Ontario Health

Optimizing Care Through COVID-19 Transmission Scenarios

Recommendations from Ontario Health

Initial release: October 1, 2020

Date	Disclaimer
July 8, 2021	This document was initially developed in October 2020 to provide a principle-based set of recommendations and a framework of suggested strategies to optimize health care capacity to ensure appropriate and timely care for patients/clients with COVID-19, patients/clients with non-COVID health care needs, and patients/clients who may have been impacted by delayed or deferred care from wave 1. The principle-based set of recommendations and framework of suggested strategies to optimize health care capacity to ensure appropriate and timely care remain appropriate at the time of review in June 2021. This document will no longer be maintained but will remain online for reference and archival purposes.

Executive Summary

Developed by the COVID-19 Response: Optimizing Care Through COVID-19 Transmission Scenarios Committee, this document provides a principle-based set of recommendations that draw from lessons learned in wave 1 of the COVID-19 pandemic to ensure continued care for patients/clients in future waves. This includes care for those with COVID-19, those with non-COVID health care needs, and those who have been impacted by delayed or deferred care from the first wave of the pandemic. Key strategies in the planning for future waves include taking a regional approach to coordinating care, as well as nurturing partnerships and collaborations between different sectors of the health care system.

This document adapts the World Health Organization's four COVID-19 transmission scenarios as a framework for the recommendations. The transmission scenarios are described as no cases, sporadic cases, clusters of cases, and community transmission (moderate and widespread). Health system goals for the scenarios focus on: stopping transmission and preventing spread; supporting care partner participation in care delivery; and resuming care that may have been paused during the first wave of the pandemic, accelerating care (when appropriate) to help alleviate the backlog of care created by the first wave, or maintaining health care services during scenarios of increased spread (subject to future directives and/or amendments to existing directives from Ontario's Chief Medical Officer of Health).

Comprehensive recommendations are directed at the regional/sub-regional level (COVID-19 regional and sub-regional steering committees). More specific recommendations for health care organizations and providers are outlined for each of the four scenarios. Where appropriate, specific recommendations for each sector are also included.

Recommendations for COVID-19 regional and sub-regional steering committees include the following: determine the transmission scenario for their region/sub-region in a timely manner; monitor health system metrics; coordinate with health care organizations, providers, and sectors outside health care, with specific considerations to optimize capacity and health human resources, protect vulnerable populations, reinforce immunization programs, support consistent communications.

Recommendations for health care organizations and providers vary slightly in each scenario, but include the following themes: resume/maintain/accelerate scheduled health care services (consider deferring scheduled care only during widespread community transmission); use virtual care; standardize process improvements; strengthen partnerships; prepare/ready/implement/scale-up/intensify surge plans; reinforce immunization programs; monitor health system metrics; support care partner participation; standardize communications; train/re-train on infection prevention and control; manage COVID-19.

Below are recommendations by sector, which also vary slightly in each scenario.

Hospitals: review and reprioritize wait lists/create capacity; use virtual care; address time-urgent care backlog; monitor health system metrics; review surge plans; plan for COVID-protected wards; refresh visitor policy; reduce unnecessary tests and treatments; collaborate with primary care and home and community care.

Primary Care and Out of Hospital Ambulatory Care: determine services to prioritize for in-person care; use virtual care; reduce unnecessary tests and treatments; identify required resources; assess capacity; collaborate with hospitals and home and community care.

Home and Community Care and Community Support Services: resume/accelerate scheduled care services; identify required resources; cohort care teams; ensure services continue.

Table of Contents

Introduction

This document was developed by the COVID-19 Response: Optimizing Care Through COVID-19 Transmission Scenarios Committee, chaired by Dr. Chris Simpson (see Appendix A for a full list of committee members). The goal of this document is to provide a principle-based set of recommendations that draw from lessons learned in wave 1 of the COVID-19 pandemic to ensure continued care for patients/clients in future waves, including:

- Patients/clients with COVID-19
- Patients/clients with non-COVID health care needs
- Patients/clients who may have been impacted by delayed or deferred care during the first wave of the COVID-19 pandemic

To do this, the committee focused on identifying opportunities to optimize care delivery at the regional level, as well as between sectors of the health care system (hospital care [acute and rehabilitation], outpatient care, primary care, and home and community care).

The committee acknowledges that health care sectors differ significantly in their oversight and accountabilities, as the Ministry of Health has oversight and direct funding relationships with physicians and the majority of primary care. The committee also acknowledges that these health sectors differ in the ways that they provide care to patients and clients, which may result in differences in how they operationalize their plans in each COVID-19 transmission scenario. The high-level recommendations provided in this document may be applied to all health care organizations and providers, regardless of their differences. While not explicitly in scope, the recommendations provided in this document can also be used by other groups, such as independent health facilities, out of hospital premises, optometry, and rehabilitation services (this list is not exhaustive).

Along with the COVID-19 regional/sub-regional steering committees, health care organizations and providers are encouraged to collaborate in the planning and management of health care service delivery throughout each transmission scenario. In addition to these recommendations, sector-specific guidance may be provided by other groups, such as the Mental Health and Addictions Centre of Excellence or the Ministry of Long-Term Care.

Planning for Future Waves of COVID-19

At the onset of the COVID-19 pandemic, Directive #2 (issued March 19, 2020) to preserve capacity to care for patients/clients with COVID-19 stated that "all non-essential and elective services should be ceased or reduced to minimal levels."[1] Appropriately, providers from all health sectors were able to rapidly reduce scheduled care. As the first wave of the pandemic stabilized, Directive #2 was amended on May 26, 2020,[1] to support the gradual restart of all deferred and non-essential and elective services, and was accompanied by the Ministry of Health's COVID-19 Operational Requirements: Health Sector Restart to guide the resumption of services.[2] COVID-19 regional/sub-regional steering committees, organizations, and providers have been actively working to resume care delivery and are reflecting on lessons learned since March 19, 2020, to plan for potential future waves of the pandemic.

Since the start of the first wave of the pandemic, there has been time to plan for optimized care in future surges. For example, there is improved supply-chain security for personal protective equipment (PPE) and there are updated processes in place to coordinate the distribution of PPE. Universal masking policies in many health care settings help prevent the spread of COVID-19 among staff, patients/clients,

and care partners/family caregivers. Most health care settings (including primary care and home and community care) can now support patient care in ways that were not safely possible early in the pandemic.

Anticipated future waves and fall 2020 will bring new challenges that were not present during the first wave in spring 2020. For example, students' return to school, the beginning of the influenza season, and the potentially growing backlog of health care services all present novel factors in the continued COVID-19 pandemic. Pandemic planning and response have begun and is briefly outlined below.

Integrated Provincial and Regional Capacity Planning and Response

Provincially and regionally, integrated capacity plans are being prepared that incorporate strategies to help maintain patient care during the next pandemic wave. Planning may include expanding the capacity of assessment centres, support for virtual care or other special programs, using a regional approach to optimize health human resources (HHR), and implementing COVID-19 protected areas. The Ministry of Health has released their Fall Preparedness Plan for Health, Long-Term Care and Education and is working internally with other ministries to develop risk assessment and mitigation measures (e.g. health system, long-term care, education, corrections).

Provincial planning and response must address the reality that some parts of Ontario have experienced a higher prevalence of COVID-19 compared to others. To address the impact of this imbalance on health care services and the wellbeing of communities in Ontario's COVID-19 "hotspots," the following provincial tools could be considered to help lessen the inequity: targeted provision of additional funding (or relief from funding requirements), focused addition of new services, and deployment of provincial assets to alleviate service providers.

Hospital Planning and Response

Hospitals are using the recommendations provided in Ontario Health's *A Measured Approach to Planning for Surgeries and Procedures During the COVID-19 Pandemic*[3] to carefully plan for the resumption of scheduled surgeries and procedures, working collaboratively with their regions/ sub-regions while ensuring readiness for potential future waves of COVID-19. Preparation strategies for future waves include: reserving at least 10% surge capacity of inpatient medical, surgical, and critical care beds (or ensuring this capacity can be made available within 48 hours); confirming that critical supplies are in stock and available (including PPE, resources for COVID-19 testing, and medications); and incorporating HHR considerations into crisis plans that include flexibility to support urgent and emergent care, as well as continued support for long-term care.

Outpatient Care, Primary Care, and Home and Community Care Planning and Response

Ontario Health also provided *Recommendations for Regional Health Care Delivery During the COVID-19 Pandemic: Outpatient Care, Primary Care, and Home and Community Care*,[4] which outlined key planning criteria for increasing care activities in these settings. Key strategies include: maximizing virtual care services that appropriately reduce in-person visits; applying comprehensive infection prevention and control (IPAC) measures for in-person care; ensuring appropriate PPE is available; and assessing HHR required to increase care activity.

Core Assumptions

Some of the lessons learned from the first wave of the COVID-19 pandemic are embedded in the assumptions listed below, and frame the recommendations provided in this document:

- In any future pandemic wave, care will continue to be provided to all types of patients/clients, including those who have COVID-19 and those who do not
- Across all sectors: emergency, urgent, and time-sensitive care should not be deferred (e.g., time-sensitive surgery, assistance with activities of daily living in the community)
- Provision of services will follow an equitable and patient-centred approach, ensuring patients/clients are supported across the full continuum of care, and care partners/caregivers remain an integral part of the care team[5-7]
    - Care partners are distinct from casual visitors. In this document, care partners or family caregivers, are family, friends, neighbours, colleagues, or community members who are designated by the patient to provide critical and often ongoing personal, social, psychological and physical support, assistance and care, for people in need of support due to frailty, illness, degenerative disease, physical/cognitive/mental disability, or end of life circumstances
- A heightened level of regional/sub-regional oversight, coordination, and flexibility for the foreseeable future is required, as there is uncertainty about the duration and extent of future COVID-19 pandemic waves and other confounding factors (e.g., flu season)
- Changes to care activities (including increasing and decreasing activity) will be asymmetrical between organizations and regions based on their local context (e.g., local COVID-19 epidemiology, HHR, public health measures)
- The different sectors of the health care system are interdependent, and a change in one part of the care continuum may affect the delivery of care in others. Social determinants of health are major determinants of all of our communities' outcomes in the pandemic, and therefore increased collaboration is needed across health and social services and municipal and provincial services
- Protecting the health and safety of patients/clients, health care workers, and the community remains paramount for all provision of services, including the acceleration of services to reduce backlogs. This includes maintaining staff wellness and the use of appropriate public health measures, such as physical distancing, screening protocols for COVID-19, and PPE
- Health care organizations and providers will act as good stewards of available resources, including PPE
- Testing, contact tracing, and isolating (when indicated) will continue appropriately
- Health equity considerations and the need to protect vulnerable populations will be addressed

Guiding Ethical Principles

The recommendations provided in this document align with the following ethical principles to guide planning during the COVID-19 pandemic, although it is recognized that some principles will exist in tension with others (e.g., equity vs. utility):

- ***Proportionality:*** To reduce the number of individuals who are negatively impacted, ensure that decisions to reduce/defer care should not exceed what is required to accommodate the surge in demand, and decisions to resume/accelerate care should be proportionate to surge reductions

- ***Non-maleficence:*** Decisions should strive to limit harm wherever possible. This requires considering the differential benefits and burdens to patients/clients and patient/client populations, and ensuring that alternatives to treat and relieve pain and suffering are available

- ***Equity:*** Equity requires that all persons within the same categories (e.g., levels of urgency) be treated in the same way unless relevant differences exist. Length of time on wait lists and prior cancellations must be considered when prioritizing care. Decision-makers should strive to balance the needs of COVID-19 patients and non-COVID patients/clients with time-sensitive treatment for other diseases and conditions. This principle also recognizes that there are highly vulnerable populations (e.g., economically disadvantaged, homeless, indigenous, migrant workers, racialized populations) who will need specific resources to ensure equitable access to health care services related to COVID-19

- ***Reciprocity:*** Certain patients/clients, patient/client populations, and health care workers will be particularly burdened as a result of our health system's limited capacity due to COVID-19. Patients/clients should have ability to have their health monitored, receive appropriate care, and be re-evaluated for emergent services, as required

- ***Solidarity:*** It is understood that the different sectors of our health care system are interdependent and must rely on one another to work toward common goals (e.g., decreasing mortality and morbidity of the overall population)

- ***Utility:*** Decisions are made with the goal of achieving the greatest good for the greatest number

Transmission Scenario Framework

This document adapted the World Health Organization's four COVID-19 transmission scenarios as a framework upon which to structure these recommendations.[8,9] These scenarios are to be used as general guidance, since not all situations will fit neatly into each of these categories. As the regions/ sub-regions experience different transmission scenarios (depending on local epidemiology), they should adjust and tailor their actions to safely maximize the delivery of health care services during the COVID-19 pandemic. Regions/sub-regions will likely move back and forth between the four transmission scenarios throughout the pandemic. The four transmission scenarios and the health system goals for each scenario are summarized in Table 1. Please see Figure 1 for a quick reference guide to the goals and recommendations for each scenario.

Throughout this document, "maintaining" services refers to continuing the existing levels of service without increasing or decreasing activities that will impact capacity. "Resuming" care refers to increasing services back to pre-pandemic levels, and "accelerating" services refers to increasing services above pre-pandemic levels to help alleviate the backlog of care deferred from previous waves of the pandemic.

Table 1. Description and Health System Goals for Each COVID-19 Transmission Scenario[8]

Scenario	Description	Health System Goals†
1. No Cases	• No reported active cases	• Stop transmission and prevent spread • Resume/accelerate* health care services • Support care partner participation in care delivery**
2. Sporadic Cases	• One or more cases, imported or locally acquired	• Stop transmission and prevent spread • Resume/accelerate* health care services • Support care partner participation in care delivery**
3. Clusters of Cases	• Most cases of local transmission linked to chains of transmission • May be clustered in time, geographic location, and/or common exposure	• Stop transmission and prevent spread • Maintain health care services; resume/accelerate* if there is adequate system capacity and resources (e.g., HHR and PPE) • Support care partner participation in care delivery**
4. Community Transmission	• Larger outbreaks of local transmission, defined through an assessment of factors including (but not limited to): o Large numbers of cases not linkable to transmission chains o Increasing percentage of positive tests among total number of tests o Multiple unrelated clusters in several areas in the region/sub-region	• Slow transmission, reduce case numbers, and end community outbreaks
A. Moderate		***A. Moderate*** • Modify scheduled acute inpatient services in proportion to available resources and according to key metrics • Maintain/resume/accelerate* other health care services to ensure adequate capacity to care for patients with COVID-19 • Maintain prioritization for time-sensitive health services, if possible • Support care partner participation in care delivery in accordance with IPAC policies**
B. Widespread		***B. Widespread*** • Defer scheduled acute inpatient services in proportion to available resources and according to key metrics • Maintain/resume/accelerate* other health care services to create capacity to care for patients with COVID-19 • Support care partner participation in care delivery in accordance with IPAC policies**

†Subject to future directives and/or amendments to existing directives from Ontario's Chief Medical Officer of Health.

*Accelerating services may include increasing services beyond baseline volumes to address the backlog of care deferred from previous waves of the pandemic. Even when accelerating services, hospitals must reserve at least 10% surge capacity of inpatient medical, surgical, and critical care beds, or are ensuring that this capacity can be made available within 48 hours.

**Care partner presence guidelines are dependent on local epidemiology and outbreak status (e.g., if there is an outbreak in the hospital or the community, care partner presence guidelines may change, in accordance with the infection prevention and control policies for that specific location).

Figure 1: Quick Reference of Goals and Recommendations for Each COVID-19 Transmission Scenario

	Plan	Ready	Implement	Scale Up	Intensify
	Scenario 1: No Cases	**Scenario 2**: Sporadic Cases	**Scenario 3**: Clusters of Cases	**Scenario 4A**: Moderate Community Transmission	**Scenario 4B**: Widespread Community Transmission
Optimizing Care Goals	• Resume/accelerate health care services	• Resume/accelerate health care services	• Maintain health care services • Resume/accelerate if there is adequate system capacity and resources	• Modify scheduled acute inpatient services in proportion to available resources and according to key metrics • Maintain/resume/accelerate other care to ensure adequate capacity for COVID-19 patients	• Defer scheduled acute inpatient services in proportion to available resources and according to key metrics • Maintain/resume/accelerate other care to create capacity for COVID-19 patients
Regional or Sub-Regional Steering Committees	• Determine COVID-19 transmission scenario • Monitor health system metrics • Coordinate with health care organizations, providers, and sectors outside of health care to: optimize capacity and maintain care services; optimize health human resources (HHR) across the region; protect vulnerable populations; reinforce immunization programs; support consistent communication				
All Sectors	• Resume/accelerate scheduled care • Standardize process improvements • Strengthen partnerships • Prepare surge plans (to optimize capacity and HHR, protect vulnerable populations, and refresh visitor presence guidelines) for all transmission scenarios • Reinforce immunization programs	• Resume/accelerate scheduled care • Ready surge plans • Manage COVID-19 • Reinforce immunization programs	• Maintain/accelerate scheduled care • Implement and enhance surge plans • Manage COVID-19 • Reinforce immunization programs	• Prioritize time sensitive scheduled care • Scale up surge plans	• Defer scheduled care as required • Intensify surge plans
	• Use virtual care • Monitor health system metrics • Support care partner participation • Standardize communications • Train on IPAC				
Hospital-Based Care	• Review and reprioritize wait lists • Address time-sensitive care backlog • Review surge plans • Plan for COVID-protected wards, where feasible • Refresh visitor policy • Reduce unnecessary tests and treatments		• Create capacity • Collaborate with primary care and home and community care	• Prioritize time-sensitive surgeries and procedures • Consider deferring non-time sensitive surgeries and procedures • Implement COVID-protected wards, where feasible	
Primary Care & Out of Hospital Ambulatory Care	• Determine services to prioritize for in-person care • Reduce unnecessary tests and treatments • Identify required resources to support services in each scenario		• Assess capacity and set appropriate priorities of care • Collaborate with hospitals and home and community care	• Assess capacity and set appropriate priorities of care • Collaborate with hospitals and home and community care	
Home and Community Care & Community Support Services	• Identify required resources to support services in each scenario		• Ensure services continue • Cohort care teams	• Ensure services continue	

Recommendations for COVID-19 Regional and Sub-regional Steering Committees

Given regional differences in COVID-19 epidemiology, and consistent with previous Ontario Health recommendations, a regional or sub-regional approach to optimizing care should be taken.

With representation from local public health, the COVID-19 regional/sub-regional steering committees should determine which transmission scenario the region/sub-region is experiencing and recognize when the population may be moving from one scenario to another. They must also recognize when geographically isolated populations within sub-regions (e.g., in many areas of Northern Ontario) may be moving from one scenario to another.

The COVID-19 regional/sub-regional steering committees play a key role in meeting the health system goals of the transmission scenarios for the region/sub-region. A full list of scenario planning recommendations for COVID-19 regional/sub-regional steering committees is outlined in Table 2. Examples of regional collaboration are shared in Ideas Box 1.

Table 2: Scenario Planning Recommendations for COVID-19 Regional/ Sub-regional Steering Committees

Recommendation	Description
Determine COVID-19 regional/sub-regional transmission scenario in a timely manner	• With local public health units, review trends in local epidemiological indicators to determine a region's COVID-19 transmission scenario o Indicators may include the total number of COVID-19 cases or cases per 100,000, percentage of confirmed COVID-19 cases that are non-epidemiologically linked, and the number of outbreak clusters (see Appendix B for sample metrics) • Establish regular communication channels to notify health care organizations, providers, and other key stakeholders as regions/ sub-regions move between transmission scenarios
Monitor health system metrics	• Review health care utilization metrics regularly to inform regional/sub-regional decision making to support health care organizations' and providers' responses to an emerging scenario (see Appendix B for sample metrics). This includes monitoring critical supplies (e.g. PPE, medications)
Coordinate with health care organizations, providers, and sectors outside of health care	Collaborate/consult with health care organizations and providers across the care continuum (as well as regional supply chain teams and sectors outside of health care) to facilitate an integrated response to each transmission scenario. Escalate risks to Ontario Health leadership when appropriate. Specific considerations are outlined below.

(Table continues on the following page.)

Table 2: Scenario Planning Recommendations for COVID-19 Regional/Sub-regional Steering Committees (continued)

Recommendation	Description
Coordinate with health care organizations, providers, and sectors outside of health care *(continued)*	<u>Optimize capacity and maintain care services</u> • Consider a regional approach to optimize patient flow during community spread, and shift care to organizations/providers who are less impacted by COVID-19 • Integrate Ontario health teams (OHTs) into the regional approach, and support active and developing OHTs in their COVID-19 planning • Assist in coordinating system partners (e.g., hospitals, public health units, and Public Health Ontario) to support primary care, community-based physician specialists, and community health service providers (e.g., home care, hospice care, community support service agencies) so that they are able to maintain services • Coordinate with sectors outside health care. Partners may include paramedicine, education, municipalities, and correctional services <u>Optimize HHR across the region</u> • Plan for HHR that has the flexibility to respond to surge needs across all sectors (e.g., physician and nurse redeployment to assessment centres) • Optimize HHR in home and community care to allow for early supported discharge from hospital • Ensure consistent communications on relevant HHR directives and plans to health care organizations and providers, as well as with representative groups (e.g., unions, professional associations) • Ensure consistent communication with provincial organization assets (e.g., Ontario Health–Health Force Ontario, workforce matching services), as needed • Ensure access to timely testing for all health care workers who develop symptoms or are required to be tested for safe return to work <u>Protect vulnerable populations</u> • Enable health care organizations and teams with the necessary capacity and resources (e.g., timely testing, IPAC support) to support vulnerable populations and those disproportionately affected by COVID-19 and the consequences of the public health measures (e.g., increased unemployment) • Support the coordination of health care services with municipalities and housing, education, public health, and others to address the needs of vulnerable populations

(Table continues on the following page.)

Table 2: Scenario Planning Recommendations for COVID-19 Regional/Sub-regional Steering Committees (continued)

Recommendation	Description
Coordinate with health care organizations, providers, and sectors outside of health care *(continued)*	<u>Reinforce immunization programs</u> • Proactively support a coordinated influenza immunization program across the region and sub-regions <u>Support consistent communication</u> • Disseminate provincial guidance/recommendations appropriately • Communicate with patients/clients, care partners, and the public using standardized messaging. Consider creating a template that can be populated locally and posted centrally (e.g., online). Ideally, the information shared with patients/clients and care partners should be consistent, no matter where they are accessing care • Collaborate with local public health to ensure alignment of communication about public health measures as they relate to health care and to other sectors (e.g., retail, hospitality) • Consider using a variety of communication channels (e.g., FM radio, newspapers, social media, professional associations) to communicate key messages to providers and the public

Ideas Box 1: Examples of Regional Collaboration

Could these work in your region?

Regional Coordination of Patient Flow—*Ontario Health East Region*

In March 2020, the Ontario Health East Region began collaborating to create capacity to appropriately care for patients with COVID-19. During wave 1 of the pandemic, larger acute care hospitals prioritized care delivery for patients with COVID-19, while smaller community hospitals and sub-acute hospitals admitted patients who were awaiting placement in long-term care homes. This required transferring patients from larger acute hospitals to community or sub-acute hospitals. In addition, facilities offering convalescent care that would typically accept post-operative patients from acute care also accepted patients awaiting placement in long-term care, since their capacity increased as scheduled care decreased. When long-term care homes were able to resume regular operations, patients waiting in community hospitals, subacute, and convalescent care were the first admitted, ensuring the operations at these sites could resume in a timely manner.

Standardizing Communication with Providers—*Ontario Health West Region*

The Ontario Health West Region includes nearly 2,300 health service providers, partners, and stakeholders who needed regular and fact-based updates related to personal protective equipment (PPE), outbreaks, latest COVID-19 numbers, directives, and Ministry guidance. An online document repository was developed to ensure these communications could easily be found in a central location. In addition, to ensure standardized, up-to-date communications across the region, their COVID-19 response team decided to hold weekly/bi-weekly web-based meeting with all providers, partners, and stakeholders to share the Emergency Operation Centre's Situation Reports, Ministry guidance and other relevant documents.

Leveraging the Regional and Inter-regional Approaches Used by Cancer Surgery

Cancer surgery in Ontario has considerable experience transferring patients from region to region for treatment. This experience could be leveraged to support regional and inter-regional approaches to creating capacity during COVID-19. For example, Ontario Health–Cancer Care Ontario's Surgical Oncology Program has developed a virtual re-referral/deferral process (including principles and procedures) to help refer or defer care for cancer patients to other treatment centres when their original facility can no longer provide care (e.g., if they experiencing HHR issues). This model could be considered in scenarios of community transmission of COVID-19, so that if hospitals in regions more impacted by COVID-19 exceed their capacity, patients could be transferred to out-of-region hospitals to ensure the timely care of all patients.

Recommendations for Health Care Organizations and Providers by Transmission Scenario

For each of the COVID-19 transmission scenarios, a set of recommendations applicable to all sectors are provided. Where applicable, recommendations for specific health sectors are also outlined in some scenarios.

Health care organizations and providers should be prepared to respond to changing epidemiological trends and collaborate with their region/sub-region and local partners as they respond to each scenario.

Scenario 1: No COVID-19 Cases

Overall recommendations for scenario 1 are described in Table 3.

Table 3: Recommendations for Scenario 1

Scenario 1 (No COVID-19 Cases)	
Description	• No reported active cases
Goals	• Stop transmission and prevent spread • Resume/accelerate health care services • Support care partner participation in care delivery
Recommendation	**Description**
Resume/accelerate scheduled health care services Use virtual care (including telemedicine)	• Resume/accelerate scheduled health care services that were deferred due to previous waves/transmission scenarios (e.g., hospital surgeries and procedures, adult vaccinations in primary care). Consider the following when resuming/accelerating care: o Minimize impact on overall health outcomes (e.g., cancer screening) o Prioritize in-person visits to those who benefit most (e.g., where physical examinations are required) • Continue to provide virtual care, where appropriate[10] • Maintain readiness to treat patients with COVID-19 (e.g., the ability to quickly create capacity for patients with COVID-19, or the ability to quickly offer additional virtual care, where appropriate)
Standardize process improvements	• Identify novel processes from wave 1 that should be maintained (i.e., care delivery improvements that should be carried forward)

(Table continues on the following page.)

Table 3: Recommendations for Scenario 1 (continued)

Recommendation	Description
Strengthen partnerships	• Leverage partnerships of active Ontario health teams or other existing partner tables and infrastructures • Engage in early discussions within and across health sectors to plan for: o Altering patient flow during community spread of COVID-19 to increase overall capacity. Start by mapping patient flow/referral patterns between assessment centres, the emergency department (ED), inpatient care, pediatric care, long-term care, primary care, and home and community care settings to determine where care can be shifted o Providing critical supports to sectors most likely to be impacted severely during widespread transmission (e.g., hospital support for long-term care homes and primary care, and home and community care supports for frail individuals living in the community) • Consider partnerships outside of the health sector (e.g., paramedicine, education, municipalities, correctional services, some major industries). See Ideas Box 2 for examples of partnerships
Prepare surge plans	Prepare surge plans for transmission scenarios 2, 3, and 4, incorporating lessons learned from wave 1. Strategies to consider in these plans are outlined below. <u>Optimize capacity</u> • Generate a list of scheduled health services (and their related resource needs) that could be modified or deferred to inform actions in a scenario of community transmission (e.g., staff redeployment; see Appendix C for sample guidelines for providing non-COVID care during the COVID-19 pandemic) • Understand the resources needed to maintain time-sensitive care and inform actions in a scenario of community transmission • Consider the impact of IPAC policies and procedures during capacity planning (e.g., ensuring physical distancing in the available space, staffing changes in a location with outbreaks)

(Table continues on the following page.)

Table 3: Recommendations for Scenario 1 (continued)

Recommendation	Description
Prepare surge plans *(continued)*	Optimize HHR • Redeploy staff to high need areas, with a plan to repatriate them back to their regular functions when appropriate • Have a clear policy for COVID-19 screening[11] and testing[12] for staff that is aligned with Ministry's guidance documents. Expedite testing so that workers can safely return to work in a timely way. Include a plan for staff screening/testing during the school year and what to do if children of staff are ill • Create a plan to support health care workers' wellness throughout all transmission scenarios • Create a plan to ensure continued learning for clinically-facing learners throughout all transmission scenarios, including consideration for adequate IPAC and PPE supply Protect vulnerable populations • Create a plan to protect vulnerable populations[13] throughout the pandemic Refresh visitor presence guidelines • Create a safe, patient-centred care partner presence policy[5-7]
Reinforce immunization programs	• Reinforce immunizations against preventable disease, including vaccination for influenza • Where possible, partner with others for immunization delivery (e.g., pharmacy, education, industry)
Monitor health system metrics	• Review response capacity metrics on a regular basis to inform decision making (see Appendix B for sample metrics)
Support care partner participation	• Where feasible, offer virtual visits to patients/clients to connect additional family members/casual visitors (even if care partners are present) • Implement care partner presence guidelines in accordance with the infection control policies for the specific location (i.e., meets patient needs and IPAC requirements)

(Table continues on the following page.)

Table 3: Recommendations for Scenario 1 (continued)

Recommendation	Description
Standardize communications	• Reinforce standardized communications to patients/clients, care partners, and the public. Key messages should include guidance on: o Up-to-date information on changes to care settings for each transmission scenario (e.g., IPAC protocols, virtual screening, care partner presence guidelines) o Appropriate care-seeking behaviour for each scenario ▪ Emphasize that EDs are open and that safety measures are in place to care for all patients requiring emergency care ▪ Emphasize that primary care and home and community care remain available • Where available, consider using a regional/sub-regional template. Engage patient and family advisory committees to tailor messaging to local context
Train on IPAC	• Train/re-train staff on IPAC (including the use of PPE), and implement IPAC measures to prevent or limit transmission • Ensure appropriate physical distancing measures and other precautions are in place (e.g., designated COVID-19 care areas)

Ideas Box 2: Example of Cross-Sector Partnerships and Collaboration

Could this work in your region?

Collaborating Across Sectors to Prevent Spread and to Protect Vulnerable Patient Populations—*Ontario Health North Region*

In Marathon, a small northern community, hospitals, primary care, and home and community care collaborated to function as a local "hub" of care. Using this model, a nurse practitioner was partially redeployed from primary care to provide oversight of the chronic care wing of the hospital. Physicians who worked in the ED and COVID-19 assessment centre did not "crossover" to provide care in that wing to prevent the possible spread of COVID-19 to the vulnerable patient population. Outpatient infusions (remicade, venofer, IVIG) were moved out of the hospital to the primary care clinic setting, where they were provided by a seconded hospital registered nurse. Primary care nursing staff provided care to people living in senior supportive housing with virtual support from physicians.

Virtual Collaborations to Support Primary Care Providers—*SCOPE and eConsult*

Seamless Care Optimizing the Patient Experience (SCOPE) is a shared virtual interprofessional care team that supports primary care providers (PCPs) in the greater Toronto Area who are unaffiliated with health care teams. It creates connections with a virtual care team of nurse navigators, health coaches, specialists, imaging, and community services using a single point of access. Since launching in 2012, SCOPE has experienced great success, including a 35% ED avoidance rate. In the second wave of the COVID-19 pandemic, SCOPE plans to provide rapid connections between PCPs and hospital resources to support COVID-19 management and to create linkages between community PCPs and hospital providers to maintain access to care for non-COVID related care needs.

The provincial eConsult program is another way for PCPs in Ontario to access specialist advice on the management of COVID-19 and to ensure appropriate referrals to hospital-based care for other conditions.

In addition to overall recommendations for scenario 1 (Table 3), sector-specific strategies to support resuming/accelerating health care services and optimizing care partner participation are described in Table 4.

Table 4: Additional Strategies by Sector for Scenario 1

Recommendation	Description
Hospital-Based Care: Inpatient Acute, Inpatient Post-Acute, Outpatient	
Review and reprioritize wait lists Use virtual care (including telemedicine)	• Consider equally effective alternative treatment modalities for patients that will reduce demand on inpatient beds (e.g., drug therapy for patients with atrial fibrillation, where appropriate) • Continue to use or implement virtual care (e.g., virtual access to emergency services, virtual care to optimize scheduled surgeries)

(Table continues on the following page.)

Table 4: Additional Strategies by Sector for Scenario 1 (continued)

Recommendation	Description
Hospital-Based Care: Inpatient Acute, Inpatient Post-Acute, Outpatient (continued)	
Address time-sensitive care backlog	• If capacity and resources allow, consider accepting out-of-region patients from regions that are experiencing community transmission and/or consider selective acceleration in time-sensitive care. Maintain regular communication with COVID-19 regional/sub-regional steering committee to support these efforts
Monitor health system metrics	• Review response capacity metrics on a regular basis to inform decision making. Key metrics include (see Appendix B for additional metrics): o Time to inpatient bed o % of acute care beds occupied o % of intensive care unit (ICU) beds occupied o # days' supply of PPE o % alternate level of care beds
Review surge plans	• Acute hospitals should review critical care COVID-19 surge plans • Acute hospitals should ensure the ability to quickly create 10% capacity for COVID-19 • Acute hospitals should ensure surge plans include maintenance of IPAC practices (e.g., physical distancing) in the ED
Plan for COVID-protected wards	• Be ready to implement COVID-protected wards (where feasible)
Refresh visitor policy	• Refresh visitor policy in accordance with guidance on care partner presence during COVID-19.[5-7,14] Engage patient and family advisory committees
Reduce unnecessary tests and treatments	• Implement applicable Choosing Wisely Canada recommendations to ensure the delivery of appropriate care in the appropriate setting and reduce unnecessary tests and treatments o Consider generating a list of health care services that should not be restarted[15]

(Table continues on the following page.)

Table 4: Additional Strategies by Sector for Scenario 1 (continued)

Recommendation	Description
Primary Care and Out of Hospital Ambulatory Care	
Determine services to prioritize for in-person care Use virtual care (including telemedicine)	• Offer in-person services, where appropriate. Review your practice services to assess which services to prioritize for in-person care. Example guidelines include: o In-person visits when phone/video isn't enough, Ontario College of Family Physicians o Several resources from the Centre for Effective Practice, including Primary Care Operations in the COVID-19 Context • Review caseload for any care missed in wave 1 and anticipate care that should be provided in the coming months (e.g., drug level monitoring, bone density scans, follow up echocardiograms), and ensure they are performed in timely way[16]
Reduce unnecessary tests and treatments	• Implement applicable Choosing Wisely Canada recommendations for Family Medicine to ensure the delivery of appropriate care and reduce unnecessary tests and treatments o Consider generating a list of health care services that should not be restarted[15]
Identify required resources	• Identify required resources to support services in each scenario. Seek support to acquire PPE through the Pandemic PPE Transitional Support Program, as needed
Home and Community Care and Community Support Services	
Resume/accelerate scheduled care	• Resume and accelerate home and community care services that were discharged, delayed, or deferred in wave 1
Identify required resources	• Identify required resources to support enhanced home and community care (e.g., HHR, PPE). Collaborate and consult with your region and direct service providers to develop a plan should hospitals need to create capacity. If eligible, seek support through the Pandemic PPE Transitional Support Program, as needed • Identify required/expanded resources to support end-of-life care delivered in the home by front-line service provider organizations (e.g., home care, hospice). Collaborate with others in your region to develop a plan

Scenario 2: Sporadic COVID-19 Cases

The overall recommendations for scenario 2 are described in Table 5. The sector-specific strategies provided in scenario 1 (Table 4) should be continued in scenario 2, with an emphasis on being ready to respond in the event COVID-19 transmission moves into scenario 3 (clusters of cases) or scenario 4 (community transmission).

Table 5: Recommendations for Scenario 2

Scenario 2 (Sporadic COVID-19 Cases)	
Description	• One or more cases, imported or locally acquired
Goals	• Stop transmission and prevent spread • Resume/accelerate health care services • Support care partner participation in care delivery
Recommendation	**Description**
Resume/accelerate scheduled care Use virtual care (including telemedicine)	• Resume/accelerate scheduled health care services that were deferred due to previous waves/transmission scenarios (e.g., hospital surgeries and procedures, adult vaccinations in primary care) • Continue to provide virtual care, where appropriate (see Ideas Boxes 3 and 4 for examples of virtual care)
Ready surge plans	• Conduct rapid capacity assessments (e.g., % acute care, % ICU beds, available human resources, # days' supply of material resources [such as PPE]) • Prepare for a potential surge
Manage COVID-19	• Manage patients with COVID-19
Reinforce immunization programs	• Reinforce immunizations against preventable disease, including vaccination for influenza
Monitor health system metrics	• Review response capacity metrics on a regular basis to inform decision making (see Appendix B for sample metrics)
Support care partner participation	• Where feasible, offer virtual visits to patients/clients to connect additional family members/casual visitors (even if care partners are present) • Implement care partner presence guidelines in accordance with the infection control policies for the specific location (i.e., meets patient needs and IPAC requirements)

(Table continues on the following page.)

Table 5: Recommendations for Scenario 2 (continued)

Recommendation	Description
Standardize communications	• Reinforce standardized communications to patients/clients, care partners, and the public about safe care-seeking behaviour for this scenario
Train on IPAC	• Train/re-train staff on IPAC (including the use of PPE), and implement IPAC measures to prevent or limit transmission

Ideas Box 3: Examples of Virtual Care in Home and Community Care

Could these work in your organization?

Virtual Care in Home Visits—*Closing the Gap Healthcare*

By thinking outside the box, Closing the Gap Healthcare has used technology to help minimize the number of providers required to enter clients' homes. For example, where a physiotherapy home visit would typically require both a physiotherapist and an assistant, physiotherapists now use video technology to guide the rehabilitative care of patients/clients, assess progress, and modify care plans virtually, while a physiotherapy assistant helps with any required in-person care delivery. In addition, assessments of clients' homes for assistive devices and equipment became virtual as a result of the COVID-19 pandemic, and therapists have reported improved efficiency in these virtual assessments. An added benefit of completing the assessment over a virtual video call is that caregivers and vendors can also participate.

Ideas Box 4: Examples of Virtual Care in Hospital Care

Could these work in your organization?

Virtual ED Appointments—*St. Joseph's Healthcare Hamilton*

St. Joseph's Healthcare Hamilton introduced virtual visits with an ED physician to address the drop in ED attendance resulting from the fear of being exposed to COVID-19. For patients who did not have a family doctor (or could not access theirs), this provided another option for the community, and could be accessed by adults (18 years and older) from any smartphone, tablet, or computer.

Virtual Family-Centred Rounds—*Children's Hospital of Eastern Ontario*

In response to COVID-19, the Children's Hospital of Eastern Ontario (CHEO) created virtual family-centered rounds—a virtual version of the traditional interdisciplinary process that allows for family-informed decision-making. Patients, caregivers, and the entire health care team meet virtually (using the PHIPA-compliant Zoom platform) to complete daily rounds. This allows CHEO to continue providing high-quality, family-centered care while physically distancing and conserving PPE.

Scenario 3: Clusters of COVID-19 Cases

The overall recommendations for scenario 3 are described in Table 6.

Table 6: Recommendations for Scenario 3

Scenario 3 (Clusters of COVID-19 Cases)	
Description	• Most cases of local transmission linked to chains of transmission • May be clustered in time, geographic location, and/or common exposure
Goals	• Stop transmission and prevent spread • Maintain health care services; resume/accelerate care if there is adequate system capacity and resources (e.g., HHR and PPE) • Support care partner participation in care delivery
Recommendation	**Description**
Maintain/accelerate scheduled care Use virtual care (includes telemedicine)	• Maintain/accelerate scheduled health care services, and maintain adequate capacity and resources for COVID-19 (e.g., avoid unnecessary acute care use) • Continue to provide and expand virtual care, where appropriate.[10] This includes initial assessments so that in-person visits can be as brief as possible and limited to physical assessment time • Continue to provide in-person care without delay if care is time sensitive (e.g., well-child visits for newborns, treatment for certain cancer diagnoses, acute abdominal pain, assistance with activities of daily living) • If virtual care is not appropriate/feasible, prioritize in-person care services using clinical judgement
Implement and enhance surge plans	• Limit facility-based care (e.g., scheduling appointments, early supported discharge with enhanced home and community care services, communicating any changes to care partner presence policies, using virtual care, if appropriate) • Shift to more virtual care (where appropriate), or shift care to another organization/provider if they are less impacted by COVID-19 (see Ideas Box 2 for an example of partnerships) • Alter patient flow between your health care organization and others (i.e., referrals) to create capacity in the system
Manage COVID-19	• Continue to manage patients with COVID-19
Reinforce immunization programs	• Reinforce immunizations against preventable disease, including vaccination for influenza

(Table continues on the following page.)

Table 6: Recommendations for Scenario 3 (continued)

Recommendation	Description
Monitor health system metrics	• Review response capacity metrics on a regular basis to inform decision making. This includes monitoring critical supplies (e.g. PPE, medications; see Appendix B for sample metrics)
Support care partner participation	• Where feasible, offer virtual visits to patients/clients to connect additional family members/casual visitors (even if care partners are present) • Implement care partner presence guidelines in accordance with the infection control policies for the specific location (i.e., meets patient needs and IPAC requirements)
Standardize communications	• Reinforce standardized communications to patients/clients, care partners, and the public about safe care-seeking behaviour for this scenario
Train on IPAC	• Train/re-train staff on IPAC (including the use of PPE), and implement IPAC measures to prevent or limit transmission

In addition to overall recommendations for scenario 3 (Table 6), sector-specific strategies are described below in Table 7.

Table 7: Additional Strategies by Sector for Scenario 3

Recommendation	Description
Hospital-Based Care: Inpatient Acute, Inpatient Post-Acute, Outpatient	
Create capacity	• Monitor data trends on key indicators, including ward and intensive care unit (ICU) capacity, ED admissions, and length of stay, and implement steps for creating capacity. Ensure alignment with the critical care surge plan
Collaborate with primary care and home and community care	• Work closely with front line providers in primary care and home and community care to support safe and timely discharge from hospital
Primary Care and Out of Hospital Ambulatory Care	
Assess capacity	• Offer in-person services, where appropriate. Continue to assess capacity and set appropriate priorities of care (see Ideas Box 5 for examples in primary care)

(Table continues on the following page.)

Table 7: Additional Strategies by Sector for Scenario 3 (continued)

Recommendation	Description
Primary Care and Out of Hospital Ambulatory Care (continued)	
Collaborate with hospitals and home and community care	• Work closely with hospitals and home and community care to support vulnerable patients/clients (e.g., those recently discharged from hospital, those who are frail)
Home and Community Care and Community Support Services	
Ensure services continue	• Use virtual care, where appropriate (e.g., to connect with vulnerable seniors, for wound care, isolation and loneliness, meetings with care team—including clients and care partners) • Continue to accelerate home and community care services that were discharged, delayed, or deferred in wave 1
Cohort care teams	• Establish consistent care teams for clients to limit the number of staff entering each patient's home

Ideas Box 5: Examples of Building Capacity and Prioritizing Care in Primary Care

Could these work in your organization?

Prioritizing Care When Resuming Preventive Screening—*North York Family Health Team*
Preventive care screening in Ontario had was paused for several months in spring 2020. When pap testing resumed, one primary care office created an EMR search to identify patients whose last pap was >= 48 months ago. Those patients received phone calls or emails and were invited for screening. The intended workflow was to next reach out to patients past due by 44 months, and then by 36 months. And if the clinician could reasonably manage it, patients visiting the office for other reasons and were also due for cervical screening were offered pap tests. This way, the clinic was able to prioritize care to those who needed it most, while managing their "backlog" of care.

Patient-Centred Approach to Influenza Immunization—*McMaster Family Health Team*
Influenza vaccinations will be especially important as we continue to manage our COVID-19 case load over the fall and winter. At the McMaster Family Health Team in Hamilton, two clinics plan to implement proactive vaccination efforts. When patients call for a medical visit, they will be asked to arrive 15 minutes earlier to get their flu shot (if willing) before their appointment with the health care provider. This approach maximizes the care provided in the least amount of time, since patients will have already been COVID-19-screened for their appointment, and the required 15-minute post-vaccine wait time will already be spent in the clinic for their medical visit.

Resource Assessment Leads to Improved Care—*Chatham-Kent Family Health Team*
Primary care in the West region did not close during wave 1. For the Chatham-Kent Family Health Team (FHT), services were simply reprioritized, screenings were deferred (if it could be done safely), and when possible, the team used virtual care options. After assessing staff capacity and considering how resources could focus on patient-centred care and avoid unnecessary acute care use, the Chatham-Kent FHT determined that they had the capacity to maintain essential cares services *and* proactively support their senior patients. To support the more vulnerable senior population in their community, a team of interprofessional health providers and registered practical nurses carried out wellness calls over the phone for the FHT's patients (who were 70 years of age and older) to ensure they were getting the care they needed.

Scenario 4: Community Transmission of COVID-19 Cases

The overall recommendations for scenarios 4A and 4B are described in Table 8. Please note that unless otherwise stated under 4B recommendations, 4A recommendations would also apply during widespread community transmission.

Table 8: Recommendations for Scenarios 4A and 4B

Scenario 4 (Community Transmission of COVID-19)	
Description	• Larger outbreaks of local transmission, defined through an assessment of factors including, but not limited to: o Large numbers of cases not linkable to transmission chains o Increasing percentage of positive tests o Multiple unrelated clusters in several areas in the region/sub-region
Goals	• Slow transmission, reduce case numbers, and end community outbreaks <u>Scenario 4A (Moderate Community Transmission)</u>: • Modify scheduled acute inpatient services in proportion to available resources and according to key metrics • Maintain/resume/accelerate* other health care services to ensure adequate capacity to care for patients with COVID-19 • Maintain prioritization for time-sensitive health services, if possible • Support care partner participation in care delivery in accordance with IPAC policies <u>Scenario 4B (Widespread Community Transmission)</u>: • Defer scheduled acute inpatient services in proportion to available resources and according to key metrics • Maintain/resume/accelerate* other health care services to create capacity to care for patients with COVID-19 • Support care partner participation in care delivery in accordance with IPAC policies
Recommendation	**Description**
Scenario 4A (Moderate Community Transmission of COVID-19)	
Prioritize time-sensitive scheduled care Use virtual care (including telemedicine)	• Continue to provide in-person care without delay if in-person care is time sensitive (e.g., well-child visits for newborns, treatment for certain cancer diagnoses, acute abdominal pain, assistance with activities of daily living) • Use virtual care, where appropriate

(Table continues on the following page.)

Table 8: Recommendations for Scenarios 4A and 4B (continued)

Recommendation	Description
Scenario 4A (Moderate Community Transmission of COVID-19)	
Prioritize time-sensitive scheduled care *(continued)*	• If virtual care is not appropriate/feasible, use clinical judgement to consider the following options: o Consider reducing in-person care for conditions that are not time sensitive (e.g., care for well-controlled chronic conditions, routine screening for asymptomatic conditions) o For time-sensitive conditions, arrange for in-person care as soon as feasible, prioritizing patients/clients who are considered at risk/vulnerable[13]
Scale up surge plans	• Ensure adequate capacity to care for patients with COVID-19 • Modify scheduled acute inpatient services, as necessary, depending on local epidemiology o Prepare to defer scheduled care, if required o Maintain regular communication with the COVID-19 regional/sub-regional steering committee about these efforts • Redeploy staff as needed (staff performing services that are not time-critical can be redistributed to the regional/sub-regional COVID response) • Activate partnerships to create capacity (e.g., shorter lengths of stay in hospital) • Consider if care can be shifted to another organization or provider if they are less impacted by COVID-19 • Be prepared to resume health care services once community transmission is reduced to clusters of cases or sporadic cases
Monitor health system metrics	• Review response capacity metrics on a regular basis to inform decision making. This includes monitoring critical supplies (e.g., PPE, medications; see Appendix B for sample metrics)
Support care partner participation	• Where feasible, offer virtual visits to patients/clients to connect additional family members/casual visitors (even if care partners are present) • Implement care partner presence guidelines in accordance with the infection control policies for the specific location
Standardize communications	• Reinforce standardized communications to patients/clients, care partners, and the public about safe care-seeking behaviour for this scenario
Train on IPAC	• Train/re-train staff on IPAC (including the use of PPE), and implement IPAC measures to prevent or limit transmission

(Table continues on the following page.)

Table 8: Recommendations for Scenarios 4A and 4B (continued)

Recommendation	Description
Scenario 4B (Widespread Community Transmission of COVID-19)	
Defer scheduled care (as required)	• Defer scheduled acute inpatient services, as required, depending on local epidemiology
Intensify surge plans	• Continue surge actions from scenario 4A, and continue to use virtual care, where appropriate • Ensure adequate capacity to manage patients with COVID-19
Train on IPAC	• Refresh/re-train staff on IPAC (including the use of PPE), and implement IPAC measures to prevent or limit transmission

In addition to the overall recommendations for scenario 4 (Table 8), Table 9 describes additional strategies by sector.

Table 9: Additional Strategies by Sector for Scenario 4

Recommendation	Description
Hospital-Based Care: Inpatient-Acute, Post-Acute, Outpatient	
Prioritize time-sensitive surgeries and procedures	• Aim to continue time-sensitive surgeries and procedures (e.g., cancer surgery, transplant, cardiac)
Consider deferring non-time sensitive surgeries and procedures	• Using clinical judgement, consider deferring scheduled surgeries and procedures that are not time-sensitive. Consider continuing scheduled outpatient surgeries and procedures while limiting resource-intensive inpatient surgeries and procedures, if appropriate. Maintain regular communication with the COVID-19 regional/sub-regional steering committee when redefining scope of regular care activities
Monitor health system metrics	• Monitor data trends for ward and ICU capacity, ED admissions, and length of stay, HHR, PPE, and implement steps for creating capacity as needed
Implement COVID-protected wards	• Implement COVID-protected wards (where feasible)
Primary Care and Out of Hospital Ambulatory Care	
Assess capacity	• Continue to assess capacity and set appropriate priorities to ensure continued time-sensitive care • Primary care providers may be asked to support other sectors (e.g., assessment centres)
Collaborate with hospitals and home and community care	• Work closely with hospitals and home and community care to support vulnerable patients (e.g., those recently discharged from hospital, those who are frail)
Home and Community Care and Community Support Services	
Ensure services continue	• Support patients/clients and care partners to receive care at home

Conclusion

The goal of this document was to provide a principle-based set of recommendations and a framework of suggested strategies to optimize health care capacity to ensure appropriate and timely care for patients/clients with COVID-19, patients/clients with non-COVID health care needs, and patients/clients who may have been impacted by delayed or deferred care from wave 1. This document emphasizes the importance of taking a regional/sub-regional approach with participation from local public health to facilitate collaboration and implementation of an integrated plan to optimize care delivery throughout all phases of this pandemic. This will require an enhanced level of flexibility, adaptability, creativity, and resourcefulness, as the nature of the disease and its transmission may change over time.

These recommendations were written with the best available evidence and information at the time of writing and may be updated as new information becomes available.

Appendices

Appendix A: Committee Membership

Table A1. Optimizing Care Through COVID-19 Transmission Scenarios Committee

Member	Role and Organization
Chris Simpson (Chair)	Vice-Dean (Clinical), School of Medicine, Queen's University
Jason Bartell	Clinical Lead/Nurse Practitioner, Chatham-Kent Family Health Team
Subi Bhandari	Patient and Public Representative, Ontario Quality Standards Committee
Mary Burnett	CEO, Alzheimer Society, Brant, Haldimand Norfolk, Hamilton Halton
Connie Clerici	Executive Chair, Closing the Gap Healthcare
Julian Dobranowski	Chief, Diagnostic Imaging, Niagara Health; Provincial Lead, Ontario Health–Cancer Care Ontario
Paula Doering	Senior Vice-President Clinical Programs, Chief Nursing Executive and Allied Health, Bruyère Continuing Care
Jennifer Everson	Vice-President, Clinical, Ontario Health West Region
Lee Fairclough	President, St. Mary's Hospital
Neva Fantham-Tremblay	Medical Director of Surgery, Head of Obstetrics and Gynecology, North Bay Regional Health Centre
Karli Farrow	Executive Vice-President, Patient Care Services & Chief Operating Officer, Trillium Health Partners
Gary Garber	Scientific Lead, Provincial Infectious Disease Advisory Committee for Infection Prevention and Control; Infectious Disease Physician, Public Health Ontario
Michael Gardam	Medical Director, Infection Prevention and Control, Women's College Hospital; Associate Professor of Medicine, University of Toronto
Dianne Godkin	Senior Ethicist, Trillium Health Partners
Wendy Hansson	President & CEO, Sault Area Hospital
Jonathan Irish	Provincial Head, Surgical Oncology & Provincial Clinical Lead, Access to Care-Surgery, Ontario Health–Cancer Care Ontario
Steven Jackson	VP Medical Planning and Chief of Staff, General Surgeon, Mackenzie Health
Joan Ludwig	VP Clinical Services and CNE, Timmins and District Hospital

(Table continues on the following page.)

Table A1. Optimizing Care Through COVID-19 Transmission Scenarios Committee (continued)

Member	Role and Organization
Danielle Martin	Executive VP & Chief Medical Executive, Women's College Hospital
Derek McNally	Executive VP, Clinical Services & Chief Nursing Executive, Niagara Health
Sarah Newbery	Family Physician, Chief of Staff, Wilson Memorial General Hospital; Associate Professor, Northern Ontario School of Medicine
Howard Ovens	Chief Medical Strategy Officer, Sinai Health System; Ontario Provincial Lead for Emergency Medicine
David Pichora	President & CEO, Kingston Health Sciences Centre
Paul Preston	Vice President, Clinical, Ontario Health North Region
Dhenuka Radhakrishnan	Pediatric Respirologist, Children's Hospital of Eastern Ontario (CHEO); Director, CHEO Asthma Program; Vice Chair, Canadian Thoracic Society Asthma Assembly Steering Committee; Assistant Professor, Department of Pediatrics, University of Ottawa
Shirlee Sharkey	President and CEO, SE Health (Saint Elizabeth Health Care)
Hsiu-Li Wang	Commissioner and Acting Chief Medical Officer of Health, Region of Waterloo Public Health and Emergency Services
Harindra Wijeysundera	Interventional Cardiologist, Sunnybrook Health Sciences Center, Senior Scientist, Sunnybrook Research Institute
Kimberly Wintemute	Primary Care Lead, Choosing Wisely Canada, Assistant Professor, University of Toronto
Observers	
Mike Heenan	Assistant Deputy Minister (Hospitals and Capital), Ministry of Health
Kristin Taylor	Director, Provincial Programs, Ministry of Health

Appendix B: Sample Health System Metrics

Below is a list of metrics that may be used to monitor the pandemic, the pandemic response, and the health system's capacity and recovery. Except where noted, these metrics have been used by the COVID-19 Command Table.

Table B2: Examples of Health System Metrics

Pandemic Monitoring Metrics: ***Monitoring pandemic progress, trajectory, and risk for increased spread***
Trend in # of new cases (rolling 7-day average), stratified by age group
# of deaths**
# of current hospitalized/ICU cases
# of current/recent outbreaks by setting in last week
Effective reproduction number*
Rate of new cases per population**
Population mobility/adherence to public health measures
Response Monitoring Metrics: ***Measuring the extent and speed of the pandemic response***
# of tests processed within 24/48 hours of specimen collection
% of positive COVID-19 tests reported to public health within 24/48 hours (duration between specimen collection date and date reported to local public health)**
Percent positivity
Testing volume
Response Capacity: ***Health system, public health, and other capacity available to enable pandemic response***
% of acute care beds occupied
% of base ICU beds occupied
Time to inpatient bed**
% alternate level of care beds**
% of facilities with 7 days' PPE
PPE requests escalated to MEOC
LTC critical staffing shortage
Weekly lab processing capacity
Ability for local public health to follow up with cases within 24 hours**
Availability of swabs
ED visit volumes (7-day average)

(Table continues on the following page.)

Table B2: Examples of Health System Metrics (continued)

Recovery Monitoring: ***Measuring the health system's recovery from the pandemic and ability to resume regular activity***
Scheduled surgery volumes by specialty compared to 2019
Home care utilization by service, admissions/holds, referrals by source
Wait time and queue for LTC placement from community
Immunization rates vs. last year
Immunization rates vs. 5-year average**
Primary care physician services (e.g. GP visits)
ED % visit by CTAS

Abbreviations: CTAS, Canadian Triage and Acuity Scale; ED, emergency department; GP, general practitioner; ICU, intensive care unit; LTC, long-term care; MEOC, Ministry Emergency Operations Centre; PPE, personal protective equipment.
*Caution for use at small geographies.
**Not included on the August 25, 2020 list of metrics reviewed by the COVID-19 Command Table.

Appendix C: Sample Guidelines for Providing Non-COVID Care During the COVID-19 Pandemic

Multiple Health Care Sectors

- Framework for healthcare systems providing non-COVID-19 clinical care during the COVID-19 pandemic—Centers for Disease Control and Prevention
- Maintaining essential health services: operational guidance for the COVID-19 context (see Part 2) —World Health Organization
- Recommendations for regional health care delivery during the COVID-19 pandemic: Outpatient care, primary care, and home and community care—Ontario Health (see item 8)
- Building a better health care system post-covid-19: steps for reducing low-value and wasteful care — Sorenson C, Japigna M, Crook H, McLellan M

Primary Care

- Post-COVID primary care reboot? —Wintemute K, Thériault G
- Rethinking screening during and after COVID-19: Should things ever be the same again? —Dickinson JA, Thériault G, Singh H, Szafran O, Grad R

Acute Care

- A measured approach for planning for surgeries and procedures during the COVID-19 pandemic —Ontario Health (see section 5)

Home and Community Care

- Message to home support agencies—Government of New Brunswick

References

(1) Williams DC. Directive #2 for health care providers [Internet]. Toronto (ON): Ministry of Health, Ministry of Long-Term Care; 2020 March 26 [cited 2020 March 27]. Available from: http://www.health.gov.on.ca/en/pro/programs/publichealth/coronavirus/docs/directives/RHPA_professionals.pdf

(2) Ministry of Health. COVID-19 Operational requirements: health sector restart, Version 2 [Internet]. Toronto (ON): The Ministry; 2020 Jun 15. Available from: http://www.health.gov.on.ca/en/pro/programs/publichealth/coronavirus/docs/operational_requirements_health_sector.pdf

(3) Ontario Health. A measured approach to planning for surgeries and procedures during the COVID-19 pandemic [Internet]. Toronto (ON): Ontario Health; 2020 Jun 15. Available from: https://www.ontariohealth.ca/sites/ontariohealth/files/2020-06/A%20Measured%20Approach%20to%20Planning%20for%20Surgeries%20and%20Procedures%20During%20the%20COVID-19%20Pandemic.pdf

(4) Ontario Health. Recommendations for regional health care delivery during the COVID-19 pandemic: outpatient care, primary care, and home and community care [Internet]: Ontario Health; 2020 Jun 8 [cited 2020 Aug]. Available from: https://www.ontariohealth.ca/sites/ontariohealth/files/2020-06/Recommendations%20for%20Regional%20Health%20Care%20Delivery%20During%20the%20COVID-19%20Pandemic%20-%20Outpatient%20Care%2C%20Primary%20Care%2C%20and%20Home%20and%20Com.pdf

(5) Canadian Foundation for Healthcare Improvement. Re-integration of family caregivers as essential partners in care in a time of COVID-19 [Internet]. Ottawa (ON): The Foundation; 2020 Jul 8 [cited 2020 Aug 24]. Available from: https://www.cfhi-fcass.ca/about/news-and-stories/news-detail/2020/07/08/re-integration-of-family-caregivers-as-essential-partners-in-care-in-a-time-of-covid-19

(6) Ontario Hospital Association. Care partner presence policies during COVID-19 [Internet]: The Association; 2020 Jun [cited 2020 Aug 18]. Available from: https://www.oha.com/Documents/Care%20Partner%20Presence%20Policies%20During%20COVID-19.pdf

(7) The Change Foundation. Caregiver ID: A program to help re-integrate caregivers during COVID-19 [Internet]. Toronto (ON): The Foundation; 2020 [cited 2020 Aug 24]. Available from: https://changefoundation.ca/caregiver-id-a-program-to-help-re-integrate-caregivers-during-covid-19/

(8) World Health Organization. Interim guidance: critical preparedness, readiness and response actions for COVID-19 [Internet]. Geneva: The Organization; 2020 Jun 24 [cited 2020 Aug 18]. Available from: https://www.who.int/publications/i/item/critical-preparedness-readiness-and-response-actions-for-covid-19

(9) World Health Organization. Maintaining essential health services: operational guidance for the COVID-19 context [Internet]. Geneva: The Organization; 2020 Jun 1 [cited 2020 Aug 18]. Available from: https://www.who.int/publications/i/item/10665-332240

(10) Dermer M. Virtual care playbook [Internet]: Canadian Medical Association, The College of Family Physicians of Canada, Royal College of Physicians and Surgeons of Canada; 2020 Mar [cited 2020 Sep 26]. Available from: https://www.cma.ca/sites/default/files/pdf/Virtual-Care-Playbook_mar2020_E.pdf

(11) Ministry of Health. COVID-19 patient screening guidance document, Version 4.0 [Internet]. Toronto (ON): The Ministry; 2020 Jun 11 [cited 2020 Aug 18]. Available from: http://www.health.gov.on.ca/en/pro/programs/publichealth/coronavirus/docs/2019_patient_screening_guidance.pdf

(12) Ministry of Health. COVID-19 provincial testing guidance V.8.0 [Internet]. Toronto (ON): The Ministry; 2020 Sep 24 [cited 2020 Sep 25]. Available from: http://www.health.gov.on.ca/en/pro/programs/publichealth/coronavirus/docs/2019_testing_guidance.pdf

(13) Government of Canada. Vulnerable populations and COVID-19 [Internet]. The Government; 2020 Jul 20 [cited 2020 Aug 18]. Available from: https://www.canada.ca/en/public-health/services/publications/diseases-conditions/vulnerable-populations-covid-19.html

(14) Ministry of Health. COVID-19 guidance: acute care [Internet]. Toronto (ON): The Ministry; 2020 Jun 15 [cited 2020 Jun 25]. Available from: http://www.health.gov.on.ca/en/pro/programs/publichealth/coronavirus/docs/2019_acute_care_guidance.pdf

(15) Sorenson C, Japigna M, Crook H, McLellan M. Building a better health care system post-covid-19: steps for reducing low-value and wasteful care [Internet]. Waltam (MA): NEJM Group; 2020 [cited 2020 Aug 24]. 2020 Aug 21:[Available from: https://catalyst.nejm.org/doi/full/10.1056/cat.20.0368

(16) Dickinson JA, Theriault G, Singh H, Szafran O, Grad R. Rethinking screening during and after COVID-19. Canadian Family Physician. 2020;66(8):571-5.