McMaster University | HEALTH FORUM

COVID-END COVID-19 Evidence Network to support Decision-making ... in Canada

COVID-19 Living Evidence Profile #5

(Version 1: 15 June 2021)

Question

What went well and what could have gone better in the COVID-19 response in other countries, as well as what will need to go well in future given any available foresight work being conducted?

Background to the question

With increasing numbers of citizens getting vaccinated in countries around the world, now is the time to examine the response to the COVID-19 pandemic in select countries while it is still fresh in the minds of policymakers and stakeholders. The countries include Australia, Brazil, France, Germany, South Africa, the United Kingdom, and the United States. Answers to questions about what was done well and what could have been better in other countries are necessary to allow us to learn from both the missteps and the successes in the COVID-19 responses that were implemented during the pandemic. This reflexive lens will help to ensure that Canada and other countries are well positioned for future waves of the pandemic, for any future pandemics, and for future public-health challenges that share characteristics with this one. We have used the two organizing frameworks below to provide a thematic analysis of lessons learned from evidence documents, opinion pieces that meet one or more explicit criteria (explicit assessment of pros and cons, cited data and/or evidence that was explicitly used in deriving lessons learned, documented stakeholder-engagement process, or endorsements of lessons learned by a formal group or a large, informal group of signatories), and the experiences of governments and government agencies. We have also developed a complementary summary of lessons learned from Canadian federal, provincial and territorial responses using the same organizing frameworks (which can be found on this webpage as living evidence profile 4.2).

Box 1: Our approach

We identified research evidence addressing the question by searching the COVID-END inventory of best evidence syntheses, the COVID-END guide to key COVID-19 evidence sources (which includes several databases containing COVID-19-specific single studies and COVID-19 specific pre-prints, such as COVID-19+, L*VE and TRIPP), EMBASE, and select additional grey-literature sources in the 31 May to 4 June 2021 period. For this update, we conducted searches in English. For next months update we will conduct searches using terms in French, Portuguese, and German.

We identified experiences from other countries related to the question by hand searching national government and national government agency websites. We included documents from the sub-national level if they were reported on these websites (but we did not search sub-national government websites separately). We reviewed English, French and Portuguese-language websites in this update, and will search sites in German next month. We also contacted key individuals familiar with the COVID-19 response in their respective country and asked that they send us relevant documents (or point us to relevant websites).

We searched primarily for empirical studies (including those published in the peer-reviewed literature, as pre-prints, and in the 'grey' literature) and opinion pieces (specifically those that justify the position(s) taken in one or more ways described in Appendix 1). As part of the search for empirical studies, we also searched for full systematic reviews (or review-derived products such as overviews of systematic reviews), rapid reviews, protocols for systematic reviews, and titles/questions for systematic reviews or rapid reviews that have been identified as either being conducted or prioritized to be conducted. Empirical studies, reviews and opinion pieces have been included when they have an explicit assessment of the pros and cons of a course of action compared to the alternatives available. However, for some documents, this assessment has been difficult to apply and we will continue to refine our assessments for future updates of this living evidence profile (LEP).

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Organizing framework

We organized our results by COVID-19 response type (rows in Table 1) and by part of the question being addressed (columns in Table 1) using an explicit equity lens. We used different treatment of fonts to profile the gradation in evidence, with **bolded** text representing themes that are found in multiple sources of evidence documents or government and agency reports. In next month's update, we hope to be able to provide further gradation with weight assigned based on a combination of volume and quality and distinguished using **bolded**, regular and *italic* fonts.

Box 1: Our approach (continued)

For this update, we used AMSTAR to appraise the methodological quality of full systematic reviews and rapid reviews deemed to be highly relevant. We also identified the methodology of included empirical studies deemed to be highly relevant and undertook quality assessments for quasi-experimental studies using the Maryland Scientific Methods Scale. For the next update of this LEP we will present quality appraisals for highly relevant experimental studies (using the Cochrane risk of bias assessment), quantitative observational studies, (using ROBINS-I) and highly relevant qualitative studies (using either CASP or JBI).

This LEP was prepared in the equivalent of three days of a 'full-court press' by all involved staff, and will be updated again in July and August.

The first organizing framework is for type of COVID-19 response:

- cross-cutting by federal vs provincial (vs municipal) and by shift in policy instrument (and/or condition, treatment, sector, or population);
- public health measures (e.g., stockpiling personal-protective equipment), by federal vs provincial (vs municipal) and by shift in policy instrument;
- clinical management, by condition and/or treatment (typically provincial for topics like drug formularies);
- health-system arrangements, by sector (e.g., long-term care) and population (e.g., essential workers and racialized communities) and by federal/pan-Canadian/cross-provincial vs provincial) and by shift in policy instrument;
    - governance arrangements (e.g., dividing up or keeping public-health functions together),
    - financial arrangements,
    - delivery arrangements; and
- economic and social, by sector and by federal (vs provincial) (vs municipal) and by shift in policy instrument.

The second organizing framework is for the three parts of the question:

- what went well;
- what could have gone better; and
- recommendations on what will need to go well in the future given any available foresight work being conducted.

What we found

In this first update, we identified 36 evidence documents, of which we deemed 23 to be highly relevant, including:

- two full-systematic reviews;
- four rapid reviews;
- 11 single studies; and
- five opinion pieces.

In the thematic analysis below (Table 1), we itemize lessons learned from the highly relevant evidence documents and from government and government agency reports included in the jurisdictional scans. Where equity-related findings appear in documents, we have explicitly drawn these out and included them in the lessons below. The table includes lessons learned from any point in the pandemic, however in future editions we hope to be able to distinguish between lessons based on when they emerged (e.g., in wave 1 vs in waves 2 and 3). We outline the type and number of all documents that were identified in Table 2.

For those who want to know more about our approach, we provide a detailed summary of our methods in Appendix 1. We provide a summary of key findings from the identified evidence documents and government reports and analyses in Appendix 2. We provide detailed insights from the highly relevant evidence documents in Appendix 3 (including their relevance to the categories in the organizing framework, key findings, and when they were conducted or published). We also provide detailed summaries of reports by government and government agencies from the seven countries in Appendix 4. Documents excluded at the final stages of reviewing are provided in Appendix 5.

Thematic analysis

Lessons learned concentrate within certain response types in the first organizing framework, namely in: cross-cutting responses, public-health measures, health-system arrangements, and economic and social responses. We found one lesson related to clinical management.

With respect to what went well, there were few common lessons learned, with many of the findings specific to each country's response. One common lesson was that the implementation of 'solidarity funds' and job-protection schemes have protected the incomes and jobs of many workers.

There were five common lessons about what could have gone better. The first is that in three countries (Australia, the United Kingdom, and the United States) a lack of transparency in governance and communication undermined public trust in the pandemic response. Three of the lessons about what could have gone better relate to public-health measures put in place and include: 1) challenges in procuring personal protective equipment due to limited pre-pandemic stockpiles; 2) limited uptake of contact-tracing apps; and 3) regional discrepancies in communication about physical-distancing guidelines which led to confusion among the public. The final lesson learned was the effect of the pandemic on elective procedures, which are now experiencing significant backlogs across multiple countries.

Explicit lessons learned on equity were all relevant to what could have gone better. These lessons were identified mostly from government reports and select opinion pieces and focus on:

- the disproportionate effect that COVID-19 has had on exacerbating health disparities among communities of color and those of lower socioeconomic status;
- the disparate effect of interruptions in school between high and low-income students; and
- the failure on the part of select governments to consider the particularly negative impact of the pandemic on women.

Recommendations were largely found in government documents rather than from the included reviews, single studies or opinion pieces. Recommendations from multiple countries focused on:

- updating response plans based on learnings from the pandemic and undertaking robust risk planning, notably to ensure frameworks include details about logistics and the roles and responsibilities of various ministries and agencies;
- improving the accuracy, completeness and interoperability of key datasets and sharing them promptly across delivery organizations;
- stockpiling personal-protective equipment in the event of a future public-health crises; and
- ensuring the complete reporting of race and gender information.

Table 1: Lessons learned from other countries (with **bolded** text representing themes found across multiple countries)

Organizing framework	What went well?	What could have gone better?	Recommendations for what will need to go well in the future
Cross-cutting	• In France, the mobilization of the research community and the development of new reporting structures between research groups and the Ministry of Health led to quick adoption of innovative solutions (one government report) • In Germany, the use of existing scientific expertise through the Robert Kock Institute and Max Planck Institute supported the co-production of policy approaches and helped to gain public trust throughout the pandemic (one qualitative study and one opinion piece) • In South Africa, leadership and communication from the president, provincial leaders and municipal leaders has been strong and enabled governmental and societal mobilization to combat the pandemic (one government report) • In the U.K., the pandemic response involved examples of effective cross-government and public-private sector collaboration (one government report)	• **In Australia, the U.K., and the U.S., a lack of transparency in governance and communication undermined public trust in the pandemic response** (four government reports – 1-AUS, 2-UK 3-US, 4-US; and one opinion piece) • **In the U.S. and the U.K., the role that COVID-19 has had in exacerbating health disparities among communities of color and socioeconomic statuses was identified** (three government reports - 1-US, 2-US, 3-UK; and one opinion piece - US) • **Lack of coordination across European Union Member States led to varied responses, including in both France and Germany, which in some cases led to tensions between countries particularly with respect to border controls** (one government report) • In France, the historical weakness of public health within the health system and lack of preventative culture reduced the effectiveness of the response (one government report)	• **Governments in France, the U.S. and the U.K. need to update their response plans based on learnings from the pandemic and undertake robust risk planning, notably to ensure frameworks include details about logistics and the roles and responsibilities of various ministries and agencies** (four government reports -1- FR 2-US, 3-US, 4-UK) • **Governments in the U.S. and the U.K. should consider focusing on improving the accuracy, completeness and interoperability of key datasets and sharing them promptly across delivery organizations** (two government reports – 1-UK, 2-US) • In the U.K., the National Health Service should consider the equitable allocations of measures to prevent COVID-19, including vaccinations and supporting those in particularly high-risk occupations in select geographic areas (one government report) • In the U.K., the government should consider including audit trails to ensure accountability as part of key decisions, particularly when they areas where other

		• In the U.S., delegated responsibility to the state level deviated from established protocols and led to confusion and fragmented responses across states (one government report) • In South Africa, while the Disaster Management Act enabled some degree of management, the lack of capacity and under resourcing led to poor preparation (one government report)	controls such as competitive tendering are not in place (one government report)
Public-health measures	• In Brazil, lockdown policies significantly reduced COVID-19 cases and deaths (three quasi-experimental studies - 1 – rated level 3; 2 – rated level 2; 3-rated level 3) • In France, partnership between the Ministry of Transportation and Air France successfully brought home French residents from abroad at the beginning of the pandemic (one government report) • In France, passing legislation allowed for the sharing of personal data of infected individuals between health workers and health authorities (one government report) • In France, the training of health-insurance agents to contact trace helped to fill a gap in the workforce (one government report) • In Germany, the in-country development of a COVID-19 test and the requirement that all insurance companies cover tests at no cost supported the quick scale up of testing capacity (one opinion piece)	• **Australia, U.K., U.S., France and Germany all faced challenges procuring personal protective equipment due to limited pre-pandemic stockpiles and challenges procuring additional stock** (Five government reports -1-AUS, 2-US, 3-US, 4-FR, 5-FR; and one opinion piece - GR) • **In Australia and Germany, contact tracing apps underperformed due to low public uptake** (one government report – AUS; one opinion piece -GER) • **In Germany and the U.K., different physical-distancing guidelines across countries (U.K.) and regions (Germany) led to confusion among the public** (one qualitative study- UK; and one opinion piece - GER) • In Australia, pre-pandemic planning was found to be inadequate with the initial response having several key gaps including closing of borders that left	• **Both the French and the U.K. governments should stockpile PPE for future public-health crises** (two government reports - 1-FR, 2-UK) • **The U.S. and South African governments should take steps to ensure the complete reporting of race and gender information** (three government reports - 1-US, 2-US, 3-SA) • The federal government of Australia should consider the development a national Centre for Disease Control to enhance capacity to address future public-health crises (one government report) • The French government should consider adding to the existing national and European production capacities to secure supplies of needed equipment for future public health crises (two government reports - 1, 2) • The French government should entrust the management of stockpiling personal protective equipment and supervision of

	• In Germany, cooperation between national and regional governments with local councils for surveillance, isolation and quarantine reduced the spread of COVID-19 (one systematic review – AMSTAR rating 5/9) • In Israel, drive-through testing complexes using pre-registration and identification at site by QR-code was a cost-effective and efficient method of performing mass testing (one observational study) • In Israel, specific government funding for vaccine purchase and distribution, unified planning and execution of the vaccine strategy, timely contracting for vaccines, creative responses to storage and handling of vaccines, well-developed primary-care system to deliver vaccines, and tailored outreach efforts were all characteristics that contributed to a rapid vaccine roll-out (one qualitative study and one opinion piece) • In the U.S., emergency-use authorizations were critical to increasing the supply chain of medical devices including ventilators (one government report)	many Australians stranded abroad (one government report) • In France, global demand for testing materials led to a backlog in testing early in the pandemic (one government report) • In France, the implementation of the second lockdown in November without pre-established rules about how businesses would function led to confusion and undermined its effectiveness (one government report) • In the U.K., the government lacked a plan for many aspects of the response and led to greater impact of COVID-19 including identifying and shielding clinically vulnerable individuals (one government report) • In the U.K., private procurement of personal protective equipment through a parallel supply chain led to waste when it failed to comply to U.K. standards (one opinion piece) • In the U.S., limited integration between diagnostic technologies for testing and the technology in local public-health departments slowed the pandemic response (one government report and one opinion piece) • In the U.S., a lack of national standards for the implementation of contact-tracing programs, unclear job functions within contact tracing and case-investigation units, and challenges with	logistics to a single operator who should be required to publicly report on available stock (one government report) • The U.S. government should further invest in public-health leadership and workforce development (one government report and one opinion piece) • The U.S. government should modernize data and information technology capabilities at all levels of government and establish national standards to enhance public-health system interoperability (one government report; and one opinion piece) • The U.S. should allow for more flexibility in routine and emergency program-funding streams to enable jurisdictions to directly meet the needs for public-health surge capacity (one opinion piece) • The Israeli government should consider the development of a national plan that includes building trust in the country's leadership and tailoring public-health measures for minority populations (one opinion piece) • The U.K. government should consider implementing a decentralized mass-testing program with rapid tests instead of the present test and trace program (one systematic review – AMSTAR rating 5/9)

		mass training limited the scale up and reach of contact tracing within states and led to many municipalities concentrating exclusively on congregate-living facilities and high-density employment settings (one qualitative study) • In the U.S., understaffing of the public-health workforce and limited equipment hindered the ability of teams to benchmark their capacity and articulate community-specific needs (one opinion piece) • In South Africa, strict lockdown had a negative effect on some children, reducing access to school-based food programs and in some cases, formal education due to inequities in access to digital technology needed for virtual learning (one rapid review, AMSTAR rating 5/9)	
Clinical management	• In France, the development and implementation of an action plan to manage medicines supported centralized information on available stocks and distribution of essential medicines throughout the country and avoided breaks in care (one government report)	None identified	None identified
Health-system arrangements	By sector • Cross-sectoral ○ In France, the development of a national platform for health workers and volunteers supported inter-	By sector • Cross-sectoral ○ In the U.K., limited workforce capacity and high-vacancy rates in nursing and social care led to	By sector • Acute care ○ The French government should increase funding for critical-care equipment and critical-care

	regional mobilization of the health workforce and deployment of staff and volunteers to the most affected areas (one government report) ○ In the U.S., The Centres for Medicare and Medicaid Services' use of blanket program waivers led to expanded access to services across home and community care, acute care, and long-term care (one government report) ○ In South Africa, the pandemic spurred advances in self-managed care, telehealth and a lesser reliance on a facility-based system which may remain beyond the pandemic (one government report) • Home and community-care ○ In Australia, young adults rated their experience using telehealth for mental health concerns during the pandemic more highly than with face-to-face clinicians, however it was found to be inappropriate for complex or high-risk conditions (one observational study) • Acute care ○ In Israel, designating facilities for treatment of COVID-19 patients conserved the operational continuity of acute care and the ability to continue to deliver acute services to non-COVID-19 patients (one qualitative study) ○ In the U.S., emergency-use authorizations have been critical to	unequal responses across the four countries and between regions (one government document and one opinion piece) ○ In the U.S., obstacles in the implementation of telemedicine during the pandemic included a lack of reimbursement parity, telemedicine-infrastructure capabilities, lack of internet connectivity in certain areas, and patient and provider discomfort with technology (one systematic review – AMSTAR rating 5/9) • Long-term care ○ In Australia, long-standing issues in long-term care homes contributed to high mortality and morbidity from COVID-19, these included: ▪ Inadequate staffing levels ▪ Inadequate levels of personal protective equipment ▪ Failure to adequately plan for the sector ▪ Failure for the national regulator of long-term care homes to use its regulatory powers to protect residents (one government report) ○ In France, insufficient monitoring of COVID-19 in long-term care homes led to an incomplete epidemiological picture and delayed action to protect	personnel by including additional training for general-care nurses to ensure they can be called upon for future crises (one government report) • Public health ○ The Ministry of Social Affairs and Health in France should design an action plan aimed at increasing the role of public health in the training of health professionals (one government report)

	increasing the supply chain of critical medical devices including ventilators (one government report) ○ In France, rapid restructuring of hospitals and deployment of field hospitals allowed for the system to double its treatment capacity for COVID-19 patients (one government report) ○ In the U.K., the introduction of a 'no-fault' training extension for surgical residents was put in place to reduce the stigma normally associated with training extensions (one rapid review – AMSTAR rating 2/9)	the residents (one government report) • Acute care ○ **In France, the U.K., the U.S., significant backlogs in elective surgeries have been reported as a result of pauses in elective procedures** (one rapid review – AMSTAR 2/9; two government documents - 1-FR, 2-FR) ○ In France, an insufficient amount of resuscitation equipment led to significant inequalities in the management and treatment of COVID-19 across regions (one government report) ○ In the U.K., a long-standing focus on hospitals within the National Health Service and unequal footing between health and social care made responding to the pandemic more difficult for community-health and social-care providers who lacked necessary resources (one government document) • Public health ○ In the U.K., absence of integration of public-health capacity at the national and local level led to fragmentation and unpreparedness to provide the necessary response (one opinion piece)	

Economic and social responses	By sector
	• Children and youth services
	  ○ In South Africa, legislation to enforce lockdown included provisions that prioritized children's rights to protection from abuse within the judiciary (one rapid review – AMSTAR rating 5/9)
	• Employment
	  ○ **In Australia, Brazil, France and the U.K., the implementation of solidarity funds and job protection schemes have protected the incomes and jobs of many workers** (four government reports – 1-AUS, 2 – BR, 3-FR, 4-FR, 5-UK, 6-UK)
	  ○ In South Africa, programs to support income and employment that used existing infrastructure were in operation faster and were more successful than new programs (one government report)
	• Housing
	  ○ In France, the use of hotels helped contain the spread of COVID-19 among those who were homeless or marginally housed, however it increased feelings of isolation (one government report)
		By sector
		• Cross-sectoral
		  ○ In the U.K., the government was not prepared for the aspects of pandemic planning beyond the health system, including for the development of employment-support schemes and providing financial support to local authorities which led to delays in the implementation of these programs (one government report)
		• Education
		  ○ In France, the greatest interruptions in school were reported for middle and secondary school aged students, and significant variation was reported among students with different access to educational resources (one government report)
		  ○ In the U.S., incomplete data of school and district spending of COVID-19 relief funds led to an incomplete picture of how the funds are being used (one government report)
		  ○ In the U.K., closures of schools have had a disproportionate effect on the educational attainment on low-income students (one government report)
		• Employment
		  ○ **In Australia and South Africa, government supports failed to consider the particularly negative**
			By sector
			• Education
			  ○ The Ministry of Education in France should develop an operational plan for school continuity during times of crisis, which could include providing free access to internet and data to facilitate continued learning (one government report)
			• Employment
			  ○ In the U.K., HM Revenue and Customs should implement additional protection for employees against acts of fraud and should dedicate additional resources towards recovering money from these instances where it is cost-effective to do so (one government report)

		impact of the pandemic on women and did not provide adequate support to help maintain their employment(two government reports - 1-AUS, 2-SA) ○ In the U.K., declines in income and employment have been greater among lower-income groups as compared to their higher-income counterparts (one government report) ○ In the U.S., significant overpayments of the Pandemic Unemployment Assistance program have been found (one government report)	

Table 2: Overview of type and number of documents related to lessons learned from the COVID-19 response

Type of document	Total (n= 36)*	Cross-cutting responses (n=3)	Public-health measures (n=19)	Clinical management (n=4)	Health-system arrangements (n=12)	Economic and social responses (n=4)
Full systematic reviews	3	-	1	1	2	-
Rapid reviews	4	1	2	-	3	1
Protocols for reviews that are underway	1	-	1	1	-	-
Titles/questions for reviews that are being planned	-	-	-	-	-	-
Single studies that provide additional insight	22	1	14	-	4	3
Opinion pieces	6	1	1	-	3	-

*Some documents were tagged in more than one category so the column total does not match the total number of documents.

Waddell KA, Wilson MG, Bain T, Bhuiya A, Al-Khateeb S, Sharma K, DeMaio P, Lavis JN. COVID-19 living evidence profile #5 (version 5.1): What went well and what could have gone better in the COVID-19 response in other countries, as well as what will need to go well in future given any available foresight work being conducted? Hamilton: McMaster Health Forum, 15 June 2021.

To help health- and social-system leaders as they respond to unprecedented challenges related to the COVID-19 pandemic, the McMaster Health Forum is preparing rapid evidence profiles like this one. This rapid evidence profile is funded by the Public Health Agency of Canada. The opinions, results, and conclusions are those of the McMaster Health Forum and are independent of the funder. No endorsement by the Public Health Agency of Canada is intended or should be inferred.

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