Back to Basics: Changes to the Residency Curriculum During a Pandemic

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Abstract

In the height of the COVID-19 pandemic, prompt changes are required from medical systems. Within Canadian academic institutions, this will mean a restructuring of residency programs of all specialties and at all levels of training. Rapid training in critical care procedures and models of patient care will be paramount to contend with the increasing numbers of critically-ill patients. Flexibility from staff physicians, residents, and medical students will be required to fill gaps in patient care. Finally, compassion for our co-workers throughout illness and isolation will be necessary to provide emotional support for one another.

Resume

Au plus fort de la pandémie COVID-19, des changements rapides sont nécessaires de la part des systèmes médicaux. Au sein des institutions universitaires canadiennes, cela signifiera la restructuration des programmes de résidence de toutes les spécialités et à tous les niveaux de formation. Une formation rapide aux procédures de soins intensifs et aux modèles de soins aux patients sera primordiale pour faire face au nombre croissant de patients gravement malades. La flexibilité des médecins du personnel, des résidents et des étudiants en médecine sera nécessaire pour combler les lacunes dans les soins aux patients. Enfin, la compassion envers nos collègues tout au long de la maladie et de l'isolement sera nécessaire pour se soutenir mutuellement sur le plan émotionnel.

Canada confirmed its first case of the novel coronavirus (SARS-CoV-2) causing coronavirus disease 2019 (COVID-19) on January 25, 2020.¹ Forty-six days later, COVID-19 was officially declared a pandemic by the World Health Organization. As of April 15th, there were 23, 891 confirmed cases of COVID-19 in Canada, spread by both international travellers and local transmission.²

Many phrases have been used to describe this unprecedented period in our healthcare, such as “all-hands on deck” or “the calm before the storm”. As residents, we await our call to action with both excitement and trepidation. The lessons from SARS are only accessible to us from our mentors. From these lessons, and from our own experiences, we share some thoughts on how post-graduate trainees can support the response to COVID-19.

A New Curriculum

Preparing for the pandemic has affected the structure of residency programs nationwide. Licensing exams have been postponed, many hospital services have been cancelled, and many residents may be redeployed from career-focused electives. As a result, many learners are seeing a narrower scope of their practice and feeling apprehensive about their futures. Despite these changes, the message from programs has been clear: things will eventually return to normal. For now, the short-term goal of our curriculum is to ensure that we are prepared.

We are learning from our colleagues in the United States, Italy, and other countries deeply affected by this pandemic that we need to rapidly expand our critical care capacity (e.g., beds, ventilators, monitors) and the number of healthcare workers trained in intensive care.³ While residents cannot expect to become experts before the surge of COVID-19 cases occurs, we can develop our competency with additional rapid training.^{4,5} Currently, Toronto hospitals are quiet, but this will not last long.

The need for expertise is essential in the management of patients with COVID-19. Rapidly worsening hypoxemia paired with vigilant personal protective equipment (PPE) use means that securing an airway is done by the most experienced physician available. Yet as we have seen in other parts of the world, COVID-19 has created major challenges for the provision of critical care. Many jurisdictions are recruiting multi-disciplinary support to meet increased demands.^{6,7} Herein lies an opportunity for ingenuity in medical education to prepare junior doctors by developing a curriculum that emphasizes the hands-on practical skills but also focusses on equipping residents with an ICU-approach to managing health emergencies.

An immediate solution to developing further competency is implementing educational programming in collaboration with other health care specialties. For instance, residents could spend a week with a respiratory therapist to learn basic principles of oxygen delivery systems, the management of ventilator settings, and troubleshooting common ventilator problems. Residents training in Canada are seldom taught how to draw blood and insert peripheral intravenous catheters, skills we could start to learn by shadowing our nursing and phlebotomy colleagues. This planning phase is also an excellent opportunity to use simulation labs to learn the basics of obtaining central venous access, inserting an arterial line, or reviewing scenarios on how to resuscitate critically ill patients. When the workload increases hospital-wide, teams can be more effective if we share our collective knowledge and skills.

Beyond the procedural skills, critical care experience introduces residents to a unique care philosophy when treating patients at their sickest while also supporting their families through a

period of intense vulnerability. Effective communication will be necessary and frequently used skill during the pandemic in all areas of healthcare. The ability to be clear and develop a rapport will be even more challenging with the limitations of physical distancing. However, we can learn from our ICU colleagues on how they deliver difficult news, update a family member or discuss the end of life care goals in order to be ready if the pandemic moves beyond the critical care setting.

Examples of resources to prepare our front line staff are already being developed with online training modules such as www.quickcuttraining.com. This free resource developed through the collaborative efforts of clinicians, educators, and scientists from across the University of Toronto and the Toronto Academic Health Sciences Network (TAHSN) called the Critical Care Education Pandemic Preparedness (CCEPP), will help health care workers meet the potential demand.

Redefining Our Roles

Trainees play a key role in providing care. When the demand is highest, we will need to be flexible. This may mean being uncomfortable. Discomfort bolstered by a safe learning environment, however, can be a powerful teacher. Junior residents from all subspecialties (Psychiatry, Family Medicine, Internal Medicine, and Surgery) can be moved to general medicine wards where the bulk of the COVID-19 response will take place. This may mean moving towards a more historical intern year, where first-year residents apply their knowledge from medical school to work in multiple disciplines with a focus on general internal medicine and critical care.

We have seen a redefining of role already in undergraduate medical education. Not able to receive clinical training at the present time, many of our medical students have taken the initiative by volunteering their time to support health care workers (HCW) with everyday tasks including childcare.^{8,9} In Calgary, medical and nursing students have volunteered to help local public health agencies with contact tracing, quadrupling Alberta's capacity for this essential public health task¹⁰. While non-conventional, these solutions are exactly the kind of creativity we need when faced with a novel problem within the health care system.

Compassion for Our Colleagues

A year ago, the idea that you “do not call in sick unless you are dying in your bed” was not uncommon. However, residents are now being told to stay home with even mild symptoms such as sore throat and runny noses. This is the right thing to do to keep patients, communities, and other HCWs safe; however, this is not without its own burden. Staying at home with mild symptoms, knowing your colleagues are covering your call shifts during a pandemic can be agonizing.

We must remember these policies are not about the individual and are not meant to be punitive. Public health starts in the community and as healthcare workers, residents are part of that community first and foremost. We are no different and need to self-isolate when required. We can help prevent the spread of the virus by being vigilant and judicious about PPE and by coaching our colleagues' donning and doffing. This not only keeps us protected but also creates a community of support as we care for each other's safety.

Recently, a Toronto clinician highlighted the importance of colleagues' emotionally supporting one another during the SARS pandemic.¹¹ The medical community needs to suspend the reflex to blame our colleagues for staying home. Rather, we must prioritize taking care of one another; we are all susceptible to the emotional toll of this crisis stemming from self-isolation, fear of infecting our families, and feelings of helplessness.

These are certainly unprecedented times. Training programs have been challenged with the responsibility of keeping residents safe as they fight this pandemic. We believe that we are safer if we are trained and prepared. Many lessons will be learned from this pandemic – years from now all HCWs will recount what it was like during COVID-19, our generation's greatest acute public health crisis. Let us ensure that history looks back on us kindly, knowing we did all that we could do.

Disclaimer

The opinions expressed in this submitted article are our own and do not represent an official position of the University of Toronto or of St. Michael's Hospital.

Conflicts of Interest

None.

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None.

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