities to see our long-time friends from whom we have been separated over the last 30 months have been far too few, and CHEST 2022 will include a number of ways to celebrate these reunions. Returning to in-person meetings has been too long in coming, and we will be sure not to squander a moment of our time together.

Something that has come to my attention over the last several weeks is that there may be efforts on the mission to protect CHEST could receive instructions while making certain these directives didn’t fall into the wrong hands. Since you likely noticed some odd linguistic choices, if you’ve gotten this far, I suspect you’ve found the secret message I’ve hidden herein; three randomly-selected members who email me at president@chestnet.org before October 1 with that message as the subject line will win free registration to CHEST 2022 (others will get a nice shout-out)!

Until next time,
David S.
Twenty-five years of life-changing grants

Realizing the impact of the CHEST Foundation

In 1996, the CHEST Foundation was just an idea. CHEST members all over the world had begun raising concerns to the Board of Regents over what their patients were experiencing – challenges like poverty and environmental factors. To Bart Chernow MD, Master FCCP, the founding father of the Foundation, that was the lightbulb moment that CHEST could do more. The Foundation's goal became serving patients by fighting against the global factors that contribute to disparities, focusing not just on clinical medicine but also the social, cultural, and environmental problems surrounding and impacting patient care.

A key driver of this mission was to provide financial grants to advance medicine and support those in need. Twenty-five years and 12 million dollars later, the CHEST Foundation is proud to still be awarding grants to bolster the field of medicine and enhance patient care.

When asked about the grants awarded by the CHEST Foundation, CHEST Past President D. Robert McCaffree, MD, Master FCCP, recalls one that stuck with him because it gave children the gift of a childhood.

1998: Starting at the beginning

In 1998, the American College of Chest Physicians presented Dr. Moises Simpser, MD, FCCP, with its prestigious Governors Community Service Award in recognition of work he’d done to establish an overnight camp for ventilator-assisted children from all over the country. Dr. Simpser created Ventilation Assisted Children’s Center camp (VACC Camp) with the intention of giving families with ventilator-dependent children the “vacation of a lifetime” by offering unique opportunities for recreation and socialization.

“Dr. Simpser’s goal was to give a break to the families caring for ventilator-dependent children; to provide respite for just a week where they wouldn’t have to worry about anything,” said Carlos Gallostra, a retired respiratory therapist and one of many medical volunteers at the camp. “For one week a year, the families didn’t have to worry about therapies, administering medications, food, nothing.”

With the assistance of the volunteers, VACC Camp was able to provide experiences for the children that would have been nearly impossible elsewhere, like getting into a swimming pool. "To see the pictures of these children with their tracheostomies on a ventilator floating in a pool ... you just had to smile or laugh. It was such a joyful picture," says Dr. McCaffree. "I will always remember that, not just because it was our first granting year but because it was such a great project."

Dr. Simpser died in 2017, but his legacy lives on through the camp, which is still operational. In its 30 years, VACC Camp has hosted more than 180 families for life-changing vacation experiences.

While the Foundation awarded its first grants to US-based projects, the program quickly expanded internationally.

2010: Running water in Peru

Robert Hyzy, MD, FCCP, medical director of the Critical Care Medicine Unit and co-chair of the Critical Care Committee at the University of Michigan Hospital in Ann Arbor, Michigan, also serves as medical director for Amazon Promise, a nonprofit organization that provides medical care to remote communities in the Upper Amazon Basin of northeastern Peru.

In 2010, Dr. Hyzy received a CHEST Foundation grant to fund plumbing improvements for an Amazon Promise free clinic in Belén, a poor community near the city of Iquitos. “Amazon Promise has a clinic on stilts in the air with a small waiting room,” said Dr. Hyzy. “There’s no running water, so … we built this clinic, but we really had no plumbing of any sort.”

His proposal to the Foundation requested funding for a water purification system, composting toilet, and a shower in the back of the facility. After receiving the grant, Amazon Promise worked with Engineers Without Borders to install the components, which took less than a week to complete.

The funds also helped propel the clinic into a more fully functional center for local Peruvian staff, American staff, and the teams of University of Michigan medical students and residents who travel to Belén every year with Dr. Hyzy.

“It made a big difference for us to be able to use our clinic more fully [and] more comfortably…” he said. “It’s been roughly 10 years, and that equipment is still in use today.”

Since they made the system improvements, Dr. Hyzy and his teams have served thousands of people over the course of 10 trips. During each visit to Belén, they typically see 200 to 250 people a day for 1 or 2 days, often with a focus on deworming children and providing them with antiparasitic medications and multivitamins.

When Dr. Hyzy reflected on his opportunities to serve in the clinic, he said the most meaningful part was connecting with patients. “In a way, the greatest impact we have is on people who are largely forgotten knowing they’re not forgotten,” he said. “The third world deserves nothing less than university-based medical critical care.”

2021: Offering a hand up, not a handout

Valerie Andrews, a community leader in south Sacramento, California, is using a recent grant to continue serving as a conduit between residents with asthma and their doctors.

She is the founder and program director of the JUDAHH Project, a nonprofit organization that works to help empower underserved residents of Sacramento with a “hand up” instead of a “handout.” Andrews plans to use her grant funding from the CHEST Foundation to educate the community on asthma detection, treatment, and management.

Andrews will continue her work teaching residents how to use their inhaler, the importance of developing a personal asthma action plan, and the right questions to ask their doctor. JUDAHH also offers home visits to conduct an asthma trigger assessment and help remediate environmental triggers in partnership with Regional Asthma Mitigation Project (RAMP).

“[Our goal is] just to bring the information because we know that health plays a significant part in continuing in the underserved community. If they have access to health, then the likelihood of them succeeding is better,” said Andrews.

The work inspired Andrews to pursue other grant opportunities through the CHEST Foundation. Andrews plans to implement the project until June 2023. She hopes to help those who suffer from asthma identify household and environmental triggers and, ultimately, mitigate the need for ED visits, missed school, and work absences.

To the next 25

Twenty-five years ago, a handful of visionaries, including Dr. Bart Chernow, came together with a mission to give back to those who need it most. The CHEST Foundation is able fund projects dedicated to furthering this mission because of the continued support of those who donate. Looking ahead to the next 25 years, the Foundation will continue to advance medicine and public health through awarded grants, as well as support promising initiatives aimed at eliminating disparities.

In the words of one of the Foundation's trailblazers, Dr. McCaffree, “Awarding these grants is a great way for CHEST to not only support our members but to also thank our membership for ensuring the future of research and community involvement. Grants help us recognize the present and support the future.”

To learn more about Amazon Promise, visit amazonpromise.org.

To learn more about the JUDAHH Project, visit thejudahhproject.com.
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