KSRC The Bluegrass Breather

Kentucky Society For Respiratory Care

Vol 1. Issue 2 Spring 2017

Presidents Address:

Advocacy

These past weeks, I have started to think about who we are as an organization, a profession, and the steps we need to take to meet the needs of therapists, patients and our communities. The KSRC is the advocate for each of these groups and as such, we need your help. The KSRC has been working to represent our profession both in Kentucky and in Congress; additionally, the threat to licensure and other proposed legislative actions across the country enhance the need for a united voice.

The KSRC continues to be the voice of the respiratory therapist in Kentucky. The Board of Directors (BOD) provided recommendations to the Governor's office for appointments of therapists to our licensure board, the Kentucky Board of Respiratory Care (KBRC). The BOD takes this responsibility very seriously and the newest appointees to the KBRC are staunch supporters of the respiratory profession in Kentucky. Secondly, there have been several bills or resolutions that have been proposed in the 2017 Kentucky legislative session that affect healthcare workers, patients with respiratory disease and the respiratory health of the population. The KSRC Standing Committee on Government Affairs has worked to express an opinion on the legislative matters that highlight the thoughts and concerns of respiratory therapists of this state.

We, along with others, also advocated for increased safety of hospital employees. The Kentucky legislature and the Governor heard our joined voices and on March 16, 2017, Matt Bevin signed KY SB42 into law. This law "permits a peace officer to make an arrest for a violation of KRS 508.030, assault in the 4th degree, when the violation occurs in a hospital and the officer has probable cause".

In addition, the 2017 Respiratory Therapy Capitol Hill Advocacy Day in Washington DC has just concluded. This was a day where respiratory professionals across the nation gather to advocate for our profession. Tom Cahill, MS, RRT and Tina Siddon MS., RRT, Co-Chairs of the Government Affairs Committee met personally with Kentucky's representatives and senators. Kentucky has risen to the challenge set forth and increased participation 212% in letters and emails sent and increased the number of individuals participating by 131%. Your voice is critical in what we do.

Recently (February 21, 2017) the licensure of respiratory therapists in Iowa were threatened. This is the most recent state to threaten de-licensure of our profession. Other states have also had licensure threatened such as Texas (2014) and Michigan (2012-2013). The American Association of Respiratory Care and the state affiliate organization were there to speak on behalf of the therapists, stressing the importance of licensure to maintain patient safety, improve patient outcomes and help defeat these threats. At this time, there is no current proposal to deregulate respiratory therapy licensure in Kentucky; however, that does not mean it would not be proposed in the future. Additionally, Kentucky's licensure law for respiratory care will be open for changes. I do not know any specific dates but have been told the law needs to be updated. When this happens, we need a strong and united voice to ensure the changes proposed enhance our profession and secure the future of respiratory therapy in Kentucky.

Finally, I have recently learned of a California legislative bill that would require "allied healthcare" students to receive compensation for clinical hours. The bill excludes "medical professions" such as nursing, physician assistants and medical doctors from the requirement. The California Society for Respiratory Care and the AARC will be working together to address concerns of this bill. However, all of us need to be concerned as to how this could affect respiratory education and to find steps to transition respiratory therapy from an "allied health profession" and obtain the recognition we deserve as a skilled and dedicated clinical medical specialty.

Please join me to continue the growth and positive changes that I have seen as a thirty plus year veteran of this healthcare specialty profession. Our current membership of 424 active members is just a small portion (12%) of the over 3,500 licensed therapist in Kentucky. We need the voice of every therapist in the Commonwealth to be joined. It is important that as therapists we advocate for our profession, our patients and our communities, thereby ensuring better outcomes through skilled and dedicated therapists and proper legislative means. I see it as key that there is a united voice in this process and the KSRC is proud to be the organization of choice.

For more information on what is happening within the society, check us out on Facebook or our website, **kentuckysocietyforrespiratorycare.org.** If you have questions, comments or concerns and would like to

share them, please reach out to us via email at ksrcbod@gmail.com.

Lisa M. Houle, MS, RRT
2017-2018 KSRC President

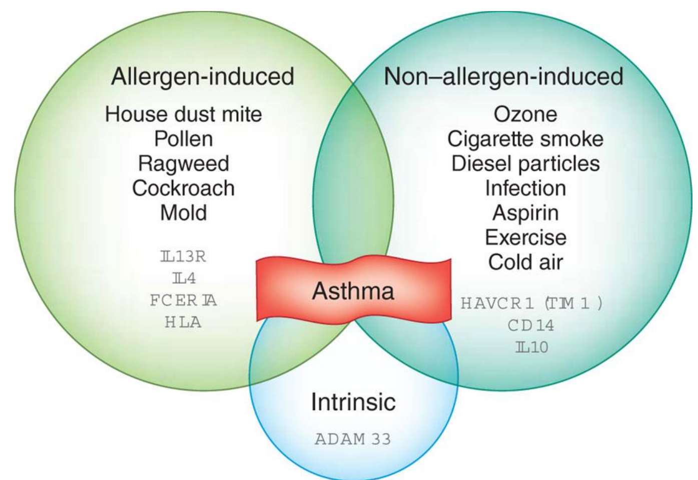
Managing Asthma Symptoms Properly, and With Limited Pharmacotherapy

Last year I traveled to Orange County, California where I sat on a subject matter expert panel and discussed the realities of our health economic environment. Our core discussion was centered on disease management and its place in the value-based reimbursement world. Particularly asthma and my view on the realities of performing case management in the Medicaid population.

From review of medical literature, we find that most chronic disease mortality rates are decreasing. We can attribute this to better medical management, awareness, and education. However, what happens when this paradigm is not followed? This leads to two of the few chronic diseases with mortality rates on the rise, COPD and asthma.

Asthma at its core for most Americans is allergy driven. In children, nearly 80% of those with allergic dermatitis go on to develop allergic rhinitis or asthma. 80-90% of children with asthma have allergic (atopic/extrinsic) asthma. Roughly, 60% of adult asthmatics are extrinsic.

Asthma is widespread and rising. Its current prevalence is about 7% of the population or >20 million persons. In Kentucky, these numbers are much higher reaching over 14%. In 2007, the direct costs of treating asthma placed a burden on the healthcare system of $50.1 billion while indirect costs were $5.9 billion.



What are we doing right and what are we doing wrong? Well when we look at the chronic disease paradigm that has been so successfully used to treat other chronic disease, we will find the gap in asthma care. We do great at 3 out of 4 of the steps. We perform complete histories and physicals, we often perform spirometry and other diagnostic tests to confirm and drive management, and billions of dollars are spent on pharmacotherapy of asthma. However, what about lifestyle changes?

Imagine a diabetic who goes to the PCP and gets diagnosed with diabetes after a complete H&P. The labs are drawn and they are placed on metformin. What treatment step were missed in the plan? Surely at some

point the MD, RN, MA, licensed diabetic educator, or someone would have met with this patient and gone over diet and exercise. In fact some patients never need to be on medications.

Like diabetes, it is entirely possible to manage asthmatics' symptoms with limited pharmacotherapy. Rescue medication should always be available but maintenance medication can be titrated. Trigger exposure reduction in conjunction with pharmacotherapy can work to reduce symptoms and exacerbations to a level of 0 per year. As illustrated by the EPA campaign a few years ago. "1 attack is too many"

So remember, if you would discuss carb choices with a diabetic, you should also discuss allergens with an asthmatic.

Robert Beatty, RCP, RRT-ACCS, AE-C, BA

Health System Specialist

Kentucky/Indiana ImmunoDiagnostics

Thermo Fisher Scientific

Current Literature Review

Pre-oxygenation and Prevention of Desaturation During Emergency Airway Management

This excellent article provides information related to pre-oxygenation and peri-intubation oxygenation techniques to minimize the risk of oxygen desaturations that can occur during intubation. The reason that I chose this article to review is that it reinforces techniques to minimize desaturations that all respiratory therapists have likely learned at one time but adds a twist to improve efficiency. There are other techniques discussed in the article that were completely new to me. The strategies discussed in the article are not based on anecdotal experience but rather evidence based techniques to minimize the risk of desaturations that can easily be incorporated into clinical practice. My review will highlight the recommendations outlined in the article.

- **Recommendation:** Standard reservoir facemasks with the flow rate of oxygen set as high as possible are the recommended source of high FiO2 for pre-oxygenation in the ED.
  - This means higher than 15 L/M for which most flow meters are calibrated.
  - This applies to manual resuscitators too. The article also reminds practitioners that the only way a patient will receive oxygen through a self-inflating bag valve mask resuscitator is if the patient takes a spontaneous breath to open the one-way valve or breaths are delivered by squeezing the bag with a good mask seal.

- **Recommendation:** Patients with an adequate respiratory drive should receive pre-oxygenation for 3 minutes or take 8 breaths, with maximal inhalation and exhalation.
  - This will promote getting the arterial saturation close to 100%.

- It will remove nitrogen from the alveoli replacing it with oxygen to increase the reservoir of oxygen in the lungs.

- **Recommendation:** CPAP masks, noninvasive positive pressure ventilation, or PEEP valves on a bag-valve-mask device should be considered for pre-oxygenation and ventilation during the onset phase of muscle relaxation in patients who cannot achieve saturations greater than 93% to 95% with high FiO2.
    - If the saturations remain less than 93% after a period of pre-oxygenation significant intrapulmonary shunting must be present. The increased airway pressure will improve oxygenation in most patients.
    - In cases where resources and/or time do not allow use of a stand-alone CPAP system or ventilators to apply positive pressure the authors discuss the use of a "poor man's" CPAP in which a nasal cannula is run at 15 L/M and placed on the patient under the bag-valve mask with a PEEP valve attached.

- **Recommendation:** Patients should receive pre-oxygenation in a head-elevated position whenever possible. For patients immobilized for possible spinal injury, reverse Trendelenburg position can be used.
    - Placing the patient in a 20-degree head-up position has been shown to increase the time for desaturation compared to a control group that was left supine.
    - The authors of the article site research from Ramkumar et al that the 20-degree head-up group took 452 seconds (over 7.5 minutes) to desaturate from 100% to 95% versus 364 seconds for the supine group.

- **Recommendation:** Apneic oxygenation can extend the duration of safe apnea when used after the administration of sedatives and muscle relaxants. A nasal cannula set at 15 L/minute is the most readily available and effective means of providing apneic oxygenation during ED tracheal intubations.
    - The article explains that 250 ml/O2 will move from the alveoli into the blood while only 8-20 ml of CO2 move into the alveoli, with the remainder of CO2 being buffered in the blood. This results in a mass flow of oxygen from the pharynx toward the alveoli. This phenomenon, called apneic oxygenation, permits maintenance of oxygenation without spontaneous or administered ventilations.
    - The authors site a reference indicating that a PaO2 can be maintained at greater than

100 mm Hg for up to 100 minutes without a single breath! However the lack of ventilation will eventually cause marked hypercapnia and significant acidosis.

- **Recommendation:** Apneic oxygenation can extend the duration of safe apnea when used after the administration of sedatives and muscle relaxants. A nasal cannula set at 15L/minute is the most readily available and effective means of providing apneic oxygenation during ED tracheal intubations.
    - The authors note that although nasal cannulas provide limited FiO2 to spontaneously breathing patients in the apneic state the high flow nasal cannula flow rate fills the pharynx with oxygen allowing delivery of nearly 100% O2.
    - Patients having their mouths open did not adversely affect the FiO2.
    - Nasal obstruction can be alleviated by the placement of nasopharyngeal airways allowing a clear path for the oxygen to flow.
    - In the apneic state a non-rebreathing mask provides minimal O2 due to the oxygen venting out of the one-way valves and the poor fit the mask on many patients.
    - Bag-valve masks only deliver O2 when ventilations are provided to the apneic patient.
    - The nasal cannula can be left in place during the intubation, which has lead to the use of the acronym **NO DESAT** (**N**asal **O**xygen **D**uring **E**fforts **S**ecuring **A T**ube)

- **Recommendation:** The risk/benefit of active ventilation during the onset phase of muscle relaxants must be carefully assessed in each patient. In patients at low risk for desaturation (95% saturation), manual ventilation is not necessary. In patients at higher risk (91% to 95% saturation), a risk-benefit assessment should include an estimation of desaturation risk and the presence of pulmonary pathology. In hypoxemic patients, low-pressure, low-volume, low-rate ventilations will be required.

- **Recommendation:** Patients should be positioned to maximize upper airway patency before and during the apneic period, using ear-to–sternal notch positioning. Nasal airways may be needed to create a patent upper airway. Once the apneic period begins, the posterior pharyngeal structures should be kept from collapsing backwards by using a jaw thrust. Cricoid pressure may negatively affect apneic oxygenation, but studies examining this question in the setting of modern emergency airway management do not exist to our knowledge.

- **Recommendation:** In patients at high risk of desaturation, rocuronium may provide a longer duration of safe apnea than succinylcholine.

As respiratory care practitioners we are always involved in either assisting and/or performing endotracheal intubations. Incorporating the techniques outlined in this article will decrease the incidence of desaturations and associated complications thus providing an opportunity to directly improve patient care.

This article review was provided by:

Jim Matchuny, BS, RRT-NPS, RPFT, AE-C, RPSGT
Respiratory Care and Polysomnography Program Coordinator
Bluegrass Community & Technical College
Lexington, KY 40506-0235
phone: (859) 246-6246

Weingart S, Levitan R: Preoxygenation and Prevention of Desaturation During Emergency Airway Management, Ann Emerg Med. 2012;59:165-175.

http://www.annemergmed.com/article/S0196-0644%2811%2901667-2/pdf

---

Getting Involved in the Mountain District!

I graduated from the respiratory program in May 2010. I decided on a career change, and I chose respiratory therapy because I knew how much my dad suffered with COPD, heart and kidney disease. I wanted to help people who had these diseases because I could relate to what they were going through. Before respiratory therapy, I had 10 years of experience as an elementary teacher before deciding on going in to respiratory care. I was interested in the education side of the field even as a student. I began respiratory education as a clinical instructor for the program from which I graduated. I worked as an instructor for 5 years before the opportunity came to work full time as an Instructor and now director of clinical education. I can truly say I am working in my dream job! A part of my profession and advocating for respiratory is my AARC membership. I have been a member since 2013. I want to be a part of the professional organization that advocates and represents me. It is important for people to be involved. My dad was a pastor and he used to say to our church, “we are only as strong as our weakest member”. I feel this way about our professional organization. We are only as strong as our membership and involvement. We have no right to complain about changes we would like to see in our profession if we are not willing to get involved. Now, I am currently serving as the senior representative of the Mountain District with KSRC. I am on the membership committee as well.

There are activities in the works for the Mountain District *(shown in red above).* I would like to see the Mountain District come alive and really advocate for our profession. The biggest challenge for the Mountain District is membership. It is vital that people see the need to get involved. I hear RTs complain all the time about one issue or another. These issues cannot be resolved without support and involvement from those

working in the profession. Every voice matters. In order to be heard by lawmakers, one must realize they have to be involved at the local level, the state level and the national level. If we do not show support for our professional organization, then why would we expect others to advocate on our behalf? If you want your voice to heard, it is never a burden to take a few minutes, hours, or days to be involved in something as important as the AARC/KSRC.

I would welcome anyone to contact me directly. I would love to share information with them and enlist their help to promote our profession. My email is dturner0017@kctcs.edu.

Delilah Turner, BS, RRT

Senior Representative of Mountain District. KSRC

Advocacy News from the American Lung Association in Kentucky:

- Senate Bill 89 sponsored by Senator Julie Raque Adams passed Health and Welfare unanimously earlier in 2017. This bill will require all Kentucky insurers, both private and Medicaid, to provide barrier free coverage for all USPSTF recommended and FDA-approved treatments for smokers who want to quit. It is expected to go to the Senate floor next week.
- SB 78 passed on the Senate floor last week with a vote of 25-9. It would make all K-12 Kentucky school campuses tobacco free. The companion bill HB 247 has been assigned to the Education Committee.

Help us fight for laws that will save lives and protect lung health!

BECOME AN ADVOCATE of the ALA:

Go to: www.lung.org

Click on: *get involved*

On the drop down select: *become an advocate*

You will receive email explaining the advocacy work happening in Frankfort. When help is needed to get the attention of a representative, you will be asked to make a call or submit a letter. To find your state and local representatives, enter your zip code. The verbiage is already written or you can add your own comments.

Tami Cappelletti, RRT
Program Manager
American Lung Association in Kentucky

Student Submission:

Quitting Smoking Can Kill You (I Was Healthier When I Smoked)

"All the best RT's are smokers." This was my father's snappy response to anyone, including me, that would mention the irony of the fact that he worked as a respiratory therapist and was an avid pack-a-day smoker. So, I had no worries when I decided that I was going to try smoking out for a while. Over the last two years, however, I have witnessed firsthand the consequences of smoking in my clinical experiences and during my job as a student therapist. As much as this alone should have compelled me to quit, it was my conscience that eventually lead me to quit. I was tired of feeling like a hypocrite when I was doing a smoking cessation education session with one of my patients after I had just smoked. So, I set my quit date to coincide with some days that I would be off from both school and work.

The first day went surprisingly well. By the third day, I was coughing continuously. I had expected some coughing, but nothing like this. The next day, I had developed a fever, chills, and all the aches that normally accompany a bug or the flu. I wore the patch for all of two days. After that, I felt too bad to care about nicotine withdrawal. Actually, I came up with the title of this article because that was how I would answer people during that first week when they would ask me how my quitting smoking was going.

When I finally felt like dragging myself to my computer, I discovered a condition that was referred to as Quitter's Flu. The Quitter's Flu is the name given to the collection of flu-like symptoms that people get when they are quitting smoking. It is referred to as the "flu" because often the symptoms experienced mimic those of the winter flu. Quitter's Flu does not affect everybody that quits smoking, and the ones that it does are affected differently.

Over the next week, I thought a lot about the population of our patients that are smokers. I joked to people that I felt better when I was smoking, but I realized that these were valid arguments that we therapists could experience when discussing quitting smoking with our patients. I was told by one of my instructors that they had a family member that refused to quit smoking simply because they felt so bad when they tried. As some will use this as their excuse not to quit, it has become my reason for not starting back. Hopefully, I can inspire some others to use it for that as well.

Our patients need to be educated on Quitter's Flu. When educating patients, we need to not only focus on the good things of quitting smoking. We don't want to scare them off from their attempt to quit, but we do need to let them know that there may be some rough days ahead and that it may take some hard work and help from others to get through them, but, that in the end, it is worth every bit of effort.

Another thing that crossed my mind when thinking about this was that many of our patients already have moderate to severe impairments to their

pulmonary function due to disease processes. It would be very easy for one of these patients to develop pneumonia, or worse, if they end up with the more severe symptoms of Quitter's Flu. They need to be educated to the fact that if left unchecked, Quitter's Flu could lead to an exacerbation of their disease and that they should be prepared to seek medical aid if necessary.

In closing, I must add that I do know that I am better off having quit smoking. After telling one of my instructors the title of my article, they made me promise that I would put that in here. I do hope that my experience has helped me to better educate my patients on smoking cessation. My only fear now is that when I'm with pulmonary rehab patients and explaining how important it is to eat right and exercise, that I am going to feel compelled to do the same.

Steven Survant
Madisonville Community College
Class of 2017

Respiratory Therapy and Pleural Mesothelioma

Guest contribution provided by :

The Pleural Mesothelioma Center

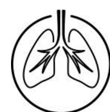
PleuralMesothelioma.com

Pleural mesothelioma is a rare cancer that develops on the pleura, which is the protective lining of the lungs.

The primary cause is exposure to asbestos, a naturally occurring mineral once considered a "miracle material" in the manufacturing and industrial sectors. When a person inhales toxic asbestos fibers, the fibers can become trapped in the pleura, where they can remain for decades and potentially lead to the formation of malignant tumors.

Mesothelioma carries an unusually long latency period. It can take 20 to 50 years after initial asbestos exposure before symptoms arise. Most patients are 60 years or older.

In the early stages of the cancer, symptoms resemble less serious conditions such as pneumonia or the flu. Symptoms become more severe as the tumors metastasize to other organs and other parts of the body.



A common misconception is that pleural mesothelioma is a type of lung cancer. While both cancers affect the lungs and chest by causing pain and reducing lung function, they differ in physical characteristics and non-asbestos risk factors. Lung cancer develops in the lung itself, instead of on the pleura.

Smoking — the overwhelming cause of lung cancer — has no influence on a person's risk of developing mesothelioma. However, smoking combined with asbestos exposure can greatly increase a person's risk of developing lung cancer.

Because mesothelioma is rare, familiarity with treating lung cancer or other lung conditions may benefit respiratory therapists working with someone diagnosed with pleural mesothelioma.

Palliative Care Essential for Mesothelioma

Pleural mesothelioma is a debilitating cancer that is extremely aggressive once symptoms arise. Many patients are diagnosed in the later stages of the cancer when the only treatment option is palliative care.

The most common symptoms include pain or tightness in chest, breathlessness and chronic cough.

Respiratory therapy can improve breathing and lung function in many mesothelioma patients. It can also boost energy levels and alleviate coughing and chest pain.

Breathing will become more difficult for patients as tumors grow and cause inflammation. Implementing pulmonary rehabilitation can help patients with physical and emotional stress. Common breathing techniques used on pleural mesothelioma patients include pursed-lip breathing, abdominal/diaphragmatic breathing and the active cycle of breathing technique (ACBT).

Because there is no definitive cure for mesothelioma, improving a patient's quality of life with respiratory therapy and pulmonary rehabilitation is an essential part of the treatment plan.

The Pleural Mesothelioma Center and PleuralMesothelioma.com is an organization dedicated to supporting patients and providing resources. We are not a legal or medical referral service and the information we provide is not a substitute for professional medical advice.

Written by Matt Mauney

The Pleural Mesothelioma Center

Just a few reasons to join AARC!

1. **Free CEU's are made available to you. You are going to need them. Why not get them for free?**
2. **Help provide resources and representation of Kentucky.**
3. **You are able to get involved and help with initiatives that directly impact RT's right here in your state.**
4. **Career opportunities are made available on AARC's website**
5. **Discounts for conferences and other events**
6. **Are you interested in education, NICU, Adult ICU, PFT's and other specialties? You can join the AARC and be part of specific communities of specialists, and interact and share best practices.**
7. **Students can be members too! In fact, being an AARC member gets you resources, libraries, and journals online, and DISCOUNTS FOR YOUR BOARD EXAMS.**
8. **Be part of a larger community and understand that you are supporting lobbyists and other delegates that go before Congress to help push initiatives that make our profession stronger.**
9. **Programs are offered to become a Certified COPD Educator. This can be marketable when looking at non-traditional career opportunities.**
10. **Keep track and automatically manage your CEU's**
11. **As health care changes, AARC can help to keep us up to date on medical issues as they arise. There has been updates on what RT's can do about Zika, Flu, Ebola, and other issues as they become known.**
12. **Access to policies and procedures, and best practices being used around the country.**
13. **Resume and letter writing tips geared for RT's.**

Publications Committee:

Patti Gilpin

Kelly Hayes

Kyle Mahan

Huge thank you to all our Contributors who make this publication possible.

For ideas and submissions, please email KSRCbod@gmail.com