Adapting primary care to respond to COVID-19

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COVID-19 has created an unprecedented shift in health care systems around the world. In Canada, within a week, almost all services have moved towards a virtual-first model to limit unnecessary in person interactions. While initial efforts have focused on building acute care capacity such as ICU beds, there is a simultaneous need to enhance support for patients in the community to ensure they do not place an additional burden on acute care settings. This has not been a key factor in the response of many regions, which either focused on careful tracking and tracing early on in the epidemic, as in South Korea,[1] or building field hospitals and redeploying health care providers later in the epidemic, as in Italy.[2] Canada still has the time to develop and deploy a comprehensive approach that includes primary care to manage a potentially exponential spread of disease in the community, recognizing that the contribution of primary care will evolve over the course of the epidemic.

The initial response has been to reduce the spread of the virus by limiting faced to face contact between patients and providers, in many cases by deferring non-urgent care and doing remote assessment. As social distancing continues, the focus should shift to remote management of chronic disease to prevent exacerbations that might result in hospitalizations. In the event of a massive surge in hospitalized COVID-19 cases, primary care providers could be required to remotely manage severely ill patients who would normally have been hospitalized with conditions like congestive heart failure, chronic bronchitis, diabetes or acute mental health issues. At the peak of the epidemic, patients with a range of life-limiting conditions will need to be managed at home with palliative care. Each phase will require rapid design and deployment of a range of new strategies with iterative improvement and ongoing monitoring. In this commentary, we describe these five phases and highlight key elements that are required to maximize the benefit of primary care.

1. Triage and remote management of minor acute illness

Reduce the spread of the virus by limiting faced to face contact between patients and providers to situations where a physical exam is urgently required. In the short term, this involved canceling patient visits that were deemed to be non-urgent, and switching other appoints to phone or video calls. This also required triage systems involving front desk staff, nurses and doctors to manage incoming calls and determine who needs to be seen in clinic. Current approaches are fairly rudimentary and their ability to predict which modality is most appropriate is unknown. While essential, these approaches could be bolstered by more algorithmic approaches to triage clerical versus clinical requests, and determine whether patients would best be suited to phone, text and video for assessment and advice where possible, escalating to face to face care when needed. If call volumes become overwhelming, a digital front door with automated triage could both improve access and reduce workloads. This is being deployed in the UK,[3] providing wayfinding within the health system and directing patients to educational tools for specific conditions where appropriate. The next level up would be to license more sophisticated triage tools like those developed by vendors like Babylon or Dialogue, which could connect patients to an on-call nurse or physician through a text or video visit when needed. This is the most active area in the primary care response to COVID, with a range of resources available.

2. Ongoing remote management of chronic disease

As social distancing is likely to continue for several months, primary care providers will not be able to put off non-urgent care indefinitely and should consider remote management of chronic disease to prevent exacerbations that might result in hospitalizations. Most of the models of remote monitoring have focused on high-burden conditions like congestive heart failure, chronic obstructive pulmonary disease or diabetes. But primary care providers will need approaches to address every major chronic disease in their practice population, including migraine, benign prostatic hypertrophy, and asthma. This could involve emailing fillable PDFs with

symptom scores, or periodically sending screening questions over a web-based platform like OCEAN that go directly into an EMR. For the many patients that have multiple chronic conditions, it could involve eliciting an agenda and addressing patient concerns through asynchronous text prior to a synchronous video visit, and follow up with educational resources and a monitoring strategy. Lastly, patients with one major condition could be prescribed an app that could track symptoms, provide trend analysis and targeted advice on behavior change and treatment escalation. More generally, doing this well should involve developing robust self-management supports and training for caregivers when needed.

3. Virtual care of patients with severe acute illness

If hospitals fill up and their capacity to admit patients declines, primary care providers will need to remotely manage severely ill patients who would normally have been hospitalized. A key area for development is remote management of COVID-19 itself by their own primary care provider or a group practice. As nosocomial infection spreads, and personal protective equipment supplies decline, a wide range of conditions would need to be managed at home to minimize risks for patients and staff. The limited capacity of the home care sector may mean that much of this work would have to be done without in-person interaction. The simplest approach would involve using symptom scores and basic vital signs collected at home and called or emailed in. On the other extreme, this could involve robust monitoring systems using Bluetooth enabled devices with automated alerts and capacity to dispatch staff to homes only when necessary. A subset of patients would also be transferred to hospitals using some centralized triage mechanism to regional capacity.

4. Virtual home-based palliative care

If ICUs fill up and death rates increase within acute and community settings, transferring of patients will life-limiting illness to hospital may become infeasible. Primary care would then have to be engaged in rapid scale up of home-based and remote palliative care for patients with severe COVID-19 and other life-limiting conditions that are either never transferred or discharged prematurely because treatment is deemed medically futile. Given the limited capacity currently, PCPs would have to discuss advanced care directives with their patients and then partner with palliative care experts and home care agencies, monitor patients, and provide ongoing support for symptom management. Building capacity at at this stage might involve rapid accreditation of international medical graduates, nursing and personal support workers. This may also involve up-credentialing providers and quickly training them to do tasks previously outside their scope. Despite this, home care staff may be overwhelmed by the demand and much of this work would have to take place virtually, with extensive coaching of caregivers when possible.

5. Consolidating the primary care system of the future

The experience of deep engagement with every phase of COVID response will demonstrate the potential of primary care as the foundation of the health system, something which is often said, but not always understood by health system leaders or observed in practice. The development of a wide range of primary care based initiatives will accelerate the transfer of care out of hospitals and into the community, and create a level of collaboration across sectors that could be further developed. The extensive use of virtual care strategies throughout the response will allow us to reflect on where it has been most effective and institutionalize new models of virtual primary care that will continue after the pandemic has resolved.

The COVID-19 pandemic has turned public health officials into key stewards of government policy across all sectors, elevated the appreciation of health care providers within society, stretched health system planners and hospital managers ingenuity to meet the growing needs. This crisis also creates an opportunity for primary care providers to lead by showing the value of accessible care that is comprehensive, well-coordinated with every other sector, and based on longstanding relationships of trust with patients. Leveraging these core components

of our practice is much more attractive than being redeployed into other tasks we may not be as well suited for, and now is the time to show the value of what we do.

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