GPHIN Daily Report for 2020-08-27

Special section on Coronavirus

Canada

Areas in Canada with cases of COVID-19 as of 26 August 2020 at 07:00 pm EDT
Source: Government of Canada

Province, territory or other	Number of confirmed cases	Number of active cases	Number of deaths
Canada	126,417	4,868	9,094
Newfoundland and Labrador	268	0	3
Prince Edward Island	44	3	0
Nova Scotia	1,081	5	65
New Brunswick	190	8	2
Quebec	61,945	1,276	5,747
Ontario	41,695	1,030	2,802
Manitoba	1,043	408	13
Saskatchewan	1,604	60	24
Alberta	13,210	1,176	235
British Columbia	5,304	902	203
Yukon	15	0	0
Northwest Territories	5	0	0
Nunavut	0	0	0
Repatriated travellers	13	0	0

A detailed epidemiologic summary is available.
https://www.canada.ca/en/public-health/services/diseases/2019-novel-coronavirus-infection.html#a1

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

Canada

Statement from the Chief Public Health Officer of Canada on August 26, 2020 - Canada.ca
Source: PHAC
Statement

[APG]

In lieu of an in-person update to the media, Dr. Theresa Tam, Canada's Chief Public Health Officer, issued the following statement today:
"There have been 125,969 cases of COVID-19 in Canada, including 9,090 deaths. 89% of people have now recovered. Labs across Canada tested an average of almost 48,000 people daily over the past week with 0.7% testing positive. Currently, Canada is testing more than 140 people for every positive case. An average of 400 new cases have been reported daily during the most recent seven days.
Tragically, in many regions of the country, the COVID-19 pandemic is contributing to an increase in drug-related overdoses and deaths. There are indications that the street drug supply is growing more unpredictable and toxic in some parts of the country, as previous supply chains have been disrupted by travel restrictions and border measures. Public health measures designed to reduce the impact of COVID-19 may increase isolation, stress and anxiety as well as put a strain on the supports for persons who use drugs.
For the third consecutive month this year, the number of drug overdose deaths recorded in British Columbia has exceeded 170. These deaths represent a 136% increase over the number of deaths recorded in July 2019.
There are news reports of an increase in overdoses in other communities across the country. Yukon reported twice as many overdose deaths in the first half of 2020 when compared with the same period in 2019. Saskatchewan is reporting historic levels of overdoses and overdose deaths, and in Quebec, July saw the highest number of overdose deaths in Montreal in over five years.
People use substances for many different reasons, such as a means of coping with trauma and other pain. For some, substance use can have negative impacts on their life. We know that addiction is not a choice, it is a treatable medical condition. There are many different paths to wellness and recovery. I encourage those in a position to support people who use substances to explore all of the options at their disposal.
Evidence shows supervised consumption sites help save lives, connect people to social services and can serve as a pathway to treatment. Providing flexible treatment options (like methadone or other opioid agonist therapies) or a safer alternative to street drugs for people with substance use disorders are also evidence-based ways to help reduce the risk of overdose, infection and withdrawal.
The federal government is continuing to take action to address the drug overdose crisis and to reduce the risk of harm for people who use substances during the COVID-19 pandemic.
There are many resources available to guide providers, such as six new national guidance documents, developed by the Canadian Research Initiative in Substance Misuse (CRISM). These guidelines address the urgent needs of people who use substances, service providers, and decision makers in relation to the COVID-19 pandemic. I also encourage health care providers to access this toolkit, which provides clarity on the rules for prescribing for the treatment of substance use disorder, and/or to provide a safer alternative to street drugs.
Visit Canada.ca/opioids to learn more about what you can do to help save a life, such as recognize and act if you witness an opioid overdose, or change the way you speak about substance use so others feel supported to reach out for help. These actions can help save lives, especially given the compounding public health impacts of the pandemic."
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https://www.canada.ca/en/public-health/news/2020/08/statement-from-the-chief-public-health-officer-of-canada-on-august-26-2020.html

Canada
Prime Minister Justin Trudeau speaks with premiers on continued efforts to address the impacts of COVID-19
Source: Prime Minister of Canada
Unique ID: 1007712241

Today, Prime Minister Justin Trudeau and Minister of Intergovernmental Affairs Dominic LeBlanc held the seventeenth call with Canada's provincial and territorial premiers to discuss their shared response to the

COVID-19 pandemic.
Building on the strong federal, provincial, and territorial collaboration that led to the Safe Restart Agreement, First Ministers discussed provincial and territorial efforts to re-open schools for the fall. They reaffirmed the need to ensure a safe and secure return to class for students and staff, and to minimize future surges in cases of COVID-19.
First Ministers agreed on the need to coordinate their efforts closely moving forward and reiterated their support for the Team Canada approach to fighting COVID-19.
https://pm.gc.ca/en/news/readouts/2020/08/25/prime-minister-justin-trudeau-speaks-premiers-continued-efforts-address

Canada
Prime Minister announces support for a safe return to school
Source: Prime Minister of Canada
Unique ID: 1007712244

School is critical for kids' development and future success. The COVID-19 pandemic has been difficult for families, with schools closed and students separated from their classmates and friends. As we gradually and safely restart our economy, parents should be able to return to work and trust that their children are learning in a healthy environment. That is why the Government of Canada is working to support provinces and territories in their efforts to ensure a safe return to school and protect the health of students and staff.
The Prime Minister, Justin Trudeau, today announced up to $2 billion in support for provinces and territories through the Safe Return to Class Fund. This will provide the complementary funding they need, as they work alongside local school boards to ensure the safety of students and staff members throughout the school year. For example, the Fund will help provinces and territories by supporting adapted learning spaces, improved air ventilation, increased hand sanitation and hygiene, and purchases of personal protective equipment and cleaning supplies.
The Prime Minister also announced an additional $112 million in funding for First Nations to support community measures to ensure a safe return to school on reserves. The government will continue to work with First Nation partners to help protect the health and safety of students and staff this school year.
As we reopen our schools and restart our economy, we will continue to take leadership and work together with provincial and territorial partners to protect the health and safety of all Canadians.
Quotes
"As a former teacher and a parent, I know first-hand the importance of school for kids' social development and mental well-being, not to mention their ability to learn. The return to school is also an important step to restart our economy and get parents back to work while not worrying about the health of their children. The Government of Canada will remain a close partner to provinces, territories, and First Nations as we work together to keep children, families, and all Canadians safe and healthy during this difficult time."
"Canada's children have shown immense strength throughout this global pandemic. With a new school year about to begin, our government is committed to helping ensure that Canada's students and teachers can safely return to their classrooms."
The Hon. Chrystia Freeland, Deputy Prime Minister and Minister of Finance
"The past few months have been especially hard on students who have been physically separated from their friends and classmates, and on parents who have had to juggle work and childcare. Provinces and territories have all been working hard to get students, teachers, and staff safely back to school, and the federal government wants to support them in that work. This funding will help provinces and territories in their tireless efforts in creating healthy and safe learning environments for our children and educators as we start a school year unlike any other."
The Hon. Dominic LeBlanc, President of the Queen's Privy Council for Canada and Minister of Intergovernmental Affairs
"We know that schools, students, and parents have been significantly impacted across the country as a result of the COVID-19 pandemic. This investment will enable First Nations to take action on First Nation-led plans and preparations for the safe reopening of their schools in a way that both follows public health guidance and continues to support students."
"We know families are worried about sending their children back to school. The COVID-19 pandemic has put pressure on our schools and on families. That is why today's announcement is so important. It will help schools across Canada have the support and equipment they need to keep kids, teachers, and

families safe."
The Hon. Ahmed Hussen, Minister of Families, Children and Social Development
Quick Facts
Funding will be provided to provinces and territories in two instalments, with a first disbursement in Fall 2020 and additional funding available for early 2021, to ensure that provinces and territories have support for the whole school year.
The funding by province and territory will be allocated based on the number of children aged between 4 and 18 years old, with a $2 million base amount provided to each jurisdiction.
Maximum total allocation by province and territory:
Alberta: $262.84 million
British Columbia: $242.36 million
Manitoba: $85.41 million
New Brunswick: $39.79 million
Newfoundland and Labrador: $26.18 million
Northwest Territories: $4.85 million
Nova Scotia: $47.88 million
Nunavut: $5.75 million
Ontario: $763.34 million
Prince Edward Island: $10.39 million
Quebec: $432.15 million
Saskatchewan: $74.90 million
Yukon: $4.16 million
The Safe Return to Class Fund is in addition to the more than $19 billion previously announced for the Safe Restart Agreement to help provinces and territories safely restart their economies. This agreement included funding to increase testing and contact tracing of the virus, support vulnerable Canadians, ensure the availability of safe childcare, and provide income support for people who do not have paid sick leave so all Canadians can stay healthy.
https://pm.gc.ca/en/news/news-releases/2020/08/26/prime-minister-announces-support-safe-return-school

Canada
VCH warns of potential coronavirus exposure at Privé Kitchen + Bar
Source: Daily Hive
GPHIN ID: 1007710723
Vancouver Coastal Health says patrons who visited a local karaoke restaurant and bar recently could be at risk for potential coronavirus exposure. The health authority issued a public exposure notification Tuesday afternoon about Privé Kitchen + Bar, a food an entertainment venue in Fairview featuring karaoke rooms and a large outdoor patio. The potential exposure dates were August 3, 6, 7, 8, 15, 16, and 17. The warning applies to the entire time Privé was open on those days.
https://dailyhive.com/vancouver/coronavirus-potential-exposure-prive-kitchen-bar

Canada
Simcoe Muskoka health unit sees 'troubling trend' with local COVID cases
Source: CTV Toronto
GPHIN ID: 1007710753

BARRIE, ONT. -- The Simcoe Muskoka District Health Unit is concerned with what it calls a troubling trend.
"We've had a growth in the pandemic," Medical Officer of Health Dr. Charles Gardner said. "The most significant driver for that would be people socializing, among family members, larger groups, potentially beyond their social circle of 10 people," he added.
In the past month, COVID-19 cases had been on a downward trend, but now the health unit said they are on the rise.
An outbreak was also declared at Mill Creek Care Centre in Barrie, where a staff member tested positive for the virus.
Residents at the long-term care home on Hurst Drive are now undergoing testing.

On Tuesday, the health unit confirmed a Barrie girl under the age of 17 also tested positive for COVID-19. It's yet another alarming discovery as the health unit barrels ahead with back to school preparations.
Yesterday, Education Minister Stephen Lecce said that local health units could delay schools' open dates if necessary.
"We all just want to ensure we follow the public health advice and give the school board those additional few days to get it right," Lecce stated.
Dr. Gardner said the health unit had not made that recommendation or request at this time.
The health unit's top doc admitted contact tracing has become extremely difficult as more people open up their bubbles and venture out more places. He warns that it's important to remain in your 10 person bubble.
https://barrie.ctvnews.ca/simcoe-muskoka-health-unit-sees-troubling-trend-with-local-covid-cases-1.5078984

Canada
Security guard at Nunavut isolation hotel in Ottawa tests positive for COVID-19
Source: CTV News - Ottawa
ID: 1007714724
OTTAWA -- A security guard working at one of Nunavut's isolation facilities in Ottawa has tested positive for COVID-19.
In a media release, the Government of Nunavut said Ottawa Public Health has confirmed an isolation site staff member at the Residence Inn on Walkley Road has tested positive for novel coronavirus.
"We are currently establishing what risk, if any, there is to Nunavummiut and we will begin contact tracing in territory if necessary," said Dr. Michael Patterson, Nunavut's Chief Public Health Officer.
The Government of Nunavut has set up isolation centres in Ottawa, Winnipeg, Edmonton or Yellowknife for residents who have travelled out of Nunavut. Residents must undergo a 14-day isolation period in the city before boarding a plane to return to Nunavut.
Ottawa Public Health says the staff member was likely infectious while working shifts at the Residence Inn on Aug. 16, 17, 18 and 19.
The Government of Nunavut says staff at the isolation sites are always required to wear masks while working.
"We are discussing with Ottawa Public Health whether this positive case will require those scheduled to return home in the coming days to remain in isolation until they can be cleared as contacts and confirmed COVID-19 free," said George Hickes, Minister of Health.
Any Nunavummiut who were in isolation between Aug. 16 and 19 at the Residence Inn and have since travelled home to Nunavut are asked to monitor for symptoms of COVID-19.
https://ottawa.ctvnews.ca/security-guard-at-nunavut-isolation-hotel-in-ottawa-tests-positive-for-covid-19-1.5080886

Canada
Government of Canada provides support for a safe return to First Nations schools on reserves
Source: www.canada.ca
ID: 1007714698
Canada recognizes that the COVID-19 pandemic has significantly affected students, parents and schools across the country. With September right around the corner, Indigenous Services Canada continues to work with Indigenous partners to address the challenges related to the reopening of schools and the increased pressures being faced.
Today, the Honourable Marc Miller, Minister of Indigenous Services, announced $112 million to support a safe return to elementary and secondary schools on reserves.
The investment will provide funding to meet the needs of schools and students, including, for example, for salaries for teachers, custodians and bus drivers (who may work additional hours during this period), access to technology, purchase of e-learning software, and the development of take-home learning materials.
This investment will also support schools with the necessary retrofits they need to implement in order to follow public health guidelines and respect adequate physical distancing as school activities resume. This can include the installation of Plexiglas separators and marking floors with physical distance indicators.
As we reopen schools and restart the economy, the Government of Canada remains in regular communication with Indigenous community leadership and organizations, working directly with Indigenous

partners to support their decision-making processes to help protect the health and safety of students and staff this school year.
We will also address challenges in urban areas, where we have seen larger spikes of positive cases of the virus. Those children who attend school off-reserve to study are particularly vulnerable. We will continue to work with communities to make sure the needs of their children and families are met.
Quotes
“School is critical for a child’s development and future success. The reopening of schools affects everyone in Canada, including Indigenous peoples, as they face the very difficult choice of how they best serve their children. We recognize that a safe and physically-distanced return to school may incur additional costs and are committed to keeping communities safe. As we face these challenges, uncertainty, and deal with risk management, we will be there for schools and students. This investment will help ensure that First Nations schools on-reserve can gradually reopen in a way that both follows public health guidelines and continues to support student success.”
The Honourable Marc Miller
Minister of Indigenous Services
Quick facts
First Nations can and will make decisions about their own schools reopening based on what they feel is safest for students and their families.
In addition to the $112 million, First Nations are provided flexible supports through the Indigenous Community Support Fund, which could include costs related to public health measures for reopening schools and other supports for children.
On August 12, the Government of Canada announced an additional $305 million for the Indigenous Community Support Fund. The recent announcement brings the Fund to $685 million in total funding directly to First Nation, Inuit and Métis leadership as well as the organizations that support them.
Associated links
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https://www.canada.ca/en/indigenous-services-canada/news/2020/08/government-of-canada-provides-support-for-a-safe-return-to-first-nations-schools-on-reserves.html

Canada / China

Chinese vaccine maker’s coronavirus program with Canada ends

Source: National Post
ID: 1007713673
Canada’s National Research Council (NRC) said on Wednesday that it has ended its partnership for a coronavirus vaccine with CanSino Biologics, saying the Chinese company lacks the authority to ship the vaccine at this time.
CanSino in May had agreed to bring its vaccine candidate to Canada for testing through a partnership with the National Research Council (NRC).

Because of the delay, NRC “has since moved on to focus our team and facilities on other partners,” the organization said in a statement to Reuters.
“The process is not clear to the NRC, but CanSino does not have the authority to ship the vaccine at this time,” said NRC in its statement.
Earlier, CanSino cited bureaucratic indecision as the reason behind the failure for its vaccine partnership in Canada, the Globe and Mail reported, quoting the company’s chief executive officer.
Decisions in China on whether to send the vaccine to Canada were “caught in the bureaucracy,” and some divisions of the Chinese government were not clear if the vaccine should “go to global trials or how to handle it,” chairman and CEO of CanSino Biologics, Dr Xuefeng Yu, told the Globe and Mail in an interview. (https://tgam.ca/3bavWMx)
NRC said its agreement with CanSino had been reviewed by the company’s Chinese government collaborators. After the agreement was signed, the Chinese government changed the process required to ship vaccines to other countries.
https://nationalpost.com/pmn/health-pmn/chinese-vaccine-makers-coronavirus-program-with-canada-ends

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

United States

Trump Administration to Release 1.5 Million N95 Respirators from the Strategic National Stockpile for Distribution to Nursing Homes
Source: HHS
Unique ID: 1007712253

Under the leadership of President Trump, the Department of Health and Human Services (HHS) today announced the release of 1.5 million N95 respirators from the Strategic National Stockpile (SNS) for distribution to approximately 3,336 nursing home facilities across the United States.
Beginning Aug. 28, 2020, the Defense Logistics Agency will direct shipments of N95 respirators to select nursing homes that recently reported having enough supplies for only zero to three days of operations. These respirators are meant to supplement existing supplies of personal protective equipment (PPE) and will provide a seven-day supply for each nursing home to support an entire shift before discarding used products.
“President Trump and Secretary Azar remain fully committed to caring for our nation’s most vulnerable citizens, and that means ensuring nursing homes have the equipment and supplies they need to treat patients safely during the pandemic,” said HHS Assistant Secretary for Preparedness and Response (ASPR) Robert Kadlec, M.D., who oversees the SNS. “This additional federal supplement of N95 respirators from the SNS will immediately help those nursing homes prevent the spread of COVID-19 and keep the patients they care for safe during this pandemic.”
“Through the use of the Defense Production Act, the federal government has increased the domestic production of N95 respirators and has allowed the SNS to grow,” said Rear Admiral John Polowczyk, HHS Supply Chain Task Force lead. “This increase has allowed us to use our existing surge-capacity built up in the stockpile to distribute 1.5 million masks to meet the needs of front-line healthcare workers caring for one of our most-affected populations. Our goal is to enable our states to provide longer term support in the fight against COVID-19.”
Certified by the National Institute of Occupational Safety and Health (NIOSH), these N95 respirators are produced by O&M Halyard and made in the United States. Each shipment will contain a 4:1 mix of size regular and small respirators as validated by historical distribution ratios from the medical distributors.
The quantity of respirators distributed to each nursing home will be based on the number of medical staff employed at the facility, as reported to the Centers for Medicare and Medicaid Services database. Each state’s governor was notified of the pending shipments during the Vice President’s call with governors on Aug. 18, 2020.
These shipments support only Medicare and Medicaid-approved nursing homes and are in addition to prior shipments of PPE distributed in order to safeguard our most vulnerable populations during the COVID-19 pandemic.

About HHS, ASPR, and the Strategic National Stockpile:
HHS works to enhance and protect the health and well-being of all Americans, providing for effective health and human services and fostering advances in medicine, public health, and social services. The mission of ASPR is to save lives and protect Americans from 21st century health security threats. Within ASPR, the Strategic National Stockpile supplements state and local supplies during public health emergencies. The supplies, medicines, and devices for life-saving care contained in the stockpile can be used as a short-term, stopgap buffer when supplies may not be immediately available or sufficient. To learn more about federal support for the nationwide COVID-19 response, visit coronavirus.gov.
https://www.hhs.gov/about/news/2020/08/25/trump-administration-release-1-5-million-n95-respirators-from-strategic-national-stockpile-distribution-nursing-homes.html

United States
Dr. Robert R. Redfield Statement on "Preventing and Mitigating SARS-CoV-2 Transmission — Four Overnight Camps, Maine, June–August 2020"
Source: CDC
Media Statement
For Immediate Release: Wednesday, August 26, 2020
Contact: Media Relations
(404) 639-3286
Today's MMWR, which highlights the thoughtful and prudent public health practices used during overnight summer camps in Maine, reinforces how powerful everyday preventive actions are in reducing and keeping COVID-19 transmission low. Despite more than 1,000 campers and staff from nearly every state and 7 countries, only three people tested positive for COVID-19 during the camp and no additional campers or staff were known to be infected. Using a combination of proven public health strategies to slow the spread of COVID-19, campers and staff were able to enjoy a traditional summer pastime amid a global pandemic. As communities work together to get us back to where we used to be, it is essential that everyone – for their own good and that of their family's – follow CDC and the federal government's recommendations to protect against COVID-19. This includes wearing masks, practicing social distancing and good hand hygiene, and staying home when you are sick. I want to thank everyone who is already following this guidance, as well as encourage others to understand that their actions help others as much as they help them.
https://www.cdc.gov/media/releases/2020/s0826-statement-preventing-sars-cov-2.html

United States
COVID-19 Update: FDA Authorizes First Diagnostic Test Where Results Can Be Read Directly From Testing Card
Source: FDA
For Immediate Release: August 26, 2020
Silver Spring, MD -- Today, the U.S. Food and Drug Administration issued an emergency use authorization for the first antigen test where results can be read directly from the testing card, a similar design to some pregnancy tests. This simple design is fast and efficient for healthcare providers and patients and does not need the use of an analyzer.

"This new COVID-19 antigen test is an important addition to available tests because the results can be read in minutes, right off the testing card. This means people will know if they have the virus in almost real-time. Due to its simpler design and the large number of tests the company anticipates making in the coming months, this new antigen test is an important advancement in our fight against the pandemic," said Jeff Shuren, M.D., J.D., director of the FDA's Center for Devices and Radiological Health.

HOW IT WORKS:

A healthcare provider swabs the patient's nose and twirls that sample on a test card with a testing reagent added. After waiting 15 minutes, the healthcare provider reads the results directly from the testing card. One line indicates a negative result; two lines indicate a positive result.

WHERE IT CAN BE USED:

This test could be used at point-of-care settings, like a doctor's office, emergency room or some schools. This test has been authorized for use in patients suspected of COVID-19 by their healthcare provider within seven days of symptom onset. Given the simple nature of this test, it is likely that these tests could be made broadly available. According to the test manufacturer, Abbott, it plans to make up to 50 million tests available monthly in the U.S. at the beginning of October 2020.

TEST DETAILS:

In general, antigen tests are very specific, but are not as sensitive as molecular tests. Due to the potential for decreased sensitivity compared to molecular assays, negative results from an antigen test may need to be confirmed with a molecular test prior to making treatment decisions. Negative results from an antigen test should be considered in the context of clinical observations, patient history and epidemiological information.

The emergency use authorization was issued to Abbott Diagnostics Scarborough, Inc for its BinaxNOW COVID-19 Ag Card.

The FDA, an agency within the U.S. Department of Health and Human Services, protects the public health by assuring the safety, effectiveness, and security of human and veterinary drugs, vaccines and other biological products for human use, and medical devices. The agency also is responsible for the safety and security of our nation's food supply, cosmetics, dietary supplements, products that give off electronic radiation, and for regulating tobacco products.
https://www.fda.gov/news-events/press-announcements/covid-19-update-fda-authorizes-first-diagnostic-test-where-results-can-be-read-directly-testing-card

United States
FDA-approved rapid US$5 coronavirus test doesn't need specialty equipment
Source: CTV News
ID: 1007714757
WASHINGTON -- The U.S. Food and Drug Administration on Wednesday authorized the first rapid coronavirus test that doesn't need any special computer equipment to get results.
The 15-minute test from Abbott Laboratories will sell for $5, giving it a competitive edge over similar tests that need to be popped into a small machine. The size of a credit card, the self-contained test is based on the same technology used to test for the flu, strep throat and other infections.
It's the latest cheaper, simpler test to hit the U.S. market, providing new options to expand testing as schools and businesses struggle to reopen and flu season approaches. The FDA also recently greenlighted a saliva test from Yale University that bypasses some of the supplies that have led to testing bottlenecks.
Both tests have limitations and neither can be done at home. Several companies are developing rapid, at-home tests, but none have yet won approval. Abbott's new test still requires a nasal swab by a health worker, like most older coronavirus tests. The Yale saliva test eliminates the need for a swab, but can only be run at high-grade laboratories.
And in general, rapid tests like Abbott's are less accurate than lab-developed tests. The FDA said in a statement announcing the decision that negative results with Abbott's test may need to be confirmed with a lab test in some cases, such as when patients have coronavirus-like symptoms. The agency granted Abbott an emergency use authorization for the test late Wednesday.
The two additions should help expand the number of available tests. The U.S. is now testing about 690,000 people per day, down from a peak of 850,000 daily tests late last month. Many public health experts believe the country will soon need to test vastly more people to find those who are infected, isolate them and contain the virus.
The FDA noted that Abbott's test could be used in a doctor's office, emergency room or some schools. "Given the simple nature of this test, it is likely that these tests could be made broadly available," the FDA said.
Since the start of the pandemic, nasal swab tests that are sent to a lab have been the standard for COVID-19 screening. While considered highly accurate, the tests rely on expensive, specialized

machines and chemicals. Shortages of those supplies have led to repeated delays in reporting results, especially during a spike in cases last month.
Government and health experts view rapid tests that can be run outside the laboratory system as key to boosting capacity.
"Those screening tests are what we need in schools, workplaces and nursing homes in order to catch asymptomatic spreaders," said Dr. Jonathan Quick of the Rockefeller Foundation. The non-profit group has called for the U.S. to conduct about 4 millions per day by October, mostly rapid, point-of-care tests.
Abbott's BinaxNOW is the fourth rapid test that detects COVID-19 antigens, proteins found on the surface of the coronavirus, rather than the virus itself. It's considered a faster, though sometimes less precise, screening method. The other tests need to be inserted into a small machine.
Inside the Abbott test is a specially coated strip that interacts with COVID-19 antigens. The patient's nasal swab is inserted into the card and a few drops of a chemical solution are added. Markings appear on the card to indicate whether the sample is positive or negative -- much like a pregnancy test.
Two other makers of antigen tests -- Quidel and Becton Dickinson have said they haven't been able to meet demand for the tests. A third, LumiraDx plans to begin shipping its recently approved antigen tests by the end of this month. Abbot's Abbott expects to begin shipping tests in September, reaching 50 million tests a month in October.
The influx of antigen tests will go a long way toward meeting the Trump administration's projection that 90 million COVID-19 tests a month will be available by September if needed. But U.S. "testing czar" Adm. Brett Giroir has stressed that the U.S. can contain the outbreak with far fewer tests.
"That's the capacity ... we do not need that many tests to safely and sensibly reopen," Giroir told reporters on a recent call. He pointed to several key indicators that have been falling, including new infections and hospitalizations, even as testing has slowed.
Earlier this month, the FDA authorized Yale's saliva-based test, which is expected to cut the time and cost compared with similar tests. It's the fifth COVID-19 saliva tests OK'd by regulators. All require lab processing.
Developed by Yale's School of Public Health, SalivaDirect can use any sterile container to collect a sample, not the special tube needed with earlier tests, and requires less chemicals. Outside experts welcomed the new approach but noted its limitations.
"It's not a rapid test, it's a laboratory-based test that will still be prone to the same massive delays as any other test," said Dr. Michael Mina of Harvard University.
https://www.ctvnews.ca/health/coronavirus/fda-approved-rapid-us-5-coronavirus-test-doesn-t-need-specialty-equipment-1.5081018

United States

Immunity discovered on fishing vessel overcome with COVID-19 infections
Source: CTV News
GPHIN ID: 1007713725

TORONTO -- In an effort to keep its crew safe from the novel coronavirus, a Seattle fishing expedition may have inadvertently proven the power of COVID-19 antibodies after the virus swept through the ship.
More than 85 per cent of its 122-person crew tested positive for SARS-CoV-2 after an 18-day expedition from Seattle in May, according to "retrospective analysis" published in the Journal of Clinical Microbiology on Wednesday.
But three people -- each of whom showed evidence of “neutralizing antibodies” to COVID-19 prior to departure -- stayed healthy before and after the trip. Most of the crew had been tested for the virus before boarding.
“These antibodies likely protect people from being reinfected,” said study author Alex Greninger, in a press release.
The study represents unintentional preliminary evidence that antibodies may prevent secondary infections among people, which may not be clinically proven for some time, researchers noted. To date, only animals have been used to “make inferences” about protection among the human population.
“Human challenge trials, which could provide rapid information about the protection conferred by neutralizing antibodies, are controversial due to the severity and unknown long-term impacts of SARS-CoV-2 infection and concerns over ethical administration of such trials,” they wrote in the study.

Greninger said the new evidence from the three immune people on the fishing vessel leaves him "optimistic" about current vaccine trials. The presence and amount of antibodies in the blood, called "titers," may be attainable through a number of vaccine candidates currently in trials.
"Vaccines currently in development against SARS-CoV-2 have been shown to elicit levels of neutralizing antibodies comparable to those observed in naturally infected persons," the study reads.
https://www.ctvnews.ca/health/coronavirus/immunity-discovered-on-fishing-vessel-overcome-with-covid-19-infections-1.5080286

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

Belgium

Belgium revises down COVID-19 deaths just shy of 10,000 mark
Source: National Post
Unique ID: 1007711379

BRUSSELS — Belgium revised down on Wednesday the country's COVID-19 death toll, just as it was about to pass the milestone of 10,000 fatalities.
Health authorities have reviewed figures from care homes in the northern region of Flanders and found some COVID-19 deaths not reported as such, some recorded twice and some not caused by the new coronavirus. The net effect is a reduction of 121.
The revision brought the total fatalities to 9,878 by Wednesday. Otherwise, it would have been 9,999.
Britain also lowered its death toll from the disease by more than 5,000 two weeks ago after the government adopted a new method of counting fatalities.
Belgium's COVID-19 deaths per capita are among the highest in the world and it reports a higher proportion of fatalities in care homes than other countries, including when the disease is suspected but not confirmed.
Belgian COVID-19 task-force spokesman and virologist Steven Van Gucht told Reuters TV that Belgium, home of EU and NATO headquarters, had been hit hard.
"But if you compare Belgium with for example the United Kingdom or Spain you see they were actually hit even worse," he said, adding this was reflected in 'excess' mortality rates.
The number of new cases in Belgium has risen steadily from a low of around 80 per day in early July to an average of 490 for the week Aug 16-22, although numbers had been falling for 10 days.
Van Gucht said about a fifth of new infections appeared to have been caught on summer holidays. A new challenge would come from re-opening schools and a public tiring of measures among the strictest in Europe.
"This is a matter of prevention… This is really to avoid a problem that will only come in a few weeks or a few months," he said. (Reporting by Philip Blenkinsop and Clement Rossignol; Editing by Kirsten Donovan)
https://nationalpost.com/pmn/health-pmn/belgium-revises-down-covid-19-deaths-just-shy-of-10000-mark

Belgium

EU eyes initial COVID-19 vaccination for at least 40% of population | Financial Post
Source: Financial Post
GPHIN ID: 1007711411

BRUSSELS — European Union nations, Britain and EU partners have agreed on a blueprint for a COVID-19 vaccination plan envisaging inoculation of at least 40% of their populations, a step that may set back the World Health Organisation's own vaccine blueprint.
The EU target for early vaccinations is twice as high as the goal set by the WHO, which is aiming to buy vaccines initially for 20% of the world's most vulnerable people through a global procurement scheme.
The EU estimates that the share of its population in need of initial vaccination, should a shot be developed, would be at least 40%, effectively reducing the availability of possible doses for less developed countries.
There is so far no approved COVID-19 vaccine, except one authorized in Russia before large-scale trials.
The supply of the vaccines that might be successful is expected to be limited for a long period as production capacities are limited.

“Adding (up) all risk groups presently known will designate probably 40% of the population, depending on the situation and demography in countries,” said the document, adopted in late July by health experts from EU member states as well as Britain, Switzerland, Norway and Balkan countries.
https://financialpost.com/pmn/business-pmn/eu-eyes-initial-covid-19-vaccination-for-at-least-40-of-population

Libya

Libya Records Highest Daily Cases from Coronavirus
Source: Urdupoint
Unique ID: 1007711396

TRIPOLI, (UrduPoint / Pakistan Point News - 26th Aug 2020): Libya’s National Center for Disease Control on Wednesday announced it had found 553 new coronavirus cases, the highest daily infection rate so far.
In a statement, the center said it also recorded 7 deaths and 40 recoveries in the last 24 hours.
The total count of cases in the North African country reached 11,834, including 210 deaths and 1,152 recoveries.
Since originating in China last December, COVID-19 has claimed nearly 820,000 lives in 188 countries and regions.
More than 23.9 million cases have been reported worldwide, while over 15.59 million patients have recovered, according to figures compiled by the US' Johns Hopkins University.
https://www.urdupoint.com/en/health/libya-records-highest-daily-cases-from-corona-1011907.html

Palestinian territory

Gaza fears the worst as Israel ratchets up its siege | News | Al Jazeera
Source: www.aljazeera.com
GPHIN ID: 1007711416

Gaza City - Fears are mounting for the safety of people with health issues as already-strained hospitals are largely without power and the Palestinian territory faces a coronavirus outbreak.
Two million residents are surviving on only four hours of electricity a day after Israel cut off the fuel supply, leading to the shut down of Gaza's sole power plant last week.
Israel made the move after the continuous launch of incendiary balloons from the coastal enclave towards Israeli communities surrounding the Gaza Strip by activists demanding the easing of the crippling 13-year blockade.
At 5:30am local time, Salwa al-Bitar, 40, arrived at al-Shifa hospital to start her four-hour dialysis treatment in central Gaza City, which she requires once a week, before the arrival of other patients for the life-saving treatment.
"The situation is harder than before in addition to the precautionary measures to avoid COVID-19 infections. We are afraid from the effects of the fuel shortage on hospitals," al-Bitar told Al Jazeera.
"My body is very sensitive. With only four hours of electricity, it's like experiencing death in life. I can't breathe as I can't operate a fan, air conditioning, or use any substitution to deal with the electricity shortage."
Ashraf al-Qidra, spokesperson for Gaza's health ministry, said the power cuts have "dangerous repercussions" for hospitals with 120 premature babies needing incubators, 100 patients in intensive care, and 950 people with kidney failure requiring haemodialysis sessions every week.
"In addition, the electricity crisis endangers the daily surgeries, caesarean deliveries, and the laboratories … as the old generators can barely cover the electricity needs during this crisis," al-Qidra told Al Jazeera.
'Dilapidated health system'
On Monday night, a total lockdown was imposed on the besieged Gaza Strip after authorities confirmed the first coronavirus infections.
"The announcement of COVID-19 cases within the community in Gaza puts the dilapidated health system due to the blockade at a dangerous new juncture, and it is difficult to withstand without regional and international support," said al-Qidra.
Mohamed al-Qawwas, 55, needs to visit the dialysis unit three times a week, and he expressed concern at the arrival of COVID-19 in Gaza. He has diabetes and heart disease, which make a potential infection extremely dangerous.

"I go to the hospital three times a week and due to fuel and equipment shortage, I wait for about two hours to start my four-hour session," al-Qawwas told Al Jazeera. "This is exhausting my heart and spirit."
On August 11, Israel halted the entry of some materials into Gaza, but days later banned all transfers through the only commercial crossing except for food and medicine. The sea was also made inaccessible to fishermen on August 16.
'Ignoring crimes'
Fawzi Barhoum - a spokesman for Hamas, the rulers of Gaza - called Israel's move "a crime against humanity".
"If the occupation thinks that this siege will undermine the determination and persistence of our people and its resistance, and that it will achieve security for them, that is delusional," Barhoum said in a statement.
He urged intervention by the international community. "We call on human rights and humanitarian institutions and the international community - and decision-makers in the region - to break their silence and work to curb the Zionist aggression and end the blockade of Gaza.
"The absence of deterrent decisions to the occupation, but rather ignoring its crimes and normalisation with it is the main reason for its persistence in its crimes and violations against Palestinians."
The Palestinian Businessmen Association in Gaza announced on Monday that nearly 2,000 companies have been completely or partially affected by the power station's stoppage.
"Preventing the entry of various materials necessary for the activity of the industrial and health sectors threatens to have dangerous repercussions on the strategic stock of basic needs, threatening food insecurity, high unemployment, and poverty rates," Ali al-Hayek, head of the association, told Al Jazeera.
Food shortages
Walid al-Efranj, sales manager of a bakery chain, said fuel shortages were already affecting food production in the territory.
"The food industry in Gaza has been affected negatively by the lack of fuel as there is a decrease in production. And because of the coronavirus crisis, consumers rushed to stockpile food for the home quarantine period, which forced us to work longer hours using fuel generators that increase the cost of production for us," he said.
Ahmed Labib al-Helou, head of the Association of Owners of Oil and Gas Companies in Gaza, warned of "disastrous consequences" on fuel supplies if the closure of the Karem Abu Salem (known as Kerem Shalom to Israelis)commercial crossing with the Israeli side continues.
Fishermen, too, are voicing concern.
"We depend on daily wages from selling the fish catch. If we don't work we can't afford food for our families, and for the 13th day in a row there is no source of income because of the ban on fishing," said Khaled al-Habil, 40, a fisherman from the al-Shati refugee camp in Gaza City.
"In addition to the implications of COVID-19 and precautionary measures that decreased our fish supply during the past three months, now Israel has shut down the sea. Two enemies against us - that is too much."
Palestinian politician Jamal al-Khudari, chairman of the National Committee to Confront the Siege against Gaza, said the reopening of the commercial crossing was imperative with Gaza now facing the COVID-19 pandemic.
"The coronavirus pandemic enters Gaza in the most difficult humanitarian, health and environmental conditions, in light of the tightening of the occupation's siege," he said in a statement.
Palestinian sources confirmed the Qatari envoy to Gaza, Mohammed al-Emadi, was in the enclave on Wednesday as part of mediation efforts to alleviate tension between Israel and Hamas and fears of another all-out war.
https://www.aljazeera.com/news/2020/08/gazans-fear-worst-israel-ratchets-siege-200826104113521.html

WHO

WHO/Europe | WHO/Europe to establish a mental health coalition to support system reforms and COVID-19 recovery
Source: WHO/EURO
GPHIN ID: 1007711662

This week marks the launch of one of WHO/Europe's new flagship initiatives: mental health. Mental health is a key public health concern in the WHO European Region – over 110 million people are living with some kind of mental health condition, accounting for over 10% of the population.

The 4 new flagships – mental health, digital health and innovation, behavioural and cultural insights, and immunization – represent identified priorities for WHO/Europe in the coming 5 years. The mental health flagship will bring together a broad coalition of mental health leaders, champions, service users and other partners to improve mental health policies and practices across the Region.

Mental health and COVID-19

Mental health has been an essential programme within WHO's agenda since its founding in 1948. But in light of the COVID-19 pandemic, a renewed focus on mental health is particularly important. Apart from the fear and uncertainty regarding infection itself, measures brought in to contain the spread of the virus, such as quarantine and lockdown, have been psychologically challenging. These compound social isolation for many and add to existing anxieties and stresses.

For frontline health-care workers and for those suffering from existing conditions, the pandemic has taken a significant toll on well-being. Furthermore, the socioeconomic fallout is exacerbating pressures on the population's mental health. Precarious work conditions, unemployment and uncertainty with regard to the future are expected to contribute to a sharp increase in mental health conditions, just as they did in the wake of the global financial crisis a decade ago.

As the world begins to adjust to and recover from the initial impacts of the pandemic, renewed attention to the mental well-being of affected vulnerable populations and of the public at large will be crucial.

Supporting countries

Reform and development of the mental health system is an area of work for which many countries across the Region have been requesting help. WHO has responded with guidance, capacity-building and technical support.

Now, a more concerted effort is required to secure better mental health for all, both through intensified country support and intercountry initiatives at regional and global levels. By marking mental health as a fundamental element of the European Programme of Work, existing opportunities and evidence-based approaches for mental health promotion, protection and care can be seized, scaled up and sustained.

Poor mental health already claims the lives of 140 000 people per year by suicide in the Region. We urgently need to address long-standing gaps and deficiencies in mental health service delivery and financing, and to implement prevention and mitigation strategies to stem any worsening of the mental health situation across the Region.

What will the flagship do?

People with mental health conditions or psychosocial disabilities have long been stigmatized. One of the core components of the WHO mental health flagship will therefore involve challenging stigma and discrimination by improving mental health awareness and literacy among not only the public but also service providers and decision-makers.

Another key pillar of the new initiative will be enhancing access to person-centred, rights-based mental health care in communities. This will expedite progress towards universal health coverage for people with mental health conditions and make the case for a parity of esteem between mental and physical health.

The pandemic has shone a light on the fragility of existing institution-based systems and the need for community-based support and care (delivered through digital means where necessary or applicable). The mental health flagship will encourage efforts and investments to relocate care away from institutions and towards community services, including through the integration of mental health into primary health care and other priority programmes such as adolescent health and noncommunicable diseases.

Since mental health is an integral element of individual and collective well-being, protecting and promoting it during times of adversity and uncertainty is especially important, as is ensuring the availability and continuity of quality care for those living with mental health conditions. It is time to instigate long-awaited reforms to mental health services and deconstruct social stigma around mental ill health. Through collaboration with a strong coalition of partner organizations and citizens, WHO/Europe looks forward to building a more positive approach to and future for mental health across the Region.

https://www.euro.who.int/en/health-topics/noncommunicable-diseases/mental-health/news/news/2020/8/whoeurope-to-establish-a-mental-health-coalition-to-support-system-reforms-and-covid-19-recovery

Lebanon

Lebanon could 'lose control' of coronavirus outbreak – PM

Source: National post
ID: 1007713771
BEIRUT — Caretaker Prime Minister Hassan Diab said on Wednesday that Lebanon was at risk of losing control over the coronavirus outbreak after a rise in the number of cases following the explosion in Beirut on Aug 4.
Cases doubled in the two weeks following the blast as infections spread in hospitals where victims were being treated, medics say.
"The number of cases is increasing greatly, and if this continues, we will lose control of this epidemic," Diab said in a statement issued by the Supreme Defence Council.
Lebanon registered 557 new COVID-19 infections and one death on Wednesday. It had registered a record 12 deaths the previous day.
The health minister for Lebanon's caretaker government, Hamad Hassan, who also spoke to the Council, said hospital capacity needed to be increased to help combat the rise in cases.
The government imposed a partial lockdown last Friday to help fight community spread. But the shutdown, which includes a curfew from 6 p.m. to 6 a.m., still allows for clearing rubble, making repairs and giving out aid in neighborhoods damaged by the explosion. The airport will remain open, with travelers having to take PCR tests before boarding and on arriving in the country.
https://nationalpost.com/pmn/health-pmn/lebanon-could-lose-control-of-coronavirus-outbreak-pm

Sweden

Sweden Finds Thousands of False Positive Results From Chinese-Made Coronavirus Test Kits

Source: www.msn.com
ID: 1007713700
Matthew Impelli 7 hrs ago
Sweden's Public Health Agency said Tuesday it has found thousands of false positive coronavirus test results from Chinese-made tests.

In a statement, the agency said that the PCR kits, which test for coronavirus infection, were made in China by BGI Genomics and that the errors were discovered during routine quality control checks in two laboratories. The tests were unable to distinguish the difference between very low levels of virus infection and a negative result.

According to the agency, the tests were used to conduct at-home tests between March and August. Approximately 3,700 residents received false positive results, the agency said.

"The two laboratories have analyzed samples from a total of ten regions in Sweden, of which nine have received incorrect test results. This applies to Stockholm, Västra Götaland, Gävleborg, Västerbotten, Västmanland, Dalarna, Västernorrland, Sörmland and Blekinge," the agency said in a statement.

The agency also noted that a majority of the people that received the false positive test results "have had mild symptoms or have not felt any symptoms at the time of the test."

"The incorrect test kit has been reported to the Medical Products Agency. It has been exported from China to many countries other than Sweden. The Swedish Public Health Agency has informed the corresponding authorities in Europe and the WHO of what happened," the agency's statement added.

Karin Tegmark Wisell, head of the agency's microbiology department, said that "it is good that the error has been discovered and that the necessary measures have now been taken to ensure the quality of the test results."

As of Wednesday, there were over 87,000 confirmed cases of the novel virus in Sweden and at least 5,817 deaths.

Newsweek was directed to the press release issued by Sweden's Public Health Agency after reaching out for comment.

BGI Genomics, the company that supplied the tests, received emergency use authorization for its coronavirus testing from U.S. authorities in March and an Emergency Use Listing from the World Health Organization in May.

According to Reuters, two of BGI Genomics subsidiaries were recently placed on a U.S. economic blacklist by the U.S. Commerce Department. They were accused of human rights violations regarding China's treatment of Uighurs in the northwestern region of Xinjiang.

After being placed on the blacklist, the company released a statement denying any allegations of human rights violations.

"BGI Group does not engage in unethical practices and does not provide gene technology for the surveillance of Uighurs. BGI Group does not condone and would never be involved in any human-rights abuses," the statement said, according to Reuters.
https://www.msn.com/en-us/news/world/sweden-finds-thousands-of-false-positive-results-from-chinese-made-coronavirus-test-kits/ar-BB18ousu?li=BBnbcA1

Brazil
Brazil asks China for proof chicken wings had coronavirus
Source: Financial Post
ID: 1007713673
SAO PAULO — Brazil has asked Chinese authorities to provide results of laboratory tests that detected traces of the novel coronavirus on chicken wings exported by the South American country, according to a statement sent to Reuters by Brazil's Agriculture Ministry on Wednesday.
The request was made during a meeting in the city of Shenzhen, in Guangdong province, where Brazilian agriculture attachés met local health and trade officials on Tuesday, the statement said.
In response, according to the statement, the Chinese participants said the results are being kept by health authorities of Guangdong, who did not participate in the meeting.
The Brazilians said they would continue to liaise with China's municipal, provincial and central government's to obtain the lab reports as well as other relevant information pertaining to the case.
The contamination claim concerns chicken wings produced at a Brazilian poultry plant registered under SIF number 601, the statement said.
Aurora, the company which operates that facility in Southern Brazil, voluntarily suspended poultry exports to China effective Aug. 20 pending more clarifications regarding the alleged contamination.
https://financialpost.com/pmn/business-pmn/brazil-asks-china-for-proof-chicken-wings-had-coronavirus

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

Study
Phase II human trial of Oxford vaccine begins in Pune
Source: www.freepressjournal.in
GPHIN ID: 1007711414

The Phase II clinical trial of the Oxford COVID-19 vaccine, being manufactured by the city-based Serum Institute of India (SII), began at a medical college and hospital here on Wednesday.
Two male volunteers were administered the vaccine at Bharti Vidyapeeth's Medical College and Hospital, a senior office-bearer of the hospital said.
The trial began around 1 pm, he said.
"Doctors at the hospital administered the first shot of the 'Covishield' vaccine to a 32-year-old man after his reports of COVID-19 and antibodies tests came out negative," Medical Director of Bharti Vidyapeeth's Medical College, Hospital and Research Centre, Dr Sanjay Lalwani, said.
Another 48-year-old male volunteer was also given the vaccine, he added.

While the 32 year-old volunteer works for a private company, the other one is associated with the healthcare sector, he said.
"Before administering the vaccine, doctors checked their temperature, blood pressure and heart beats," he said.
Five volunteers had enrolled themselves for the trial after the doses were received from the SII on Tuesday, he added.
"The COVID-19 and antibodies tests were conducted on all the five volunteers. Of them, the reports of three volunteers' antibodies test came out positive. So they became ineligible for the trial," Dr Lalwani said.
"The two other volunteers, who were administered the vaccines are being monitored," he said.
According to Dr Lalwani, in all, 25 candidates will given the vaccine in the next seven days.
SII, the world's largest vaccine maker, has signed an agreement to manufacture the potential vaccine developed by the Jenner Institute of Oxford University in collaboration with British-Swedish pharma company AstraZeneca.
https://www.freepressjournal.in/mumbai/phase-ii-human-trial-of-oxford-vaccine-begins-in-pune

Study

COVID-19 survivors might require a lung transplant in the future, researchers say

Source: Medical Express
GPHIN ID: 1007711413

Although doctors are currently uncertain about the long-term effects of COVID-19 on the lungs of those who get the disease, they do know that patients who recover from an episode of severe acute respiratory distress syndrome (ARDS), a secondary condition that can be caused by infections like COVID-19, may not recover their full lung capacity.
There are rare cases of patients who develop severe ARDS, experience respiratory failure and are not able to come off a ventilator. In those situations, experts say they would consider a lung transplant if the patient is otherwise reasonably healthy.
"I suspect that some patients may develop longer-term pulmonary problems following COVID-19, but it is too early to know how common this might be and what the spectrum of those problems will be," says Brian Garibaldi, M.D., associate professor of medicine at the Johns Hopkins University School of Medicine and director of the biocontainment unit at The Johns Hopkins Hospital.
Among the main symptoms seen in patients with COVID-19 are shortness of breath and coughing. If these symptoms persist or worsen after recovery from COVID-19, Garibaldi says that those may be warning signs of debilitating lung damage. Those patients, he explains, will likely require oxygen when exerting themselves and perhaps, even while at rest, to maintain safe levels.
It will be important, Garibaldi says, for all patients who have survived severe COVID-19—and experienced severe ARDS requiring mechanical ventilation or high levels of oxygen—to schedule regular follow-up visits with their primary care physician or a pulmonary specialist so they can be evaluated for potential long-term problems. If necessary, treatment options, including a lung transplant, can be recommended.
At Johns Hopkins, two clinics are dedicated to following COVID-19 patients to help them through the recovery process and to better understand the potential long-term problems associated with the initial infection, the immune system response to the infection and the recovery phase in general.
Provided by Johns Hopkins University
https://medicalxpress.com/news/2020-08-covid-survivors-require-lung-transplant.html

United States

Preventing and Mitigating SARS-CoV-2 Transmission — Four Overnight Camps, Maine, June–August 2020

Source: Morbidity and Mortality Weekly Report (MMWR)
GPHIN ID: 1007712684

Early Release / August 26, 2020 / 69

The World Health Organization declared coronavirus disease 2019 (COVID-19) a pandemic on March 11, 2020.* Shortly thereafter, closures of 124,000 U.S. public and private schools affected at least 55.1 million students through the end of the 2019–20 school year.† During the summer of 2020, approximately 82% of 8,947 U.S. overnight camps did not operate.§ In Maine, only approximately 20% of 100 overnight camps opened.¶ An overnight camp in Georgia recently reported SARS-CoV-2, the virus that causes COVID-19, transmission among campers and staff members when nonpharmaceutical interventions (NPIs) were not strictly followed (1); however, NPIs have been successfully used to mitigate SARS-CoV-2 transmission among military basic trainees (2). During June–August 2020, four overnight camps in Maine implemented several NPIs to prevent and mitigate the transmission of SARS-CoV-2, including prearrival quarantine, pre- and postarrival testing and symptom screening, cohorting, use of face coverings, physical distancing, enhanced hygiene measures, cleaning and disinfecting, and maximal outdoor programming. During the camp sessions, testing and symptom screening enabled early and rapid identification and isolation of attendees with COVID-19. Among the 1,022 attendees (staff members and campers) from 41 states, one territory, and six international locations, 1,010 were tested before arrival; 12 attendees who had completed a period of isolation after receiving a diagnosis of COVID-19 2 months before arrival were not tested. Four (0.4%) asymptomatic attendees received positive SARS-CoV-2 test results before arrival; these persons delayed their arrival, completed 10 days of isolation at home, remained asymptomatic, and did not receive any further testing before arrival or for the duration of camp attendance. Approximately 1 week after camp arrival, all 1,006 attendees without a previous diagnosis of COVID-19 were tested, and three asymptomatic cases were identified. Following isolation of these persons and quarantine of their contacts, no secondary transmission of SARS-CoV-2 occurred. These findings can inform similar multilayered public health strategies to prevent and mitigate the introduction and transmission of SARS-CoV-2 among children, adolescents, and adults in congregate settings, such as overnight camps, residential schools, and colleges.

Summer camps are a $26 billion dollar industry; approximately 15,000 day and overnight camps in the United States employ approximately 1.5 million staff members and host an estimated 26 million children annually. The Maine Department of Health and Human Services (DHHS) licenses Maine summer camps, which serve 20,000–25,000 children from the United States and other countries each year. Previous studies suggest that isolation and physical distancing measures likely mitigated disease during the influenza pandemic of 1918 and prevented spread of the coronavirus SARS-CoV, which caused the severe acute respiratory syndrome (SARS) epidemic in 2003 (3,4). During the 2009 influenza A virus (pH1N1) pandemic, CDC issued guidance for influenza prevention and control in camp settings focusing on early identification and isolation of ill persons and enhanced hygiene.** Camps operating in Maine during the pH1N1 2009 season followed public health guidance and implemented recommended preventive measures. Although many camps reported influenza-like illness and outbreaks, major disruptions were not reported (5).

To prevent, identify, and mitigate spread of COVID-19, four Maine overnight summer camps with similar size, session duration, and camper and staff member characteristics opened with uniform NPIs, including precamp quarantine, pre- and postarrival testing and symptom screening, cohorting, and physical distancing between cohorts. In addition, camps required use of face coverings, enhanced hygiene measures, enhanced cleaning and disinfecting, maximal outdoor programming, and early and rapid identification of infection and isolation.

All attendees were instructed to quarantine with their family unit (unless parents were essential workers††) for 10–14 days before camp arrival. No camp restricted attendance from any part of the country or globally but did advise on mode of travel (preferred mode was direct to camp in family vehicle; riders on camp buses wore face coverings, with physical distancing monitored by staff members; and air travelers were instructed to wear face coverings while traveling). Study activities were conducted by the medical directors and health staff members at each camp and under exempt approval by the Institutional Review Board of the University of Virginia.

Attendees with COVID-19 were defined as detection of SARS-CoV-2 by reverse transcription–polymerase chain reaction (RT-PCR) testing. Approximately 5–7 days (mean = 2.4–9.4 days) before camp arrival, 1,010 of the 1,022 attendees were tested for SARS-CoV-2 by RT-PCR at the attendees'

primary care providers or at commercial laboratories that provided services directly to consumers, including camps and schools according to Food and Drug Administration's Emergency Use Authorizations. Attendees with self-reported symptoms consistent with COVID-19 as defined by CDC (https://www.cdc.gov/coronavirus/2019-ncov/symptoms-testing/symptoms.html) before camp arrival were referred to their primary care provider for further evaluation. Three of four camps mandated submission of test results before camp entry, and delays in receipt of test results caused one camp to isolate 15 campers until negative results were known, up to 4 days after camp arrival.

To address potential late exposures or exposures during travel, all camps quarantined attendees by cohort for 14 days after camp arrival, regardless of testing or screening results. Each camp implemented NPIs with careful attention to the population served, physical attributes of the camp, and camp-specific daily programming to identify and mitigate high-transmission–risk activities occurring between cohorts. All attendees received instruction on hygiene measures such as cough and sneeze etiquette and hand hygiene, with the requirement to clean hands with soap and water or hand sanitizer containing a minimum of 60% ethanol or 70% isopropanol before and after all activity periods, meals, and other high-touch interactions. Compliance with all NPIs was monitored by staff members. Staff members did not leave camp during the session for days off.

After camp arrival, campers and staff members were screened by health staff members at least daily (at one camp twice daily) for fever (temperature >100.4°F [38°C]) with infrared thermometers and through direct questioning for symptoms consistent with COVID-19. Programmatic changes to usual camp activities included limiting indoor activities that mixed cohorts, staggering dining periods or dining outdoors, cohort-specific programming, and limiting sports to those that allowed for physical distancing between staff members and cohorts. Stable cohorts were based on living quarters (e.g., bunk assignment) or age division and ranged in number from 5–44 attendees. If interacting outside the cohort, attendees were required to wear face coverings and maintain a physical distance of 6 feet for a minimum of 14 days. Bathroom use was organized by cohort using separate bathrooms or staggering use. In general, cleaning and disinfection of the camps followed the Maine Center for Disease Control and American Camp Association Field Guide for Camps on Implementation of CDC Guidance.§§ Shared items were cleaned and disinfected as much as possible, with high touch areas (e.g., door handles or railings) being cleaned more frequently. Personal sports equipment and shared items were disinfected immediately after use, or a minimum of 24 hours was required before subsequent use. Kitchens followed standard protocols, as well as state COVID-19 protocols for restaurants. Bathrooms were cleaned and disinfected twice daily. Camps attempted to use single-use items, such as milk cartons and single-use condiment packs or silverware, to the extent possible.

RT-PCR testing was repeated a mean of 4.1 to 9.1 days after camp arrival for 1,006 attendees, with results available approximately 2–3 days later; no attendees declined testing. Attendees with positive SARS-CoV-2 test results or those who reported symptoms consistent with COVID-19 were isolated immediately, and their cohort was quarantined until the attendee received a negative test result.

Before the 1,022 attendees departed for camp, four (0.4%) asymptomatic attendees received positive SARS-CoV-2 test results and delayed their arrival; they were subsequently isolated for 10 days at their homes, were not retested before camp entry, were considered to not have COVID-19 at time of camp arrival, and did not receive any further testing for the duration of their attendance. Twelve attendees (nine staff members and three campers) were not tested before travel to camp because they had completed a period of isolation after experiencing symptoms and having received positive SARS-CoV-2 RT-PCR test results in the 2 months before camp opening. The remaining 1,006 attendees received negative SARS-CoV-2 test results.

During June–August, the combined attendance of the four camps included 642 children and 380 staff members, aged 7–70 years, from 41 states with a variety of 7-day average rate of SARS-CoV-2 infection (Figure); 1.8% of camp attendees¶¶ (10 staff members and eight campers) came from six international locations (Bermuda, Canada, Mexico, South Africa, Spain, and United Kingdom) and Puerto Rico (Table 1). Camp sessions ranged from 44 to 62 days (including a 14-day staff member orientation) during June 15–August 16, 2020. The number of campers in cabins (including dormitory-style quarters) ranged from five to 44 campers (Table 2). No attendee reported a condition that precluded wearing a face covering,

and all attendees were observed to comply with use of face coverings and physical distancing.
Daily symptom checks identified 12 attendees (one staff member and 11 campers) (1.2%) with signs or symptoms compatible with COVID-19; symptomatic persons were immediately isolated and tested, and their cohorts were quarantined until test results were available. All 12 isolated attendees received negative test results, after which isolation and cohort quarantine were discontinued.
Three asymptomatic attendees at three different camps (two staff members and one camper) (0.3%) received positive SARS-CoV-2 test results after arrival at camp and were rapidly isolated and their cohorts (sized five, six, and 30 attendees) quarantined for 14 days per state and CDC guidance. Both asymptomatic staff members isolated for 10 days and received negative test results twice 24 hours apart at the end of their isolation. The asymptomatic camper was isolated on day 3 after testing when positive test results were received. The camper was retested on days 4 and 5 after a positive test result and released from isolation on day 8 after a second negative result was received (per CDC isolation termination guidelines at that time). The 30 members of the camper's cohort were retested on days 3 and 4 after the asymptomatic camper's initial positive test result. No cohort members received a positive test result, and all were released from quarantine on day 8 after the asymptomatic camper's positive test result. No secondary transmission was identified.

https://www.cdc.gov/mmwr/volumes/69/wr/mm6935e1.htm?s_cid=mm6935e1_e&deliveryName=USCDC_921-DM36316

Study
Vaccine Needs 80 Percent Efficiency With 75 Percent Uptake to Stop Pandemic in U.S.
Source: Newsweek
Unique ID: 1007711409

The team, led by Bruce Y. Lee from the CUNY Graduate School of Public Health and Health Policy, found that if 75 percent of the population got the vaccine, 80 percent effectiveness would stop an ongoing epidemic. If only 60 percent got the vaccine, it would need to have 100 percent efficiency to extinguish the epidemic. Their findings are published in the American Journal of Preventive Medicine.

The computer model simulated the spread of COVID-19 and vaccination across the U.S. At present, there are no approved treatments for the disease, and current control methods are largely reliant on non-pharmaceutical interventions, such as social distancing, lockdowns and mask use. Because of this, there has been a huge focus on the development of a vaccine.

Countries across the world are working to develop vaccines, with 32 currently in the human trial stages, according to the New York Times vaccine tracker. Russia announced it had approved its vaccine, Sputnik V, earlier this month. The Russian Direct Investment Fund, which is helping to finance the vaccine, said 20 countries have expressed interest in it. On 20 August, the state-run Tass news agency said it would start vaccinating medics with Sputnik V the following week.

China also recently announced it had been giving its own vaccine to healthcare workers since July. According to CNN, Zheng Zhongwei, director of the Science and Technology Development Center of the National Health Commission, said China's laws clearly say that during a public health emergency, the country can authorize the emergency use of vaccines. He said that by vaccinating frontline workers, an "immunity barrier" could be established. They plan to roll out the vaccine to people who work in agriculture, transportation and service industries next, he added.

In the U.S. Dr. Anthony Fauci, director of the National Institute of Allergy and Infectious Diseases, warned against rushing out vaccines before their safety and efficiency had been proven. His comments followed reports that the Trump administration was hoping to push out a vaccine, potentially via emergency use authorization (EUA), before November's election. These claims were denied by White House officials.

Fauci had also previously spoken about the first vaccines to be developed, saying their efficiency would probably be low to start. Earlier this month, he said the chances of developing a vaccine that has a 98

percent effectiveness were "not great." He said scientists were hoping for efficiency of around 75 percent, but added 50 to 60 percent would also be acceptable. An effectiveness of around 50 percent would put a coronavirus vaccine in line with seasonal flu shots.

In June, Andy Slavitt, the former Acting Administrator of the Centers for Medicare and Medicaid Services under president Barack Obama, also said the first vaccines would probably have an efficiency similar to those for the flu, saying subsequent vaccines would get progressively more effective.

In the latest study, Lee and colleagues said it will be important to understand how effective a vaccine needs to be, and how many people will need to have it, if social distancing measures are to be removed altogether. Findings showed that with 100 percent update, a vaccine would still need to be at least 60 percent effective to stop the pandemic. If coverage falls to 75 percent, the vaccine would need to be 80 percent effective.

"Some are pushing for a vaccine to come out as quickly as possible so that life can 'return to normal,'" Lee said in a statement. "However, we have to set appropriate expectations. Just because a vaccine comes out doesn't mean you can go back to life as it was before the pandemic. It is important to remember that a vaccine is like many other products—what matters is not just that a product is available, but also how effective it is."
The American Journal of Preventive Medicine
https://www.ajpmonline.org/article/S0749-3797(20)30284-1/fulltext#%20
https://www.newsweek.com/coronavirus-vaccine-stop-pandemic-1527697?utm_source=Public&utm_medium=Feed&utm_campaign=Distribution

Study
Study tracks evolution of SARS-CoV-2 virus mutations
Source: Medical Xpress
Unique ID: 1007711400

Since COVID-19 began its menacing march across Wuhan, China, in December 2019, and then across the world, the SARS-CoV-2 virus has taken a "whatever works" strategy to ensure its replication and spread. But in anew study undergoing peer review, University of Illinois researchers and students show the virus is honing the tactics that may make it more successful and more stable.
A group of graduate students in a spring-semester Bioinformatics and Systems Biology class at Illinois tracked the mutation rate in the virus's proteome—the collection of proteins encoded by genetic material—through time, starting with the first SARS-CoV-2 genome published in January and ending more than 15,300 genomes later in May.
The team found some regions still actively spinning off new mutations, indicating continuing adaptation to the host environment. But the mutation rate in other regions showed signs of slowing, coalescing around single versions of key proteins.
"That is bad news. The virus is changing and changing, but it is keeping the things that are most useful or interesting for itself," says Gustavo Caetano-Anolles, professor of bioinformatics in the Department of Crop Sciences at Illinois and senior author on the study.
Importantly, however, the stabilization of certain proteins could be good news for the treatment of COVID-19.
According to first author Tre Tomaszewski, a doctoral student in the School of Information Sciences at Illinois, "In vaccine development, for example, you need to know what the antibodies are attaching to. New mutations could change everything, including the way proteins are constructed, their shape. An antibody target could go from the surface of a protein to being folded inside of it, and you can't get to it anymore. Knowing which proteins and structures are sticking around will provide important insights for vaccines and other therapies."
The research team documented a general slowdown in the virus's mutation rate starting in April, after an initial period of rapid change. This included stabilization within the spike protein, those pokey appendages that give coronaviruses their crowned appearance.
Within the spike, the researchers found that an amino acid at site 614 was replaced with another (aspartic acid to glycine), a mutation that took over the entire virus population during March and April.

"The spike was a completely different protein at the very beginning than it is now. You can barely find that initial version now," Tomaszewski says.
The spike protein, which is organized into two main domains, is responsible for attaching to human cells and helping inject the virus's genetic material, RNA, inside to be replicated. The 614 mutation breaks an important bond between distinct domains and protein subunits in the spike.
"For some reason, this must help the virus increase its spread and infectivity in entering the host. Or else the mutation wouldn't be kept," Caetano-Anolles says.
The 614 mutation was associated with increased viral loads and higher infectivity in a previous study, with no effect on disease severity. Yet, in another study, the mutation was linked with higher case fatality rates. Tomaszewski says although its role in virulence needs confirmation, the mutation clearly mediates entry into host cells and therefore is critical for understanding virus transmission and spread.
Remarkably, sites within two other notable proteins also became more stable starting in April, including the NSP12 polymerase protein, which duplicates RNA, and the NSP13 helicase protein, which proofreads the duplicated RNA strands.
"All three mutations seem to be coordinated with each other," Caetano-Anolles says. "They are in different molecules, but they are following the same evolutionary process."
The researchers also noted regions of the virus proteome becoming more variable through time, which they say may give us an indication of what to expect next with COVID-19. Specifically, they found increasing mutations in the nucleocapsid protein, which packages the virus's RNA after entering a host cell, and the 3a viroporin protein, which creates pores in host cells to facilitate viral release, replication, and virulence.
The research team says these are regions to watch, because increasing non-random variability in these proteins suggests the virus is actively seeking ways to improve its spread. Caetano-Anolles explains these two proteins interfere with how our bodies combat the virus. They are the main blockers of the beta-interferon pathway that make up our antiviral defenses. Their mutation could explain the uncontrolled immune responses responsible for so many COVID-19 deaths.
"Considering this virus will be in our midst for some time, we hope the exploration of mutational pathways can anticipate moving targets for speedy therapeutics and vaccine development as we prepare for the next wave," Tomaszewski says. "We, along with thousands of other researchers sequencing, uploading, and curating genome samples through the GISAID Initiative, will continue to keep track of this virus."
The article, "New pathways of mutational change in SARS-CoV-2 proteomes involve regions of intrinsic disorder important for virus replication and release," is published on the preprint server BioRxiv
More information: Tre Tomaszewski et al. New Pathways of Mutational Change in SARS-CoV-2 Proteomes Involve Regions of Intrinsic Disorder Important for Virus Replication and Release, (2020). DOI: 10.1101/2020.07.31.231472
https://www.biorxiv.org/content/10.1101/2020.07.31.231472v1
https://medicalxpress.com/news/2020-08-tracks-evolution-sars-cov-virus-mutations.html

Study

Coronavirus in Chicago: UIC to start COVID-19 vaccine trial Monday
Source: Chicago Sun Times
Unique ID: 1007710786

The University of Illinois at Chicago will begin clinical trials Monday on a potential COVID-19 vaccine.
UIC researchers will enroll up to 1,000 people into the trial to test the effectiveness of the vaccine, which was developed by Massachusetts-based biotech company Moderna, according to a statement from university officials.
“We are looking for two things really,” Dr. Richard Novak, who is leading the study, said in the statement. “One, we want to see if people who get the vaccine have a lower chance of getting sick from the virus compared to others — this would be game-changing.
“Two, for those people who still get sick from COVID-19, we want to see if those who received the vaccine have better outcomes. For example, if people with the vaccine have a lower chance of needing to be hospitalized when they do get sick, this would also be a really positive step forward and dramatically impact public health.”
Participants will be randomly assigned to groups that will receive shots of the vaccine or a placebo, officials said. The shots will be administered in two doses over the course of four weeks.

A “handful” of participants enrolled in the study will start receiving shots Monday, with researchers planning to schedule further appointments with other volunteers, officials said. Three sites — two at UIC and one at the University of Chicago — will eventually administer shots to between 20 and 40 people per day.
People interested in volunteering for the study can sign up online or call UIC researchers at 312-355-0656.
https://chicago.suntimes.com/coronavirus/2020/8/24/21398818/uic-covid-19-coronavirus-vaccine-trial

Belgium

Researchers unravel two mysteries of COVID-19
Source: Science Daily
ID: 1007713709
A team from Lawson Health Research Institute and Western University has made significant steps forward in understanding COVID-19 through two back-to-back studies published this week in Critical Care Explorations. In one study, the team has identified six molecules that can be used as biomarkers to predict how severely ill a patient will become. In the other study, they are the first to reveal a new mechanism causing blood clots in COVID-19 patients and potential ways to treat them.
The studies were conducted by analyzing blood samples from critically ill patients at London Health Sciences Centre (LHSC). They build on a growing body of work from the team who were first in the world to profile the body's immune response to the virus by revealing a separate six molecules that could act as potential targets to treat hyperinflammation in critically ill patients.
"We've begun answering some of the biggest COVID-19 questions asked by clinicians and health researchers," says Dr. Douglas Fraser, lead researcher from Lawson and Western's Schulich School of Medicine & Dentistry, and Critical Care Physician at LHSC. "While the findings need to be validated with larger groups of patients, they could have important implications for treating and studying this disease."
Predicting which COVID-19 patients will get worse
With no proven therapies, many COVID-19 patients admitted to intensive care units (ICUs) do not survive. "When a patient is admitted to ICU, we normally wait to see if they are going to get worse before we consider any risky interventions. To improve outcomes, we not only need new therapies but also a way to predict prognosis or which patients are going to get worse," explains Dr. Fraser.
The researchers identified six molecules of importance (CLM-1, IL12RB1, CD83, FAM3B, IGFR1R and OPTC). They found that these molecules were elevated in COVID-19 patients who would become even more severely ill. They found that when measured on a COVID-19 patient's first day of ICU admission, the molecules could be used to predict which patients will survive following standard ICU treatment.
"While further research is needed, we're confident in these biomarkers and suspect these patterns may be present even before ICU admission, such as when a patient first presents to the emergency department," notes Dr. Fraser. "These findings could be incredibly important in determining how severely ill a patient will become."
The team measured 1,161 plasma proteins from the blood of 30 participants: 10 COVID-19 patients and 10 patients with other infections admitted to LHSC's ICU, as well as 10 healthy control participants. Blood was drawn on set days of ICU admission, processed in a lab and then analyzed using statistical methods and artificial intelligence.
The team notes that predicting a patient's disease severity can help in a number of ways. It could allow for medical teams to have important conversations with family members, setting goals of care based on the patient's health and personal wishes. Medical teams could use the knowledge to mobilize resources more quickly. If they know a patient is at higher risk of death, they may consider intervening sooner despite associated risks. The team also hopes the findings can be used to better design COVID-19 clinical trials by grouping patients based on their risk. This could allow for stronger results when examining potential treatments for the disease.
Understanding why blood clots occur and how to treat them
A major complication occurring in most critically ill COVID-19 patients is clotting in the lung's small blood vessels which leads to low oxygen levels in the body.
"The reason for this clotting has been unclear. Most suspect the clotting mechanisms in our blood are put into overdrive and so many clinicians have been treating with anticoagulant therapies like the drug heparin," says Dr. Fraser. "But we've uncovered an entirely different mechanism."

The team further analyzed the blood samples from their 30 participants, and found evidence to suggest that the inner linings of small blood vessels are becoming damaged and inflamed, making them a welcoming environment for platelets (small blood cells) to stick.
They discovered that COVID-19 patients had elevated levels of three molecules (hyaluronic acid, syndecan-1 and P-selectin.) The first two molecules are products broken down from small hair-like structures (the glycocalyx) which line the inside of the blood vessels. Their presence suggests the glycocalyx is being damaged with its breakdown products sent into the bloodstream. The presence of P-selectin is also significant as this molecule helps to make both platelets and the inner lining of blood vessels adhere to one another.
"The glycocalyx keeps platelets from touching the inside wall of the blood vessel and helps facilitate the production of nitric oxide, which has an important role in preventing platelets from sticking," explains Dr. Fraser. "We suspect the body's immune response is producing enzymes that shear off these little hair-like structures, inflaming blood vessels and making them a welcoming environment for platelets to form clots."
The team suggests that two therapies may hold promise for treating blood clots in COVID-19 patients: platelet inhibitors to stop platelets from sticking and molecules to protect and restore the inner lining of blood vessels.
"By exploring these therapies as potential alternatives to anticoagulant therapies, we may be able to improve patient outcomes," says Dr. Fraser. "Through our combined findings, we hope to provide tools to predict which patients will become the most severely ill and treatments for both hyperinflammation and blood clots."
Story Source:
Materials provided by Lawson Health Research Institute. Note: Content may be edited for style and length.
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Domestic Events of Interest

Canada
Torontonian contracts West Nile virus; first resident infected in 2020

Canada
B.C. marks 3rd straight month with more than 170 overdose deaths

International Events of Interest

United States
First Prophylactic Gonorrhea Vaccine Developed.
Source: Outbreak News Today
GPHIN ID: 1007712351

Intravacc, a global leader in translational research and development of viral and bacterial vaccines, has partnered with American, Buffalo, NY, based Therapyx, to further develop and optimize the world's first

prophylactic vaccine against gonorrhea, NGoXIM. For this Therapyx received a $ 2.8 million Phase IIB grant in the US and has chosen to partner with Intravacc for its unique capabilities and infrastructure for the optimization of vaccines, vaccine processes and vaccine technologies.
NGoXIM is a microsphere vaccine with encapsulated interleukin-12 (IL-12) and outer bacterial membrane vesicles from Neisseria gonorrhoeae, developed with Intravacc's OMV platform. This vaccine therefore consists of a combination of adjuvant and antigen, specifically designed for mucosal immunization. Vaccination with NGoXIM has been shown to induce potent and persistent antibacterial activity in primates. In this collaboration, the parties will focus on enhancing and optimizing the specific adaptive immune response in non-human primates as a prelude to testing in humans. This should ultimately lead to a vaccine that provides lasting protection against infection with the Neisseria gonorrhoeae bacteria.
Gonorrhea is the second most common bacterial infectious disease in the US, with a reported incidence of more than 300,000 cases per year. The Neisseria gonorrhoeae bacteria, a gram-negative aerobic 0.6–1.0 µm bacteria, is the cause of this sexually transmitted disease. Due to under-reporting and asymptomatic disease course, the true incidence is believed to be more than double. There is currently no effective gonorrhea vaccine available and the disease is known to be contracted repeatedly without apparently developing protective immunity as a result of previous infection. In addition, antibiotic resistance is increasingly common for this bacterium. The US-based Center for Disease Control and Prevention has listed antibiotic resistant N. gonorrhoeae as one of the top three pathogens that "pose an immediate threat to public health that must be urgently and aggressively addressed".
Dr. Jan Groen, Intravacc's CEO, said:
"We are proud to partner with Therapyx in the further optimization and development of the world's first gonorrhea vaccine. Vaccination with the candidate vaccine inducing a potent and lasting antibacterial activity in primates, not only shows the proof-of-principle for NGoXIM, but also the potency of the mucosal vaccine platform in general. This rapidly adaptable platform for the engineering and development of mucosal vaccines has enormous potential for challenging respiratory viral infections, including influenza and COVID-19, among others. With our unique infrastructure and pilot plant for the optimization of vaccines, vaccine processes and vaccine technologies, we can contribute to accelerated further development of this promising vaccine, for which there is a great worldwide medical need."
http://outbreaknewstoday.com/first-prophylactic-gonorrhea-vaccine-developed-65210/

Austria

BM32 vaccine against grass pollen allergy could be potential treatment for hepatitis B infection
Source: www.news-medical.net
GPHIN ID: 1007711434

Chronic hepatitis B infections represent a global health problem that could hitherto only be treated by chemotherapy.
A team of researchers led by Rudolf Valenta from MedUni Vienna's Center for Pathophysiology, Infectiology and Immunology has now demonstrated that a protein contained in the BM32 vaccine against grass pollen allergy induces antibodies that prevent the hepatitis B virus from docking onto liver cells. The study has been published in the Lancet EBioMedicine journal.
Chronic hepatitis B (HBV) it is a serious viral disease associated with inflammation of the liver. According to World Health Organization (WHO) estimates, there are currently more than 250 million sufferers worldwide.
HBV is usually treated with nucleoside and nucleotide analogues or with interferon. However, these forms of treatment have many side-effects.
Current vaccinations to protect against HBV are based on the S protein, a specific component of the HB virus, but are not effective in 10 - 20% of cases.
Using data from 128 people vaccinated against grass pollen allergy, a research group led by Rudolf Valenta from MedUni Vienna's Center for Pathophysiology, Infectiology and Immunology has now shown that this BM32 vaccine induces antibodies exactly at the site where the virus binds to the liver cell, thus preventing infection.
Different dosage regimes were tested, and various cross-reactions investigated. The vaccinated people formed antibodies that are capable of recognising and fighting all known forms of the virus.

The antibody count appears to be high enough to not only prevent the chronic form of hepatitis B but also to serve as a treatment. It would then be possible to interrupt the cycle of viral infestation of the liver cells and to achieve immunisation.
This study is a first step towards the therapeutic use of vaccination against chronic hepatitis and also represents a completely new concept that could revolutionize current methods of treatment.
This work is a result of the collaboration between the Medical University of Vienna and the Vienna company Viravaxx.
Cornelius, C., et al. (2020) Immunotherapy With the PreS-based Grass Pollen Allergy Vaccine BM32 Induces Antibody Responses Protecting Against Hepatitis B Infection. EBioMedicine. doi.org/10.1016/j.ebiom.2016.07.023.
https://www.sciencedirect.com/science/article/pii/S2352396416303292?via%3Dihub

New Zealand

World-first study on blood hormone could reduce cardiovascular deaths

Source: medicalxpress.com
GPHIN ID: 1007711636

A simple blood test could identify seemingly-healthy people with a high hidden risk of heart disease thanks to a world-first discovery by University of Otago, Christchurch researchers.
Researchers from the University's Christchurch Heart Institute studied the blood samples and cardiology scans of 665 healthy young and middle-aged people with no previous heart conditions. They found people with high levels of a hormone in the blood, called C-type Natriuretic Peptide (CNP), were significantly more likely to have stiffening of the arteries, reduced pumping action of the heart, higher fat levels in the blood and liver, and reduced kidney function—all signs of increased risk of heart disease.
The discovery could one day enable doctors to identify those people whose lives could be saved from a future heart attack by interventions such as drugs or lifestyle changes.
The study is the first to describe a link between the blood hormone CNP and inflammation across a range of tissues including arteries and the heart. The results were recently published in the prestigious Peptides journal.
Lead researcher Dr. Tim Prickett says CNP seems to protect arteries from hardening and blocking. This means it is working hard and present in higher levels in those with potentially poor, and undetected, cardiovascular health.
"We examined two quite different groups of healthy people—one group age 28 years, the other age 50 years—both without history of heart or kidney disease. High levels of CNP in both age groups were found in people who had stiffer arteries, reduced pumping action of the heart, higher fat levels in the blood and liver, and reduced kidney function."
Dr. Prickett says inflamed and blocked arteries can cause numerous physical problems including scarring and stiffness and damage to organs such as the heart, liver and kidneys. "We found that CNP in the blood stream reflects an increased production of CNP in these tissues, as part of a protective response to inflammation."
He says the finding that CNP acts to protect the body is key to helping save lives through early detection of serious conditions such as atherosclerosis, which can lead to heart attack or stroke.
This is one of a number of discoveries by the Christchurch Heart Institute over the past 25 years. The research group has discovered and developed blood tests for heart disease diagnosis and treatment, some of which are used in hospitals and emergency departments in New Zealand and around the globe.
More information: Timothy CR Prickett et al. Circulating products of C-type natriuretic peptide and links with organ function in health and disease, Peptides (2020). DOI: 10.1016/j.peptides.2020.170363
https://www.sciencedirect.com/science/article/pii/S0196978120301121?via%3Dihub

Researches, Policies and Guidelines

NIL