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Sent: 2020-10-29 8:33 AM
To: gphin / rmisp (PHAC/ASPC)
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Good morning,

Please find below the daily Summary and articles collected by GPHIN for your review and risk assessment.

GPHIN Daily Report Email Summary

Special Section on Coronavirus

[Canada \(Update\) - Coronavirus disease \(COVID-19\) Outbreak](#) (Official)

As of 28 October 2020 at 19:00 EDT, a total of 225,586 cases have been recorded in Canada including 10,032 deaths. The cases are reported in Newfoundland and Labrador (291 confirmed cases, 4 deaths), Prince Edward Island (64 confirmed cases), Nova Scotia (1,102 confirmed cases, 65 deaths), New Brunswick (337 confirmed cases, 6 deaths), Quebec (102,814 confirmed cases, 6,189 deaths), Ontario (72,885 confirmed cases, 3,108 deaths), Manitoba (4,701 confirmed cases, 61 deaths), Saskatchewan (2,908 confirmed cases, 25 deaths), Alberta (26,565 confirmed cases, 313 deaths), British Columbia (13,875 confirmed cases, 13,875 deaths), Yukon (22 confirmed cases), Northwest Territories (9 confirmed cases), Nunavut (0 confirmed case), and repatriated travellers (13 confirmed cases). A detailed [epidemiological summary](#) is available. The risk will vary between and within communities, but given the increasing number of cases in Canada, the risk to Canadians is considered [high](#).

[International \(Update\) - Coronavirus disease \(COVID-19\) Outbreak](#) (Media)

As of 29 October 2020, 11:55 GMT, there were 44,878,011 cases of COVID-19 and 1,180,914 deaths reported globally. Top 10 countries with the highest number of cases, by alphabetical order are: Argentina (1,130,533 cases, 30,071 deaths), Brazil (5,469,755 cases, 158,468 deaths); Colombia (1,041,935 cases, 30,753 deaths); France (1,235,132 cases, 35,785 deaths); India (8,041,051 cases, 120,583 deaths); Mexico (906,863 cases, 90,309 deaths); United Kingdom (942,275 cases, 45,675 deaths); Russia (1,581,693 cases, 27,301 deaths); Spain (1,194,681 cases, 35,466 deaths); United States (9,121,800 cases, 233,137 deaths).

Canada – Coronavirus disease (COVID -19) Outbreaks and Outcomes (Official and Media)

- On 28 October 2020, [the Minister of Health tabled in Parliament her annual report entitled “From Risk to Resilience: An Equity Approach to COVID-19”](#). The [report](#) describes COVID-19's broader consequences and calls to incorporate a health equity approach into pandemic preparedness, response and recovery. Driven by the evidence summarized in the report, the Minister of Health is calling for action in three key areas: sustain leadership and governance at all levels for structural change across health, social and economic sectors; harness the power of social cohesion; and strengthen public health capacity.
- On October 28 2020, [Chief Public Health Officer In lieu of an in-person update](#) noted that Canada is reporting over ten thousand deaths for the first time, with 10,001 deaths among the total cases to date. Larger clusters tell us that closed and crowded settings and/or not sufficiently maintaining public health practices, such as physical distancing and mask wearing, can amplify spread of the virus. The number of people experiencing severe illness continues to increase. Canada needs a collective effort to sustain the public health response through to the end of the pandemic, while balancing the health, social and economic consequences.
- [According to new data released by Statistics Canada on 28 October 2020, there were 7,000 ‘excess deaths’ in Canada during coronavirus 1st wave](#). Excess mortality reflects data on the number of deaths that exceed what is considered normal during a given period. Throughout the pandemic, some countries have used this as an indicator that the actual death toll related to the coronavirus is much higher than official tallies. The provisional data, released on 28 October suggests that the number of deaths attributed to COVID-19 by public health authorities largely aligns with official death statistics. Between March and June, public health offices across the country reported 8,145 deaths attributable to COVID-19, about 5% more (7,755) than figures from the Canadian Vital Statistics Death Database, which is the official source of data on deaths in Canada. Over the past two

weeks, daily case count records have been broken in Ontario, British Columbia, Alberta, Saskatchewan and Manitoba. In Quebec and Ontario, the mortality rate for neighbourhoods with these large population groups was three times higher than that with fewer visible minorities. In British Columbia, despite having a lower number of deaths comparatively, the mortality rate was 10 times higher.

- [According to Health Canada, as of 28 October 2020, there are 32 active clinical trials related to efforts to stop the novel coronavirus in Canada](#). They run the gamut from attempts to stop the progression of the disease in the most severely ill patients to experiments on what drugs found to be effective against other illnesses do to COVID-19. Another 30 clinical trials are listed as pending, which means they have not officially begun, while three more, all involving hydroxychloroquine, have been closed.
- [Quebec workplaces linked to almost 30% of new coronavirus cases](#). The report was released the week of 27 October as public-health officials plunge the province into a prolonged lockdown in an attempt to curb workplace outbreaks. Data from the Institut national de santé publique du Québec details a mountainous spike leading into the second wave of the pandemic across factories, grocery stores and restaurants, and spreading from urban centres into rural towns. It is considered to be the most comprehensive information on workplace outbreaks released in Canada to date.
- According to [Yukon's chief medical officer of health, a cluster of five COVID-19 cases in Watson Lake](#) is a landmark event. The cluster is the first to occur outside of the territory's capital and the source of the virus may never be known. The cases are a reminder that the territory is not impervious to COVID-19. The cluster occurred in two family groups in the same circle of transmission, and contact tracing has not turned up any further cases.
- According to the [Northwest Territories' chief public health officer, the presumptive positive case of COVID-19 in Inuvik](#), announced on 27 October, has been confirmed. The case was confirmed by a lab at Stanton Territorial Hospital in Yellowknife. The case is related to last week's case in which another Inuvik resident who had travelled to the town from Alberta by road was confirmed positive for COVID-19. The transmission occurred within the same household where the two individuals had been self-isolating.

United States - Coronavirus Disease 2019 (COVID-19) - Communication Resources (Official and Media)

- The U.S. Department of Health and Human Services ([HHS](#)) and Department of Defense ([DoD](#)) on 28 October 2020 [announced an agreement with Eli Lilly and Company to purchase the first doses of the company's COVID-19 investigational antibody therapeutic bamlanivimab, also known as LY-CoV555](#). These doses will be available for patient care if the U.S. Food and Drug Administration ([FDA](#)) authorizes use of the therapeutic, as outlined in agency [guidance](#).
- [Two new studies detail US nursing home preparedness amid the COVID-19 pandemic](#), one found that 20% of facilities had less than 1 week's supply of at least one type of personal protective equipment (PPE), and the other showing that homes owned by private equity firms performed on par with those under other types of ownership in terms of coronavirus cases and deaths but stored less PPE.
 - The first [report](#), published on 26 October by the US Public Interest Research Group (US PIRG) and the Frontier Group, said that, 7 months into the pandemic, shortages of critical PPE like N95 respirators and medical gowns had worsened rather than improved. The shortages were reported to the US Centers for Medicare & Medicaid Services by 2,981 (19.9%) of the nation's 15,000 nursing homes; in total, the affected homes have 226,495 residents.
 - The second [study](#) published on 28 October in *JAMA Network Open* led by researchers at Weill Cornell Medical College, evaluated the performance of US nursing homes owned by private equity firms. While proponents of private equity-owned nursing homes say that they bring management expertise and health information technology resources, the authors prefaced the study by noting that these firms have long been suspected of taking on large amounts of debt to buy nursing homes in order to turn high short-term profits for investors with no plans to stay in business beyond 3 to 5 years.
- [According to research presented at the virtual ID Week, heavy use of contract staffing was associated with an increased risk for a COVID-19 outbreak in nursing homes](#). Nursing home residents account for just over 40% of SARS-CoV-2-related deaths in the U.S., and staff are a known vector of transmission. Nursing homes utilize more contract nursing, may have more transmission of contagious infections, and contract nursing may also be a proxy for nursing home quality.
- On 28 October 2020, [Bio Testing Supplies and InGenesis announce a joint COVID-19 screening solution which enables businesses to protect their workforce during the global pandemic](#). The biosecurity solution includes an FDA-authorized rapid COVID-19 test administered by qualified healthcare professionals. Bio Testing Supplies and InGenesis offer an integrated occupational health COVID-19 testing service with a turnkey, scalable solution that is compliant with FDA and CDC guidelines. The COVID-19 testing and screening services can be utilized as a standalone or as an integrated service. Bio Testing Supplies' Saliva RT-PCR test has been validated as a laboratory developed test in response to the need for easy-to-collect and rapid turnaround time testing solutions to detect a current infection.

International - Coronavirus disease (COVID-19) Outbreak and Outcomes (Official and Media)

- [In India, three health officials, including a medical officer, were suspended for allegedly issuing fraudulent negative COVID-19 certificates.](#) Health minister has directed top officials to file a criminal case against a lab technician, medical officer on contract and another worker. The three were allegedly approaching people who sought negative test reports. They allegedly would assure them of a negative certificate without having them undergo tests. Taking advantage of the situation, the individuals would demand anywhere between Rs 1,000 to Rs 2,500 to provide a negative certificate. They would allegedly collect the phone number of the person, but not collect their swab samples. Once the SRF ID was generated, the associates would concoct a sample using water. It was then sent for tests. Officials said they followed the same procedure for both rapid antigen (RAT) and RTPCR tests. With this, they were not only making money through bribes, but were also reaching set testing targets.
- [Russia has made applications to the WHO for an Emergency Use Listing \(EUL\) and prequalification of its COVID-19 vaccine "Sputnik V."](#) According to a statement of the Russian Direct Investment Fund (RDIF), accelerated vaccine registration under the EUL procedure would make the Russian vaccine available to the globe faster than usual, and WHO prequalification and assessment of the quality, safety and efficacy of medicines would include the vaccine in the list that guides bulk purchasing of medicines by international procurement agencies and countries. The vaccine, based on a platform of human adenoviral vectors, was developed by Moscow's Gamaleya Research Institute and marketed by the RDIF. Russia was the first country to grant regulatory approval for a COVID-19 vaccine before large-scale trials were complete.
- The Head of Rospotrebnadzor (The Federal Service for Surveillance on Consumer Rights Protection and Human Wellbeing) for the Moscow region in Russian Federation has stated that [45-50% of the cases in Moscow city have been asymptomatic.](#) Many find out that they have COVID-19 only after testing.
- [French President announced on 28 October that the country will go back into a national lockdown](#) to keep the outbreak from spiraling out of control. The new rules say people have to stay home, except to buy essential goods, seek medical care, or exercise outdoors for 1 hour each day. The measure takes effect 30 October and will last until 1 December.
- [German Chancellor, following an emergency meeting with leaders from German states, announced a 1-month partial lockdown](#) that goes into effect 2 November. The action temporarily shuts restaurants, bars, theaters, movie theaters, pools, gyms, and concert venues but will keep schools and shops open if they follow distancing and hygiene rules. Professional sports can continue without spectators, and people have been asked to limit travel to essential trips.
- [The Czech Republic, reported to have of the continent's highest infection rates alongside Belgium,](#) reported a record daily high of 15,663 cases on 29 October, along with rising hospitalizations. A nationwide nighttime curfew began 28 October.
- On 28 October 2020, [Iran recorded a daily high in deaths, 415, and also added 6,824 new cases](#) to its total.
- [Pakistan's health ministry announced](#) that the country is now in its second wave of infections.
- On 28 October 2020, [Sanofi and GlaxoSmithKline pledged 200 million doses](#) of adjuvanted, recombinant, protein-based COVID-19 vaccine to the COVAX initiative, an effort led by the WHO to pool the risk of developing vaccines and secure equitable doses for countries across all income levels.

Studies Related to Coronavirus disease (COVID -19) Outbreak (Media)

- According to McGill University's findings, the survey of 28 experts, each with an average 25 years experience working with vaccines, [the COVID-19 vaccine is most likely to be available to the general public in the United States and/or Canada, by their best-case guess was June 2021 for the soonest, but more likely fall of 2021.](#) The experts believed there was a three-in-10 chance a safety issue would be discovered only after the first vaccine is approved that would require a boxed warning, and a four-in-10 chance that the first large field study will report a null or negative result.
- [Researchers at the National Institutes of Health, U.S., have discovered a biological pathway that the novel coronavirus appears to use to hijack and exit cells as it spreads through the body.](#) A better understanding of this important pathway may provide vital insight in stopping the transmission of SARS-CoV-2. In cell studies, the researchers showed for the first time that the coronavirus can exit infected cells through the lysosome, an organelle known as the cells' "trash compactor." Normally the lysosome destroys viruses and other pathogens before they leave the cells. However, it was found that the coronavirus deactivates the lysosome's disease-fighting machinery, allowing it to freely spread throughout the body.
- A new [study](#) has suggested that getting a flu shot may help reduce the risk of contracting COVID-19. [Several studies have reported cross-protection between flu vaccination and COVID-19 during the current pandemic, although the mechanism behind such an effect is unknown.](#) Scientists have also revealed that getting vaccinated against the flu virus may offer some shield against severe illness due to COVID-19. The quadrivalent inactivated influenza vaccine can induce a trained immunity response, including an improvement of cytokine responses after stimulation of human immune cells with coronavirus. The research, published on the preprint server *MedRxiv*,

indicates that getting a flu vaccine may also trigger the human body to produce broad infection-fighting molecules that can help combat COVID-19.

- [The importance of maintaining high-quality air flow to restrict transmission of SARS-CoV-2 in confined workspaces has been strongly indicated by the investigation of an outbreak of the virus at a German meat processing plant during May and June 2020.](#) The [study](#), published in *EMBO Molecular Medicine*, found that the outbreak originated from a single worker on the meat processing production line. It also concluded that in such confined spaces where unfiltered air is recirculated at low rates of external air exchange, transmission of SARS-CoV-2 can occur over distances of at least eight meters.
- [Researchers at Trinity College Dublin, Ireland, have provided an updated estimate of the incubation period for SARS-CoV-2.](#) Initial estimates made during the early stages of the pandemic ranged from around 4 to 7 days. However, numerous reports have since emerged, estimating an incubation period of anything from one to 34 days. Currently, governments are planning their mitigation strategies based on a maximum incubation period of 14 days. Researchers have conducted a modeling study highlighting the variability in this period, including the potential for incubation that extends beyond 14 days. An accurate estimate of the incubation period distribution for SARS-CoV-2 is essential for modeling the virus's spread and the effectiveness of control measures.
- [People who received the flu vaccine in the year before testing positive for COVID-19](#) are nearly 2 1/2 times less likely to be hospitalized with a severe form of the disease than those who were not vaccinated, an analysis published on 28 October by the *Journal of the American Board of Family Medicine* found. In addition, those vaccinated against the flu within a year of being diagnosed with COVID-19 were more than three times less likely to be admitted to an intensive care unit because of the new coronavirus, according to researchers at the University of Florida. The flu vaccine does not, however, offer protection against COVID-19, the researchers said. Instead, it may help prevent progression to severe disease from the virus by "priming" of the immune system against an invading virus, no matter which one.
- [Immune cells that coronavirus survivors develop in an attempt to fight the infection may turn on some of them attacking healthy tissues, new research suggest.](#) The off-target assaults of these rogue immune cells may be the culprit of COVID-19 'long-haulers' lingering symptoms, the Emory University scientists suspect. So-called 'autoantibodies' are similar to the autoimmune responses seen in diseases like lupus, some forms of hepatitis and rheumatoid arthritis. If coronavirus's autoantibodies follow the suit of these conditions, long-COVID may not be curable. But now that the scientists have discovered they can test for these rogue antibodies, they hope they can identify who has them and develop treatments to combat flare ups like those that already exist for older autoimmune diseases.

Domestic Events of Interest

[Five overdoses in six days may be linked to contaminated drugs in Lindsay](#) (Media)

The Haliburton, Kawartha, Pine Ridge District Health Unit is issuing an alert in collaboration with local police services to support people who use drugs. The alert comes as the Kawartha Lakes Police Services reports five overdose incidents in the last six days. The overdoses are thought to be the result of a contaminated or poisoned drug supply, or inconsistent or increased potency, causing more severe overdose reactions. This alert is being issued because there are potentially toxic substances present in the community that are putting people's health at risk.

[Opioid deaths skyrocket, mental health suffers due to pandemic restrictions, new federal report says](#) (Media)

A new study released on 28 October 2020 by the Public Health Agency of Canada (PHAC) reveals that the COVID-19 pandemic has wreaked havoc on Canadians suffering from mental illness, opioid addiction and other substance abuse problems which confirms anecdotal reports warning that the pandemic's health consequences extend well beyond the novel coronavirus itself. In 2018, 68% of Canadians age 15 years and older reported excellent or very good self-perceived mental health. This figure dropped to 54% in late March and early April 2020 before going lower still to 48% in early May, according to Statistics Canada data. Indigenous people, the disabled and low-income Canadians also have reported experiencing more suicidal thoughts since the outbreak, PHAC found. Seventy percent of Canadians who responded to a recent Statistics Canada survey said they were concerned about maintaining social ties. With gyms closed in many jurisdictions and recreational sports leagues on pause, some Canadians are less active. Those who were not particularly active before March 2020 lockdown reported being even less so in the months that followed. More than 60% of Canadians reported spending more time using the internet and watching TV during the pandemic in early April. Research has demonstrated that people who were able to engage in physical activity outdoors were more likely to report excellent or very good mental health.

International Events of Interest

[United States - Mystery surrounds two new *E. coli* outbreaks with genetic links to past Romaine events](#) (Official)

The two outbreaks of Shiga toxin-producing *E. coli* O157: H7 (STEC) illnesses are under investigation by the Food and Drug Administration (FDA), Centers for Disease Control, and Prevention (CDC), along with various state and local health

departments. Two distinct outbreaks of foodborne illness of *E. coli* O157: H7 (STEC) are under investigation involving recurring, emerging, or persistent strains.

- Outbreak 1 – possibly linked to the 2018 Yuma Romaine *E. coli* Outbreak. As of 28 October 2020, a total of 21 people infected with the outbreak strain of *E. coli* O157: H7 have been reported from eight states. Of 16 ill people with information available, 8 hospitalizations have been reported, including 1 person who developed hemolytic uremic syndrome (HUS). One death has been reported from Michigan.
- Outbreak 2 – possibly linked to 2019 Salinas Romaine *E. coli* outbreak. As of 28 October 2020, a total of 23 people infected with the outbreak strain of *E. coli* O157: H7 have been reported from 12 states. Of 15 ill people with information available, 10 hospitalizations have been reported, including 2 people who developed HUS. No deaths have been reported. People have reported eating a variety of foods, including leafy greens. Of the 13 people interviewed to date, all reported eating various types of leafy greens, like iceberg lettuce (9), romaine lettuce (8), mixed bag lettuce (6), and spinach (9).

[WHO notes recent flu detections, mainly H3N2, in some countries](#) (Official)

Though global influenza levels are still lower than expected for this time of year, some Northern Hemisphere countries reported some detections, the [WHO said in an update that covers the first half of October](#). The agency urged caution in interpreting flu trends because of the likely impacts from COVID-19 restrictions and surveillance. In the United States, though influenza-like illness (ILI) levels overall are below the national baseline, activity in children ages 0 to 4 years old was just above that marker. Canada reported an increase in flu detections, though at a lower level than previous seasons. Europe reported sporadic flu detections, and China's ILI activity appears to have increased to levels seen over the past three flu seasons.

Researches, Policies and Guidelines

[Scientists use clues in the human genome to discover a new inflammatory syndrome](#) (Official)

Researchers from the U.S. National Institutes of Health (NIH) have discovered a new inflammatory disorder caused by mutations in the UBA1 gene, whose symptoms include blood clots in the veins, recurrent fevers, pulmonary abnormalities, and vacuoles (unusual cavity-like structures) in myeloid cells, as published in the *New England Journal of Medicine* (NEJM). [Nearly 125 million people](#) in the United States have some form of chronic inflammatory disease. Many of these diseases have overlapping symptoms, which often makes it difficult for researchers to diagnose specific inflammatory disease in a given patient. Researchers from the National Human Genome Research Institute (NHGRI), which is part of NIH, and collaborators from other NIH Institutes took a unique approach to address this challenge.

[United States - GU research helps unlock pathway to fight parasites](#) (Media)

A study led by Gonzaga University professor raises the prospects for developing new drugs to kill parasites, which have sickened an estimated 1.5 billion people worldwide. The work targets parasitic helminths, a class including roundworms and tapeworms that live in soil and colonize human guts through dirty water. Parasitic diseases can have significant and chronic consequences for child development. A global team of researchers seeks to advance understanding of the mechanisms involved in how the parasites make the switch. The study's leaders also included a professor at Universidad de la República in Uruguay and professor of molecular genetics at the University of Toronto's Donnelly Centre for Cellular and Biomolecular Research.

Best Regards | Sincères salutations
The GPHIN Team / L'équipe du RMISP

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