MLHU Plan for Sustained COVID-19 Response

July 2020

ML
BUREAU DE SANTÉ DE
MIDDLESEX-LONDON
HEALTH UNIT
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Contents

0.0 PREAMBLE

The **MLHU Plan for Sustained COVID-19 Response** articulates the strategic vision and operational plan to guide Middlesex-London Health Unit's (MLHU) ongoing response, readiness, and resilience in the management of the COVID-19 pandemic over the next 12 – 18 months. It positions MLHU to respond in a tiered manner to escalating levels of COVID-19 prevalence in the community.

This plan is a working document informed by actions taken and lessons learned to date in MLHU's response to COVID-19. It will require revisions as new learnings are realized at the agency and local level; as international, national and provincial guidance and directives related to COVID-19 are modified; and as further scientific information related to COVID-19 becomes available.

1.0 COVID-19 BACKGROUND

In January 2020, a novel coronavirus was identified as the cause of an outbreak of pneumonia originating in Wuhan, China. On March 11, 2020, the World Health Organization (WHO) declared novel coronavirus (COVID-19) a global pandemic.

On January 25, 2020, Canada confirmed its first presumptive case of the novel coronavirus related to travel to Wuhan, China. By mid-June 2020 Canada had over 100 000 confirmed cases of COVID-19 and over 8 000 attributable deaths (Government of Canada, June 19, 2020) while Ontario had experienced over 33 000 cases and over 2 500 deaths, with over half of these deaths being attributed to Long Term Care homes (Government of Ontario, June 19, 2020).

The first laboratory-confirmed case of COVID-19 in Middlesex-London was reported to Middlesex-London Health Unit (MLHU) on January 24, 2020, well before the WHO's declaration of a global pandemic. The MLHU subsequently activated its Incident Management System (IMS) on January 27, 2020. Before the end of March, the majority of MLHU staff were redeployed to various roles to support COVID-19 related work, with non-urgent public health programs placed on hold. Critical public health services that have continued to ensure urgent public health needs of our community are met have done so with modifications, prioritizing need, maintaining client and staff safety and conserving personal protective equipment for when and where it is needed most.

1.1 MLHU's Response to COVID-19

The first laboratory-confirmed case of COVID-19 in Middlesex-London was reported to the MLHU on January 24, 2020. The MLHU activated its Incident Management System (IMS) on January 27, 2020 in response to the expected steep trajectory of the epidemic. Not long after, MLHU began implementing passive surveillance at all MLHU entrances and active surveillance in MLHU clinics and staff interactions with the public.

In mid-February, the situation continued to evolve and the IMS remained activated. The IMS met regularly to organize a response, anticipate challenges, and ensure mechanisms for the provision of accurate information to the public and community partners.

A significant proportion of staff were redeployed to various roles to support COVID-19 related work by March 27, 2020, and non-urgent public health programs were placed on hold. Operational hours

increased and COVID-19 related work was occurring seven days a week. To support physical distancing, staff and managers were encouraged to work from home. At the same time, London's first COVID-19 Assessment Centre opened at Oakridge Arena, and three days later, London's second Assessment Centre opened at Carling Heights Optimist Community Centre. By March 25, 2020, the presence of community transmission in the Middlesex-London region was confirmed. MLHU began hosting briefing webinars twice weekly to provide timely updates to healthcare providers and community stakeholders.

As the pandemic evolved, staff were redeployed to different areas within the Operational system of the COVID response, shifting to meet needed capacity (i.e. from COVID Hotline to Case and Contact Management and Assessment Centre). By mid-March, 127 MLHU staff were redeployed to Case and Contact Management. Soon after, on April 13, 2020, 60 Western University Medical Student Investigator volunteers were recruited to support MLHU's COVID response. As an additional source of support for people diagnosed with COVID-19 and their families, the "COVID Support Line" was implemented, providing telephone-based support and general information about stress and coping related to COVID-19. Students in the clinical stream in Western University's Graduate Psychology Program served as support line agents. Mobile testing was implemented through a partnership with community paramedics operating under an MLHU Medical Directive. This measure enhanced testing accessibility for person's living in congregate living settings, or who otherwise had significant challenges accessing an Assessment Centre. At the beginning of May, the Outbreak and Facilities Management team was created to work with all local congregate living settings and provide enhanced support with Infection Control Measures.

Throughout the response, change has continued to occur at a swift pace with guidance and directives from the province evolving as new information and evidence related to the virus became available.

While many health unit programs and interventions were put on hold to enable the response to the COVID-19 pandemic, critical public health programs and interventions continued, many in a modified state. No program has been unimpacted by this pandemic. Necessary program modifications have included but are not limited to: changes in program hours, reduced staff to deliver programs, change in the format of intervention from in-person to remote phone or video call support, active screening, staff use of PPE for in-person interventions, and embedding of a COVID-19 lens in all program work.

Further details of the MLHU response can be found in Appendix A.

2.0 PURPOSE AND SCOPE

The *MLHU Plan for Sustained COVID-19 Response* is intended to guide MLHU's continued response to COVID-19 and preparedness for an anticipated second-wave of the virus. This plan is designed to be flexible and scalable, supporting appropriate and timely interventions. It also guides the allocation and coordination of resources to support MLHU's ongoing mandate to meet COVID-19 related demands in the community.

This plan:

- Describes key assumptions and pandemic response principles;

- Outlines MLHU's approach to escalating a public health response to COVID-19; and

- Proposes needed skills, expertise and training to support baseline programming, surge capacity and a state of readiness for the various areas of the response.

The plan describes MLHU's response around three tiers of escalating levels of COVID-19 prevalence in the community, including the description of a base COVID-19 program, as well as modules and protocols to respond to escalating COVID-19 prevalence.

It is important to note that there are significant interdependencies between COVID-19 work and critical continuing MLHU programs and services. Factors such as seasonality (e.g. Spring public health inspection support for migrant farms); the demands of provincial re-opening (e.g. community pool facilities and restaurants requiring inspections prior to re-opening); and the steady ongoing needs of programs and services (e.g. Healthy Babies Healthy Children, Clinic Services, continued surveillance of other infectious diseases) have an impact on human resources and capacity. While some of these demands can be anticipated, others cannot. This plan provides a framework for COVID-19 related work, but the need to be continuously nimble will be ever-present.

3.0 LEGISLATIVE AUTHORITY

(adapted from SMDHU IDERP, 2019)

The *MLHU Plan for Sustained COVID-19 Response* is underpinned by the following legislation and supporting documents:

a) Health Protection and Promotion Act, R.S.O. 1990 H.7

b) Personal Health Information Protection Act, 2004, S.O. 2004, c.3 Sched. A (PHIPA)

c) Quarantine Act, S.C. 2005, c. 20

d) Coroners Act, R.S.O. 1990, c. C.37

e) Occupational Health and Safety Act, R.S.O. 1990, c.O.1

f) Public Hospitals Act, R.S.O. 1990, c. P.40

g) Emergency Management and Civil Protection Act, R.S.O. 1990, c. E.9

h) Designation of Diseases O. Reg. 135/18

i) Communicable Diseases – General R.R.O. 1990, Reg. 557

Related Documents

- Ontario Public Health Standards, 2018 or as current

- Emergency Management Guideline, 2018 or as current

- Infectious Diseases Protocol, 2018 or as current

- Infectious Diseases Protocol, Appendix A: Disease-Specific Chapters, Chapter: Diseases caused by a novel coronavirus, including Severe Acute Respiratory Syndrome (SARS) and Middle East Respiratory Syndrome (MERS) Effective: January 2020

- Institutional/Facility Outbreak Management Protocol, 2018 (or as current)

- Vaccine Storage and Handling Protocol, 2018 or as current

- Population Health Assessment and Surveillance Protocol, 2018 (or as current)

- Control of Respiratory Outbreaks in Long-Term Care Homes, 2018

- Planning Guide for Respiratory Pathogen Season, 2018

- Pandemic Influenza Plan for Middlesex-London, January 2006

- *Ministry Guidance documents and Directives related to COVID-19, as current*

Internal Documents & Tools

- MLHU Emergency Response Plan, 2018

- MLHU Return to Operations Dashboard Decision Tool

4.0 PLANNING ASSUMPTIONS and ETHICAL DECISION MAKING

(adapted from SMDHU IDERP, 2019; SMDHU PIP, 2010, and other plans)

4.1 COVID-19 Related Assumptions

- COVID-19 cases and outbreaks will continue with expected second or subsequent wave(s);

- Most of the population remains susceptible and will have had limited exposure to the virus;

- Severe illness and mortality is expected for a portion of the population; evidence to date has demonstrated that older adults and those with pre-existing medical conditions are most at risk;

- If a strong second wave occurs, acute care and hospital capacity could be challenged;

- Congregate settings, including Long-Term Care Homes, will continue to be higher risk environments for infection transmission and outbreaks;

- There will continue to be disproportionate health impacts on segments of the population who are already affected by reduced access to social determinants of health;

- Sub-clinical infections will occur;

- Scientific evidence related to COVID-19 will continue to emerge;

- Treatment for COVID-19 may continue to be unachievable;

- A vaccine will not be available for a number of months;

- Once available, vaccine will be limited and in high demand;

- The most effective means of control will continue to be disruption of transmission through public health measures; and

- It is expected that the public's sustained adherence to public health measures will require continued public health focus and encouragement.

4.2 Planning Assumptions

- Sustained public health response to COVID-19 will be needed and will be guided by directives at the national and provincial level;

- The COVID-19 response is an expansion of the mandate of MLHU:

- Additional resources will be required to support a sustained response to COVID-19;

- As the work of responding to COVID-19 continues, MLHU structures and processes must be readily scalable to need;

- One individual may fulfill more than one key function or role depending on the scale of response;

- The AMOH or designate will continue to direct the COVID-19 response;

- Staff cohorting as a means of protecting and maintaining capacity will continue to be important;

- A rapid increase of COVID-19 prevalence will require the redeployment of MLHU staff.

- During redeployment, non-critical public health programs and services will continue to be impacted, requiring modification and/or suspension;

- The MLHU Return to Operations Dashboard Decision Tool will be used to support redeployment decision-making and to ensure the provision of critical services;

- In a second wave, the availability of public health workers could be reduced by up to one-third due to illness, concern about disease transmission in the workplace, or care-giving responsibilities; and

- Processes will be required to ensure coverage of critical COVID-19 response functions while building in allowances for staff absences, including illness and necessary staff time off.

4.3 Ethical Decision Making

MLHU's response to any infectious disease emergency shall be grounded in a framework for **ethical decision-making.** This includes (Canadian Pandemic Influenza Plan, & SMDHU IDERP, 2019, Ontario Plan):

Openness and transparency - The process is open for scrutiny, and information about the basis for decisions and when and by whom they were made is publicly accessible;

Accountability - Being answerable for decisions; with a mechanism in place to ensure that ethical decision making is sustained;

Inclusiveness - Stakeholders are consulted, views are taken into account, and any disproportionate impact on particular groups is considered;

Reasonableness - Decisions should not be arbitrary but rather be rational, proportional to the threat, evidence-informed and practical; and

Responsiveness - Decisions should be revisited and revised as new information emerges, and stakeholders should have opportunities and a mechanism to voice any concerns they have about the decisions.

Further, there are **core ethical values** (Ontario Health Plan for an Influenza Pandemic 2008, SMDHU IDERP, 2019) that MLHUs response to an infectious disease emergency will be based on. More than one value may be relevant in any given situation and tension between values will occur. These core ethical values include:

Individual liberty - May be restricted in order to protect the public from serious harm;

Protection of the public from harm - Public health measures may be implemented to protect the public from harm;

Proportionality - Restrictions on individual liberty and measures taken should not exceed the minimum required;

Privacy - Individuals have a right to privacy, including the privacy of their health information. Confidential information regarding individual cases will not be shared outside of those who need to know in order to fulfill legally mandated public health functions;

Equity - All people have an equal claim to receive the health care they need, and health care institutions are obligated to ensure a sufficient supply of health services and materials. During an infectious disease emergency, tough decisions may have to be made about who will receive antiviral medication and vaccinations, and which health services will be temporarily suspended;

Duty to provide care - Health care providers (HCPs) have an ethical duty to provide care and respond to suffering. During an emergency, demands for care may overwhelm health care workers and their institutions, creating challenges related to resources, practice, liability and workplace safety. Health care workers may have to weigh their duty to provide care against competing obligations (i.e. to their own health, family and friends);

Reciprocity- Society has an ethical responsibility to support those who face a disproportionate burden in protecting the public good;

Trust - Trust is an essential part of the relationship between the government, health system partners and the public. During an infectious disease emergency, some people may perceive measures to protect the public from harm (e.g. limiting access to certain health services) as a betrayal of trust;

Solidarity - An infectious disease emergency will require solidarity among community, health system partners, and government;

Stewardship - In our society, both institutions and individuals will be entrusted with governance over scarce resources, such as vaccines, ventilators, hospital beds and even health workers. Those entrusted with governance should be guided by the notion of stewardship, which includes protecting and developing one's resources, and being accountable for public well-being;

Family-centered care - A family's right to make decisions on behalf of a child, consistent with the capacity of the child will be respected; and

Respect for emerging autonomy - When providing care for young people, their emerging autonomy will be respected.

5.0 PRINCIPLES OF PANDEMIC RESPONSE

5.1 Theoretical Phases of a Pandemic Response

To provide a framework to support countries in pandemic preparedness and response, the WHO has categorized the phases of a pandemic (Figure 1). Phases 1-3 correlate with preparedness, including capacity development and planning the response, while Phases 4-6 signal initiation of response and mitigation efforts.
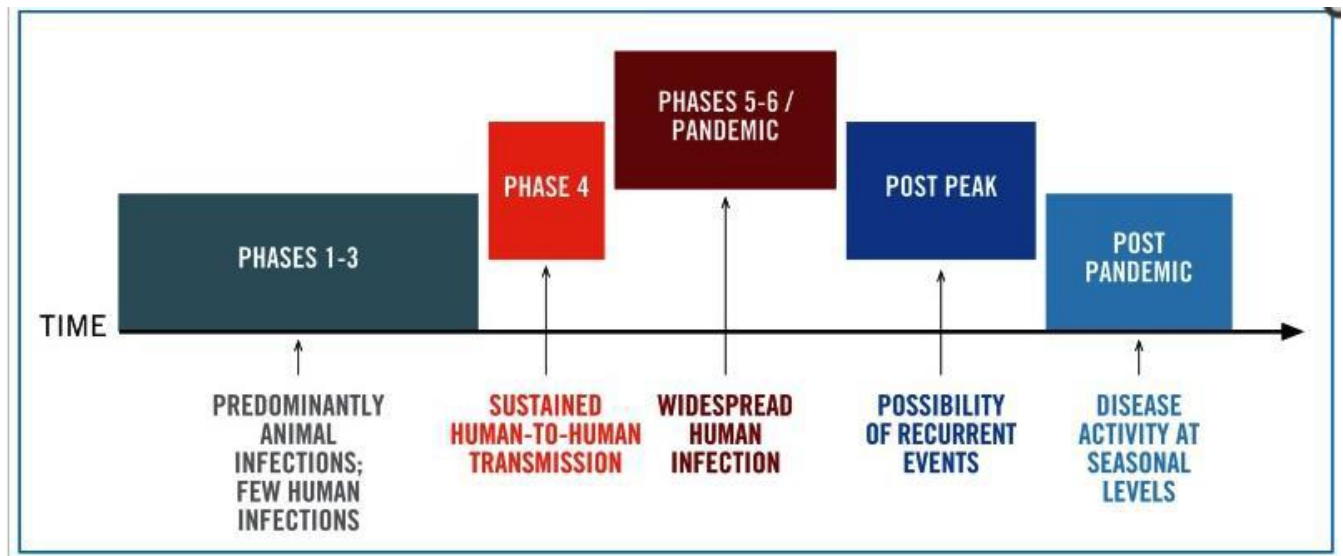
Figure 1: World Health Organization, Pandemic Influenza Preparedness and Response, 2009

For more information: visit the WHO Pandemic Phases.

These global pandemic phases can be a useful reference to inform and visualize pandemic planning and response at a local level. It is important to note that as pandemic viruses emerge, different countries will face different risks and viral activity. Canada's response thus far to a novel virus is based on the presence of the virus and activity levels within Canada. Ontario and Health Unit level responses to a pandemic will be in line with Canada's response, with variations dependent on the provincial and local situations. While activation triggers and activities may parallel some of the global WHO phases, they will not align exactly (Pan-Canadian Public Health Network, 2015).

5.2 Overview of Public Health Measures

Public health measures are non-pharmaceutical countermeasures used by countries to delay the introduction of a virus into a community, slow the spread of disease, flatten the epidemiological curve, and reduce the total number of severe cases or deaths (WHO, 2019; Government of Canada, May 30, 2020). Public health measures are typically implemented in a combined or layered approach, and they include personal practices taken by individuals as well as community-based measures (Government of Canada, May 30, 2020).

Typical public health measures are communicated and encouraged during regular, non-pandemic states of operation, including performing regular hand hygiene, covering coughs and sneezes, staying home if ill, receiving annual influenza vaccinations, environmental cleaning etc. COVID-19 has necessitated the implementation of more intensive and restrictive measures. Triggers for more restrictive measures have been based on transmission rates and evolving scientific evidence, and have been initiated at the federal, provincial and local public health levels. These measures evolve as new evidence comes forward.

Currently, there is no effective therapeutic treatment or vaccine available for COVID-19. Until such time when a vaccine becomes available and enough people have received the vaccine to establish herd immunity, it is critical that the public health measures that have been so integral in the control of this virus continue. National, provincial, and local governments must continue public health efforts to limit the number of severe cases and deaths and reduce the burden on health care resources, while minimizing societal disruption (Government of Canada, June 10, 2020).

5.3 Scaling of Public Health Measures

In any infectious disease outbreak, public health measures utilized are scaled to the severity of the situation, where a mild situation would warrant mild response activities and situations of higher severity would mandate more extreme public health measures. The Ontario Health Plan for an Influenza Pandemic (OHPIP) depicts a severity model, with severity measured along two dimensions: transmissibility of the virus and clinical severity of illness (Ministry of Health, 2013). Using the OHPIP as a guide, pandemic response strategies can be appropriately determined based on one of four severity scenarios (Figure 6). In relation to this model, the public health measures taken for COVID-19 have fallen in the upper right quadrant based on evidence of high transmissibility, and the potential for high clinical severity, notably in older adults and populations with pre-existing chronic health conditions.

Figure 6: Scaling of Public Health Measures
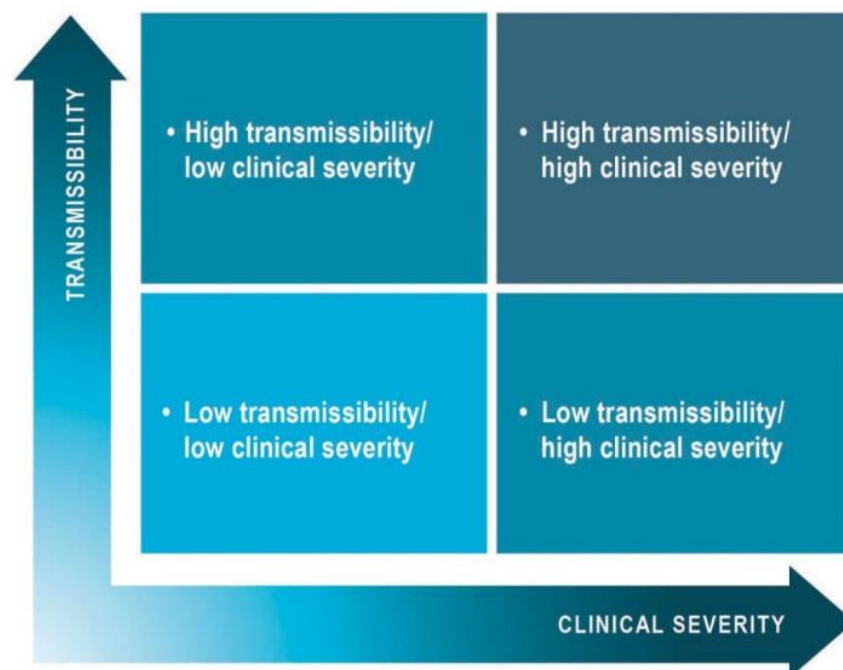
Source: Ontario Ministry of Health and Long-Term Care. (2013). *Ontario Health Plan for an Influenza Pandemic.* Retrieved from:
http://www.health.gov.on.ca/en/pro/programs/emb/pan_flu/docs/ch_01.pdf

As the level of transmissibility or clinical severity changes, the demand for control measures will change. For example, if an effective treatment for COVID-19 becomes available, this will lessen the burden on critical care services. A similar inference can be made with transmissibility. Once a vaccine for COVID-19 becomes available and enough people have been vaccinated, transmissibility within a community will decrease, and public health measures beyond standard practices can then be lifted.

Public health measures can be implemented at the individual, community and institutional levels. As evidence evolves and the prevalence of virus in the community changes, so do the public health measures implemented.

5.4 Individual Public Health Measures

Individual public health measures are activities that people can practice to reduce the risk of becoming infected with and transmitting the virus. The individual public health measure that have been taken and advised thus far during the COVID-19 pandemic have included (Government of Canada, June 10, 2020):

- Regularly performing hand hygiene (i.e. washing hands with soap and water and using an alcohol-based hand sanitizer);

- Covering coughs and sneezes (either with a tissue or in the bend of the arm);

- Avoiding face-touching with unwashed hands;

- Disposing of used tissues in lined waste containers;

- Physical distancing (i.e. 2-metre separation from others);

- Avoiding crowded places;

- Wearing a face-covering in public places;

- Limiting non-essential travel outside of the home; and

- Avoiding physical contact such as handshakes.

All individuals will continue to advised to self-monitor for symptoms of COVID-19 and if symptoms developed, to self-isolate for 14 days, including away from family members of the same household. If an individual had an exposure to COVID-19 (from international travel or a COVID-19 positive person), they will be required to quarantine for 14 days (Government of Canada, June 10, 2020 & Government of Canada, May 30, 2020).

5.5 Broader Community-Based Public Health Measures

In addition to the personal infection control practices mentioned previously, additional recommended and mandated community-based public health measures are critical for decreasing community transmission of COVID-19. Community-based public health measures apply to settings where members

of the public gather, including business and workplaces, child and youth settings, community gathering spaces or settings, outdoor spaces and public transportation (Government of Canada, May 30, 2020).

Community-based public health measures can be implemented at the Federal, Provincial and Local levels to reduce transmission of the virus and protect the public. Public health measures can evolve rapidly and became more restrictive as cases increase.

Public health measures change based on the impact of a virus across communities which is monitored through surveillance activities. The type of public health measures used depends on several factors such as (SMDHU, PIP, 2010):

- The epidemiology of the virus;

- The pandemic phase and virus activity in the region;

- Characteristics of the community;

- Resources required to implement the measure;

- Public acceptance of the measure; and

- The amount of social disruption the measure will cause.

As the prevalence of the virus increases, more strict public health measures must be communicated and encouraged. As the number of cases decreases, less restrictive measures can be utilized. With direction from the federal and provincial governments, public health will continuously monitor the effectiveness of current public health measures, assess the harms and benefits, and adjust less effective measures as needed (Government of Canada, June 10, 2020).

5.6 Considerations for Congregate Settings

There are specific directives and guidelines for congregate settings. The risk of individuals transmitting COVID-19 within congregate living settings such as long-term care facilities, residential care facilities, correctional facilities, group homes, shelters, and agricultural worker housing is heightened. This is due to a number of reasons, including (Government of Canada, May 30, 2020).

- Crowded accommodations;

- Shared sleeping quarters;

- Shared washrooms;

- Communal kitchens/cafeterias;

- Shared use of items such as utensils and toiletries; and

- Lack of adequate facilities to isolate persons who become ill.

Several public health measures have been used to prevent the introduction of COVID-19 into congregate living settings and to limit the possibility of an outbreak; these measures are tailored to each setting. Public health measures for most congregate settings are directed and recommended by the Ministry of Health; however certain congregate living settings additionally have sector-specific directives from

different Ministries. MLHU will continue to provide support to the congregate living settings in Middlesex-London and assist with implementing these measures.

6.0 INTEGRATED RESPONSE AND REGIONAL COORDINATION

Local public health authorities are the primary responsible body for planning and coordinating local level response to an infectious disease event, with direction from both the provincial and federal governments and in collaboration with health and non-health system partners. The Medical Officer of Health leads the response to an infectious disease incident/emergency within London and Middlesex County.

6.1 Federal, Provincial and Municipal Coordination

The Health Unit works closely with the Ministry of Health who provides provincial leadership to the health sector through the Ministry Emergency Operations Centre (EOC). See Figure 2 below: Provincial Governance Model. The Ministry EOC may issue directives to health system partners including health units, hospitals, long-term care facilities and physicians. The Health Unit liaises with health and non-health system partners locally, ensuring that the response in Middlesex-London is coordinated with the provincial response and is in line with the directives issued by the Ministry (MLHU, 2006 & SMDHU IDERP, 2019). The response infrastructure for health emergencies and relationships in the broader emergency response system are outlined in Figure 3 Inter-Relationship Roles below.

Locally, the Head of Council of a municipality may declare a state of emergency in that municipality and may implement the municipality's emergency response plan, authorizing the Head of Council to do what they consider necessary to protect the health, safety and welfare of residents and draw from any resource or service within the community (SMDHU IDERP, 2019). See Figure 4 below: Inter-Agency Emergency Management Structure.

Figure 2: Provincial Governance Model

Figure 2: Provincial Governance Model

Minister and Minister's Office

Cabinet Committee on Emergency Management

Provincial Emergency Operations Centre

Command Table

External Members: Ontario Health (OH), Public Health Ontario (PHO), DM-MLTSD, DM-MLTC, University of Toronto (UofT)

Internal Members: MOH Executive Leadership Table

Ministry Emergency Operations Centre

Surveillance Strategy	Laboratory Testing Strategy	Care & Treatment Strategy	Supplies & Equipment Strategy	Public Health Measures Strategy	Communication Strategies: Health System & Public
MOH & PHO	*MOH & PHO*	*MOH & PHO*	*MOH & MLTC*	*MOH & PHO*	*MOH*

Collaboration Table
Associations, Unions and Regulatory Colleges

Strategic Advice

Coordination

Ontario Health Leads Table
OH (lead) Leads from the 5 Regions
MEOC liaison

Development, Coordination & Implementation of Regional Approaches of Provincial Strategies

OH Toronto Region Planning & Implementation Table
OH (lead), PHU, hospitals, EMS, primary care, other groups, MEOC liaison

OH Central Region Planning & Implementation Table
OH (lead), PHU, hospitals, EMS, primary care, other groups, MEOC liaison

OH West Region Planning & Implementation Table
OH (lead), PHU, hospitals, EMS, primary care, other groups MEOC liaison

OH East Region Planning & Implementation Table
OH (lead), PHU, hospitals, EMS, primary care, other groups MEOC liaison

OH North Region Planning & Implementation Table
OH (lead), PHU, hospitals, EMS, primary care, other groups MEOC liaison

Scientific Table
PHO - lead

Bioethics Table
UofT lead

Technical Advice

Sector or Issue Specific Coordination Tables
MOH (lead):
- PHUs;
- EMS;
- GPOs & SSOs;
- Case & Contact Management (as needed);
- Repatriation Coordination
- Testing hospitals;
- Surveillance partners;
- First Nations Health Partners;
- Critical Care; and
- Others as needed

Implementation of Provincial Approaches within Sectors

Key tasks of Regional Planning & Implementation Tables
Develop an integrated, regional plan for:

Care & Treatment Strategy
1. assessment of those who are sick (ambulatory & acute settings)
2. care for those who are sick (ambulatory & acute settings)
3. guidance for those who are sick in the community
4. Continuity of Operations Planning

Laboratory Testing Strategy
5. local testing capacity

Supplies & Equipment Strategy
6. distribution of supplies & equipment (including Health Human Resources)

Surveillance Strategy
7. local surveillance and information sharing

Communications Strategy
8. information sharing between organizations
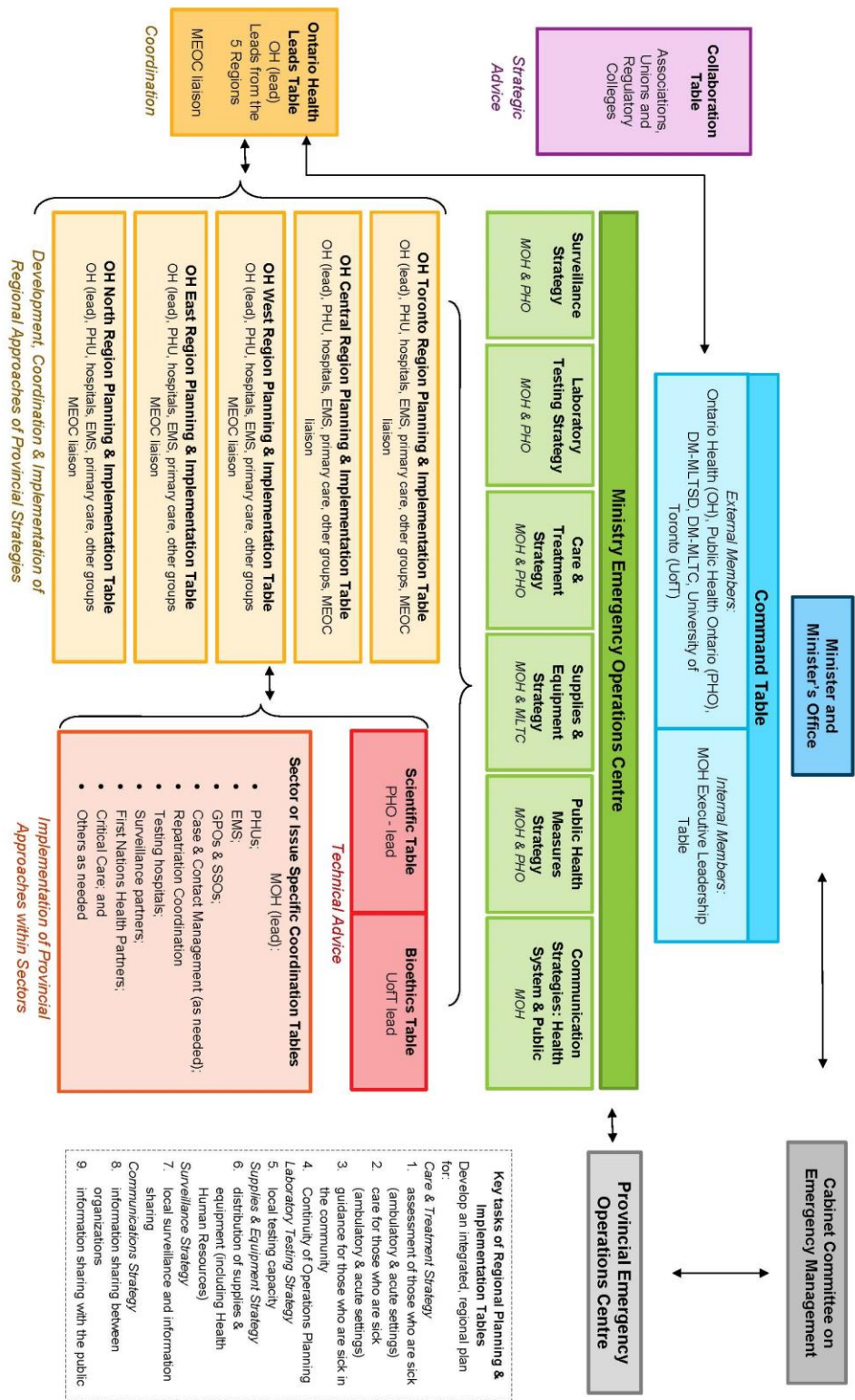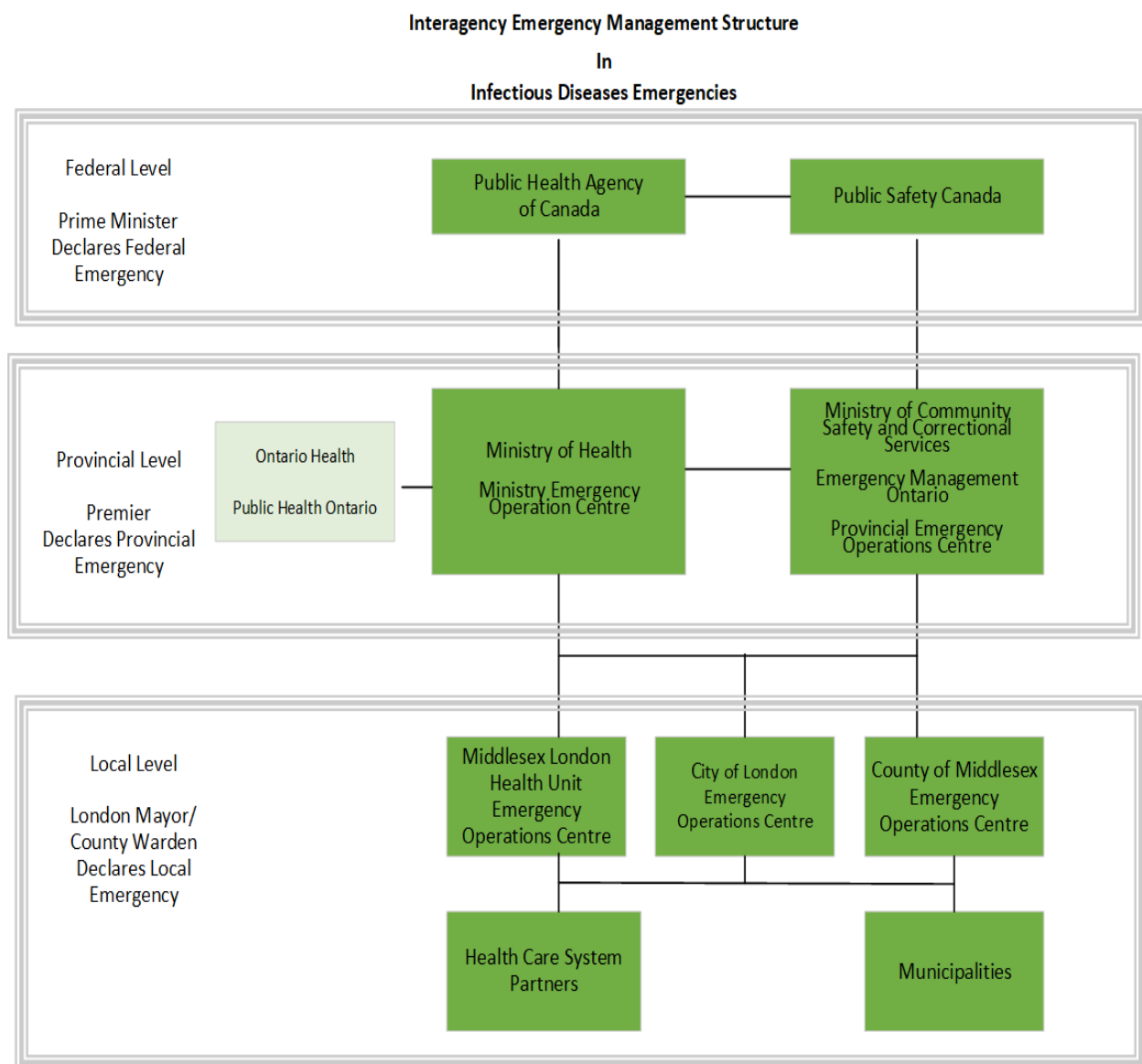9. information sharing with the public

Figure 3: Inter-Relationship Roles

Adapted from the Infectious Disease Emergency Response Plan with permission of the Simcoe Muskoka District Health Unit

Figure 4: Inter-Agency Emergency Management Structure

Interagency Emergency Management Structure
In
Infectious Diseases Emergencies

Federal Level		
Prime Minister Declares Federal Emergency	Public Health Agency of Canada	Public Safety Canada

Provincial Level			
Premier Declares Provincial Emergency	Ontario Health / Public Health Ontario	Ministry of Health / Ministry Emergency Operation Centre	Ministry of Community Safety and Correctional Services / Emergency Management Ontario / Provincial Emergency Operations Centre

Local Level			
London Mayor/ County Warden Declares Local Emergency	Middlesex London Health Unit Emergency Operations Centre	City of London Emergency Operations Centre	County of Middlesex Emergency Operations Centre
	Health Care System Partners		Municipalities

Adapted from the Infectious Disease Emergency Response Plan with permission of the Simcoe Muskoka District Health Unit

The Medical Officer of Health maintains regular communication with the province and broader planning systems including, but not limited to, the Public Health Measures Table advising the CMOH on public health measures to be implemented; work with health systems partners to identify and coordinate efforts to address local issues and participate in meetings with PHO, OH, hospital and non-hospital leaders, City of London and County Officials to determine and address community needs and keep key

stakeholders appraised of local developments. The MLHU will ensure that the COVID-19 response in Middlesex-London is coordinated and aligned with Ministry of Health directives.

7.0 Proposed MLHU COVID-19 Program and Operational Response

7.1 Phases of Pandemic Response at MLHU

During the initial wave of the COVID-19 pandemic, MLHU implemented and utilized a full IMS structure to plan and respond to this public health crisis. To respond to ongoing COVID-19 demands, sustain other critical public health interventions, and prepare for a probable second wave, MLHU proposes the development of a new COVID-19 program, as well as enhance other existing public health programs.

In anticipation of dynamic and variable COVID-19 community transmission, MLHU has structured its response around three tiers of escalating levels of COVID-19 prevalence in the community.

- Level One – Baseline
    - At Level One, the following parameters apply:
        - Maximum 2 new cases/day
        - Total of 30 active cases
        - Minimal institutional outbreaks
        - Hours of Operation
            - Monday to Friday
            - 9am to 5pm
        - 24-hour on-call with weekend on-call from Friday at 5pm to Monday at 9am

- Level Two – Program Surge
    - At Level Two, the following parameters apply:
        - Maximum 5 new cases/day
        - Total of 70 active cases
        - A small number of institutional outbreaks
        - Hours of Operation
            - Seven days per week
            - 9am to 8pm

- Level Three – Redeployment Surge
    - At Level Three, the following parameters apply:
        - Greater than 5 new cases/day
        - A substantial number of institutional outbreaks
        - Hours of Operation
            - Seven days per week
            - 9am to 8pm
        - Redeployment of MLHU staff required

7.2 Base COVID-19 Program

COVID-19 and the health risks associated with this virus are expected to continue for many months. In order to respond to the ongoing demands of COVID-19 while sustaining other critical public health interventions and re-instate vital public health programs that have been put on hold, a reorganization of structure and augmentation of resources to establish a COVID-19 Program (Figure 5) has been proposed. The core program will be structured and resourced to respond to the initial two tiers of escalation. At the third tier, redeployment of staff from across the organization will once again be required.

Figure 5: Proposed COVID Program Structure
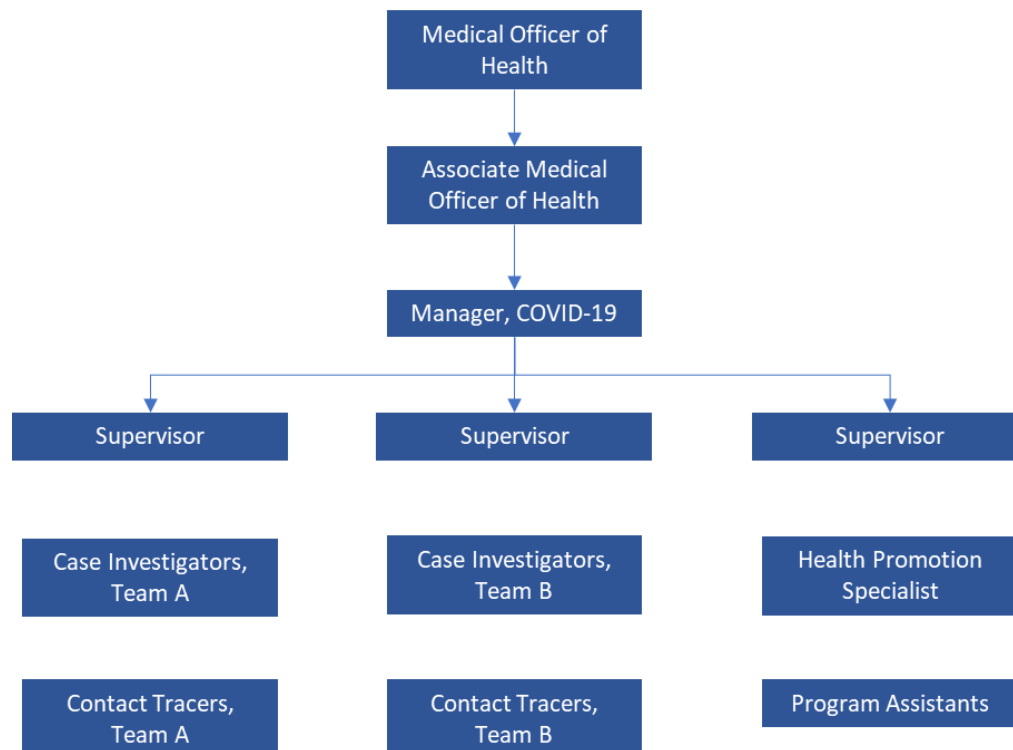
The core components and intervention of the COVID-19 Program are as follows:

- Case and Contact Management
- Outbreak Management
- Screening, Assessment and Testing
- Planning and System Coordination
- Liaison and Community Support
- Scientific and Technical Support

Details on the proposed staff and resources required for the base COVID-19 program can be found in [Appendix B](#).

7.3 Required Enhancements for other MLHU Programs

Some of the work that has been previously operationalized within the first wave COVID-19 IMS response is best described as base programming for other MLHU programs. To enhance coordination and deal specifically with COVID-19, these resources were redeployed to the IMS response. As the COVID-19 situation continues, it is recommended that components of this work be repatriated and adequately resourced to appropriately manage both COVID-19 and other public health needs in the community.

The work that is proposed to be repatriated includes:

- Facility Liaison;

- Infection prevention capacity building in facilities and congregate settings;

- Communications;

- Emergency Preparedness;

- Vulnerable Population Liaison and support;

- Population Health Assessment and Surveillance;

- Human Resources;

- Information Technology; and

- Operations and Procurement.

The core COVID-19 program would collaborate closely with many programs across the Health Unit, providing technical and scientific advice for COVID-19 specific issues. Processes will need to be developed to ensure robust collaboration, clear communication and role clarity. At high levels of COVID-19 prevalence, redeployment would result in a redistribution of work and the redeployment of MLHU staff.

Details on the proposed enhancements to other MLHU programs can be found in [Appendix C](#).

8.0 ESCALATION MODULES AND PROTOCOLS

Based on the experience and learnings of MLHU's response to the first wave of COVID-19, template modules and protocols have been developed for utilization in a potential second wave. They will be optimized and refined by the COVID-19 Program in anticipation of a tiered response to escalating levels of COVID-19 prevalence in the community.

These modules and protocols describe the roles and responsibilities, required skill sets, staffing considerations, training, coverage, and core functions. These modules were developed based on documentation that has been generated to date by the COVID-19 IMS response team, focus groups with COVID-19 staff and check-in sessions to ensure clarity of information.

The modules include protocols for the following functions:

- Surveillance and Reporting
- Case and Contact Management
- Outbreak and Facility Management
- Hotline
- Communications
- Data Support
- Assessment Centre and Testing Support
- Priority Populations Support and Liaison
- Mass Immunization
- Internal health and safety

9.0 MENTAL HEALTH AND WELLBEING

Focused discussion of mental health and wellbeing has not historically been included as part of a pandemic plan. A search of the literature, including grey literature, evidence from global analysis and themes in current event coverage has shown that the unprecedented COVID-19 pandemic has had a significant impact on population mental health and wellbeing. Including considerations for mental health in MLHU's emergency and infectious disease pandemic planning can ensure that the appropriate resources and interventions are in place to mitigate the impact that pandemics have on mental health for individuals and communities.

The potential morbidity and mortality of the COVID-19 virus has necessitated restrictive public health measures in an effort to control spread, including physical distancing, quarantine, self-isolation, institutional no visitor policies, closure of schools and public gathering spaces, cancelling of events, etc. which has significantly disrupted opportunities for social connection. Additionally, financial implications of closing non-essential businesses and workplaces, coupled with ever-present global news and information regarding the pandemic has been shown to increase feelings of stress, fear and anxiety, creating an increased risk for adverse mental health outcomes.

Considering mental health explicitly in the pandemic planning aligns with the requirements of the 2018 OPHS Mental Health Promotion Guideline, which directs Boards of Health to consider:

- Embedding mental health promotion strategies and approaches across public health programs and services;

- Seeking opportunities to offer mental health promotion programs and services across the life course; and

- Seeking opportunities to implement whole-population and community-based interventions, particularly for cross-cutting issues.

    Ministry of Health and Long-Term Care. (2018). Mental Health Promotion Guideline, 2018

The COVID-19 pandemic has presented a need and opportunity to ensure that, as the COVID-19 pandemic evolves, with the potential for second wave and continuation and re-tightening of restrictions, that MLHU further enhance focus on mental health and well-being, with additional attention paid to specific groups most vulnerable to adverse mental health outcomes.

10.0 REDEPLOYMENT STRATEGY AND PREPARATION

As previously stated, the core program will be structured and resourced to respond to the initial two tiers of escalation. At the third tier, redeployment of staff from across the organization will once again be required.

Escalation to the third tier will require utilization of business continuity plans to ensure that the appropriate level of agency response and time-critical public health services can continue during an escalated COVID-19 response.

Considerations in business continuity and return to operations planning include (adapted from SMDHU Business Continuity Plan, Public Version, 2019):

- Staffing complement (FTE) necessary to carry out roles and functions (for redeployment to COVID-19 response and for prioritized public health services that remain in place during the pandemic);

- Certification and skill set necessary to carry out roles and functions (for redeployment to COVID-19 response and for prioritized public health services that remain in place during the pandemic);

- COVID-19 related training/refresher training and skill development for redeployed staff and for staff that continue to provide prioritized public health services;

- Potential recruitment of contract staff (for COVID-19 response and for prioritized public health services that remain in place during the pandemic);

- Surge capacity and seasonal demand for time-critical public health services that continue to be offered during the pandemic;

- Technology, tools and equipment needed to carry out services/functions;

- Service delivery modifications;

- Priority ratings (based on community need, impact, health equity, community capacity, implementation challenges, etc.) for public health interventions to return to operations

- Multiple dependencies that influence ability to maintain public health services and/or return to operations;

- Anticipated demand for public health services;

- Interdependencies between COVID-19 response functions and continuing time-critical public health services, and other public health programs and mandates; and

- Physical and psychosocial health and safety impacts on staff.

If a secondary incident or public health emergency were to arise requiring public health resources that are already being utilized, then the MOH, Senior Leadership Team and relevant IMS Committee will reassess the impacts of both incidents on all time-critical public health services and reassign and deploy staff as appropriate in order to manage both situations (SMDHU Business continuity plan).

11.0 COVID-19 RESOURCES

11.1 MLHU Website (www.healthunit.com/novel-coronavirus)

COVID-19 Guidance and Resources

Please click on the links below to find COVID-19 guidance and resources for the general public, health care providers and institutions, long-term care and retirement homes and workplaces and community settings.

General Public | Health Care Providers and Institutions | Long-Term Care and Retirement Homes | Workplaces and Community Settings | Schools and Child Care Centres

11.2 Provincial, Federal and International COVID-19 Websites

- Ontario Ministry of Health
- Public Health Ontario
- Public Health Agency of Canada
- U.S. Centers for Disease Control
- World Health Organization

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13.0 APPENDICES

Appendix A – COVID-19 and Initial MLHU Response

COVID-19 - Global Context

In January 2020, a novel coronavirus was identified as the cause of an outbreak of pneumonia originating in Wuhan, China. By January 23rd, cases had been identified in Thailand, Japan, South Korea, other cities in China, and the United States of America, all having a travel history to Wuhan China (WHO, January 23, 2020). On January 31, 2020, the World Health Organization (WHO) declared the outbreak to be a public health emergency of international concern and the day prior, the Emergency Committee on the novel coronavirus was convened (WHO, January 31, 2020).

On January 25, 2020, Canada confirmed its first presumptive case of the novel coronavirus related to travel to Wuhan, China. On February 20, 2020, Canada's first case related to travel outside of mainland China was confirmed, and on March 9, 2020, Canada confirmed its first novel coronavirus related death. The World Health Organization (WHO) declared novel corona virus (COVID-19) a global pandemic on March 11, 2020. With the WHO declaration of a pandemic, broad based public health measures were triggered. On March 13, 2020, the Canadian Government advised Canadians to avoid all non-essential travel outside of Canada and by March 16th any travelers entering Canada were advised to self-isolate for 14 days. On March 18th an announcement was made that the Canada-US border was closed to all non-essential visitors and the Canadian Government implemented a ban on all foreign nationals from all countries except the United States from entering Canada (Government of Canada, June 19, 2020).

The number of cases in Canada has increased rapidly: by April 28, 2020, Canada confirmed more than 50 000 COVID positive cases, and more than 2 000 deaths, and by mid-June there were over 100 000 cases in Canada with over 8 000 deaths (Government of Canada, June 19, 2020).

COVID-19 - Ontario Context

Novel Coronavirus was added as a reportable disease under Ontario's public health legislation on January 22, 2020 enabling prompt public health investigation, lab testing and case and contact management to prevent and control the spread of the virus (Ontario Newsroom, January 22, 2020).

Provincially mandated public health measures ensued: On March 12, 2020 the Ontario Government announced the closure of all public schools for the two weeks following March Break (Ontario Newsroom, March 12, 2020). The closure was later (May 19, 2020) extended for the remainder of the school year (Ontario Newsroom, May 19, 2020).

On March 17, 2020 a declaration of emergency under 7.0.1 (1) the *Emergency Management and Civil Protection Act* was made by the Government of Ontario legally requiring the closure of indoor recreational programs, public libraries, private schools, licensed child care centres, bars and restaurants excepting takeout and delivery, theatres, cinemas, concert venues, and placing a restriction on organized public events over 50 people (Ontario Newsroom, March 17 2020).The limit on social gatherings was later reduced to 5 people (March 28, 2020) and all non-essential businesses were required to close (Ontario Newsroom, March 28 2020). The state of emergency has subsequently been extended several times, with variation in the type and extent of mandated restrictions corresponding to changing trends in provincial COVID-19 case prevalence and transmission.

The number of cases in Ontario has changed quickly: by April 28, 2020, Ontario confirmed more than 15 000 COVID-19 positive cases, and more than 900 deaths, and by mid-June 2020 there were more than 33 000 cases in Ontario with over 2 500 deaths, with over half of these deaths being attributed to Long Term Care homes (Government of Ontario, June 19, 2020).

Although Ontario experienced an increase in cases over several months, modeling in mid-April showed signs the weekly average of new cases was decreasing due to enhanced public health measures. This prompted the Ontario Government to begin re-opening businesses using a three phased process and outlining parameters in place for businesses permitted to open (Government of Ontario, May 19, 2020). On June 8, 2020, the Ontario Government announced they will be moving forward with Stage 2 of re-opening Ontario based on promising indicators such as lower rates of transmission, increased capacity in hospitals, and progress made in testing. Stage 2 of re-opening Ontario permitted additional businesses to open with public health measures in place and increased the limit on social gatherings to 10 (Ontario Newsroom, June 8 2020). The Ontario Government continues to monitor regional and provincial situations and will either continue to reopen businesses or reapply certain public health measures to manage the spread of COVID-19.

Activation of IMS Structure and Operational Response

MLHU activated the IMS system under the premise that Canada had its second case of the novel coronavirus, human-to-human transmission had been confirmed in multiple countries, and the trajectory of the epidemic was steep. Although the risk level in the community was low at that point, the purpose of activating the IMS was to clarify roles, create meeting cycles and structure, and to allow for clear decision making and tracking of operational objectives.

MLHU conducted surveillance activities to monitor the situation locally and began frequent communications with federal and provincial stakeholders to keep informed on the developments of the virus. The Infectious Disease Control Team at MLHU was preparing for probable and confirmed cases to come to Middlesex-London.
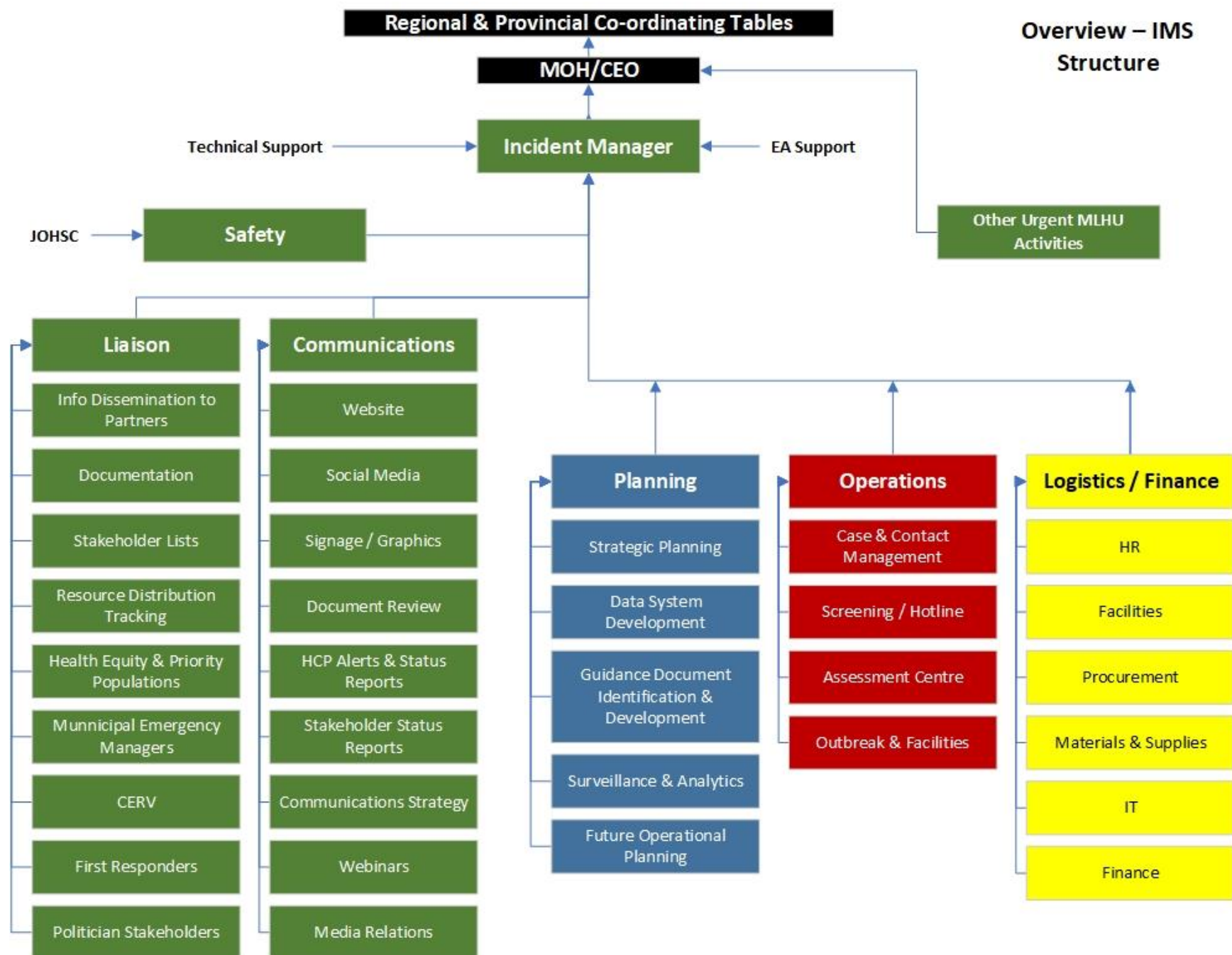
Once cases were increasing in Canada and locally, MLHU moved into the next phase of the Health Unit's local response and began ramping up IMS activities including deploying a small number of staff to help with the response. MLHU hosted a large meeting that drew together local stakeholders and decision makers, local hospitals, post-secondary education, the English and French language school boards, as well as police, fire and emergency services. Sentinel surveillance was conducted to determine the presence of the virus within Middlesex-London and if community transmission was occurring. This data identifies trends, outbreaks and monitors the burden of disease.

On March 16, 2020, shortly after the WHO declared COVID-19 as a pandemic (Phase 6), MLHU moved into full IMS mode. All non-urgent work ceased and most MLHU staff were seconded to support COVID related work. Staff were placed in positions within the IMS structure to help with the COVID response. As we move into post peak in Ontario and locally, surveillance activities continue to track virus activity and provide insight on actions and resources needed for the COVID response, including planning and preparation for the second wave.

The incident management system (IMS) is an international practice that encourages organizations to

work together effectively to manage multi-jurisdictional incidents while improving communication, coordination and optimization of resources to facilitate cooperation and coordination between agencies.

The Ministry requires Boards of Health to incorporate concepts consistent with IMS into emergency response plans in accordance with the Emergency Management Guideline (2018). As such, MLHU adopted the IMS model at the outset of the COVID-19 Pandemic once response demands exceeded capacity of existing infectious disease management structures.

Overview – IMS Structure

Regional & Provincial Co-ordinating Tables

MOH/CEO

Incident Manager

Technical Support →

← EA Support

JOHSC →

Safety

Other Urgent MLHU Activities

Liaison
- Info Dissemination to Partners
- Documentation
- Stakeholder Lists
- Resource Distribution Tracking
- Health Equity & Priority Populations
- Munnicipal Emergency Managers
- CERV
- First Responders
- Politician Stakeholders

Communications
- Website
- Social Media
- Signage / Graphics
- Document Review
- HCP Alerts & Status Reports
- Stakeholder Status Reports
- Communications Strategy
- Webinars
- Media Relations

Planning
- Strategic Planning
- Data System Development
- Guidance Document Identification & Development
- Surveillance & Analytics
- Future Operational Planning

Operations
- Case & Contact Management
- Screening / Hotline
- Assessment Centre
- Outbreak & Facilities

Logistics / Finance
- HR
- Facilities
- Procurement
- Materials & Supplies
- IT
- Finance

Brief descriptions of the roles within the IMS structure are described below.

Table 1: COVID-19 First Wave IMS Structure	
Incident Commander (AMOH)	• Operationalized MLHU's response to escalating COVID-19 prevalence in the community; • Determined local pandemic strategy, and in consultation and approval from the MOH, implement said strategy; • Determined planning cycle timelines and objectives for the response • Provided technical advice and guidance to case and outbreak management; • Approved major and significant decisions relevant to overall redeployment response, in consultation with Senior Leadership Team and the MOH; • Appropriately delegated other decisions within the redeployment response; • In conjunction with the MOH, provided timely situational awareness for the organization and community; and • In conjunction with the MOH, liaised with the Ministry of Health, health care sector, and public health sector.
Liaison	• Maintained situational awareness with COVID-19 stakeholders in accordance with the level of interest and influence to support community adaptation of COVID-19 prevention measures; • Assessed the COVID-19 risks for priority populations and ensured plans were in place to address health inequities; and • Informed Incident Commander of actions taken in conjunction with other agencies.
Health and Safety	• Ensured COVID-19 operations comply with the Occupational Health and Safety Act and the applicable regulations: • Ensured the wellbeing and health and safety of MLHU employees, volunteers, students and visitors by assessing risks and implementing protection measures through hazard identification and control (i.e. Engineering (physical barriers) and administrative controls (active screening, policies and training) and Personal Protective Equipment) that supported MLHU operations in a COVID-19 pandemic environment; • Engaged the Be Well Committee in applicable wellness programming and communications to enhance employee wellness; and • Engaged the Joint Occupational Health and Safety Committee in the assessment and mitigation of COVID-19, pandemic risks.
EOC Documentation	• Documentation and storage/filing of all COVID-19, Pandemic outbreak activities within the EOC folder S:MLHU/EOC and assisted with EOC setup.

Table 1: COVID-19 First Wave IMS Structure	
Planning (Surveillance & Reporting)	• Coordinated, managed and analyzed the collection of COVID surveillance data and information; • Developed epidemiological reports to inform Incident Command and other internal stakeholders; • Monitored trends in the incidence and prevalence of COVID to identify new or unrecognized exposures or risk factors; • Completed consolidated summary reports and Incident Action Plan and maintained incident documentation; and • Provided guidance to Incident Commander on activities to prevent or slow the spread of COVID-19.
Operations	• Coordinated and oversaw the COVID-19 Hot Line activities; • Coordinated and oversaw the activities of the COVID-19 Case and Contact Management; • Coordinated and oversaw the Outbreak and Facilities activities and • Initiated strike teams to address the needs of priority populations to address public health inequities.

Logistics/Finance	• Prepared and maintained facilities for expanded hours and implemented COVID-19 prevention measures;
	• Procured, distributed and maintained supply chain to support COVID-19 operations including:
	   o PPE
	   o Testing Swabs
	   o Technical Hardware
	• Developed staffing plans to support COVID-19 operations;
	• Developed, implemented, and supported technology infrastructure for COVID-19 operations; and
	• Monitored the cost of COVID-19 operations and number of hours worked by employees for each operational period.

Communication	• Ensured accurate and timely communication of COVID-19 to staff, community stakeholders and to the public; • Developed public and stakeholder information and maintained and supported media relations related to COVID-19; and • Ensured staff are using accurate and consistent messaging with their stakeholders, partners and specific audiences.

Activation of Business Continuity Plan

At the beginning of the COVID-19 emergency, MLHU's plans for deployment and business continuity were activated by the MOH and IMS Committee. Non-critical public health programs were stopped or reduced, new functional structures, teams and processes were developed, and many staff were redeployed to the COVID-19 response.

Throughout the response constant assessment of response needs has occurred with staffing assignments and structures evolving to meet shifting demands.

While a significant number of staff were deployed directly to the operational COVID response, and components of many public health programs and interventions were put on hold, several critical public health services have continued, recognizing that ensuring urgent public health services remain available is critical for the health of our community. All programs, however have needed to implement adjustments in services and processes within the COVID-19 pandemic to prioritize need, maintain client and staff safety and conserve personal protective equipment for when and where it is needed most.

Clinical services that remain in place during the pandemic include: TB clinics and direct observed therapy; vaccine distribution and Immunization Clinic; Family Planning and STI Clinics, dispensary, and needle exchange; Outreach; breastfeeding home visits; Healthy Babies, Health Children and Nurse Family Partnership Family Home Visits; Healthy Smiles Ontario Emergency and Essential Services (HSO-EESS) Clinic, and the smoking cessation Quit Clinic. Modification included adjustments in frequency of and hours of service, use of phone OTN as default with in-person care when needed. Each of these services engages in active screening, point-of-care risk assessment, and the appropriate use of personal protective equipment (MLHU BOH report, April 16, 2020).

Urgent tobacco enforcement, public health inspections and consultations, and other prioritized environmental health services continue, with processes adjusted as needed to ensure employee and community member safety. Processes in receiving have also been altered to ensure staff and courier safety, and staff and clients interacting at reception are protected by a physical barrier. All continuing programs and services, while not officially deployed to COVID-19 work, have occurred through a COVID-19 lens (MLHU BOH report, April 16, 2020).

Appendix B - Proposed COVID-19 Program Staffing and Budget

The proposed COVID-19 program will be structured for a tiered response to escalating levels of COVID-19 prevalence in the community. The core program will be structured and resourced to respond to the initial two tiers of escalation. At the third tier, redeployment of staff from across the organization will once again be required. The staffing scenarios below outline the assumptions that were used to propose the number of staff required. The variables include workday length, case complexity, new cases per day, total active cases, contacts per case, call frequency and time to complete each task.

Core Program Components and Interventions

Case and Contact Management

Case and contact management are specialized skills that public health staff use in an investigation of any confirmed COVID-19 case. Case investigation is the identification of any person with confirmed and probable diagnoses of COVID-19 (cases). The management of the case begins with a thorough interview to determine and identify close contacts (contact tracing) using a series of questions and data collecting methods so that information can be documented in a case and contact management tool. Contract investigation or contact tracing is the identification, monitoring and support of the individuals or contacts, who have been exposed to the case and possibly infected themselves. This process prevents further transmission of disease by separating people who have or may have an infectious disease from people who do not.

Outbreak Management

The COVID-19 Program would support all COVID-19 outbreak investigations and management. Ongoing support of facilities such as long-term care homes or child care facilities would be responsibility of the Infectious Disease Control (IDC) team. However, upon identification of a COVID-19 case in a facility, a case investigator from the COVID-19 program would partner with the IDC investigator to support the management of an outbreak.

Screening, Assessment and Testing

The COVID-19 Program will be required to support screening initiatives, assessment centres, and testing policy. The program will also oversee and update all relevant medical directives related to testing.

Planning and System Coordination

The COVID-19 Program will participate in internal and external planning for a COVID-19 resurgence, including the possibility of mass immunization.

Internally, the COVID-19 Program would be responsible for developing an escalation plan and surge protocols in the instance of increased COVID-19 prevalence. The program would also develop and support the training of other MLHU staff in anticipation of potential redeployment.

Externally, the COVID-19 Program would work with partners in the health sector to assist in system coordination and planning.

Liaison and Community Support

The COVID-19 program will be responsible for liaison and consultation with non-health sector partners regarding COVID-19. The program will also act as a resource for others in the Health Unit who have pre-existing relationship with external partners and are called on to provide COVID-19 guidance.

The COVID-19 program will also provide Tier Two telephone support for general inquiries from the public. The Client Service Representatives (CSR) will be the first line of contact for the public calling about COVID-19. Following a screening by the CSR, the caller will either be provided with the information or transferred to the Tier Two level support.

Scientific and Technical Support

The COVID-19 Program will collate, review, interpret, and translate all relevant research, policy, and guidelines. The program will be responsible for providing scientific and technical support internally and externally. This will inform the implementation of public health measures locally.

Program Staffing Model

Organizational Structure

```
                    Medical Officer of
                         Health
                            │
                            ▼
                    Associate Medical
                    Officer of Health
                            │
                            ▼
                    Manager, COVID-19
          ┌─────────────────┼─────────────────┐
          ▼                 ▼                 ▼
      Supervisor        Supervisor        Supervisor


  Case Investigators,  Case Investigators,  Health Promotion
       Team A               Team B            Specialist


    Contact Tracers,    Contact Tracers,    Program Assistants
       Team A               Team B
```
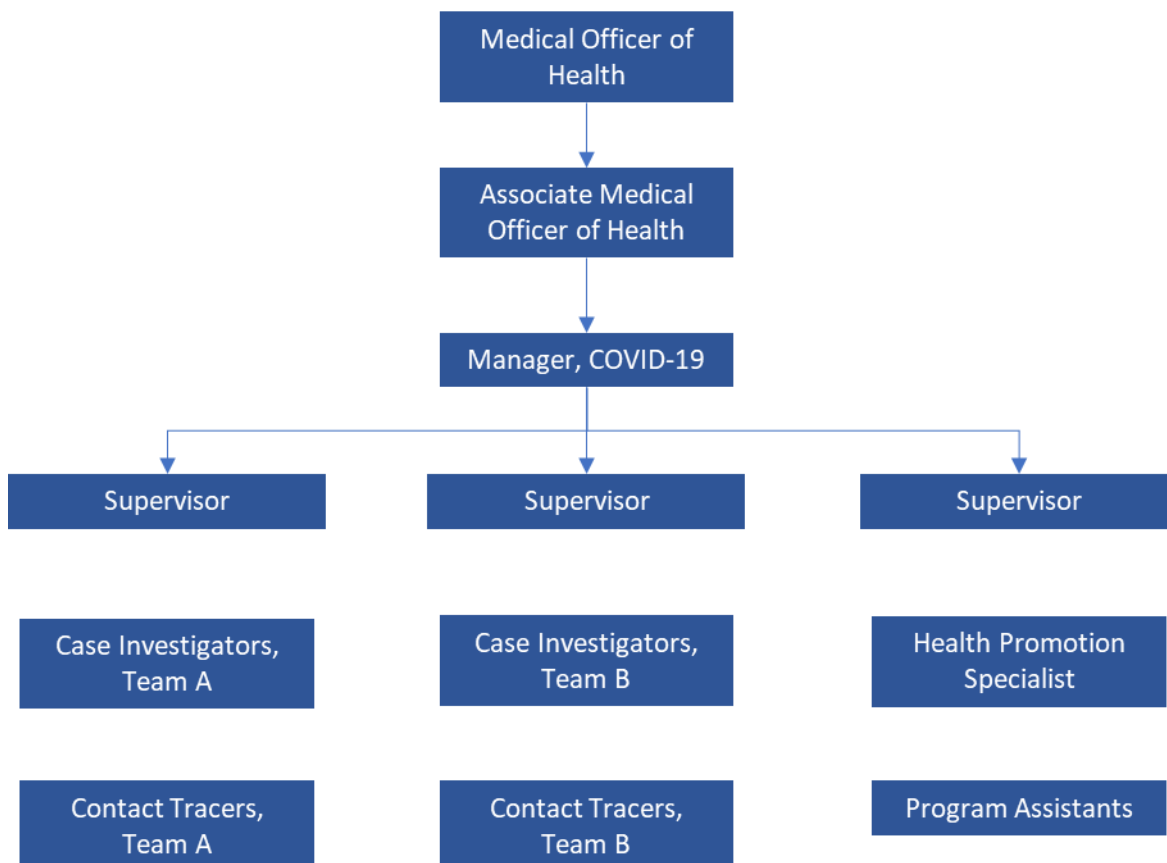
Position Descriptions

Position	Description
Medical Officer of Health	The Medical Officer of Health will continue to act as the primary external liaison with senior government and health sector leaders and will provide strategic direction to the COVID-19 program. These responsibilities may be delegated to the AMOH.
Associate Medical Officer of Health	The Associate Medical Officer of Health will provide strategic and operational direction for the COVID-19 program, in addition to medical, technical, and scientific advice. The AMOH will also oversee surveillance activities.
Manager, COVID-19	The COVID-19 Manager will provide leadership of the COVID-19 Program by setting operational goals and objective, monitoring performance, and providing constant oversight of operational objectives. In collaboration with Supervisors, the Manager will identify and address issues, challenges, and opportunities. The Manager provides overarching performance management of all members of the COVID-19 team using constant feedback from the Supervisors. The Manager will also be responsible for ensuring that each intervention is appropriately staffed to reflect changing priorities.
Supervisor, COVID-19	The COVID-19 Supervisors are responsible for the delivery of assigned interventions within the COVID-19 Program. The interventions are assigned at the discretion of the Manager and the Supervisor is responsible for the effective delivery of assigned interventions. This includes regular and robust oversight and reporting on the performance of the intervention and of staff, including participation in necessary performance management and discipline. Supervisors will be responsible for ensuring that program staff are following required documentation and data collection practices through the regular review of case documentation and running reports from case management databases and tools. The Supervisors are also responsible for providing consultative support and guidance to Case Investigators and Contact Tracers who encounter difficult or complex cases and contacts. They will also mentor, coach and provide feedback on performance. The Supervisors are also responsible for the day-to-day scheduling and attendance management of the staff assigned to their interventions.
Case Investigator	The Case Investigator is responsible for all aspects of Case and Contact Management. They will work collaborative with Contact Tracers to ensure that follow-up targets are met. This includes that complete and accurate use of COVID-19 tools. This role also acts to support cases and contacts with other social supports that may be required.

Contact Tracer	The Contact Tracers will provide follow-up phone calls to contacts of cases and, in the event of a Level Three – Redeployment Surge, will participate in case follow-up. Contact Tracer are to be used upon activation of Level Two – Program Surge. Contact tracers would be drawn from a pool of casual staff. Consideration will need to be given for initial training, ongoing communication and support at Level One – Baseline. Strong consideration should be given to having a pool of Contact Tracers with a wide range of fluent languages.
Program Assistant	The Program Assistant supports all administrative needs of the COVID-19 Program which include but are not limited to monitoring of lab results being received by fax, reconciling data and preparing lists for case investigators, and ensuring that reporting to provincial reporting systems are complete.
Health Promotion Specialist	The Health Promotion Specialist provides direct support to the Supervisors and Manager. This includes the identification, review and implementation of new guidance documents and evidence. This role will work closely with other Foundational Standards supports to ensure that the best practices for COVID-19 are being implemented in Middlesex-London.

Program Parameters

- Level One – Baseline
  - At Level One, the following parameters apply:
    - Maximum 2 new cases/day
    - Total of 30 active cases
    - Minimal institutional outbreaks
    - Hours of Operation
      - Monday to Friday
      - 9am to 5pm
    - 24 hour on-call with weekend on call from Friday at 5pm to Monday at 9am

	Length of Workday (in minutes)	Meetings / Handoffs	Case and Contact Follow-up	Documentation and Review	Consultation with Team	Other
% of Day	--->	15%	55%	20%	5%	5%
Case Investigators	390	58.5	214.5	78	19.5	19.5
Contact Tracer	390	58.5	214.5	78	19.5	19.5

Assumptions

2	New Cases Per Day		Hr / Day	7
30	Total Active Cases		Days / Week	5
20	Contacts Per Case		Staffing Factor	1
600	Total Active Contacts		% of Cases that are high risk	50%
			% of Contacts that are high risk	50%

Case Investigation First Call	60			
Case Follow-up - High Risk	45		**Minimum viable staff per day**	**Total FTE**
Case Follow-up - Low Risk	30		**Case Investigator**	**19.6**	**19.6**
Case Discharge	30		**Contact Tracer**	**0.0**	**0**
Contact Follow-up - High Risk	15			
Contact Follow-up - Low Risk	15			

Type of Call	Who Calls	Proportion of Calls	Calls in 14 day period	# per day	Minutes per day
Case Investigation First Call	Case Investigator	100%	1	2.0	120.0
Case Follow-up - High Risk	Case Investigator	50%	12	12.9	578.6
Case Follow-up - Low Risk	Case Investigator	50%	7	7.5	225.0
Case Discharge	Case Investigator	100%	1	2.0	60.0
Contact Follow-up - High Risk	Case Investigator	50%	7	150.0	2250.0
Contact Follow-up - Low Risk	Case Investigator	50%	3	64.3	964.3

Level Two – Program Surge

- o At Level Two, the following parameters apply:
  - ▪ Maximum 5 new cases/day
  - ▪ Total of 70 active cases
  - ▪ A small number of institutional outbreaks
  - ▪ Hours of Operation
    - • Seven days per week
    - • 9am to 8pm
- o Case Investigator capacity would be maximized before mobilization of contact tracers

	Length of Workday (in minutes)	Meetings / Handoffs	Case and Contact Follow-up	Documentation and Review	Consultation with Team	Other
	--->	15%	55%	20%	5%	5%
Case Investigators	570	85.5	313.5	114	28.5	28.5
Contact Tracer	570	85.5	313.5	114	28.5	28.5

Assumptions					
5	New Cases Per Day		Hr / Day		10
70	Total Active Cases		Days / Week		7
10	Contacts Per Case		Staffing Factor		2
700	Total Active Contacts		% of Cases that are high risk		50%
			% of Contacts that are high risk		50%
Case Investigation First Call	60				
Case Follow-up - High Risk	45		Minimum viable staff per day		Total FTE
Case Follow-up - Low Risk	30		Case Investigator	7.4	14.8
Case Discharge	30		Contact Tracer	12.0	23.9
Contact Follow-up - High Risk	15				
Contact Follow-up - Low Risk	15				

Type of Call	Who Calls	Proportion of Calls	Calls in 14 day period	# per day	Minutes per day
Case Investigation First Call	Case Investigator	100%	1	5.0	300.0
Case Follow-up - High Risk	Case Investigator	50%	12	30.0	1350.0
Case Follow-up - Low Risk	Case Investigator	50%	7	17.5	525.0
Case Discharge	Case Investigator	100%	1	5.0	150.0
Contact Follow-up - High Risk	Contact Tracer	50%	7	175.0	2625.0
Contact Follow-up - Low Risk	Contact Tracer	50%	3	75.0	1125.0

- Level Three – Redeployment Surge
  - At Level Three, the following parameters apply:
    - \> 5 new cases/day
    - A substantial number of institutional outbreaks
    - Hours of Operation
      - Seven days per week
      - 9am to 8pm
    - Redeployment of MLHU staff required

	Length of Workday (in minutes)	Meetings / Handoffs	Case and Contact Follow-up	Documentation and Review	Consultation with Team	Other
	--->	15%	55%	20%	5%	5%
Case Investigators	570	85.5	313.5	114	28.5	28.5
Contact Tracer	570	85.5	313.5	114	28.5	28.5

Assumptions					
10	New Cases Per Day		Hr / Day		10
140	Total Active Cases		Days / Week		7
5	Contacts Per Case		Staffing Factor		2
700	Total Active Contacts		% of Cases that are high risk		50%
			% of Contacts that are high risk		50%
Case Investigation First Call	60				
Case Follow-up - High Risk	45		Minimum viable staff per day		Total FTE
Case Follow-up - Low Risk	30		Case Investigator	14.8	29.7
Case Discharge	30		Contact Tracer	12.0	23.9
Contact Follow-up - High Risk	15				
Contact Follow-up - Low Risk	15				

Type of Call	Who Calls	Proportion of Calls	Calls in 14 day period	# per day	Minutes per day
Case Investigation First Call	Case Investigator	100%	1	10.0	600.0
Case Follow-up - High Risk	Case Investigator	50%	12	60.0	2700.0
Case Follow-up - Low Risk	Case Investigator	50%	7	35.0	1050.0
Case Discharge	Case Investigator	100%	1	10.0	300.0
Contact Follow-up - High Risk	Contact Tracer	50%	7	175.0	2625.0
Contact Follow-up - Low Risk	Contact Tracer	50%	3	75.0	1125.0

Appendix C – Proposed Enhancements to Existing Programs

The programs highlighted below are those which require additional staffing enhancements and augmentation to support a sustained COVID-19 response. Other programs requiring enhancement may be determined through further discussions.

Public Health Programs

Infection Prevention and Control

Role	Proposed FTE	Rationale for Enhancement
Public Health Inspector / Public Health Nurse	5.0	To support increase infection prevention and control in regulated facilities, additional staffing is required.
Program Assistant	1.0	To support increased administrative work.

Community Outreach

Role	Proposed FTE	Rationale for Enhancement
Public Health Nurse	1.0	To support liaison and infection prevention and control capacity building in shelters and amongst people experiencing homelessness.

Environmental Health

Role	Proposed FTE	Rationale for Enhancement
Public Health Inspector	2.0	To support liaison and infection prevention and control capacity building among vulnerable occupancies, such as migrant farm communities and rooming homes.

Foundational Standards

Communications

Role	Proposed FTE	Rationale for Enhancement
Communications Coordinator	1.0	To support increase communication demands relevant to COVID-19

Population Health Assessment and Surveillance

Role	Proposed FTE	Rationale for Enhancement
Epidemiologist	1.0	To support ongoing surveillance and data analytic requirements for COVID-19

Program Planning and Evaluation

Role	Proposed FTE	Rationale for Enhancement
Program Evaluator	0.5	To support enhanced COVID-19 program planning, implementation, and evaluation, in addition to tool development and deployment

Healthy Organization

Human Resources

Role	Proposed FTE	Rationale for Enhancement
Human Resources Coordinator	1.0	To provide continued support for the HR hotline and increased recruitment
Occupational Health and Safety Specialist	1.0	To respond to heightened COVID-19 occupational health and safety measures

Finance

Role	Proposed FTE	Rationale for Enhancement
Payroll and Benefits Coordinators	0.5	To support increased finance demands for non-traditional payroll

Clinic Support Services

Role	Proposed FTE	Rationale for Enhancement
Client Service Representative	2.0	To support active screening and Level One COVID-19 telephone support

Procurement and Operation

Role	Proposed FTE	Rationale for Enhancement
Shipping and Receiving Coordinator	1.0	To support centralized PPE inventory management, swab management, and PPE procurement and ordering