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Sent: 2020-10-15 8:16 AM
To: gphin / rmisp (PHAC/ASPC)
Subject: GPHIN Daily Report (15 October 2020)
Attachments: GPHIN Daily Report 20201015 SR1.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 14 October 2020 at 19:00 EDT, a total of 189,387 cases have been recorded in Canada including 9,664 deaths. The cases are reported in Newfoundland and Labrador (283 confirmed cases, 4 deaths), Prince Edward Island (65 confirmed cases), Nova Scotia (1,092 confirmed cases, 65 deaths), New Brunswick (292 confirmed cases, 2 deaths), Quebec (88,994 confirmed cases, 5,977 deaths), Ontario (61,413 confirmed cases, 3,017 deaths), Manitoba (2,925 confirmed cases, 37 deaths), Saskatchewan (2,199 confirmed cases, 25 deaths), Alberta (21,199 confirmed cases, 287 deaths), British Columbia (10,892 confirmed cases, 250 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 15 October 2020, 11:30 GMT, there were 38,816,933 cases of COVID-19 and 1,098,037 deaths reported globally. Top 10 countries with the highest number of cases, by alphabetical order are: Argentina (931,967 cases, 24,921 deaths), Brazil (5,141,498 cases, 151,779 deaths); Colombia (930,159 cases, 28,306 deaths); France (779,063 , 33,037 deaths); India (7,309,164 cases, 111,337 deaths); Mexico (829,396 cases, 84,898 deaths); Peru (856,951 cases, 33,512 deaths); Russia (1,354,163 cases, 23,491 deaths); Spain (937,311 cases, 33,413 deaths); United States (8,154,627 cases, 221,888 deaths).

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

- On 14 October 2020, [Chief Public Health Officer in lieu of an in-person update](#) stated that flu shot provides protection against infection with influenza A and B viruses that are expected to circulate in the Canadian population this fall and winter while COVID-19 activity continues. Although the flu shot doesn't provide protection against infection with the virus that causes COVID-19, it will help reduce the risk of you getting the flu before, during or after a possible COVID-19 infection.
- According to the Northern Inter-Tribal Health Authority (NITHA), there were [39 active cases of COVID-19 in the northern Saskatchewan](#). The Little Red River reserve now has seven active cases and La Ronge has two active cases. The Lac La Ronge Indian Band's community of Stanley Mission implemented a roadblock and a curfew to stop the spread of the virus. Stanley Mission has managed to keep the total number of cases at six, but other communities within Lac La Ronge have not been as lucky. The spike in cases is not limited to one First Nation. According to a Facebook post from the band's public health unit, the Red Earth Cree Nation has 10 active 9cases of COVID-19 as of 14 October. Red Earth closed its health centre to free up staff for drive-through mass testing in the community.
- [Several more hand sanitizers have been added to a growing list of those recalled by Health Canada](#). On 13 October, five additional products were recalled from the market for containing ingredients that are not permitted by Health Canada and/or not being properly labelled. Since June, Health Canada has recalled dozens of hand sanitizers for containing unapproved ingredients, missing risk labels, and not being authorized to contain technical-grade ethanol. A complete list of hand sanitizers recalled by Health Canada can be found [under this link](#).

- [Nearly half of Manitoba's new 124 COVID-19 cases are on reserve and a northern Manitoba First Nation is in lockdown with more than 30 positive cases of COVID-19.](#) Little Grand Rapids is operating under a Code Red on the provincial pandemic response system with the most cases in a First Nation in the province, officials confirmed. It is one of nine First Nations in Manitoba with confirmed cases. According to the report, officials are seeing a large cluster of cases with connections across communities related to traveling and visiting family, among other things.
- [Three schools in Winnipeg and one school in Mitchell, Man. are reporting potential COVID-19 exposures](#) on 14 October. In the province's COVID-19 bulletin, the province announced potential COVID-19 exposures at Acadia Junior High and Margaret Park School in Winnipeg, and at Mitchell Middle School, part of the Southern Health region. The Seven Oaks School Division announced there are also been an exposure at Elwick School.
- On 14 October 2020, [Ontario province's associate chief medical officer indicated](#) that 3% of COVID-19 tests performed in Ontario over the last day came back positive, calling the rate a worrisome one. The per cent positivity rate increased from the previous day's 2.6%, according to provincial data, as Ontario recorded 721 new COVID-19 cases out of roughly 32,200 tests. The official said the seven-day average is 2.2% positivity, but she noted even that is increasing slightly.
- [Canadians appear to be turning against mandatory COVID-19 inoculations whenever a vaccine becomes available](#), with a new poll suggesting the number of people opposed to the idea is growing. The poll by Leger and the Association for Canadian Studies is the latest to take the public's opinion during the COVID-19 pandemic, and comes as governments and scientists around the world are scrambling to find a vaccine.

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

- According to the media, [the White House has embraced a declaration by a group of scientists](#) arguing that authorities should allow the coronavirus to spread among young healthy people while protecting the elderly and the vulnerable, an approach that would rely on arriving at herd immunity through infections rather than a vaccine.
- On 14 October 2020, Centers for Disease Control and Prevention updated [Vaccines](#), including [8 Things to Know about U.S. COVID-19 Vaccination Plans](#), [How CDC Is Making COVID-19 Vaccine Recommendations](#), [Ensuring the Safety of COVID-19 Vaccines](#), [Frequently Asked Questions about COVID-19 Vaccination](#). In addition, the agency has published [10 Things Healthcare Professionals Need to Know about U.S. COVID-19 Vaccination Plans](#) stating that in the United States, there is currently no authorized or approved vaccine to prevent coronavirus disease 2019 (COVID-19). [Operation Warp Speedexternal icon](#) has been working since the pandemic started to make a COVID-19 vaccine(s) available as soon as possible. CDC is focused on vaccine planning, working closely with health departments and partners to get ready for when a vaccine(s) is available, however, CDC does not have a role in developing COVID-19 vaccines.

[PAHO - New rapid antigen tests could transform COVID-19 response in the Americas](#) (Official)

On 14 October 2020, the Pan American Health Organization's (PAHO) Director remarked that a rapid antigen diagnostic test for the novel coronavirus would be a game changer in the fight against the pandemic. PAHO is helping to roll out hundreds of thousands of these tests in Latin America, especially in more marginalized regions at first, which will allow people with active symptoms to have test results much faster than before. The Director stated, this new diagnostic will allow us to test more people faster and more accurately than ever before, particularly in remote communities without easy access to a laboratory, which have been disproportionately impacted by the pandemic. The Director also acknowledged, as patients wait for test results, they carry on with their lives, they go to work, and they take public transportation and visit family. This means that for days or even weeks they run the risk of infecting their loved ones, their coworkers and their communities.

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

- [The U.S. Defense Advanced Research Projects Agency, better known as DARPA, teamed up with biodefense company Zeteo Tech Inc](#) to evaluate in-flight spread of airborne particles. Industry partners included Boeing and United Airlines. According to the release, fluorescent tracer particles meant to simulate viral particles were released at rates of 2 to 4 minutes, both in the air and on the ground. Mannequins representing passengers were positioned throughout the aircraft, some wearing masks and some without. The evaluators also tested a variety of scenarios, releasing particles in the cockpit as well as in the cabin, at the terminal with the cabin door open and at the terminal with doors closed but with air recirculation via an auxiliary power unit. According to the release, test results were due to TRANSCOM in September and then set to be reported to the Defense Department's COVID-19 task force. The data will be used to develop strategies like cabin loading and seating configurations to mitigate potential risk of inter-person transmission of the aerosol particles.
- On 14 October 2020, the [U.S. Centers for Disease Control and Prevention \(CDC\) said that COVID-19 vaccines may not be initially recommended for children](#), when they become available. Children, who rarely have severe COVID-19 symptoms, have not yet been tested for any experimental coronavirus vaccine. The CDC said so far early clinical trials have only included non-pregnant adults, noting the recommended groups could change in the

future as clinical trials expand to recruit more people. Pfizer Inc has said it will enrol children, who are capable of passing on the virus to high-risk groups, as young as 12 in its large, late-stage COVID-19 vaccine trial, while AstraZeneca has said a sub-group of patients in a large trial will test children between five to 12.

- [Clinical-stage biotechnology company, Vaxart, Inc., announced that the first subject has been dosed in its Phase 1 study of VXA-CoV2-1](#), an oral tablet COVID-19 vaccine candidate. The Phase 1, open-label, dose-ranging trial (NCT04563702) is designed to examine the safety and immunogenicity of two doses of VXA-CoV2-1 in up to 48 healthy adult volunteers aged 18 to 54 years old. Enrollment is expected to be completed by early November 2020, with participants receiving the low or high dose of the VXA-CoV2-1 oral tablet at days 1 and 29. Safety, reactogenicity and immunogenicity assessments will be performed at set times during the active phase.
- [Indian health ministry released guidelines](#) for treating coronavirus disease patients simultaneously infected with dengue, malaria or other infections, flagging the risk of seasonal epidemics and underscoring the medical challenges of treating double infections. The guidelines recommend the use of the anti-viral oseltamivir under the prescribed dosage for patients co-infected with influenza. In case of an outbreak of seasonal influenza, oseltamivir “blanket therapy” should be considered for all patients with COVID-19, according to the ministry.
- [Russia has granted regulatory approval to a second COVID-19 vaccine](#), which is developed by Siberia’s Vector Institute and completed early-stage human trials last month.
- [AstraZeneca is set to provide Indonesia with 100 million coronavirus vaccines next year](#). The first shipment will be made by the first half of 2021.
- [French President has declared a state of emergency and announced that people must stay indoors from 21:00 to 06:00](#) in Paris and eight other cities to control the rapid spread of coronavirus in the country. The curfew will come into effect from 17 October and last for at least four weeks. Across Europe, governments are introducing new restrictions to battle a second wave of infections.

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

- [A UBC study following a cohort of 78 former COVID-19 patients](#), has found more than 75% continue to experience significant symptoms, including half with irreversible lung scarring. The study, published in the [European Respiratory Journal](#), found 76% of patients hospitalized with COVID self-reported abnormal symptoms three months after they were infected, and one-third reported at least moderate impairment in major dimensions of quality of life.
- [Scientists have developed, for the first time, a score that can accurately predict which patients will develop a severe form of COVID-19](#). The study, led by researchers at RCSI University of Medicine and Health Sciences, is published in [The Lancet’s](#) translational research journal *EBioMedicine*. The measurement, called the Dublin-Boston score, is designed to enable clinicians to make more informed decisions when identifying patients who may benefit from therapies, such as steroids, and admission to intensive care units. Until this study, no COVID-19-specific prognostic scores were available to guide clinical decision-making. The Dublin-Boston score can now accurately predict how severe the infection will be on day seven after measuring the patient’s blood for the first four days. The blood test works by measuring the levels of two molecules that send messages to the body’s immune system and control inflammation. The Dublin-Boston score is easily calculated and can be applied to all hospitalized COVID-19 patients. More informed prognosis could help determine when to escalate or de-escalate care, a key component of the efficient allocation of resources during the current pandemic. The score may also have a role in evaluating whether new therapies designed to decrease inflammation in COVID-19 actually provide benefit.
- [Scientists report a comparison of 21 developed countries during the start of the coronavirus pandemic](#) shows that those with early lockdowns and well-prepared national health systems avoided large numbers of additional deaths due to the outbreak. In a study published by the journal [Nature Medicine](#), researchers used the number of weekly deaths in 19 European countries, New Zealand and Australia over the past decade to estimate how many people would have died from mid-February to May 2020 had the pandemic not happened.
- [New research out of Japan suggests](#) that airborne coronavirus particles travel farther in dry environments, potentially making humidifiers a valuable tool for fighting contagion. The study is the latest from Japanese research institute Riken, which has been using [the world’s top supercomputer, Fugaku](#), to model how the coronavirus spreads in different scenarios. Partnering with Kobe University, the institute analyzed different indoor settings to determine how microscopic virus particles travel after being discharged by an infected person. At higher humidity levels, particles hung in the air for shorter periods and were less likely to reach someone seated on the opposite side of a dining table, [the researchers found](#). The simulations showed that the amount of particles in the air was more than twice as high when humidity was below 30 percent than when it rose above 60 percent. The findings suggest that dry indoor conditions could make the winter months particularly dangerous. The researchers also proposed that humidifiers could be used to lessen, though not eliminate the risk of transmission in poorly ventilated spaces. Previous simulations using Fugaku prompted Riken to recommend [keeping windows open on commuter trains](#) and using masks [instead of face shields](#).

Domestic Events of Interest

[Food Recall Warning - Adar brand Schmaltz Herring in Oil recalled due to Listeria monocytogenes](#) (Official)

National Herring Co. is recalling Adar brand Schmaltz Herring in Oil from the marketplace due to possible Listeria monocytogenes contamination. This recall was triggered by Canadian Food Inspection Agency (CFIA) test results. The product has been sold in Quebec. There have been no reported illnesses associated with the consumption of this product.

International Events of Interest

[WHO - WHO: Global TB progress at risk](#) (Official)

Prior to the COVID-19 pandemic, many countries were making steady progress in tackling tuberculosis (TB), with a 9% reduction in incidence seen between 2015 and 2019 and a 14% drop in deaths in the same period. High-level political commitments at global and national levels were delivering results. However, a new report from WHO shows that access to TB services remains a challenge, and that global targets for prevention and treatment will likely be missed without urgent action and investments. Disruptions in services caused by the COVID-19 pandemic have led to further setbacks. In many countries, human, financial and other resources have been relocated from TB to the COVID-19 response. Data collection and reporting systems have also been negatively impacted. According to the new report, data collated from over 200 countries has shown significant reductions in TB case notifications, with 25-30% drops reported in 3 high burden countries – India, Indonesia, the Philippines – between January and June 2020 compared to the same 6-month period in 2019. These reductions in case notifications could lead to a dramatic increase in additional TB deaths, according to WHO modelling.

[WHO- WHO takes a position on genetically modified mosquitoes](#) (Official)

On 14 October, the WHO informed through their newsletter that more than 700 000 people die from vector-borne diseases (VBDs) such as malaria, dengue, schistosomiasis, leishmaniasis, Chagas disease, yellow fever and Japanese encephalitis, among others. More than 80% of the global population live in areas at risk of at least one major vector-borne disease, and more than half are at risk of two or more. Taken together, these diseases exact an immense toll on economies and can impede both rural and urban development. Recognizing the urgent need for new tools to combat VBDs, and in the spirit of fostering innovation, WHO supports the investigation of all potentially beneficial technologies, including genetically-modified mosquitoes (GMMs). A new position statement, launched in a WHO seminar, clarifies WHO's stance on the evaluation and use of GMMs for the control of vector-borne diseases.

[WHO - 10,000 more children a month could die of malnutrition due to COVID impact](#) (Media)

According to the director general of the WHO, an additional 10,000 children a month could die this year from malnutrition as a result of the impact of the COVID-19 pandemic. The official, speaking at a U.N Food and Agriculture (FAO) conference stated, he expected a 14% increase this year in children suffering from malnutrition as a result of the pandemic.

[UNAIDS - COVID-19 Causing Global Disruptions in Routine HIV Testing Services, Data Show](#) (Media)

Monthly data routinely reported to UNAIDS on disruptions to HIV testing and treatment services have found significant decreases in HIV testing services in nearly all countries with available data. Since the start of the COVID-19 pandemic, UNAIDS, the World Health Organization, and the United Nations Children's Fund have collected data from countries through an [online platform](#) to identify national, regional, and global disruptions of routine HIV services caused by COVID-19.

Researches, Policies and Guidelines

[Longitudinal antibody and T cell responses in Ebola virus disease survivors and contacts: an observational cohort study](#) (Study)

A new study reports an in-depth analysis of naturally acquired immunity to Ebola virus and enables a comprehensive comparison between naturally acquired and vaccine-induced immunity to Ebola virus both at the antibody and T cell level. The study also provides supporting evidence for the existence of paucisymptomatic Ebola virus disease and suggests that true incidence of Ebola virus infection in the west African outbreak was greater than recorded. Additionally, T cell phenotyping results support the preclinical findings of a potential correlate of protection to Ebola virus. The authors suggest that up to 9% of individuals with Ebola virus disease will present with mild symptoms, which will have implications with regard to monitoring and responding to future outbreaks. Additionally, the work shows that T cell responses are relevant and long lasting among survivors of Ebola virus disease; therefore, future vaccine developers might wish to

consider the T-cell response in more depth. The evaluation of convalescent plasma showed varying titres of anti-Ebola virus IgG, so pre-screening of IgG and neutralising titres before administration of convalescent plasma should be considered in future outbreaks.

[United States - First Ebola therapy approved by the FDA \(Media\)](#)

For the first time, an Ebola therapy has been approved for use. The Food and Drug Administration on 14 October approved Inmazeb, an antibody cocktail made by Regeneron Pharmaceuticals. With the approval, there are now both a vaccine — Merck's Ervebo — and a therapeutic to battle Ebola Zaire, tools that for decades were out of reach for Ebola, which is one of the deadliest infections known to humankind. The treatment has been used in the current DRC outbreak under a compassionate use protocol. The Biomedical Advanced Research and Development Authority has purchased an undisclosed number of doses of Inmazeb for the U.S. strategic national stockpile.

[United States - Swine acute diarrhea syndrome coronavirus replication in primary human cells reveals potential susceptibility to infection \(Study\)](#)

New research from the University of North Carolina at Chapel Hill suggests that a strain of coronavirus that has recently alarmed the swine industry may have the potential to spread to humans as well. The coronavirus strain, known as swine acute diarrhea syndrome coronavirus (SADS-CoV), emerged from bats and has infected swine herds throughout China since it was first discovered in 2016. Outbreaks of such an illness have the potential to wreak economic havoc in many countries across the globe that rely on the pork industry. The virus' potential threat to people was demonstrated in lab tests that revealed SADS-CoV efficiently replicated in human liver and gut cells, as well as airway cells. The findings were published Oct. 12 in PNAS. Though it is in the same family of viruses as the betacoronavirus SARS-CoV-2, which causes the respiratory illness COVID-19 in humans, SADS-CoV is an alphacoronavirus that causes gastrointestinal illness in swine. The virus causes severe diarrhea and vomiting and has been especially deadly to young piglets.

[United States- Updated guidance for healthcare workers with HIV, hepatitis \(Media\)](#)

On 14 October 2020, the Society for Healthcare Epidemiology of America (SHEA) released an updated guidance for healthcare personnel living with the blood-borne pathogens such as hepatitis B, hepatitis C, and HIV. The SHEA White Paper, "[Management of Healthcare Personnel Living with Hepatitis B, Hepatitis C, or Human Immunodeficiency Virus in United States Healthcare Institutions](#)," was published online in the journal *Infection Control & Hospital Epidemiology*. SHEA has been at the forefront of this issue since its initial set of recommendations was issued in 1990. The recommendations, which update SHEA's 2010 guideline, reflect experience that underscores the low risk of transmission from healthcare personnel to patients. The updated guidance also considers interventions that reduce risk for occupational exposures and injuries, as well as advances in antiviral therapy and treatments that cure hepatitis C and reduce circulating HIV to undetectable levels in nearly all individuals living with the disease.

[International - Plant-derived flu vaccine is non-inferior \(Study\)](#)

A quadrivalent (four-strain) flu vaccine derived from the *Nicotiana benthamiana* plant, a relative of the tobacco plant, produces "non-inferior" results at minimum, according to the results of two phase 3 vaccine efficacy (VE) trials published in a [Lancet](#) study. The researchers conducted their randomized, observer-blind studies in Northern Hemisphere locations across Europe, Asia, and North America. In the 18-to-64 study, researchers administered either the plant-derived vaccine or a placebo to 10,160 people during the 2017-18 flu season. Serious adverse events were comparable between the two groups, with 55 (1.1%) of the 5,064 who received the plant-derived vaccine experiencing a severe effect and 51 (1.0%) of the 5,072 in the placebo group experiencing one. While the 18-to-64 study produced suboptimal results—the target was 70%—the flu VE for that year in the United Kingdom was 15%. Of this group, 263 (4.1%) and 266 (4.2%) experienced serious adverse events, respectively.

[Switzerland - CARB-X taps Swiss company to develop antibiotic for *Enterobacteriaceae* \(Media\)](#)

CARB-X announced that it is awarding up to \$2.62 million to Swiss biopharmaceutical company Polyphor AG to develop a new antibiotic to treat infections caused by *Enterobacteriaceae*, including carbapenem-resistant *Enterobacteriaceae* (CRE). The antibiotic being developed by Polyphor is a thanatin-derivative peptide that targets the lipopolysaccharide transport protein in gram-negative bacteria to break down their outer membrane. The company says antibiotics in this class have shown potent and specific activity against *Enterobacteriaceae*, including extremely drug-resistant strains like CRE.

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

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