The Lung Health Foundation's

UPDATE

on Respiratory Health, Research and Education

Ontario Respiratory Care Society | Fall 2020 Issue 11

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.

CHAIR'S MESSAGE

To say that 'change is the only constant' would certainly ring true of the past few months. I would like to begin by thanking all our ORCS members – especially those on the front lines, for devoting their 'all' to helping Ontarians and our health system battle this pandemic. In April the ORCS began a program for members to nominate other members for their heroic deeds and achievements. I'm very pleased that we were able to recognize our members in this way. Each hero was named in our weekly newsletter as well as on the Lung Health Foundation website. Again, sincerest appreciation to all our members who were on the front lines and working behind the scenes to make a difference in these unusual and

changing times.

With the challenges that change brings, we've also seen opportunities. Many of us have adopted virtual methods of communication where we never had imagined we would. We've acquired skills and abilities that are allowing us to keep reaching out and connecting despite distances. I'm pleased to announce that the Better Breathing Conference will be *entirely virtual* this year! With this new format we have the opportunity to welcome more delegates than ever before. This is an exciting opportunity that we're looking forward to the week of January 18th - 22nd, 2021. More information on this event will be available soon on social media, the LHF website, and our ORCS weekly newsletter.

Our Regional Committees are busy planning virtual education sessions for the fall and spring. Registration is currently open for the Central Region Webinar *Virtual Care: Pearls of Wisdom For Your Practice - Panel Discussion on Where we've been, where we're at and where we're going*. Please register below for this lunchtime webinar on November 3rd.

This year, due to the pandemic, we decided to extend the membership lapse date for the ORCS from April to September knowing that many of our members were busy with front line efforts. We sincerely thank all members who have renewed their membership. We need you and your expertise as we impact lung health in Ontario and nationally. Joining a committee is a wonderful way to be more involved and lend your expertise to the Lung Health Community. Whether you are interested in helping to plan our education sessions, planning Better Breathing, advocating for lung health, or being involved with "Update", we extend a warm welcome to you.

Because Lung Health Matters, Miriam Freymond-Turnbull Chair, Ontario Respiratory Care Society



EDITOR'S MESSAGE

As our province is slowly learning to function in its new normal environment, we have an opportunity to reflect on the personal and professional experience of the past 6 months, to connect that experience with knowledge gained, and to look forward with hope and confidence. I am a respiratory therapist who entered the profession in the middle of what was called, at the time, the first pandemic of the 21st century – the 2003 SARS outbreak.

My excitement of starting a new career was somewhat shadowed by the somberness and challenges of that outbreak. When the World Health

Organization declared a new global pandemic in March of 2020, amidst the anxiety and concern we all felt, I remembered a few important lessons learned from the beginning of my career in the community of all respiratory care providers in Ontario. We are resilient; we learn fast from scientific evidence and we adapt our practice to new public health guidelines quickly. However, most importantly, I remember the professional networks created for supporting one another and the interprofessional collaboration in practice and the human connections that helped us turn challenges into opportunities and move forward towards professional growth. We have demonstrated in the past 6 months that we can do it again.

We have the privilege to live and work in a country and province that appreciates the importance of timely dissemination of evidence-based scientific information on SARS-CoV disease. We also have a responsibility to combat misinformation and provide education along with practice of appropriate infection control measures while continuing to take into consideration any other new research done to promote the respiratory health of Ontarians.

It is with hope for good outcomes in the future of our practice and health that I invite you to explore the content of our new edition of Update on Respiratory Health, Research and Education. In our feature article, Dr. Darlene Reid provides information on her research of the underlying principle of near infrared spectroscopy and its applications in physiotherapy.

The Eye-on section of this edition explores the importance and availability of multidisciplinary COPD Healthcare.

The poster presentations from the Better Breathing Conference 2020 are highlighted in our In the Spotlight section. In the Toolbox section, you will find information on sensitivity training regarding the indigenous population. Last, but not least, this edition offers a few articles of interest in respiratory care that will be informative as well as great conversation starters for you to use in your professional circles.

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



FEATURED ARTICLE

Does Near Infrared Spectroscopy Provide More Information Than Pulse Oximetry?

Submitted by Darlene Reid, Physical Therapist and Professor in Physical Therapy, University of Toronto

Many people with chronic or acute respiratory conditions have lower levels of oxygenated blood. Their oxygen status is often evaluated using pulse oximetry to provide the oxygen saturation of arterial blood, also abbreviated as SpO₂. This provides a measure of the oxygen status of the circulating cardiac output but what about the tissues? Does the oxygen status of the tissues equal the oxygen status of arterial blood? The short answer is "no" and if you'd like to know more, please read on.

Partial Pressure Gradient of Oxygen from Air to Tissues

The first bit of physiology is to appreciate the changes of the partial pressure of oxygen as it travels from ambient air to the tissues. When air travels from room air, the partial pressure of oxygen decreases at every interface – it is approximately 160 mmHg in room air at sea level \rightarrow it is ~110 mm Hg in the alveoli \rightarrow ~100 mm Hg in arterial blood and ranges between 4 to 20 mm Hg in the tissues.

We usually consider that low oxygen content in arterial blood in respiratory conditions is due to poor gas exchange in the lungs. However, oxygen delivery can be compromised by poor cardiac output and diminished peripheral vascular flow. Taken together, these factors can lower oxygenation of the muscle and the brain, both of which require an ample oxygen supply during physical activity and exercise.



How Does Near Infrared Spectroscopy (NIRS) Work?



Near infrared spectroscopy, also known as NIRS, is a device that evaluates oxygen status of the tissues by measuring the absorbance of infrared light shone through the tissues.^{2,3} It is like an oximeter for the tissues but provides more information than an oximeter. In addition to the oxygen saturation of the small vessels of the tissue arterioles, venules and capillaries - it estimates the oxygenated and deoxygenated hemoglobin in these vessels. The software can calculate the total hemoglobin, which provides

a measure of blood volume beneath the NIRS optode site, and is an estimate of blood flow.

NIRS Outcomes in Muscle of Healthy Person

During physical activity and exercise, NIRS can be used to monitor exercising muscle and the brain, both of which require a good oxygen supply for good motor control. In the example shown in Figure 3, the deltoid is being monitored while a very fit person is doing push-ups. Note the upward trajectory of the deoxygenated hemoglobin (HHb) and the total hemoglobin (tHb). During exercise, oxygen is extracted from hemoglobin to the mitochrondria in the exercising muscle so deoxygenated hemoglobin (HHb) increases.⁴ In a healthy person, blood flow



indicated by tHb also increases. If the oxygen delivery meets the demand of the exercising muscle, oxygenated hemoglobin (O₂Hb) changes very little.

These changes in Figure 3 show typical changes in exercising muscle of a healthy person. The oscillations correspond to each muscle contraction - the downward swing occurs during muscle contraction that occludes blood flow whereas the upward swing occurs during relaxation when the muscle fibres no longer compress the vasculature.



NIRS Outcomes in Muscle of People with Chronic Obstructive Lung Disease (COPD)

In people living with respiratory disease, a very different pattern is shown in their exercising muscle. We have shown that oxvgenated hemoglobin decreases in exercising muscle in stable COPD patients who are not on supplemental oxygen. In this study, the muscle recruited most by the exercise decreased their O₂Hb and had very small changes in tHb as shown in the Figure 4.⁵ Note the thick blue lines that show the response of the sternocleidomastoid when participants breathed through ever increasing loads. The

upper left panel shows the progressive decrease in oxygenated hemoglobin during exercise and the lower left panel shows the very sluggish response of total hemoglobin of the sternocleidomastoid. The right panels show a similar response in the exercising biceps with repetitive elbow flexion. In this case, the biceps (thick green line) show a dramatic decrease in oxygenated hemoglobin (upper right panel) and the lower panel shows no increase in total hemoglobin (tHb), the surrogate measure of blood flow. In other words, blood flow did not keep up with oxygen demand during respiratory muscle loading and elbow flexor loading in this group of COPD patients. It would be interesting to see how much improvement occurs in these patients with exercise training.

NIRS Outcomes in Muscle of People with Interstitial Lung Disease (ILD)

In study led by Dr. Lisa Wickerson,⁶ we had healthy people and patients with mild ILD and severe, oxygen dependent ILD perform unilateral repetitive knee extensor loading. It is interesting to note that during progressive incremental knee extensor loading, all groups including the healthy people showed oxygen desaturation in their vastus lateralis (SmO₂). Of clinical importance, those with severe ILD desaturated their vastus lateralis at a much lower workload (Figure 5).



What Happens in the Brain During Dual Tasking?

Most of the time when we are walking, we are not simply walking. We often are thinking about what we are about to do i.e. the grocery list or what we want to get out of garage. Doing two things



simultaneously is termed *dual tasking*. In this study, we questioned what would happen in COPD patients compared to older individuals when doing two things at once. In this study led by Ahmed Hassan,⁷ we asked older persons and people with COPD to walk at their usual pace and to walk as quickly but as safely as possible. We then asked them to do two things at once – they were asked to spell words backwards while walking at either speed.

We applied NIRS monitoring over their prefrontal cortex (brain just beneath the forehead) because this region of the brain is important for attention and manipulating information. Compared to healthy persons of similar age, persons with COPD had a greater increase in oxygenated hemoglobin (O_2Hb) , a sign of greater neural activity when walking at their usual pace and when walking as quickly as possible (fast walk) (red brackets). In other words, their brain has to work harder than people of similar age when walking at their usual pace, even though they were walking at a much slower pace than healthy people. The results were even more interesting when both groups were asked to do two things at once. Older individuals were able to increase their neural activity (O_2Hb) when walking while spelling backwards (blue brackets). In contrast, COPD patients did not

increase their neural activity (O₂Hb) while doing two things at once. Worthy of note, COPD patients even walked more slowly while doing dual tasking (doing two things at once).

The good news

Exercise training improves the endurance of limb muscles in COPD⁸ and ILD.⁹ NIRS examination of limb muscle before and after training demonstrates a great oxygen desaturation during exercise concomitant with attainment of a higher exercise workload.¹⁰ Of equal importance, recovery from oxygen desaturation in the exercising muscle occurred more quickly post training.¹⁰

Important points about NIRS

- It provides tissue oxygenation, which differs from oximetry
- It shows real time measures of hemodynamics, oxygenation and deoxygenation of muscle and brain. This information can provide important insight into limitations of exercise in people with COPD or ILD. NIRS can help pinpoint the cause of exercise limitation in our patients. Is the specific muscle undertrained? Did the muscle improve its oxidative capacity post training? Is the brain receiving adequate oxygen for motor control?
- It can indicate if interventions help i.e. exercise training, supplemental oxygen, and medications.
- It can be utilized during body movement; therefore, it is much more useful to examine what is happening in the muscle and brain during physical activity compared to MRI and other imaging methods.
- It is inexpensive compared to MRI and other imaging methods.

References

- 1. Basoudan N. *Respiratory muscle oxygenation and myoelectrical manifestations during normoxic and hypoxic inspiratory threshold loading*, Thesis. University of British Columbia; 2015.
- 2. Boushel R, Langberg H, Olesen J, Gonzales-Alonzo J, Bulow J, Kjaer M. Monitoring tissue oxygen availability with near infrared spectroscopy (NIRS) in health and disease. *Scand J Med Sci Sports*. 2001;11(4):213-222.
- 3. Ferrari M, Mottola L, Quaresima V. Principles, techniques, and limitations of near infrared spectroscopy. *Canadian Journal of Applied Physiology.* 2004;29(4):463-487.
- 4. Grassi B, Quaresima V. Near-infrared spectroscopy and skeletal muscle oxidative function in vivo in health and disease: a review from an exercise physiology perspective. *J Biomed Opt.* 2016;21(9):091313.
- 5. Reid WD, Sheel AW, Shadgan B, Garland SJ, Road JD. Recruitment and deoxygenation of selected respiratory and skeletal muscles during incremental loading in stable COPD patients. *J Cardiopulm Rehabil Prev.* 2016;36(4):279-287.
- 6. Wickerson L, Mathur S, Brooks D, et al. Skeletal muscle oxygenation and regional blood volume during incremental limb loading in interstitial lung disease. *ERJ Open Research.* 2020;6(1).
- 7. Hassan SA, Campos MA, Kasawara KT, et al. Changes in Oxyhemoglobin Concentration in the Prefrontal Cortex during Cognitive-Motor Dual Tasks in People with Chronic Obstructive Pulmonary Disease. *COPD: Journal of Chronic Obstructive Pulmonary Disease.* 2020:1-8.
- 8. Rochester CL. Exercise training in chronic obstructive pulmonary disease. *Journal of Rehabilitation Research and Development.* 2003;40(5; SUPP/2):59-80.
- 9. Holland AE, Hill C. Physical training for interstitial lung disease. *Cochrane Database of Systematic Reviews.* 2008(4).
- 10. Barberan-Garcia A, Munoz PA, Gimeno-Santos E, et al. Training-induced changes on quadriceps muscle oxygenation measured by near-infrared spectroscopy in healthy subjects and in chronic obstructive pulmonary disease patients. *Clinical Physiology and Functional Imaging.* 2019;39(4):284-290.

Acknowledgement

We are grateful to the Ontario Respiratory Care Society who provided funding for two of the studies,^{6,7} described in this article.



EYE ON

Multidisciplinary Approach to Community-based COPD Care

Submitted by Authors: Geetika Bhargava, RRT, CRE, Michael Georgievski, RKin

Although COPD is an irreversible disease, with the proper self-management tools, its progression can be delayed or even stopped. This may prevent further damage to the lungs and positively impact clients' quality of life. The COPD Program at the Vaughan Community Health Centre (VCHC) is a recognized program by the Ontario Lung Association and is supported by local practitioners.

The Program is designed to empower clients to self-manage their disease with the goal of reducing emergency room visits and hospitalization. The program uses a multidisciplinary approach with a team consisting of a Registered Respiratory Therapist (RRT), Registered Kinesiologist (RKin), Registered Dietitian (RD), Registered Social Worker (RSW) and a Registered Physiotherapist (RPT).

Services such as onsite spirometry testing, disease specific education, exercise programs and smoking cessation are available to help clients self-manage and improve their overall quality of life. The VCHC COPD Program is offered both onsite and virtually, which eliminates the barrier to access to care.

There are a variety of exercise programs offered to each client. The Pulmonary Rehabilitation Program is a 12-week (2 days a week) structured program providing disease specific education and exercise in which the client receives the tools necessary to self-manage their symptoms. A client's progress is tracked using subjective and objective measures such as the 6-Minute Walk Test, COPD Assessment Test, and confidence scales. Post-Program assessments for participants who complete the program demonstrate positive results in all three measurements and clients report an overall improvement in quality of life. With this foundation, the client can transition into a Maintenance Program (52- week drop in program), which is designed to help increase confidence and capacity of the client to exercise on their own with a focus on daily living activities. With the recent events surrounding COVID-19, the VCHC COPD Program has taken the initiative to ensure continuity of care and exercise by launching the COPD Virtual Care Program. Much like the PR program itself, the Virtual Care Program meets twice a week via Zoom Health Care. The Virtual Program focuses on breathing techniques, range of motion, respiratory muscle strength building and cardiovascular capacity.

The Centre also offers a monthly Support Group for individuals living with or caring for those living with lung disease. The Support Group provides participants with education on various topics and a welcoming environment to meet others. The Support Group is implemented in response to clients' needs to share similar experiences and connect with other individuals who have lung disease. The program is open to family members and caregivers and is offered both in-person and virtually.

The COPD Program at VCHC follows a holistic model of care to support individuals living with lung disease. The focus is on the individuality of the person, their unique needs instead of the disease itself.

"I would recommend it [the program] highly – it has changed my life," said a recent graduate from the PR Program. *"It's an excellent program which takes its time to truly get to the heart of the matter."*

For more information on the COPD program at VCHC, please visit: www.vaughanchc.com or call: 905.303-8490 ext 2.



IN THE SPOTLIGHT

ORCS Poster Presentations at Better Breathing 2020 Submitted by Jennifer Noble, Senior Manager of Member Engagement, Lung Health Foundation

Each year, at the Better Breathing Conference, the Ontario Respiratory Care Society showcases free standing poster submissions pertaining to aspects of

respiratory health. Submissions are displayed for viewing for the duration of the day and then judged in a 3 minute rapid-fire presentation from the author.

This segment of the conference has been very popular with students, researchers and practitioners alike. The quick and ready nature of the presentations keeps the audience engaged and allows the authors to present as much information from the poster as possible within the short time allotted. During the presentation judges score based on the content, organization and verbal delivery of the presentation.

Congratulations to our 2020 Winners!

Margaret Fitch Award for Best Poster: Mika Nonoyama for Healthcare Utilization and Costs of Pediatric Mechanical Ventilation in Canada

Lisa Cicutto Award for Best Poster by a Student: Sachi O'Hoski for *Reliability and Validity of a Computer Adaptive Test of Participation in People with Chronic Obstructive Pulmonary Disease*

Sheila Gordon-Dillane Award for Best Poster for Program Evaluation: Lily Spanjevic for Scaling Up INSPIRED Approached to COPD Care

Many thanks to everyone who submitted and presented. Special acknowledgement goes to Sharolyn Mossey, Chair of the ORCS Research and Fellowship Committee and her panel of judges, for organizing and executing this event each year.

2020 was a great success and we're looking forward to presenting this year's poster submissions in virtual format at this year's BBC 2021. Learn more or submit an application by going to: https://hcp.lunghealth.ca/wp-content/uploads/2020/10/BBC2021-ORCS-Posters-Guidelines-Application-Form-FINAL.1.pdf

TOOLBOX

This year, more so than in several decades, a light has been shone on the issue of inequality and racism in our country and around the world. In addition to the specific practice-relevant information below, your editorial committee would like to share the position statement released by the Lung Health Foundation in June:

From the Lung Health Foundation:

When we re-introduced ourselves as the Lung Health Foundation, we stepped up to play a critical role in ending gaps in the prevention, diagnosis, and care of lung disease in Canada. These gaps include things like timely lung tumour testing, access to cutting edge treatments, and the ability to participate in outcome-boosting programs like pulmonary rehabilitation.

Whether a person experiences these gaps can depend on many factors, including geographic region and socioeconomic status. Furthermore, there is alarming evidence that these gaps can be widened by factors like race and ethnicity, resulting in poorer lung health outcomes for BIPOC (Black, Indigenous, People of Colour) communities.

The Lung Health Foundation decries these gaps as unacceptable, and is committed to doing our part to address the systemic inequalities that result in BIPOC communities showing poorer health outcomes across Canada.

The **Black Lives Matter** movement has inspired the Lung Health Foundation to work harder to address inequality in respiratory care. More than ever, we are dedicated to:

- Ensuring that our staff is as diverse as the country we call home;
- Investigating how social determinants can result in lung health inequities, and architecting solutions;
- Building education campaigns, resources, programs, and services that are inclusive to marginalized populations; and
- Embedding the unique experiences of racialized groups in our policy and advocacy work.

Lung health starts now — for everyone.



Indigenous Cultural Resources for Health Care Professionals Submitted by Jane Lindsay, BScPT, CRE

Developing cultural competence on a foundation of cultural sensitivity and cultural awareness is an important part of any health professional's growth. This edition's Toolbox focuses on Indigenous culture, specifically as a follow-up to a presentation at the Better Breathing 2020 conference, entitled "*Smoking Habits in the Indigenous*"

Population." The links here provide access to information and training for anyone who provides service to Indigenous patients.

Anishnawbe Health Toronto's stated mission is "to improve the health and well-being of Aboriginal People in spirit, mind, emotion and body by providing Traditional Healing within a multi-disciplinary health care model." Any Indigenous patients in the Greater Toronto Area can be referred for care. The organization's website offers online information, and staff are available to provide information to assist health care professionals whose patients cannot access the Toronto-based resources. www.anishnawbehealth.com

Those interested in specific cultural safety training may wish to check out the online "San'yas Indigenous Cultural Safety Training Program" delivered by the Provincial Health Services Authority of British Columbia. To quote from their website "Cultural safety is about fostering a climate where the unique history of Indigenous peoples is recognized and respected in order to provide appropriate care and services in an equitable and safe way, without discrimination." While the organization is based in British Columbia, their cultural safety training is also appropriate for healthcare professionals in Ontario. http://www.sanyas.ca/home



Cannabis Resources submitted by Lawrence Jackson, BScPhm

1) Cannabinoids / Medical Cannabis - Newsletter, Chart, Q&A, Consent/Agreement http://www.rxfiles.ca/rxfiles/uploads/documents/CANNABINOIDS-Newsletter-CHT-QandA-RxFiles.pdf

2) Medical Cannabis Q&A - Patient Booklet

- Colour version: http://www.rxfiles.ca/rxfiles/uploads/documents/Cannabis-Medical-Patient-Booklet.pdf
- Black/White version: http://www.rxfiles.ca/rxfiles/uploads/documents/Cannabis-Medical-Patient-Booklet-Black-White.pdf

3) CAMH – Cannabis Recommendations to Reduce Risk https://www.camh.ca/-/media/files/lrcug_professional-pdf

4) CAMH – Changes to Canadian Cannabis Guidelines https://www.camh.ca/en/camh-news-and-stories/changes-to-rules-governing-cannabis-incanada

5) Health Canada - Cannabis Information https://www.canada.ca/en/health-canada/services/drugs-medication/cannabis.html

RESPIRATORY ARTICLE OF INTEREST #1

Targeted management of severe asthma: Developing a Canadian approach *Summary by Yvonne Drasovean, RRT, FCSRT, Med*

Kenneth R. Chapman, Erika Penz & J. Mark FitzGerald (2020) *Targeted management of severe asthma: Developing a Canadian approach*, Canadian Journal of Respiratory, Critical Care, and Sleep Medicine, 4:2, 124-132, Available from DOI: 10.1080/24745332.2019.1678443

This paper provides a review of the management of severe asthma in with a focus on the adverse effects of oral corticosteroids and more awareness of newer alternative therapies. It also discusses opportunities for access to specialized care for patients with severe asthma including education resources and ongoing monitoring with a severe asthma registry.

The discussion focuses on the underutilization of biologic therapy in treating severe asthma and recommendations that may be helpful in the appropriate assimilation of these therapies into clinical practice.

The review was conducted using a PubMed search from 2005 to February 2019. While asthma research has received a lot of attention in general, what is interesting to note in this paper is the recommendations for change:

- Awareness of use of oral corticosteroids and the long-term consequences, with the need for two or more "bursts" of prednisone for asthma within a year being regarded as a treatment failure that should prompt re-evaluation of management
- **Research** and development of a unified Canadian registry of patients with severe asthma that could quantify the burden of severe asthma, monitor outcomes, track quality indicators and estimate costs to determine optimal treatments
- Access to patient resources, better identification of specialists' roles (such as CREs) and specialist centers through a "hub and spoke model" to be considered in Canada

RESPIRATORY ARTICLE OF INTEREST #2

Self-management practice, associated factors and its relationship with health literacy and patient activation among multi-morbid COPD patients from rural Nepal Submitted by Julie Duff Cloutier, RN, PhD (c)

Yadav UN, Lloyd J, Hosseinzadeh H, Baral KP, Bhatta N, Harris MF. Self-management practice, associated factors and its relationship with health literacy and patient activation among multi-morbid COPD patients from rural Nepal. 2020. BMC Public Health.

COPD self-management and supports provided by carers are key to the quality of life persons with COPD experience. Health literacy and patient activation are main drivers of self-management practices. However, their contribution needs to be further explored. This study aimed to examine the level of self-management practices and the relationship with socio-demographic factors, health literacy, and patient activation among multi-morbid COPD patients in rural Nepal.

This cross-sectional study was conducted between July 2018 and January 2019. A total of 238 patients completed the Self-Management Practices questionnaire (SMPQ), five domains of the Health Literacy Questionnaire (HLQ), and the Patient Activation Measure (PAM). The relationship between self-management practices, health literacy, and patient activation was examined.

Of the 238 participants, about half (55%) were women, with an average age of 59 years. Most were married, and were uneducated. Most worked in factories as labourers. HLQ and PAM scores were found to be positively correlated with the total score of SMPQ. Low level of SMPs were found to be positively associated with low levels of education, and having a low family income, and negatively associated with the presence of more than one co-morbidity.

Overall, SMPs were very limited in this study population. The authors state that in Nepal, many patients with COPD seek services from government or private hospitals because of the inadequacy of available services at the primary health care level and as such, overall poor self-management practices likely includes both practitioner and patient-related factors.

As results identified, within this population, being uneducated, with low levels of income, and comorbidity were significantly associated with SMPs. As such, patients with lower levels of education and health literacy may have a poorer understanding of self-management skills, inclusive of use of inhalers, knowledge on self-care and COPD, and symptom management. This study further highlights the importance of assessment of HL and PA by health professionals to include in the plan for selfmanagement support.

Although further work needs to continue in the area, these findings support the necessity of crafting and implementing COPD self-management programs that enhance patient activation and health literacy, keeping in mind the support needs of those with low income and lower levels of education.

UPCOMING EVENTS

BETTER BREATHING 2021

A CONFERENCE FOR RESPIRATORY HEALTH PROFESSIONALS

Save the dates for our newly-formatted online Better Breathing conference!

This year, BBC2021 will take place over a whole week **from Monday January 18 to Friday January 22**, 2021 with each day focused on a key area of Lung Health – Asthma, COPD, Lung Cancer, Infectious Disease, and Vaping/Smoking Cessation.

Registration will open soon! Stayed tuned!

Ontario Respiratory Care Society Central Region Committee

Presents a Virtual Education Session

Presenters:

Tuesday, November 3, 2020 | 12 noon-1pm EST

Pearls for Practice in Virtual Care: A Panel Discussion on where we're at, what we've learned, where we're going Tina Lepener, RRT, CRE Sandra Mierdel, Director Clinical Innovation OTN Meridene Haynes, Coordinator Caring for my COPD Jennifer Nguyen RRT, CRE

REGISTER

https://bit.ly/3k0VcrX

1 hour can be used towards continuing education requirements

RESPIRATORY TRAINING RESPTREC® & EDUCATOR COURSE

To see a list of upcoming courses, please visit: https://www.resptrec.org/registration/registerOnline.php?currMenu=Register

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 https://hcp.lunghealth.ca/respiratory-care-society today!

BROUGHT TO YOU BY

Editorial Committee

CHAIR

Yvonne Drasovean, RRT

MEMBERS

Jane Lindsay, BScPT, CRE Julie Duff Cloutier, RN, MSc, CAE Elizabeth Gartner, BScOT Lawrence (Larry) Jackson, BScPhm Lily Spanjevic, RN, BScN, MN, GNC(C), CRN(C), CMSN(C) Priscila Robles, BScPT, MSc, PhD Shirley Quach, HBsc, RRT Geetika Bhargava, RRT, CRE

Ontario Respiratory Care Society

CHAIR Miriam Freymond Turnbull, MBA, RRT, COPD Ed. Vice President & GM | ProResp Inc.

Lung Health Foundation

PRESIDENT & CEO George Habib

VICE PRESIDENT, PROGRAMS & SERVICES Jess Rogers

SENIOR MANAGER, MEMBER ENGAGEMENT Jennifer Noble

ORCS/OTS CO-ORDINATOR

Natalie Bennett