

The Role of Primary Care in a Pandemic: Reflections During the COVID-19 Pandemic in Canada

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Joanne Kearon¹  and Cathy Risdon¹

Abstract

As COVID-19 cases began to rise in Ontario, Canada, in March 2020, increasing surge capacity in hospitals and intensive care units became a large focus of preparations. As part of these preparations, primary care physicians were ready to be redeployed to the hospitals. However, due to the effective implementation of community-wide public health measures, the hospital system was not overwhelmed. As Ontario prepares now for a potential second wave of COVID-19, primary care physicians have an opportunity to consider the full breadth and depth of scope for primary care during a pandemic. From planning to surveillance to vaccination, primary care physicians are positioned to play a unique and vital role in a pandemic. Nevertheless, there are specific barriers that will need to be overcome.

Keywords

pandemic, COVID-19, primary care, emergency response, planning, health systems

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Introduction

As COVID-19 cases began to rise in Ontario, the public health and healthcare sectors began to rapidly prepare. A core component of preparations was to increase surge capacity in hospitals, anticipating a large influx of patients that would require critical care and ventilation. Plans were made for family physicians to be redeployed to work in hospitals if needed. However, as societal physical distancing measures took effect, the rate of transmission fortunately decreased. In most areas in Ontario, mainly outside of the Greater Toronto Area, the expected surge did not impact hospitals to the degree that was feared and expected. Instead, the majority of cases were managed in the community by primary care physicians.

Family medicine, as a specialty, is defined by several characteristics:

- community-based;
- continuity of care;
- first point-of-contact;
- comprehensive whole-person care;
- coordination of intersectoral and multidisciplinary team.¹

While other medical specialties may at times incorporate some of these attributes, none exemplify all of these characteristics

in the same way as family medicine. Importantly, there has been extensive research to demonstrate that access to a family physician improves patient satisfaction, hospitalization rates, clinical outcomes and equity.²⁻⁴ It is precisely these characteristics that place family physicians in a unique position in pandemic response. In this article, we outline some of the vital functions of primary care during a pandemic, based on studies and experiences of previous pandemics. Working through the course of a pandemic, from onset, peak, recovery and planning for the next pandemic, we demonstrate the need for support for primary care to explore and perform its role in a pandemic, outside of the hospital system.

Educate and Communicate

Many patients will inevitably turn to their family physicians as “trusted and credible sources of information.”⁵ In fact, family physicians may be considered more reliable by patients than public health organizations. This may be due to the

¹McMaster University, Hamilton, ON, Canada

Corresponding Author:

Joanne Kearon, Department of Health Research Methods, Evidence and Impact, McMaster University, 100 Main St West, Hamilton, ON L8S 4L8, Canada.

Email: joanne.kearon@medportal.ca



longstanding relationship between a patient and their family physician, but also due to mistrust amongst some groups of governmental organizations, including public health organizations.⁵ Therefore, family physicians have a duty to remain up-to-date with the best evidence as the pandemic progresses, and public health organizations must maintain open lines of communication with primary care.⁶ Family physicians have the opportunity to provide patients with advice on individual preventative measures, self-management of symptoms and to correct sometimes detrimental misinformation.⁷

Another opportunity for family physicians that may be overlooked and under-utilized is to emphasize with patients with COVID-19 the importance of isolation. Case-contact tracing and reinforcing self-isolation is one of the core responsibilities of public health. Nevertheless, when a patient is diagnosed, there is an opening for their family physician to contact them and reinforce public health measures.^{8,9} Similarly, if a patient were to identify themselves to their physician as a contact to a case, the role of quarantine can be emphasized. In this way, family physicians help to slow the spread of COVID-19.

Surveillance

Primary care physicians are a key component of surveillance systems, with the responsibility to report to public health when they identify communicable diseases of significance. For example, as a patient's first point-of-contact, primary care tends to identify a spike in seasonal influenza earlier than emergency departments, and can serve as a reliable indicator of underlying trends in community transmission.^{5,10} This function will become increasingly important in post-peak surveillance, when primary care physicians will be the ones to whom patients are most likely to first present, and may therefore be the first to identify resurgence of COVID-19.

Triage and Treatment of Pandemic Illness in the Community

While a small subset of patients with COVID-19 will inevitably require hospitalization, the majority will be seen first and solely by primary care because the majority of infected individuals experience only mild to moderate symptoms. In Ontario, as of August 28, 2020, 11.6% of cases had ever been hospitalized, meaning that almost 90% of cases were managed in the community.¹¹ Treating as many patients in the community as possible also removes strain from the hospital system, reducing the risk of overwhelming hospital capacity.¹² Furthermore, reflecting on their experiences of COVID-19 in Italy, a group of intensive care physicians wrote, "We are learning that hospitals might be the main COVID-19 carriers, as they are rapidly populated by infected patients, facilitating

transmission to uninfected patients. . . This disaster could be averted only by massive deployment of outreach services. Pandemic solutions are required for the entire population, not only for hospitals."¹³ Similarly, a model based on pandemic influenza and SARS found that a higher concentration of hospitals is linked with greater spread and mortality, while a higher concentration of community-based primary care clinics to triage, diagnose and treat the pandemic illness was associated with reduced transmission and mortality.¹⁴ Hence, primary care of COVID-19 in the community is critical to keep as many patients out of hospital as possible to reserve constrained hospital resources and prevent institutional outbreaks.

Prevention of Spread Amongst Vulnerable Populations

Certain populations will be at a higher risk of contracting communicable diseases, such as those who are unstably housed or living in congregate settings. Still others are more vulnerable to worse outcomes from a respiratory illness, such as those who are immunocompromised or have multiple comorbidities. Public health organizations will often attempt to broadly identify, inform, and provide support for these populations. Yet, primary care physicians are in a unique position of being able to individually pinpoint who in their practice is most vulnerable.¹⁰ By proactively reaching out to these patients, family physicians are able to provide education and support to prevent spread to these individuals. No one else in the healthcare sector is able to perform this function in the way that family physicians can.

Moreover, in most communities, family physicians form the backbone of outreach services to the most vulnerable and to congregate living settings. In these settings, family physicians may be expected to set the standards for infection prevention and control measures, as well as help coordinate response to outbreaks within the facility.^{15,16}

Home and Community Care of Higher Acuity Non-Pandemic Illness

During a pandemic, primary care physicians will need to provide care in the community to an increasing number and higher acuity of patients. Patients that may have typically been admitted to hospitals for short stays may need to be treated as an outpatient during a pandemic. This is primarily to divert patients away from hospitals that are already stretched in terms of resources.¹² Further, this prevents vulnerable patients from risking exposure in the hospital setting. There are multiple potential avenues to provide this increased care, including continued adapted clinic-based care, strengthened multidisciplinary home care, tele-monitoring and virtual visits.¹⁷

Vaccination

If and when this becomes available for COVID-19, primary care physicians are going to play an important role in delivering population-wide vaccination. While this process will likely be coordinated by public health, primary care offers a built-in infrastructure for rapid distribution of vaccines. Moreover, in a survey on influenza vaccination in 2009, about a third of people were found to be reluctant to receive the vaccination even after public health messaging.¹⁸ Yet, due to longer-standing rapport, patients may be more likely to receive the vaccine after discussion with their family physician.⁹

Post-Pandemic Recovery

Considering the stringency of societal physical distancing measures, during which many lost jobs and social contact decreased, there will be a lot of rebuilding that must take place following COVID-19. Some patients will have increased health needs due to the long period of physical distancing, and the impact that has had on their physical and mental health.¹⁹ Others will have avoided acute or delayed routine medical care due to fears over exposure to COVID-19.²⁰ In the post-peak period, family physicians will have a large role in caring for these needs. Following the relaxation of physical distancing measures, there will likely be an increase in demand of counselling and mental health services, higher volume of preventive care, and a higher acuity of medical complaints.⁹

Pandemic Planning

Finally, a core component of pandemic recovery is to assess lessons learned and begin to prepare and plan for another pandemic. This needs to take place within each organization and across organizations in the public health and healthcare sectors.¹⁶ Traditionally, primary care specific planning has been limited.²¹ However, COVID-19 highlights the importance of having primary care representatives in the creation of pandemic preparedness plans.

Barriers

Though primary care has many important roles in a pandemic, there are also many barriers or challenges to family physicians being able to fulfill these roles.

- Time: Family physicians are often already feeling pressured in terms of time commitments. Expanding and adapting clinical practice during a pandemic can be difficult.
- Communication: Following SARS and H1N1 influenza, one of the largest barriers identified by surveyed family physicians was the sense of lack of communication or miscommunication between public health agencies and primary care.^{6,22}

- Governance of primary care: Compared to public health agencies, hospitals, paramedic services, and other healthcare organizations, primary care in Ontario does not often have a central hierarchical structure. This creates challenges in coordinating a unified primary care pandemic response, though it certainly does not preclude it.
- Technology: Many of the functions of primary care in a pandemic would be made easier by technology, including enabling virtual care, communication and enhanced triaging and surveillance. While COVID-19 has certainly forced a progression in technological development and adoption, there is still room for growth.
- Recognition and support: As previously discussed, pandemic responses have often been focused on secondary and tertiary care, without a clear understanding of the important role of primary care. As Rust et al state, “Authorities may designate mainly hospitals as surge sites, neglecting to designate primary care community health center networks.”²⁵ Similarly, in an analysis of the response to SARS, Lee and Chuh wrote, “SARS has highlighted the inadequate interface between primary and secondary care and valuable health care resources were thus inappropriately matched to community needs.”²⁹ Lack of understanding of the role family physicians play in the community during a pandemic leads to primary care being inadequately equipped in terms of personal protective equipment and workforce investment.

Recommendations

As Ontario passes the first peak of COVID-19, it is now necessary to reflect on lessons learned in order to best prepare for any subsequent waves, as well as for future pandemics.

Based on the discussed roles of primary care in a pandemic, and the related barriers, several recommendations can be made:

- Prioritize primary care in PPE provision
- Improve access and use of data generated from primary care for syndromic surveillance
- Include primary care representatives on pandemic planning and response committees in all healthcare sectors and formulate primary care specific pandemic plans for each community
- Creation of clinical care pathways and guidelines to support family physicians in providing care for higher acuity illness in the community
- Governmental investment in technology in primary care to improve quality of virtual care
- Consider creation of community-based clinics for triage and treatment
- Expansion of home-based care by primary physicians

- Timely and open avenues of communication between public health organizations and primary care, with clear messages for physicians to give to patients

Lastly, though this review found several useful commentaries, guidelines and qualitative studies, evidence of how primary care can best respond to a pandemic is limited overall. COVID-19 presents an opportunity for further research on this area.

Conclusion

The response to COVID-19 has required extensive adaptation and flexibility by all healthcare providers. Nevertheless, the focus, particularly at the beginning of the outbreak, was on the impact on and response of secondary and tertiary care. The primary care sector's duties in the response focused on how it could participate in the response of secondary and tertiary care centers. However, due to effective public health measures, much of the created hospital surge capacity was thankfully not required. There is now time to reflect and learn from this experience in order to best prepare for a subsequent wave. The entire breadth and depth of the role of primary care during outbreaks and pandemics remains to be fully recognized and utilized.

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ORCID iD

Joanne Kearon  <https://orcid.org/0000-0002-7039-6894>

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