Inhalation exposures in troops in Iraq and Afghanistan include high levels of dust, various combustion products, and open-air burn pits where trash and used uniforms are discarded.

**Pneumonia Trends May Be Due to Coding Changes**

*Lower rate offset by other diagnoses.*

**New Sleep Criteria Proposed for DSM-5**

BY MARY ANN MOON
Elsevier Global Medical News

Noteable declines in both pneumonia hospitalizations and inpatient mortality attributed to pneumonia actually appear to be statistical artifacts related to changes in diagnostic coding rather than to bonafide improvements in health care, according to a recent report.

A nationwide 27% reduction in pneumonia hospitalizations and an accompanying 28% reduction in pneumonia mortality were offset by concomitant rises in the rates of hospitalization and death due to sepsis (with a secondary diagnosis of pneumonia) and to respiratory failure (with a secondary diagnosis of pneumonia), said Dr. Peter K. Lindenauer of the Center for Quality of Care Research, Baystate Medical Center, Springfield, Mass., and his associates.

The findings also suggest that ratings of hospital performance based on pneumonia statistics may be inaccurate because of variation across hospitals in the use of diagnostic codes for pneumonia, sepsis, and respiratory failure, they added.

Noting that several epidemiologic studies have reported improvements in pneumonia statistics but that there haven’t been any “care-transforming technologies” to account for this improvement, Dr. Lindenauer and his colleagues analyzed trends in pneumonia hospital admissions and outcomes over time. They used...
CRITICAL CARE MEDICINE

Meds vs. Machine: Postop DVT Prophylaxis Debate

BY DAMIAN McNAMARA
Elcoer Global Medical News

MIAMI BEACH — An internist and an orthopaedic surgeon recently ward off on the best strategy to prevent deep vein thrombosis after joint-replacement surgery.

Anticoagulant agents effectively prevent DVT after total hip replacement or total knee replacement, according to a large body of scientific studies, the internist argued. In contrast to the well-studied, relatively small number of anticoagulants, the profusion of mechanical devices are supported by more limited, less-rigorous research in the medical literature, Dr. James D. Douketis, FCCP, said at a meeting on perioperative medicine sponsored by the University of Miami.

The risk of major or clinically relevant bleeding associated with anticoagulant use can be minimized with appropriate administration, such as waiting at least 12 hours after surgery to start therapy, said Dr. Douketis, director of the vascular medicine program at St. Joseph’s Healthcare in Hamilton, Ont.

“I agree that the bleeding risk is relatively low if these drugs are used properly, but why do you have to take any risk?” orthopedic surgeon Dr. Clifford W. Colwell Jr. asked at the meeting.

Most bleeding episodes, when they do occur, are easy to mitigate, Dr. Douketis said. Unlike VIDs, most of these events do not have long-term consequences, he said. In addition, mechanical methods are not always benign. There are reports of trauma associated with use of intermittent compression devices, for example.

Dr. Colwell countered that a zero risk of an adverse bleeding event is one of the main benefits of mechanical devices to prevent DVT. For this reason, these devices are ideal for patients at a high risk for bleeding who cannot take anticoagulants, he said. Enhancement of the effectiveness of drug-based thromboprophylaxis and reduced leg swelling are other potential benefits of these devices.

The effectiveness of mechanical compression devices is directly correlated with how much time they are worn, and these devices are nearly complication free, said Dr. Colwell, medical director at the Shiley Center for Orthopaedic Research and Education at Scripps Clinic in La Jolla, Calif.

But their design and size can impede ambulation after surgery. There are portable intermittent compression devices, or PICDs, that can be worn out of bed and out of the hospital, Dr. Colwell said. They synchronize compression with the patient’s respiratory phase and provide a naturalistic phasic venous flow.

An initial study of efficacy in 121 patients “was small … I was not convinced,” Dr. Colwell said (J. Arthroplasty 2006;21:206-14). A more recent multicenter, prospective study by Dr. Colwell and his associates compared effectiveness of the PICD to low-molecular-weight heparin for 10 days for total hip arthroplasty and was more compelling (J. Bone Joint Surg. Am. 2010;92:927-35).

At 3 months, the DVT rate was “essentially the same” at 4.1% in the device group, compared with 4.2% in the anticoagulant cohort. There were no fatal pulmonary embolisms or any deaths among the 410 randomized participants. In addition, major bleeding occurred for 0% of the device wearers and 6% of the pharmacologically treated patients.

“I acknowledge that mechanical prophylaxis has a role after major orthopaedic surgery, but it’s a second-line strategy,” said Dr. Douketis, who also is on the medicine faculty at McMaster University. Pharmacologic prophylaxis should be first-line therapy because it has been shown to prevent DVT and PE, including fatal PE, he said.

A meta-analysis by Dr. Douketis and his colleagues showed extended-duration prophylaxis with heparin or warfarin significantly decreased the frequency of symptomatic venous thromboembolism, compared with placebo after total hip or knee replacement (Lancet 2001;358:9-15).

There is less confidence about prevention of proximal DVTs with mechanical devices, Dr. Douketis said. The risks should be weighed against this efficacy, he said. The risk of major or clinically relevant bleeding was 4% in 1,101 patients treated with apixaban and 5% in 1,508 patients treated with enoxaparin (Lancet 2010;375:807-15).

Dr. Douketis remained unconvinced about PICDs and said he preferred to withhold judgment until more studies are completed. “We are much more confident with anticoagulants than mechanical strategies,” Dr. Douketis disclosed that he is a consultant or advisory board member for AGENT, Ortho-Jansen, Pfizer, Sanofi Aventis, Bayer, Bristol-Myers Squibb, Astra Zeneica, and Boehringer Ingelheim. Dr. Colwell disclosed that he is a consultant for and receives research grants from Medical Compression Systems, which makes a PICD.

Dr. Carl Kaplan, FCCP, comments: Post-op orthopedic patients have a known increased risk for VTE. This article highlights the challenging navigation, from the bedside pulmonar y consultant or primary physician standpoint, among the various options and new and complex choices for the post-op orthopedic patient. The ACCP’s recently published VTE prevention guidelines ( Chest 2012;141[2 suppl:e278S-325S) provide an excellent, efficient, and helpful tool to facilitate decision making among these options based on evidence-based medicine and expert opinion. The guidelines include the patient’s values and preferences in this process.

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ONLY inhaled prostacyclin analogue approved as an add-on to oral PAH monotherapy¹
- 52% of patients improved 6MWD by greater than 20 m³
- Improvement in 6MWD at peak (20 m) and trough (14 m) exposure³

Dosing regimen fits into patients’ schedules
- Short treatment sessions: just 2 to 3 minutes, 4x daily²
  - One plastic ampule per day—no need to replace ampule for each treatment session¹
  - About 5 minutes a day for device preparation—once in the morning, and the device is ready to go all day¹
- Treatment timing can be adjusted for planned activities¹

INDICATION
Tyvaso is a prostacyclin vasodilator indicated for the treatment of pulmonary arterial hypertension (PAH) (WHO Group 1) to improve exercise ability. Studies establishing effectiveness included predominately patients with NYHA Functional Class III symptoms and etiologies of idiopathic or heritable PAH (56%) or PAH associated with connective tissue diseases (33%).

The effects diminish over the minimum recommended dosing interval of 4 hours; treatment timing can be adjusted for planned activities.

While there are long-term data on use of treprostinil by other routes of administration, nearly all controlled clinical experience with inhaled treprostinil has been on a background of bosentan (an endothelin receptor antagonist) or sildenafil (a phosphodiesterase type 5 inhibitor). The controlled clinical experience was limited to 12 weeks in duration.

IMPORTANT SAFETY INFORMATION
- Tyvaso is intended for oral inhalation only. Tyvaso is approved for use only with the Tyvaso Inhalation System
- The safety and efficacy of Tyvaso have not been established in patients with significant underlying lung disease (such as asthma or chronic obstructive pulmonary disease) and in patients under 18 years of age. Patients with acute pulmonary infections should be carefully monitored to detect any worsening of lung disease and loss of drug effect
- Tyvaso may increase the risk of bleeding, particularly in patients receiving antiplatelet agents
- In patients with low systemic arterial pressure, Tyvaso may cause symptomatic hypotension. The concomitant use of Tyvaso with diuretics, antihypertensives, or other vasodilators may increase the risk of symptomatic hypotension
- Hepatic or renal insufficiency may increase exposure to Tyvaso and decrease tolerability. Tyvaso dosage adjustments may be necessary if inhibitors of CYP2C8 such as gemfibrozil or inducers such as rifampin are added or withdrawn

Adverse events
- The most common adverse events seen with Tyvaso in ≥4% of PAH patients and more than 3% greater than placebo in the placebo-controlled clinical study were cough, headache, throat irritation/pharyngolaryngeal pain, and syncope¹

STUDY DESIGN: TRIUMPH I was a 12-week, randomized, double-blind, placebo-controlled, multicenter study of patients with PAH (WHO Group 1) who were receiving a stable dose of bosentan or sildenafil for 3 months before study initiation. Patients were administered either placebo or Tyvaso in 4 daily treatment sessions with a target dose of 9 breaths (54 mcg) per session over the course of the 12-week study. Primary endpoint was change in 6MWD at 12 weeks. Secondary endpoints included time to clinical worsening, Borg dyspnea score, NYHA functional class, trough 6MWD at week 12 (obtained at least 4 hours after study drug administration), peak 6MWD at 6 weeks, quality of life as measured by the MLWHF questionnaire, and PAH signs and symptoms.¹

Steroid Exposure Risk High in ‘Allergic Triad’

BY MIRIAM E. TUCKER
Elsevier Global Medical News

ORLANDO – Children who have at least two disorders of the “allergic triad” — asthma, allergic rhinitis, and atopic dermatitis — often receive prescriptions from multiple physicians and may be at risk for substantial exposure to exogenous corticosteroids.

This finding, from a chart review of 197 pediatric patients seen between 2000 and 2010 at a single U.S. allergy/immunology clinic, “reinforces the need for improved communication and coordination of care,” said Dr. Min Jung Lee of Cohen Children’s Medical Center of New York.

Of the 197 patients who had been diagnosted with at least two of the three ICD-9 codes for asthma, allergic rhinitis, and/or atopic dermatitis, 48% had all three conditions, 67% had both asthma and allergic rhinitis, 16.5% had asthma and atopic dermatitis, and 16.5% had allergic rhinitis and atopic dermatitis, Dr. Lee said at the annual meeting of the American Academy of Allergy, Asthma, and Immunology.

Of the patients with asthma, 74% were treated with inhaled steroids. Of those, 36% received steroid prescriptions from multiple physicians, 29% from primary care physicians alone, and 9% from pulmonologists alone. Of the patients with allergic rhinitis, 62% were treated with intranasal steroids, of which 20% were given prescriptions by multiple physicians, 67% by allergists alone, 5% by primary care physicians alone, and 1% by otolaryngologists alone. Of those with atopic dermatitis, 75% were treated with topical steroids, of those, 41% received steroid prescriptions from multiple physicians, 23% from dermatologists alone, and 21% from allergists alone, and 7% from primary care physicians alone.

Dr. Lee said that “access to electronic pharmacy records would also be very beneficial for each of us to know what our patients are taking.”

In response to another audience member’s question regarding the role of electronic health records in improving communication between physicians, Dr. Lee responded: “No, we didn’t see any communication between physicians.”

Major Finding: Treatment with corticosteroids for both conditions, with asthma and allergic rhinitis, 59% of those with asthma and atopic dermatitis, and 6% of those with allergic rhinitis plus atopic dermatitis. In patients who had all three conditions, 41% were treated with corticosteroids for all three and 36% for two of the three.

Data Source: The findings come from a chart review of 197 pediatric patients seen at a single allergy clinic over a 10-year period.

Disclosures: Both Dr. Lee and Dr. Fagin stated that they had no disclosures.

were small numbers from each group for which the specialty of the prescriber was unknown.

Among the children with both asthma and allergic rhinitis, 55% were treated for corticosteroids for both conditions and 38% for one of the two conditions, while just 7% were not treated with corticosteroids. For those with asthma and atopic dermatitis, 59% were prescribed corticosteroids for both conditions and 23% for just one of the two, while 21% received no corticosteroids. For the atopic rhinitis plus atopic dermatitis group, 6% were treated with corticosteroids for both conditions and 82% for just one, while 12% were not treated at all.

For the 95 patients who had all three conditions, 41% were treated with corticosteroids for all three, 36% for two of the three, and 19% for one of the three. Just 4% of that group was not treated with corticosteroids, Dr. Lee reported.

In response to an audience member’s question about whether the prescribers were coordinated, she replied, “No, usually we didn’t see any communication between physicians.”
Vitamin D May Boost Fluticasone’s Rhinitis Effect

JULY 2012 • CHEST PHYSICIAN PULMONARY MEDICINE

BY MITCHEL L. ZOLER

ORLANDO – Daily oral treatment with a vitamin D supplement significantly improved the ability of fluticasone nasal spray to relieve the total, daytime symptoms of seasonal rhinitis in a pilot, placebo-controlled study of 35 patients.

Two weeks of daily treatment with 4,000 IU of a standard, the over-the-counter vitamin D pill also produced a strong trend toward improving the impact of a standard fluticasone nasal spray on nasal symptoms, and improved rhinocconjunctivitis quality of life, James Lane reported at the annual meeting of the American Academy of Allergy, Asthma, and Immunology.

But because the study population was so small, the next step will be to repeat the result in a larger number of patients, said Mr. Lane, a researcher in the department of surgery at the University of Chicago.

“This was a shot in the dark, to see if there was any chance of it working for rhinitis. I hope we’ll get funding [from the National Institutes of Health] because industry won’t fund this,” Dr. Baroody said in an interview. He and his associates tested vitamin D because of prior evidence that it can improve immune function.

Dr. Baroody has submitted a proposal to the NIH for a four-arm follow-up study: vitamin D alone, fluticasone alone, both agents together, and a double-placebo group. About 150 patients in each arm — 600 patients in total — will be needed to produce adequate statistical power.

“There is no way we could do that by ourselves. If the government doesn’t fund it, it dies here,” he said.

The study enrolled patients who were 18-45 years old and had at least a 2-year history of seasonal allergic rhinitis to tree, grass, or ragweed pollen during the pollen seasons of 2010 and 2011. The patients also needed to have a positive skin-test reaction to the pollen types, and had to show at least a 35% improvement in their peak nasal flow following treatment with oxymetazoline, a decongestant.

The researchers had all patients self-administer a 100-mcg fluticasone propionate nasal spray into each nostril once daily, and randomized patients to additional daily treatment with 4,000 IU of oral vitamin D or placebo for 14 days.

The enrolled patients had an average age of about 28 years, with roughly equal numbers of men and women. At baseline, their average level of serum vitamin D was about 30 ng/mL. By the end of the study, the average vitamin D level of the patients randomized to take a daily vitamin D pill had risen to 37 ng/mL, while the average level in the placebo patients had not changed from baseline.

After 2 weeks in the study, the daytime total-symptom score throughout the study period fell by an average of 3.7 points in the placebo group and by 6.9 points in the patients taking vitamin D, a statistically significant difference. The 24-hour nasal-symptom score throughout the study fell by an average of 7.6 points in the placebo patients and by 11.3 points in the vitamin D group, a difference that approached significance. Both the total symptom scores and nasal symptom scores fell sharply in the vitamin D patients during the first week of the study and then remained low during the second week. In contrast, scores fell more gradually in the placebo patients, but by the final, 14th day of the study, average scores in the placebo patients approached those of the patients on vitamin D. This pattern suggested that vitamin D helped hasten patient responses to fluticasone, Dr. Baroody said.

The researchers also measured the patients’ rhinocconjunctivitis quality of life at baseline and after 2 weeks on treatment. This measure fell by an average of 2.0 units in the placebo patients and by an average of 2.5 units in the patients who took vitamin D. With this metric, a reduction of at least 0.5 units is considered clinically meaningful. The results therefore showed that while the patients taking fluticasone alone had a meaningful quality of life improvement, the incrementally better improvement in patients also taking vitamin D was even more clinically meaningful, although the between-group difference of 0.5 units was not significant.

Working Out Works Well in Asthma

ORLANDO – People with asthma in a structured exercise program had sustained quality-of-life improvement of 2 years’ duration, a study has shown.

Although exercise is often anathema to people with asthma, previously sedentary people with asthma who were randomized in a small study to engage in three exercise sessions per week reported a twofold greater improvement in their symptom-related quality of life, compared with those who did not increase their routine exercise, reported Dr. Thomas Platts-Mills, professor of medicine, allergy and clinical immunology at the University of Virginia in Charlottesville.

The preliminary study was designed to convince health insurers to fund structured exercise programs in commercial VITALS

Major Finding: At week 8, scores on the symptom domain of an asthma quality-of-life questionnaire were significantly higher among exercisers, with 78.3% of responses indicating improvement, compared with 39.5% of responses by non-exercising controls (P = .05).

Data Source: This was a randomized study.

Disclosures: The study was supported by Southern Health Services. Dr. Platts-Mills and colleagues reported that they had no conflicts of interest.

gyms for patients with asthma, Dr. Platts-Mills said at the annual meeting of the American Academy of Allergy, Asthma, and Immunology.

“You’ve got three obstacles to overcome: One is that the patients think that heart rate is the only number they have to increase. We also think it will make their asthma worse,” he noted. “Second, the gym may be resistant, because they think they’ll have asthma attacks to deal with; and third, the insurance companies are.”

The investigators recruited from a local commercial health plan 13 patients with persistent asthma. The participants were all treated with inhaled corticosteroids (ICS) and leukotriene agents that were on the health plan’s formulary.

All 13 patients were identified as engaging in no or little exercise (fewer than two sessions of aerobic activity per week over the past 6 months). Patients who were more than 3 hours per week in moderate-level physical activity were excluded, as were patients with active pulmonary infections, cardiovascular disease, musculoskeletal disease, or other conditions that might impair their ability to exercise.

The authors convinced the insurer to pay a gym to enroll plan members with asthma, and they helped gym staff establish asthma protocols that included monitoring asthma clients for symptoms and providing access to nebulizers.

“The gym, we hope, will want to do this, and it’s very much in the insurance company’s favor to do it,” Dr. Platts-Mills said. “But it’s still very difficult to get people to do regular exercise.”

BY NEIL OSTERWEIL

ORLANDO – People with asthma who engaged in a structured exercise program had sustained quality-of-life improvement of 2 years’ duration, a study has shown.

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Major Finding: Daily fluticasone nasal spray and oral vitamin D cut total daytime symptom scores by 6.9 points, compared with 3.7 points for fluticasone alone.

Data Source: Data came from a randomized, placebo-controlled, 2-week study of 35 patients with seasonal allergic rhinitis at one U.S. center.

Disclosures: Mr. Lane and Dr. Baroody said that they had no relevant disclosures.

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Local and Regional Lung Allocation Systems Conflict

BY MARK S. LESNEY
Elsevier Global Medical News

FT. LAUDERDALE, FLA. – More than a decade ago, the Department of Health and Human Services issued the “Final Rule on Organ Procurement and Transplantation Network Amendments,” which was intended to ensure that “organ[s] will be [allocated] based on medical criteria, not accidents of geography.” Despite the introduction of this final rule, disparities in waiting list outcomes are known to be significantly influenced by where the transplantation candidate lives, and lower priority candidates are receiving organs at the expense of the more severely ill. Although all candidates are ranked based on an objective priority score known as the Lung Allocation Score (LAS), lung allocation remains a locally based system. Organs are first allocated based on geography regardless of LAS. Therefore, organs are initially offered only to the subset of matched lung transplant candidates (based on blood group and size) within the donor’s local Donor Service Area (DSA). As a result, if an available organ is first accepted for a candidate within the local DSA, it is never offered to potentially more severely ill candidates at the broader regional or national level – even if the regional or national candidate has a much higher priority score. There is evidence that this is a frequent occurrence, according to research presented by Dr. Mark J. Russo at the annual meeting of the Society of Thoracic Surgeons. Dr. Russo and his colleagues analyzed data provided by the United Network for Organ Sharing to determine the frequency with which donor lungs were allocated to local candidates when blood group- and size-matched candidates with a higher LAS existed in the same region.

Their study cohort included all locally allocated organs for double lung transplantation in the United States in the year 2009. The authors then identified all cases in which ABO blood group- and height-matched (within 10 cm) double lung candidates in the same region had a higher LAS than did the local candidate who actually received the lung. They also calculated the number of these events in which the LAS difference was greater than 10 and greater than 25. The number of these bypassed regional candidates who then died on the waiting list was also determined. Among the 580 locally allocated double lung transplants analyzed, there was a mean of 6.0 blood group- and height-matched double lung events per transplant (3,454 total, impacting 1,193 different candidates) in the same region where candidates had a higher LAS than did the local candidate who received the organ. A total of 24% (820) of the events involved skipping over a regional candidate with an LAS greater than 10 points higher than the local recipient, with 7.2% (250) of skipping events a regional candidate with an LAS greater than 25 points higher than the local recipient. Overall, 185 of the bypassed regional candidates died on the waiting list.

Dr. Russo said that although the issue of transplantation in important geographic areas of the country is severe, and the adverse impact of an additional hour or two of ischemic time due to transporta- tion is not clinically significant, and should not be a major factor in the decision as to local vs. regional candidates. Ideally, a suitable donor organ would be available for every lung transplant candidate who could benefit from transplantation. Unfortunately, there remains a critical scarcity of donor organs available for transplantation. Therefore, efficient allocation of organs is necessary to ensure maximum benefit from the available organs,” according to Dr. Russo, a cardiothoracic surgeon at the University of Chicago Medical Center.

“Locally based allocation results in a high number of events in which a lung is allocated to a lower-priority candidate when an appro- priately matched, higher-priority candidate exists in the same region. As a result, low-priority candidates, defined by an LAS less than 50, account for nearly 90% of lung transplant recipients, while candidates with higher LAS scores, defined by an LAS greater than 75, continue to die at extremely high rates while await- ing transplantation,” Dr. Russo stated.

Because this study considered double lung candidates only, did not consider the possibility of national matching, and did not allow for blood groups to be crossed, it may underestimate the frequency of these events and lives lost, he said.

“These findings suggest that further study of organ sharing over broader geo- graphies should be pursued if it would improve [waiting] list outcomes, including higher rates of organ al- location to higher-priority candidates, improved survival on the waiting list, and greater net benefit from the organs available for transplantation,” he said.

Kids of Prenatal Smokers Have Vascular Damage

BY DENISE NAPOLI
Elsevier Global Medical News

A 5 years old, the children of mothers who smoked in pregnancy had significantly greater carotid intima-media thickness (CIMT) and arterial wall distensibility than those of nonexposed children.

Moreover, there was a clear positive trend between the number of cigarettes smokers by mothers in pregnancy and vascular health, a finding that adds to the credibility of gestational smoking being causally related to offspring vascular damage,” wrote Dr. Caroline C. Geerts and colleagues (Pediatrics 2011 Dec;128(6):1042/1049).

In what the researchers called the first study to report on prenatal smoking and arterial characteristics in nonsmoking offspring, Dr. Geerts of the University Medical Center Utrecht (the Nether- lands) and colleagues looked at 259 children who underwent ultrasound at age 5 years to determine carotid artery inti- ma-media thickness (CIMT) and arterial wall distensibility.

The participants’ mothers had previ- ously completed surveys when their children were 4 weeks of age, answering questions about smoking status at that time and during the pregnancy. A simi- lar questionnaire was administered at the time of the child’s ultrasound.

Most mothers (244 of 259) reported that they did not smoke during preg- nancy, according to the questionnaire. At birth, children born to smokers did not differ significantly from their coun- terparts in terms of weight, length, or gestational age, although there was a trend for these children to be lighter in weight and shorter. They were, howev- er, significantly less likely to be breastfed than babies of nonsmoking mothers.

By 5 years, among the 258 children with CIMT values available, children of mothers who smoked during pregnancy (n = 15) had a CIMT that was 18.8 mc当地 than that of their counterparts.

Additionally, the children of mothers who smoked both during pregnancy in the postnatal period (n = 11) had an even thicker CIMT (23.3 mc当地), compared with that of completely nonsmoking children. In contrast, the children of 16 women who did not smoke in pregnancy but did smoke in the postnatal period had no differences in CIMT, compared with children of nonsmoking mothers.

The finding was similar when investigators looked at vascular function: The arteries of chil- dren whose mothers smoked during pregnancy had significa- ntly (16%) less stretch than those of nonexposed children. This effect was compounded for children whose mothers smoked both during pregnancy and at the 5-year follow-up (19% lower distensibility).

Meanwhile, children of mothers who did not smoke during pregnancy but took it up afterward had no significant difference in distensibility, compared with their unexposed peers.

Finally, the authors found that com- pared with the children of mothers who smoked five or fewer cigarettes per day during pregnancy, the children of moth- ers who smoked more than five per day exhibited a statistically significant trend of lower mean arterial distensibility, as well as a nonsignificant trend toward greater CIMT, according to Dr. Geerts.

The authors concluded that the use of nicotine and cotinine as hair biomarkers for active smoking would have given a more reliable picture of smoking activity. However, “that technology was unknown at the time of the study design, and it is not known if measurements at inclusion (weeks postpartum) accurately reflect smoke exposure in pregnancy,” they wrote. “Underreporting of smoking cannot be excluded.”

The investigators also added that CIMT and distensibility at age 5 years – known markers of cardiovascular disease risk in adulthood – may not correlate to disease in adulthood. Such associations “can only be assumed,” they added.

More evidence for physicians to tell parents about the many dangers of cigarette smoking!
Surgeon General: Decline in Tobacco Use Stalled

BY FRANCES CORREA
Elsevier Global Medical News

Approximately 3,800 children smoke their first cigarette every day and the rates of tobacco initiation are no longer declining, according to the Surgeon General’s report, “Preventing Tobacco Use Among Youth and Young Adults.”

“Every day, 1,200 Americans die from smoking and each of those people are replaced by two young smokers,” Surgeon General Regina Benjamin said at a press conference. “We know that prevention is the key … If we can just get [young people] to remain smoke free until they’re 26, less than 1% of them will ever start.”

Among adults who smoke daily, 88% smoked their first cigarette before their 18th birthday; nearly all (99%) did so before their 26th.

According to the report, nearly 25% of high school seniors are current smokers, compared with about 33% of young adults and about 20% of adults. And it’s not all cigarettes: About 1 in 10 male high school seniors currently uses smokeless tobacco and about 1 in 5 smokes cigars, according to the report.

The report, which updates the 1994 Surgeon General report on tobacco use in youth, highlights the immediate and long-term health consequences to which children and young adults are most vulnerable. These include cardiovascular damage, reduced lung function and growth, and risk of COPD.

Because they’re impressionable, young adults and children also are vulnerable to tobacco advertising and targeted products. Even though the landmark 1998 Master Settlement Agreement drastically restricted the way tobacco can be marketed, one-third of the top grossing children’s movies in 2010 contained images of smoking, according to the report.

“Far too many kids still see smoking images and messages every day that normalize this dependence,” said Dr. Howard Koh, assistant secretary for health in the Health and Human Services department. “Kids see smoking in the movies they watch, the video games they play, the websites they visit, and the communities where they live.”

Physician organizations voiced support of the report and recommended that it be used to help protect young people from using tobacco products.

“As pediatricians, and parents, we need to send a clear message to the studios that this must stop now,” Dr. Robert W. Block, president of the American Academy of Pediatrics, said in a statement. Dr. Block added that the Surgeon General’s report should be used to help overturn a recent federal court decision that called graphic cigarette warning labels unconstitutional.

“Warning labels play a critical role in educating children, teens, and parents about the negative health impacts of tobacco. By ignoring health harms from tobacco, we are not only sustaining incredible costs in health care, but we are also risking the lives of youth and young adults. This is simply irresponsible,” he said.

The American Medical Association called for better funding of smoking cessation programs. The AMA “is concerned that these smokers will not get the support and assistance needed to combat their addiction,” Dr. Peter Carmel, the association’s president, said in a statement. “Increasing the price of tobacco and adopting comprehensive smoke-free laws would also help reduce the health, social, and economic consequences associated with tobacco use among our youth.”

The American Heart Association called the report a wake up call. “We cannot let our guard down for a minute when it comes to tobacco addiction,” CEO Nancy Brown said in a statement. “While many Americans may think tobacco use is fading away, the evidence in this report tells a dramatically different story.”


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TB, Mycobacterial Lung Disease Seen in Anti-TNF Users

BY BRUCE JANCIN
Elsevier Global Medical News

SAN DIEGO – While it’s well known that sarcoidosis commonly affects pulmonary function, it’s perhaps less known that the disease can be detrimental to cardiac function in approximately 5% of cases.

“A common way that patients present with cardiac sarcoidosis is with sudden cardiac death,” Dr. Misha Rosenbach said. “This is a terrible way to present to your doctor with a problem.”

A multisystem disorder of unknown cause, sarcoidosis commonly affects young and middle-aged adults and frequently presents with bilateral hilar lymphadenopathy, pulmonary infiltration, and ocular and skin lesions. Other organs may be involved. The diagnosis is established when clinical-radiologic findings are supported by histologic evidence of noncaseating epithelioid cell granulomas.

“Sarcoidosis is primarily a pulmonary disease, but patients can also present with profound systemic symptoms,” said Dr. Rosenbach of the departments of internal medicine and dermatology at the University of Pennsylvania, Philadelphia. “It’s important to know what else can be affected.”

Although pulmonary function is affected in more than 90% of cases, other commonly affected sites include the eyes (25%-50% of cases), lymph nodes (about 33%), musculoskeletal system (25%-40%), endocrine system (10%-25%), and liver (20%-50%). The initial evaluation should consider history and physical exam, chest x-ray, pulmonary function tests (including carbon monoxide diffusion capacity), ophthalmologic examination, complete blood count and serum chemistries (including calcium), urinalysis, EKG plus additional testing if there is a history of palpitations, tuberculin skin test (TST) or interferon (INF)-gamma release assay, and thyroid and vitamin D testing.

“Patients with sarcoidosis often have low levels of 25-hydroxyvitamin D, but elevated levels of 1,25-dihydroxyvitamin D3,” Dr. Rosenbach said. “Inappropriate supplementation can lead to hypercalcemia.”

For latent tuberculosis testing, the INF-gamma release assay (IGRA) is thought to be more accurate than the TST, said Dr. Rosenbach, who is also director of the cutaneous sarcoidosis clinic at the University of Pennsylvania.

In terms of the impact of sarcoidosis on the thyroid gland, a recent analysis of a large database in the United Kingdom found that autoimmune thyroiditis was twice as common in patients with sarcoidosis, compared with a control population (Postgrad. Med. J. 2009;85:233-7). A more recent study of 50 patients with cutaneous sarcoidosis conducted by Dr. Rosenbach and his colleagues found that 25% of patients had abnormal thyroid laboratory test results (J. Am. Acad. Dermatol. 2012;66:167-8).

The precise association between sarcoidosis and malignant or nonmalignant disorders is unclear, he said, but the best available studies suggest that the incidence of lymphoproliferative disorder may be increased in patients with sarcoidosis. A common stepwise approach for treating patients, Dr. Rosenbach said, begins with skin-directed therapies in the form of photorefractive or injections. The second step involves the use of antimalarials and tetracycline-class antibiotics. The third step involves methotrexate and/or prednisone, and the fourth step involves consideration for treatment with infliximab or adalimumab, Dr. Rosenbach said at the annual meeting of the American Academy of Dermatology.

Dr. Rosenbach disclosed that he was an investigator for a clinical trial sponsored by Centocor and Johnson & Johnson to investigate biologics for chronic/refractory sarcoidosis.
FDA Panel Recommends Changes to Influenza Vaccine

By Elizabeth Mechtacite
Elsevier Global Medical News

Silver Spring, MD – A Food and Drug Administration advisory panel recommended that the vaccine for the next influenza season should include two new strains. The panel said that only one of the three strains in the current vaccine.

The FDA’s Vaccines and Related Biological Products Advisory Committee (VRPAC) noted that the 2012-2013 seasonal flu vaccine used in the United States should include the same influenza A (H1N1) component included in the 2011-2012 vaccine, an A (H1N1)-like virus. For the second influenza A strain in the vaccine, the panel’s vote was also unanimous, recommending that the influenza A (H3N2) component be replaced with an A/Victoria/361/2011 (H3N2)-like virus.

The panel voted 17-1 that the influenza B strain be replaced with a B/Wisconsin/1/2010-like virus. The current vaccine strain is a B/Iowa/460/2008-like virus, a B/Victoria lineage strain. Panelists pointed out, however, that determining which B strain to select, a Victoria or Yamagata lineage, is always challenging and said that this illustrated the utility of a quadrivalent influenza vaccine that contains B/Victoria lineage and B/Yamagata lineage viruses.

A quadrivalent influenza vaccine may soon be available, possibly as early as 2013. At the meeting, representatives of several vaccine manufacturers updated the status of their quadrivalent influenza vaccines in development, including GlaxoSmithKline, which has filed for FDA approval of a quadrivalent influenza vaccine for people aged 1 and older.

The FDA panel’s recommendations are the same as the World Health Organization’s recommendations for the 2012-2013 Northern Hemisphere seasonal influenza season. The FDA panel meets at the same time every year to recommend the strains to be included in the trivalent vaccine in the United States in the upcoming season, considering information on the strains circulating worldwide and the WHO recommendation for the vaccine to be used in the Northern Hemisphere.

This influenza season has started late, in February, and flu activity has been low, although it is expected to increase, the Centers for Disease Control and Prevention announced.

The FDA usually follows the recommendations of its advisory panels. Panelists have been cleared of potential conflicts of interest related to the topic of the meeting.
Repeat Lavage Advised With Prolonged VAP Therapy

BY DIANA MAHONEY
Elsevier Global Medical News

HOUSTON – Repeat bronchoalveolar lavage should be considered for tailoring the duration of antibiotic therapy and for reassessing resistance profiles in patients with ventilator-associated pneumonia from infection with non-lactose fermenting gram-negative bacilli.

New clinical evidence endorses prolonged antibiotic therapy in these patients. Importantly, the findings also indicate that these patients have persistent primary infections, rather than recurrent infections, as has been previously suggested, Dr. Gina R. Shirah reported at annual meeting of the Society for Critical Care Medicine.

The distinction between persistent and recurrent infection is important, she emphasized, as the former may signal drug resistance. For this reason, repeat bronchoalveolar lavage (BAL) should be considered as therapy, both to tailor duration of antibiotics and reassess for changes in resistance profiles.

The American Thoracic Society recommends an 8-day antimicrobial treatment protocol for ventilator-associated pneumonia (VAP), but advises a longer course of therapy in patients with non-lactose fermenting gram-negative rods (NLF-GNR), which include Pseudomonas aeruginosa, Acinetobacter baumannii, and Stenotrophomonas maltophilia (Am. J. Respir. Crit. Care Med. 2005;171:388-416). The recommendation is based on the findings of a randomized study that showed 8 days of treatment to be as effective as 15 days except in patients with NLF-GNR, who had higher recurrence rates (JAMA 2003;290:2588-98).

In the study by Dr. Shirah and colleagues at the Maricopa Integrated Health System in Phoenix, 8-day antibiotic regimens were associated with persistent primary infections, not recurrent infections, in patients with gram-negative bacilli.

The researchers retrospectively studied patients at a level 1 trauma center admitted over a 4½-year period. They examined data for all VAP patients who were diagnosed via BAL and who underwent subsequent BAL during the antimicrobial treatment course. Based upon initial BAL pathogen, the patients were classified into two groups: those with NLF-GNR and those with all other pathogens, including Enterobacteriaceae, methicillin-resistant Staphylococcus aureus, and community-acquired Haemophilus spp, methicillin-sensitive S. aureus, and Streptococcus spp.

They were then further divided based on whether the repeat BAL was conducted prior to the eighth day or after 8 days of appropriate antibiotic therapy or at day 8 or later, Dr. Shirah said.

Of the 77 surgical ICU patients who met the criteria, 96% received appropriate empiric therapy. Subsequent BAL was done an average of 7 days later (range 3-14 days), with 37 patients undergoing the procedure after 8 days of therapy. Of those, 13 patients were in the NLF-GNR group. Within that group, persistent primary infection after more than 8 days of appropriate antimicrobial therapy was reported in nine patients (69%) – seven with P. aeruginosa and two with A. baumannii.

By comparison, only two patients in the second group (8%) – both with Enterobacteriaceae – had evidence of persistent primary infection, representing a statistically significant difference, she said.

“Importantly, in the NLF-GNR group, 56% of bacilli obtained on repeat BAL remained sensitive to the treatment antibiotics, so nearly half of the patients required alternative antibiotic treatment.”

The investigators also sought to determine whether persistent infection could have been predicted. They separated patients into three groups based on treatment status: treated; persistently infected antimicrobial sensitive; and persistently infected antimicrobial resistant. A comparison of clinical parameters showed that although there was some variation in white blood cell count, temperature, and ventilator needs, “none of the differences were statistically significant,” and thus not predictive of short-course treatment success or persistent infection, Dr. Shirah said.

The data strongly support the conclusion that a shortened course of antibiotics in patients with VAP caused by NLF-GNR will frequently lead to a persistent primary infection, said Dr. Shirah, noting that, in the case of NLF-GNR, “changes in antibiotic profiles are common and without reliable clinical indicators.”

For this reason, she stressed, repeat BAL should be considered during therapy, both to tailor duration of antibiotics and to reassess for changes in resistance profiles.

“Eight days is simply not enough,” Dr. Shirah said.

Dr. Marcos Restrepo, FCCP, comments: The observation that follow-up bronchoalveolar lavage in trauma patients with VAP due to non-lactose fermenting gram-negative rods may require longer duration of antimicrobial therapy is something that requires further evaluation.

The main concern is that microbiologically persistent VAP due to NLF-GNR infections may be associated with the change of antibiotics and lead to worse clinical outcomes. Due to the natural complexity of critically ill patients infected with NLF-GNR VAP, “one size does not fit all” regarding the duration of antibiotic therapy in this group of patients.

Respiratory Infections Raise Mortality in Status Epilepticus

BY MICHELE G. SULLIVAN
Elsevier Global Medical News

BALTIMORE – Patients who acquired a nosocomial infection during their hospital stay for status epilepticus had a significantly longer ICU stay (mean of 63 vs. 21 days) and a mortality rate of 6.2% compared with 4.7% among those who did not acquire nosocomial infections, a study presented at the American Epilepsy Society meeting in Phoenix, said Dr. Raoul Sutter.

The distinction between persistent and recurrent infection is important, she emphasized, as the former may signal drug resistance. For this reason, repeat bronchoalveolar lavage (BAL) should be considered as therapy, both to tailor duration of antibiotics and reassess for changes in resistance profiles.

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Dr. Stephen Field, FCCP, comments: As with many good studies, this one confirms what indirect epidemiology would have led one to conjecture – that patients with status epilepticus are prone to developing pneumonia and that the consequences of that pneumonia can be dire. This finding was relatively predictable, as loss of consciousness and control of upper airway function, along with increased intra-abdominal pressure, provide an open pathway for lung infections. Unfortu

ate biomarkers failed to adequately show the early onset of pneumonia, so we are left with maintaining a high index of suspicion, using the best available preventive measures, and early aggressive treatment of infection.

Dr. R. Shirah said.
data from the 2003 through the 2009 Nationwide Inpatient Sample (NIS), the largest all-payer hospital database in the country, which covers between 5 million and 8 million discharges each year. The NIS is sponsored by the U.S. Agency for Healthcare Research and Quality.

The researchers assessed hospitalizations for a principal diagnosis of pneumonia, as well as for a principal diagnosis of sepsis or respiratory failure together with a secondary diagnosis of pneumonia. For control conditions, they assessed hospitalizations for a principal diagnosis of ischemic stroke, ST-segment elevation myocardial infarction (STEMI), and ruptured thoracic or abdominal aortic aneurysms.

“We also considered change over time in discharge disposition, including discharge to hospice, as a secondary outcome because increasing referral to inpatient nursing and rehabilitation facilities and hospice might allow sicker patients to be discharged rather than retained in the hospital,” Dr. Lindenauer and his colleagues noted.

From 2003 to 2009, the hospitalization rate of patients with a principal diagnosis of pneumonia decreased by 27.4%, from 5.5 per 1,000 to 4.0 per 1,000. This reversed “a well-documented decades-long trend toward increasing hospitalization” for pneumonia, the investigators said (JAMA 2012;307:1405-13).

During the same period, however, the hospitalization rate for patients with a principal diagnosis of sepsis and a secondary diagnosis of pneumonia rose 17.6%, from 0.4 per 1,000 to 1.1 per 1,000. And the hospitalization rate for patients with a principal diagnosis of respiratory failure and a secondary diagnosis of pneumonia rose 9.3%, from 0.44 per 1,000 to 0.48 per 1,000. These trends were consistent across all age groups and for both men and women.

During the same period, inpatient pneumonia mortality declined from 5.8% to 4.2%, a relative risk reduction (RRR) of 28.2%. There was a concomitant decline in inpatient sepsis mortality (RRR, 12%) and in inpatient respiratory failure mortality (RRR, 23.7%).

However, “when the three groups were combined ... there was little change in the inpatient mortality rate, varying from a small increase to a small decline, depending on the approach to risk adjustment,” Dr. Lindenauer and his associates said.

As expected, the reductions in inpatient hospitalizations for the three control conditions were significantly smaller than those for pneumonia hospitalizations. Ischemic stroke, STEMI, and ruptured aortic aneurysms were indeed “less susceptible to secular changes in the choice of an alternative principal diagnosis,” they pointed out.

Also as expected, the proportion of pneumonia patients who were discharged to nursing facilities and hospices did not account for the large decline in pneumonia inpatients.

The results of the primary analysis in this study were supported by those of a secondary analysis of bacteriologic types. Hospitalization rates for pneumococcal, pseudomonas, and staphylococcal pneumonias all declined to a similar extent as overall pneumonia and were offset by matching increases in the rates of sepsis due to these organisms. The study findings have important implications well beyond the scope of pneumonia. "Several recent studies have reported very rapid growth in the rate of hospitalizations of patients with sepsis and severe sepsis, suggesting that the phenomenon in this study may extend to many other infectious diseases, they said. Turning to the question of why clinicians might be switching from a principal diagnosis of pneumonia to a principal diagnosis of sepsis/secondary diagnosis of pneumonia, Dr. Lindenauer and his colleagues offered two possible explanations. First, there was a well-publicized national campaign advocating the early recognition and treatment of sepsis in 2002. Second, hospital reimbursement rates for sepsis and respiratory failure are higher than those for pneumonia, they noted. The authors reported having no conflicts of interest.

PULMONARY MEDICINE

Dr. Marcos Restrepo, FCCP, comments: Better care is not the only reason why there are improving rates of hospitalization and deaths in pneumonia patients. A presumed reduction in pneumonia hospital admissions and deaths seems to be driven by coding more primary diagnosis as sepsis and respiratory failure. Coding pneumonia as a secondary diagnosis is affecting the epidemiology of pneumonia hospitalizations and mortality in the United States.
Sleep Disorders May Be Redefined

The proposed DSM-5 criteria replace terminology that causally attributes coexisting conditions with a simple listing of the comorbidities. This was done to underscore that the patient has a sleep disorder warranting independent clinical attention in addition to any psychiatric and medical disorders also present. In addition to the switch from “primary insomnia” to “insomnia disorder,” the diagnoses of “sleep disorder related to another mental disorder” and “sleep disorder related to a general medical condition” also are proposed to be dropped in favor of “insomnia disorder” or “hypersomnia disorder,” along with specification of clinically comorbid medical and psychiatric conditions.

This approach acknowledges bidirectional or interactive effects between sleep disorders and coexisting psychiatric conditions such as depression. It also has implications for treatment. For example, a patient who has persistent insomnia even after adequate treatment for depression might be at increased risk for relapse of the depression, or for worsening of cognitive impairment, and might therefore require independent evaluation of the sleep problem. Dr. Reynolds noted.

In an effort to improve diagnostic precision, use of “insomnia not otherwise specified” is proposed to be reduced by elevating both “REM sleep behavior disorder” and “reverie leg syndrome” to full-fledged diagnoses. This recommendation is based on a large amount of epidemiologic, pathophysiologic, genetic, and controlled clinical trial data, he said.

Another proposal is to further subtype circadian rhythm sleep disorders into delayed sleep phase type; advanced sleep phase type; and irregular sleep–wake type, “free-running type,” “jet lag type,” and “shift work type.” Yet another proposal would subtype breathing related sleep disorder into obstructive vs. central in order to inform treatment planning.

Other major proposed changes include distinguishing narcolepsy/hypocretin deficiency from other forms of hypersomnia disorder, which illustrates the increased emphasis on using biomarkers in the DSM-5 where doing so would be scientifically appropriate and clinically practical, he noted.

An example of the effort to move away from expert opinion to evidence-based diagnostic criteria is the proposed “primary hypersomnia/narcolepsy without cataplexy” category.

In the DSM-IV, the criteria are “unexplained hypersomnia (excessive sleep) or and hypersomnolence (sleepiness in spite of sufficient nocturnal sleep), for at least 3 months, occurring 3 or more times per week, with ‘hypersomnia’ defined by a prolonged nocturnal sleep episode or daily sleep amounts (more than 9 hours/day).

In the proposed DSM-5 revision, the definition of hypersomnia includes the following thresholds: excessive sleepiness that occurs three or more times per week, for 3 or more months, despite a main sleep cycle lasting 7 hours or longer. Evidence supporting this definition comes from a recent cross-sectional telephone survey of 15,929 individuals who were representative of the adult general population of 15 U.S. states. A total of 27.8% reported ‘excessive sleepiness,’ and 15.6% had recurrent periods of irrepressible need to sleep or to nap within the same day (13.2%); recurrent naps within the same day (1.9%); a nonrestorative (unrefreshing), prolonged main sleep episode of 9 hours or more per day (0.7%); and/or confusional arousals (sleep drunkenness) (4.4%).

Adding in the “excessive sleep” definition — frequency of at least three times per week for at least 3 months, despite normal sleep duration — dropped the hypersomnia disorder prevalence to 4.7% of the sample. Adding in “significant distress or impairment in cognitive, social, occupational, or other important areas of functioning” further dropped the prevalence to 2.6%, and the differential hypersomnia is not better accounted for or does not occur exclusively during the course of another sleep disorder gave a final prevalence of 1.5% (Arch. Gen. Psychiatry 2012;69:71-9).

“This is a threshold for significant daytime distress/impairment that warrants diagnosis. This kind of empirical basis is something we’ve pursued throughout DSM-4 in order to make it less dependent on expert opinion and more data driven,” Dr. Reynolds commented.

Dr. Reynolds disclosed that he has received funding from the National Institute of Mental Health, the National Institute on Aging, the National Center on Minority Health and Health Disparities; the National Heart, Lung, and Blood Institute; the John A. Hartford Foundation; the American Foundation for Suicide Prevention; the Commonwealth of Pennsylvania; and the UPMC Endowment in Geriatric Psychiatry. Forest Laboratories, Pfizer, Lilly, and Bristol-Myers Squibb have provided pharmaceuticals for his National Institutes of Health-sponsored research.
Could Everyone Just Be Quiet, Please?

In an effort to confirm previous observations that noise in hospital rooms keeps inpatients from getting quality sleep, medical student Jordan C. Yoder and colleagues, under the direction of Dr. Vireet M. Arora of the Sleep, Metabolism, and Health Center at the University of Chicago, sought to objectively measure noise and sleep duration in ambulatory adult hospital patients at the university’s medical center. They collected sleep and sound data from 106 consenting patients between April 2010 and May 2011, excluding individuals with known sleep disorders, those with cognitive impairment, and those under respiratory isolation or who had been admitted for more than 72 hours (Arch. Intern. Med. 2012;172:68-9).

They found that patient room noise levels were significantly higher than the World Health Organization’s recommendations for average noise levels. Further, peak noise level “approached that of a chain saw,” according to their research letter. Nighttime sound levels were lower than daytime levels, but all still significantly exceeded recommendations for maximum noise level and 94% exceeded recommendations for average noise level.

More than 40% of the patients reported noise disruptions of sleep. Sleep actigraphy data demonstrated that “patients slept significantly less in the hospital than their self-reported baseline sleep,” the authors observed, and mean sleep efficiency when hospitalized was low, with more than half of the recorded nights measuring below the normal lower boundary of 80% efficiency for adults. While roommates, alarms, intercoms, and pagers were all associated with substantial percentages of noise disruption, the most disruptive source of environment was reported to be staff interaction, as the percentage of noise disruption attributed to staff conversation was 65%.

Dr. Arora noted that “some amount of sleep loss in the hospital may be expected given the unfamiliar environment.” In fact, she said in an interview, “our next studies are actually looking at this and the component that may be driven by loss of control or stress.”

In the current study, however, “patients lost more sleep in the hospital when noise levels were loudest after accounting for baseline sleep characteristics, so at least noise seems like an independent predictor of hospital sleep, highlighting the importance of optimizing the hospital environment.” The magnitude of the difference, she explained, is 1 hour less of sleep, “which is pretty significant.” Further, patients in noisier rooms reported more complaints, indicating that noise is an issue, she said.

Based on their findings, the authors concluded that “hospitals should implement interventions to reduce nighttime noise levels in an effort to improve patient sleep.”

“Hospitals should implement interventions to reduce nighttime noise levels in an effort to improve patient sleep.”

Dr. ARORA

Melatonin supplements help the rise come earlier in night owls, who should also avoid bright light in the evening.

The role of melatonin is uncertain in people with an advanced sleep phase disorder — those who routinely fall asleep at 7 p.m., for instance, and awake at 4 a.m. — but bright light therapy early in the evening can push back their sleep schedule. “In someone with advanced sleep phase, that’s what I would do first – bright light therapy in the evening.” Dr. Zee said.

Patients with circadian sleep disorders don’t have insomnia. Once asleep, they get a full night’s rest.

Even so, being out of sync with the world can cause problems. People with delayed phase disorders can barely get out bed for work, and when they do, they’re sleepy all day. An advanced phase person’s internal clock tells that person to go to bed when the rest of the world is still active. Such misalignments can trigger actual insomnia and lead to health problems. Delayed phase disorders also correlate with depression.

“Many people who we think have primary insomnia or psychological insomnia actually have delayed or advanced circadian phases. It isn’t so much they complain about insomnia; they really complain about excessive sleepiness,” Dr. Zee said.

To make the right therapeutic call, it’s important to know the timing of patients’ internal clocks. History gives a clue. “I’ve never met a delayed person who is not an owl. I’ve never met an advance sleep phase disorder person who is not a lark,” Dr. Zee said.

A sleep diary and actigraphy can also help. During DLMO therapy in a sleep lab, melatonin concentrations are assessed from patients’ saliva. DLMO usually occurs at about 9 p.m. for someone on an 11 p.m.-7 a.m. sleep schedule.

Dr. Zee is a consultant for Sanofi-Aventis, Merck, Johnson & Johnson, UCB-Pharma, Purdue Pharma, Jazz Pharmaceuticals, and Royal Philips Electronics/Respironics. She also disclosed stock options in Zoetis.
DENVER – Low-dose adjunctive benzodiazepines are effective in combination with opioids for dyspnea in palliative care patients who don’t respond to opioids alone, said Dr. Patama Gomutbutra.

When opioids alone aren’t bringing significant improvement, adding a benzodiazepine is worthwhile, she said. The question of whether benzodiazepines alone are effective in the management of dyspnea must await answers from randomized clinical trials.

Dr. Gomutbutra conducted a retrospective chart review of 303 inpatients with dyspnea evaluated by members of the University of California, San Francisco, palliative care program. These were seriously ill patients: 23% had primary lung cancer, 32% had cancer outside the lung, 12% had heart failure, and 7% had COPD. Of these patients, 47% died in the hospital and 23% were discharged to hospice.

At baseline, physicians rated dyspnea as severe in 19% of patients, moderate in 28%, and mild in 53%. At baseline, 49% of patients were already on opioids at a median dose of 52 mg/day; 87% of these patients remained on opioids at 24 hours at a median of 60 mg/day. Of the patients not initially taking an opioid, 41% were placed on the medication at a median dose of 22 mg/day. Dr. Gomutbutra said at the annual meeting of the American Academy of Hospice and Palliative Care Medicine.

At baseline, 17% of patients were on a benzodiazepine equivalent to a median dose of 1 mg/day of oral lorazepam. At follow-up 24 hours after adjustment of dosages or addition of an opioid or a benzodiazepine, the population with severe dyspnea had fallen from 19% to 4%. Dyspnea was rated moderate in 18% and mild in 44%, and was absent in 34%.

VITALS

Major Finding: At follow-up 24 hours after adjustment of dosages or addition of an opioid or a benzodiazepine, the population with severe dyspnea had fallen from 19% to 4%.

Data Source: Data were taken from a retrospective chart review of 303 inpatients with dyspnea evaluated by members of the University of California, San Francisco, palliative care program.

Disclosures: Dr. Gomutbutra reported having no financial conflicts.

Routine Oxygen at End of Life Usually Not Needed

DENVER — The routine administration of oxygen to terminally ill patients who are near death is unwarranted, according to the results of a randomized trial.

“Oxygen has well-established benefits in hypoxemic patients with exacerbations of an underlying pulmonary condition, but without ever having been subjected to scientific scrutiny, oxygen administration has become routine for patients who are near death,” said Dr. Campbell of Wayne State University, Detroit. “Oxygen has become almost an iconic intervention at the end of life — as common as golf clubs on a Wednesday afternoon,” he said.

To assess the value of routine oxygen administration, she conducted a double-blind, randomized, crossover study involving 32 terminally ill patients. None was in respiratory distress at baseline, but all were at high risk for distress because of underlying conditions. Each patient received a capnoline to capture exhaled carbon dioxide. Next, randomly alternating 10-minute intervals of oxygen, medical air, and no flow were administered for 90 minutes. The key finding: 29 of 32 patients experienced no benefit of either intervention, with moderate or severe dyspnea at baseline associated with a 4.1- and 4.5-fold increased likelihood of improvement, respectively.

Dr. Campbell reported having no financial conflicts.
ASCIO Urges Early Palliative Care in Metastatic Cancers

BY NEIL OSTERWEIL
Elsevier Global Medical News

Compelling evidence from a recent randomized trial has prompted the American Society of Clinical Oncology to recommend that palliative care be integrated early on into standard cancer therapies for patients with metastatic cancers or a high burden of cancer symptoms. Patients receiving palliative care had significantly better quality-of-life scores. Patients receiving palliative care had significantly better quality-of-life scores.

Dr. Cobb, medical director of ASCO's palliative care program in the Duke University Health System, Durham, N.C., and a coauthor of the ASCO provisional clinical opinion, agrees that there are multiple impediments to reimbursement of palliative care.

“The Stark law is one impediment; a second is that the reimbursement mechanism that is clear in hospice aren't necessarily as clear in community-based care, and then there are workforce issues. Right now, we have only a finite number of palliative care practitioners, and we only have a finite number of blocks in our graduate training programs, and we're not going to be able, using those slots, to train enough palliative care practitioners to fill the need that's highlighted in this provisional clinical opinion,” she said.

"Substantial evidence [shows] that palliative care... leads to better patient and caregiver outcomes.

"The primary value of the study, she added, is that it demonstrated distinct benefits of palliative care on patient mood and quality of life.

"The Will but Not the Way?

But many practices, particularly those in community settings, may not have the resources to provide a full complement of palliative care services, said an oncologist in community-based practice.

"The other oncology settings, substantial evidence demonstrates that palliative care... when combined with standard cancer care or at the main focus of care... leads to better patient and caregiver outcomes. These include improvement in symptoms, quality of life, and patient satisfaction, with reduced caregiver burden," wrote Dr. Thomas J. Smith and his colleagues in a paper published online in the Journal of Clinical Oncology (doi:10.1200/JCO.2011.38.5161).

Palliative care also eases patients and families through the anguish of dashed hopes and has the potential to reduce costs by limiting expensive but often futile intensive hospital-based services, the authors wrote.

"The data suggest that there's absolutely no harm from earlier integration of hospice and palliative medicine into patient care. A couple of trials have shown improved survival, and there are very good data from observational studies that people who use hospice actually live longer," Dr. Smith said in an interview. He is director of palliative care for Johns Hopkins University and Hopkins' Sidney Kimmel Comprehensive Cancer Center in Baltimore.

"I think that ASCO is sending a really strong message to oncologists that we need to do more than we're currently doing and that comprehensive cancer care needs to include supportive care on top of cancer-directed therapy," said Dr. Jennifer S. Temel, clinical director of thoracic oncology at Massachusetts General Hospital in Boston, and lead author of the randomized trial described earlier.

She noted, however, that the study was not powered to detect an overall survival benefit. "All we were hoping for was that early palliative care didn't lead to a survival detriment. ... People could have been concerned that because of the involvement of palliative care, patients would receive less-intensive therapy and have shorter survival," Dr. Temel said. "I'm just happy that's not what we saw, but whether the survival benefit we saw was real and will be replicated, we'll have to wait and see.

The primary value of the study, she added, is that it demonstrated distinct benefits of palliative care on patient mood and quality of life.

"All physicians interviewed for this article reported that they did not have financial conflicts of interest.

"Dr. Larry Robinson, FCCP, comments: Based on multiple, recently published randomized trials, the American Society of Clinical Oncology issued these strong recommendations for oncologists to integrate palliative care early into their treatment plans with patients with metastatic lung cancer. In addition to significant increases in overall survival, early palliative care plus chemo-therapy resulted in better patient mood and improved quality of life for the patient and their families, compared with standard therapy alone. Offering early supportive care and hospice in a comprehensive cancer care program appears ideal and appears to reduce overall costs of cancer therapy by decreasing expensive end-of-life hospitalizations. Limitations of this approach may be found in some communities because palliative care programs, especially in smaller population centers and rural areas where palliative care is not readily available and payment for these services may also be difficult to obtain.
Cardiac Surgical Transfusions Tied to Infection Risk

BY KERRI WACHTER
Elsevier Global Medical News

FT. LAUDERDALE, FLA. – Transfusion of packed red blood cells during cardiac surgery is independently associated with increased risk of major infection, researchers reported, and in a related study – pneumonia was found to be the most common infection associated with cardiac surgery.

Cardiac procedures with transfusions were associated with a significant risk of infection, such that “with every unit of blood, you had a significant increase in the risk of infection for the patient. It appears that there might be some sort of threshold in the 2- to 4-unit range, whereas after the risk really seems to increase. But statistically, even that first drop of blood carried an additional infectious risk,” Dr. Keith A. Horvath said at the annual meeting of the Society of Thoracic Surgeons.

In a related study, researchers found pneumonia was the most common infection associated with cardiac surgery. “Pneumonia, surprisingly, was the most common infection, at 2.4%. This was much more common than other infections we were worried about and get a fair amount of press and literature on, such as sternal wound infections,” said Dr. Gorav Ailawadi of the University of Virginia in Charlottesville.

Data for 5,184 adult cardiac patients were used for both studies. The patients were prospectively enrolled in a 10-center infection registry between February and September 2010. Captured data included infection occurrence, type, and organism. Adjudication was performed by an independent panel of infectious diseases experts.

Disclosures: Both Dr. Horvath and Dr. Ailawadi reported that they have no relevant financial disclosures.

VITALS

**Major Finding: There was a significant dose-dependent association between quantity of packed red blood cells (PRBCs) and risk of infection, with the crude risk increasing by an average of 29% with each PRBC unit. Pneumonia was the most common infection at 2.4%.**

**Data Source: A total of 5,184 adult cardiac patients were prospectively enrolled in a 10-center infection registry between February and September 2010. Captured data included infection occurrence, type, and organism. Adjudication was performed by an independent panel of infectious diseases experts.**

**Disclosures:** Both Dr. Horvath and Dr. Ailawadi reported that they have no relevant financial disclosures.

**Commentary**

Dr. Jun Chiong, FCCP, comments: Blood transfusion carries a risk of infection. The authors have nicely presented their work correlating this risk in patients undergoing cardiac surgery. However, patients who received transfusion are often sicker, which may explain their susceptibility to infection, whether blood borne, nosocomial, or community-acquired. It is also very important to our surgical colleagues to minimize transfusion if possible. Blood banks play a significant role in the screening of donors and the collection and storage of blood and blood products, and these data need to be stratified by sites, as this finding may not be universal.

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Power to Connect

In Memoriam

By Dr. Anita Graves, FCCP; Dr. Marc Benton, FCCP; and Dr. Michael Nelson, FCCP

“Whenever you find that you are on the side of the majority, it is time to reform.” —Mark Twain

As you read this article, the clerks of the US Supreme Court, who are, of course, intimately aware of the problems facing you and your patients, fumble through case-law that could scuttle your future. But the really good news is that you have no way to advocate on your own behalf. Perhaps you would be more comfortable knowing that the US Congress is looking out for you, as well. At least you can speak to them...sometimes...via e-mail...through an officer staffer, who thinks thoracenticism is a move about a Norse god. The major problem with health-care reform for those of us in private practice is the uncertainty. What can we do to maximize the possibility that the coming transformations of medicine and the resultant metamorphosis of private practice will allow us to provide high-quality care in a financially viable environment? Let’s look at a few issues more closely, beginning with the manpower shortage.

Anyone who has tried to hire another partner to join their group knows of the many difficulties one faces. It is, and will be for the foreseeable future, a “seller’s market.” Fellows just out of training and early-career physicians wishing to establish themselves with a practice often have expectations about time commitment and salary that can be out of sync with the reality of one’s everyday practice. This makes it difficult to compete with other health systems that offer attractive employed-positions...for 2 years, or until the deal changes, and is no longer so attractive. In most cases, the hospital’s focus is limited, and is no longer so attractive. The entrepreneurial appetite for risk has been supplanted by staggering student loans, limited upside to income, and a questionable quality of life.

In Memoriam

Dr. Philip Marcus, FCCP, died suddenly on April 9 during a family vacation. As many of you know, Phil was a passionate supporter of the College, and his leadership contributions are many, including service on the ACCP Board of Regents, serving as Chair and Vice-Chair of the Council of NetWorks, Practice Operations NetWork, and Practice Management Committee, and member of the Editorial Advisory Board, CHEST Physician. He was a good friend to all at the College, and he will be sorely missed. The ACCP extends heartfelt condolences to the Marcus family.

Comounding the well-documented shortage of pulmonary and critical care specialists, a new physician-hire costs the typical private practice extended recruitment and signing bonuses only to culminate in promiscuous hires who are quick to wander to what they perceive as greener pastures.

Let’s move on to the topic of the ever-dwindling compensation for your services. Don’t worry; you can be very certain that you will be paid less tomorrow for things that you do very well today. These cuts could be the result of devaluation of fees, limited access to contractual agreements with commercial payers, and penalties as a result of an escalation in audits and noncompliance with government mandates. You are also likely to endure more profit pressures from investments required to comply with Meaningful Use, mandatory administrative changes for billing and coding, and challenges to utilization. For many of us, the only way to compensate is by increasing our work volume. This runaway health-care train will eventually jump the track, and you should position yourself to sustain as little injury as possible. You should start with a complete economic and operational evaluation of your practice to create efficiencies that would not adversely affect your patient care but would protect your salary in the event of the inevitable declining reimbursements. The best defense to remain independent is by establishing a practice that is patient-oriented, technologically progressive, and quality driven. This advantageously positions you for the next ray of hope for independent private practice as we know it—clinical integration.

Clinical integration has many forms—hospital contracting, preferred-provider status (approved members) in clinically integrated health-care networks, and accountable care organizations (ACOs). The solution for your practice will depend on regional opportunities and regulations that frame the relationships you wish you cultivate. The Healthcare Reform Law, though vague at the moment, is one vehicle that may maneuver private practice away from extinction. The value-based purchasing and ACO shared-savings provisions mandate quality threshold measures and governance requirements that require committed physician buy-in, physician leadership, and, therefore, productive physician-hospital relationships that would certainly go beyond the scope of simple employment. Despite enumerable changes to the landscape of medicine over the next 5 years, certainly you can adapt to changes wrought by your ‘friends’ in the federal government. Those nimble minds that have made you excellent physicians and successful in business need only be flexible and not cede the battle before the lines are drawn.

The views expressed in this article are those of the authors and do not represent the views of the ACCP, its leadership, members, or staff.

Health-care Reform: Is Anyone Listening?

In this issue, Dr. Mike Nelson (Immediate Past Chair of the Practice Management Committee [PMC]), Dr. Anita Graves (Chair of the EHR Subcommittee of the PMC), and Dr. Marc Benton (member of the PMC) discuss their feelings as private practitioners. They give a balanced perspective on the private practice job market and how it is likely to affect the millennials and generation Xers. And, very importantly, they provide practical advice to the private practitioners on how to prepare and adapt individual medical practices to brace for the change and to sustain independence in uncertain and difficult times.

—Dr. Suhail Raoof, FCCP

NEWS FROM THE COLLEGE
Global Education and Development

BY DR. MARK J. ROSEN, FCCP
Director, Global Education and Strategic Development

In a previous issue of CHEST Physician, I reviewed the College’s efforts to increase our participation and impact on the clinical education of our thousands of members around the world, along with others who care for patients with pulmonary disease, critical illness, and sleep disorders. The Global Education and Development Committee (GEDC), representing stakeholders in the College, along with representatives from Greece, Romania, and Israel, is developing new strategies to expand our educational reach with new and innovative approaches to provide the most effective education.

The CHEST 2012 in Atlanta will feature a series of sessions with international speakers on topics of global interest. An ad hoc committee of ACCP members from Saudi Arabia, Israel, Argentina, and China has coordinated a series of sessions on environmental issues, infectious diseases, public health, and disaster management. In addition, Global Case Report sessions invite international members and others to present their interesting cases to a wide audience. The ACCP is arguably the world leader in simulation education, a method shown in our own evidence-based CME guidelines to be far more effective in improving physicians’ knowledge than the standard didactic approach of the professor in the dark room with the PowerPoint presentations. This is also far more effective in teaching procedural skills and improving clinicians’ confidence in performing them. Our program in airway management simulation was conducted in Saudi Arabia, and a group of Saudi physicians are now recognized as ACCP trainers, capable of conducting these programs for others using our methods and curriculum. ACCP leaders conducted a series of hands-on simulation programs on mechanical ventilation in India, and an ACCP program in bronchoscopy simulation was recently carried out in Israel during a joint Israel Society of Pulmonology – ACCP joint conference. We also have plans to partner with international medical centers and national and regional educational programs.

The ACCP is committed to work with the GEDC and the Council of International Regents and Governors to fulfill the College’s mission of being the global leader in providing education in cardipulmonary, critical care, and sleep medicine, and we are delighted and grateful for our members’ enthusiasm and participation.

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New Approach to VAP Surveillance Proposed

The CDC’s Division of Quality Promotion (DHQP) is collaborating with the CDC Prevention Epicenters (http://www.cdc.gov/hai/epicenters), the Critical Care Societies Collaborative (CCSC, http://ccsconline.org), other professional societies and subject matter experts, and federal partners. DHQP initiated a collaboration with the CCSC in September 2011 and convened a VAP Surveillance Definition Working Group, consisting of representatives from several organizations with expertise in critical care, infectious diseases, health-care epidemiology and surveillance, and infection control. The Working Group recognized that there is currently no gold standard, valid, reliable definition for VAP. Even the most widely used VAP definitions are neither sensitive nor specific for VAP. Therefore, the Working Group decided to pursue a different approach—development of a surveillance definition algorithm for detection of ventilator-associated events (VAEs). This algorithm will detect a broad range of conditions or complications occurring in mechanically ventilated adult patients.

The Working Group has proposed a new surveillance definition algorithm to detect VAEs in adult patients. It is not designed for use in the clinical care of patients. The Working Group anticipates that the new definition algorithm will continue to be refined, based on the results of field experience and additional research. The definition algorithm refinement process is, and will continue to be, iterative and will require the ongoing engagement of the critical care, infection prevention, infectious diseases, and health-care epidemiology communities. For further information, go to http://www.cdc.gov/about/atstat/resources/ATS_VAIR_Compliant_Final_20120301.pdf.

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Anesthesia and Sleep: More Than Just Apnea—An Update From the Society of Anesthesiology and Sleep Medicine

Mark Your Calendars: OneBreath® at CHEST 2012

Near 1 year ago, an article was published in the Sleep Strategies section of CHEST Physician announcing the formation of a new medical organization, the Society of Anesthesiology and Sleep Medicine (SASM). SASM was developed, in part, to study, educate, and discuss issues relevant to perioperative care and obstructive sleep apnea (OSA). (Auckley et al. CHEST Physician. 2011;67[7]:21.) Since that time, SASM has held its first conference, established a website (www.sasm.org), published three newsletters, and developed a committee structure to address many aspects of this interdisciplinary area of medicine.

The inaugural meeting, “OSA, Anesthesia and Sleep: The Common Ground” was held in Chicago on October 14, 2011. With nearly 350 registrants, a full day of lectures, and the presentation of 35 abstracts, the meeting was very well received. The majority of the attendees were anesthesiologists because the meeting preceded the annual American Society of Anesthesiologists meeting. Sleep medicine practitioners and providers representing a handful of other specialties also attended the meeting. The keynote address, delivered by Dr. David Hillman of Sir Charles Gairdner Hospital in Perth, Western Australia, was titled, “The Effects of Sleep and Anesthesia-Induced Unconsciousness on Upper Airway Patency” and set the tone for an open discussion regarding the interrelated disciplines of anesthesia, sleep, and perioperative care. The conference included nine other lectures presented in three sequential sessions with poster viewing and discussion in-between the lectures. Four awards were given to the best abstracts in the categories of basic science and clinical research. The top prize in basic science was awarded to Dr. Norman Taylor of Massachusetts General Hospital in Boston for his abstract titled, “The D1 Dopamine Receptor Agonist Chloro-APB Induces Emergence From Isoflurane Anesthesia.” The first prize for clinical research went to Dr. Peter Liao from the University of Toronto who presented “A Randomized Controlled Trial of Perioperative Auto-EPAP Treatment in OSA Patients: A Preliminary Report.” Extensive notes regarding this emerging collaborative field. Links are provided to quarterly newsletters, a discussion forum available for members to converse about the varied aspects of anesthesia and sleep medicine, and regular literature updates highlighting important articles relevant to the field. Two recently featured manuscripts describe the increased risk of postoperative pulmonary complications and perioperative delirium in patients with OSA. The first of these (Mentzosoudis et al. Anesth Analg. 2011;112[1]:113) used a large surgical database of 6.5 million cases to identify an association between the diagnosis of OSA and higher rates of postoperative aspiration pneumonia, ARDS, the need for mechanical ventilation, and, in patients undergoing orthopedic surgery, pulmonary embolism. The second study (Fink et al. Anesthesiology. 2012;116[4]:788) was a small prospective study of patients 65 years and older, free of dementia or psychiatric disease at baseline, who were undergoing elective knee replacement. This study found that, after multivariate analysis, the preexisting diagnosis of OSA was the only significant predictor of the development of postoperative delirium. Both of these studies emphasize the need for further research to determine optimal strategies for managing OSA perioperatively and how such management may impact clinical outcomes.

The organizational structure of the SASM and its leadership can be found in detail on the SASM website. Among the active committees is the Clinical and Research Committee that is dedicated to directing future research endeavors related to the interactions between anesthesia and sleep medicine. Initial efforts are underway to establish a multicenter database of patients with OSA undergoing surgery in order to provide a resource for clinical research studies and hypothesis generation. It is this type of collaborative research that will help move the field ahead. The Teaching and Training Subcommittee has been charged with developing strategies and tools for disseminating information and enhancing education regarding the perioperative care of patients with OSA.

While SASM formed around the issues of evaluation and management of surgical patients with known or suspected OSA, there are other shared features of anesthesia and sleep medicine that bring them together. Understanding the basic mechanisms underlying unconsciousness in anesthesia and sleep will lead to new insights into the nature of both conditions. As an example, it is not yet understood why sleepiness appears to increase susceptibility to anesthesia or why this susceptibility appears to have a circadian variation. In addition, while anesthesia in the absence of significant postoperative pain seems to have some of the restorative powers of natural sleep, sleep loss due to pain and a number of other factors is common postoperatively and may adversely impact recovery from surgery (Rosenberg-Adamsen et al. Br J Anaesth. 1996;76[4]:352). Similarly, sleep loss may adversely affect outcomes in critical care units and other hospital environments where sleep may be severely disrupted over prolonged periods (Friske. Crit Care Med. 2008;36[3]:697). Examination of the effects of sleep disturbance and sedation on clinical outcomes is likely to have implications beyond the perioperative arena and is a fertile area for future study. This should be of specific interest to members of the ACCP who work in critical care units. Because of expanding interest in these topics, the 2012 SASM conference, scheduled to take place in Washington, DC, on October 11-12, has grown to 1-2 days. The 2012 meeting, titled “Anesthesia and Sleep Medicine: What Every Health Professional Needs to Know” will offer content relevant to many providers, including anesthesiologists, critical care physicians, residents, fellows, general medicine physicians, pulmonologists, sleep medicine providers, surgeons, and allied health professionals, as well as basic scientists. The objectives of the meeting are as follows:

► To review what a health professional should know about sleep apnea and the impact of anesthesiology/sedatives/narcotics and body position perioperatively

► To recognize the perioperative complications of patients with OSA

► To understand the patient selection and screening process, and manage sleep-disordered breathing in the perioperative period

The keynote address, to be delivered by Dr. Kingman Strohl of Case Western Reserve University in Cleveland, Ohio, is titled, “Genetic Architecture of Ventilatory Traits.” The meeting will have six sequential sessions and cover a wide range of issues related to sleep and sleep apnea in the perioperative setting, including topics such as home sleep testing and pediatric sleep apnea, as well as a discussion on common mechanisms of sleep and anesthesia. Abstracts for the meeting can be submitted via the SASM website between May 1 and July 1. Any work related to the following areas will be considered for acceptance: the mechanism of anesthesia, sedation, arousal, memory, intraoperative awareness and postoperative recall, airway physiology, respiratory drive, and sleep disorders. There will be three research awards for abstracts in each of the areas of basic research and clinical research. The winners will present their work orally at the meeting and receive monetary awards.

All health-care providers interested in learning more about the clinical problems shared by anesthesiology and sleep medicine are encouraged to join the SASM and attend what undoubtedly be an exciting conference this fall.

Mark your calendars for the OneBreath® An Evening at the Georgia Aquarium event on Sunday, October 21, 2012, 7:00 to 10:00 PM, during the CHEST 2012 meeting. The Georgia Aquarium provides an opportunity to experience the wonder of marine life at the world’s largest aquarium while ensuring that The Foundation’s important lung health education for children and families can be expanded to more communities. Tickets will be available through the CHEST 2012 registration site. Watch ACCP NewsBrief, social media, and CHEST Physician for more information regarding this event.
Pediatric Chest Medicine

Future of Medicine Is Here

There is great excitement in the cystic fibrosis (CF) world as these days due to the introduction of ivacaftor (Kalydeco), a CF gene potentiator.

Over the last 40 years, there has been great improvements in the management of CF, mainly through the introduction of specific antibiotics against pseudomonas, oral, IV, and by inhalation; the wide use of effective airway clearance techniques; and the use of pancreatic enzymes, thus improving the nutritional status of patients affected by this awful disease. All these treatments were directed to better manage the complications of this illness.

In 1989, when the sequencing and cloning of the CF transmembrane regulator (CFTR) gene became available, there was great excitement that, since the causative gene was known, correction of it and the “CURE” were just around the corner.

Despite early progress in the gene therapy field, many severe significant obstacles continue to interfere with the development of this approach.

The other plan of attack to treat the cause of the illness is to reverse the consequences of CFTR mutations on this protein function on the surface of the epithelial cell.

More than 1,700 different CFTR mutations have been identified. They have been grouped into six different classes based on their effects on CFTR structure and/or function. Class-specific therapies are being developed and are at different stages of clinical trials.

Ivacaftor ( VX- 770) is the first such drug that actually showed significant efficacy in improving the function of the chloride channel at the surface of the epithelial cell. It improves the Cl- ion flux (potentiator) into the lumen of the airways/exocrine canals, hydrating sputum and exocrine gland secretions, thus reversing the basic cause of what was once called “mucoviscidosis.”

The main effect has been shown in improving the function of G551D mutation. This particular mutation is present in only 4% of the CF population in the United States.

However, since this treatment is class-specific, it is expected to improve class III mutations known as “gating mutations” (Ramsey et al. N Engl J Med. 2011;365[18]:1663).

Ivacaftor is an oral medication available as 150 mg tab taken twice daily with fatty meals. The effect on pulmonary function was noted in 2 weeks by 10.6% improvement of FEV1. There was marked reduction of the pulmonary exacerbations and weight gain. The concentration of sweat chloride value dropped almost in half.

This is a great advance in medicine. Treatment is individualized and attacks the specific genetic cause of illness.

The future of medicine is here.

Dr. Louay K. Nazzal, FCCP

Steering Committee Member

Pulmonary Vascular Disease

During the past 25 years, the field of pulmonary arterial hypertension (PAH) has dramatically evolved. We now have more FDA-approved therapies for PAH with several more being evaluated. The number of physicians with specialized interest in this field has also expanded significantly. The enhanced options and interest in PAH have created unique challenges. How do we begin to hone down on the best approaches to diagnosis and treatment in this complex environment? Can we prospectively study all possible combinations of therapies available? What are the predictors of outcome in the “modern era” of PAH?

Although many of these questions remain unanswered, we now have a powerful tool to start the unraveling process. The Registry to Evaluate Early and Long-term PAH Disease Management (REVEAL) was established as a multicenter retrospective and prospective registry, designed to comprehensively evaluate salient features of patients with established PAH. In a rare disease such as PAH, registries of this type are ideally suited to answering many questions that simply couldn’t be addressed otherwise.

REVEAL, in its short existence, has led to remarkable output of information. More than 3,000 patients have been enrolled in REVEAL (compared with 184 in the entire NIH registry of the early 1980s!). Ten peer-reviewed papers have either been published or are in press. Over 90 abstracts have been presented. New insights into characteristics of patients with PAH (Badesch et al. Chest. 2010;137[2]:376; continued delays in PAH diagnosis (Brown et al. Chest. 2011;140[1]:19); composite predictors of survival (Benza et al. Circulation. 2010; 122[2]:164); and connective tissue disease-associated PAH (Chung et al. Chest. 2010;138[6]): are just a few examples of what REVEAL has yielded.

Dr. Richard Channick, FCCP

Steering Committee Member

CHEST 2011 CENTERS OF EXCELLENCE SERIES

The UMass Memorial Medical Center Experience

BY ANN E. CONNOLLY, ACNP-BC; AND DR. RICHARD S. IRWIN, MASTER FCCP

The Centers of Excellence (COE) is a new and innovative concept that was introduced at CHEST 2011. Aimed at providing a platform to share best practices, COE 2011 offered an unburdened, relaxed setting to interact with others and demonstrate successful models and programs. Our critical care team did not hesitate when offered the opportunity to participate and showcase the mechanics and operation of our critical care model. Our method, an institution-wide, interdisciplinary, collaborative, patient-focused team approach of delivering critical care, was spawned at our university medical center from a seed planted at our hospital; was initially a small idea that was nurtured and bottom up. It’s noteworthy that the experience was worthy that the experience was well received and widely accepted.

Our method, an institution-wide, interdisciplinary, collaborative, patient-focused team approach of delivering critical care, was spawned at our university medical center from a seed planted at our hospital; was initially a small idea that was nurtured and bottom up. It’s noteworthy that the experience was well received and widely accepted.
Understanding and Addressing Asthma Disparities

BY DR. LEROY M. GRAHAM, FCCP
ACCP Diversity Committee Member

Health disparities are defined as differences in the incidence, prevalence, mortality, and burden of disease and other adverse health conditions that exist among specific population groups.

Epidemiology of Asthma Disparities

Asthma in the United States continues to be characterized by alarmingly persistent, if not increasing, health-care disparities. Recently, the Centers for Disease Control and Prevention (CDC) reviewed asthma prevalence, disease characteristics, and self-management education in the United States over the period of 2001 to 2009.1 The overall prevalence of asthma increased 12.3% from 7.3% (20.3 million persons) in 2001 to 8.2% (24.6 million persons) in 2009. This increase in prevalence was most notable among the young, minorities, women, and the poor. Prevalence among children (<18 years of age) was 9.6%, and was highest among poor children (13.9%) and among non-Hispanic black children (17.0%). Among adults, prevalence was greatest in women (9.7%) and adults who were poor (10.6%). More uninsured persons with asthma than similarly diagnosed insured persons reported being unable to buy prescription medications (40.3% vs 11.5%). Uninsured persons with asthma were less likely to have seen or talked to a primary care physician (58.8% vs 85.6%) or specialist (19.5% vs 36.9%) than insured persons with asthma.1 This pattern at once seems counterintuitive to evidence-based guidelines for the diagnosis and management of asthma, perceived advances in access to care, and purportedly enhanced awareness of these disparities.

African American children have three to six times higher rates of ED visits, hospitalizations, and mortality attributable to asthma compared with white children. Higher asthma morbidity is also noted in Hispanic children, particularly of Puerto Rican descent.2,3 Similar trends persisted in a large diverse population of military dependents where differences in access to care and socioeconomic status were less likely. A recent study utilized the National Asthma Survey to characterize racial and ethnic disparities in asthma medication use and health-care utilization among children. In this review, 1,485 children were surveyed. Of those surveyed, 55% were white, 23% were Hispanic, and 20% were black. In comparison to white children, twice as many black children had asthma-related ED visits (39% vs 18%) and hospitalizations (12% vs 9%). Though the National Asthma Education and Prevention Program clearly states that inhaled corticosteroids are the preferred treatment for mild to moderate persistent asthma in children,4 significantly fewer black and Hispanic children reported using these agents in the prior 3 months (21% and 22%, respectively) compared with white children (33%). In addition, 20% of black children and 19% of Hispanic children reported receiving a daily dose of short-acting beta-agonists (SABAs) compared with 12% of white children. In this survey, ED visits were positively correlated with SABA use and were negatively correlated with ICS use when stratified by race/ethnicity.5 A study of all hospital discharges obtained from the N.T. State Department of Health revealed that black hospitalizations and death rates for all ages among Hispanics and blacks were three to five times those among whites.4 While socioeconomic factors contribute to asthma disparities, a study of middle-class adult members of a health maintenance organization (HMO) found black members were more likely to use the ED and less likely to use a primary care provider for asthma-related visits than white members. Referral to an asthma specialist was also less likely among black members than among white members.4 Persistent asthma disparities continue to increase primarily among minority and poor populations.5 Regrettably, the current body of clinical research is limited descriptive and, as such, offers little in terms of actionable strategies to attenuate or decrease these disparities.

Asthma requires an acceptance of the concept of maintenance health care to achieve and sustain control. Many minorities see health care as a situational need; quite simply, something to access when they are sick as disparate utilization of urgent care centers and EDs would seem to indicate. Similarly, cultural influences may affect the taking of daily maintenance therapy as required in persistent asthma. Misguided fears of tolerance and/or dependency may greatly limit adherence in this regard.

Communication between the care team (providers and educators) must become more effective. A common perception that more effective education and interaction is more time consuming is simply not the case. Effective communication should actually increase the efficiency of both the clinical encounter and any educational intervention.5 Attempts to “dummey down” communication about often-complex disease states do not suffice for cultural competency or accommodation for low literacy.

Awareness by health-care providers of these challenges is a critical component of effective asthma education and management to reduce disparities.

References


Every wonder why, no matter where you go in Atlanta, you always seem to be driving on Peachtree Street? There are more than 65 streets with the word Peachtree. Did you know Peachtree streets are not named for peach trees? Many of Atlanta’s corridors follow paths created by the Creek and Cherokee Indian nations who inhabited the area until the early 19th century. One Creek settlement was called Standing Pitch Tree after a tall lone tree. Over time, “pitch tree” became “peach tree,” which was adopted as a common street name.

As you prepare for the CHEST meeting and begin planning your trip to Atlanta, keep in mind some of the city’s interesting facts and folklore. For instance, did you know:

- You can ride your bike from Atlanta to Alabama. The Silver Comet Trail begins in Smyrna and runs across the Alabama border.
- Atlanta is home to two Nobel Peace Prize winners. In 1964, Martin Luther King Jr. was the youngest man to receive the Nobel Peace Prize, and President Jimmy Carter received the Nobel Peace Prize in 2002. The prizes are on display in Atlanta at the Martin Luther King National Historic Site and The Jimmy Carter Library and Museum.
- View Atlanta from the tallest hotel in the Western hemisphere. The rotating Sun Dial Restaurant Bar and View atop the cylindrical Westin Peachtree Plaza in downtown Atlanta provides a breathtaking 360-degree view of the city and surrounding area while enjoying the restaurant’s cuisine.
- Atlanta Brave Hank Aaron hit his 715th home run in April 1974 over the left field wall at Atlanta-Fulton County Stadium, breaking Babe Ruth’s career record. The stadium was demolished in 1997. A parking lot for Turner Field now stands on the site, with an outline of the old stadium and plaque marking the spot where Aaron’s historic home run landed in what was formerly the Braves bullpen.

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Chairman, CHEST Physician Classifieds Committee
Using Social Media Effectively in Your Physician Practice: One Institution’s Experience

Lancaster General Health sees social media as an effective tactic to promote its approximately 22 physician practices. In September 2007, we launched our first social media marketing campaign using Facebook, YouTube, and Twitter. In November 2008, we added physician-led blogs to our website. More recently, we began a series of live question and answer chats where physicians participate in discussion forums with the general community.

Background of LG Health
Lancaster General Health (LG Health) is a not-for-profit health-care system located in south central Pennsylvania. LG Health includes Lancaster General Hospital, a 525-bed, acute-care Magnet hospital; Women & Babies Hospital, a 98-bed facility focused entirely on women’s health care, and 12 outpatient facilities. The system includes a network of more than 20 primary and specialty care physician practices, as well as outpatient and retail clinics.

Getting on the Social Media Train
First, some simple guidelines:
1. Ensure patient privacy rules are respected: Since most social media tools require a two-way conversation, patient privacy rules still apply. Patients have the right to post their entire medical history on the Internet but physicians should still adhere to HIPAA by not sharing private health information that could be violative laws by not sharing it. Physicians should still adhere to HIPAA privacy rules still apply. Patients require a two-way conversation, expected by health information that could be shared on the Internet but physicians should still adhere to HIPAA privacy rules still apply. Patients require a two-way conversation, expected.

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