On 11 March 2020, the World Health Organization declared Coronavirus 2019 (COVID-19) a pandemic, one that has since spread across the globe. As of May 2021, COVID-19 has infected over 171 million people, resulting in more than 3.5 million deaths, while pressing hospital and ICU capacities to precarious acuity levels. Yet the international crisis also revealed a disproportionate impact on primary care, leading to severe declines in clinical volumes and revenues, plus interruption in effective preventive care services and chronic disease management. Equally important, we are learning of numerous potential long-term clinical impacts and distressing ongoing chronic health issues stemming from respiratory illness, psychological problems or cognitive deficits and unexplained lingering symptoms (1–3). Primary care training has likely suffered due to early restrictions on personal protective equipment, quarantining of health care workers and reduced morale amongst practicing physicians and nurses (4–6). Rapid adoption of telehealth, and outreach to existing patient populations has created a demand for new methods of care delivery (7) and reimbursement, while concurrently raising a multitude of questions about effectiveness and financial stability (8).

The critical role of primary care in managing ambulatory COVID-19 and identifying those at higher risk for severe manifestations in order to initiate outpatient monoclonal antibodies, or admit patients to hospital, has played a key role in disease management. The advent of the vaccine, associated hesitancy and social barriers have created a new set of primary care challenges for which systems solutions and additional resources are critically important. Primary care as the trusted health provider, coupled with new resources to reach into the community, has the capacity to overcome vaccination barriers and connect with hard to reach individuals. This supplement was developed prior to widespread availability of COVID-19 vaccination and the recognition of subsequent resistance. Therefore, our intent here is not to inform vaccination efforts in any jurisdictions. However, in the USA we have seen creative tools developed by the Centers for Disease Control in mapping vaccine hesitancy at the county level together with the Social Vulnerability Index to provide a robust understanding of social barriers in numerous locales. In Maryland, for example, the Health Information Exchange (CRISP), has developed a set of data analytics for each primary care practice to identify patients eligible for the COVID-19 vaccine based on demographics and chronic disease, and provided patient names for targeted outreach. Primary care physicians are receiving education and training in utilizing data, and there are emerging resources for community outreach to complement the work of primary care (9,10).

As such, the role of primary care will undoubtedly continue to evolve, shifting from detection of acute symptoms and referrals to chronic care management challenges as patients confront long-term disease consequences to the newer manifestation of long COVID (11). As this disease is better understood, public health issues will encompass more comprehensive prevention efforts, including discussions surrounding promising vaccines (and boosters), rapid testing and preventing further spread, contact tracing, emerging therapeutics and coordination with multiple medical specialists or inpatient facilities. As the primary care practice assumes an increasingly central role in treatment and monitoring of ongoing pandemic repercussions, multifaceted research insights will be required to provide prompt yet accurate evaluations of infection vectors, disease patterns, acute and chronic symptom recognition, developing pharmaceutical and other treatment modalities, and the impact of appropriate referrals as needed. In addition, information will be essential regarding accompanying psychological responses to infections and imposed periods of isolation, social and employment disruptions, risk factors for special patient groups and subsequent equity concerns, accumulating treatment costs with finite clinic resources, along with proximal and longitudinal outcomes. Furthermore, sensitive recognition of individual patient needs and greater population level burdens must be continually reassessed. The personal, national and global impact of this pandemic cannot be underestimated, and will likely be felt for years to come. There is a need to continually benchmark primary care responses, specifically regarding patient outcomes.

Effective interventions to address the myriad of clinical issues and patient needs will be crucial, including innovative treatment approaches and patient-focused care coordination. International efforts at targeting solutions and disease control vary, as do resources, public opinion and responses; demographics or behavioural risk factors also influence disease progression and outcomes, and thus should be closely evaluated. All these factors must be systematically studied through sound, methodologically rigorous research and dissemination efforts. How successfully the primary care sector can manage the diversity of problems and intersecting demands will depend on the quality of evidence that arises from primary care environments. Lessons learned through this special issue concerning efficacious therapies and effective clinical delivery will likely dictate the ongoing presentation of this pernicious virus.

Over a year into the pandemic, an informal review of PubMed, Google Scholars and other databases revealed a substantial share of published articles exploring the SARS virus and general COVID-related issues. Yet we observed that the vast majority of papers focused on biological mechanisms, epidemiological factors regarding disease spread, clinical presentation and pharmaceutical or other experimental treatment options. A relatively small portion of the current research and evidence targets health services implications or applied
public health approaches, with even fewer devoted to the role of primary care and family medicine providers. So while our scientific knowledge about the virus and subsequent clinical ramifications have developed exponentially, information regarding primary care response to COVID-19 in diverse settings, and the interaction with patient perspectives and priorities, and broader public health responsibilities remain considerably more opaque.

Therefore, our call for papers aimed to solicit manuscripts that addressed one or more of the following priority areas, with submissions encouraged from primary care professionals as well as those with special expertise in epidemiology, health services research, qualitative research, clinical trials, systematic reviews, meta-analysis, case reports and other types of studies as described on our website. These included: defining the role of primary care in pandemic responses, guidelines and recommendations from national and international experts along with emerging governmental policies, adoption of novel efforts for screening and management, methods to better coordinate chronic care and preventive delivery, new models of physician and clinic reimbursement, positioning primary care practices as the logical partner in vaccine delivery and therapeutics delivery, evaluating primary care as the frontline providers for patients with behavioural health and substance abuse conditions, and assessing the impact on education, training and the well-being of primary care providers.

We are excited and gratified to observe such dedicated attention to researching this pandemic and its consequences for patients, providers and society. Following the solicitation, we received well over 70 inquiries from investigators interested in disseminating significant findings from their work. Fifty-three manuscripts were eventually submitted for review, covering a range of topics from psychological problems stemming from the disease or subsequent isolation, telemedicine along with other novel health delivery options, care coordination and communication barriers, to potential improvements in effective detection and treatment. After a lengthy editorial evaluation and our typical rigorous review process, we selected seven manuscripts for inclusion, six research papers and an intriguing case study.

Opening this issue, Beavers et al. describe community-based approaches to addressing the pandemic, while Awadallah and colleagues examined the well-being of primary care residents and faculty due to changing workflows during the pandemic. Next, Dr Tunaligil and team conducted a simulation modelling analysis to help forecast COVID-19 and flu incidence, expanding prior work gauging disease spread via advanced methodological approaches. Observing perceptions of quality antenatal care experienced by women throughout the pandemic lockdown, Ulaganeetha et al. utilized a mixed methods approach to assess perceived challenges in receiving obstetric visits and other services in Puducherry, India. Norman and her colleagues also focussed on women’s health, documented access to abortion services in Canada from a provider perspective. Concluding the full research studies, Sebo and colleagues also examined clinician pandemic responses in France while also documenting COVID symptoms in patients by age and gender. Finally, Ardoy et al. present an interesting case study of femoral osteonecrosis developing after a COVID diagnosis in an elderly woman.

These international studies highlight the diversity of current efforts into the pandemic impact while reflecting upon the complexities of addressing this infectious disease scenario. Such work establishes an impressive foundation for future work into longer-term effects of COVID, innovative epidemiological techniques to monitor outbreaks, and collaborative clinical treatment approaches. Family Practice sincerely applauds this insightful collective work being done, with a special note of appreciation for the hundreds of researchers exploring this topic, not to mention untold thousands of frontline providers, their courageous patients and social support networks. We believe the global health community is now better posed to glean the benefits from such outstanding research.

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Data availability
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