TORONTO

REPORT FOR ACTION

Response to COVID-19: Update on resurgence

Date: October 6, 2020
To: Board of Health
From: Medical Officer of Health
Wards: All

SUMMARY

At its September 21, 2020 meeting, the Board of Health received a report outlining Toronto Public Health's (TPH) plans for a resurgence of COVID-19 in the fall, including activities and recommendations required to strengthen readiness. Since that time, there has been a significant and marked surge in reported cases, focused among younger individuals who live and/or socialize in downtown neighbourhoods. This demographic shift compared to the first wave, has so far, resulted in limited increases in cases requiring hospitalization mitigating somewhat the strain on health care services.

As part of the planning for the resurgence, TPH developed or adopted a series of epidemiological methods to gather the evidence for who is being affected by COVID-19, and on the risks identified in those cases for COVID-19 transmission. This report makes recommendations and identifies strategies for a targeted COVID-19 response based on this evidence. A brief outline of methods used to generate this information is also provided.

In addition to this work, at its July 2, 2020 meeting, the Board of Health requested TPH to consult with groups that have been disproportionately affected by COVID-19, identify the impacts being experienced by these groups, and recommend actions for the City of Toronto and its governmental partners to reduce these impacts. During the summer of 2020, TPH staff held a series of consultation sessions with Toronto's 13 COVID-19 Community Cluster tables where over 140 non-profit organizations were represented, including ten regional community tables, the Black Resilience table for African, Caribbean and Black serving organizations and the Indigenous Serving Organizations table. This report includes the recommendations resulting from these consultations.

Finally, this report also provides updated modelling for the City of Toronto. The most basic indicator that can provide information on the growth of the outbreak is the effective reproductive number R(t). It represents the average number of new cases per current infectious case and is used to predict the growth of the outbreak. Toronto's current R(t) is 1.2, which suggests a significant acceleration of case growth without additional steps to respond and limit transmission.

RECOMMENDATIONS

The Medical Officer of Health recommends that:

1. City Council and the Board of Health urge the Ontario Ministry of Health to ensure that the new provincial software, Case and Contact Management (CCM), meets all the needs of Toronto Public Health as determined by the Medical Officer of Health and facilitates cluster identification to target interventions and restrictions.

2. City Council and the Board of Health urge the Ontario Ministry of Health to conduct case control studies using the data collected by public health units across the province to inform decision-making through the pandemic going forward.

3. City Council and the Board of Health urge the Federal and Provincial Governments to mitigate the impacts of COVID-19 on groups that have been disproportionately affected by COVID-19 by funding and accelerating the implementation of existing strategies related to the social determinants of health, including affordable housing, eliminating homelessness, poverty reduction, food security, overdose prevention, anti-Black racism, and Indigenous health and well-being, as recommended in Attachment 1.

4. The Board of Health request the Medical Officer of Health to review and action the full set of recommendations in Attachment 1, as appropriate, including:

a. Consulting with City divisions and agencies to collaborate with community partners in order to plan and implement the short-term actions listed in Attachment 1, including:

1. Creating more accessible public health information;
2. Building community agency support;
3. Increasing community testing and health access;
4. Advocating for income supports and eviction protection;
5. Supporting effective isolation;
6. Overdose prevention and harm reduction; and
7. Supporting people experiencing homelessness.

b. Consulting with City divisions and agencies to collaborate with community partners in order to plan and implement the long-term actions listed in Attachment 1, including:

1. Comprehensive poverty reduction, including universal guaranteed basic income;
2. Safe, high quality, and affordable housing, including supportive housing;
3. Food security, including access to healthy and culturally appropriate food;
4. Better wages, benefits and protections for workers, including migrant workers; and
5. Equity for Black and Indigenous communities, as well as other populations that experience systemic discrimination.

c. Collaborating with community organizations and health care partners in developing a "social needs assessment" process with appropriate funding and resources to ensure wrap-around supports;

d. Continuing to release disaggregated COVID-19 socio-demographic data and include information on how the City plans to take action in collaboration with impacted communities; and

e. Conducting additional consultation with the Indigenous Serving Organizations cluster table on the impacts of COVID-19.

FINANCIAL IMPACT

There are no financial impacts resulting from the adoption of the recommendations in this report.

DECISION HISTORY

On September 21, 2020 the Medical Officer of Health delivered a report and presentation to the Board of Health on the Response to COVID-19: Reopening and Preparations for a Potential Resurgence.
http://app.toronto.ca/tmmis/viewAgendaItemHistory.do?item=2020.HL20.1

On July 26, 2020, the Medical Officer of Health delivered a Supplementary Report to City Council on Establishing a COVID-19 Isolation Site.
http://app.toronto.ca/tmmis/viewAgendaItemHistory.do?item=2020.HL18.1

On July 2, 2020, the Medical Officer of Health delivered a report and presentation to the Board of Health on an update regarding COVID-19.
http://app.toronto.ca/tmmis/viewAgendaItemHistory.do?item=2020.HL18.1

On June 8, 2020, the Medical Officer of Health delivered a report and presentation to the Board of Health regarding the City of Toronto's COVID-19 Response and Recovery.
http://app.toronto.ca/tmmis/viewAgendaItemHistory.do?item=2020.HL17.1

On May 7, 2020, the Medical Officer of Health delivered a presentation at a special meeting of the Board of Health.
http://app.toronto.ca/tmmis/viewAgendaItemHistory.do?item=2020.HL16.2

COMMENTS

At its September 21, 2020 meeting, the Board received a summary of key findings from the first wave of the pandemic in Toronto. This provided members of the Board with an overview of reported case characteristics, sources of infection, and the impact of COVID-19 on the health of those infected. Since that time, Toronto Public Health (TPH) has continued to enhance methods used to track a number of additional indicators and measures, to further understand case activities and to estimate the magnitude of potential subsequent waves of COVID-19 in Toronto.

Epidemiological methods

Demographic Details

During the first wave of the COVID-19 pandemic, a large proportion of illness was associated with residents of long-term care homes and resulted in a concentration of cases in older Torontonians. Toronto is now seeing a resurgence of cases within a changed context: most businesses are operating, schools have reopened, and there has been increasing evidence that the virus is circulating within neighbourhoods with a contrasting demographic profile to what was observed in the spring. Cases are now being identified in much younger individuals. The proportion of cases under 40 years of age has grown considerably to 50 percent in the last month, from 35 percent during the first wave. This change is further reflected in both recent deaths and the proportion of cases being hospitalized, which have decreased dramatically. In the last two weeks of September, fewer than 3 percent of cases were hospitalized, compared to 12 percent for the first wave. There have been 5 deaths reported in this same time period.

Source of Infection Information

Another fundamental focus of epidemiological investigations is ascertaining a source of infection. Understanding the transmission of the virus through the specific activities and contacts made during the 14 days prior to symptoms, is vital to recognizing how individuals are getting sick. This information is used to identify actions and strategies that are necessary to reduce the risk of subsequent spread, and to slow down the outbreak. The infectiousness of the virus has been confirmed through a substantial proportion of cases being identified as close contact with a known case, including household contacts. This proportion has remained steady throughout the pandemic at approximately 60 percent and the proportion of these cases that are identified as household contacts has also remained steady at 45 percent (or 26 percent of all cases). This trend led TPH to initiate the establishment of a voluntary isolation centre, which houses individuals who might have difficulty finding a way to isolate at home, and ultimately can reduce the risk of this type of transmission.

Case-Control Studies

Once a substantial number of individuals are infected and hypotheses can be generated on the relative risks of behaviours, settings and activities leading to infection, one epidemiologic strategy is to conduct a case-control study. This is commonly used to investigate food poisoning investigations and developed to identify the food most likely causing the outbreak. For COVID-19 transmission, a case-control study can be used to identify which activities from cases placed them at increased risk of infection. By comparing the activities of a group of cases to those of a similar (matched on age and neighbourhood) group of individuals known to be negative for the virus, those activities that significantly differed between the two groups can be identified. TPH has initiated this type of study and this report recommends that the Ministry of Health take a similar approach to studying the virus in order to support future decision-making.

Additional methods that go beyond routine data collected for the purposes of case and contact management are being piloted and adopted by TPH to enhance information

available for an effective COVID-19 response. Some of these added methods include:

Mobility Data

The best available evidence shows that COVID-19 spreads primarily as a result of close contact between an infected individual and a susceptible one. Mobility data available to cell phone companies can be anonymously used to understand the movement of groups of people across different parts of the city, and can provide important information related to the risk of exposure to COVID-19. For example, retrospective summaries of these data showed that individuals living in the City's northwest continued to move about at approximately the same rate throughout the pandemic, while movement patterns in more affluent areas suggested those residents were more likely to stay at home. One explanation is that there has been a continued need for individuals in lower income communities to leave their homes to attend work, which is an expectation of many essential workers. Moreover, cell phone mobility data can show us the distance travelled to or from a gathering that may be considered high risk for exposure to COVID-19,and provides us with a better understanding of the characteristics of and how to reach the population who may have been most impacted.

Survey to Understand the Impact of the Pandemic on Behaviours and Health

It is believed that the pandemic has had profound impacts on the behaviours of many residents and their health, beyond illness caused by the infection. Some of those behaviours have been the focus of TPH's messaging, such as reducing contact with others, hand washing and wearing masks or face coverings. The range of potential health impacts are concerning and can include effects that have been seen in other jurisdictions, such as substance use and worsening of chronic conditions (add citation), increased anxiety, a reduction in overall mental health and wellbeing. These can relate to the health threat of the pandemic and/or relate to the financial pressures resulting from closures and associated job losses. Understanding how the population is adopting protective behaviours or handling health impacts is an important input to decisions around additional measures that may be undertaken. TPH will be conducting a survey (third party, statistically representative sample) this fall to gauge the extent that people have changed their behaviours and to better assess the impact of the pandemic on their overall health and lives so far. The results of this work will be shared with the Board of Health.

Consultations with Groups Disproportionately affected by COVID-19

At its July 2, 2020 meeting, the Board of Health (BOH) requested that TPH consult with groups that have been disproportionately affected by COVID-19, identify the impacts being experienced by these groups, and recommend actions for the City of Toronto and its governmental partners to reduce these impacts. During the summer of 2020, TPH staff held a series of consultation sessions with Toronto's 13 COVID-19 Community Cluster tables, including:

- Ten regional community tables
- City-wide table
- Black Resilience table for African, Caribbean and Black serving organizations

- Indigenous Serving Organizations table

Cluster tables are part of Toronto's COVID-19 Community Coordination Plan. The tables bring together a cross-section of non-profit organizations in Toronto to identify urgent community needs and coordinate rapid solutions. A total of 140 organizations were represented in the consultation sessions.

Consultation Findings

Across all consultation sessions, participants stated that COVID-19 has laid bare and exacerbated long-standing systemic inequities related to poverty, racism, and other forms of discrimination.

Inequitable access to the social determinants of health has provided favourable conditions for COVID-19 to spread in populations already marginalized by existing inequities, particularly Indigenous, Black, racialized and low-income communities.

A variety of unintended consequences emerged from COVID-19 public health measures, including: worsening social isolation, food insecurity, unemployment, drug overdose, and violence, as well as limited access to essential health and social services.

The full report, *COVID-19 and the Social Determinants of Health: Community Consultation Report*, can be found in Attachment 1.

Modelling

Throughout the pandemic, the public has been looking for guidance on what lies ahead. Through modelling, experts can take the current situation and project various scenarios into the future. It is important to note that while all models are simply hypothetical, some can be quite useful. They can show what is likely to occur if certain actions are taken using assumptions that have been validated in other jurisdictions or through studies of other viruses. During wave 1, several models were created but with limited knowledge of the virus, they had many shortcomings. Now with more extensive knowledge of the virus and its impact on health such as the proportion of asymptomatic cases, models will have more validated assumptions to support their predictions.

Future Outlook

The most basic indicator that can provide information on the growth of the outbreak is the effective reproductive number R(t). It represents the average number of new cases per current infectious case and is used to predict the growth of the outbreak. Toronto's current R(t) is 1.2, which suggests a significant acceleration of case growth without additional steps to respond and limit transmission. Attachment 2 shows the potential trajectory of several R(t) values, and how early interventions can dramatically reduce the peak and total case counts. This is why there is an urgent need for public health measures to be adopted as early as possible in Toronto. Modelling data also can help us predict the impact of various levels of COVID-19 activity on the health system. Attachment 3 shows what might be expected if an R(t) of 1.2 is maintained through the

imposition of various public health measures. This is important as preserving our health system is an important goal of our pandemic response.

Changing the Course of the Fall Resurgence

There are several interventions and measures that have already been adopted in the most recent weeks, and others are being considered to curb the growing rate of recent cases.

With the added goal of maintaining a healthy economy, the source of recent clusters of illness and outbreaks must be addressed. Recent additional measures such as lowering the number of patrons that can sit together in a restaurant and reducing the noise of music in restaurants and ensuring that all patrons provide their contact information will assist with contact tracing efforts and reducing the likelihood of transmission in these establishments. Beyond the hospitality industry, a variety of other workplaces have also experienced outbreaks, sometimes with many cases. TPH is working with the Ministry of Labour, Training and Skills Development to ensure, for example, both pro-active inspections of workplaces and also support for businesses, particularly small businesses who may not have the resources to support their employees optimally.

TPH's response to the pandemic will continue to be informed by data, the review of the experience of other jurisdictions and the professional judgement of the health professionals working on the response.

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SIGNATURE

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Medical Officer of Health

ATTACHMENTS

Attachment 1: COVID-19 and the Social Determinants of Health: Community Consultation Report

Attachment 2: Estimated number of infections based on potential values of R(t)

Attachment 3: Estimated number of infections at R(t) 1.2