*Understanding & Trends*

*What is the Geographical Distribution of Covid-19 infection and how its evolving?*

Timeline of how Covid-19 evolved from november 2019 to present day :

Corona Virus Pandemic started as reported on New Year’s Eve 2019 in the city of Wuhan, China. Still the origin day is not known accurate.

31st Dec 2019 - Wuhan Municipal Health Commission, China, reported [a cluster of cases of pneumonia](https://www.who.int/csr/don/05-january-2020-pneumonia-of-unkown-cause-china/en/) in Wuhan, Hubei Province.

January 2020

* WHO reported about the outbreak of a new disease caused by this new virus.
* China publicly [shared](https://www.who.int/csr/don/12-january-2020-novel-coronavirus-china/en/) the genetic sequence of COVID-19.
* [Thailand](https://www.who.int/news-room/detail/13-01-2020-who-statement-on-novel-coronavirus-in-thailand) confirmed a case of [COVID-19](https://www.who.int/news-room/detail/13-01-2020-who-statement-on-novel-coronavirus-in-thailand), the first recorded case outside of China.
* WHO experts visited to Wuhan.
* January 30th reported 7818 total confirmed cases worldwide - with the majority of these in China, and 82 cases reported in 18 countries outside China. WHO gave a risk assessment of very high for China, and high at the global level.

February 2020

* WHO releases [Strategic Preparedness and Response Plan](https://www.who.int/publications-detail-redirect/strategic-preparedness-and-response-plan-for-the-new-coronavirus) to help protect states with weaker health systems.
* WHO convened a [Research and Innovation Forum](https://www.who.int/news-room/detail/12-02-2020-world-experts-and-funders-set-priorities-for-covid-19-research) on COVID-19
* The WHO-China Joint mission

MARCH 2020

* alarming levels of spread and severity
* [COVID-19 Solidarity Response Fund](https://www.who.int/emergencies/diseases/novel-coronavirus-2019/donate) launched
* WHO and partners launch the [Solidarity Trial](https://www.who.int/emergencies/diseases/novel-coronavirus-2019/global-research-on-novel-coronavirus-2019-ncov/solidarity-clinical-trial-for-covid-19-treatments)

APRIL 2020

* The [novel coronavirus](https://www.cnn.com/specials/world/coronavirus-outbreak-intl-hnk) has infected more than 1.1 million people and [killed more than 60,000](https://www.cnn.com/interactive/2020/health/coronavirus-maps-and-cases/) worldwide.
* The US has more than 300,000 cases and more than 8,100 deaths, according to revised figures.

MAY 2020

* More than 5.8 million cases of Covid-19
* More than 360,000 deaths from Covid-19

JUNE 2020

* More than 10 million people across the world have been infected with the Coronavirus
* More than 500,000 have died from the Coronavirus

JULY 2020

* At least 33 US states experienced [an increase in new Coronavirus cases](https://www.cnn.com/2020/07/10/health/us-coronavirus-friday/index.html) compared to last week.
* Cases keep rising in the Australian state of Victoria. Another 273 infections have been recorded, state Premier Daniel Andrews said Sunday.
* Infections in Latin America and the Caribbean surpassed 3 million this week.

Novel Coronavirus Identified

* The Coronavirus first started in Wuhan, China.
* Then on July 6, India overtook Russia with the world's third-highest number of novel coronavirus cases, at nearly 700,000.
* On **July 7**, Pandemic measures were reimposed in Australia's second biggest city, confining Melbourne residents to their homes unless undertaking essential business for six weeks.
* The US on **July 8** officially notified the United Nations secretary-general of the country's withdrawal from the World Health Organization (WHO) even as it grapples with nearly three million cases of coronavirus.
* On **July 10** Hong Kong will close all schools after the territory reported a spike in locally transmitted COVID-19 infections. Meanwhile in northern Syria, the first coronavirus case has been confirmed.
* The World Health Organization (WHO) on **July 11** reported a record daily increase in global coronavirus cases, with the total rising by 228,102 in one day. The Coronavirus spread and spread until almost everywhere had a pandemic.

*Describe the trend in your State.*

Covid -19 Status in Wisconsin

COVID-19 remains very contagious and most people in Wisconsin are still at risk of getting sick from the virus.

* Regions and counties are classified as high, medium, or low activity levels for disease spread by combining the case burden and trajectory indicators
* Burden (case rate)

**Burden is the total number of cases per 100,000 Wisconsin residents in the last two weeks.**

* Trajectory (percent case change)

**Trajectory is the percent change from previous to current week and p-value (indicates statistical significance) from a test against the percent change equal to zero.**

* COVID-19 activity level

**COVID-19 activity level is a summary indicator based on whether the burden (case rate) status is low, moderate, moderately high, or high and whether the trajectory (case change) status is significantly shrinking, growing, or have no statistically significant change\*.**

<https://www.dhs.wisconsin.gov/covid-19/local.htm>

What is happening in Oak Creek, WI

* Covid 19 is still spreading in our community, to lower risk, continue to practice physical distancing and avoid gatherings.
* The temporary public health order has expired. All businesses are encouraged to reopen safely, implementing safe business practices and physical distancing between employees and customers.
* The CDC and WI DHS recommend wearing a cloth face cover when you are outside the home conducting essential activities.
* As of July 10, there are 276 reported cases of COVID-19 in Oak Creek, 13 COVID-19-related deaths, and 199 recovered.
* A 14-day self-quarantine upon return for anyone who travels to any U.S. states with confirmed community spread of COVID-19.

*Prevention & Cure*

Vaccine Development to prevent Covid-19

China Inactive Vaccine

China has five COVID-19 vaccines in clinical trials. Now one of them, from state-owned Sinopharm, has reported positive results from animal tests. The vaccine candidate, dubbed BIBP-CorV and made from an inactivated form of the virus, induced high levels of neutralizing antibodies against SARS-CoV-2—the virus behind COVID-19—in rodents, rabbits and monkeys without triggering any serious adverse events, a team of Chinese researchers reported in the journal Cell. A multi-arm phase 1/2 trial examining the varent dosing strengths, is ongoing, according to China’s clinical trial [reg](http://www.chictr.org.cn/showproj.aspx?proj=53003)ccine’s safety, as well as antibody and cellular immunity at three diffe[istry](http://www.chictr.org.cn/showproj.aspx?proj=53003). To make the vaccine, scientists at Sinopharm subsidiary CNBG’s Beijing Institute of Biological Products picked one viral strain from a patient that showed an optimal ability to replicate. In mice, the researchers detected neutralizing antibodies that could block the virus from infecting host cells in all animals after immunization with the vaccine at three different dose levels. But the immunogenicity of a three-dose regimen was higher than that of both the one- and two-dose programs, according to the team.

World's first Covid-19 vaccine? Russia successfully completes clinical trials

* The clinical trials of the world's first coronavirus on volunteers at Sechenov First Moscow State Medical University has been successfully completed
* The vaccine corresponds to the safety of those vaccines are currently in the market
* After over six months of novel coronavirus outbreak, which has infected more than 12 million people and killed over 500,000 all over the world, the clinical trials of the purportedly world's first coronavirus vaccine have been successfully completed.

Coronavirus Treatment: India will soon do the clinical trials of Ayurvedic drugs for COVID 19 treatment

* The government and doctors are trying hard to find the vaccine for the novel coronavirus. But according to official reports, it might take around 18 months to develop a vaccine. Amidst the lockdown Prime Minister Narendra Modi asked general public to follow the guidelines from the Ministry of Ayush, which recommends certain home remedies to boost immunity.
* The world has been relying on the Ayurvedic system of medicine from ages. Thus, doctors may soon start human trials of ayurvedic medicines to treat COVID in India. In states of Goa, Kerala and Haryana, doctors have already started administering Ayurvedic medicines to asymptomatic patients and frontline workers.
* The Ministry of Ayush had sought suggestions from doctors across India practising Homeopathy and Ayurveda and have received more than 2,000 proposals.

**UK - University of Oxford has developed a vaccine that triggers immune response**

The vaccine - called ChAdOx1 nCoV-19 - is being developed at unprecedented speed. It is made from a genetically engineered virus that causes the common cold in chimpanzees. It has been heavily modified, first so it cannot cause infections in people and also to make it "look" more like coronavirus. Scientists did this by transferring the genetic instructions for the coronavirus "spike protein" - the crucial tool it uses to invade our cells - to the vaccine they were developing. This means the vaccine resembles the coronavirus and the immune system can learn how to attack it.Much of the focus on coronavirus so far has been about antibodies, but these are only one part of our immune defence. Antibodies are small proteins made by the immune system that stick onto the surface of viruses. Neutralising antibodies can disable the coronavirus. T-cells, a type of white blood cell, help coordinate the immune system and are able to spot which of the body's cells have been infected and destroy them. Nearly all effective vaccines induce both an antibody and a T-cell response.

**National Institute of Health -** Phase 3 clinical trial of investigational vaccine for COVID-19 begins

* The vaccine, known as mRNA-1273, was co-developed by the Cambridge, Massachusetts-based biotechnology company Moderna, Inc., and the National Institute of Allergy and Infectious Diseases (NIAID), part of the National Institutes of Health. The trial, which will be conducted at U.S. clinical research sites, is expected to enroll approximately 30,000 adult volunteers who do not have COVID-19.
* Although face coverings, physical distancing and proper isolation and quarantine of infected individuals and contacts can help us mitigate SARS-CoV-2 spread, we urgently need a safe and effective preventive vaccine to ultimately control this pandemic
* Results from early-stage clinical testing indicate the investigational mRNA-1273 vaccine is safe and immunogenic, supporting the initiation of a Phase 3 clinical trial. This scientifically rigorous, randomized, placebo-controlled trial is designed to determine if the vaccine can prevent COVID-19 and for how long such protection may last.

Data Based Recommendations

Recommendations on social gatherings

* Social gatherings should be completely avoided because if there is one person infected with the virus, the whole community will be infected.
* Virtual gatherings are recommended where you can reach more people in less time.
* At the same time, completely sitting online is not recommended for your health.
* We need to redefine certain things if we want to continue living here.
* We need self-discipline, good hygiene, respects fellow living things and we should not lose hope.
* Nothing is permanent, there will be a solution.

Having a safe and effective vaccine distributed by the end of 2020 is a stretch goal, but it’s the right goal for the American people.

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