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DIVISION DIRECTOR'S COLUMN – Dr. Douglas Bradley

COVID-ization: A New Challenge for the Division of Respiriology

The advent of the COVID-19 pandemic has had a profound effect on the practice of medicine. While it is fairly certain that the implementation of an Ontario-wide lockdown in mid-March, 2020 has limited the spread of COVID-19, the requirements for PPE, physical distancing, restrictions on patient clinic visits and closure of hospital facilities has had an adverse effect on our ability to care for our patients, teach our trainees and conduct our research.

The extent to which this has affected care of patients with illnesses other than COVID-19 is not presently known, and will vary from jurisdiction to jurisdiction, but there are clues that the problem is significant. For example, in the week ending April 3, 2020, there were 6,000 more deaths in England and Wales than recorded during that week in any previous year. Only half of these were due to COVID-19, the rest were due to other causes. Thus, closure of hospitals and medical clinics in the UK, for all but emergencies, has taken a heavy toll on many patients suffering from other life-threatening illnesses. In this week's CMAJ, it is estimated that a backlog of 148,364 surgeries has accumulated in Ontario between March 15 and June 13. This included 38% fewer cancer surgeries, 42% fewer cardiac surgeries and 96% fewer surgeries for other conditions.



It is estimated that it will take one and a half years to clear the backlog. Obviously, those subject to these delays have been suffering. Similarly, emergency rooms (ER) in Ontario have reported many fewer visits from patients with serious conditions such as acute coronary syndromes and COPD exacerbations, suggesting that many such patients are avoiding ER visits for fear of contracting COVID-19. The medical implications of avoiding ERs are liable to be quite serious. Of course, one could argue that without a lockdown, the unchecked spread of COVID-19 might actually have taken a higher overall toll on patients with other diseases, because of widespread fear of attending clinics and hospitals. Nevertheless, the potential collateral damage to the health of people with other diseases needs further assessment to inform future policy.

With respect to Respiriology, on the clinical side, COVID-19 has forced closures of pulmonary function and sleep laboratories, reduced access to bronchoscopy and other procedures and delayed surgery for those in need. In addition, it has forced physicians to conduct virtual clinics via telephone and telehealth. This does not constitute optimum care, particularly for a first visit during which patients ordinarily undergo a physical examination and any initial tests deemed necessary. The extent to which these restrictions have had an adverse impact on the health of our patients is not known, but hopefully research in this area will provide some answers.

Regarding educational activities, COVID-19 restrictions have been disruptive. For example, the need to conserve PPE for staff physicians meant that for many consultations and procedures, trainees did not have access to PPE and therefore were not permitted to take part in such clinical assessments. Proscription for most patient visits to outpatient clinics necessitated phone call or telehealth “visits” thus depriving trainees of the experience of direct patient contact and of performing physical examinations under staff supervision. Lack of access to laboratory testing also meant that trainees would often not see the results of diagnostic tests, since they could not be performed in a timely fashion, so they did not have the experience of assessing their management plans. All educational rounds had to be either cancelled, or conducted “virtually” via on-line tools. In general, dialogue in such venues is less vigorous and enlightening than in the live situation. All electives and CME activities are on hold. Finally, Royal College examinations have been postponed, delaying “graduation” of our residents and hampering their ability to take on their first jobs as independent practitioners.

Research has suffered as well: all research institutes and the University of Toronto have been in lockdown. This has had a hugely negative impact on research productivity and is preventing students from completing their degrees and advanced training. Although these institutions are gradually emerging from lockdown, restart procedures related to patient-oriented research are so onerous, that at least where my laboratory is located, practically no such research has been conducted in the last 5 months. Moreover, it is not clear what criteria must be met before these restrictions will be lifted. All national and international scientific conferences have either been cancelled or are being held on-line. With respect to Respiriology trainees, we were forced to conduct our annual research day in June virtually, with very little feedback on trainee presentations. While Gaspard Montandon is to be commended for the amazing job he did organizing an on-line version of Research Day, the experience was not comparable to the live situation. Finally, our annual “Meet the Investigator Evening” will also have to be conducted virtually without the scientific and social mingling it was designed to stimulate.

As bad as the situation has been, there is some silver lining on the COVID cloud. One thing we have learned is that certain meetings and educational activities can be undertaken effectively via on-line conferencing tools such as TEAMS and ZOOM saving travel time, etc. Similarly, routine follow up visits for a large proportion of

patients could be accomplished via phone calls and telehealth. The benefit of this for patients is convenience (no traffic, no parking, no waiting, no worry about catching COVID in the hospital), and for the physician, greater efficiency with far fewer missed appointments and less time required for assessments. However, continuation of this practice this will only be feasible if OHIP maintains payments for such patient assessments once COVID-related restrictions are lifted.

The question now is, assuming some restrictions remain for the foreseeable future, how do we deal with this effectively in all realms of our activities? I do not have the answer to this, but it is clear that faculty at the University of Toronto will need to create imaginative ways to ensure optimal care of our patients, effective educational activities for our trainees, and novel approaches to patient-oriented research. Among our many talented and dedicated members, I am confident that over time, we will rise to the challenge and come up with novel ways to deliver all these services in the most effective way given constraints imposed upon us.

FEATURE ARTICLE - Dr John Granton

Retrospective - 10 Years in Review



I am grateful for the opportunity to have served as the division head for Respiriology at UHN and SHS for the past 11 years. It has been a sincere privilege and honor to both represent and also steward such a talented group of individuals. I am grateful to Charlie Chan for leaving me a division that was in great shape that allowed me to support talented recruits and help them realize their potential and foster the development of several programs. During my tenure we recruited 17 clinicians (6 clinician scientists, 7 clinician investigators, 1 clinician teacher and 3 clinician quality improvers) in both Respiriology and Critical Care (working closely with Niall Ferguson – head of Critical Care). The recruitment of these individuals has supported the development of novel programs in advanced respiratory failure, interstitial lung disease, mycobacterial infections, complications of cancer care and, in collaboration with our thoracic surgery colleagues, an interventional bronchoscopy and pleural disease program. It has

also supported the growth and academic vision of the lung transplant program – now the largest and one of the most innovative programs globally.

Under the stewardship of John Thenganatt and through the contributions of our faculty, we have developed highly regarded specialized educational programs attracting residents and fellows both locally and from around the world. These individuals have contributed to the richness of our programs and are woven into the fabric of our division.

I also want to recognize my WCH colleagues who I had an opportunity to work with as interim head as they transitioned to a new hospital and health information system – now under the steady hand of Jakov Moric. I

would also like to commend the wonderful 10ES nurse managers, April Guthrie and Jocelyne De Romana, who have been incredibly capable, supportive and kind. Ed Cole, Chaim Bell and Doug Bradley have also been supportive and I would like to also thank them for helping us to realize our aspirations as a division. Finally the foundation at TGH/TWH have been incredibly supportive and are currently undertaking a major campaign to raise \$75 million for our programs in respiratory diseases.

It was wonderful to be able to celebrate the milestones and success of our faculty over the years. Our scientists and investigators have been very successful in obtaining peer-reviewed salary support and operating grants as well as in attracting donations to support their research, educational and clinical programs. The impact of our team on education and research is recognized both nationally and internationally. We have also built solid relationships with our colleagues in thoracic surgery, radiology, cardiology, rheumatology, oncology, nursing, and allied health – enhancing the richness of our programs and quality of care in the process. Our collaboration with thoracic surgery has been particularly productive in interventional bronchoscopy, transplantation and ECLS (Extracorporeal life support).

Over the past 11 years, we have seen a dramatic shift in how we care for patients with lung disease and respiratory failure. This has recently been amplified in response to the COVID 19 pandemic. Our division has demonstrated leadership as we move to a virtual environment in caring for our patients. Though there are many challenges ahead, I am confident that the division will continue to flourish and leave its mark in the years ahead under the capable leadership of Lianne Singer.

I want to thank all of you for all the support and mentorship you have provided me through the years. It has been a great ride

RESIDENT TRAINING PROGRAM ALUMNI – Dr. Joanna Zurawska

I graduated from the University of Toronto Respiriology Residency Program in 2013. Subsequently, I joined the Respiriology Division at Mackenzie Health in Richmond Hill, where I enjoy a busy and varied community Respiriology practice. For additional training, I pursued a community-based fellowship and became certified to practice Sleep Medicine. I am also looking forward to serving the community of Vaughan at the new Mackenzie Health Vaughan Hospital. Outside of work, I keep busy parenting two young daughters (Helena, age 4, and Natalia, age 2) with my husband Lukas. Recent favourite pastimes include stickers, arts and crafts, and exploring new playgrounds. However, I hope soon to spend more time on age-appropriate hobbies including volleyball, hiking, and learning to play guitar. I am very grateful for the opportunity to have trained at the University of Toronto and to have met numerous excellent role models and colleagues whose guidance prepared me well for my present career. Indeed, I regularly apply ‘clinical pearls’ learned from them during my residency to my practice.



CLINICAL RESEARCH FELLOWSHIP ALUMNI – Dr. Kieran Halloran

I completed my fellowship with the Toronto Lung Transplant program in 2013 and went on to complete my Master of Science in Epidemiology at the Harvard School of Public Health. Since then I have worked with the University of Alberta lung transplant program in Edmonton as a clinician investigator.

Training with the Toronto lung transplant program was an incredible experience and I continue to have great relationships with the team there. The exposure to a high-volume program coupled with clinical and research excellence was the perfect way to start my career. The highlight though was the people: at all levels, the people in the program love what they do and do a great job of it as a result. It's a great model of how to run a program. Our program in Edmonton has grown since I joined and now performs over 70 lung transplants per year. In total, we have completed over 1000 transplants since 1986. The consistent longitudinal follow-up here has allowed me to develop several research areas, including pre-transplant risk stratification, post-transplant lung dysfunction phenotyping and molecular characterization of rejection. I have also been able to maintain an interest in teaching in the years since I started here, mainly at the post-graduate residency and fellowship level.



When I'm not working, I spend most of my time with my amazing wife and daughter, Jen and Alexandra. We love to travel together and to spend time with our friends and the rest of our family.

Program Director Report – Dr. Chris Li

The COVID-19 pandemic has impacted residency training programs across the board, and our program has been no exception. Our Respiriology inpatient services saw reduced core Internal Medicine and Anesthesia resident numbers due to redeployments and quarantines; our own Respiriology subspecialty residents were redeployed from ambulatory rotations where activity was dramatically reduced; and many of our usual teaching and assessment activities were curtailed by physical distancing requirements and PPE conservation measures. I am proud to say that our residents responded to the crisis with courage and selflessness, as they moved from scheduled rotations to fill gaps in coverage on our wards and in ICUs. They sacrificed elective opportunities and even vacation time. Our program has responded by pivoting to online teaching tools, building our capacity for virtual patient care, and finding creative ways to incorporate residents in the “new normal” in our patient care areas and pulmonary function labs.

We are settling into a new rhythm, as we begin a new academic year and return to a more familiar rotation schedule. We welcome a new cohort of Year 1 residents to our program:

Ghada Alrehaili (from Queen's University)
Moayad Alshehri (from McMaster University)
Chris Humphreys (from the University of Calgary)
Tanya Khaper (from Western University)
Alyssa Lip (from the University of Calgary)
Leigh Minuk (from the University of Toronto)
Shaun Ong (from the University of British Columbia)



The road ahead remains uncertain, but I continue to be inspired by the work of our residents and faculty in the face of such adversity. I am confident that our program will face whatever challenges lie ahead with the same spirit and ingenuity that has been on display during a difficult 6 months

Competence By Design

We had planned for a March 2020 pilot of Entrustable Professional Activity (EPA) assessment tools on the Elentra data-management system, and a full July 2020 launch for CBD. These timelines have been reconsidered in light of the pandemic, and the nationwide launch of CBD for our subspecialty has been deferred. We will be pilot-testing some EPA assessments in the fall of 2020, in preparation for a July 2021 launch. Stay tuned for the much-anticipated re-release of some riveting instructional videos on EPAs and Elentra, in the coming months.

Accreditation 2020

The Royal College External Review in November 2020 will be going ahead as originally scheduled, though it will be conducted mostly in an online format. Our program continues to prepare for this important quality improvement activity. We look forward to showcasing all that is on offer in our program, and learning from what is always a thoughtful and in-depth review.

Fellowship Director Report – Dr. Cecilia Chaparro



Typically, in June, we say goodbye to fellows finishing their training, then as July rolls in we welcome our new cohort of fellows to the Division of Respiriology, University of Toronto. 2020 is the year that changed so much of how we normally operate, there has been nothing normal about this year. COVID has changed everything, our schedules, lives and functions in every sense. To all fellows, supervisors, teachers, and support staff involved in the registration, scheduling and teaching of fellows, THANK YOU for your efforts, your patience and your enduring support.

With the impossibility of travel affecting the departure and arrival of our fellows, many graciously stayed on, helping us to cover the late arrival of incoming fellows. During the worst of our COVID wave we were fortunate that our fellows remained strong, committed and willing to be redeployed wherever they were needed, thank you.

To leaving fellows, I also want to thank you for the opportunity you have given us to learn from you. As you return home, we wish you every success. We hope you are all happy to be with your extended families and friends but remember that now you have friends in Canada too, so we ask you to stay in touch.

For our incoming fellows, a warm welcome to each of you! Firstly, thank you for the patience with all the paperwork, and revisions to paperwork that take up so much time, then all the waiting for work permits and educational licensure. Secondly, we hope you will enjoy your learning experience in Toronto. To this end, once you are all settled-in, I will be in contact so we can meet and chat about your learning experience. At any time during your fellowship, please do not hesitate to contact me. I am here to support your learning experience.

HONOURS, AWARDS and GRANTS

Xiaoshu Cao (supervisors, Azadeh Yadollahi and Doug Bradley), First Place in Lightning Rounds Presentation Awards, for "Fluid shift linking asthma and obstructive sleep apnea (OSA)" at the Canadian Respiratory Research Network annual meeting.

Roger Goldstein, CTS 2020 Honorary Lecture Award.

Stephen Juvet, CIHR grant entitled, "Interrogation of novel B cell pathways in chronic lung allograft rejection".

Ted Marras and Sarah Brode were awarded the Team Breathe Research Award from the OTS / Lung Health Foundation operating grant competition for "Pilot study of point-of-use microbial water filters as adjunctive management in patients with mycobacterium avium pulmonary disease"

Gaspard Montandon: Early Career Investigator Award in Circulatory and Respiratory Research from CIHR and a Team Breathe Research Awarded by the Lung Health Foundation for the following project: "Identification of new molecular pathways regulating opioid-induced respiratory depression and safe opioid pain therapies using zebrafish models."

Anu Tandon- Division of Respiriology Teaching Award

Harvey Wong - Sunnybrook Department of Medicine Young Teacher Award for 2019

Respirology Research Forum 2020 Winners:

2020 Faculty Teaching Award - winner Anu Tandon

2020 Jae Yang Resident Teaching Award - Alina Blazer

2020 Sheldon Mintz Undergraduate Teaching Award - Anju Anand

2020 Faculty Mentorship Award - John Granton

2020 Faculty Research Excellence - Marie Faughnan (HHT Research)

2020 Outstanding Research Trainee - Theresa Lee (supervisor Andrea Gershon)

2020 Best Oral Presentation – Aadil Ali

2020 Best Poster, Epidemiology – Lee Fidler

2020 Best Poster, Biomedical Sciences - Harvard Tran

2020 Best Poster, Clinical Sciences - Kevin Zhang

NEWS

Westpark Health Centre: Following the urgent need to free ICU beds for COVID-related emergencies, the Long Term Ventilation Unit at West Park has been expanded to 69 beds, the largest in Canada. Together with partner LTV centres, Michael Garron and Salvation Army Grace, the centre will play a key role in the planning of LTV beds for the Toronto Region.

Dr. Roger Goldstein, along with his co-editors, Drs Ambrosino and Donner have just published, via Taylor Frances, the second edition of *Pulmonary Rehabilitation* (PR). This is a comprehensive reference text that examines the growing usefulness of PR beyond COPD to include neuromuscular, interstitial and suppurative lung diseases as well as lung surgery. It also includes a timely chapter on PR post COVID-19. Several innovative PR tools such as non-invasive ventilation, whole body vibration and neuromuscular stimulation are discussed <https://bit.ly/2VuMZSW>

The Pettit Block Term Grant Competition for April 2020 went to Dr Marie Faughnan, for her project, " COVID Risks and HHT".

Meet The Investigators Night, will be a ZOOM affair on October 6th, 2020. Presentations will be three minutes long instead of 1 minute. We are disappointed not to be able to get together this year, but we will forge ahead on ZOOM

Deborah Casey - Welcomed Marlow Alexander Casey Routh on August 4/20! Colin Adams, Ahmed Abdelbasit, and Fatimah Alfaraj all had babies arrive in 2020. We congratulate each of you and your families on these happy occasions!