



Ontario Respiratory Care Society | Spring 2021 Issue 13











# **Update**

on Respiratory Health, Research and Education

*Update on Respiratory Health, Research and Education* is the official publication of the Ontario Respiratory Care Society (ORCS), a section of the Lung Health Foundation. *Update* is published three times per year and includes peer-reviewed original articles, clinical practice tools, health news, and communications between the ORCS and its membership. The beginning section is a snapshot. Click the "Read more" links to view the full articles below.

### Chair's Message



As the new Chair of the Ontario Respiratory Care Society (ORCS), I am delighted to be writing my first message for the Update on Respiratory Health, Research, and Education publication.

I would like to start by expressing gratitude to our outgoing Chair, Miriam Freymond-Turnbull, for her dedication and commitment to the ORCS for more than 30 years. I anticipate that Miriam will continue to be highly active within the ORCS and we will benefit from her wisdom for many years to come. We wish her all the best! Read more

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### **Featured Article**

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Submitted by Fatima Foster, RRT, CRE (Co-Investigator) Respiratory Rehabilitation Program, St Joseph's Healthcare Hamilton, Hamilton, Ontario

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### Eye on: Lung Health Foundation's Lung Health Support Groups



### Evolving and Adapting Support Groups to our Changing Environment By Jody Hamilton, BSW, MSW, Manager, Patient Engagement and Community Programs at the

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socialize and participate in leisure and physical activities. It also affects relationships with family and friends, independence, finances and emotional well-being. Read more

### In the Spotlight

#### Sheila Gordon-Dillane

Submitted by Miriam Freymond Turnbull, Past-Chair Ontario Respiratory Care Society

What an incredible privilege to shine the spotlight on Sheila Gordon-Dillane! Sheila's duties at the helm of the Ontario Respiratory Care Society (ORCS) were herculean. Yet the first words that come to mind when we think of Sheila are humility, respect, and care. Her humility accompanied by her passion inspired volunteers. Read more

### **Toolbox**

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Submitted by Sharon Curtis, Project Manager, Youth Engagement & Knowledge Translation at the Lung Health Foundation

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### **Respiratory Article of Interest #1**

CTS Guidelines and Position Statements. 2021 Canadian Thoracic Society Guideline - a focused update on the management of very mild and mild asthma

Summary by Lawrence Jackson, BScPhm

Yang CL, Hicks EA, Mitchell P, Reisman J, Podgers D, Hayward KM, Waite M, Ramsey CD. *CTS Guidelines and Position Statements*. 2021 Canadian Thoracic Society Guideline- a focused update on the management of very mild and mild asthma. Canadian Journal of Respiratory, Critical Care, and Sleep Medicine. https://doi.org/10.1080/24745332.2021.1877043 Published online ahead of print version. Read more

### **Respiratory Article of Interest #2**

### Update on the Pathogenesis of Chronic Obstructive pulmonary disease

Submitted by Shirley Quach, MHSc, RRT, CRE, HBSc

Agusti A, Hogg JC. *Update on the Pathogenesis of Chronic Obstructive pulmonary disease*. N Eng J Med [Internet]. 2019; 381: 1248-56. DOI: 10.1056/NEJMra1900475 https://www.nejm.org/doi/full/10.1056/NEJMra1900475 Read more

### **Respiratory Article of Interest #3**

## Changes in medication adherence among patients with asthma and COPD during the COVID-19 pandemic.

Summary by Julie Duff-Cloutier, RN, BScM, MSc

Kaye L, Theys B, Smeenk I, Gondalia R, Barrett M, Stempel DA. 2020. *Changes in medication adherence among patients with asthma and COPD during the COVID-19 pandemic*. J Allergy Clin Immunol Pract. 8 P2384 – P2385 DOI: https://doi.org/10.1016/j.jaip.2020.04.053 Read more

### **Education & Events**

The Lung Health Foundation hosts various continuing medical education programs including 3 annual conferences (Better Breathing, Respiratory Health Forum, and TB) and periodic webinars on a wide range of topics related to respiratory lung health, many of which are Mainpro+ certified. Read more

### Ways to Get Involved

A great way to get involved is to join one of our committees! Read more



### **Brought to You by**

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### Chair's Message



As the new Chair of the Ontario Respiratory Care Society (ORCS), I am delighted to be writing my first message for the Update on Respiratory Health, Research, and Education publication.

I would like to start by expressing gratitude to our outgoing Chair, Miriam Freymond-Turnbull, for her dedication and commitment to the ORCS for more than 30 years. I anticipate that Miriam will continue to be highly active within the ORCS and we will benefit from her wisdom for many years to come. We wish her all the best!

I am humbled to serve as the new Chair of the ORCS. For those of you who do not know me, I am a Registered Nurse and Assistant Professor in the School of Nursing at Laurentian University. I am also a PhD candidate in the Interdisciplinary Health PhD program in the School of Rural and Northern Health. In 2001, I became a proud member of the ORCS as an undergraduate student under the wing of the irreplaceable Dr. Patricia Hill Bailey. Through the years, I have developed a passion for respiratory care and have had the honour and privilege of meeting so many wonderful people through my engagement with the ORCS and Ontario Lung Association (OLA), now the Lung Health Foundation (LHF). I look forward to serving alongside you, and the amazing leadership and staff of the LHF, as we collectively engage in endeavours aimed at improving the lives of those living with lung disease through research, education, and policy and practice change.

New this year, ORCS membership is free! If you have not renewed yet for 2021-2022, please do so today at <a href="https://lunghealth.member365.com">https://lunghealth.member365.com</a>. We ask you to renew and update your information so that we can better understand the wants and needs of you, our important members. Don't forget to take advantage of the directory so you can better get to know everyone too!

This issue of the ORCS publication features an article by Fatima Foster on the Mental Health of Healthcare Providers, a very timely topic as we head into the second difficult year of the COVID-10 pandemic. The Toolbox also contains some resources to help healthcare providers cope. In addition, other articles in this publication provide important information about available support for patients, including an Eye on Lung Cancer Support Groups and a Toolbox on a youth-oriented smoking and vaping cessation program, QUASH. Moreover, In the Spotlight this issue is Sheila Gordon-Dillane, an exceptional woman with such a long and prolific history with the ORCS that she hardly needs introduction, yet certainly deserves the praise. Lastly, as always, we provide some reviews of Respiratory Articles of Interest to aid in your continual learning.



Finally, if you have thoughts or recommendations on future topics or authors for the next publication, a speaker for an upcoming educational webinar, or if you have something you would like us to include in the bi-weekly ORCS News, please do not hesitate to send them to societies@lunghealth.ca.

I look forward to serving as your Chair and thank you all for the tireless work that you do in these exceptionally challenging times. I wish you all continued health and strength.

Respectfully submitted, Christina McMillan Boyles, RN, MScN, PhD candidate Chair, Ontario Respiratory Care Society

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### **Editor's Message**



While our entire province comes together in support and solidarity during another wave of the COVID-19 pandemic, commitment to education and dissemination of accurate information is paramount. Pandemic fatigue has reached everyone by this point and the term is now part of daily conversation. As we reflect on the past year and accept the present, it is important to stay active in our personal lives as well as our professional lives. It is important to restore and replenish our energy and continue our individual paths and the collective paths that connect our lung health and respiratory care community. I am convinced that one way to renew and replenish this energy is to educate ourselves, and our patients with accurate and evidence based new information.

The members of our Editorial Committee have put in many volunteer hours and work in selecting and reviewing information submitted for publication. My heartfelt thank you to these professionals for offering their already limited free time under the current circumstances when respiratory care practitioners are in the frontline of the pandemic.

Of course, our publication would not be able to provide information without the amazing contributions of healthcare professionals who choose to share their work and knowledge with our readers.

In this edition, the feature article written by Fatima Foster brings attention to an important research study currently in progress, on health care workers moral injury due to the COVID-19 pandemic experience of the past year.

In the Eye On section, Jody Hamilton provides information on Lung Cancer Support groups. Miriam Freymond-Turnbull, provides some insight on the contributions of Sheila Gordon-Dillane in the In the Spotlight section. As you have come to expect, this edition collected new information for the Tool Box. Sharon Curtis highlights QUASH, a free interactive online smoking/vaping cessation program for youth, while Elizabeth summarizes a number of links to websites and programs with tools to help with mental health of health care professionals.

Lawrence Jackson, Shirley Quach, and Julie Duff Cloutier have summarized three articles of interest, with highlights that will spark your interest in reading these articles.

I invite you to read all of our content, or choose your adventure in reading as you flip through the pages with this edition of *Update in Respiratory Health, Research and Education*. I also invite you to engage with us and let us know how to enhance your educational reading experience.

Sincerely, Yvonne Drasovean, BSc, RRT, MEd, FCSRT Co-chair, ORCS Editorial Board



### **Featured Article**

### Health care workers experience of COVID-19 related Moral Injury (RT)

Submitted by Fatima Foster, RRT, CRE (Co-Investigator) Respiratory Rehabilitation Program, St Joseph's Healthcare Hamilton, Hamilton, Ontario

The aim of this project is to examine mental health and moral injury in health care workers (HCW) across Canada with a study arm focused on Registered Respiratory Therapists (RRT) and student RTs (SRT). This study is a collaboration between McMaster University and St. Joseph's Healthcare Hamilton, Ontario with Dr Margaret McKinnon as Principal Investigator and Kelly Hassall (RRT) as an additional Co-Investigator.

Moral Injury (MI) has been described by Shay (2014) as, a) a betrayal of what's right; b) either by a person in authority, or by one's self; or c) in a high-stake situation. In military populations, exposure to potentially morally injurious events has been associated with negative outcomes, such as Post Traumatic Stress Disorder (PTSD), self-harming behaviours (e.g. self-injury, alcohol abuse and suicidal behaviours), self-handicapping behaviours (e.g. isolation), and demoralization (e.g. hopelessness)<sup>1</sup>.

MI is an area of increased interest in HCW across a range of health care occupations, including nursing, medicine, respiratory therapy, allied health,<sup>2 3 4</sup> and administration<sup>5</sup>. From an occupational perspective, MI has been associated with low job satisfaction, high rates of burnout<sup>6</sup> and intention to leave their profession<sup>7</sup>.

Although research on moral injury is still in its nascent, work by Nazarov et al<sup>8</sup> provides support for a link between moral injury and PTSD. Specifically, they found that military members who had been exposed to potentially morally injurious events while on deployment were more likely to have PTSD and major depressive disorder in the year following the exposure.

A recent survey of 147 RRTs and SRTs in Ontario, completed pre-pandemic, found that 30 per cent of participants met criteria for PTSD using the PTSD Checklist-5 (PCL-5) validated self-report screening measure for PTSD based on DSM 5 criteria. The results suggest risk for occupation-related PTSD for RRTs and SRTs is comparable to that of Paramedics. Of those who met the criteria for PTSD, 9.5 per cent were students in their clinical year of training and 21.4 per cent were RRTs with 0-5 years clinical experience. This points to potential risk fairly early in their careers. Despite these high rates, RRTs are often overlooked for debriefings and other psychological supports and resources, potentially placing them at increased risk of PTSD.

The COVID-19 pandemic has added an additional layer of incredibly stressful and complex situations to the profession. The pandemic has created circumstances that involve additional stress at all organizational levels, and exposure to ethically and morally challenging situations, such as allocation of scant resources, aligning the duty to care for others with concerns over the welfare of their families and loved ones, and balancing their own physical and mental well-being with those of patients<sup>10</sup>. At the same time, HCWs are faced with inadequate amounts of resources and staffing<sup>11,12</sup>.

It is important to raise awareness and to lift stigma regarding PTSD. Normalizing the importance of mental health self-care with a focus on prevention is critical to this highly stressed profession. By normalizing mental self-care, therapists will more freely engage in prevention and address any concerns earlier. Mentally healthy therapists will more effectively engage in, and recover from, critical incidents which are a daily norm in the profession. Therapists will be better positioned to provide exemplary care, address "burnout", reduce attrition rates, and have more engaging careers in healthier workplaces.

Research on this subject matter in healthcare workers is just starting to come to the forefront - but the RRT experience is still lacking. Without targeted RRT research, widespread RRT participation and especially a Canadian perspective, advocating for change to positively support the profession will be challenging.

The objective of this qualitative and quantitative study is to address the knowledge gap of the incidence/occurrence of moral injury in Canadian HCWs with an additional study arm focusing on RRTs and SRTs. The entire study is currently active and open to anyone working in Canadian healthcare regardless of role. An end date has not yet been established given the current state of the pandemic may require more recruitment time.



All Canadian HCWs can access more information through COVID19STUDY@MCMASTER.CA RRTs/SRTs will also receive communication from their regulatory colleges, associations, education institutions and the Canadian Society of Respiratory Therapists (CSRT). The study is also posted on the CSRT research page.

Inquires may be sent directly to Co-Investigator: Fatima Foster, RRT, CRE St. Joseph's Healthcare Hamilton, T8117-50 Charlton Ave E, Hamilton, ON L8N 4A6 905-522-1155 ext 33492 ffoster@stjoes.ca

Acknowledgements: Thank you to the research team. Brown, A., Ritchie, K., Pichtikova, M. et al., for their support and tireless efforts on this important work.

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### Eye on: Lung Health Foundation's Lung Health Support Groups



**Evolving and Adapting Support Groups to our Changing Environment** *By Jody Hamilton, BSW, MSW, Manager, Patient Engagement and Community Programs at the Lung Health Foundation* 

The ongoing and seemingly relentless global pandemic surrounding Covid-19 can be frightening, overwhelming, and undoubtedly exhausting. The uncertainty around the virus and variants, the vaccine rollout, our personal health, the risk to our loved ones and not knowing when all of this will end can bring about feelings of fear, anxiety and sadness. For people living with a lung disease, the stakes are particularly high right now. Lung disease already brings with it loss that can affect every part of a person's life. For many, it affects the ability to work, travel,

socialize and participate in leisure and physical activities. It also affects relationships with family and friends, independence, finances and emotional well-being.

Although all of these feelings are a normal response to lung disease and the COVID-19 pandemic, too much stress, too much fear, too much anxiety can begin to take a toll on our physical and mental health. As humans, we are social animals, so ongoing isolation combined with heightened feelings of anxiety may serve to only amplify those feelings. For all of these reasons there is a growing need for lung health support groups. These support groups bring together people who share the experience of living with lung disease and they offer psychosocial support and a sense of empowerment. They provide an opportunity for participants to learn more about their disease, share experiences, frustrations, and accomplishments, find emotional support, develop coping skills and strategies, and increase social supports and connections to their community.

The Lung Health Foundation (LHF) remains committed to offering access to lung health support groups to people living with lung disease, their family members and caregivers. We have evolved and adapted our traditional in-person approach to these groups and are now focusing our time on innovative ways to reach, inform and support people in Ontario and across Canada. For more than a year now, we have been running a monthly call-in phone support group on the second Wednesday of each month. Group members can email their questions ahead of the meeting or ask then during the call. There is always a Certified Respiratory Educator (CRE) on every call and from time to time we bring in guest speakers to address requested areas of interest. We now have a distribution list of 70 participants and still growing! 1–888–344–LUNG (5864)

Over the holiday season this past December / January the staff at the Lung Health Foundation engaged in a "Holiday Call" program, where any support group member who signed up received a phone call and a friendly conversation. This was something that was enjoyed equally by our staff and our group members. Touching base and chatting for a half hour made all of us feel more connected. In addition to this, and for the first time ever, we opened our Better Breathing conference to patients and caregivers. There were 12 sessions available, at no cost, over a five-day period, and topics ranged from addressing vaccine hesitancy, to achieving better balance and strength while living with lung disease to the stigma faced by those living with lung cancer. More than 500 patients and family members joined in on these practical and thought-provoking talks.

The Lung Health Foundation has also enhanced our online offerings related to support groups and we are excited that there is a new resource for patients, caregivers and healthcare providers' interested in starting a lung health support group. This narrated, interactive eLearning module provides step-by-step guidance for "how to" start a lung health support group. It is our sincere hope that once it is safe to do so, in-person support groups will return or start anew in communities across Ontario. https://lunghealth.ca/support-resources/community-support

Another area of great focus in the coming year, is the development of a model for Lung Cancer specifically support groups. The Lung Health Foundation plans to construct and deliver a support service to lung cancer patients that is current, relevant and meaningful. We are doing research, holding focus groups and have developed a patient advisory committee to gain insight and understanding from patients, family members and caregivers into the areas within lung cancer care that are deemed pertinent and necessary to advocate for change.

In summary, although the pandemic has changed the way we reach and work with those living with lung disease, it has not changed our commitment or drive to support and work towards increased survivorship and improved quality of life for all those impacted.



We would like to extend an invitation to:

- refer clients/patients to the Lung Health Line if they are interested in participating in a support group or in receiving case management through several phone-based sessions,
- any of our Ontario Respiratory Care Society (ORCS) members and their students who are interested in volunteering some of their time to help out at one or more of our support groups (e.g. presenting on a topic area, answering questions) and
- · any of our ORCS members who are interested in starting their own support group for their practice or community.

The Lung Health Foundation is dedicated to ending gaps in the prevention, diagnosis, and care of lung disease in Canada. We aim to give patients and their families the programs and support they need today. Please, get in touch with us if you would like to learn more or get involved!

Lung Health Line: 1-888-344-LUNG (5864)

Learn more about our support groups: https://lunghealth.ca/support-resources/community-support



### In the Spotlight

### Sheila Gordon-Dillane

Submitted by Miriam Freymond Turnbull, Past-Chair Ontario Respiratory Care Society

What an incredible privilege to shine the spotlight on Sheila Gordon-Dillane! Sheila's duties at the helm of the Ontario Respiratory Care Society (ORCS) were herculean. Yet the first words that come to mind when we think of Sheila are humility, respect, and care. Her humility accompanied by her passion inspired volunteers.

Saying no to Sheila was difficult. Highly intelligent and very organized with a memory we all envied. Goals were met because of her leadership and her subtle but firm guidance. Such an amazing example of leadership! Her demeanor earned the respect of everyone who had the privilege of working with her. She connected with all and made everyone feel valued, regardless of status and different views.

While quiet and someone you would describe as being in the background...behind the scenes, her walk into a room defied what you thought – she had everyone's attention without any evident demand for it. Those of us who worked with Sheila got undeserved credit. She was always determined to acknowledge those involved while those of us involved knew the success was primarily attributable to her – amazing humility.

Sheila knew how much to nudge to keep us on track and when to step in. She can be described as the glue for the Association. She led many strategic plans and actively worked to ensure that everyone was engaged and felt that their voice was heard. She was the common denominator in many committees, ensuring effective communication and timely action. Her interactions across the spectrum of stakeholders were founded on respect and collaboration.

Despite not being a healthcare professional, she deserves an honorary degree or diploma as a nurse, physiotherapist, respiratory therapist, pharmacist, and about every profession that makes up our membership. When discussing diseases and their treatment, she often had as much information to offer as the healthcare professionals in the room.

In conclusion, we add to the first words that come to mind with descriptors like remarkable, unparalleled, incredible, incomparable – well, you get the idea. Sheila Gordon Dillane is one amazing woman!



### **Toolbox**

### Quash powered by the Lung Health Foundation

Submitted by Sharon Curtis, Project Manager, Youth Engagement & Knowledge Translation at the Lung Health Foundation

Despite progress in reducing smoking rates over the years, tobacco use remains the leading preventable cause of premature death in Canada with approximately 45,000 deaths annually. The majority of adult smokers report smoking initiation in adolescence, which highlights the importance of addressing tobacco use early on. The recent upsurge in vaping and vaping-related illnesses and the strong association between smoking and vaping among adolescents have prompted more education, regulations, and new prevention and cessation interventions for youth. Although dual use may vary among individuals, concurrently smoking and vaping poses a greater health risk than each behaviour alone.

The tobacco industry has marketed vaping as more discreet and desirable than smoking glossing over the fact that for many it will lead to nicotine addiction and other negative health effects. Smoking and vaping among youth is an undeniable priority that warrants immediate action. We have created Quash, a Health Canada funded program, powered by the Lung Health Foundation, that will equip youth with the knowledge and tools to quit smoking and/or vaping.

Quash was co-developed with youth for youth with the understanding that every individual has a unique experience when quitting. Quash is a free program, that is evidenced-based.

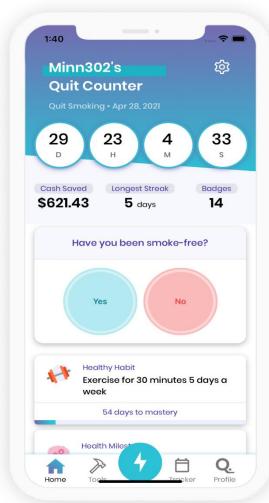
There are two versions of the program that can be utilized separately or simultaneously depending on the needs of the young person trying to quit:

- 1. Self-directed program for youth (app)
- 2. Adult facilitated version of the program delivered to youth over seven sessions (online or in-person)

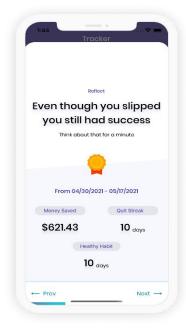
There are three online platforms:

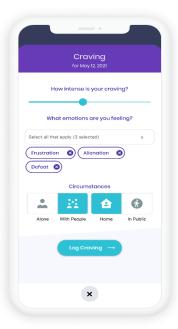
- an app (self-directed program for youth)
- a website (for youth and adults)
- an e-module training program for adults interested in becoming Quash facilitators and delivering the program to youth online or in-person

Quash utilizes the Stages of Change and Social Cognitive Theory as the theoretical underpinnings driving behaviour change. The app has key offerings that enable the end-user to track their quit progress, manage slips, understand and deal with their cravings and adopt healthy activities. Quash empowers end-users to monitor and identify changes in their behaviour and to recognize their barriers to quitting as well as their strengths and supports. This heightened awareness can drive healthy decision making.









Within the app, the end-user will find their quit plan and they can revise the plan as they see fit. Over time, Quash will teach the end-user to become more familiar with their triggers and cravings and how to work through them more efficiently and effectively. The end-user will learn to take positive action earlier, giving them confidence to quit, maintain their quit status and seek additional help when needed.



#### Quash has launched!

Join us! Together we can ensure that future generations don't suffer the debilitating effects of lung disease and addiction. Download Quash in the App Store or Play Store. Visit the Quash website for more information: https://www.quashapp.com/.

#### **Facebook**

https://www.facebook.com/lunghealthfoundation/

#### Instagram

https://www.instagram.com/lunghealthfoundation/

#### **Twitter**

https://twitter.com/LungHealthFdn

#### YouTube

https://www.youtube.com/channel/UCH4Ap1iIYRH9n0KSrT66v6Q

#QuashApp #LungHealth



### **Respiratory Article of Interest #1**

CTS Guidelines and Position Statements. 2021 Canadian Thoracic Society Guideline - a focused update on the management of very mild and mild asthma

Summary by Lawrence Jackson, BScPhm

Yang CL, Hicks EA, Mitchell P, Reisman J, Podgers D, Hayward KM, Waite M, Ramsey CD. *CTS Guidelines and Position Statements*. 2021 Canadian Thoracic Society Guideline- a focused update on the management of very mild and mild asthma. Canadian Journal of Respiratory, Critical Care, and Sleep Medicine. https://doi.org/10.1080/24745332.2021.1877043 Published online ahead of print version.

This asthma guideline update focuses on the management of individuals 1 year of age and over and adults with asthma at the mild end of the spectrum. This update applies current Global Initiative for Asthma (GINA) recommendations and recent evidence to the Canadian context. The updated evidence demonstrated that daily inhaled corticosteroids (ICS) plus as needed (PRN) short-acting beta-agonist (SABA) decrease exacerbations and improve asthma control compared to PRN SABA in individuals with very mild and mild asthma. There is new evidence in children ≥12 years of age and adults that PRN budesonide/formoterol (bud/form) decreases exacerbations in comparison to PRN SABA, with different levels of evidence in those with very mild versus mild asthma. Individuals with very mild asthma at higher risk of exacerbation should be given the option of switching from PRN SABA to daily ICS + PRN SABA (all ages) or PRN bud/form (≥12 years of age). In individuals with mild asthma, daily ICS + PRN SABA are still recommended as first line controller therapy. However, in individuals ≥12 years of age with poor adherence to daily medication despite substantial asthma education and support, PRN bud/form is an alternative. Intermittent use of very high dose ICS for acute loss of asthma control is not suggested in preschoolers given potential for harm. Contrary to GINA 2019, the CTS still lists PRN SABA as an option in those with low risk of exacerbation.



### **Respiratory Article of Interest #2**

### Update on the Pathogenesis of Chronic Obstructive pulmonary disease

Submitted by Shirley Quach, MHSc, RRT, CRE, HBSc

Agusti A, Hogg JC. *Update on the Pathogenesis of Chronic Obstructive pulmonary disease*. N Eng J Med [Internet]. 2019; 381: 1248-56. DOI: 10.1056/NEJMra1900475 https://www.nejm.org/doi/full/10.1056/NEJMra1900475

Traditionally, chronic obstructive pulmonary disease (COPD) is widely accepted as a self-inflicted disease caused by tobacco smoking. It is believed that smoking activates abnormal inflammatory responses and damages the airways and lung tissues, leading to airway limitation and lung health deterioration. Many of the therapeutic options for individuals living with COPD involve minimizing airflow limitations, alleviating symptoms and preventing exacerbations. However, the perception of COPD pathogenesis requires reconsideration as recent research suggests that there is more to the disease pathway than previously known.

Factors such as increased apoptosis, lung maintenance failure, oxidative stress, autoimmunity, malnutrition or a combination of these are suggested to contribute to the pathogenic mechanism in emphysema, a key component of COPD. Although these may be the result from smoking and is a key risk factor in COPD, about one third of those diagnosed with COPD in the world never smoked. In fact, there are other environmental risk factors that may lead to a COPD diagnosis, including but not limited to, pollutants and smoke from occupational and industrial environments. Therefore, COPD is a heterogenous disease, comprised of many components caused by risk factors that may progress the COPD pathology independently.

COPD does not usually present alone. Individuals with COPD most often than not, have other comorbidities that may or may not involve the cardiopulmonary system. Multimorbid conditions may influence the COPD disease progression, regardless of its involvement in lung health. Even though COPD is primarily a pulmonary disease condition, its role in a person's overall systemic health and comorbidities must be considered when deciding treatment options.

Lung function in later life may be influenced by the effects of maternal smoking and prematurity in early lung development. Lung function peaks and plateaus around 20 years of age, with a steady decline in the following years. However, some individuals' forced expiratory volume (FEV1) do not peak to normal predicted values for their sex and age in early adulthood, which may indicate greater airflow limitations later in life despite similar decline in lung function. These differences may elevate the risk of certain individuals for higher incidence and earlier prevalence of decreased lung function and other comorbidities. It is suggested that by identifying individuals with lower than normal lung function in early adulthood may allow for early preventative intervention, but this is still not well understood.

In conclusion, it is crucial to consider COPD as the result of other risk factors in combination or besides tobacco smoking. Current evidence suggests that COPD may be due to multiple gene-environment interactions and the pathogenesis is complicated and dynamic. Furthermore, COPD may not be a progressive disease, but rather is the subsequent condition from the interactions of the previously mentioned risk factors. This indicates the necessity of identifying biomarkers to classify each individual's COPD endotype that could provide insight to developing specific and preventative therapies in early adulthood.



### **Respiratory Article of Interest #3**

# Changes in medication adherence among patients with asthma and COPD during the COVID-19 pandemic.

Summary by Julie Duff-Cloutier, RN, BScM, MSc

Kaye L, Theys B, Smeenk I, Gondalia R, Barrett M, Stempel DA. 2020. *Changes in medication adherence among patients with asthma and COPD during the COVID-19 pandemic*. J Allergy Clin Immunol Pract. 8 P2384 – P2385 DOI: https://doi.org/10.1016/j.jaip.2020.04.053

Adherence to daily medications is multifactorial and it is known that adherence to daily controller medications has been associated with improved disease outcomes and decreased risk of respiratory exacerbations. In addition, patients with well managed symptoms are less likely to seek out acute care which in turn may decrease their risk of exposure to COVID-19. Researchers examined how patients with asthma and COPD were responding to the recommendations of respiratory societies to follow daily medication regimens during the COVID-19 pandemic.

Data was collected from a digital program that tracked inhaler use through electronic medication markers and sends alerts to patients for missed doses. Data was analyzed for 7578 patients from January 2020 to March 2020 and a 14.5% increase in mean daily controller medication adherence was noted. Older patients had higher levels of adherence. No clinically meaningful difference in adherence was noted between patients with asthma or COPD.

This initial evidence on adherence is encouraging and it is hoped that it will have a positive effect of improved control of asthma and COPD and minimize the need for acute care for their primary disease.



### **Education & Events**

The Lung Health Foundation hosts various continuing medical education programs including 3 annual conferences (Better Breathing, Respiratory Health Forum, and TB) and periodic webinars on a wide range of topics related to respiratory lung health, many of which are Mainpro+ certified. For more information or to set up a workshop for your healthcare team or organization please contact pep@lunghealth.ca.



ORCS members regularly receive news of upcoming workshops via the bi-weekly ORCS News. Recordings of past educational webinars can be found in our archives.

# RESPIRATORY TRAINING RESPIRATORY COURSE RESPIRATORY TRAINING & EDUCATOR COURSE RESPIRATORY TRAINING

RESPTREC is pleased to offer ORCS members a 10% discount on any individual course purchases (ie. Asthma or COPD or Education for Chronic Disease). To receive the discount, please apply the code **ORCS10** at the time of registration. If you are a new RESPTREC learner, you can also register for all three courses as a value-bundled option.

To see what RESPTREC courses are currently available and to register, please visit www.resptrec.org.



### Ways to Get Involved

### A great way to get involved is to join one of our committees!

#### PROVINCIAL COMMITTEE

provides leadership to the ORCS. It is comprised of the ORCS Chair, the Chair-Elect, Past Chair, the Chairs of the standing committees, the Chairs of the regional planning committees and the ORCS representative on the Lung Health Foundation Board of Directors.

#### **EDITORIAL BOARD**

produces the electronic publication, Update on Respiratory Health, Research and Education for ORCS members by providing academic and patient education content.

#### **EDUCATION COMMITTEE**

is responsible for planning those sessions at the annual Better Breathing conference that would be of interest to ORCS members.

#### RESEARCH AND FELLOWSHIP COMMITTEE

manages the ORCS research funding process by reviewing the grant and fellowship applications and recommending the funding allocation.

### **REGIONAL PLANNING COMMITTEES**

(Northeastern, Northwestern, Eastern, Central, and Western) plan educational seminars of particular interest to the ORCS members in their communities.

For more information, please contact the ORCS office at societies@lunghealth.ca.

And don't forget to encourage your colleagues to become members of the Ontario Respiratory Care Society!

Have them visit hcp.lunghealth.ca/respiratory-care-society today!