



# The CSN COVID-19 Rapid Response Program

Canadian Journal of Kidney Health and Disease  
Volume 7: 1–4  
© The Author(s) 2020  
Article reuse guidelines:  
sagepub.com/journals-permissions  
DOI: 10.1177/2054358120949110  
journals.sagepub.com/home/cjk



Gihad Nesrallah<sup>1,2</sup> , Loreen Gilmour<sup>3</sup>, Adeera Levin<sup>4</sup>,  
Reem Mustafa<sup>5</sup>, Steven Soroka<sup>6</sup> , and Deborah Zimmerman<sup>7</sup>

## Abstract

The coronavirus disease (COVID-19) pandemic has created unprecedented challenges in caring for individuals living with kidney disease. In response to a growing call for up-to-date information and evidence-informed advice, the Canadian Society of Nephrology has established a COVID-19 Rapid Response Team that will leverage existing evidence and national expertise to inform kidney care practices in the COVID-19 era. Given limited published evidence and compressed timelines, formal clinical practice guidelines are not feasible, and we have adopted rapid review methods to instead provide interim guidance across identified priority areas. In this article, we describe the methodological approach that was applied in developing a first iteration of guidance documents addressing clinical and operational aspects of care for patients treated with in-center hemodialysis, home dialysis, those with advanced chronic kidney disease, those with glomerulonephritis, and those with acute kidney injury. We further describe strategies for maintaining ongoing engagement with the renal community to elicit emerging needs and perspectives as the situation unfolds.

## Keywords

rapid recommendations, interim guidance, COVID-19, CKD (chronic kidney disease), dialysis

Received April 25, 2020. Accepted for publication July 16, 2020.

## Background

Since its first emergence in Wuhan, in December 2019, the global spread of coronavirus disease (COVID-19) has created unprecedented challenges for even the most advanced health systems. Among the earliest identified features of the disease are its propensity to cause more severe, life-threatening illness in individuals with preexisting conditions, including chronic kidney disease (CKD).<sup>1</sup> While the disease poses a heightened risk of adverse outcomes in this vulnerable population, facility-based dialysis, by its nature, limits the extent of the physical distancing that is among the most effective public health interventions in preventing transmission. Moreover, as health systems reorganize services to deal with anticipated surges, the pandemic further threatens the quality of care and safety of patients with kidney disease. Reduced access to elective procedures, dialysis capacity pressures, and looming human resource constraints are among the many emerging supply-demand inequalities identified by kidney care providers as areas in need of innovative solutions and contingency planning.

In early 2020, Canadian kidney programs began updating their pandemic plans and related policies to address the anticipated system-wide challenges. At the same time, senior

renal leaders from provincial health authorities and kidney programs across Canada started sharing initiatives via an Internet-based forum that had been established in 2018. To promote distribution and dissemination of this growing knowledge base, the Canadian Society of Nephrology (CSN) developed an online repository for COVID-19-related policy and guidance documents (<https://www.csnsn.ca/covid-19-emergency-preparedness-for-healthcare-professionals>) and solicited contributions from the Canadian kidney community. As the realities imposed by the pandemic have

<sup>1</sup>Faculty of Medicine, University of Toronto, Ontario, Canada

<sup>2</sup>Nephrology Program, Humber River Hospital, Toronto, Ontario, Canada

<sup>3</sup>Alberta Health Services, Calgary, Canada

<sup>4</sup>Faculty of Medicine, The University of British Columbia, Vancouver, Canada

<sup>5</sup>Department of Clinical Epidemiology and Biostatistics, McMaster University, Hamilton, Ontario, Canada

<sup>6</sup>Medicine, Queen Elizabeth II Health Sciences Centre, Halifax, Nova Scotia, Canada

<sup>7</sup>Faculty of Medicine, The Ottawa Hospital, Ontario, Canada

## Corresponding Author:

Gihad Nesrallah, Nephrology Program, Humber River Hospital,  
1235 Wilson Ave, North York, ON, Canada M3M 0B2.  
Email: gnesrallah@hrh.ca



become clearer, the CSN has continued to receive requests for guidance across a growing range of topics. As the evidence-base informing kidney care in the COVID-19 era is relatively nascent, formal clinical practice guidelines are unlikely to be feasible or timely enough to meet the community's urgent needs. Under such circumstances, a more informal, consensus-based process that integrates available evidence, expert opinion, and ethical principles can provide timely and practical "interim" guidance.<sup>2</sup>

To this end, the CSN has established the CSN COVID-19 Rapid Response Team (CCRRT), the primary goal of which is to leverage the evolving experiences, protocols, and tools across Canada to develop a current picture of "best practices," which can be shared to the benefit of patients and care providers. Specific objectives of the CCRRT are to (1) develop relevant interim guidance leveraging the pan-Canadian experience and existing materials; (2) enable real-time dissemination of interim guidance to kidney programs using preprints hosted on the society's Web site, open-access journal publication, and live interactive sessions; (3) develop a compendium of relevant external guidance documents and linkages to pertinent literature; (4) establish mechanisms for concurrent and rapid peer review; and (5) solicit emerging needs through CSN, government agency, and academic channels as well as through interactive webinars.

## Methods

We developed a brief protocol to guide the activities of the CCRRT working groups with the intention of promoting standardization in methods and outputs. However, in the interest of enabling agility and autonomy, we encouraged the working groups to adapt the proposed methods or to adopt other methodologies (eg, survey or qualitative synthesis methods) as required, enhancing efficiencies, recommendation quality, or the interpretability of their guidance documents. As such, the methods described below represent the general guidance provided to the working groups with any significant differences highlighted in the individual reports. In developing these suggested methods, we considered the Guidelines International Network-McMaster Guideline Development Checklist extension for rapid recommendations, but recognized a priori that checklist items pertaining to systematic review conduct, quality appraisal, and grading of interim guidance statements would not be applicable to our planned body of work.<sup>3</sup>

## Working Group Composition and Conduct

We assembled working groups based on members' interest, known areas of expertise, availability, willingness, and regional representation. Each working group identified a chair whose role was to facilitate discussion, ensure adherence to timelines, call for meetings, and establish appropriate

quorum, balancing inclusivity with expediency. Working groups invited additional members as required, aiming to ensure a balance of content and methodological expertise and geographic representation, and drew upon participants from both community and academic settings. In future iterations, working groups may recruit administrators and individuals from other disciplines at their discretion and as appropriate to the evolving scope of work. We did not include patient advisors in every working group in the first iteration and will consider doing so for future iterations.

We asked the working groups to complete a first draft document within 14 days of invitation. Working groups operated autonomously in all aspects of project management, including the distribution of tasks such as literature searches, data extraction, and writing activities.

## Synthesis Methods

### *Item Generation—Identifying Relevant Topics and Themes*

The qualitative researcher on our team (L.G.) performed thematic analysis of the email-based pan-Canadian senior renal leadership forum spanning March 20 to April 6, 2020. This exercise yielded 22 initial topics organized under 4 primary themes, each of which formed the basis for a working group. The working groups included (number of topics identified through thematic analysis) the following: (1) acute kidney injury/critical care ( $n = 5$ ), (2) home dialysis ( $n = 6$ ), (3) in-center hemodialysis ( $n = 8$ ), and (4) advanced and complex CKD, including glomerulonephritis ( $n = 3$ ). Working groups then used an iterative and consultative process with various stakeholders (local and national) to further expand each initial list of topics for consideration for inclusion of the first iteration of each interim guidance document.

### *Prioritization*

Working groups used informal consensus methods to prioritize identified topics. The working groups considered the following criteria in their priority setting:

- Expressed need for guidance by kidney community—areas of confusion/moral distress/interest;
- Apparent practice variability;
- Need for advocacy (where a position statement by a professional society could resolve disagreements or influence policy in an ethically balanced manner);
- Feasibility within the given 14-day timeline (bearing in mind that there would be opportunities for future iterations).

When the working groups identified high-quality publications addressing relevant but general topics (eg, hand hygiene, donning and doffing personal protective equipment), they

documented the information source (reference or URL) for inclusion in an appendix, rather than attempted to summarize the material.

### Information Sources

Working groups included existing guidance documents, policies, and procedures from the following sources:

- Guidelines published by other nephrology societies (American Society of Nephrology, National Kidney Foundation, etc.);
- Guidelines published by major non-kidney health care agencies (Centers for Disease Control, World Health Organization);
- UpToDate (including a curated list of society guidelines; <https://www.uptodate.com/contents/society-guideline-links-coronavirus-disease-2019-covid-19-international-and-government-guidelines-for-general-care>);
- Policy and procedure documents from Canadian kidney programs;
- Policy and guidance documents from Canadian provincial kidney agencies.

Eligible source documents also included peer-reviewed opinion pieces deemed to be high-quality and relevant systematic reviews. Working groups drew from original research articles where available but did not perform any de novo systematic reviews in developing their first-iteration documents. Working groups plan to continuously reassess the feasibility and utility of systematic reviews as the evidence base evolves.

## Developing Guidance Documents and Recommendations

### Guiding Principles

For transparency and to promote consensus, each working group first established a set of guiding principles, through discussion and in consultation with an ethicist with content knowledge in nephrology. The guiding principles formed the underpinnings of the recommendations that required value judgments or trade-offs between benefits and harms (eg, minimizing health care workers' contact with an infected patient places a higher value on the safety of the health care worker, over the experience of the patient). The working groups generally did not consider resource use in establishing guiding principles.

### Guidance Statements

We phrased guidance statements (recommendations) in the active voice and used concise and prescriptive language where appropriate (eg, when describing processes or steps in

procedures). Although the CSN generally endorses the GRADE approach to guideline development,<sup>4</sup> a formal implementation of this framework was deemed infeasible, given time constraints and the lack of applicable published research. In keeping with previous CSN commentaries on published guidelines, working groups used “we suggest . . .” and “we recommend . . .” phrasing in formulating guidance statements that were based on low versus high certainty of effects, respectively. However, we did not provide quality ratings or explicitly state the strength of recommendations.<sup>5</sup>

We used bullets and lists in describing processes or procedural content, and tables to draw comparisons between recommendations that varied between contexts. Where there was considerable uncertainty or disagreement within working groups, or the need to consider local contexts, we used less prescriptive language and instead listed options for users' consideration.

### Resource Use

Although we did not consider resource use in developing guiding principles, we recognized that recommendations might vary with resource availability. In these situations, we aimed to provide explicit guidance for a plausible range of scenarios (eg, “where resources permit, providers should . . .”; “where resources are constrained, providers should consider the following alternative(s)”).

## Identifying Knowledge Gaps and Research Priority Setting

We recognized that in identifying scope items and developing guidance statements, participants might identify important knowledge gaps and research questions. We excluded these from the first-iteration guidance documents, but asked participants to collate research questions for consideration for inclusion in future updates.

### Peer-Review Process

We used a concurrent peer-review process to minimize time-to-publication. Each working group identified external reviewers based in both community and academic settings. Reviewers first assessed scope items for content validity and importance, and subsequently reviewed initial draft documents. Concurrently, the working groups presented their draft guidance documents via national webinar (on April 11 and 18, 2020) and solicited both live and offline feedback from participants (N > 200) that included nephrologists (CSN members and non-members), industry leaders, hospital administrators, and allied health care professionals. The working groups then collated feedback, addressed reviewer comments, and submitted for publication. Documentation of response to feedback was provided to the editorial staff at the *Canadian Journal of Kidney*

*Health and Disease (CJKHD)*. CJKHD editors reviewed the response to feedback and edited the documents for clarity.

## Communication Strategy—Responding Rapidly in an Evolving Crisis

Interim guidance from the CSN COVID-19 Rapid Response Program is published with open access in this issue of the *CJKHD* with dissemination through the Journal<sup>6-9</sup> and the CSN Web site (<https://www.csnsn.ca/CSN-covid-19-rapid-response-team-recommendations-CJKHD>). However, in these unprecedented times, we aspire to move beyond dissemination in favor of vigorous public discourse. A rapid response program can only be as effective as the level of engagement that we as a community can achieve, so we must leverage every possible channel to elicit emerging needs, share new strategies and insights, build consensus where we can, and engage in healthy debate where we cannot.

In 20 years, even the most Luddite among us will look back on 2020 as the year that videoconferencing saved our economies and spared our sanity. The CSN and CCRRT will continue to engage the kidney community through weekly webinars for as long as is helpful, during the various phases of the pandemic. The initial sessions will serve to present the draft guidance statements for public commentary and validation. Subsequent sessions will serve as a forum for presenting new topics and for ongoing exchange of ideas and opinions as the situation and evidence base evolve.

The CSN will also continue to gather topic suggestions and inquiries through online forms (links available at <https://www.csnsn.ca/>), will collate questions from provincial kidney agencies that are closely connected to the frontlines, and will continue to engage the community through industry and academic channels. Updates to guidance scope and content will continue for as long as they are useful.

A crisis of this magnitude is a historic first for the modern world, for the CSN as an organization, and for each of us as individuals. The future is uncertain; however, as a community, we have come together to support each other and our patients, using collective wisdom, experience, and humanity to enable the best outcomes for all.

## Acknowledgments

The Canadian Society of Nephrology COVID-19 Rapid Response Team (CSN COVID-19 RRT) thanks Julie Leidecker and Filomena Picciano for their invaluable assistance; they were instrumental in organizing the workgroups and webinars. We thank Lisa Pyke for expertly assisting the working groups with the literature searches

that enabled this program of work. Steering Committee members are Adeera Levin, Reem Mustafa, Gihad Nesrallah, Steven Soroka, and Deborah Zimmerman.

## Declaration of Conflicting Interests

The author(s) declared no potential conflicts of interest with respect to the research, authorship, and/or publication of this article.

## Funding

The author(s) received no financial support for the research, authorship, and/or publication of this article.

## ORCID iDs

Gihad Nesrallah  <https://orcid.org/0000-0002-2280-3811>

Steven Soroka  <https://orcid.org/0000-0002-7278-1702>

## References

1. Henry BM, Lippi G. Chronic kidney disease is associated with severe coronavirus disease 2019 (COVID-19) infection. *Int Urol Nephrol*. 2020;52(6):1193-1194.
2. Kowalski SC, Morgan RL, Falavigna M, et al. Development of rapid guidelines: 1. Systematic survey of current practices and methods. *Health Res Policy Syst*. 2018;16(1):61.
3. Morgan RL, Florez I, Falavigna M, et al. Development of rapid guidelines: 3. GIN-McMaster Guideline Development Checklist extension for rapid recommendations. *Health Res Policy Syst*. 2018;16(1):63.
4. Guyatt GH, Oxman AD, Vist GE, et al. GRADE: an emerging consensus on rating quality of evidence and strength of recommendations. *BMJ*. 2008;336(7650):924-926.
5. Andrews J, Guyatt G, Oxman AD, et al. GRADE guidelines: 14. Going from evidence to recommendations: the significance and presentation of recommendations. *J Clin Epidemiol*. 2013;66(7):719-725.
6. Home Dialysis Workgroup Members, Copland M, Hemmett, J, et al. Canadian Society of Nephrology COVID-19 Rapid Response Team Home Dialysis Recommendations. *Can J Kidney Health Dis*. 7. doi:10.1177/2054358120928153.
7. Clark EG, Hiremath S, Soroka SD, et al. CSN COVID-19 Rapid Review Program: Management of Acute Kidney Injury. *Can J Kidney Health Dis*. 2020; 7. doi:2054358120941679.
8. White CA, Kappel JE, Levin A, et al. Management of Advanced Chronic Kidney Disease During the COVID-19 Pandemic: Suggestions From the Canadian Society of Nephrology COVID-19 Rapid Response Team. *Can J Kidney Health Dis*. 2020; 7. doi:2054358120939354.
9. Suri RS, Antonsen JE, Banks CA, et al. Management of outpatient hemodialysis during the COVID-19 pandemic: recommendations from the Canadian Society of Nephrology COVID-19 rapid response team. *Can J Kidney Health Dis*. 2020;7. doi:2054358120938564.