

Navigating urology's new normal and mitigating the effects of a second wave of COVID-19

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Introduction

The initial wave of the COVID-19 crisis forced immediate and seismic changes on urological practice, patient care, and education — collateral damage to the upending of societal and global economic norms. Lockdowns and limitations curtailed access to the physical spaces of the clinic and operating room, and slashed remuneration secondarily. As the curves flattened and healthcare infrastructure was deemed secure, we have begun opening our societies and clinical lives again. Remote care, in particular, has remained the default model of care, with attendant changes in how urological experience and education are obtained. As the colder weather looms, so does uncertainty about repeated waves of infection, the sustainability of the businesses that sustain our economy, and the ability to provide high-quality, uninterrupted care outside of emergencies. To this end, we have compiled perspective and advice from previous authors and contributors to the CUA and CUAJ's educational and research output, with a view to the future, to second waves, and ever-altered clinical landscapes.

— Michael Leveridge, CUAJ Editor-in-Chief

Clinical pearls for practicing functional urology in the era of COVID-19

Landan MacDonald, Ashley Cox

Introduction

In the early days of the COVID-19 pandemic in Canada, functional urology patients were considered non-urgent consults and their referrals, investigations, and surgeries put on hold. The pandemic is now fluctuating and prolonged. Therefore, we need to identify ways to safely and accurately diagnose and treat patients with functional urological problems, such as lower urinary tract symptoms (LUTS), incontinence, urinary tract infections (UTIs), and genitourinary pain disorders. Lopez-Fando et al recently summarized a risk-stratified approach to the management of functional urology patients during the COVID pandemic, providing an excellent resource for urologists.¹

What are the pros and cons of virtual medicine for functional urology patients?

Urology patients are open to virtual medicine;^{2,3} it is, therefore, reasonable to convert most visits to virtual for functional urology patients.¹

Virtual visits have many benefits, including:

- Reducing travel costs and missed work hours for patients
- Accurately determining the severity of the functional problem
- Identifying red flags, such as hematuria, febrile UTIs, pain post-sling procedure
- Determining need for further investigations, surgery, and followup
- Initiating conservative and medical therapies
- Appreciation by patients
- Reducing waitlists

There are also several cons of virtual visits, including:

- Lack of connection with a patient
- Inability to perform physical exam
- Communication barriers (hearing, language, technology, cognitive status)
- Patient access to technology
- Reimbursement issues
- Unpredictable time
- Likely not cost-effective in the long-run⁴
- Cost of implementing communication software that is compatible with privacy standards

What can be accomplished with telemedicine for functional urology disorders?

Telemedicine is effective for initiating therapy of most functional urology disorders. During phone or video consultation, one can effectively provide education on fluid management, weight loss, pelvic floor strengthening, and behavioral training.^{1,5} In the absence of pelvic floor physiotherapy, patients may be directed to one of many apps directed at strengthening the pelvic floor (e.g., Tat, Kegel Trainer PFM exercises, Perifit). In the absence of contraindications, initiation of medical therapy for functional urology disorders is recommended.¹ This may include: anticholinergics or beta-3 agonists for overactive bladder; alpha-blockers or 5-alpha reductase inhibitors for male LUTs; amitriptyline for bladder pain syndrome; or cranberry supplements, prophylactic antibiotics, and vaginal estrogen for UTIs. Telemedicine affords the ability to counsel patients regarding side effects and medication use.

Telemedicine is effective for safely assessing patients following routine, uncomplicated surgeries, such as sling procedures and prolapse repair.⁴

Who can wait and who can't?

The ability of patients to access further investigations (e.g., cystoscopy, urodynamics) or surgery will depend on the landscape of the pandemic at each individual center. With the exception of an infected prosthesis (e.g., sphincter, neuromodulator), functional urological surgeries can be delayed greater than three months.¹ Complicated cases leading to high levels of physical or psychological distress will have to be prioritized depending on access to operating rooms. Examples of prioritized functional urology issues include:

- Urinary fistula
- Urinary diversion for hemorrhage/sepsis (e.g., radiation cystitis)
- Retention with indwelling catheters or due to urethral stricture disease
- Recurrent infections/pain/retention due to eroded devices

- Severe urinary incontinence preventing normal functioning
- High-risk neurogenic bladder treatment (e.g., Botox)

What can we expect for the future (in preparation for a second wave)?

It is imperative to prepare patients that virtual medicine is likely here to stay, in various degrees. Informing patients that followup will be done virtually may help ease patient anxiety. Incorporating use of email/mail communication to send patients voiding diaries, quality of life (QoL) questionnaires, and health questionnaires will help facilitate the provision of functional urological care. Continuing with virtual consults of these non-urgent referrals is mandatory to help prevent an overwhelming backlog of patients with severe QoL impairment. Surgeries will be delayed, but attention to QoL impairment will help triage patients as operating time becomes more available.

Are virtual clinics the “new” normal in urology office-based clinical care

Keith Jarvi

At the time of this writing, the COVID-19 pandemic is less than six months old. In that period, a lot of our attention as urologists has been on managing the draconian restrictions on operating room time. The urologists have also had to face a complete re-organization of the clinics during the pandemic.⁶ There is variability across the country, but most of us faced strict limitations on the numbers of patients to be seen in person in clinics during the pandemic. As an example, in our clinic in Toronto, we were only allowed to see patients in the clinics if absolutely required and only if they could not be managed remotely. In addition, in many centers, trainees were excluded from any in-person interactions with clinic patients, further reducing the educational opportunities for the urology trainees.

There have been previous studies on urology remote clinics that have reported high patient satisfaction, lower costs, and no adverse events.⁷ However, the use of remote clinics in urology prior to this pandemic was low. The question is, will access to remote patient care become the new normal for urologists' offices after the pandemic has ended?

Think in advance about visit types that are well-served remotely

We still needed to provide timely care for the many patients that urologists assess routinely. Remote clinic visits as opposed to in-person visits provided urologists with the means to continue to assess and *manage* close to the normal numbers of patients without needing to see the normal numbers of patients. This type of change was not without

problems. Along with many other medical services, urologist had to, in real time, decide first which patients could be safely managed remotely, and secondly how to safely investigate and manage patients seen remotely.⁸⁻¹⁰ Some decisions about patients requiring in-person visits may be obvious: a man with a lump in the scrotum probably should be seen in person. Some decisions may not be so obvious: a man with a pain in the scrotum could probably be managed remotely. There are now articles published discussing the safe management of patients with different urological cancers, bladder outlet obstruction, and other benign urological conditions.^{6,11,12}

Due to the pandemic, for the first time in most of our careers, many of us are now assessing a significant fraction of our patients remotely. The pandemic has forced many of us to become familiar and comfortable with the selection of patients to be safely managed remotely and the types of care we are able to safely provide remotely. In addition, by dint of the fact that we needed to see significant numbers of patients remotely, for many clinics, systems have been put in place to improve the efficiency of the remote visit.

Re-orient administrative structures for increased virtual care

Urologists also needed to, in real time, re-organize their clinics to make remote patient assessments as efficient and safe as possible. There were logistical issues to overcome to assess patients remotely. Urology clinics have largely been based on in-person visits: systems have been put in place to optimize the efficiency of seeing patients in-person (e.g., handing patients requisitions, followup appointment cards, etc.). Generally, these are not the same types of systems used to optimize the efficiency of assessing patients remotely. For clinicians to be convinced to incorporate remote visits long-term as a part of the “new normal” in urology clinics, they will need to be confident that remote visits for their types of patients are as safe, comfortable, and efficient as in-person visits, and that patients feel that remote visits are more convenient and don’t compromise care. As the technology improves, the efficiency of remote visits will also improve, making it an even more attractive option for urologists in the future.

Consider the impact and role of trainees in academic medicine

Many centers will also need to consider the impact of remote patient visits on educational opportunities for the trainees. Historically, trainees have been involved in direct patient contact, with a lot of the teaching being in the form of an apprenticeship with the urology staff. At our center and many of the local centers in Toronto, the trainees have now been included in the remote visits. While the effect on training still needs to be assessed, the trainees continue to be

exposed to the same number of patients and the same length of time with the staff, so we don’t predict there would be any intrinsic difference in the training.

Finally, patient convenience and comfort would need to be considered by each center, considering greater numbers of remote patient visits. Unquestionably, remote visits require less time and costs for the patients (less travel time and costs, potentially may be able to continue their normal activities until remotely contacted) and, as such, are more convenient.⁷

Quite predictably, with this new knowledge and infrastructure, some urologists will decide that remote visits are as safe and equally or more efficient than in-person visits for selected types of patients and consider incorporating greater numbers of remote visits into their clinics. Certainly, increasing the numbers of remote patient visits will not be appropriate for every clinic, but for those clinics where patient type and clinic location means that remote visits are safe, efficient, and convenient (for patients), the experience gained in the pandemic has provided an opportunity to expand their use of remote patient visits, even after the pandemic has ended.

Tech tips

Paul Martin

Virtual care is probably here to stay in one form or another. It seems wise to integrate virtual care solutions into our practices during the current pandemic, but also to provide better care in the long-term. Here are a few tips for using IT solutions to efficiently integrate virtual care into your practice.

Create a website

A website can be a great resource for your patients. They can access information about their condition and about your practice, including information such as uroflow or voiding diary instructions. You can link other helpful online resources, such as websites or documents. A website can be used as a portal to start virtual visits and to provide consent information regarding virtual care. There are many user-friendly and cost-effective options for developing your own website, including Wix or Squarespace. Websites can easily be updated and can help you manage your online presence.

Don’t limit yourself to the phone

Using different methods to communicate with patients can improve the patient experience and patient satisfaction. In many situations, you may also save time and money. Consider video visits if you’ve only been using the phone. Also consider asynchronous care in some situations. You might try secure messaging through your electronic medical

records (EMR), or email or text messages, depending on the circumstance and with privacy concerns in mind.

Try different virtual care solutions

Different practice styles will benefit from different solutions. We recommend trying many programs. Most companies will offer a free trial. Some urologists will find value in paid virtual care platforms and others will not. Try different video platforms, and maybe try using a softphone (internet-based phone) and see what works for you.

Leverage your EMR

Most physicians aren't maximizing the potential of their EMR. Depending on the EMR provider and the province, there are several built-in or add-on features that can really help you take it to the next level. These features may include hospital/provincial lab integration, integrated e-Fax, e-Referral, secure patient messaging, e-Prescription, appointment reminders, and others.

Personal finance during a second wave of COVID-19

Christopher French

Will email ever be disrupted?

I look forward to the day when my multiple email inboxes and associated calendars are disrupted. That is improved, smarter, and more efficient. I expect to gain 1–2 hours of each day once the tech wizards apply network and artificial intelligence to solve this problem. Since COVID, the fury of emails and daily critical changes absorbs the time once spent in the operating room. Sorry for this initial sidebar but I will tie it in later.

We made it through the initial wave of a pandemic. Yay! I'm quite certain everyone has put plans on hold, curtailed spending, and looks forward to more "normal" times. Whether early, middle, or late in your career, it important to plan ahead for the unknowable future. Yes, I'm suggesting that now is a good time to rethink personal finances. If you are lucky enough to be debt-free, congrats, you're way ahead. But if you carry debt like a mortgage, you should bask in the glory of low rates. Now is not the time to target mortgage debt, rather build your buffer of liquidity. Be ready for soft billings. Take advantage of tax-free savings accounts (TFSA). Everyone should have this maxed right now. If not possible, then it's OK to secure a line of credit to use only if needed, as your liquidity pool.

Why? As crazy as the markets seem, decoupled from the economy, bull markets climb a wall of worry. It's wise to keep long-term investments working for you. Avoid withdrawing from your retirement pool. Staying invested for the long-term at times like this will pay off later.

Market trends have been in place for years. Extraneous shocks (e.g., pandemics) historically don't change the major underlying trends. In the past six months, we have seen these trends speed up, intensify. I'll name a few:

- Social unrest and inequality
- Low and even negative interest rates
- Technological disruption of old economic paradigms
- Environmental concerns and our dependence on fossil fuels

These pre-pandemic trends have been accelerated. We are changing as a society and now is the time to understand and embrace this change. There may not be much of a second wave, or the wave is a "known entity" and, therefore, manageable. Or perhaps up to 1/4 of us have already been exposed. Who knows? Out of the trends noted above, the advance of technology has resonated the most with me. "Zoom" is a verb now. Online groceries are the norm. Work from home is here to stay for many. Disruptive technologies are changing our world, software as a service requires no bricks and mortar, scales easily, can employ people at home, has high margin, low capital requirements, and generally does not carry as much debt as legacy businesses. I'm eagerly awaiting the disruption of my multiple email inboxes. Please! If I say it out loud with my phone nearby, will this help?

My advice is to build a liquidity pool but don't hinder your long-term investment goals. Use TFSA because you can withdraw and refill this at will, incurring no tax on returns. Focus on family and support of your colleagues (work family). Think long-term about the major trends noted above. Be proactive not reactive.

Education in urology during COVID-19: What we gained, lost, and learned

Yuding Wang; Luis H. Braga

The COVID-19 pandemic has disrupted medical education in unprecedented ways. Urological education in Canada, from the undergraduate, postgraduate, and continuing medical education, has not been immune from this disruption. The following commentary will evaluate what we gained, lost, and learned from our experiences to date adapting to the rapid changes brought on by the pandemic.

What we gained

The urological community has traditionally been at the forefront of adapting and using new technologies and methods. This endeavoring spirit carried forward during the pandemic. As it became clear that social distancing measures were needed to curtail the spread of the virus, in-person didactic teaching moved online. Many teaching programs lever-

aged available technologies (including Zoom, Skype, Google Meetings, Cisco Webinar) to seamlessly adapt weekly in-person teaching sessions to an online distributed format.¹³ The move online has allowed convenience in scheduling and alleviated many of the logistical barriers associated with traditional face-to-face teaching, such as travel time and costs. These issues can be especially burdensome for aggregate teaching faculty from dispersed sites, limiting participation.¹⁴ The option to record lectures for playback creates an unique opportunity for residents and other learners to learn at their own pace, increasing knowledge (education) access.¹⁵ Taking lectures online has allowed for national and international collaboration, with the establishment of numerous open-access lecture series (Table 1) tailored to residents, fellows, and practicing urologists alike.^{14,16}

Innovations have also been adapted by national organizations, such as the Canadian Urological Association (CUA), European Association of Urology, and American Urological Association. Each society’s annual general meeting was entirely online for the first time. The CUA general meeting was spread out over four nights with interactive sessions and lectures. The meeting was free to members, accessible throughout the world, and did not have the normal costs or disruption to clinical activity associated with in-person meetings of years past. Assessment has also been disrupted due to the pandemic. For the first time in the Royal College of Surgeons of Canada’s history, the final accreditation exams of every specialty, including urology, can be taken online anywhere in lieu of an in-person exam. Remote proctoring technology via a third-party company has been employed to ensure invigilation. Locally, many academic centers have trialed online video-conference-based objective structured clinical examinations and oral exams to assess trainees.^{16,17}

What we lost

Despite innovations, surgical education is a hands-on endeavor that requires clinical interaction and surgical volume. Many in-person clinics were mandated to dramatically slow down and some surgical cases paused entirely during

the pandemic, limiting the learning opportunities of medical students, residents, and fellows. In some jurisdictions, medical schools were closed entirely, and medical students were pulled from all clinical activities. A generation of medical students may never be exposed to urology at all, as they may have missed their first- and second-year elective opportunities. In similar fashion, operative rooms were put on hold during the pandemic, limiting the amount of cases residents and fellows were exposed to during training. At the time of this writing, many jurisdictions have yet to resume full clinical activities, which amounts to more than six months (and counting) of reduced learning opportunities. Although simulation training has bridged the gap in some cases,^{17,18} the lack of real cases cannot be understated.¹⁹ The true impact of lost clinical volume experienced during the pandemic on learning is not yet known.

What we learned

During these unprecedented times, we learned that the urological community around the world and especially here in Canada can embrace innovative technologies and methods to continue urological education. These technologies and methods include online lectures, conferences, and assessments, which have increased access and decreased barriers to learning. A strong case can be made to continue many of the changes brought on during the pandemic: 1) a national online curriculum that can leverage experts from different institutions to teach residents across Canada; and 2) an openly accessible, concurrent online option to regional, national, and international meetings to make cutting-edge urological research and clinical practice advice available for urologists anywhere and anytime. These are some of the ideas we learned are possible with the knowledge gained working through the pandemic. We also have to learn from what we have lost. We must learn strategies to leverage limited clinical volume to maximize learning for all trainees, including better strategies for passive learning and how to best integrate simulation into the current curriculum. Despite the unprecedented disruption caused by the pandemic, uro-

Table 1. Open-access lecture series

Name	Audience	Content	Lecture website
Educational Multi-institutional Program for Instructing Residents (EMPIRE) Lecture Series	Residents, fellows	Varied topics	https://nyaua.com/empire/
University of Southern California ‘Masters of Urology’ Zoom Clinical Series	Residents, fellows, staff urologists	Varied topics (panel discussions)	https://usc.zoom.us/webinar/register/WN_a1qzM5ppSD-cxmDoggKLxA
Urology Collaborative Online Virtual Didactics (COViD) Lecture Series	Residents, medical students	Varied topics	https://urologycovid.ucsf.edu/
Pediatric Urology Fellowship Lectures Online (PedsUroFLO)	Residents, fellows, staff urologists	Pediatric urology	https://pedsuroflo.ucsf.edu/
Genitourinary Reconstruction Lecture Series	Residents, fellows, staff urologists	Reconstructive urology	https://zoom.us/webinar/register/WN_sZ1uW2Z-TmqGLvZRGtm1wg

logical education has gained, lost, and learned during the pandemic, but most importantly continued to move the field forward.

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