

The patient-urologist relationship in the COVID-19 era and beyond

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Cite as: *Can Urol Assoc J* 2020;14(6):E271-3. <http://dx.doi.org/10.5489/cuaj.6688>

The world has rapidly altered all aspects of its normal activities to control COVID-19, including how patients and their healthcare providers interact. The medical community has remained at the forefront of these adaptations to provide the highest level of care for COVID-19 and non-COVID-19 patients. We have witnessed unforgettable examples of the heroism, humanism, and compassion that are the foundation of a healing relationship between patient and physician in an environment with strapped resources, such as personal protective equipment, ventilators, and staffing. While the scope of the pandemic remains to be determined, this presents an opportunity to understand the changes that the field of urology has endured and its lasting impact on the patient-urologist relationship.

As cases approach 5 million persons worldwide (at present time), many urologists have been deployed to provide care for COVID-19 patients.¹ The urology community quickly developed pathways to triage high-risk and emergent urology cases while preserving resources and mitigating risk.^{2,3} In addition to explaining the standard risks and benefits of an operation, urologists have engaged in new dimensions of shared decision-making — weighing the risk of delaying treatment with the risk of COVID-19 exposure. As many urological patients are older with multiple comorbidities, this cohort may be more susceptible to develop severe sequelae and mortality from COVID-19. As deferring surgery is not a “one-size-fits-all” strategy, urologists should exercise clinical judgement regarding which patients require urgent interventions vs. those who can be rescheduled. Great care must be taken to ensure that those who have deferred care must not be lost to followup due these postponements. All surgical specialties will have an intensifying backlog of office visits and operative cases that will need prioritization when elective cases resume and office hours normalize. A systematic model for prioritizing deferred cases will be necessary, as operating rooms and clinics will be working with limited time and space (Appendix).

Physicians across multiple specialties have quickly adopted telemedicine as part of the social distancing strat-

egy. To this end, in the U.S, the Centers of Medicare and Medicaid Services (CMS) expanded the telehealth coverage and expanded supervision of inpatient visits to advanced practice providers for Medicare patients. Similarly, European and Asian countries have expanded their use of telemedicine in an effort to provide continued access to healthcare services.⁴ Telemedicine, now being used across many urological subspecialties, can reduce unnecessary ancillary costs and allow the continuation of office-based urological care.^{5,6} However, patient education level, access to technology, costs, and reimbursement uncertainties are key barriers for universal adoption of telemedicine.⁷ Telehealth remains a double-edge sword, as it intends to expand access to care, but may also disenfranchise some patients. Those who lack technological proficiency and resources, such as the elderly and patients with lower socioeconomic status, may still be unable to receive reliable telehealth services, which may affect their health outcomes. System-level innovations will be necessary to create infrastructure and an environment where the most vulnerable patients in urology have the appropriate access to care.

The COVID-19 pandemic has changed how patients and urologists-in-training interact. Urology trainees have implemented telemedicine visits. While human touch is still a vital part of the art of healing, trainees are learning how to triage acute presentations without being physically present amid this pandemic. The patient-urologist relationship is one that is complex and needs time to develop. Under the current circumstance, trainees have to learn advanced communication skills with limited time and feedback, both of which are needed to practice and reinforce communication skills in clinical situations. Moreover, trainees face an uphill battle in terms of maintaining robust clinical volume and didactic programs. While efforts to augment didactics through virtual platforms have been successful, this global crisis has stolen vital training for many residents. In an era where telehealth will likely be welcomed, teaching residents to adopt this new interface of healthcare to effectively provide for the most vulnerable urological patients will require a careful and systematic effort.

The increased financial burden for urologists and hospitals threatens access to care for many urology patients during and after this crisis. An estimated \$362 billion to \$1.45 trillion in charges will arise from COVID-19 patient care in U.S.⁸ Even with a 20% increase in reimbursement, there is a predicted \$6000–8000 loss per case for the hospital on the treatment of COVID-19 patients.⁹ The cancellation of elective cases decreases a large portion of revenue, further widening the gap between costs and revenue for the hospital. Under these financial pressures, many hospitals and urology offices may be forced to reduce labor costs, furlough employees, and possibly reduce services for the under-insured and uninsured. In the U.S, the passage of the Coronavirus Aid, Relief, and Economic Security Act intends to provide \$376 billion to small businesses and workers through several temporary programs, including paycheck protection programs, express loans, and debt relief programs to help offset the financial disruption. Novel strategies supported by federal entities and public-private partnerships may mitigate this financial strain and ensure that access to care is maintained for patients with new and existing urological conditions.

For many patients, standard therapies have been exhausted and they may benefit from participation in clinical trials. The pandemic has decreased clinical trial participation, reshaped current trial portfolios, and may even alter study outcomes. As the possibility for a second wave of infection remains unknown, urologists will need to reassess non-oncology and oncology patients for clinical trial participation given interim disease progression and possible infection risks. This is especially true in the urologic oncology population, where patients often require multiple clinic visits, adjunct therapies, and outpatient testing.¹⁰

Our health system will inevitably face future crises, and we must use the lessons learned during the COVID-19 pandemic to ensure that we respond appropriately. Continued efforts to provide the highest level of urological care in the post-COVID era will require a balanced and purposeful

determination that sustains the primacy of the patient-urologist relationship within a continually evolving healthcare landscape.

Competing interests: Dr. Singer receives research support from Astellas/Medivation. The remaining authors report no competing personal or financial interests related to this work.

Funding: This work is supported by a grant from the National Cancer Institute (P30CA072720).

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APPENDIX. COVID-19 resources**Resources for restarting elective surgeries**

- Joint statement on restarting elective surgeries after COVID-19 pandemic¹¹

Resources for triaging cases

- Endourology cases^{2,12-14}
- Urologic oncology cases¹²⁻¹⁵
- Pediatric cases^{14,16}

Resources for urological oncology patients

- Guideline for cancer patients during COVID-19 pandemic^{10,17-20}
- Outcomes for cancer patients during COVID-19¹⁰

Resources for urology practices

- Challenges to urology practices^{1,14,21-24}
- Telemedicine usage^{4,25-27}

Resources for residency restructuring

- Surgical department restructuring^{28,29}
- Urological department restructuring^{30-32,45}
- Residency selection process³³

Health delivery during COVID-19 pandemic

- Disparity of care delivered to non-COVID patients³⁴⁻³⁶
- Surgeon's dilemma during COVID-19^{37,38}
- Effect on healthcare workers³⁹⁻⁴⁴

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