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Sent: 2020-10-09 8:37 AM
To: gphin / rmisp (PHAC/ASPC)
Subject: GPHIN Daily Report (09 October 2020)
Attachments: GPHIN Daily Report 20201009 ER.docx

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 08 October 2020 at 19:00 EDT, a total of 175,559 cases have been recorded in Canada including 9,557 deaths. The cases are reported in Newfoundland and Labrador (277 confirmed cases, 4 deaths), Prince Edward Island (61 confirmed cases), Nova Scotia (1,089 confirmed cases, 65 deaths), New Brunswick (225 confirmed cases, 2 deaths), Quebec (82,992 confirmed cases, 5,915 deaths), Ontario (56,742 confirmed cases, 2,992 deaths), Manitoba (2,344 confirmed cases, 27 deaths), Saskatchewan (2,012 confirmed cases, 24 deaths), Alberta (19,718 confirmed cases, 283 deaths), British Columbia (10,066 confirmed cases, 245 deaths), Yukon (15 confirmed cases), Northwest Territories (5 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 October 09, 2020, 11:20 GMT, there were 36,802,545 cases of COVID-19 and 1,067,551 deaths reported globally. Top 10 countries with the highest number of cases, by alphabetical order are: Argentina (856,369 cases, 22,710 deaths), Brazil (5,029,539 cases, 149,034 deaths); Colombia (886,179 cases, 27,331 deaths); India (6,906,151 cases, 106,521 deaths); Mexico (804,488 cases, 83,096 deaths); Peru (838,614 cases, 33,098 deaths); Russia (1,272,238 cases, 22,257 deaths); South Africa (686,891 cases, 17,408 deaths); Spain (884,381 cases, 32,688 deaths); United States (7,834,289 cases, 217,750 deaths).

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

- On 8 October 2020, [Chief Public Health Officer, In lieu of an in-person update](#) stated that national trends reflect a series of regional epidemics that will continue to unfold differently in communities across the country. Canada's two most populous provinces are reporting over 80% of the cases being reported nationally in recent weeks. Both provinces have also observed a rise in the number of hospitalized cases over the past several weeks raising concerns about straining health system capacity if the upward trend continues. Although the numbers remain well below those observed in the spring, both provinces are also reporting a concerning increase in the number of outbreaks in long-term care facilities. Follow the guidance of your [local public health agencies](#) and departments. No matter where we live, it is up to all of us to follow the tried and true personal protective practices that we know are effective in preventing the spread of COVID-19.
- [New Brunswick provincial government announced](#), masks will become mandatory in most indoor public places as of midnight 8 October 2020, Effective at midnight, the twinning agreement that allowed for non-essential day trips by residents of Listuguj First Nation and Pointe-à-la-Croix, Quebec is suspended. At the entry point at Campbellton, residents of Listuguj First Nation and Pointe-à-la-Croix, Quebec, will be permitted entry to obtain groceries, prescription medications and essential goods and services not available to them in their own community, as it was prior to the twinning agreement. Travel also continues to be permitted for work, medical appointments, to fulfill the terms of a child custody agreement and to obtain child care. Students can continue to cross the border to attend school for kindergarten to Grade 8. High school students will be permitted entry on Friday, 9 October, but arrangements are being made to provide remote learning for high school students beginning on 13 October.

- On 8 October 2020, Ottawa Public Health (OPH) shared a diagram on Twitter to illustrate how quickly the novel coronavirus can spread in large group settings when precautions aren't taken. The diagram was related to [one person who showed up at an indoor wedding in Ottawa with mild COVID-19 symptoms kicked off a chain reaction of transmission that saw 22 people infected and more than 200 people forced to self-isolate in just 15 days](#). At the September indoor wedding with roughly 50 people in attendance, one person attended the event despite having mild symptoms of COVID-19. Attendees were not physically distancing or wearing masks at the event, when those symptoms were later confirmed to be COVID-19, 49 other high-risk contacts were created. In total, 22 people tested positive for the virus in connection with the event. In total, 207 people had to self-isolate as a result of the wedding exposure.
- [Samples taken from Ottawa's sewage treatment plant show the concentration of COVID-19 in the city's wastewater has doubled](#) in the past month and is ten times higher than it was in June. Wastewater sampling offers a measure of COVID-19 that is not influenced by how many people are being tested. Crucially, sampling wastewater measures virus that has been shed by people before they show symptoms and are less likely to seek, or qualify, for testing. Across Canada, though, it had mainly been used on an experimental basis until Ottawa Public Health recently began using the data daily.
- On 8 October 2020, [Ottawa Public Health provided an update on the COVID-19 situation at Ottawa schools](#), noting that new outbreaks have been declared at four Ottawa schools, while an outbreak at an Ottawa private school is now over. There are still COVID-19 outbreaks at 12 Ottawa schools. The Conseil des écoles catholique du Centre-Est said Franco-Cite would be closed for 14 days due to COVID-19 cases in the school.
- [According to the data released by Toronto Public Health on October 8th](#), of the 80 current community outbreaks of COVID-19 in the city, 27 of them are related to bars and restaurants. The current data doesn't include outbreaks in schools or congregate settings like long-term-care homes.
- [According to the Nunavut's chief public health officer, an outbreak of COVID-19 at a gold mine has been contained](#). There are 10 positive cases and six presumptive cases at the Hope Bay mine, about 125 kilometers southwest of Cambridge Bay. But the cases will not be counted as the territory's, because the workers' home jurisdictions have chosen to record them. The territory has yet to record a positive case. The official states those who have finished their isolation and those who are not considered high-risk contacts can travel home. Some contacts remain in isolation are expected to be cleared for travel within the week. [A northern Saskatchewan First Nation is on lockdown](#) over concerns of COVID-19 transmission following a series of religious services where participants were unmasked. The Peter Ballantyne Cree Nation has closed its three communities of Southend, Sturgeon Landing and an urban reserve in the city of Prince Albert. The band has also closed its two schools until at least Oct. 19, because of possible staff exposure to the virus.
- [The Quebec Major Junior Hockey League has a team dealing with multiple positive COVID-19 tests for the second-time this week](#). The Sherbrooke Phoenix announced on 8 October that eight members of their organization have tested positive. The announcement comes one day after the Blainville-Boisbriand Armada announced they have 18 positive cases. The Phoenix and the Armada played twice last weekend as the QMJHL opened its season.

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

- On 8 October 2020, the Centers for Disease Control and Prevention (CDC) updated its [Interim Guidance for General Population Disaster Shelters during the COVID-19 Pandemic](#). This interim guidance is based on current information about the transmission and severity of coronavirus disease 2019 (COVID-19). This document is intended for use by federal, state, local, and tribal jurisdictions in the United States. It should be used in conjunction with existing shelter operation and management plans, procedures, guidance, resources, and systems, and is not a substitute for shelter planning and preparedness activities. This document provides interim guidance to reduce the risk of introducing and transmitting COVID-19 in general population disaster shelters before, during, or after a disaster. This document should not be applied to medical support shelters or functional needs shelters. Medical support shelters and functional needs shelters should follow the [Interim Guidance for Healthcare Facilities: Preparing for Community Transmission](#).
- On 8 October 2020, the Centers for Disease Control and Prevention released a study [Characteristics Associated with Adults Remembering to Wash Hands in Multiple Situations Before and During the COVID-19 Pandemic — United States, October 2019 and June 2020](#). U.S. adult Internet survey respondents in June 2020 were more likely to remember to wash their hands after experiencing respiratory symptoms, before eating in a restaurant, and before eating at home than were October 2019 survey respondents. Despite improvements, <75% of survey respondents reported remembering to wash their hands in these situations in 2020.
- On 8 October 2020, the Centers for Disease Control and Prevention published a study [Trends in COVID-19 Incidence After Implementation of Mitigation Measures — Arizona, January 22–August 7, 2020](#). Widespread implementation and enforcement of sustained community mitigation measures, including mask wearing, informed by state and local officials' continual data monitoring and collaboration can help prevent transmission of SARS-CoV-2 and decrease the numbers of COVID-19 cases.,

- On 8 October 2020, the Centers for Disease Control and Prevention published a [Case Series of Multisystem Inflammatory Syndrome in Adults Associated with SARS-CoV-2 Infection — United Kingdom and United States, March–August 2020](#). Since June 2020, several case reports and series have been published reporting a multisystem inflammatory syndrome in adults (MIS-A).
- On 8 October 2020, [the U.S. Food and Drug Administration](#) updated the dashboard on the [Coronavirus Treatment Acceleration Program](#) (CTAP) webpage. 274 tests are authorized by FDA under EUAs; these include 216 molecular tests, 53 antibody tests, and 5 antigen tests.
- [According to the media, in a recent Goldman Sachs Healthcare virtual conference, there could be up to 100 million doses of a COVID-19 vaccine by year-end, enough to cover especially vulnerable populations](#). Enough doses of a coronavirus vaccine could be manufactured by March to April next year for every American who wants one, this was stated by the U.S. Health and Human Services on 8 October 2020.

WHO/PAHO - Some countries showing spikes in COVID-19 transmission, especially among young people: PAHO - PAHO/WHO (Official)

Pan American Health Organization (PAHO) has held more than 160 trainings, delivered more than 17 million COVID PCR tests, and millions more gloves, gowns and masks to keep health workers safe. PAHO Director stated when hospitals are able to cope and manage patients, there are fewer deaths. With COVID exposure, elderly people and those with diabetes or hypertension are still vulnerable. Therefore PAHO urged people of all ages to continue to wear masks, practice social distancing to protect themselves and avoid exposing others. The transmission of COVID19 in the Americas remains very active, with some countries suffering recurrent spikes in cases and the virus spreading in new and different ways. Over 17 million cases of COVID-19 have been reported in the Americas, with more than 574,000 deaths, representing half of all cases worldwide and more than half of all deaths.

WHO - One stillbirth occurs every 16 seconds, according to first ever joint UN estimates (Official)

According to the first ever joint stillbirth estimates released by UNICEF, WHO, the World Bank Group and the Population Division of the United Nations Department of Economic and Social Affairs, COVID-19-related health service disruptions could worsen the situation, potentially adding nearly 200 000 more stillbirths over a 12-month period. Almost 2 million babies are stillborn every year or 1 every 16 seconds. The vast majority of stillbirths, 84 per cent, occur in low- and lower-middle-income countries, according to the new report, [A Neglected Tragedy: The Global Burden of Stillbirths](#). In 2019, 3 in 4 stillbirths occurred in sub-Saharan Africa or Southern Asia. A stillbirth is defined in the report as a baby born with no signs of life at 28 weeks of pregnancy or more. As a result, despite advances in health services to prevent or treat causes of child death, progress in lowering the stillbirth rate has been slow. From 2000 to 2019, the annual rate of reduction in the stillbirth rate was just 2.3 per cent, compared to a 2.9 per cent reduction in neonatal mortality, and 4.3 per cent in mortality among children aged 1–59 months. Progress, however, is possible with sound policy, programmes and investment.

WHO - Testing only main symptoms risks missing most cases (Media)

The World Health Organisation reported that people should be considered to have suspected coronavirus if they have both a high fever and a cough, or acute onset of any three or more of fever, cough, general weakness and fatigue, headache, aching muscles, sore throat, stuffy nose, trouble breathing, decreased appetite, nausea, vomiting, diarrhoea and altered mental status. In the case of university halls, it may be particularly relevant to test all students before they go home for Christmas. [According to an expert](#), future testing programmes should involve frequent testing of a wider group of individuals, not just symptomatic cases, especially in high-risk settings or places where many people work or live close together such as meat factories or university halls. In a recent study, the University College London found that 86 per cent of people who tested positive for coronavirus during lockdown did not have those three virus symptoms. With a wider range of symptoms, including fatigue or shortness of breath, 76.5 per cent were deemed asymptomatic. In the study, researchers used data from the Office for National Statistics Covid-19 surveillance study, which took swabs from a representative sample of 36,061 people between April 26 and June 27. Of those, 115 had a positive test result.

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

- On 8 October 2020, [the National Veterinary Services Laboratories \(NVSL\)](#) confirms that dead mink at a Taylor County mink farm have tested positive for SARS-CoV-2 infection, the virus that causes COVID-19 in humans. This is the first confirmed SARS-CoV-2 infection among Wisconsin's mink population. The Department of Agriculture, Trade and Consumer Protection (DATCP) has quarantined all animals on the farm, meaning no animals or animal products may leave the premise. According to a press release, Wisconsin is the second state with confirmed SARS-CoV-2 at a mink farm, Utah confirmed its first cases on August 17.
- According to [the Indian media, the COVID-19 infection is hitting towns and villages](#) where resources are scant and people are skeptical of lockdown efforts. The defiance of the coronavirus rules is being reflected across rural India, and it is propelling this nation's virus caseload toward the No. 1 spot globally. Infections are rippling into every corner of this country of 1.3 billion people.

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

- On 8 October 2020, [researchers from the Lunenfeld-Tanenbaum Research Institute and the University of Toronto](#) released the findings of their study suggesting that people who have been infected with COVID-19 can have antibodies that last up to three months. Participants in the study, who had previously been infected with COVID-19, provided both saliva and blood samples to measure antibody levels for three months after the onset of symptoms. The study found that antibodies were detectable in both blood and saliva for at least 115 days, which represents the longest time interval that was measured.
- Most pregnant women with COVID-19 experience mild disease, but many have prolonged symptoms lasting weeks after infection, according to [a large nationwide study in Obstetrics & Gynecology](#). The new study—the largest known to date that included non-hospitalized COVID-19 pregnant women—followed 594 geographically and demographically diverse US women who tested positive for SARS-CoV-2 during pregnancy and reported symptoms at the time of testing. Symptoms and symptom duration for pregnant COVID-19 patients were gathered from Mar 22 to Jul 10. Only 27 of the women (5%) were hospitalized, with 11 (2%) admitted to the ICU.
- [New research out of Japan reveals that the novel coronavirus can survive on human skin for up to nine hours](#), suggesting that hand washing remains a vital tool in the fight against the pandemic. The study from the Kyoto Prefectural University of Medicine in Japan was published on 3 October 2020 in the journal [Clinical Infectious Diseases](#) shows the coronavirus lasts far longer on human skin and other surfaces compared to the influenza A virus, which causes the seasonal flu. Influenza A survived for just under two hours on skin. Both pathogens were killed within 15 seconds upon contact with hand sanitizer. Past research has shown that the coronavirus can live on copper for up to four hours, cardboard for about one day and plastic and stainless steel for about two to three days, according to an April letter to the editor published in The New England Journal of Medicine.
- Most vaccines under development worldwide have been modeled on the original 'D-strain' of the virus, which were more common amongst sequences published early in the pandemic. Since then, the virus has evolved to the globally dominant 'G-strain', which now accounts for about 85 per cent of published SARS-CoV-2 genomes. There had been fears the G-strain, within the main protein on the surface of the virus, would negatively impact on vaccines under development. [A research by Australia's national science agency the Commonwealth Scientific and Industrial Research Organisation \(CSIRO\), found no evidence the change would adversely impact the efficacy of vaccine candidates](#). The study tested blood samples from ferrets given a candidate vaccine against virus strains that either possessed or lacked this mutation (known as 'D614G'). This is good news for the hundreds of vaccines in development around the world, with the majority targeting the spike protein as this binds to the ACE2 receptors in our lungs and airways, which are the entry point to infect cells. The study is published in NPJ Vaccines.
- [Biotechnology Company Regeneron has requested to FDA emergency use authorization from federal regulators for a COVID-19 antibody treatment](#). The REGN-COV2 treatment is a combination of two antibodies that's designed to block infectivity of the SARS-CoV-2 virus that causes COVID-19. The main active are two virus-neutralizing antibodies that form REGN-COV2 bind non-competitively to the critical receptor binding domain of the virus's spike protein, which diminishes the ability of mutant viruses to escape treatment and protects against spike variants that have arisen in the human population. Regeneron, which asked the Food and Drug Administration for the emergency authorization, stated it has doses available for 50,000 patients and will have enough for another 300,000 in the coming months. The company stated that if emergency use authorization is granted the government has committed to making these doses available to the American people at no cost and would be responsible for their distribution. Regeneron added if its request is approved, it will distribute the treatment in the United States and partner Roche will distribute overseas.
- [Researchers identify a promising method to stop COVID-19 infection, investigating how SARS-CoV-2 attacks the body in the search for other means of stopping its devastating impact](#). The key to one possibility, blocking a protein that enables the virus to turn the immune system against healthy cells, has been identified in a recent study by a team of Johns Hopkins Medicine researchers. Based on the findings, [the researchers believe that inhibiting the protein, known as factor D, also will curtail the potentially deadly inflammatory reactions that many patients have to the virus](#). Making the discovery even more exciting is that there may already be drugs in development and testing for other diseases that can do the required blocking. The study is published on 2 September 2020, in the journal Blood. The researchers found, the resulting immune system response to chemicals released by the lysing of killed cells could be responsible for the organ damage and failures seen in severe cases of COVID-19. Most notably, the research team found by blocking another complement protein, known as factor D, which works immediately upstream in the pathway from factor H, were able to stop the destructive chain of events triggered by SARS-CoV-2.
- According to a recent research out of Arizona State University (ASU), [as the COVID-19 pandemic progresses, it is important to track how the coronavirus mutates because it could affect the efficacy of a vaccine](#). With COVID-19, however, those mutations happen much slower. In March 2020, Arizona State University played host to the country's fourth COVID-19 case. As soon as it was detected, researcher's at ASU started studying how the virus

mutates and sent findings to the World Health Organization. Currently, scientists are focusing much of their efforts on identifying ways to eliminate the function of the spike protein in COVID-19, as it is the way the virus binds to our cells and infects them. The research suggest that right now there does not appear to be any issues because the virus mutates slowly, but it could adapt to a vaccine once one begins to circulate.

- [According to the media, the Institute of Experimental Medicine \(St. Petersburg\) is developing a binary vaccine against COVID-19 and influenza.](#) The genetically engineered vaccine is based on a flu vector, and the administered flu virus carries the SARS-CoV-2 protein, inducing an immune response to both influenza and COVID-19. This vaccine is essential amid fears that the COVID-19 and influenza spread can overlap.
- [Scientists at the Institute of Medical Biology, under the Chinese Academy of Medical Sciences, conducted phase 1 trials](#) on 191 people aged 18 to 59 in May. All were from Sichuan province and had never been infected with the coronavirus. The team behind a Chinese Covid-19 vaccine candidate report early phase trials suggest it is unlikely to cause a potentially harmful antibody-dependent enhancement (ADE) of the disease. Final trials involving about 25,000 to 30,000 people would take place outside China, where the coronavirus was more active, though the exact location had not yet been decided.

Domestic Events of Interest

[Canada - Unclear if respiratory outbreaks in Peterborough facilities linked \(Media\)](#)

Extendicare Peterborough has a declared outbreak of an unknown respiratory illness, as another outbreak at Riverview Manor Long-Term Care ends. Peterborough Public Health reports they have tested for COVID-19, the flu and other illnesses and everything has come up negative. [The health unit is not sure what the illnesses are](#), or even if they are the same one. On 6 October, Peterborough Public Health updated the status of outbreaks in community facilities. According to the health unit, the onset of the first case of the illness at Extendicare started on 1 October. The recently ended outbreak at Riverview Manor was declared on 28 September, when the unknown illness was discovered in the home. Another unknown respiratory outbreak occurred at Peterborough Regional Health Centre on 21 September, ending on 26 September. So far, the health unit has not confirmed any link between these outbreaks and it is unknown or if this is the same illness affecting multiple facilities. According to the health unit, they have done testing for COVID-19 and more common illnesses but there are hundreds of respiratory illnesses, so it could be many things.

[Canada - Fentanyl warning in Akwesasne after one man dies, another revived following overdose \(Media\)](#)

On 6 October 2020, a 38-year-old male was pronounced deceased at a Snye, Quebec, residence after reserve police and the Akwesasne Mohawk Ambulance unit provided life-saving measures in an attempt to revive him, according to a press release issued by the Mohawk Council of Akwesasne. That fatality followed a call on 5 October 2020, at a residence in Snye (also known as Tsi Snaihne). But in that case, first responders managed to revive a 30-year-old man who was then treated in hospital and released. The patient's situation is referred to as an overdose in the release. Snye is located on the south shore of the St. Lawrence River, roughly across from Glen Walter in South Glengarry Township and the east end of Cornwall. It comprises part of the Akwesasne reserve straddling two provinces and an American state (New York).

[Canada - Patients sue province over plans to end opioid therapy \(Media\)](#)

A group of patients participating in Alberta's drug therapy for severe opioid addictions is suing the government in an effort to stop the province from shuttering the treatment program next year, arguing its closing would infringe on their constitutional rights by putting lives at risk. Government critics argue limiting or ending access to programs like injectable opioid agonist treatment, or iOAT and supervised drug-consumption operations, where clients use illicit substances under the watch of health care professionals there to reverse overdoses, amounts to state cruelty and discrimination, and undermines the right to life, liberty and security for people with severe opioid addictions. Alberta's United Conservative Party government prohibited its iOAT, programs from accepting new patients in March, and reported its existing 65 patients must be off the regime in a year's time.

International Events of Interest

IHR Notification - France | Oropouche virus disease

On 30 September 2020, the French Guiana Regional Health Agency (ARS) reported the first detection of Oropouche virus (OROV) in French Guiana. The Pasteur Institute in Cayenne (a member of the French National Reference Laboratory for arboviruses) notified the France IHR National Focal Point of seven laboratory-confirmed cases of Oropouche virus infection in the village of Saül (in the center of the country) on 22 September 2020. These cases were identified following clinical investigation of an unusually high number of dengue-like illnesses in the village. Between 11 August and 25 September 2020, there were 37 clinically-compatible cases of Oropouche virus disease identified in Saül. In the Americas, outbreaks of OROV have been reported in rural and urban communities of Brazil, Ecuador, Panama, Peru, and Trinidad and Tobago, and now in French Guiana. This is the first detection of Oropouche virus in French

Guiana; therefore, the population is highly susceptible. To date, there is no evidence of direct human-to-human Oropouche virus transmission.

[United States \(Update\) - Outbreak of Salmonella Newport Infections Linked to Onions \(Official\)](#)

CDC, public health and regulatory officials in several states, FDA, and Canada investigated a multistate outbreak of *Salmonella* Newport infections linked to onions. As of 8 October, 2020, this outbreak appears to be over. A total of 1,127 people infected with the outbreak strain of *Salmonella* Newport were reported from 48 states. There were 167 hospitalizations and no deaths reported. [Epidemiologic and traceback evidence](#) showed that red onions from Thomson International Inc. were the likely source of this outbreak.

[United States - A mumps epidemic has a lot to teach colleges about reopening safely in the time of coronavirus \(Media\)](#)

The response of higher education institutions to the Massachusetts mumps outbreak, in particular, those in Boston, a city of 110 institutions of higher learning and 60 residential colleges, can serve as a blueprint for addressing the current situation with Covid-19. During and after the mumps outbreaks, a Harvard-based research team worked closely with the Massachusetts Department of Public Health and numerous affected colleges to generate [genomic data](#) to characterize the mumps virus, investigate its spread in the area, and develop a plan to keep vulnerable campuses and the communities around them safe. As a reportable disease that has been relatively manageable since a vaccine was approved in 1967, mumps serves as a warning of how viruses can spread rapidly and in unexpected ways with lessons for understanding SARS-CoV-2, the virus that causes Covid-19.

[Study - E-cigarette related to sleep deprivation in young adults, reveals study \(Media\)](#)

A systematic review in 2019 on adolescent substance use and sleep found few and inconsistent studies addressing the association between e-cigarette use and sleep deprivation and concluded that this association is a concern that requires more research. The findings from a recent study published in [Addictive Behaviors](#) suggest that e-cigarette use might be related to sleep deprivation in young adults. Nicotine, as a stimulant, can suppress rapid eye movement (REM) sleep, which may contribute to a variety of sleep problems such as sleep deprivation. The findings from a recent study published in [Addictive Behaviors](#) suggest that e-cigarette use might be related to sleep deprivation in young adults. Sleep deprivation is a strong predictive factor for many adverse health outcomes. It disrupts the functionality of different human body systems, such as immune, reproductive, and cardiovascular systems. One potential predictor of sleep deprivation might be e-cigarette use. E-cigarette use (vaping) has dramatically increased among young adults in the U.S., even among those who had never used cigarettes. Nicotine and other particulates of e-cigarettes have been linked to adverse health outcomes, such as increased heart rate, cough and wheeze, endothelial dysfunction, oxidative stress, addiction, and attention deficiency.

Researches, Policies and Guidelines

[Canada - Planning underway to tackle rising overdose deaths in New West \(Media\)](#)

According to the media, Fraser Health selects a non-profit operator for the overdose prevention site, and it will inform the city of a potential location for the facility. A rezoning or temporary-use permit may be required to allow for the proposed use, but, because of the number of overdose deaths, staff is proposing to use an expedited development approval process. B.C. Fraser Health now has the resources needed to open an overdose prevention site in New Westminster. A report considered by city council on 5 October 2020 states that Fraser Health is actively exploring a location for an overdose prevention site in New West. Fraser Health's medical health officer and medical director, communicated that in 2018, there were 35 people who died of an opioid overdose, and in 2019 there were 19 people. So far this year, 23 people, up to the end of August, have died of an overdose. Along with deaths, there is an increase in the number of overdose calls.

[Canada - New health projects empower Indigenous communities to address chronic diseases \(Media\)](#)

Indigenous communities burdened with up to three times the national rates of chronic diseases now have access to an innovative health project fund established by Bimaadzwin and Boehringer Ingelheim (Canada) Ltd. These community-driven pilot projects, specifically aimed at reducing type 2 diabetes and chronic obstructive pulmonary disease are intended to empower Nations in improving health and wellness. The Indigenous Health Pilot Project is a collaboration between Boehringer Ingelheim Canada, Bimaadzwin and Indigenous health policy leaders. Funding is available to advance national health and wellness projects that go beyond the pill in addressing type 2 diabetes and/or chronic obstructive pulmonary disease among Canada's Indigenous Peoples. Further investments in other chronic illnesses are planned following the successful launch of four initial pilot projects.

[WHO - WHO advisors propose new vaccine virus strains for pandemic readiness \(Official\)](#)

During recent meetings to recommend the flu strains to include in the Southern Hemisphere's 2021 flu season, the World Health Organization (WHO) advisory group also reviewed the latest developments with zoonotic strains and recommended two new candidate vaccine viruses for pandemic preparedness. Based on results from genetic characterization and antigenic testing, the group proposed developing a new candidate vaccine virus against a new clade of H5N6 recently detected in poultry in Vietnam, an influenza A/chicken/Vietnam/RAHO4-CD-20-421/2020-like virus. It also recommended a new candidate vaccine virus against variant H1 (H1v) that was detected in Germany, an influenza A/Hessen/47/2020-like virus.

[International - Strict COVID-19 lockdowns may speed up economic recovery: IMF \(Media\)](#)

On 8 October 2020, the International Monetary Fund stated that early lockdowns in an epidemic can substantially reduce infections, and policymakers should be wary of lifting them to jumpstart their economies when infections remain high. The IMF research did not single out specific countries, but comes as infections are rising sharply in parts of the United States that moved to end lockdowns early amid pressure from USA. The IMF commented that lockdowns needed to be sufficiently strict to curb infections, suggesting that stringent and short-lived lockdowns could be preferable to mild and prolonged measures. Lockdowns also reduced the mobility of younger people aged 18 to 44 more sharply, since they had younger children affected by school closures and often had temporary job contracts that were more likely to be terminated during a crisis. To prevent long-lasting wider inequality, decision-makers should look to strengthen unemployment benefits and offer paid leave to parents.

[Saudi Arabia- Study shows lower mortality in MERS patients treated with drug combo \(Media\)](#)

In a study in the *New England Journal of Medicine* on 8 October 2020, a combination of recombinant interferon beta-1b plus lopinavir-ritonavir lowered mortality in Middle Eastern respiratory syndrome coronavirus (MERS-CoV) patients. Researchers found that the mortality rate was 28% in patients in the intervention group and 44% in the placebo group, marking a difference of 19 percentage points when adaptive design was taken into account. The researchers write that in a prespecified subgroup analysis, treatment within 7 days after symptom onset led to lower 90-day mortality than use of placebo (relative risk, 0.19; 95% CI, 0.05 to 0.75), whereas later treatment did not. Participants were enrolled from nine sites in Saudi Arabia from November 2016 to April 2020. Interferons have been investigated for years because of their potential to inhibit viral reproduction and stimulate certain immune reactions, and while this study is promising, the researchers point out that future studies should particularly look at quantifying the viral RNA amounts.

[Study - Genome data spotlight re-emergence, resistance in yaws \(Media\)](#)

A new study by an international team of scientists is shedding light on the re-emergence and development of antibiotic resistance in a neglected tropical infection. In the study, published in *The Lancet Microbe*, researchers performed whole-genome sequencing (WGS) on DNA from patients in Papua New Guinea who had yaws, an infection of the skin, bone, and cartilage caused by the bacterium *Treponema pallidum* subspecies *pertenue* (*T p pertenu*). The infection, which is transmitted through person-to-person contact, affects children in at least 15 countries, mainly in Africa, Asia, Latin America, and the South Pacific. If untreated, it can cause chronic, disfiguring skin ulcers. In the new study, WGS revealed that re-emergence of the infection likely stemmed from multiple sources and that the resistance appears to have emerged in one patient before spreading to others, findings the authors note could shape the elimination strategy going forward. The analysis also showed that these sub-lineages had distinct evolutionary histories, an indication that the re-emergence of the infection after mass azithromycin distribution did not stem from a single source, but multiple sources. The researchers suspect the re-emergence stems from people who had a latent infection and didn't receive azithromycin treatment, which resulted in the infection becoming active. The authors of the study note, these results provide information that could help improve the WHO's mass azithromycin distribution program, which has also been implemented in Benin, Ivory Coast, Ghana, Togo, and Vanuatu.

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

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