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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 15 October 2020 at 19:00 EDT, a total of 191,732 cases have been recorded in Canada including 9,699 deaths. The cases are reported in Newfoundland and Labrador (284 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 (89,963 confirmed cases, 6,005 deaths), Ontario (62,196 confirmed cases, 3,022 deaths), Manitoba (3,098 confirmed cases, 38 deaths), Saskatchewan (2,232 confirmed cases, 25 deaths), Alberta (21,443 confirmed cases, 288 deaths), British Columbia (11,034 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 16 October 2020, 02:40 GMT, there were 39,235,114 cases of COVID-19 and 1,103,757 deaths reported globally. Top 10 countries with the highest number of cases, by alphabetical order are: Argentina (949,063 cases, 25,342 deaths), Brazil (5,170,996 cases, 152,513 deaths); Colombia (936,982 cases, 28,457 deaths); France (809,684, 33,125 deaths); India (7,372,394 cases, 112,146 deaths); Mexico (834,910 cases, 85,285 deaths); Peru (859,740 cases, 33,577 deaths); Russia (1,369,313 cases, 23,723 deaths); Spain (972,958 cases, 33,553 deaths); United States (8,219,088 cases, 222,754 deaths).

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

- [British Columbia's provincial health stated that the province's first case of multi-system inflammatory syndrome \(MIS-C\) had been detected](#) in a young child under the age of 5. The child who was found to have MIS-C and later tested positive for COVID-19 but has since recovered.
- [Alberta hospitals are treating 100 COVID-19 patients a day after reaching a record 102 patients in care with the virus](#). Alberta Health spokesman stated that outbreaks at the Misericordia Hospital in Edmonton and the Foothills Medical Centre in Calgary are driving those numbers up. With 1,473 active cases, the Edmonton Zone, which includes the capital and surrounding communities, continues to be the epicentre of the pandemic in Alberta.
- On 14 October 2020, [Nova Scotia's chief medical officer of health declared that the outbreaks in New Brunswick do not pose an increased risk to Nova Scotians](#) at this time because there is no evidence of community spread. Public health officials in that province have said their cases are linked to specific outbreaks, including one at a long-term care home in Moncton. To close the border with New Brunswick, there would need to be a "significant risk" of COVID-19 being brought into Nova Scotia it was announced. Nova Scotia's government is the only one inside the Atlantic bubble that has not yet issued special guidelines for travellers from New Brunswick's two hot spots.
- [Nova Scotia is the latest province to adopt the federal government's COVID-19 exposure-notification app for smartphones](#). The Premier stated that the Nova Scotians can immediately download the free and voluntary application onto their phones.

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

- [The U.S. Food and Drug Administration \(FDA\) has reissued the Emergency Use Authorization \(EUA\)](#) for certain filtering face-piece respirators (FFRs) that are manufactured in China and are not approved by the Centers for Disease Control and Prevention's (CDC) National Institute for Occupational Safety and Health (NIOSH).
- [U.S. diplomats and security officials privately warned the state of Nevada not to use Chinese-made coronavirus test kits donated by the United Arab Emirates](#) over concerns about patient privacy, test accuracy and Chinese government involvement. The donation offer to Nevada involved a shadowy Emirati company called Group 42, which collaborated with Shenzhen-based BGI to create a rapid-testing system in the United Arab Emirates.

IHR Announcement - Additional health measures in relation to the COVID-19 outbreak

As of 16 October 2020, there has been no new State Party that reported on additional health measures that significantly interfere with international traffic since the last announcement published on 09 October 2020. A total of 194 out of 196 States Parties reported to date with Mexico and Nicaragua not reporting any measure. Moreover, 29 countries provided updates to their previously implemented measures.

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

- WHO has published, a new [Micronutrient survey manual \(2020\)](#) and toolkit, developed in collaboration by WHO, CDC, UNICEF and Nutrition International to meet the demand of countries interested in assessing the micronutrient status of their populations.
- According to the WHO's regional director for Europe, [daily coronavirus deaths in Europe could reach four or five times their April peak within months without effective countermeasures](#). However, he stated that there was cause for optimism because the situation was not the same as during the first wave of the pandemic, and tighter controls introduced by many European countries could save hundreds of thousands of lives.
- The [World Health Organization says the young and healthy may have to wait until 2022 to get a COVID-19 vaccine](#). WHO chief scientist has said that health authorities will likely prioritize health care and frontline workers such as law enforcement and emergency responders, then the elderly.
- [Russian Health Minister has stated that results of studies on the third domestic vaccine against the coronavirus infection are expected by mid-December](#). He also clarified that lists of those categories of people that should be vaccinated were being formed now.

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

- [A novel method of sampling sewage for COVID-19 is showing an "alarming" surge in viral transmission in Ottawa](#), researchers reported — a detection process that belies flattening case counts registered by the province's strained testing system. Epidemiologists have warned that upheaval in the province's testing system — difficulty accessing assessment centres, backlogs of swabs, and changes to testing criteria — mean that any apparent flattening in Ontario's case curve should be considered suspect. And so from our perspective here in Ottawa, where we have the highest rate per hundred thousand people of COVID at the moment, this is a really important measure of the effectiveness of our public health regulation." A novel method of sampling sewage for COVID-19 is showing an "alarming" surge in viral transmission in Ottawa, researchers say — a detection process that belies flattening case counts registered by the province's strained testing system.
- [Remdesivir does not improve COVID-19 survival odds, a large World Health Organization \(WHO\) trial of it and three other treatments has ruled](#). More than 11,200 hospitalized COVID-19 patients around the world were treated with remdesivir - an antiviral - lopinavir, hydroxychloroquine, interferon or a placebo for the WHO's massive SOLIDARITY trial. None of the drugs 'substantially affected' mortality risks, the dismal report found.
- [Two medical studies have suggested that people with blood type O may be at lower risk of contracting the novel coronavirus](#). The Danish study, conducted by 11 researchers based on information of 473,654 individuals tested for COVID-19, found that blood group O was associated with a decreased risk of coronavirus infection. The research indicated that individuals with blood types A, B, and AB are at higher risk of exhibiting thrombosis due to clotting of blood inside a blood vessel, and cardiovascular diseases, which are significant co-occurring conditions among hospitalized COVID-19 patients. Similar results were found by a Canadian medical study conducted by 14 researchers based on data collected from intensive care unit patients in six metropolitan Vancouver hospitals. The study concluded that 84% of patients with blood groups A or AB required mechanical ventilation in SARS-CoV-2 infection, that level was 61% for patients with blood types O or B, according to the research. The median length of staying in intensive care units was 13.5 days for patients with A or AB blood types, while it was only 9 days for patients with O or B blood types.
- A recent preprint study, not yet peer-reviewed, from researchers at the Mayo Clinic reported very [strong associations between pneumococcal vaccination and protection against COVID-19](#). This is especially true among minority patients who are bearing the brunt of the coronavirus pandemic. The report also suggests that other vaccines or combinations of vaccines, such as Hib and MMR may also provide protection. Based on these data, the authors advocate for a universal pneumococcal and Hib vaccination among children, at-risk adults and all adults over 65 to prevent serious COVID-19 disease.

- [IDseq, a novel cloud-based open source metagenomic analysis platform, identifies both novel and existing disease-causing pathogens from a human](#), animal or parasite sample to provide an actionable report of what is happening on the ground in labs and clinics anywhere in the world. A partnership between the Chan Zuckerberg Biohub, the Chan Zuckerberg Initiative (CZI), and the Bill and Melinda Gates Foundation enabled the researchers to sequence and confirm the country's first case of COVID-19 in a matter of days—not the weeks it could typically take. In their [study](#), the scientists used various approaches to demonstrate that the IDseq tool can reliably identify emerging pathogens, among them, as proof of principle, a nasal swab from a COVID-19 patient in Cambodia.
- [A Chinese drug developer is offering an experimental coronavirus vaccine to students going abroad in a strategy health experts expressed safety and ethical concerns](#). Since students need to travel to Beijing, the national capital, or Wuhan, where the outbreak emerged in December 2019, they will need to receive a vaccine. The students are part of a global race to develop a vaccine that, if they are successful, offers the fledgling Chinese industry the potential for prestige and worldwide sales. More than 168,000 people signed up to receive the vaccine via an online survey and more than 91,000 are being considered, CNBG said on its website.
- [Scientists from Oxford University's Department of Physics have developed an extremely rapid diagnostic test that detects and identifies viruses in less than five minutes](#). The method, published on the preprint server [MedRxiv](#), is able to differentiate with high accuracy SARS-CoV-2, the virus responsible for COVID-19, from negative clinical samples, as well as from other common respiratory pathogens such as influenza and seasonal human coronaviruses. Working directly on throat swabs from COVID-19 patients, without the need for genome extraction, purification or amplification of the viruses, the method starts with the rapid labeling of virus particles in the sample with short fluorescent DNA strands. A microscope is then used to collect images of the sample, with each image containing hundreds of fluorescently-labeled viruses. The researchers aim to develop an integrated device that will eventually be used for testing in sites such as businesses, music venues, airports etc., to establish and safeguard COVID-19-free spaces.
- Researchers from Chan School of Public Health, Harvard Pilgrim Health Care Institute, Brigham and Women's Hospital, and Vassar College recently showed that the [varying population distribution of Cycle threshold \(Ct\) values from positive SARS-CoV-2 samples could help infer epidemic dynamics](#). However, the varying symptoms and non-specific incubation periods of coronavirus disease 2019 (COVID-19), the limited availability of testing, and the delay in case reporting or confirmed deaths make these approaches limited and non-reliable in mapping the infection trajectory. Tracking the trajectory of an outbreak during a pandemic is essential for making key decisions related to public health response measures. Understanding the trends of infection can help decision-makers plan the deployment of public health resources, the need for non-pharmaceutical interventions, and the optimal use of hospital beds for patients and personal protective equipment for health workers. Study findings show that by incorporating viral loads into public health data streams, a new approach can be devised that allows for real-time resource allocation and assessment of outbreak mitigation strategies, even in the absence of repeat incidence data
- On 14 October 2020, in a letter published in *The Lancet* a group of specialists acknowledged that "ongoing restrictions have understandably led to widespread demoralization and diminishing trust among the public," such restrictions may be necessary, at least in the short term. The letter, signed by 80 researchers from the fields of public health, epidemiology, virology, infectious diseases and others, stated that [aid relying on immunity among people who have recovered from Covid-19 is a flawed strategy](#). The declaration, according to one administration official, means that dealing "with this pandemic is something that centers on aggressive protection of the vulnerable, opening all schools, opening businesses and society, and ending the prolonged lockdowns."
- [People aged under 60 who are hospitalised with COVID-19 are more likely than expected to experience severe psychiatric symptoms](#). Research found that altered mental states such as psychosis are being reported in these younger patients. It confirmed that strokes and other neurological symptoms are common in severe COVID-19. In the study, 'altered mental state' included any sudden change in personality, behaviour, thinking abilities, or consciousness. Neurological symptoms included any symptoms involving the nerves or muscles. Strokes included blood clots or bleeds in the brain. Further research may help researchers work out how the virus causes these complications.
- [A research team has discovered a novel antiviral strategy for treatment of COVID-19](#). They discovered that a class of metallodrugs currently used in the treatment of other infectious diseases is showing efficacy to potentially suppress SARS-CoV-2 replication and relieve viral-associated symptoms in an animal model. The findings provide a new and readily available therapeutic option with high clinical potential for infection with SARS-CoV-2. This groundbreaking work has been published online in a top-class scientific journal *Nature Microbiology*.

Domestic Events of Interest

[Canada - New pink fentanyl causing overdoses across Ontario, prompting public health warnings \(Media\)](#)

A new red and pink street drug that causes more overdoses has arrived in Hamilton, prompting warnings from local public health officials. The Director of epidemiology, wellness and communicable disease control with Hamilton Public Health commented that there have been 17 EMS calls related to opioid overdoses on September 2020. A physician of the

Shelter Health Network in Hamilton stated it is a deadly combination because while someone is overdosing, "they're still having difficulty breathing no matter how much naloxone you give them because the benzos are suppressing respiration. Don't use pink fentanyl alone." Some of the nicknames for the drug include pink, pinky, pink down or pink dizzy.

[Canada - Raschera DOP \(cheese\) recalled due to Salmonella \(Official\)](#)

Taste for Luxury is recalling Raschera DOP (cheese) from the marketplace due to possible Salmonella contamination. The products have been sold in Ontario and Quebec.

[Canada - Outbreak of Salmonella infections linked to peaches from the U.S. declared over \(Media\)](#)

The Public Health Agency of Canada (PHAC) has said that an investigation it opened recently into an outbreak of salmonella infections linked to peaches imported from the United States has been closed. According to the PHAC, the investigation findings identified exposure to peaches from Prima Wawona from the United States as a likely source of the outbreak. In total, there were 57 confirmed cases of *Salmonella Enteritidis* illness linked to this outbreak in two provinces: Ontario (41) and Quebec (16). Peaches grown in Canada were not associated with this outbreak.

International Events of Interest

[IHR Announcement - Poliomyelitis \(Circulating vaccine-derived poliovirus and Wild Poliovirus\) – Global update](#)

Between 1 January and 14 October 2020, there have been several countries affected by poliomyelitis including circulating vaccine-derived poliomyelitis type 1 and 2 (cVDPV1 and cVDPV2) and wild poliovirus type 1 (WPV1) globally. This announcement is a weekly update on the status of cVDPV and WPV1 in these affected countries. Between 8 and 14 October 2020, there have been four WPV1 in Acute Flaccid Paralysis (AFP) cases and four WPV1 positive environmental samples reported in Afghanistan and Pakistan. During the same period, there have been 23 cVDPV2 in AFP cases reported in Burkina Faso, Côte d'Ivoire, Guinea, Mali and Niger, and 21 cVDPV2 positive environmental samples reported in Afghanistan and Pakistan.

[Sudan- Activists: 'Rift Valley Fever epidemic' in Sudan's Northern State \(Media\)](#)

Sudan's United Resistance Coordination of Merowe in the Northern State announced that the number of deaths from Rift Valley Fever has risen to 79, while the number of recorded cases has reached 1,962, including three cases of nervous system complications. A total of 4,578 miscarriages and deaths have been recorded among livestock. The Coordination calls on the Sudanese Ministry of Health and the Ministry of Animal Resources to declare an epidemic of Rift Valley Fever and to open the door for international and voluntary organisations to intervene and assist. In a statement on 14 October 2020, the Merowe activists expressed their regret about "the Ministry of Health's concealment of the Rift Valley Fever epidemic despite taking samples since 19 September 2020. According to the Ministry, the total cases of fevers in Merowe and Ed Debba in the Northern State reached 1,493, including 63 deaths. The Director General of the Ministry of Health in the Northern State, confirmed in a press conference held on 14 October 2020 in Dongola that "the health situation in the state has stabilised". The Director indicated that, after two weeks from now, field surveys for the disease will be made, and after three months, field vaccination for the disease will be considered in accordance with the plan and guidelines of the World Organisation for Animal Health.

[St Vincent & the Grenadines and St Lucia - Residents warned of next emerging pandemic \(Media\)](#)

With hundreds of recorded dengue cases and several deaths already recorded in neighbouring St Vincent & the Grenadines and St Lucia, the Chief Health Inspector at the Central Board of Health (CBH) has sounded the alarm that "dengue is fast emerging as a pandemic around the Caribbean countries". The chief health inspector is asking adults, in particular, to be more responsible by implementing measures like covering water containers so that they will not be accessible to mosquitoes. According to the country's Chief Medical Officer (CMO), Type 3 dengue is circulating in Antigua and Barbuda. Already, two people have contracted the mosquito-borne viral infection that causes a severe flu-like illness. According to the communication, "There are different strains of dengue and the type that we have seen circulating so far in Antigua and Barbuda is Type 3."

Researches, Policies and Guidelines

[ECDC - External quality assessment \(EQA\) of performance of laboratories participating in the European Antimicrobial Resistance Surveillance Network \(EARS-Net\), 2019 \(Official\)](#)

ECDC has provided an analysis of the external quality assessment (EQA) for the antimicrobial susceptibility testing (AST) performance of laboratories participating in the European Antimicrobial Resistance Surveillance Network (EARS-Net) in 2019. A total of 952 laboratories (1–95 per country) from 30 EU/EEA countries participated in the EQA exercise.

[Germany - German researchers report C difficile pacemaker infection \(Media\)](#)

In a case study in [Open Forum Infectious Diseases](#), German researchers reported a unique case of pacemaker pocket infection, lead endocarditis and bacteraemia with *C. difficile*. This is the first reported case of *C. difficile* causing a cardiac device infection and unique since no acute gastrointestinal inflammatory pathologies nor diarrhoea was present. They added that given the high numbers of asymptomatic *C. difficile* carriers and the growing use of cardiac implantable electronic devices it remains unclear why this problem has not become apparent before.

[South Korea- Overprescribing Antibiotics for Toddlers Can Cause Child Obesity \(Media\)](#)

A research team from Seoul National University Hospital conducted a study of 31,733 toddlers who received periodic health checks between 2008 and 2012 to arrive at their conclusion. Toddlers who were prescribed more than five kinds of antibiotics, for instance, are 42 percent more likely to suffer from child obesity than those who have been prescribed a single kind. The study showed that child obesity is more likely if toddlers under 24 months old are prescribed more varieties of antibiotics at an earlier age for an extended period.

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

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