GPHIN Daily Report for 2020-09-29

Special section on Coronavirus

Canada

Areas in Canada with cases of COVID-19 as of 28 September 2020 at 19:00 pm EDT
Source: Government of Canada

Province, territory or other	Number of confirmed cases	Number of active cases	Number of deaths
Canada	155,301	13,416	9,278
Newfoundland and Labrador	273	2	3
Prince Edward Island	58	1	0
Nova Scotia	1,087	1	65
New Brunswick	200	7	2
Quebec	72,651	5,196	5,826
Ontario	50,531	4,564	2,840
Manitoba	1,919	618	20
Saskatchewan	1,892	149	24
Alberta	17,749	1,549	265
British Columbia	8,908	1,329	233
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 September 28, 2020
ID: 1007932899

From: Public Health Agency of Canada

Statement
On September 28, 2020, Dr. Theresa Tam, Canada's Chief Public Health Officer, issued the following statement on COVID-19.

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 153,125 cases of COVID-19 in Canada, including 9,268 deaths. 86% of people have now recovered. Laboratories across Canada continue to test at a high rate, with an average of almost 70,000 people tested daily last week and 1.4% of these testing positive. As of Friday September 25th, an average of 1,175 cases were being reported daily across Canada over a seven-day period. As some provinces and territories do not report new cases over the weekend, the next update for the average daily case count will be provided tomorrow, once these numbers have been compiled.

As I have discussed previously, the ongoing increase in Canada's daily case count is an indicator of accelerated epidemic growth in some regions of this country. While Canadians and public health authorities alike are rapidly responding to the COVID-19 pandemic, we need to be mindful that we are doing so in the midst of an "infodemic." That is an overabundance of information about COVID-19, including rumours and misinformation, sometimes deliberately spread.

During any public health crisis, access to reliable, accurate and timely information is essential to protect our health. This is being recognized today by the United Nations Educational, Scientific and Cultural Organization (UNESCO) on the International Day for Universal Access to Information (IDUAI).

Public health officials across Canada have been working tirelessly to provide Canadians with the information they need to protect themselves and their families from COVID-19.

When the pandemic began, the world knew very little about the virus that causes COVID-19. Since then, the science and research on the virus has been evolving in real-time. As our knowledge about COVID-19 has grown, public health guidance and practices have evolved in turn. I recognize that Canadians have made a tremendous effort to learn about COVID-19, including learning epidemiology terms and infection control practices, all while looking after your own families and mental health during the pandemic.

On top of this, in today's digital age, we are all exposed to more information than ever before and often struggle to sort the good from the bad. Social media platforms allow us to stay connected to the ones we love while at a distance, and they also allow us to share information with each other. Our trust in the person sharing the information, may lead us to assume that the information they share is true and accurate and we may be less likely to double-check if the source is credible and trustworthy.

I urge everyone to consider the source of the information they share with others. And when we come across new information, we need to think critically about it, check the source and not share it further, if there any doubt about its credibility.

For additional trustworthy information about COVID-19, the Government of Canada website, Canada.ca/coronavirus, is a good place to start. You can also find reliable information on your provincial and local health agency website, as well as from international agencies like the World Health Organization and the Red Cross. For information to help you and your family boost your digital and media literacy skills, visit Mediasmarts.ca where you can find many resources, including information for families

and educators.

False or misleading information can spread as fast as a virus. Just as we must be vigilant in keeping up proven, effective public health measures to slow the spread of COVID-19, we must also be vigilant in our efforts to end the "infodemic." Let's empower one another to keep learning and stop misinformation in its tracks. To learn more on ways to reduce your risk of infection and spreading the virus, you can also consult this COVID-19 awareness resources guide."
Contacts
Public Health Agency of Canada
613-957-2983
https://www.canada.ca/en/public-health/news/2020/09/statement-from-the-chief-public-health-officer-of-canada-on-september-28-2020.html

Canada
Eight Ottawa schools reporting COVID-19 outbreaks
Source: ottawamatters
Unique ID: 1007930545

There are currently eight schools in Ottawa reporting an outbreak of COVID-19, meaning the school has more than one case of the virus and a confirmed transmission.
Meantime, the four school boards in Ottawa are reporting 58 schools with at least one case of the virus.
The Ottawa-Carleton District School Board is reporting 12 schools with a case of the virus. In total, 11 students and one staff member are affected.
There are 19 schools in the Ottawa Catholic School Board reporting cases. In total, 24 students and two staff members are affected.
Conseil des écoles publiques de l'Est de l'Ontario is reporting 10 schools with cases of COVID-19, affecting 12 students and three staff members.
And Conseil des écoles catholiques du Centre-Est is reporting 17 schools with at least one case of the virus, affecting 25 people.
https://www.ottawamatters.com/local-news/eight-ottawa-schools-reporting-covid-19-outbreaks-2747509

Canada
Ontario's 2nd wave of COVID-19 forecast to peak in October
Source: CBC News
ID: 1007930894

Fresh projections suggest that Ontario's second wave of COVID-19 will peak in mid- to late October and will likely send enough patients to intensive care that hospitals will need to scale back non-emergency surgeries.
The forecasts come from the COVID-19 Modelling Collaborative, a joint effort of scientists and physicians from the University of Toronto, University Health Network and Sunnybrook Hospital.
Based on how quickly Ontario's infection rate has been rising in recent weeks, the model projects the province is on track to exceed 1,000 new cases per day by the middle of October, unless stricter public health measures slow the accelerating spread.
The average number of new cases reported daily in Ontario is currently running four times higher than what it was at the end of August. Premier Doug Ford's government has since shrunk limits on the size of private gatherings, reduced opening hours for bars and ordered strip clubs to close.
On Sunday, Ontario's Ministry of Health reported 112 patients in hospital with a confirmed case of COVID-19, nearly triple the number of two weeks ago. The research team says the impact of the second wave on Ontario's hospitals will depend on the demographics of who gets infected in the coming weeks.
"We are at this critical moment right now where we see case numbers increase and we don't quite know yet where it's going," said Beate Sander, a scientist at the University Health Network and Canada Research Chair in economics of infectious diseases.

"Right now, we have predominantly younger, healthy people (contracting COVID-19 in Ontario)," Sander said in an interview with CBC News. "But what we've seen in other jurisdictions is that it really spills over into other population groups."

The team of researchers has run four scenarios for how Ontario's second wave could play out from here. The best-case scenario would mimic Ontario's first wave in March and April, when case numbers increased rapidly but were then reined in by a lockdown.

Two moderate scenarios would resemble how a second wave hit jurisdictions comparable to Ontario: the Australian state of Victoria (home to Melbourne, a city of 5 million), and the U.S. state of Michigan.

None of those three scenarios shows COVID-19 patients filling Ontario's hospital wards or ICUs beyond their capacity. That happens only in the modellers' worst-case scenario: a second wave as severe as the first wave that hit Italy when the pandemic began.

However, in all but the best-case scenario, the researchers foresee ICU demand that exceeds the capacity required for patients undergoing scheduled surgeries.

"The really high-risk cancer surgeries, for instance, won't be able to go ahead if the ICUs are overwhelmed with people who are showing up in the emergency department dying of COVID-19 associated pneumonia and respiratory failure," said Dr. Kali Barrett, a critical care physician at the University Health Network and part of the modelling research team.

The researchers stress that their modelling scenarios are simply forecasts. They use data on the proportion of people who have have ended up in hospital and ICUs while positive for the coronavirus, and project those onto Ontario's current trend in new cases.

The shifting demographics of who's getting infected with COVID-19 as the second wave builds makes it challenging for the researchers to forecast just how many people will need hospital treatment.

"The second wave in Spain and France started in the younger populations, but it is spreading to the elderly and the people who are more at risk of ending up in the intensive care unit or in the hospitals," said Barrett in an interview with CBC News.

"It is just a matter of time until this virus, if it's affecting the young populations, spreads into the elderly population," she said. "We're already starting to see that happening in Ontario."

The latest figures from the province's Ministry of Health show 227 people aged 70 or older with an active confirmed case of COVID-19. That number has increased 34 per cent in the space of a week.

Changes in the eligibility criteria for testing can also muddy the forecast. When testing is widespread and captures larger number of mild cases, the percentage who end up in hospital will be smaller than when testing is restricted to priority groups most likely to have the virus, as it was in Ontario in the spring.

Ontario altered its "anyone can get a test" policy on Friday, so far fewer people without symptoms are now eligible for testing.

ICU demand could lengthen surgical backlog

Ontario has around 2,000 intensive care beds, and the province plans to add 139 in October. The province's ICU beds are typically two-thirds occupied by patients whose cases have nothing to do with COVID-19, whether it's a heart attack, car accident, or another critical illness.

Since ICUs can't actually function at 100 per cent occupancy full time, the researchers calculate that Ontario has around 475 beds available for non-emergency surgery patients and COVID patients. When scheduled surgeries are running at full pace, those patients take up all but 100 of those beds.

Their conclusion: if more than 100 people with COVID-19 need ICU care, they'd be competing for space with scheduled surgery cases.

"Then we would have to make decisions in terms of who to treat," said Sander. "Do we admit COVID patients or do we do (non-emergency) surgery?"

The projections suggest if Ontario's second wave follows what happened in the Australian state of Victoria — a sharp spike in new infections that drops off quickly after a strict lockdown — some 350 to 400 people will need an ICU bed at peak demand in late October.

If the second wave in this province plays out as Michigan's did — a rise in new infections that levels off but doesn't slow down for a long time — the forecast is for more than 200 patients with COVID-19 in the ICUs from late October onwards.

Figures published Sunday by the Ministry of Health show 28 ICU patients with a confirmed case of COVID-19.

In Ontario's first wave, the number of COVID-19 patients in ICU peaked at 264, while the number of people in hospital at one time peaked at 1,043. Non-emergency surgeries were postponed across the province.

If the majority of Ontario's second wave infections come among younger healthier people — as has been happening through September — hospitalization rates are expected be lower than in the spring.
The modellers say ICU occupancy numbers will be of more critical concern than total hospitalization numbers because Ontario's hospital system can far more easily free up general ward beds than it can make space in intensive care.
That's less about the available beds and ventilators, and more about the having enough doctors and nurses capable of the specialized care that ICU patients need.
"You can just train people overnight to do this type of thing," said Sander. "You can buy a lot of beds and you can buy a lot of ventilators, but you can't get these highly qualified staff on the ground within a very short period of time."
Barrett agrees that human resources are the key limiting factor, and is concerned about how the second wave could hit hospital staff and their families.
"The majority of people working in hospitals are in their 30s, 40s and 50s, so many of them have children who go to school," she said. "If there is a massive outbreak amongst the younger population and school children, that's a whole sector of our health workforce that won't be able to come to work."
https://www.cbc.ca/news/canada/toronto/ontario-covid-19-second-wave-cases-modelling-projections-1.5739411

Canada

Two Toronto restaurants linked with 10 COVID-19 cases
Source: seaforthhuronexpositor
Unique ID: 1007930902

Toronto Public Health said seven people who tested positive for COVID-19 recently frequented the same Yonge St. restaurant.
The health department said that of the seven, five are staff members and two are patrons of the Yonge Street Warehouse, north of Dundas St., between Sept. 10-17.
Around 1,700 people may have frequented the restaurant during those days and TPH is notifying the public of the possible exposure to COVID-19.
The department said through contact tracing, health officials already followed up with all known close contacts and those people have been told to self-isolate for 14 days and go get tested.
“If you were at the Yonge Street Warehouse between September 10-17 but have not been contacted by TPH, you are not identified as a close contact. You are viewed as low risk,” said a statement released Saturday.
They noted anyone who was there during that time frame to monitor their symptoms.
On Sunday, the agency said three workers at Regulars Bar — located at 668 King St. W. — also tested positive over the last few days.
The potential exposure period is Sept. 13-22 and the department estimates some 600 people may have been at the bar during this time.
“TPH has followed up with all known close contacts. The close contacts have been asked to self-isolate for 14 days and to go for testing,” health officials said in a statement.
As a precaution, anyone who went to this bar during that time is asked to monitor themselves for COVID-19 symptoms for 14 days after their visit.
https://www.seaforthhuronexpositor.com/news/local-news/two-downtown-restaurants-linked-with-10-covid-19-cases/wcm/a11e9813-900d-4438-a4b8-fe9b4ae90a26

Quebec reports 750 new cases of COVID-19, one more death
ID: 1007932832
Source: CTV

Coronavirus newsletter sign-up: Get The COVID-19 Brief sent to your inbox
Monday's announcement saw an increase of 245 cases on the Island of Montreal (total 33,184) and 125 more in Quebec City (total 3,834). Laval reported an increase of 73 cases (total 7,018) and Monteregie reported 81 (total 10,544). The Eastern Townships reported 28 new cases (total 1,739), the Laurentians, 37 (total 4,703) and Outaouais, 27 (total 1,292). Chaudiere-Appalaches recorded an increase of 41 (total

1,241).
Hospitalizations in the province decreased by four from Sunday to Monday. The number of people receiving treatment for COVID-19 in Quebec hospitals is now 212. Of them, 37 are in intensive care, which is a decrease of four from the number reported on Sunday.
Health Minister Christian Dube called the situation "very worrying" in certain Quebec regions on Monday morning, ahead of a 5:30 p.m. press conference during which he, Premier Francois Legault and public health director Dr. Horacio Arruda are expected to announce that Montreal and Quebec City are entering the 'red' zone on the province's regional alert map. The trio will detail what the red alert level means for Quebecers in those regions.
2/2
La situation dans certaines régions est très préoccupante. On doit faire les sacrifices et rester chez-soi. #oncasselavague
— Christian Dubé (@cdube_sante) September 28, 2020
There are now 61,629 people confirmed recovered from COVID-19 in Quebec, which is an increase of 500 from the number reported on Sunday -- or about 84.8 per cent of the total number of cases in the province.
Quebec reported that it completed analyses of 17,310 COVID-19 tests on Sept. 26 (Quebec reports its daily testing figures from two days prior to its daily updates).
The Quebec government has tightened criteria for who can get a COVID-19 test, announcing it will prioritize people who are showing symptoms or who have been in close contact with a positive case.
The provincial health department said in a news release that as cases rise, it's important to focus on testing those who are most likely to have COVID-19 in order to speed up contact tracing and prevent outbreaks.
Those who don't fall into either category can be refused testing, the government said.

https://montreal.ctvnews.ca/quebec-reports-750-new-cases-of-covid-19-one-more-death-1.5123051

Quebec announces new COVID-19 restrictions starting Thursday as 3 regions put on red alert
ID: 1007933473
Source: CBC

8 minutes ago

Premier François Legault says it's with a heavy heart that he's announcing strict measures

Quebec Premier François Legault says three regions are being moved to the highest COVID-19 alert level, and stricter health measures are now necessary to curb the rate of transmission.

Those regions include Montreal, Quebec City and Chaudière-Appalaches, south of the provincial capital.

"I'm a bit heavy-hearted today," the premier said Monday during a late afternoon news conference. "We looked at the results over the weekend and the number of cases has gone up significantly."

"We need to make some difficult decisions."

This rise in cases could lead to an increase of hospitalizations and deaths, he said, and the government must act quickly in the interest of all Quebecers.

The new restrictions are set to last for 28 days (until Oct. 28) in the red zone.

The following new measures will take effect as of midnight Wednesday into Thursday in the three regions:

Ban on home gatherings, with some exceptions such as a single caregiver allowed per visit.

All bars, casinos and restaurants are closed (takeout only).

Libraries, museums, cinemas and theatres will also be closed.

Being less than two metres apart will be prohibited. Masks will be mandatory during demonstrations.

Houses of worship and venues for events like funerals and weddings will have a 25-person limit.

Hair salons, hotels and other such businesses will stay open.

Schools will remain open.

"Schools must remain open," Legault said. "Businesses are open so parents can continue to work and earn money."

To people not respecting rules, the premier had a special message. He said most people are respecting the rules, but some are not.

"That doesn't make any sense," he said. "We are not putting measures in place just for fun. We are putting measures in place to protect others."
Legault said the government is working on compensation packages for those businesses which are being shut down by the pandemic.

The government is enacting the restrictions as of Thursday to give the owners of businesses that will be closed time to prepare, he said.

The government could restrict travel between regions as was done in the spring under public health guidelines, but for now it won't be banned.

Travel between different regions of the province is strongly discouraged, Legault said.

Legault making right decision, specialist says
The government has been urging people to stop socializing for a month in order to slow the spread of the virus. Now that it is prohibited to gather in homes, Legault said the public security ministry is now exploring how the regulation will be enforced.

Dr. Cécile Tremblay, an infectious disease specialist at the Université de Montréal hospital, said the government is making the right decision.

"People can get a serious illness even if they are young," she said. "People can die even if they are young."

he said we still don't know the extent of long-term damage COVID-19 is causing to the heart, lungs and other organs and that it is important that everybody, including young people, does their part to prevent the spread of the disease.

Shutting down for 28 days is a good start, but it's hard to say how effective it will be, Tremblay said. Strict health measures have prevented transmission in other countries, she said, but it all depends on how well the population respects the rules.

The hope is to limit the impact on the health-care network especially with the cold and flu season upon us, Tremblay said.

This a developing story. An earlier version appears below.

Quebec reported 750 new cases on Monday, 245 of which were on the island of Montreal. The Quebec

City area, which had few cases during the first wave in the spring, had another 125 cases.

Quebec City and its immediate environs have emerged as a second epicentre of the fall coronavirus wave.

Taken together, the Capitale-Nationale region and Chaudière-Appalaches added more than 1,000 cases from Sept. 20-27.

Infection rates also continued to tick upward in the Eastern Townships, the Mauricie, the Gaspé Peninsula and Lanaudière.

Many regions have set new single-day records for COVID-19 cases; in the cases of Quebec City and Chaudière-Appalaches, they have tended to be superseded a short time later.

As Quebec City Mayor Régis Labeaume said succinctly last week: "The virus is among us."
https://www.cbc.ca/news/canada/montreal/covid-19-montreal-quebec-city-highest-alert-level-1.5741399

Ontario sees single-day record of 700 new COVID-19 cases as calls grow to return to Stage 2
ID: 1007933475
Source: CBC

42 minutes ago
About 60% of new cases are people under 40 years old, health minister says

Ontario Premier Doug Ford called the province's record-setting new COVID-19 case count Monday "deeply concerning," but announced no new public health measures, despite a group of doctors and medical experts calling for a return to Stage 2.

The province reported an additional 700 cases of coronavirus on Monday, the most on a single day since the outbreak began in late January.

Speaking to reporters, Ford said Ontario is indeed embarking on its second wave, which will be "more complicated, more complex — it'll be worse" than the first.

Still, asked about calls by the Ontario Hospital Association (OHA) to re-implement restrictions meant to limit the spread of the novel coronavirus, Health Minister Christine Elliott said, "We don't want to turn back a stage unless we absolutely have to."

As for how high the case count needs to climb to get to that point, Chief Medical Officer of Health Dr. David Williams wouldn't say. Williams suggested the province is considering "targeted" measures, but didn't specify what measures might be under consideration, where, or at what point they might be implemented.

At a news conference Wednesday afternoon, Williams reiterated the importance of wearing masks and washing hands, urging Ontarians to limit their contact with people and only attend essential gatherings — even though most businesses and establishments in the province are open.

Williams also cautioned against contact with anyone who is not taking the risk of COVID-19 or the associated public health guidance seriously.

"I would avoid contact with those people," he said. "They may be someone you know."

Also Monday, Williams urged the public against "nice-to-know" testing, saying the province is working to increase testing capacity. Until that happens, he insisted testing should be done on a "need-to-know" basis, meaning anyone seeking a test who does not fall into the current testing criteria should not be tested right now.

The province also announced the recruitment of 3,700 more health-care workers and caregivers, including nurses and personal support workers (PSWs), at a price tag of $52 million.

"Your province needs you right now," Ford said, calling for more Ontarians to consider becoming health-care workers.

Monday's count of new cases surpasses the previous high of 640, which came on April 24, when community transmission of the virus was thought to be at its peak in the province.

majority of newly confirmed cases are concentrated in four public health units:

Toronto: 344
Peel Region: 104
Ottawa: 89
York Region: 56
Other areas with double-digit increases include:

Niagara Region: 20
Halton Region: 15
Hamilton: 13
Simcoe Muskoka: 12
Elliott said in a series of tweets that about 60 per cent of new cases today were found in people under 40 years old.
https://www.cbc.ca/news/canada/toronto/covid-19-coronavirus-ontario-numbers-september-28-1.5741454

Ottawa Public Health releases pandemic data by neighbourhood
ID: 1007933172
Source: CTV

OTTAWA -- **Ottawa** Public Health has released a neighbourhood-by-neighbourhood map of COVID-19 infections in the city.
The map was produced in partnership with the **Ottawa** Neighbourhood Study.
OPH says the map was created and released "in the interest of transparency" but continues to stress that COVID-19 is prevalent across the city.

"Areas with lower or higher rates are not more or less 'safe' from COVID-19 transmission. The map […] is based on the neighbourhood of residence of Ottawans with confirmed COVID-19 infection and does not necessarily reflect where the people 'caught' the virus," a disclaimer on the study's website says. "Exposure to COVID-19 can occur anywhere people congregate, such as workplaces or services open to the public."

The data used to create the map represent all cases reported from March to August 2020 and were extracted by **Ottawa** Public Health from the OPH COVID-19 **Ottawa** Database. As of Aug. 31, 2020, there were 2,975 total laboratory-confirmed cases of COVID-19 across the city.
The map can be viewed here.
It shows not only the total number of laboratory-confirmed cases of COVID-19 by neighbourhood but also the rate per 100,000 residents by neighbourhood.
According to the data, the Ledbury—Heron Gate—Ridgemont neighbourhood topped the list for having the most COVID-19 cases and the highest per capita rate. A total of 123 people in the neighbourhood had tested positive for COVID-19 between March and August, which represents a rate of 912.26 per 100,000 residents.
The top five neighbourhoods for total cumulative COVID-19 cases (as of Aug. 31) are:
Ledbury—Heron Gate—Ridgemont: 123 cases
Overbrook—McArthur: 73 cases
Old Barrhaven East: 54 cases

Bayshore—Belltown: 48 cases
Portobello South: 42 cases

The top five neighbourhoods by rate per 100,000 residents (as of Aug. 31) are:
Ledbury—Heron Gate—Ridgemont: 912.26
Bayshore: 518.91
Emerald Woods—Sawmill Creek: 444.62
Overbrook—McArthur: 381.17
Marlborough: 363.98

Thirty-one of the 111 neighbourhoods on the map have fewer than five cases.
It's important to note that these neighbourhoods are scattered across the city and have different population densities. The Marlborough neighbourhood is in the rural south of **Ottawa**, for example. OPH notes that "rates (per 100,000 residents) in rural neighbourhoods will be more sensitive to changes in the number residents with confirmed COVID-19 infection, as they have smaller populations."

As well, neighbourhoods that are right next to each other might have wildly different case counts or rates. Centretown, for instance, had 40 cases as of Aug. 31, according to the map, but just a short drive away to Old **Ottawa** East, only nine cases were reported. Cross over to Billings Bridge, and the number rises to 24.

OPH notes that with COVID-19 cases found across the city, the best practices for keeping infection rates low should continue to be followed.
"The best way to limit your exposure to COVID-19 is to practice physical distancing with those outside your household, wear a mask where required and when you cannot maintain physical distance, and wash your hands regularly."
https://ottawa.ctvnews.ca/ottawa-public-health-releases-pandemic-data-by-neighbourhood-1.5123596

Nunavut

Nunavut government deploys team after 7 presumptive cases of COVID-19 at mine
ID: 1007933496
Source: nationalpost.com

IQALUIT, Nunavut — Nunavut is reporting seven presumptive cases of COVID-19 at a mine in the western region of the territory.
Dr. Michael Patterson, the territory's chief public health officer, says in a news release that the seven cases are at Hope Bay gold mine, 125 kilometres southwest of Cambridge Bay.
Patterson's office is waiting for test results to come back from a southern lab.
Nunavut confirmed two cases of the virus at Hope Bay on Sept.19, but the government says there is no established link between them and the seven presumptive cases announced today.
The release says the presumptive cases and all known contacts are isolating.
The Nunavut government's rapid response team has been deployed.
This report by The Canadian Press was first published Sept. 28, 2020
https://nationalpost.com/pmn/news-pmn/canada-news-pmn/nunavut-government-deploys-team-after-7-presumptive-cases-of-covid-19-at-mine

Manitoba

Second northern Manitoba First Nation reports case of COVID-19
Source: CBC
ID: 1007933544
Tataskweyak Cree Nation is under a lockdown after a member tested positive for COVID-19 last week.
A notice sent to community members last Thursday, Sept. 24, says the individual was a close contact of another positive case from outside the community.
As a result, the Manitoba First Nation, located about 700 kilometres north of Winnipeg, has issued a ban on trips to Winnipeg for its members, except for medical reasons, and non-residents are not allowed in

the community for two weeks. The notice doesn't say whether exceptions will be made for essential workers.
The community is also shifting to remote learning for students until further notice and has implemented an 8 p.m. curfew.
At least five Manitoba First Nations have now reported positive cases of COVID-19 in their communities. Last week, a family of seven from York Factory First Nation in northern Manitoba tested positive for COVID-19 following a trip to Winnipeg. The family went through rapid testing last Thursday, and the results were confirmed at Cadham Provincial Lab on Sunday.

https://www.cbc.ca/news/canada/manitoba/tataskweyak-cree-nation-covid-19-1.5742297?cmp=rss

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

CDC

COVID-19 Travel Recommendations by Destination
Source: CDC

Updated Sept. 28, 2020
Risk Assessment Level for COVID-19

- Level 3: COVID-19 Risk Is High
- Level 2: COVID-19 Risk Is Moderate
- Level 1: COVID-19 Risk Is Low
- No Travel Health Notice: COVID-19 Risk is Very Low
- Level 3: No Data Available-COVID-19 Risk is Unknown List of the countries at https://www.cdc.gov/coronavirus/2019-ncov/travelers/map-and-travel-notices.html

With specific exceptions, several presidential proclamations restrict foreign nationals who have been in any of the following countries during the past 14 days from entering the United States. For a full list of exceptions, please refer to the relevant proclamations in the links below.

- China
- Iran
- Most European Countries (Austria, Belgium, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Italy, Latvia, Liechtenstein, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Slovakia, Slovenia, Spain, Sweden, Switzerland, Monaco, San Marino, Vatican City)
- United Kingdom (England, Scotland, Wales, Northern Ireland)
- Republic of Ireland
- Brazil

https://www.cdc.gov/coronavirus/2019-ncov/travelers/map-and-travel-notices.html

United States

Virtual Town Hall Series - Immediately in Effect Guidance on Coronavirus (COVID-19) Diagnostic Tests
Source: FDA

SEPTEMBER 30, 2020

Summary:

The U.S. Food and Drug Administration (FDA) will host a virtual Town Hall for clinical laboratories and commercial manufacturers that are developing or have developed diagnostic tests for SARS-CoV-2. The purpose of this Town Hall is to help answer technical questions about the development and validation of tests for SARS-CoV-2. *click Save & Close*

Background:

The FDA plays a critical role in protecting the United States from threats such as emerging infectious diseases, including the Coronavirus Disease 2019 (COVID-19) pandemic. The FDA is committed to providing timely guidance to support response efforts to this pandemic.

The immediately in effect guidance "*Policy for Coronavirus Disease-2019 Tests During the Public Health Emergency (Revised)*" includes policies specific to this public health emergency. This guidance was issued on February 29, 2020 and subsequently updated on March 16, 2020, May 4, 2020, and May 11, 2020.

https://www.fda.gov/medical-devices/workshops-conferences-medical-devices/virtual-town-hall-series-immediately-effect-guidance-coronavirus-covid-19-diagnostic-tests-09302020

Webinar Series - Respirators and Other Personal Protective Equipment (PPE) for Health Care Personnel Use During the COVID-19 Pandemic

SEPTEMBER 29, 2020

Summary

On Tuesday, September 29, 12:00 p.m. - 1:00 p.m. ET, the U.S. Food and Drug Administration (FDA), along with the Centers for Disease Control and Prevention's (CDC) National Institute for Occupational Safety and Health (NIOSH) and the Occupational Safety and Health Administration (OSHA), will host a webinar on Respirators and Other PPE for Health Care Personnel Use during the COVID-19 Pandemic.

During this webinar, representatives from the FDA, the CDC, and OSHA will be available to answer your questions.

We encourage all interested stakeholders to join. Registration is not necessary.

https://www.fda.gov/medical-devices/workshops-conferences-medical-devices/webinar-series-respirators-and-other-personal-protective-equipment-ppe-health-care-personnel-use

WHO
Global partnership to make available 120 million affordable, quality COVID-19 rapid tests for low- and middle-income countries
Source: CDC

28 September 2020 News release

- **A full access package includes WHO policy guidance on the use of antigen-based rapid diagnostic tests, manufacturer volume guarantees for low and middle-income countries, catalytic funding to assist governments to deploy the tests and an initial US$50 million procurement fund**
- **Several rapid, point-of-care antigen tests are being assessed by WHO for Emergency Use Listing (EUL)**

- **Agreements between the Bill & Melinda Gates Foundation and test manufacturers Abbott and SD Biosensor make available innovative tests priced at a maximum of US$5 for low- and middle-income countries (LMICs)**
- **The Global Fund commits an initial US$50 million to enable countries to purchase the new tests, with the first orders expected to be placed this week**
- **Expedited market introduction of these tests in multiple LMICs is being supported through the Africa Centres for Disease Control and Prevention (Africa CDC), Unitaid, FIND, CHAI, and their partners**
- **This is the latest move from the Access to COVID-19 Tools (ACT) Accelerator to develop, procure and distribute critical new tools to fight the pandemic; new tests are urgently needed to meet the huge unmet needs for testing worldwide**

A set of agreements to make available, for low and middle-income countries, affordable, high-quality COVID-19 antigen rapid tests were today announced by the Access to COVID-19 Tools (ACT) Accelerator. Organizations involved in the milestone agreement include the Africa Centres for Disease Control and Prevention (Africa CDC), the Bill & Melinda Gates Foundation, the Clinton Health Access Initiative (CHAI), the Foundation for Innovative New Diagnostics (FIND), the Global Fund, Unitaid, and the World Health Organization (WHO).

As part of this comprehensive, end-to-end effort, the Bill & Melinda Gates Foundation has executed separate volume guarantee agreements with rapid diagnostic test (RDT) producers Abbott and SD Biosensor. These two arrangements will make available to LMICs 120 million antigen rapid diagnostic tests (Ag RDTs) – priced at a maximum of US$5 per unit – over a period of six months. These tests provide results in 15–30 minutes, rather than hours or days, and will enable expansion of testing, particularly in countries that do not have extensive laboratory facilities or trained health workers to implement molecular (polymerase-chain reaction or PCR) tests.

The tests developed by Abbott and SD Biosensor are highly portable, reliable, and easy to administer, making testing possible in near-person, decentralized healthcare settings. Both companies' tests are faster and cheaper than laboratory-based tests, enabling countries to increase the pace of testing, tracing and treating people for COVID-19 at the point of care particularly in areas with under-resourced health systems. A number of other Ag RDTs are at various stages of development and assessment.

To scale up the Ag RDTs, the Global Fund today announced that it has made available an initial US$50 million from its COVID-19 Response Mechanism to enable countries to purchase at least 10 million of the new rapid tests for LMICs at the guaranteed price, with the first orders expected to be placed this week through the Global Fund's pooled procurement mechanism.

FIND and WHO are working together to accelerate appropriate use by supporting implementation research that will optimize Ag RDT use in multiple LMICs, in line with WHO guidance. This includes provision of catalytic volumes of tests to understand how Ag RDTs can best fit into health systems.

Unitaid and Africa CDC will combine resources to initiate the roll out of these tests in up to 20 countries in Africa starting in October 2020. This multi-million-dollar intervention, currently undergoing final sign-off by their Boards, is designed to engage multiple partners active in the COVID-19 response in these countries, such as CHAI, African Society for Laboratory Medicine (ASLM) and local organizations. This will bolster efforts by the African Union's Partnership to Accelerate COVID-19 Testing (PACT) initiative, launched in August 2020 to mobilize experts, community workers, supplies and other resources to minimize the impact of the pandemic on the African continent by testing, tracing, and treating COVID-19 cases in a timely manner.

Testing is a critical cornerstone of the COVID-19 response, enabling countries to trace and contain the virus now, and to prepare for the roll-out of vaccines once available. Effective testing strategies rely on a portfolio of test types that can be used in different settings and situations. While molecular tests started to be rolled out within a month of the virus being sequenced, these tests are mainly laboratory based, relying on infrastructure and trained personnel to conduct them. Rapid tests to detect the presence of the virus at the point of care, which are faster and cheaper, are a vital addition to the testing arsenal needed to contain and fight COVID-19.

WHO guidance published on 11 September 2020 highlights the value of these tests in areas where community transmission is widespread and where nucleic acid amplification-based diagnostic (NAAT) testing is either unavailable or where test results are significantly delayed. As well as supporting test-trace-isolate strategies, the tests can help identify or confirm new outbreaks, support outbreak investigations through screening; monitor disease trends; and potentially test asymptomatic contacts.

The ACT-Accelerator Diagnostics Pillar is co-convened by FIND and the Global Fund, working closely with WHO and over 30 global health expert partners to accelerate innovation and overcome the technical, financial, and political obstacles to achieving equitable access to effective and timely testing. Such unprecedented global collaboration has enabled development and deployment of the first WHO EUL-approved Ag RDT within eight months of the first identification of the virus. In comparison, it took nearly five years to develop the first RDT for HIV. Several more antigen RDTs for COVID-19 are currently under WHO EUL review. Overall, the ACT-Accelerator Diagnostic Pillar aims to facilitate the supply of 500 million tests to LMICs within 12 months.

These agreements are critical to fulfil the key objective of the ACT-Accelerator: to ensure all countries, regardless of income, have fair access to new tests and tools to fight COVID-19. The exceptional speed with which the Ag RDT access package has been created demonstrates the breadth of the impact of the ACT-Accelerator initiative, and this and future achievements in testing will complement similar milestones anticipated to emerge from the Vaccines and Therapeutics Pillars.

Dr Tedros Adhanom Ghebreyesus, Director General of WHO, said: “High-quality rapid tests show us where the virus is hiding, which is key to quickly tracing and isolating contacts and breaking the chains of transmission. The tests are a critical tool for governments as they look to reopen economies and ultimately save both lives and livelihoods.”

Mark Suzman, Chief Executive Officer of the Gates Foundation, said: “Testing is an essential tool in the fight against COVID-19. We are delighted to join a partnership that will help ensure that the latest, high-quality diagnostics do not just go to the highest bidder but will be available at an affordable price to the world’s lower income countries. In addition, all of the actions announced today point to the growing success of the ACT-Accelerator in catalyzing global cooperation for a fair and effective response to this global crisis.”

Dr Iain Barton, Chief Executive Officer of CHAI, said: “These agreements will help ensure that millions of people in low- and middle-income countries have access to high-quality rapid testing in villages and towns as well as cities. This has the potential to revolutionize government’s ability to respond to the pandemic, enabling quick diagnosis and response to contain localized virus outbreaks before they spread.”

Andrea F. Wainer, Executive Vice President of Abbott’s rapid and molecular diagnostics businesses, said: “Abbott is pleased to bring our Panbio COVID-19 rapid antigen test and Sympheos digital solution to people and health authorities in low- and middle-income countries through this innovative partnership. We have long been committed to making sure our life-changing technologies are affordable and accessible, and for decades have been supporting many of these countries with our rapid tests for malaria, HIV, hepatitis, and other deadly infectious diseases.”

Hyo-Keun Lee, Chief Executive Officer of SD Biosensor, said: “We, SD Biosensor, are pleased to supply our STANDARD Q COVID-19 rapid antigen tests for people who really need fast and accurate COVID-19 diagnosis. Through this partnership, we will keep striving do our best to provide the best quality of COVID-19 antigen rapid kits for fighting COVID-19.”

Dr John Nkengasong, Director of the Africa CDC, said: “Antigen tests are an important complement to PCR testing, and are crucial to expand testing capacity throughout Africa. The beauty of antigen testing is that it is fast and gives quick results. It will allow healthcare workers to quickly isolate cases and treat them while tracing their contacts to cut the transmission chain.”

Dr Philippe Duneton, Unitaid’s Executive Director a.i., said: “Access to these point-of-care rapid tests with be a game changer in the fight against COVID-19. We are working to support countries to rapidly deploy and use these new tests in the best possible way. Today’s news shows what the ACT-A partners working together can deliver in our efforts against the COVID-19 pandemic.”

Dr Carolyn Gomes, Special Advisor for the Board, ProActividad, Jamaica, and Alternate Board Member (Developing Country NGOs), The Global Fund “Ensuring equitable access to rapid diagnostic tests is essential for controlling COVID-19 in all countries and to opening up economies across the world. Ensuring an affordable price is a major step forward. Tests that can be used at the point of care by front-line workers will greatly facilitate community access to testing. To ensure equity in access for those who need it most, there will need to be much greater support of the ACT-Accelerator and the Diagnostics Pillar in particular. Much more money is needed to meet the needs of the most vulnerable.”

Peter Sands, Executive Director of the Global Fund, said: “This is the ACT-Accelerator in action. It is proof that by working together at a massive global scale, we can develop and deploy a vital new tool to

help contain and fight the pandemic. This is not just a new test – it's the money and the deployment plan to get it to where it's needed, fast. This is the power of global collaboration."
Dr Catharina Boehme, Chief Executive Officer of FIND, said: "With this Ag RDT package, the ACT-Accelerator partners have secured much-needed tools for LMICs to dramatically increase COVID-19 testing. With the financial support of several countries, we have made great progress, but to ensure we reach all those who need testing and bring the prices down, we urgently need substantial funding from public, philanthropic, and multilateral sources."

About the ACT-Accelerator
The Access to COVID-19 Tools (ACT) Accelerator, is a new, ground-breaking global collaboration to accelerate the development production, and equitable access to COVID-19 tests, treatments, and vaccines. It was set up in response to a call from G20 leaders in March 2020 and launched by WHO, the European Commission, France and the Bill & Melinda Gates Foundation in April 2020. The ACT-Accelerator is not a decision-making body or a new organization, but works to speed up collaborative efforts among existing organizations to end the pandemic. It is a framework for collaboration that has been designed to bring key players around the table with the goal of ending the pandemic as quickly as possible through the accelerated development, equitable allocation, and scaled up delivery of tests, treatments and vaccines, thereby protecting health systems and restoring societies and economies in the near term. It draws on the experience of leading global health organizations which are tackling the world's toughest health challenges, and who, by working together, are able to unlock new and more ambitious results against COVID-19. Its members share a commitment to ensure all people have access to all the tools needed to defeat COVID-19 and to work with unprecedented levels of partnership to achieve it. The ACT-Accelerator has four areas of work: diagnostics, therapeutics, vaccines and the health system connector. Cross-cutting all of these is the workstream on Access & Allocation.
The Diagnostics Pillar of the ACT-Accelerator is focused on ensuring that everyone who needs a test can get one. Workstreams span research and development, market readiness, procurement, and country preparedness. Achievements to date include laboratory trainings in partnership with Africa CDC in early February, and a suite of online courses deployed within weeks. Nearly 20 million tests have been procured with the Diagnostics Consortium, ensuring diagnostic access for LMICs and readiness for test-and-treat implementation in these countries. Independent evaluations of antibody tests are also being conducted, as high-quality antibody tests are essential to understand population immunity for future vaccine roll out.

For information about WHO's Emergency Use Listing
https://www.who.int/diagnostics_laboratory/eual/emergency/en/
https://www.who.int/diagnostics_laboratory/200922_eul_sars_cov2_product_list.pdf?ua=1

https://www.who.int/news-room/detail/28-09-2020-global-partnership-to-make-available-120-million-affordable-quality-covid-19-rapid-tests-for-low--and-middle-income-countries

WHO
WHO Director-General's opening remarks at the media briefing on COVID-19 - 28 September 2020
Source: WHO

28 September 2020

- *Last week WHO issued the first Emergency Use Listing for a quality antigen based rapid diagnostic test and we expect other rapid tests to follow.*
- *Thanks to an agreement between WHO, partners here today and others, a substantial proportion of these rapid tests – 120 million – will be made available to low- and middle-income countries.*
- *These tests provide reliable results in approximately 15 to 30 minutes, rather than hours or days at a lower price with less sophisticated equipment.*
- *This will enable the expansion of testing, particularly in hard-to-reach areas.*

Good morning, good afternoon and good evening,

Since the beginning of the pandemic, WHO has emphasised the vital importance of testing as part of a comprehensive strategy to control COVID-19 transmission.
Within two weeks of WHO learning of the first cases of the novel coronavirus, China shared the genetic sequences with WHO and the wider world.
Working with our partner lab in Germany, Charité University, we then published the first instructions on how to build a validated PCR test for COVID-19.
By the third week of January, WHO had contracted the manufacture of PCR reagents for COVID-19.
And by late January, WHO began shipping PCR tests to over 150 labs around the world, enabling countries to identify and trace the virus.
At the same time, we began working with partners to develop simpler, faster tests for use anywhere around the world to diagnose COVID-19.
Last week we reached an important milestone, in which WHO issued the first Emergency Use Listing for a quality antigen based rapid diagnostic test and we expect other rapid tests to follow.
Today, I have good news.
I'm pleased to announce that thanks to an agreement between WHO and partners here today and others, a substantial proportion of these rapid tests – 120 million – will be made available to low- and middle-income countries.
These tests provide reliable results in approximately 15 to 30 minutes, rather than hours or days at a lower price with less sophisticated equipment.
This will enable the expansion of testing, particularly in hard-to-reach areas that do not have lab facilities or enough trained health workers to carry out PCR tests.
This is a vital addition to their testing capacity and is especially important in areas of high transmission.
Volume guarantee agreements have been developed between two manufacturers and the Bill & Melinda Gates Foundation, which will make 120 million of these new highly portable and easy-to-use rapid diagnostic tests available over a period of six months.
Currently they're priced at a maximum of 5 US dollars per unit, these are already substantially cheaper than PCR tests and we expect the price to come down.
The quicker COVID-19 can be diagnosed, the quicker action can be taken to treat and isolate those with the virus and trace their contacts.
We have an agreement, we have seed funding and now we need the full amount of funds to buy these tests.
Over the weekend my friend, Boris Johnson, the Prime Minister of the United Kingdom, announced new funding for both WHO and COVAX, which is the vaccines arm of the ACT-Accelerator.
Together, the world has to raise an additional 35 billion US dollars for the ACT-Accelerator.
But this represents a great deal for countries in the context of the trillions of dollars they're currently spending on stimulus to keep economies afloat.
If we act together, we will win together!
https://www.who.int/dg/speeches/detail/who-director-general-s-opening-remarks-at-the-media-briefing-on-covid-19---28-september-2020

PAHO

PAHO has led regional response to COVID-19 while striving to protect long-term health gains
Source: PAHO

Washington, D.C., 28 Sept. 2020 (PAHO/WHO) – Since well before the start of the COVID-19 pandemic, a key area of the Pan American Health Organization's (PAHO) technical cooperation was building its member countries' capacities to prepare for and respond to disease outbreaks and epidemics. Since the pandemic arrived in the Americas, PAHO has continued that work while providing regional leadership and coordination of the COVID-19 response and helping member countries protect gains in other vital areas, including immunization, prevention of noncommunicable diseases, and expanded access to quality health care.
These and other highlights of PAHO's technical cooperation between mid-2019 and mid-2020 are described in the 2020 Annual Report of the Director "Saving Lives and Improving Health and Well-Being." PAHO Director Carissa F. Etienne presented the report today to health authorities from throughout the Americas who are meeting virtually this week for the 58th PAHO Directing Council.

The report notes that COVID-19 “has affected health, the economy, and the way of life in almost every country” in the Americas. The pandemic exposed severe inequities in and among countries and highlighted the particular vulnerabilities of certain population groups. It also “laid bare profound structural weaknesses within health and social protection mechanisms in the Region, highlighting the need for substantive reform and actions to ensure that countries continue toward the achievement of the ambitious goal of universal health by 2030.”

Against this backdrop, the report summarizes PAHO’s strategies, interventions, and achievements in its main areas of technical cooperation during the reporting period. These areas include health systems and services; communicable diseases and environmental determinants of health; health emergencies; family, health promotion, and life course; noncommunicable diseases and mental health; and evidence and intelligence for action in health. The report highlights special efforts to ensure improved health for all both during and beyond the pandemic, especially for those in conditions of vulnerability, reflecting the Organization’s overarching commitment to “leave no one behind.” The report also describes PAHO’s efforts to improve its internal efficiency and ensure continued transparency and accountability in all its operations.

“The health, social, and economic impacts of the pandemic will have far-reaching effects on progress for the achievement of national, subregional, regional, and global health goals; on health financing and resource mobilization; and on our efforts and aspirations for health development with equity,” said Etienne in presenting the report.

She added: “We fully recognize that massive and sustained interventions will be required—in both the immediate and foreseeable future—to control and contain COVID-19, to tackle increasing poverty levels, to reduce health and social inequalities and, very importantly, to position health at the center of equitable and sustainable development.”

https://www.paho.org/en/news/28-9-2020-paho-has-led-regional-response-covid-19-while-striving-protect-long-term-health

PAHO
Health Ministers’ meeting kicks off with call for unity, solidarity to face COVID-19 pandemic in the Americas
Source: PAHO

28 Sep 2020
Health authorities discuss effects of COVID-19 and strategies to combat the pandemic at virtual PAHO Directing Council meeting
Washington, D.C., 28 September 2020 (PAHO/WHO) – Countries must cooperate to fight against the COVID-19 pandemic and adapt, innovate and reorient public health work, the Director of the Pan American Health Organization (PAHO), Carissa F. Etienne said today at the opening session of the 58th Directing Council, a meeting of all health ministers in the Americas.

“The post-COVID world will be shaped by decisions being made in the fight against the virus. The profound uncertainty about the virus and its trajectory, and about how other countries will respond, only magnifies the importance of leadership. At the very least, leaders of our region and indeed from across the world must cooperate to fight against the virus and to collectively eliminate it,” Dr. Etienne said.

The pandemic requires “adaptations, innovation and reorientation of our technical cooperation as it cannot be business as usual” for the Organization and its countries, she added. “They must make the case to their citizens that security at home requires cooperation abroad. The monumental loss of human lives resulting from this pandemic should be a sufficiently powerful reminder of the imperative need for meaningful and equitable change at the level of society and individuals.” Etienne said.

The opening ceremony of the Directing Council today also included the Prime Minister of Barbados, Mia Mottley, and the President of Colombia, Ivan Duque, as well as the Secretary General of the Organization of American States, Luis Almagro; and the president of the Inter-American Development Bank, Luis Alberto Moreno. Costa Rican Minister of Health Daniel Salas welcomed participants, along with the Director-General of the World Health Organization, Tedros Adhanom Ghebreyesus.

PAHO's tailored guidance in the region

The Prime Minister of Barbados, Mia Mottley, thanked PAHO for its unique role in addressing the COVID-19 pandemic in the Region of the Americas. "PAHO has served our states well for over 100 years and you will remain the grand dame of public health for at least 100 more," she said.

The Region must come together "despite our language, size, cultural differences and socio-economic difficulties to overcome this microscopic catalyst to changing world order that Mother Earth so needed. The virus has brought big countries around the world to their knees," she said. This is why it is vital that PAHO "tailors your guidance to all of us – the big, the not so big and tiny countries like my own Barbados."

Mottley also highlighted the urgent need to jump start economies, and particularly for the Caribbean, to facilitate a safe return to cruise tourism upon which many countries' economies depend. "But this must be done in such a way to ensure the safety of our workers," calling for priority access to vaccinations and therapeutics when they are available, to tourism workers.

A phased, science-based response

The President of Colombia, Iván Duque described his country's efforts to address what he called "the greatest challenge in our recent history." Colombia, he said, faced the crisis "early, in phases and with reliable information, accompanied by experts and scientists." The country worked in three axes: protecting the health of all, including the most vulnerable, protecting the social fabric to prevent the loss of decades' achievements in overcoming poverty, and developing tools to revive our productive capacity, he said.

Duque described how the country went from having a single laboratory at the start of the crisis to 100 public and private laboratories to process tests. It doubled intensive care beds in five months, and trained tens of thousands of health professionals. It also created the Emergency Mitigation Fund and a reserve with millions of pieces of personal protective equipment and implemented social measures that now reach nearly 10 million families.

President Duque stressed that Colombia has also devised a reactivation plan aimed at mitigating COVID-19's impacts on productive activity and laying the groundwork for a rapid, sustainable and socially conscious economic recovery, with a cross-cutting axis of strengthening public health. "We know the pandemic is not going to end soon, just as we know that we'll only come out the other side if we do it together," he stressed.

Solidarity and unity in the region

"Today, we as leaders of the Americas face a health challenge unprecedented in our lifetimes. COVID-19 has caused death and economic destruction in all of our countries. But we will continue to combat the pandemic together, in the spirit of family and the spirit of the Americas, said U.S. Secretary of Health Alex Azar II "No one in the Americas is safe from this virus until everyone in the Americas is safe."

Azar said that the United States "will extend a helping hand to all in need. We will continue to be, as we have been throughout the post-war era, the largest humanitarian and global health donor on earth. Within that work, our own Hemisphere is always a priority." He said that his country has already sent tens of

millions of dollars in development assistance to help fight the pandemic, as well as technical assistance, to at least 24 countries around the Americas.

Azar said that his country looks forward “to working with member states and PAHO leadership for more improvements in the near future.” And he added: “Let us recommit to the spirit that launched health cooperation in the Americas: the open and honest spirit we need to protect us all from disease”.

Costa Rica's Minister of Health and outgoing President of the Directing Council Daniel Salas said, "In the midst of this pandemic, no decision has been easy." He lamented that countries were competing in the race to acquire personal protective equipment, laboratory supplies, diagnostic technologies, and other inputs.

To get ahead, "We must resort to solidarity and unity," he said, urging countries "not to get carried away by the desire to acquire all vaccines" for COVID-19 when available, "if this prevents others from having access to this tool that will reduce the burden on health systems and gradually reopen economies." The minister noted that "with resilience, empathy and union" the battle against COVID-19 can be won.

The role of multilateral organizations

The Secretary-General of the Organization of American States (OAS), Luis Almagro, said PAHO's work was instrumental in 2020 in the face of the COVID-19 pandemic. "The loss of life, jobs and uncertainty about the immediate future puts us in a situation where the responsiveness of public institutions and our governments, as well as the effectiveness and response of current governance systems, is tested," Almagro stressed.

Almagro noted that, for the OAS, "urgent action is a priority, especially in support of the poorest and most vulnerable," and in this regard, "cooperation and coordination between international and inter-American agencies can help respond to the support needs posed by countries." He highlighted the work of the OAS and PAHO to generate a multisector coordination and response in support of the countries of the region.

"The challenges ahead as a region and multilateral aid are immense," he said. "PAHO's role will be central to meeting these objectives," Almagro concluded.

The president of the Inter-American Development Bank (IDB), Luis Alberto Moreno, stressed that "the pandemic has demonstrated the fragility of health systems." He alerted about a significant risk of setbacks, as well as poverty, and inequities and health outcomes.

Moreno indicated that overcoming the pandemic crisis will require leadership, joint work between countries and innovation in the region. He highlighted COVAX, the mechanism to facilitate access to the COVID-19 vaccine, as an "excellent example of how countries and multilateral agencies can work on innovative solutions." The IDB is working with countries to finance their participation in this mechanism, he explained, and has also approved more than $20 billion in loans so that countries can cope with the impact of the pandemic on health and other areas. Moreno called for strengthening health systems and increasing public health spending, among other measures, to ensure that countries are prepared for future emergencies.

“Save lives now with the tools we have”

The Director-General of WHO, Dr. Tedros, said that “the only way out of the pandemic is through national unity and global solidarity,” highlighting that “nationalism will only prolong the pandemic.

But he also warned that we cannot wait for a vaccine. “We must save lives now with the tools we have now.” To achieve this, he proposed that countries adopt four priorities: prevent amplifying events with a

risk-based approach at a local level; protect the vulnerable to save lives and reduce the burden on health systems; educate and empower communities to protect themselves and others with a comprehensive approach; and get the basics right – find, test, isolate, quarantine cases and trace their contacts.

“We have an enormous challenge to bring the pandemic under control, but the even bigger challenge will be what we do when the pandemic ends,” said Tedros, emphasizing that “investing in health is not just the right thing to do, it is the smart thing to do.”

Dr. Tedros highlighted that while there will be many reports, reviews and recommendations about the response to the pandemic. “We must all look in the mirror. Whatever lessons there are to learn this time, we must learn them. Whatever changes there are to make, we must change. Whatever errors we have made, we must have the humility to own them. We need honest judgement.”

“History will judge us – not just on what we did during the pandemic, but what we did when it was over. It is not an excuse to fail on the commitments we have made,” he said

Discussions on countries' response to the COVID-19 pandemic will be addressed in depth on Tuesday, 29 September.

The Directing Council of the Pan American Health Organization (PAHO) brings together ministers of health and high-level delegates from PAHO/WHO member countries to discuss and analyze regional health policies, and to set priorities for technical cooperation and cross-country collaboration.

https://www.paho.org/en/news/28-9-2020-health-ministers-meeting-kicks-call-unity-solidarity-face-covid-19-pandemic-americas

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

Netherlands

Netherlands joins neighbours in tightening coronavirus restrictions amid surge in cases
ID: 1007933480
Source: rss24.news

The Netherlands has introduced stricter measures to combat rising coronavirus cases, banning spectators at professional sports matches and ordering bars and restaurants to close at 10pm for the next three weeks.
Health Minister Hugo de Jonge said “we’re doing our best, but the virus is doing better”, warning that tougher measures could follow if the numbers don’t stop going up.
Prime Minister Mark Rutte also advised people to wear face masks when shopping in Amsterdam, Rotterdam and The Hague, the three cities with the highest rates of infections.
He also said people should work from home, no more than three visitors should be allowed in homes, and no more than four people should go out together.
The new measures come into force on Tuesday evening, and follow similar tightening of restrictions amongst the Netherlands’ neighbours, as European countries battle back against a surging second wave of COVID-19 cases.
The country’s coronavirus dashboard registered 2,921 new infections in the last 24 hours, down slightly from the 2,996 registered Sunday by the country’s public health institute.
Ernst Kuipers, of the national acute care network, said there are now 660 COVID-19 patients in Dutch hospitals, including 142 in intensive care units and that the numbers are rising fast.
Bars and restaurants shut in parts of France
In the French city of Marseille and nearby Aix en Provence, bars and restaurants were closed to halt the spread of the virus. The measures are expected to last at least two weeks.
France’s central government also ordered new softer restrictions for ten other cities including Paris, where

infections and hospitalisations are on the rise.
The country has reported 31,511 virus-related deaths, among the highest tolls in Europe.
Spain's health minister calls for stricter measures
Salvador Illa, Spain's health minister, has called for tougher measures to be introduced in the capital Madrid, which is seeing a huge wave of new infections.
The national government wants to see existing restrictions against the spread of the virus extended to all the city, but regional governments want to see how current measures affect the numbers.
Parts of Madrid have already been under strict measures to stop the spread, but now an additional 160,000 people in the city are also under further social restrictions.
The country's coronavirus tally on Monday reached 748,266 infections since the onset of the pandemic, 31,785 more since Friday, Monday's official data showed.
There were 179 new fatalities for COVID-19, bringing the total death toll to 31,411, although experts think that many more deaths have not been recorded due to limited testing.
With 290 cases per 100,000 people in two weeks, Spain is by far leading in Europe's infection rate during this second wave.
Read the full article at: euronews.com
https://rss24.news/netherlands-joins-neighbours-in-tightening-coronavirus-restrictions-amid-surge-in-cases/

UK

UK government toughens COVID restrictions in northeast England
ID: 1007933442
Source: japantoday.com/

LONDON
The British government tightened restrictions on socializing in parts of northeast England on Monday, in response to high and increasing COVID-19 infection rates in the region.
From Wednesday, residents in seven areas including urban centers such as Newcastle, Gateshead, Sunderland and Durham will be barred from socializing indoors with people from outside their household or strictly defined social bubble.
The restrictions will apply in homes, pubs and restaurants, and people who fail to comply will face fines enforceable by law, the health ministry said in a statement.
Coronavirus incidence rates were above 100 per 100,000 in six of the seven areas last week, the ministry said.
"Unfortunately, the number of cases continues to rise sharply," Health Secretary Matt Hancock said, announcing the new restrictions to parliament.
"We know that a large number of these infections are taking place in indoor settings outside the home. And so, at the request of the local councils, with whom we've been working closely, we will introduce legal restrictions on indoor mixing between households in any setting."
Schools and workplaces will not be affected by the restrictions.
Large swathes of the United Kingdom and millions of citizens are subject to local restrictions brought in to try to slow a second wave of COVID-19 infections. The country has the highest death toll from the virus in Europe, at 42,000.
Northeast and northwest England have been badly hit. Greater Manchester, the main urban centre in the northwest, is also subject to local measures, as are the major cities of Glasgow in Scotland and Cardiff in Wales.
https://japantoday.com/category/world/update-1-uk-government-toughens-covid-restrictions-in-northeast-england

Australia

Symptomatic Australians still going out
ID: 1007933503
Source: forbesadvocate.com.au

MELBOURNE, Sept 29 AAP -
Only a quarter of Australians withcold or flu-like symptoms are getting tested for coronavirus, according to a Monash University survey.
More than a third spent time in public while unwell.
The latest results of the Survey of COVID-19 Responses to Understand Behaviour, released on Tuesday, found 27 per cent of people with symptoms were tested for the virus.
The result is up from 15 per cent in a previous survey.
A fifth of those with COVID-19 symptoms said they didn?t go for testing because they did not think they had the virus.
More than a third spent time in public while symptomatic and one in five went to work.
But 81 per cent of those surveyed said they always followCOVID-19 rules and regulations.
Compliance with handwashing, wearing face masks and keeping a physical distance from people outside of home, either stayed the same or increased on the previous survey.
?It?s great to see Australians aren?t becoming complacent and are maintaining personal protective behaviours at a high rate,? lead researcher Peter Slattery said.
?Outbreaks last month in New Zealand and New South Wales, as well as the continued high case numbers in Melbourne saw most people across Australia do the right thing."
He said it was concerning to see people with symptoms either fail to be tested or spend time in the community while symptomatic.
?We cannot have symptomatic people acting as though they don?t have the virus when they simply can?t be sure," Dr Slattery said.
"That?s one of the ways the virus spreads and it will continue to be an issue unless more people get tested and isolate until they receive a negative result.?
The survey is in partnership with the Victorian government and theresults were collected between late August and early September.
https://www.forbesadvocate.com.au/story/6946134/symptomatic-australians-still-going-out/?cs=9676

Greece
Crew on first post-pandemic Greek cruise contract virus
Source: medicalxpress
Unique ID: 1007930528

A dozen crew members on the first cruise ship to dock in Greece after the coronavirus lockdown have tested positive, the Greek coastguard said on Monday.
The Maltese-flagged Mein Schiff 6 operated by German travel giant TUI, with 922 passengers on board, is currently moored off the Aegean island of Milos, a coastguard spokeswoman told AFP.
The positive results surfaced after tests on 150 among the crew's 666 crew members, she said.
"They are assistant staff," the spokeswoman said. "They have been isolated on board, and we are awaiting instructions from the public health agency on where the ship is to sail."
The cruise ship had sailed from the Cretan port of Iraklio on Sunday evening and was heading to Piraeus near Athens.
The passengers had a clean bill of health before the voyage, the spokeswoman said.
The TUI ship was the first to return to Greek waters after lockdown measures imposed in March, local operators said, docking at Iraklio in mid-September.
https://medicalxpress.com/news/2020-09-crew-post-pandemic-greek-cruise-virus.html

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

United States
COVID-19 Trends Among School-Aged Children — United States, March 1–September 19, 2020
Early Release / September 28, 2020 / 69
Source: CDC

Summary

What is already known about this topic?

Children aged <10 years can transmit SARS-CoV-2 in school settings, but less is known about COVID-19 incidence, characteristics, and health outcomes among school-aged children (aged 5–17 years) with COVID-19.

What is added by this report?

Since March, 277,285 COVID-19 cases in children have been reported. COVID-19 incidence among adolescents aged 12–17 years was approximately twice that in children aged 5–11 years. Underlying conditions were more common among school-aged children with severe outcomes related to COVID-19. Weekly incidence, SARS-CoV-2 test volume, and percentage of tests positive among school-aged children varied over time and by region of the United States.

What are the implications for public health practice?

It is important for schools and communities to monitor multiple indicators of COVID-19 among school-aged children and layer prevention strategies to reduce COVID-19 disease risk for students, teachers, school staff, and families. These results can provide a baseline for monitoring trends and evaluating mitigation strategies.

https://www.cdc.gov/mmwr/volumes/69/wr/mm6939e2.htm?s_cid=mm6939e2_x

United States

Researchers identify 'druggable' signaling pathway that stimulates lung tissue repair

Source: medicalxpress
Unique ID: 1007931228

Researchers at Children's Hospital of Philadelphia (CHOP) and the Perelman School of Medicine at the University of Pennsylvania have identified a cellular pathway that can be targeted with a naturally occurring drug to stimulate lung tissue regeneration, which is necessary for recovery from multiple lung injuries. The findings, which were published today in Nature Cell Biology, could lead to better therapies for patients with lung disease, including acute respiratory distress syndrome (ARDS) due to COVID-19.
"Using cutting-edge technology, including genome-wide and single-cell analyses, we have identified a specific cellular pathway involved in lung tissue regeneration and found a drug that enhances this process," said senior author G. Scott Worthen, MD, a physician-scientist in CHOP's Division of Neonatology and member of the Penn-CHOP Lung Biology Institute. "These findings provide identification of precision targets and thus allow for rational development of therapeutic interventions for lung disease caused by COVID-19 and other illnesses."
Conditions like pneumonia, influenza and ARDS—one of the known complications of COVID-19—can damage the lining of the air sacs in the lungs, known as the alveolar epithelium, which prevents oxygen from passing from the lungs to the bloodstream and can lead to death. Patients with COVID-19 who develop ARDS become critically ill, and to date, no drugs have been developed specifically to treat ARDS in COVID-19 patients. Understanding which genetic targets and pathways are involved in regenerating epithelial tissue is critical in developing effective therapies for ARDS and similar conditions.
Previous research has shown that type II alveolar pneumocytes (AT2) are important cells involved in lung repair, both through self-renewal and transdifferentiation into type I alveolar pneumocytes (AT1), which facilitate gas exchange between the lung air sacs and nearby capillaries. Yet prior to this study, it was unknown what changes in gene accessibility occurred in AT2 cells following disease-related injury to promote repair and how regenerating AT2 cells influence interactions with nearby mesenchymal cells, which are also important in tissue repair.

Using genome-wide analyses, the research team assessed changes in AT2 after lung injury, which opens up the chromosomes within the cells and makes specific genes available to the machinery of the cell. The researchers then used single-cell analysis of AT2 cells and mesenchymal cells to better understand how the two cell types interact during injury and what cell signaling pathways are involved. The two approaches converged on a single pathway, in which a transcription factor known as STAT3 increased the expression of brain-derived neurotrophic factor (BDNF), which in turn increased lung tissue regeneration.

In further analyzing this pathway, the researchers identified a naturally-occurring compound known as 7,8-Dihydroflavone (7,8-DHF), which targeted a receptor in the pathway, stimulating and accelerating lung tissue repair in multiple mouse models of lung injury.

"We believe these findings could lead to the development of a new therapeutic that could help patients recovering from COVID-19 and similar diseases," said the study's first author, Andrew J. Paris, MD, Instructor of Medicine and a pulmonary specialist in the Perelman School of Medicine at the University of Pennsylvania. "Based on the results of this study, we think 7,8-DHF is an excellent candidate for entering clinical trials for patients with lung diseases."

More information: STAT3–BDNF–TrkB signalling promotes alveolar epithelial regeneration after lung injury, Nature Cell Biology (2020). DOI: 10.1038/s41556-020-0569-x , www.nature.com/articles/s41556-020-0569-x

Journal information: Nature Cell Biology

Provided by Children's Hospital of Philadelphia

https://medicalxpress.com/news/2020-09-druggable-pathway-lung-tissue.html

United States

Older adults may be excluded from many COVID-19 trials

Source: up

Unique ID: 1007931205

Sept. 28 (UPI) -- More than half of all clinical trials evaluating vaccines and potential treatments for COVID-19 are "at high risk for excluding older adults," according to an analysis published Monday by JAMA Internal Medicine.

In addition, roughly one in four of the 847 trials reviewed by the researchers included an age "cutoff" that would exclude adults age 65 to 80, the data showed.

Older adults are generally considered to be at higher risk for severe COVID-19 and health complications related to the disease, research suggests.

"Based on our study, older adults, particularly those in their 70s and 80s, may be systematically excluded from the clinical trials necessary to develop and test [COVID-19 vaccines and treatments]," study co-author Dr. Sharon Inouye told UPI.

"My biggest concern is that without clinical trial testing, older adults will ultimately be denied treatments and vaccines -- as a result, equitable distribution to this population will not be possible, and this will be an egregious oversight," said Inouye, director of the Aging Brain Center at the Marcus Institute for Aging Research in Boston.

Adults 60 and older accounted for just under 20% of new COVID-19 cases across the country in August, down from just under 30% in May, according to estimates from the U.S. Centers for Disease Control and Prevention.

The decline has been attributed to enhanced prevention measures implemented to lower the risk for older adults after the disease swept through nursing homes in the spring.

Still, adults 65 and older have made up about 40% of those hospitalized and 80% of those who die from COVID-19, Inouye said.

For the analysis, she and her colleagues evaluated 847 trials active as of August, identifying those with age exclusions listed in their respective participant eligibility and exclusionary criteria.

Overall, 195 -- or 23% -- included an age "cut-off" or upper age limit, the researchers said.

Only 30% of the trials assessed did not have any aged-based exclusion criteria -- meaning no age groups were prevented from participating -- according to the researchers.

Fifty-three percent of the trials had either age-based exclusions or exclusions "preferentially affecting older adults," which placed them at "high risk for excluding older adults," the researchers said.

Of the 232 Phase 3 trials -- the final stage in the drug or vaccine evaluation process -- 38, or 16%, included age cutoffs and 77, or 33%, had exclusions preferentially affecting older adults, they said.
Of the 18 vaccine trials, 11, or 61%, included age cutoffs and seven "had broad non-specified exclusions," placing all at "high risk for excluding older adults," according to the researchers.
"[Older adults] are the target group where the treatments and vaccines are essential, and yet they are being excluded from the clinical trials," Inouye said. "What this means is that strategies to maximize and ensure effectiveness in these populations, and testing for safety will be limited in older adults."
https://jamanetwork.com/journals/jamainternalmedicine/fullarticle/2771091?guestAccessKey=a4bf6abb-399e-4bbf-b56f-1acffd88fed1&utm_source=For_The_Media&utm_medium=referral&utm_campaign=ftm_links&utm_content=tfl&utm_term=092820
https://www.upi.com/Health_News/2020/09/28/Study-Older-adults-may-be-excluded-from-many-COVID-19-trials/2031601301318/

CDC

Coronavirus Disease Model to Inform Transmission Reducing Measures and Health System Preparedness, Australia
Source: CDC
ID: 1007931295

Abstract
The ability of health systems to cope with coronavirus disease (COVID-19) cases is of major concern. In preparation, we used clinical pathway models to estimate healthcare requirements for COVID-19 patients in the context of broader public health measures in Australia. An age- and risk-stratified transmission model of COVID-19 demonstrated that an unmitigated epidemic would dramatically exceed the capacity of the health system of Australia over a prolonged period. Case isolation and contact quarantine alone are insufficient to constrain healthcare needs within feasible levels of expansion of health sector capacity. Overlaid social restrictions must be applied over the course of the epidemic to ensure systems do not become overwhelmed and essential health sector functions, including care of COVID-19 patients, can be maintained. Attention to the full pathway of clinical care is needed, along with ongoing strengthening of capacity.
As of late September 2020, >30.6 million confirmed cases of coronavirus disease (COVID-19) were reported worldwide, involving all global regions and resulting in >950,000 deaths (1). Although most cases are clinically mild or asymptomatic, early reports from China estimated that 20% of all COVID-19 patients progressed to severe disease and required hospitalization, 5%–16% of whom required management in an intensive care unit (ICU) (2). Pulmonary disease leading to respiratory failure has been the major cause of death in severe cases (3).

The ability of health systems around the world to cope with increasing case numbers is of major concern. All levels of the system will be challenged, from primary care, prehospital and emergency department (ED) services to inpatient units and ultimately ICUs. Stresses on clinical care provision will result in increased illness and death (4). Tragically, such consequences already have been observed, even in high-income countries that provide the whole population with access to quality medical care. Greater effects can be expected in low- and middle-income countries where access to high-level care is extremely limited. Availability of ICU beds and ventilators has proven critical for the adequate management of severe cases, with overwhelming demand initiating complex ethical discussions about rationing of scarce resources (5).

To prepare for this challenge, Australia has drawn on approaches developed over many years to prepare for influenza pandemics (6), and rapidly produced a national COVID-19 pandemic plan (7). The plan reoriented relevant influenza pandemic response strategies toward this new pathogen, building on emerging understanding of its anticipated transmissibility and severity, which are the determinants of clinical impact (8). Early imposition of stringent border measures, high levels of testing, active case-finding, and quarantine of contacts all have bought time to reinforce public health and clinical capacity. However, an influx of cases among travelers returning from countries with rapidly growing epidemics have

been associated with community transmission in several states in Australia. By April 14, 2020, a total of 6,366 cases and 61 deaths had been reported in the country (9).

We report on the use of a clinical care pathways model that represents the national capacity of the health system of Australia. This framework initially was developed for influenza pandemic preparedness (10) and has been modified to estimate healthcare requirements for COVID-19 patients and inform needed service expansion. The ability of different sectors to meet anticipated demand was assessed by modeling plausible COVID-19 epidemic scenarios, overlaid on available capacity and models of patient flow and care delivery. An unmitigated outbreak is anticipated to completely overwhelm the healthcare system in Australia. Given realistic limits on capacity expansion, these models have made the case for ongoing case-targeted measures, combined with broader social restrictions, to reduce transmission and flatten the curve of the local epidemic to preserve health sector continuity.

Methods

Disease Transmission Model

We developed an age- and risk-stratified transmission model of COVID-19 infection based on a susceptible-exposed-infected-recovered (SEIR) paradigm (Appendix). Transmission parameters were based on information synthesis from multiple sources, with an assumed basic reproduction number (R0) of 2.53 and a doubling time of 6.4 days (Table 1). Potential for presymptomatic transmission was assumed to be <48 hours before symptom onset. Despite an increasing body of evidence regarding requirements of hospitalized patients for critical care, considerable uncertainty remains regarding the full pyramid of mild and moderately symptomatic disease. Therefore, we simulated a range of scenarios by using Latin hypercube sampling from distributions in which the proportion of all infections severe enough to require hospitalization ranged from 4.3%–8.6%. These totals represent the aggregate of strongly age-skewed parameter assumptions (Table 2). For each scenario, corresponding distributions of mild cases being seen by primary care were sampled, ranging from 30%–45% at the lower range of the severe spectrum to 50%–75% for the most extreme cases and increasing linearly between the 2 ranges. Persons not seeking care in the healthcare system were assumed undetected cases without differentiation between those with mild or no symptoms.

Case-Targeted Interventions

We simulated a case-targeted public health intervention. Cases were isolated at the point of diagnosis. We assumed isolation occurred 48 hours after symptom onset, limiting the effective infectious period and reducing infectiousness from the point of identification by 80%, enabling imperfect implementation. Targeted quarantine of close contacts was implemented in the model framework by dynamic assignment of a transient “contact” label. Each time a new infectious case appears in the model, a fixed number of temporary contacts are labeled. Only contacts can progress through the exposed and infectious states, however, most remain uninfected and return to their original noncontact status <72 hours. We assumed that 80% of identified contacts adhered to quarantine measures and that the overall infectiousness of truly exposed and infected contacts was halved by quarantine, given delayed and imperfect contact tracing and the risk for transmission to household members.

Clinical Pathways Model

Thumbnail of Clinical pathways model for used to assess national health system capacity for managing COVID-19 patients, Australia. The diagram demonstrates clinical pathways for mild and severe illness and assumes minor cases are managed within primary care. Unobserved patients are those who do not seek or are unable to access healthcare services. COVID-19, coronavirus disease; ED, emergency department; GP, general practitioner; ICU, intensive care unit.

At baseline of our clinical pathways model, we assume that half of available consulting and admission capacity across all healthcare sectors and services is available to COVID-19 patients. Mild cases are seen at primary care until capacity is exceeded. Severe cases access the hospital system through an ED and are triaged to a ward or ICU bed, if available, according to need. Requirements for critical care are assumed to increase steeply with age with the consequence that >60% of all infections requiring ICU admission occur in persons >70 years of age (Table 2). As ward beds reach capacity, the ability of EDs to adequately assess patients is reduced because of bed block, meaning that not all patients who need care are medically assessed, although some will still be able to access primary care. We assume that

secondary infections are not affected by a person's access to clinical care. The model allows for repeat patient visits within and between primary care and hospital services, and progression from ward to intensive care, with length of stay (Figure 1; Table 2). The model structure and assumptions are based on publicly available data on the healthcare system of Australia and expert elicitation (Appendix).

Critical Care Capacity Expansion

The baseline assumption in our model was that half of currently available ICU beds would be available to COVID-19 patients. We considered 3 capacity expansion scenarios, assuming routine models of care for patient triage and assessment within the hospital system: total ICU capacity expansion to 150% of baseline, doubling the number of beds available to treat COVID-19 patients (2× ICU capacity); total ICU capacity expansion to 200% of baseline, tripling the number of beds available to treat COVID-19 patients (3× ICU capacity); or total ICU capacity expansion to 300% of baseline, increasing by 5-fold the number of beds available to treat COVID-19 patients (5× ICU capacity).

We also considered a theoretical alternative clinical pathway, COVID-19 clinics, which had constraints on bed numbers but double the capacity to assess severe cases in hospitals. The purpose of including this pathway was to reveal unmet clinical needs arising when bed block constrains ED triage capacity, potentially preventing needed admissions to the ICU.

Social Distancing Interventions

Broad based social distancing measures overcome ongoing opportunities for transmission arising from imperfect ascertainment of all cases and contacts, and from presymptomatic and asymptomatic persons. In settings where nonpharmaceutical social interventions have been applied, associated case-targeted measures also have been in place, making the effectiveness of each difficult to quantify (19). Data from Hong Kong showing a reduction in influenza incidence arising from a combination of distancing measures introduced in response to COVID-19 provides good evidence of generalized transmission reduction (20). However, the relative quantitative contributions of different interventions, such as canceling mass gatherings, working remotely, closing schools, and ceasing nonessential services, cannot be differentiated reliably at this time (18).

Therefore, we focused on the overall objective of distancing, which is to reduce the reproduction number. We modeled the effect of constraining spread by 25% and 33%, overlaid on existing case-targeted interventions, which is consistent with observed impacts of combined measures less restrictive than total lockdown (18). These reductions in transmission equated to input reproduction numbers of 1.90 at 25% and 1.69 at 33%; the effective reproduction number in each scenario further was reduced by quarantine and isolation measures, which limit spread of established infection.

Results

Thumbnail of Estimated daily incidence of ICU admission demand per 1 million population during coronavirus disease (COVID-19) epidemic across all age groups, Australia. A) Demand during an unmitigated COVID-19 epidemic. B) COVID-19 epidemic mitigated by case-targeted public health measures. Lines represent single simulations based on median (red), 5th percentile (blue), or 95th percentile (green) final epidemic size. Of note, the more severe epidemic is more delayed by public health intervention

Figure 2. Estimated daily incidence of ICU admission demand per 1 million population during coronavirus disease (COVID-19) epidemic across all age groups, Australia. A) Demand during an unmitigated COVID-19 epidemic. B) COVID-19 epidemic...

According to our model, an unmitigated COVID-19 epidemic would dramatically exceed the capacity of the health system of Australia over a prolonged period (Figure 2). Case isolation and contact quarantine applied at the same level of effective coverage throughout the epidemic have the potential to substantially reduce transmission. By flattening the curve, these measures produce a prolonged epidemic with lower peak incidence and fewer overall infections (Figure 2). Epidemic scenarios with higher assumed severity, such as a 95th percentile case, are more effectively delayed by these public health measures than less severe scenarios, such as a 50th percentile case, because a higher proportion of all cases are seen by health services and can be identified for isolation and contact tracing. In a mitigated epidemic, overall use

of the health system is increased because more patients are able to access needed care over the extended epidemic duration (Appendix Figure 3, panel A).

Thumbnail of Estimated duration of excess demand for healthcare sector services during COVID-19 epidemic, Australia. The graphs compare exceedance for COVID-19 admissions for A) ICU beds; B) hospital ward beds; C) emergency departments; and D) general practitioner services at baseline, 2×, 3×, and 5× ICU capacity. The COVID-19 clinics scenario reflects an alternative triage pathway and baseline capacity. Red denotes unmitigated scenarios with no public health interventions in place; blue denotes
Figure 3. Estimated duration of excess demand for healthcare sector services during COVID-19 epidemic, Australia. The graphs compare exceedance for COVID-19 admissions for A) ICU beds; B) hospital ward beds; C) emergency departments;...

Thumbnail of Estimated peak excess demand for healthcare sector services, by percentage, during the COVID-19 epidemic, Australia. The graphs compare exceedance for COVID-19 admissions for A) ICU beds; B) hospital ward beds; C) emergency departments; and D) general practitioner services at baseline, 2×, 3×, and 5× ICU capacity. The COVID-19 clinics scenario reflects an alternative triage pathway and baseline capacity. Red denotes unmitigated scenarios with no public health interventions in place;
Figure 4. Estimated peak excess demand for healthcare sector services, by percentage, during the COVID-19 epidemic, Australia. The graphs compare exceedance for COVID-19 admissions for A) ICU beds; B) hospital ward beds; C)...

Increasing the number of ICU beds available to patients with COVID-19 reduces the time over which ICU capacity is anticipated to be exceeded, potentially by more than half (Figure 3). The duration of exceedance for each capacity scenario is increased by quarantine and isolation because the overall epidemic is longer (Figure 3). During the period of exceedance, a degree of unmet need remains, even for the mitigated scenario (Figure 4). A 5-fold increase in the number of ICU beds available to patients with COVID-19 dramatically reduces the period and peak of excess demand (Figures 3, 4).

These figures do not accurately reflect the true requirement for services, however, because blocks in assessment pathways resulting from ED and ward overload are an upstream constraint on incident ICU admissions. The alternative triage scenario, the COVID-19 clinic, reveals a high level of unmet clinical need for both ward and critical care beds given baseline bed capacity (Figures 3, 4). Case-targeted measures overcame this limitation, to some extent, and effectively improved overall access to care (Figures 3, 4). Overall, if ICU beds available to COVID-19 patients are doubled, 10%–30% of those who require critical care receive it. The proportion rises to >20%–40% if capacity increases by 5-fold (Appendix Figure 3). These figures are quantified as total excess demand per million over the course of the epidemic (Appendix Figure 4).

Thumbnail of Estimated daily incident ICU admission demand per million population during coronavirus disease (COIVD-19) epidemic, Australia. Comparison of mitigation achieved by A) quarantine and isolation alone; B) a further 25% mitigation due to social distancing; and C) a 33% mitigation. Lines represent single simulations based on median (red), 5th percentile (blue), or 95th percentile (green) parameter assumptions. ICU, intensive care unit.
Figure 5. Estimated daily incident ICU admission demand per million population during coronavirus disease (COIVD-19) epidemic, Australia. Comparison of mitigation achieved by A) quarantine and isolation alone; B) a further 25% mitigation due...

Our simulated scenarios show that case isolation and contact quarantine alone will be insufficient to keep clinical requirements of COVID-19 cases within plausibly achievable expansion of health system capacity, even if very high and likely unrealistic levels of case finding can be maintained. We therefore explored the effects of additional social distancing measures that reduced input reproduction numbers by 25% and 33% on ICU requirements in relation to the same clinical care capacity constraints (Figure 5). Simulations assume ongoing application of measures of fixed effectiveness, which is also unlikely to be consistently achievable over an extended duration.

Thumbnail of Estimated duration of excess demand for healthcare sector services compared with quarantine and isolation scenarios during the COVID-19 epidemic, Australia. The graphs compare exceedance for COVID-19 admissions for A) ICU beds; B) hospital ward beds; C) emergency departments; and D) general practitioner services at baseline, 2×, 3×, and 5× ICU capacity. Blue lines indicate quarantine and isolation only scenarios; green lines indicate overlaid social distancing measures that reduce t
Figure 6. Estimated duration of excess demand for healthcare sector services compared with quarantine and isolation scenarios during the COVID-19 epidemic, Australia. The graphs compare exceedance for COVID-19 admissions for A) ICU beds;...

Thumbnail of Estimated peak excess demand for healthcare sector services, expressed as percent available capacity, compared with quarantine and isolation scenarios during the COVID-19 epidemic, Australia. The graphs compare exceedance for COVID-19 admissions for A) ICU beds; B) hospital ward beds; C) emergency departments; and D) general practitioner services at baseline, 2×, 3×, and 5× ICU capacity. Blue lines indicate quarantine and isolation only scenarios; green lines indicate overlaid socia
Figure 7. Estimated peak excess demand for healthcare sector services, expressed as percent available capacity, compared with quarantine and isolation scenarios during the COVID-19 epidemic, Australia. The graphs compare exceedance for COVID-19 admissions...

The overlay of distancing measures, applied from the initial stages of the epidemic and maintained throughout, suppresses epidemic growth to a level that is within the range of plausible ICU capacity expansion. The duration of ICU exceedance remains long in the 25% case (Figure 6), but this overflow occurs to a far lesser degree than following case-targeted strategies only (Figure 7). As anticipated, a 33% reduction in transmission achieves greater benefits. Of note, pressure on ED consultations and ward beds also is eased substantially in these scenarios, maintaining capacity along the full pathway of care. As a result, the proportion of critical cases that can access care is greatly increased. Transmission reduction of 33% makes treatment for all cases achievable in most simulations if 3- to 5-fold ICU bed capacity can be achieved (Appendix Figure 3, panel B). This improvement is reflected in a large reduction in unmet need (Appendix Figure 4, panel B).

Discussion

This modeling study shows that an unmitigated COVID-19 epidemic would rapidly overwhelm Australia's health sector capacity. Case-targeted measures including isolation of those known to be infected, and quarantine of their close contacts, must remain an ongoing cornerstone of the public health response. These interventions effectively reduce transmission but are unlikely to be maintained throughout the epidemic course at the high coverage modeled here. As public health response capacity is exceeded, greater constraint of disease spread will be essential to ensure that feasible levels of expansion in available healthcare can maintain ongoing system functions, including care of COVID-19 patients. Broader based social and physical distancing measures reduce the number of potential contacts made by each case, minimizing public health workload and supporting sustainable case-targeted disease control efforts.

Our findings are consistent with a recently published model (21) that relates the clinical burden of COVID-19 cases to global health sector capacity, characterized at a high level. In unmitigated epidemics, demand rapidly outstrips supply, even in high-income settings, by a factor of 7 (21). Because hospital bed capacity is strongly correlated with income, this factor is greatly increased in low- and middle-income countries where underlying health status likely is poorer (21). Globally, marked variability in the definition of intensive care is observed, even in high-income countries where the descriptor covers many levels of ventilatory and other support. We concur with our conclusion that social distancing measures to suppress disease are required to save lives. In addition, we acknowledge that the marked social and economic consequences of such measures will limit their ongoing application, particularly in the settings where health systems are least able to cope with disease burden (21).

Much attention has been focused on expansion of available ICU beds per se, but our clinical model reveals that critical care admissions are further limited by the ability to adequately assess patients during times of system stress. In line with model recommendations, Australia, along with other countries, has

implemented COVID-19 clinics as an initial assessment pathway to reduce impacts on primary care and ED services (22). Such facilities have additional benefits of ensuring appropriate testing, aligning local case definitions, and reducing the overall consumption of personal protective equipment by cohorting likely infectious patients. Based on evidence of bottlenecks as the epidemic progresses, other measures to improve patient flows also should be considered, such as overflow expansion in EDs, encouraging and supporting home-based care, or early discharge to supported isolation facilities.

Quantitative findings from our model are limited by ongoing uncertainties about the true disease pyramid for COVID-19 and a lack of nuanced information about determinants of severe disease, which we represented by age as a best proxy. The clinical pathways model assumes that half of available bed capacity is available for patients with the disease but does not anticipate the seasonal surge in influenza admissions that might be overlaid with the epidemic peak, although even in our most recent severe season, 2017, only 6% of hospital beds were occupied by influenza cases (23). Available beds will likely be increased by other factors, such as secondary reductions in all respiratory infections and road trauma resulting from social restrictions, and purposive decisions to cancel nonessential surgery. Of note, we did not consider healthcare worker absenteeism due to illness, caregiving responsibilities, or burnout, all of which are anticipated challenges over a very prolonged epidemic accompanied by marked social disruption. We also cannot account for shortages in critical medical supplies because the true extent of these and their likely future impacts on service provision are currently unknown.

Our model indicates that a combination of case-targeted and social measures will need to be applied over an extended period to reduce the rate of epidemic growth. In reality, the stringency of imposed controls, their public acceptability, and compliance, likely will all vary over time. In Australia, compliance with isolation and self-quarantining was largely on the basis of trust in the early response during February–March, but active monitoring and enforcement of these public health measures is now occurring in many jurisdictions. Hong Kong and Singapore initiated electronic monitoring technologies from the outset to track the location of persons and enforce compliance (24). Proxy indicators of compliance, such as transport and mobile phone data, have informed understanding of the effect of social and movement restrictions on mobility and behavior in other settings (19), and will be further investigated in the context of Australia.

The effectiveness of multiple distancing measures, including lockdown, has been demonstrated in Europe, but the contributions of individual measures cannot yet be reliably differentiated (18). The effect of local measures to curb transmission will be estimated from real time data on epidemic growth in Australia, on the basis of multiple epidemiologic and clinical data streams. Estimates of the local effective reproduction number will enable forecasting of epidemic trajectories (25) to be fed into our analysis pathway. Anticipated case numbers will be used to assess the ability to remain within health system capacity represented by the clinical pathways model, given current levels of social intervention. Such evidence will support strengthening and, when appropriate, cautious relaxation of distancing measures. Further work will examine the effects of varying the intensity of measures over time, to inform the necessary conditions that would enable exit strategies from current stringent lockdown conditions to ensure maintenance of social and economic functioning over an extended time.

All these strategies, which combine to flatten the curve, will buy time for further health system strengthening and sourcing of needed supplies. Protecting the health and wellbeing of healthcare workers will be essential to ensure ongoing service provision. ICU capacity will need to be increased several-fold in anticipation of the looming rise in cases.

Multiple challenges must be overcome along the path to delivering safe and effective COVID-19 vaccines, and the timeframe for availability is highly uncertain (26). The search for effective therapies continues. Therefore, reducing COVID-19 illness and death relies on broadly applied public health measures to interrupt overall transmission, protect vulnerable groups, and maintain and strengthen the capacity of healthcare systems and workers to manage cases.
https://wwwnc.cdc.gov/eid/article/26/12/20-2530_article?ACSTrackingID=USCDC_333-DM39150&ACSTrackingLabel=Latest%20Expedited%20Articles%20-

%20Emerging%20Infectious%20Diseases%20Journal%20-%20September%2028%2C%202020&deliveryName=USCDC_333-DM39150

CDC

Effectiveness of Cloth Masks for Protection Against Severe Acute Respiratory Syndrome Coronavirus 2

Source: CDC
ID: 1007931313

Abstract

Cloth masks have been used in healthcare and community settings to protect the wearer from respiratory infections. The use of cloth masks during the coronavirus disease (COVID-19) pandemic is under debate. The filtration effectiveness of cloth masks is generally lower than that of medical masks and respirators; however, cloth masks may provide some protection if well designed and used correctly. Multilayer cloth masks, designed to fit around the face and made of water-resistant fabric with a high number of threads and finer weave, may provide reasonable protection. Until a cloth mask design is proven to be equally effective as a medical or N95 mask, wearing cloth masks should not be mandated for healthcare workers. In community settings, however, cloth masks may be used to prevent community spread of infections by sick or asymptomatically infected persons, and the public should be educated about their correct use.

As a result of the coronavirus disease (COVID-19) pandemic, supplies of medical masks and respirators are limited globally. Medical/surgical masks and respirators are commonly used as protection against respiratory and other infections. The main difference in these 2 products is the intended use. Medical masks are used in both healthcare and community settings to protect from droplet infections and from splashes and sprays of blood and body fluids. They are also used to prevent the spread of infection from sick or asymptomatic persons (also referred to as source control). Respirators are fit around the face, designed for respiratory protection, and used mostly in healthcare settings.

Heated debate surrounds healthcare workers having to either reuse or extend the use of disposable products, sterilize their respirator, or resort to wearing cloth or other homemade masks (1,2). Historically, cloth masks have been used to protect healthcare workers and the general public from various respiratory infections (3). However, most studies of cloth masks were conducted in vivo and during the first half of the 20th century, before medical masks were developed. To our knowledge, only 1 randomized controlled trial has been conducted to determine the efficacy of cloth masks (4). In this article, we discuss the evidence to inform the use of cloth masks for prevention of respiratory infections and propose strategies for cleaning and decontamination to protect frontline healthcare workers and the general public.

Historical Use of Cloth Masks

During the early 20th century, various types of cloth masks (made of cotton, gauze, and other fabrics) were used in US hospitals. Rates of respiratory infections among healthcare workers who used masks made of 2–3 layers of gauze were low (5). Cloth masks were also used to protect healthcare workers from diphtheria and scarlet fever. During the 1918 Spanish influenza pandemic, masks made of various layers of cotton were widely used by healthcare workers and the general public. Gauze masks were used during the second Manchurian plague epidemic in 1920–1921 and a plague epidemic in Los Angeles in 1924; infection rates among healthcare workers who wore masks were low (6). During the 1930s and 1940s, gauze and cloth masks were also used by healthcare workers to protect themselves from tuberculosis (7). In the middle of the 20th century, after disposable medical masks had been developed, use of cloth masks decreased; however, cloth mask use is still widespread in many countries in Asia. During the outbreak of severe acute respiratory syndrome in China, cotton masks were widely used by healthcare workers and the general public, and observational studies found them to be effective (8).

Studies of Cloth Mask Efficacy

In 2015, we conducted a randomized controlled trial to compare the efficacy of cloth masks with that of medical masks and controls (standard practice) among healthcare workers in Vietnam (4). Rates of infection were consistently higher among those in the cloth mask group than in the medical mask and control groups. This finding suggests that risk for infection was higher for those wearing cloth masks. The mask tested was a locally manufactured, double-layered cotton mask. Participants were given 5 cloth

masks for a 4-week study period and were asked to wash the masks daily with soap and water (4). The poor performance may have been because the masks were not washed frequently enough or because they became moist and contaminated. Medical and cloth masks were used by some participants in the control group, but the poor performance of cloth masks persisted in post hoc analysis when we compared all participants who used medical masks (from the control and the medical mask groups) with all participants who used only a cloth mask (from the control and the cloth mask groups)(4).

We also examined the filtration ability of cloth masks by reviewing 19 studies (3). We found that the filtration effectiveness of cloth masks is generally lower than that of medical masks and respirators. Filtration effectiveness of cloth masks varies widely; some materials filter better than others (9–11). Filtration effectiveness of cloth masks depends on many factors, such as thread count, number of layers, type of fabric, and water resistance (3). One study tested medical masks and several household materials for the ability to block bacterial and viral aerosols. Participants made masks from different materials, and all masks tested showed some ability to block the microbial aerosol challenges although less than that of medical masks (11). Another study found that homemade cloth masks may also reduce aerosol exposure although less so than medical masks and respirators (12). Masks made of cotton and towel provide better protection than masks made of gauze. Although cloth masks are often not designed to fit around the face, some materials may fit snugly against the face. One study found that the use of nylon stockings around the mask improved filtration (A.V. Mueller et al., unpub. data, https://www.medrxiv.org/content/10.1101/2020.04.17.20069567v2.full.pdfExternal Link). Filtration effectiveness of wet masks is reportedly lower than that of dry masks (3).

Policies and Guidelines Associated with Cloth Mask Use

Despite common use of cloth masks in many countries in Asia, existing infection control guidelines do not mention their use (13). However, some previous infection control guidelines have discussed use of cloth masks when medical masks and respirators are not available. For example, in an infection control guideline developed in 1998, the US Centers for Disease Control and Prevention (CDC) and the World Health Organization (WHO) recommended using cotton masks to protect from viral hemorrhagic fevers in low-resource healthcare settings in Africa if respirators or medical masks were not available (14). Similarly, WHO also discussed the option of using cloth masks to protect wearers from acquiring infection during the 2009 influenza A(H1N1) pandemic (15). In 2006, the US Institute of Medicine, National Academy of Sciences, prepared a report about the reusability of face masks during an influenza pandemic (16). The members were hesitant to advise against the use of cloth masks because of high mask demand during pandemics (16). As a result of the shortage of masks during the recent COVID-19 pandemic, CDC developed strategies for optimizing the supply of masks and recommended using homemade cloth masks when no medical masks are available (1). However, no guidance is provided for cleaning and decontamination of cloth masks, although standard washing in hot water with soap should be adequate.

Factors to Consider when Using Cloth Masks to Protect Wearers and to Prevent Spread of Infection during the COVID-19 Pandemic

The primary transmission routes for severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) are thought to be inhalation of respiratory droplets and close contact; therefore, WHO recommends wearing medical masks during routine care and using respirators during aerosol-generating procedures and other high-risk situations (17). However, SARS-COV-2 is a novel pathogen, and growing evidence indicates the possibility of airborne transmission (18–21). Recommendations to wear masks to protect the wearer from droplet infections are based on the assumption that droplets travel short distances only, generally 1–2 m. However, of 10 studies of horizontal droplet distance, 8 showed that droplets travel >2 m, in some instances ≈8 m (22). A recent study also showed that SARS-CoV-2 may be transmitted up to 4 m (18). Therefore, ideally, all frontline healthcare workers should use a respirator. However, demand for personal protective equipment has increased during the COVID-19 pandemic, and respirator shortages in previous pandemics have also been reported (23–26). If respirators are unavailable, healthcare workers could use a medical mask but may be at increased risk if they do so (2). CDC and the European Centre for Disease Prevention and Control initially recommended that all healthcare workers use respirators; however, because of shortages, they later recommended respirator use for high-risk situations only (27,28). Some countries also recommend sterilizing and decontaminating respirators for reuse; however, limited

evidence supports these practices (29), and they may not be feasible in low- and middle-income countries.

During a pandemic, cloth masks may be the only option available; however, they should be used as a last resort when medical masks and respirators are not available (3). Cloth mask use should not be mandated for healthcare workers, but some may choose to use them if there are no alternatives (30). Protection is affected by proper mask use as well as by selection of fabric and design of the masks for water resistance, filtration, and fit. Current evidence suggests that multilayered masks with water-resistant fabric, high number of threads, and finer weave may be more protective (3,10). Several studies have examined filtration, but fewer have examined fit or water resistance. Surgical masks are normally rated for fluid resistance, and cloth masks should be too. Masks should be able to prevent a stream of fluid flowing at a pressure of up to 160 mm Hg from seeping through the mask and potentially into the mouth. Furthermore, the degree of fit affects effectiveness because air flows in the direction of least resistance; if gaps are present on the sides of the mask, air will flow through those gaps instead of through the mask.

Cloth masks can be made in large quantities in a short time. They can be reused after being decontaminated by various techniques, ideally washing in hot water with soap. Other methods or products include using bleach, isopropyl alcohol, or hydrogen peroxide; autoclaving or microwaving; and application of ultraviolet radiation or dry heat (16). Unlike disposable medical masks and respirators, the material of cloth masks is unlikely to degrade from standard decontamination procedures. However, hospitals will have the extra burden of cleaning and decontaminating used masks. If healthcare workers perform decontamination themselves, they may fail to wash masks frequently enough and may risk self-contamination (31).

The general public can use cloth masks to protect against infection spread in the community. In community settings, masks may be used in 2 ways. First, they may be used by sick persons to prevent spread of infection (source control), and most health organizations (including WHO and CDC) recommend such use. In fact, a recent CDC policy change with regard to community use of cloth masks (1) is also based on high risk for transmission from asymptomatic or presymptomatic persons (32). According to some studies, ≈25%–50% of persons with COVID-19 have mild cases or are asymptomatic and potentially can transmit infection to others. So in areas of high transmission, mask use as source control may prevent spread of infection from persons with asymptomatic, presymptomatic, or mild infections. If medical masks are prioritized for healthcare workers, the general public can use cloth masks as an alternative. Second, masks may be used by healthy persons to protect them from acquiring respiratory infections; some randomized controlled trials have shown masks to be efficacious in closed community settings, with and without the practice of hand hygiene (33). Moreover, in a widespread pandemic, differentiating asymptomatic from healthy persons in the community is very difficult, so at least in high-transmission areas, universal face mask use may be beneficial. The general public should be educated about mask use because cloth masks may give users a false sense of protection because of their limited protection against acquiring infection (16). Correctly putting on and taking off cloth masks improves protection (Table). Taking a mask off is a high-risk process (34) because pathogens may be present on the outer surface of the mask and may result in self-contamination during removal (31).

Future Research Directions

More research on cloth masks is needed to inform their use as an alternative to surgical masks/respirators in the event of shortage or high-demand situations. To our knowledge, only 1 randomized controlled trial (4) has been conducted to examine the efficacy of cloth masks in healthcare settings, and the results do not favor use of cloth masks. More randomized controlled trials should be conducted in community settings to test the efficacy of cloth masks against respiratory infections. According to the US Institute of Medicine, National Academy of Sciences, more research on the engineering design of cloth masks to enhance their filtration and fit is needed (16). Moreover, various methods for decontaminating cloth masks should be tested.

Conclusions

The filtration, effectiveness, fit, and performance of cloth masks are inferior to those of medical masks and respirators. Cloth mask use should not be mandated for healthcare workers, who should as a priority

be provided proper respiratory protection. Cloth masks are a more suitable option for community use when medical masks are unavailable. Protection provided by cloth masks may be improved by selecting appropriate material, increasing the number of mask layers, and using those with a design that provides filtration and fit. Cloth masks should be washed daily and after high-exposure use by using soap and water or other appropriate methods.
https://wwwnc.cdc.gov/eid/article/26/10/20-0948_article?ACSTrackingID=USCDC_352-DM38299&ACSTrackingLabel=Viruses%20Articles%20in%20the%20October%202020%20Emerging%20Infectious%20Diseases%20Journal&deliveryName=USCDC_352-DM38299

CDC

Review of Mental Health Response to COVID-19, China

Source: CDC
ID: 1007931312

Abstract

Public mental health response to coronavirus disease is essential. After reviewing systemic and local efforts in China, we found efficient coordination and human resources. We recommend better symptom assessment, monitoring of organizations, and basic needs protection. This recommendation can inform how other countries can overcome mental health challenges during this pandemic.

The coronavirus disease (COVID-19) outbreak and quarantines have caused major distress in China (1,2). Therefore, effective public mental health response to COVID-19 is needed (3). We review systemic and local mental health efforts in China based on psychiatric emergency guidelines from the Inter-Agency Standing Committee (4). These guidelines are coordination between multiple sectors; human resources; assessment, monitoring, and evaluation; and protection and human rights standards. Our discussion will inform mental health response for the COVID-19 pandemic.

Mental health efforts in China have been coordinated and facilitated through multiple systems, including government, academic societies, universities, hospitals, and nonprofit organizations (5). Services include a countrywide 24/7 hotline, text support through apps, psychoeducation materials, and webinars (5). The government prioritized psychosocial support for COVID-19, as shown by the National Health Commission mandate requiring all mental health associations to provide psychosocial support, establish professional focus groups, and aid the provincial and city health departments (6).

Academic organizations in psychology (Chinese Psychological Society [CPS]) (Table) and psychiatry (Chinese Society of Psychiatry) provide evidence-based guidelines on psychosocial support and training (5,7). The Ministry of Education (MoE) has mandated all college counselors across the nation to volunteer for the primary Huazhong University hotline at the epicenter in Wuhan (8). At the systemic level, there is good coordination and resource allocation. The government agencies coordinate human resources, and academic associations provide professional knowledge and guidelines for frontline effort.

Coordination and resource allocation were compiled from local efforts at the Wuhan epicenter (Appendix). On January 23, 2020, immediately after the quarantine, Zhongnan Hospital and the Hubei Psychological Consultant Association began offering hotline services. As of April 30, more than 2,000 persons had been served. Beyond the hotline, Wuhan University and Huazhong University provide online text support through apps staffed by >3,000 professionals across China. This support demonstrates how hospitals, professional associations, and universities have collectively provided immediate resources. Furthermore, resources have been mobilized from other regions to support the epicenter. The hotline of Huazhong University became the primary hotline for Hubei residents and was staffed by college counselors throughout China under the mandate of the MoE (8). Psychologists and nurses from other provinces were dispatched to Wuhan Third Hospital on January 28. Psychosocial efforts might be sourced by different organizations, but they illustrate pooling of resources and coordination from other regions to ensure access to psychosocial support at the epicenter.

The MoE and CPS recruited professionals and volunteers across China, which suggests adequate resource allocation (5,7,8). CPS trained 1,448 registered psychologists in train-the-trainer workshops (8);

these psychologists in turn supervised and provided live consultations to frontline volunteers (7). China has also implemented Artificial Intelligence Tree Holes Rescue to reduce suicidal risk. These programs demonstrate efficient task-sharing, by pooling professionals together, supervising less-trained staff, and using technology to overcome resource shortages.

The Inter-Agency Standing Committee calls for assessment of mental well-being and program evaluation of psychsocial support effectiveness (4). Guidelines of the National Health Commission document the need for assessment and program evaluation, but enforcement was unclear beyond the guidelines (6). Although there were nationwide surveys of psychological well-being (9,10), they did not describe use of surveys in psychological services. Clinical assessment, such as previous mental illness history or stressors (e.g., grief, financial stress), should be routinely integrated into services.

CPS published a list of approved hotline organizations based on survey evaluation of organizations (8). However, this survey was not conducted until 3 weeks after the outbreak. At the outset of a psychiatric emergency, a team of professionals should evaluate and monitor whether individual organizations meet national guidelines. A negative experience from an unregulated organization can deter persons from seeking help.

Although COVID-19 does not cause intentional harm, there are human rights issues on access to basic needs (4). During the sudden lockdown of Wuhan, access to food and medical needs was threatened because of food hoarding, price gouging, and transportation freeze. In response, the government coordinated supply with tons of vegetables and meat. These threats were documented by nationwide surveys of well-being of persons. Professionals can further use these documentations to advocate for victims. For example, professionals can educate policymakers about the need for transparency, such as informing the public about food shortage while reassuring the public that supply will arrive in a few days. China has provided free, country-wide psychosocial support, funded by the government and institutions (5–7). The accessibility is remarkable compared with that in other countries that depend on health insurance benefits.

Our review suggests that China has overcome resource shortages with coordination and resource allocation in its mental health response. The government, universities, and academic societies provide coordination, and independent organizations provide local support. We recommend integration of assessment in direct support, monitoring of organizations, and advocating for affected persons. These recommendations can inform how other countries can overcome shortage of mental health resources when facing this pandemic.

Dr. Miu is an assistant professor and a licensed clinical psychologist in the Department of Psychiatry at the University of Texas, Southwestern Medical Center, Dallas, TX. Her research interests include social–cognitive factors, such as growth mindset and hostile attribution bias.

https://wwwnc.cdc.gov/eid/article/26/10/20-1113_article?ACSTrackingID=USCDC_353-DM38298&ACSTrackingLabel=Zoonoses%20Articles%20in%20the%20October%202020%20Emerging%20Infectious%20Diseases%20Journal&deliveryName=USCDC_353-DM38298

United States

Less than 10% of US population has COVID-19 antibodies, data show

ID: 1007932849

Source: CIDRAP

Less than 10% of a nationally representative sample of US dialysis patients had antibodies against COVID-19, showing that herd immunity will remain out of reach for quite some time, according to a study published late last week in The Lancet.

Researchers from Stanford University and Ascend Clinical Laboratories tested the serum of 28,503

patients receiving treatment at 1,300 dialysis centers in 1,013 counties (32% of all US counties) in 46 states in July to estimate how many had been exposed to COVID-19.

Substantial regional variation
They found that 8.2% to 9.4% of the sample had COVID-19 antibodies, indicating exposure to the virus. After comparing the estimates with case counts from Johns Hopkins University, the researchers calculated that about 9.3% of the US population had been infected, with regional variation ranging from less than 5% in the West to more than 25% in the Northeast. Less than 10% of those with antibodies had been tested for COVID-19 while ill.

Residents of counties that had implemented lockdowns resulting in at least a 5% reduction in visits to workplaces in March were 60% less likely than others to test positive for coronavirus antibodies in July.

Patients from early US coronavirus hot spots had a significantly higher likelihood of having evidence of a previous infection (33.6% in New York, 17.6% in Louisiana, and 17.5% in Illinois). In contrast, residents of lesser affected neighboring states were less likely to have antibodies (6.4% in Pennsylvania and 1.9% each in Arkansas and Missouri).

The study findings are similar to those from other recent studies in hard-hit countries such as China and Spain, which have demonstrated low percentages of people with coronavirus antibodies, the authors said.

Coauthor Julie Parsonnet, MD, said in a Lancet news release that, despite high rates of coronavirus in the United States, "the number of people with antibodies is still low and we haven't come close to achieving herd immunity. Until an effective vaccine is approved, we need to make sure our more vulnerable populations are reached with prevention measures."

Wide racial, socioeconomic disparities
Compared with people in predominately white neighborhoods, those from black- and Hispanic-majority communities were two to four times more likely to have had COVID-19 (4.8% vs 11.3% to 16.3%). Patients who lived in low-income areas were twice as likely as their peers to be infected, while those living in densely populated communities were at 10 times the risk.

The researchers noted that dialysis patients are a good population for studying COVID-19 transmission because they undergo monthly blood tests and represent other coronavirus risk factors, such as advanced age, non-white race, and lower incomes. The sample was representative of US dialysis patients by age, sex, race, ethnicity, and region.

Of the 2,292 patients with COVID-19 antibodies, 1,322 (57.7%) were men, and 1,765 (77%) were 45 to 79 years old; the sample had high proportions of black patients living in neighborhoods with a non-white majority.

"Not only is this patient population representative ethnically and socio-economically, but they are one of the few groups of people who can be repeatedly tested," lead author Shuchi Anand, MD, said in the release. "Because renal disease is a Medicare-qualifying condition, they don’t face many of the access-to-care barriers that limit testing among the general population."

Assessment not perfect but useful
The authors said that monthly antibody testing of dialysis patients, while not perfect, is a good way to monitor disease trends, resource allocation, and the efficacy of public health interventions. They recommended that COVID-19 public health measures focus on black and Hispanic populations living in low-income, densely populated areas.

In a commentary in the same journal, Barnaby Flower, MD, and Christina Atchison, MD, PhD, of Imperial College London, said that serum antibody testing produces a clearer picture of who has had COVID-19 than swab testing of symptomatic patients alone.

But they pointed out that extrapolation of antibody data from dialysis patients is imperfect because, by visiting a healthcare facility three times weekly, their exposure to COVID-19 is likely higher than that of the general population.

"However, concerns over sample applicability are bidirectional: patients with end-stage kidney disease and associated comorbidities might be less likely to mount a detectable antibody response," Flower and Atchison wrote. "They are also more likely to die from COVID-19, increasing the chance of unexposed, seronegative survivors being over-represented in the sample."
https://www.cidrap.umn.edu/news-perspective/2020/09/less-10-us-population-has-covid-19-antibodies-data-show

Australia

COVID-19 challenge trial: Nasal spray shown to reduce viral replication by up to 96 per cent in animal study
Source: timesnownews
Unique ID: 1007931138

Melbourne: A novel nasal spray developed by an Australian biotech company, Ena Respiratory, has proved remarkably successful in reducing the levels of the SARS-Cov-2, the novel coronavirus that causes COVID-19, in an animal study. Test results released on Monday showed that the nasal treatment, designed to boost the natural human immune system to fight common colds and the flu, reduced COVID-19 viral replication by up to 96 per cent in a study on ferrets. Till date, there is no vaccine or specific antiviral agent to prevent or treat COVID-19.
The findings of the study led by British government agency Public Health England suggested that the new therapy could help protect humans from coronavirus infection and prevent transmission. The research has been published in the published today on biomedical pre-publication research site, medRxiv.
How does the new nasal treatment work?
According to a release by the company, the INNA-051 compound works by stimulating the innate immune system, the first line of defence against the invasion of pathogens into the body. The study showed that the ability of the SARS-CoV-2 virus to infect the animals and replicate was significantly reduced by boosting the immune system with INNA-051prior to infection.
“We’ve been amazed with just how effective our treatment has been,” said Ena Respiratory Managing Director, Dr Christophe Demaison. “By boosting the natural immune response of the ferrets with our treatment, we've seen a rapid eradication of the virus.”
The study provides evidence that INNA-051 can be used as a stand-alone method of antiviral preventative therapy, complementary to vaccine programs, said the release.
“If humans respond in a similar way, the benefits of treatment are two-fold. Individuals exposed to the virus would most likely rapidly eliminate it, with the treatment ensuring that the disease does not progress beyond mild symptoms. This is particularly relevant to vulnerable members of the community. In addition, the rapidity of this response means that the infected individuals are unlikely to pass it on, meaning a swift halt to community transmission,” added Demaison.
INNA-051, which is a synthetic small molecule, would be self-administered via an easy-to-use nasal spray and can be taken once or twice a week, with the treatment taking almost immediate effect. The therapy was in development before the outbreak of the coronavirus to promote resistance towards broader respiratory viral epidemics. The company claimed that INNA- 051, unlike vaccines which are targeted to a specific strain, is designed to be effective for all types of respiratory infections.
“Most exciting is the ability of INNA-051 to significantly reduce virus levels in the nose and throat, giving hope that this therapy could reduce COVID-19 transmission by infected people, especially those who may be presymptomatic or asymptomatic and thus unaware they are infectious,” said Professor Roberto

Solari, a respiratory specialist, advisor to Ena Respiratory and visiting Professor at Imperial College London.
Dr Chris Smith, Ena Respiratory Board Director, and Senior Investment Manager at Brandon Capital, said INNA-051 offers real hope to those in the frontline fight against COVID-19, adding the treatment offers significant potential to protect the most vulnerable, including those with pre-existing respiratory conditions and the elderly, where vaccines can be less effective.
“Our nasal treatment has amazing potential for combatting COVID-19 and future pandemics,” continued Dr Smith.
If human trials are successful, this prophylactic immune modulation therapy could be rapidly manufactured at scale and be available for use soon, given the unprecedented need for drugs to combat the coronavirus pandemic, which has so far claimed at least 998,463 lives worldwide.
The study was done by scientists from Public Health England (PHE), Ena Respiratory, and leading Australian research organisations, the Hunter Medical Research Institute, Newcastle and the University of Melbourne.
https://www.timesnownews.com/health/article/covid-19-challenge-trial-nasal-spray-shown-to-reduce-viral-replication-by-up-to-96-per-cent-in-animal-study/659127
https://www.biorxiv.org/content/10.1101/2020.09.25.309914v1.full.pdf

Australia

Australian firm says its nasal spray reduced coronavirus growth in animal study
Source: Reuters
ID: 1007931310

SYDNEY (Reuters) - Australian biotech company Ena Respiratory said on Monday that a nasal spray it is developing to improve the human immune system to fight common cold and flu significantly reduced the growth of the coronavirus in a recent study on animals.
A study on ferrets showed the product dubbed INNA-051, which could be used complementary to vaccines, lowered the levels of the virus that causes COVID-19 by up to 96%, the company said. The study was led by British government agency Public Health England.
Ena Respiratory said it would be ready to test INNA-051 in human trials in less than four months, subject to successful toxicity studies and regulatory approval.
The company has raised A$11.7 million ($8.24 million) for the development of the spray. Investors include venture capital firm Brandon Capital Ltd, the Australian federal government, pension funds and biotech giant CSL Ltd CSL.AX.
Several companies across the world are in the pursuit of developing a coronavirus vaccine. Australia has entered into agreements with some drug companies investing billions to secure potential vaccines for COVID-19, which has killed over 992,000 people worldwide.
Australia has so far reported 875 deaths and just over 27,000 coronavirus cases, far less than the numbers reported in other developed countries.
https://www.reuters.com/article/us-health-coronavirus-australia-nasalspr/australian-firm-says-its-nasal-spray-reduced-coronavirus-growth-in-animal-study-idUSKBN26J04T

Turkey

Turkey tests 1st shot of coronavirus vaccine
Source: aa
Unique ID: 1007930507

Turkish doctors on Monday gave the first shot of the coronavirus vaccine to a health worker.
Asim Basturk, 53, volunteered for the phase 3 test of the vaccine developed by China.
Speaking to reporters, Dr. Mustafa Sait Gonen, dean of Turkey’s leading Istanbul University Cerrahpasa Medical Faculty, said: “Today, we began the Phase 3 study of the Chinese origin vaccine from the Cerrahpasa medical school."
Giving a break up of patients they attended to since March, he said, out of 335,000 patients who visited the facility; 27,000 were treated for COVID-19 and 77,000 tests were conducted.
"This is an important day for the Cerrahpasa Medical Faculty. This struggle [against the virus] continues in Cerrahpasa, as in other hospitals and in the world," he added.

Also speaking, Basturk said: "I volunteered for this of my own will. Of course, we want this [virus] which is creating trouble for Turkey and the world to be eliminated soon."
The virus that first appeared in China last December has spread to 188 countries and regions, according to the US' Johns Hopkins University.
More than 33 million people have been infected, including over 998,000 deaths and nearly 23 million recoveries.
https://www.aa.com.tr/en/health/turkey-tests-1st-shot-of-coronavirus-vaccine/1988383

Domestic Events of Interest

Canada/International
Trudeau urges largest countries in the world to support UN biodiversity plan
ID: 1007932834
Source: CTV News

Trudeau urges largest countries in the world to support UN biodiversity plan
Contact
Published Monday, September 28, 2020 12:14PM EDT Last Updated Monday, September 28, 2020 1:42PM EDT
In this photo provided by the United Nations, Justin Trudeau, Prime Minister of Canada, speaks in a pre-recorded message which was played during the 75th session of the United Nations General Assembly, Friday, Sept. 25, 2020, at the UN. headquarters. (Rick Bajornas/UN Photo via AP)
SHARE
OTTAWA -- Prime Minister Justin Trudeau is calling on countries with the largest land mass to do more to protect the biodiversity of their land and water.
Trudeau made that call today at a special session of the United Nations via video conference on the sidelines of the virtual General Assembly meeting.
Trudeau was taking part in the Leaders Event for Nature and People that also featured the leaders of Costa Rica and Norway.

The prime minister was pledging Canada's support for a UN initiative that aims to protect 30 per cent of land and oceans by 2030.
But Canada is the only country in the top-10 largest countries by land mass that has joined the initiative, Trudeau said.
"Every country will find it difficult to protect 30 per cent of their land and protect biodiversity. So, it's not about who is doing better," the prime minister said.
"In terms of sheer acreage of the world, we need to get those other nine largest countries in the top 10 to do their part and step up as well."
Canada will be working with Indigenous Peoples as necessary partners because they "understand how important it is to be good stewards of these lands and these waters that sustain us," Trudeau said.
One Indigenous leader welcomed Trudeau's statement and said it could also help Canada's ongoing efforts with reconciliation.
"Respecting this leadership will also advance reconciliation and build a more equitable and sustainable future. Much of the recent progress in conserving lands - including forests and wetlands that store massive amounts of carbon - has come from Indigenous Nations," said Frank Brown, a member of the Heiltsuk Nation and senior leader with the Indigenous Leadership Initiative, in a statement.
"Now, by placing Indigenous-led conservation at the heart of its approach to protecting both nature and climate, Canada can lead the world in promoting a new model of ethical conservation - one rooted in respect, responsibility, and reconciliation."
Trudeau also said the government will move forward with its plans to plant two billion trees, ban many single-use plastics and protect wetlands, saying he wants "Canadians once again to connect to their nature."
The initiative is known as the "high ambition coalition," and it was started late last year by Costa Rica and France.
The government said in a statement that Canada is "uniquely positioned" to take part because it has the

second-largest land mass in the word, one-fifth of the world's fresh water, and the longest coastline in the world. Taken together, Canada's natural features play a critical role in fighting climate change, it said. “Our forests, grasslands, and peatlands absorb enormous amounts of carbon pollution and are our best ally in protecting our climate,” the statement said.
Environment Minister Jonathan Wilkinson said in a statement that expanding protected areas is “critical not just for stopping the loss of nature and biodiversity but also to fighting climate change and helping prevent future pandemics.”
This report by The Canadian Press was first published Sept. 28, 2020.
https://www.ctvnews.ca/politics/trudeau-urges-largest-countries-in-the-world-to-support-un-biodiversity-plan-1.5123177

Canada
Warning about higher number of drug overdoses in Sudbury
Source: sudbury
Unique ID: 1007931266

Concern raised that some street drugs are laced with Fentanyl or carfentanil
Sudbury's Community Drug Strategy and Public Health Sudbury and Districts (PHSD) said there has been a report of a higher number of suspected opioid overdoses in Sudbury. A news release included a warning about the inherent dangers of street drugs.
"While we cannot confirm the substance that has caused the overdoses, this situation serves as an important reminder to the community that street drugs may be cut or mixed with substances such as fentanyl or carfentanil, and that even a very small amount of these substances can cause an overdose," said the release.
The warning said overdoses occur when a person uses more of a substance, or combination of substances, than their body can handle.
"As a consequence, the brain is unable to control basic life functions. The person might pass out, stop breathing or experience a seizure. Overdoses can be fatal," the warning continued.
The public health statement also included some tips that substance users might consider.
1 - Avoid using combinations of drugs, such as over the counter drugs and illegal substances.
2 - Avoid drinking alcohol while using drugs.
3 - Use caution when using different substances. Begin with a lower-than-normal dosage.
4 - If you have not used drugs in awhile, your tolerance may be lower. Use a low dosage.
5 - Avoid using drugs if you are alone.
6 - Carry a Naloxone kit to help survive an overdose incident.
https://www.sudbury.com/local-news/warning-about-higher-number-of-drug-overdoses-in-sudbury-2746730

International Events of Interest

United States
FDA approved opioids for chronic pain despite lacking 'critical' safety data, analysis finds

Source: UPI.com
ID: 1007933695

Sept. 28 (UPI) -- The U.S. Food and Drug Administration approved nearly 50 new prescription opioid pain medications between 1997 and 2018, even though it lacked "critical" data on safety and effectiveness, an analysis published Monday by the journal Annals of Internal Medicine found.

None of the 48 drugs granted agency approval during the more than 20-year period was evaluated in clinical trials that lasted longer than 12 weeks, and the trials often included narrowly defined groups of patients, researchers said.

And few included "systematic assessments" of risks associated with these medications, including addiction potential and non-medical use.
"Our analysis provides a window through which to view the FDA's opioid regulation over the past 20 years," study co-author Dr. Caleb Alexander, founding co-director of the Center for Drug Safety and Effectiveness at Johns Hopkins Bloomberg School of Public Health, told UPI.

"We found the FDA often approved new opioids based on trials of short duration, in narrowly defined populations, and that systematic collection of certain important safety outcomes was rare," he said.
The use of opioid-based medications in the treatment of pain has come under scrutiny in recent years due to increasing rates of addiction and reported overdoses nationally.
Generally, new guidelines for physicians recommend the drugs only for short-term use to treat a sudden, acute episode of pain that occurs after surgery or a traumatic injury, such as a broken bone, as opposed to pain caused by chronic conditions.

For this study, Alexander and his colleagues reviewed new drug approval records for all prescription opioids approved by the FDA between 1997 and 2018.

Forty-seven of the 48 approvals were for new dosage forms, methods of drug delivery or drug combinations, and only one was for a new drug or compound, the researchers said.

Of the 39 drug applications approved for use in people with chronic pain during that period, only 21 included at least one new pivotal trial, while the remainder relied on previously approved opioids for evidence of effectiveness, they said.

Seventeen of the 21 products approved for chronic pain with new trials excluded study participants who could not tolerate the drug or who reported few early benefits, "limiting the relevance of the results to real-world practice," according to Alexander.
In addition, among the trials for products approved for chronic pain, none extended beyond 84 days, despite the fact that many people take these medicines for much longer periods, he said.
Although the trials generally reported adverse health events and side effects, they frequently failed to collect other important information, such as opioid diversion or non-medical use of these drugs, the analysis showed.
"Despite the scope of America's ongoing opioid epidemic, little is known regarding the FDA's approval of new opioid products over the past two decades," Alexander said.
"The FDA has regulatory flexibility in the requirements they set for market access, and our findings suggest that the agency did not use this to require opioid manufacturers to produce more information about the safety and effectiveness of [these drugs] prior to [approval]."

https://www.upi.com/Health_News/2020/09/28/FDA-approved-opioids-for-chronic-pain-despite-lacking-critical-safety-data/7051601318633/

United States
Shionogi Announces FDA Approval of FETROJA® (Cefiderocol) for the Treatment of Hospital-Acquired Bacterial Pneumonia and Ventilator-Associated Bacterial Pneumonia
ID: 1007932858
Source: shionogi.com

2020/09/27

OSAKA, Japan and FLORHAM PARK, N.J., September 28, 2020 – Shionogi & Co., Ltd. (hereafter “Shionogi”) today announces that the U.S. Food and Drug Administration (FDA) has approved a supplemental New Drug Application (sNDA) for FETROJA® (cefiderocol) for the treatment of patients 18

years of age or older with hospital-acquired bacterial pneumonia and ventilator-associated bacterial pneumonia (HABP/VABP) caused by the following susceptible Gram-negative microorganisms: Acinetobacter baumannii complex, Escherichia coli, Enterobacter cloacae complex, Klebsiella pneumoniae, Pseudomonas aeruginosa and Serratia marcescens.

“Antimicrobial resistance is a major global health concern, and there is a clear need for new treatments such as FETROJA to give clinicians more options to fight life-threatening infections caused by Gram-negative pathogens,” said Akira Kato, Ph.D., president and CEO at Shionogi Inc. “This milestone represents Shionogi’s long-standing and unwavering commitment to constantly fight evolving infectious diseases in an era realizing significant unmet needs.”

This expanded indication is based on the results of the Phase III APEKS-NP study, which showed FETROJA met the primary endpoint of non-inferiority compared to high-dose extended-infusion meropenem in all-cause mortality 14 days after initiation of study drug in the treatment of patients with HABP, VABP and healthcare-associated bacterial pneumonia (HCABP).

“Nosocomial pneumonia is one of the most common hospital-acquired infections and a rising number are caused by difficult-to-treat, multidrug-resistant pathogens, which can be a deadly threat for patients,” said APEKS-NP principal investigator Richard G. Wunderink, M.D., Northwestern University Feinberg School of Medicine. “The results from the APEKS-NP study show that cefiderocol is a much-needed additional option for the treatment of patients with HABP and VABP due to multidrug-resistant Gram-negative bacteria.”

FETROJA is currently approved for patients 18 years of age or older for the treatment of complicated urinary tract infections, including pyelonephritis, caused by Gram-negative pathogens. It is the first approved antibiotic that functions as a siderophore and has a novel mechanism for penetrating the outer cell membrane of Gram-negative pathogens including carbapenem-resistant strains. See the full indication below.

https://www.shionogi.com/us/en/news/2020/9/shionogi-announces-fda-approval-of-fetroja-cefiderocol-for-the-treatment-of-hospital-acquired-bacterial-pneumonia-and-ventilator-associated-bacterial-pneumonia.html

United States

Outbreak Investigation of Cyclospora: Bagged Salads (June 2020)
ID: 1007932857
Source: US FDA

CDC announces the end of the outbreak; FDA continues its investigation.

The multistate outbreak of Cyclospora infections linked to salad products that were made by Fresh Express containing iceberg lettuce, red cabbage, and carrots and that were sold in several regions of the United States investigated by the FDA, along with CDC and state and local partners, is over. The outbreak included Fresh Express branded products as well as products made by Fresh Express for retail store brands sold at ALDI, Giant Eagle, Hy-Vee, Jewel-Osco, ShopRite, and Walmart. FDA’s investigation is continuing, in consultation with the state agriculture and regional water board.

Recommendations
On June 27, 2020, Fresh Express recalledExternal Link Disclaimer products containing either iceberg lettuce, red cabbage or carrots and displaying the product code Z178, or a lower number. The “Best by” date on the products run through July 14, 2020.

The recalled products are now well beyond expiration and likely no longer on the market or in consumers' homes.

Investigation Update
September 25, 2020

As of September 25, 2020, CDC has announced this outbreak is over. FDA's traceback investigation is complete, however the cause or source of the outbreak has not been determined. FDA's investigation is continuing, in consultation with the state agriculture and regional water board.

FDA investigated multiple farms identified in the traceback, one of which led to sampling and investigation around a farm in south Florida. FDA continues to work with the state of Florida and the local water district to try to determine the source and impact of Cyclospora that was found in the regional water management canal (C-23), located west of Port St. Lucie, Florida. Given the emerging nature of genetic typing methodologies for this parasite in foods and in environmental samples, the FDA has been unable to determine if the Cyclospora detected in the canal is a genetic match to the clinical cases, therefore, there is currently not enough evidence to conclusively determine the source of this outbreak. However, the presence of Cyclospora in a canal that had previously supplied irrigation water in the region, and specifically to a farm identified in the traceback, suggests the need for a collaborative effort by state, federal and industry partners to better define the scope of the contamination and identify appropriate risk mitigation measures.

https://www.fda.gov/food/outbreaks-foodborne-illness/outbreak-investigation-cyclospora-bagged-salads-june-2020

China

Chinese county launches emergency response for the Plague after a three-year-old boy was infected with the Black Death
Source: dailymail
Unique ID: 1007930614

China found a new case of bubonic plague in Menghai county, Yunnan province
Boy, three, was confirmed to have been infected with the disease on Sunday
Officials made inspections, imposed quarantines and tested patients with fever
Came after two people died of the plague in China's Inner Mongolia last month

Authorities from a south-western Chinese county have recorded a new case of bubonic plague over the weekend as officials have activated an emergency response to prevent the disease from spreading.

A three-year-old boy from a remote village in Menghai country of Yunnan province was confirmed to have infected with the bubonic plague on Sunday, according to state media.

It comes as China's Inner Mongolia region, near the Chinese border with Mongolia, has reported two deaths caused by the plague in August, prompting the authorities to impose partial lockdowns and quarantine residents.

China is also facing the threat of the disease spreading from its neighbouring country Mongolia, which have declared at least 17 out of all 21 provinces in the country are at risk of bubonic plague.

Bubonic plague, known as the 'Black Death' in the Middle Ages, is one of the most devastating diseases in history, having killed around 100million people in the 14th century.

The Menghai authorities launched a level-four emergency response on Friday after reporting the young patient as a suspected case of bubonic plague on Friday, according to a notice.

The statement said that the patient had mild symptoms and was in stable condition after treatment.

The officials did not specify how the child had been infected but said that a rat plague had occurred in the county on September 21 after three rats were found dead for unknown reasons in a village.

The boy was diagnosed during a county-wide screening for the disease following the rat plague, said the notice.

He was confirmed to have been infected with the bubonic plague yesterday, according to state media, citing the Yunnan health authorities.

National and provincial officials had arrived in Menghai as part of the government's emergency response for the plague while teams of medical workers made inspections, imposed quarantines and screened suspected patients with fevers.

The news comes after China has reported two deaths caused by the plague since January.

On August 6, the Baotou city health commission confirmed a resident died of a different form of the disease four days earlier.

The city of Baotou, in northern China's Inner Mongolia Autonomous Region, said the victim had contracted the enteric plague.

A second victim died from multiple organ failure in a case of the bubonic plague, the Bayan Nur health commission of Inner Mongolia said on the following day.

The bubonic plague, one of the four forms of the disease, is one of the most devastating diseases in history.

The enteric plague, also known as the pharyngeal plague, attacks a person's digestive system and can arise as a result of exposure to infectious aerosols or by ingestion of infected meat.

The other forms of the disease are the pneumonic plague, a severe lung infection, and the septicemic plague, which affects a person's blood systems.

China has largely eradicated the plague, but occasional cases are still reported.

The last major known outbreak of the disease was in 2009 when several people died in the town of Ziketan in Qinghai province on the Tibetan Plateau.

However, British health experts have said that no evidence shows bubonic plague can be passed from one person to another, therefore it is unlikely to trigger another health crisis.
https://www.dailymail.co.uk/news/article-8781183/Chinese-county-launches-emergency-response-PLAGUE-three-year-old-boy-infected.html?ns_mchannel=rss&ns_campaign=1490&ito=1490

Researches, Policies and Guidelines

WHO
Recommended composition of influenza virus vaccines for use in the 2021 southern hemisphere influenza season
ID: 1007932859
Source: WHO

25 September 2020
It is recommended that quadrivalent vaccines for use in the 2021 southern hemisphere influenza season contain the following:

Egg-based Vaccines

an A/Victoria/2570/2019 (H1N1)pdm09-like virus;
an A/Hong Kong/2671/2019 (H3N2)-like virus;
a B/Washington/02/2019 (B/Victoria lineage)-like virus; and
a B/Phuket/3073/2013 (B/Yamagata lineage)-like virus.
Cell- or recombinant-based Vaccines

an A/Wisconsin/588/2019 (H1N1)pdm09-like virus;
an A/Hong Kong/45/2019 (H3N2)-like virus;
a B/Washington/02/2019 (B/Victoria lineage)-like virus; and
a B/Phuket/3073/2013 (B/Yamagata lineage)-like virus.
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a B/Washington/02/2019 (B/Victoria lineage)-like virus.

https://www.who.int/influenza/vaccines/virus/recommendations/2021_south/en/

United States

Fecal transplant provides long-term C diff protection despite exposures
ID: 1007932855
Source: CIDRAP

Mayo Clinic researchers report that a fecal microbiota transplant (FMT) was 78% effective at preventing Clostridioides difficile infection (CDI) recurrence at 1 year despite subsequent exposure to the toxoid in 460 FMT patients.

The retrospective study, published late last week in Clinical Infectious Diseases, found that 76.8% of adult patients were exposed to the healthcare system after FMT, and 78.1% of 374 patients with risk factor exposure had a durable response at 1 year.
The most common underlying diseases in the patients were inflammatory bowel disease (21.9%), chronic liver disease (12.8%), cancer (11.7%), and chronic kidney disease (3.9%). In total, 31.3% of patients received antibiotics for their infections, while 21.7% received acid suppressants. In multivariable analysis, use of antibiotics was independently tied to a less durable response (hazard ratio, 0.27).

The authors concluded, "Majority of patients had a durable response to FMT despite exposure to CDI risk factors." They called for larger studies to identify predictors of durable response in patients who have and have not taken antibiotics.

CDI, the leading cause of diarrhea in hospital patients is one of the most common infections associated with exposure to the healthcare system. FMT, which involves the transfer of stool from a healthy donor

into the colon of an infected patient, is reserved for patients who have had several CDI bouts that didn't respond to antibiotic treatment.

https://academic.oup.com/cid/advance-article/doi/10.1093/cid/ciaa1457/5911669

https://www.cidrap.umn.edu/news-perspective/2020/09/news-scan-sep-28-2020

Singapore

Smartphones to aid in treatment of dengue patients

Source: medicalxpress
Unique ID: 1007930888

Ordinary smartphone cameras are capable of accurately determining the hydration severity of dengue patients to determine care and management by analyzing the color of their urine samples, says a new study.

Lucy Lum, an author of the study and professor of pediatrics at the University of Malaya, says that maintaining the right fluid balance is a major issue in dengue cases and it would be helpful if patients can just send pictures of their urine samples for diagnosis.

Annually, the world sees some 400 million dengue infections, of which a small proportion develops severe symptoms on day four or five of illness. Suspected dengue cases are followed up for daily assessment with the passage of dark-colored urine regarded as an indicator of dehydration.

In the study, published this month in PLOS Neglected Tropical Diseases, images of urine samples from 97 patients aged 13—60 years, taken with a standard mobile phone but in a customized booth to eliminate ambient light and other factors, were processed using Adobe Photoshop to index urine color into the red, green, and blue (RGB) color bands. The RGB values were found to correlate with patients' clinical and laboratory hydration indices.

Abdul Muhaimin Azhar, co-author of the study and lecturer in medicine at the University of Malaya, says that any ordinary phone camera will work. "The essential smartphone feature that we used in our study is the ability of the complementary metal-oxide semiconductor (CMOS) sensor to convert color images into digital components with RGB values," he tells SciDev.Net. "CMOS sensors are ubiquitous in digital cameras, such as those in smartphones."

As a point-of-care tool, a smartphone equipped with a downloadable application can be linked to physicians in tertiary care centers, the study said. Adequate fluid intake at home could significantly reduce the risk of hospitalization and reduce the economic impact of dengue in countries experiencing dengue epidemics.

Given the ready availability of smartphones even in difficult-to-access rural areas, a hydration tracker application can be a valuable tool for both patients and medical personnel, the authors say.

Leo Yee Sin, executive director of the National Center for Infectious Diseases, Singapore, tells SciDev.Net that there are hurdles in the actual deployment of the tool. "First of all, users need to be provided with the standardized photo-booth, as well as be taught the utilization of apps in mobile phones and how to link up to the healthcare system etc."

The authors also acknowledge several limitations to the study, including the fact that the effect of diet and medications on urine color were not controlled for.

"The next step is to calibrate smartphones to obtain accurate RGB values under different lighting conditions," says Lum. "Our vision is for everyone in the world to be able to utilize smartphones to capture biometric data such as urine color as accurately as laboratory tests."

More information: Natalie Chew et al. Assessing dehydration status in dengue patients using urine colourimetry and mobile phone technology, PLOS Neglected Tropical Diseases (2020). DOI: 10.1371/journal.pntd.0008562
https://journals.plos.org/plosntds/article?id=10.1371/journal.pntd.0008562
Provided by SciDev.Net
https://medicalxpress.com/news/2020-09-smartphones-aid-treatment-dengue-patients.html