

**CRISIS MANAGEMENT AND DISASTER RESPONSE CENTRE OF  
EXCELLENCE**

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# COVID-19

## PART 23

(08 October – 21 October 2020)

### **COVID-19: WHAT ROLE DOES BLOOD TYPE PLAY?**

*This report represents a summary of open source information, accumulated between 08 October and 21 October 2020, and was assembled on 22 October 2020. All views and opinions expressed are solely those of the author, unless otherwise stated and do not necessarily represent the official position of the CMDR COE or any government and non-government organization or other group. The author does not bear responsibility for incomplete or incorrect facts cited or referred to herein. The majority of reference materials include official documents published by the World Health Organization, governmental pages, and online statistical databases.*

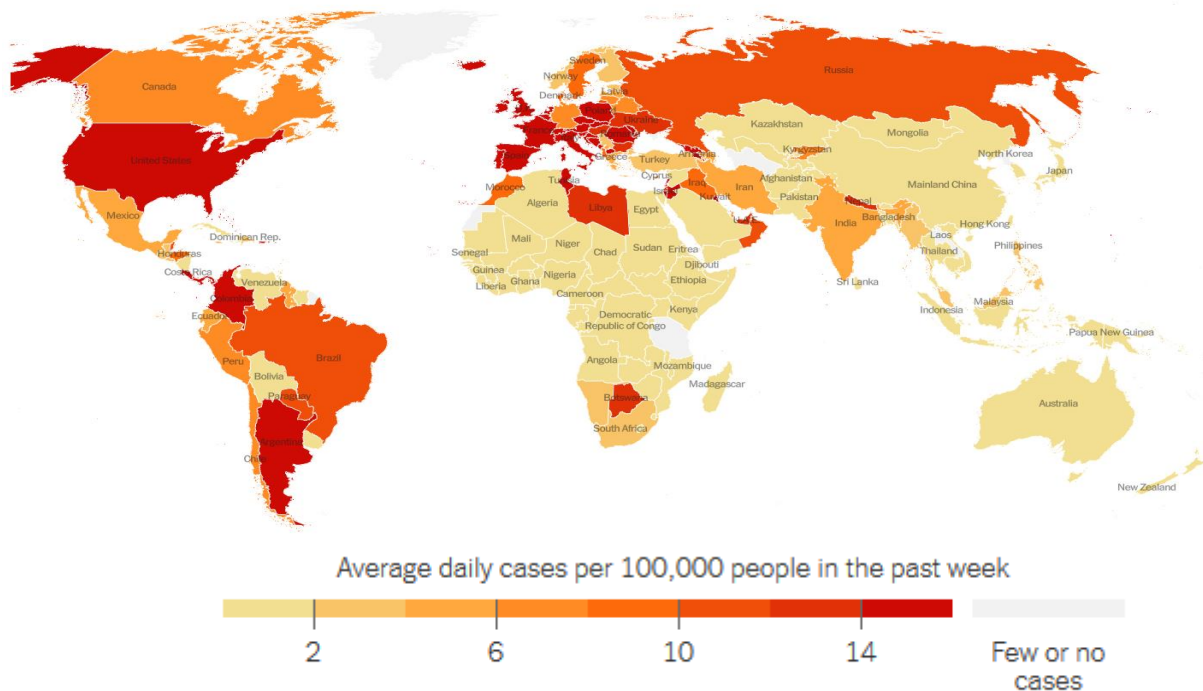
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## OVERALL SITUATION ON THE WORLD

COVID-19 cases crossed the 41-million mark globally during last two weeks, with still USA, India, Brazil, Russia and Spain coming back to the top five worst affected countries. Number of deaths crossed 1.1 million (1 128 938 as of 20 OCT) with USA, Brazil, India, Mexico, and UK among top five countries on the world.

The second wave of COVID-19 is turning out to be more destructive in *Europe*, with the top five countries in terms of total number of cases — Russia (1,431,635), Spain (1,029,668), France (930,745), UK (762,542) and Italy (434,449) — reporting record daily new cases during the last month. As a result, lockdowns and shutdowns are back in many countries. France has announced night curfews in its major cities, including Paris, while Germany and Italy have ordered midnight closure of bars and restaurants. The UK is applying three levels of restrictions depending on the prevalence of the virus at a regional level. However, even at its highest level, it is still not as strict a lockdown as seen in March and April. The Republic of Ireland will impose restrictions on level 5 coronavirus across the country for six weeks, said Prime Minister Michael Martin. It becomes the first country in the European Union to return to full quarantine.



Continuing trends in the previous weeks, the *African Region* reported an increase in both cases and deaths in the last days, with an 11% increase in new cases and 8% increase in new deaths. The pattern of increasing cases continues to be driven by eases. The majority of countries in the region are reporting community transmission South Africa and Ethiopia, with Kenya, and Botswana also reporting notable incur of COVID-19 (78%). An unusually high number of cases was reported from Botswana this week, with over 1800 cases reported in one day. This was largely attributed to a backlog of tests administered from 2–13 October, mostly from in and around the capital city of Gaborone. South Africa has accounted for approximately 70% of deaths in the Region in the past weeks. The high number of deaths being reported is partially attributed to a mortality audit, and many of these deaths are retrospectively reported.

A slight decrease in new cases was reported across the *Region of the Americas* over the past week in comparison to the previous week. The United States of America, Brazil, Argentina, Colombia and Mexico continue to register the highest number of weekly new cases in the region, while the highest incidence of new cases per million population was reported in Argentina, Bahamas, Costa Rica and Saint Martin, all with more than 1600 cases per million in the past 7 days. A marked decline in the incidence of deaths in the region continued this past week with just over 16 000 new deaths, compared with 20 000 new deaths last week. The Region, accounts for a third (n=798 794, 33%) of new cases and almost half (45%) of new deaths reported globally in the past weeks. *Argentina* remains the country in the Region with the highest number of new cases and new deaths per million population with over 2000 new cases per million inhabitants in the past week. Even though the weekly incidence of new COVID-19 cases is increasing gradually, a decreasing trend in the number of new deaths has been reported in the past two weeks, dropping from 6000 deaths per week at the end of September to less than 2500 deaths in the past week.

*Guatemala* continues to register a gradual decline in the incidence of new cases, however, an 88% increase in new deaths (from 80 to 150 deaths) was reported the past 7 days. COVID-19 test positivity rates have also remained relatively high for the last 12 weeks with over 10% of samples testing positive. The highest incidence of cases and deaths was reported in the capital, Guatemala City, and has reached over 530 deaths per million population. *Peru* has the second-highest rate of deaths per 1 million population in the Region with 1021 deaths per million inhabitants. However, in the last week, modest decreases in case and death rates continued. Some regions have reported declines of 50% and the regions of Puno, Madre de Dios, Amazonas and Moquegua registered declines of 70% in the weekly incidence of COVID-19.

A gradual increase of new cases and deaths was reported by the *Eastern Mediterranean Region* over the past weeks, reaching the highest weekly incidence reported since the beginning of the pandemic, with almost 150 000 new confirmed cases from 22 countries. In the past week, The Islamic Republic of Iran, Iraq and Morocco are reported the highest number of new cases while Bahrain, Lebanon and Jordan report the highest incidence, with over 1500 new cases per million population. A majority of the countries in the region continue to self-characterize their current transmission pattern as community transmission (64%), with 5 countries reporting clusters of cases and sporadic cases being reported in Somalia, Djibouti and Saudi Arabia. During the past weeks, Tunisia updated their classification from clusters of cases to community transmission. *The Islamic Republic of Iran* remains the most affected country in the region with Tehran, the capital city, being the most affected area. In this reporting period, Iran has recorded new weekly records, with over 30 000 new cases (360 cases per million population) and over 1,800 deaths (22 new deaths per million population) reported, bringing cumulative counts in the country to over 534 000 cases and 30 000 deaths. *Libya* has shown a surge in cases, recording over 6,000 new cases (900 cases per million

population). Test positivity rates also continue to gradually increase, with approximately 1 in 4 samples tested returning a positive result.

*South-East Asia* region continues to show a decline in cases and deaths, with Nepal being the only country, which reported an increase in both new weekly cases (12%) and new deaths (31%) in comparison to the previous weeks. Nepal reported 810 new cases per one million population, the highest in the region, followed by the Maldives (590) and India (319). Most countries in the region self-characterize their current transmission pattern as cluster of cases. *Bangladesh* reported an 8% increase in new weekly cases. *Myanmar* reported a 6% increase in new weekly deaths compared to last week. The majority of the cases and deaths continue to be reported from Yangon Region. *Thailand* continues to report relatively low numbers of cases. The country has become one of the first countries in the world to complete an assessment of how its health system has so far responded to COVID-19<sup>1</sup>. The review highlights success factors and provides recommendations across nine areas, or “pillars” of the national response.

Overall, one percent of all new weekly cases and deaths were reported from the *Western-Pacific Region*. The region reported an 8% increase in new weekly cases and 27% decrease in new weekly deaths as compared to the previous week. The majority of new cases continue to be reported from the Philippines, Malaysia and Japan. Whereas French Polynesia and Guam reported the highest incidence of new cases –3713 and 3258 new cases per one million inhabitants, respectively.

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<sup>1</sup> <https://www.who.int/thailand/news/detail/14-10-2020-Thailand-IAR-COVID19>

## COVID-19: WHAT ROLE DOES BLOOD TYPE PLAY?<sup>2</sup>

A case of COVID-19 can be from mild to severe. Sometimes no symptoms are present. Sometimes people die. More and more studies suggest that blood types may play an important role by affecting immune responses. Why do some people not notice at all that they have contracted the coronavirus, while others require medical treatment — and, in the worst cases, even die?

That COVID-19 seems so unpredictable also makes it difficult to find out how many people are actually infected and how many have already built up immunity. The number of unreported cases is correspondingly high.

Already in June, German and Norwegian researchers analyzed different blood types with regards to COVID-19. They came up with some informative results, which they published in the New England Journal of Medicine.

The researchers investigated the role blood type might play in patients with particularly severe forms of the disease.

In the study, the researchers examined 1,610 patients with COVID-19 respiratory failure in Italy and Spain, where the coronavirus hit particularly hard: Milan, Monza, Madrid, San Sebastian, and Barcelona. All patients were struggling with particularly severe cases, and some did not survive.

Blood type A means highest risk

A first result: People with blood type A seem to be at a particularly high risk of a severe case of COVID-19. In Germany, 43% of the population has this blood type. In the event of coronavirus infection, these individuals might be two times more likely to need an oxygen supply or respirator than people with blood type O: 41% of Germany's population.

Blood type O may be able to consider themselves lucky as things stand. Even though they are not protected against an infection, the study shows they have the lowest risk of coming down with a severe case of the disease.

People with blood type O- (O negative) also play a special role as blood donors, as they are considered "universal donors" and can help anyone in need of a blood transfusion.

Blood types B and AB are not as widespread, making up just 11% and 5% of the population, respectively. According to the study, the likelihood of a severe COVID-19 diagnosis for these groups could lie somewhere between that of people with blood types O or A.

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<sup>2</sup> <https://www.dw.com/en/covid-19-what-role-does-blood-type-play/a-53869161>

### More and more studies with similar results

Since then, further studies have been added to confirm the original results. On 14 October, two studies appeared in the journal *Blood Advances*, [here](#) and [here](#), which also show less severe symptoms of the disease in people in blood group O. Simultaneously, the Medical University of Graz independently reported a series of experiments, designed to further investigate the phenomenon.

### Consequences for treatment

The results of the studies may help in developing various drug treatments. Researchers have used similar approaches when searching for medication to fight other diseases.

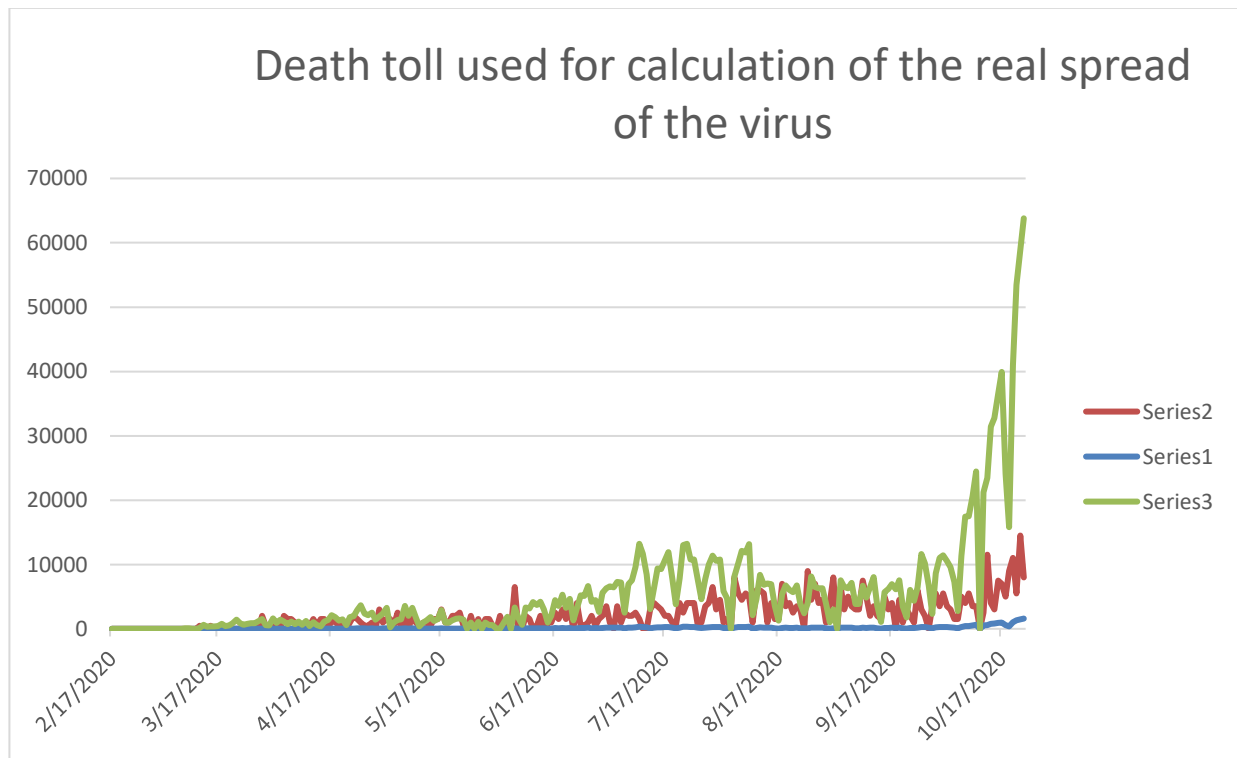
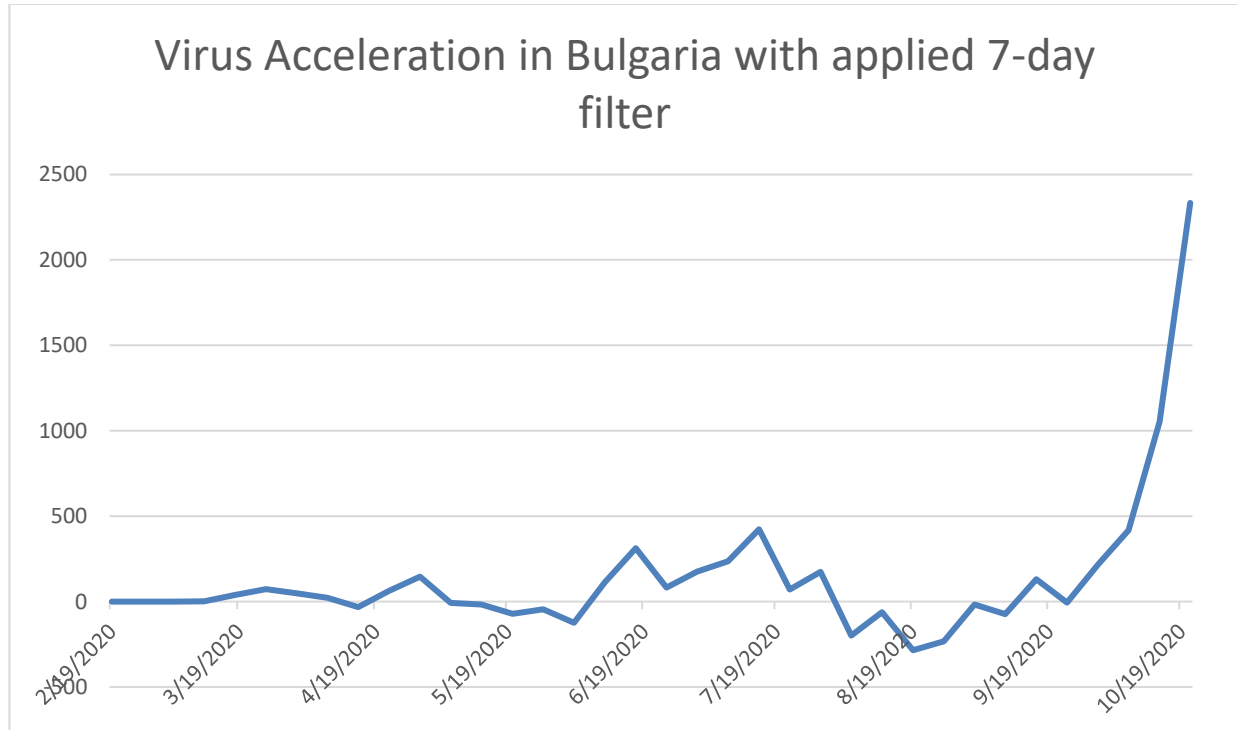
In the case of malaria, for example, scientists have established a link between the disease and different blood types. For example, it is now known that people with blood type O very rarely develop severe malaria and are very well protected against its most severe form.

In the case of other diseases, other blood types protect the human body best. For example, with the bubonic plague, people with blood type A showed the mildest symptoms.

For a long time, COVID-19 research focused on high-risk patients: Those who have certain preexisting conditions and/or have reached a certain age. Smokers also came under scrutiny as a potentially high-risk group. Now, researchers are looking at a different piece in the coronavirus jigsaw puzzle.



## CMDR COE OPS LAP ANALYSIS



The dynamic of the virus crisis in Bulgaria is interesting because of the observed epidemic behavior. The CMDR COE's theory about the new strain coming from USA is just confirmed for

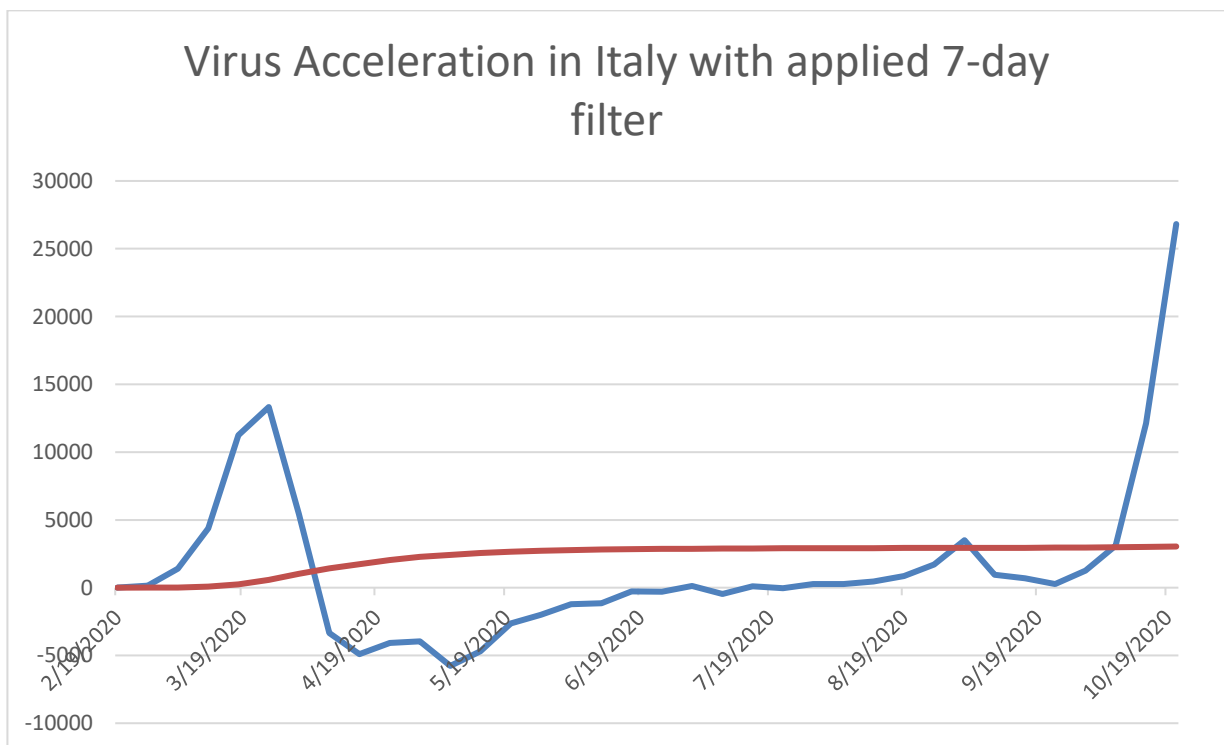
Bulgaria.

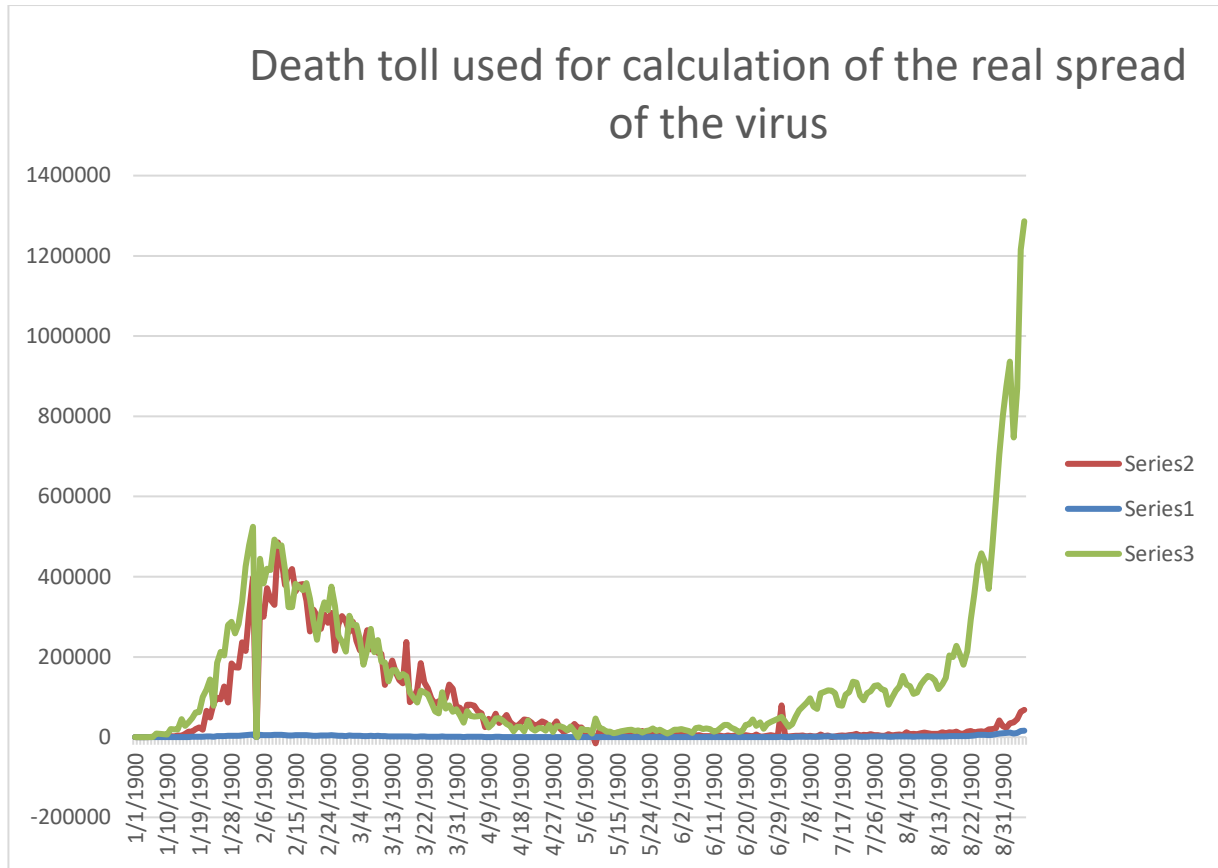
First, we have to mention the high virus spread acceleration, which signals us for rapid and exponential rise of the number of affected people. The second informative indicator is the ratio between the calculated numbers of affected people, computed by the CMDR COE' mathematical model with the coefficients of the previous strain and the reported daily cases.

According to the model, not only the number of the daily affected people will continue to grow, but the acceleration will also rise up. Now the calculated percentage of the people who has contact with the virus is slightly above 7 percent. We can expect change of the epidemic behavior and speed when it reaches 15 percent as it was observed in the other countries.

The observed from the statistical data ratio between the daily death toll and new cases is similar to what is specific for the second strain. This fact is very revealing and means that most of the cases will not be terminal.

Our estimations are for very rapid evolution of the crisis in Bulgaria. In next 2-3 weeks, the acceleration will change its sign and direction. Meanwhile we could observe number of new daily cases reaching 3000 people. There is likelihood this number to be limited by impossibility to test such big number of people.





Italy is the country often used as an example for the current crisis development. According to the statistics, the acceleration now is even higher than it was in the beginning of the crisis. It is illogical, if it was the same strain of the virus. As it is observed from the other countries, the death toll ratio is completely changed. At the moment is reported as 0.5 percent instead of the extremely higher in the beginning – 10 percent. Actually, the current ratio is even lower because not all of the affected people are detected and reported.

The new strain is more virulent and characterized with the decreased ratio of the number of the affected to those carrying the virus asymptotically. It rises the necessity to adjust the parameters of the mathematical model describing the crisis according the new behavior.

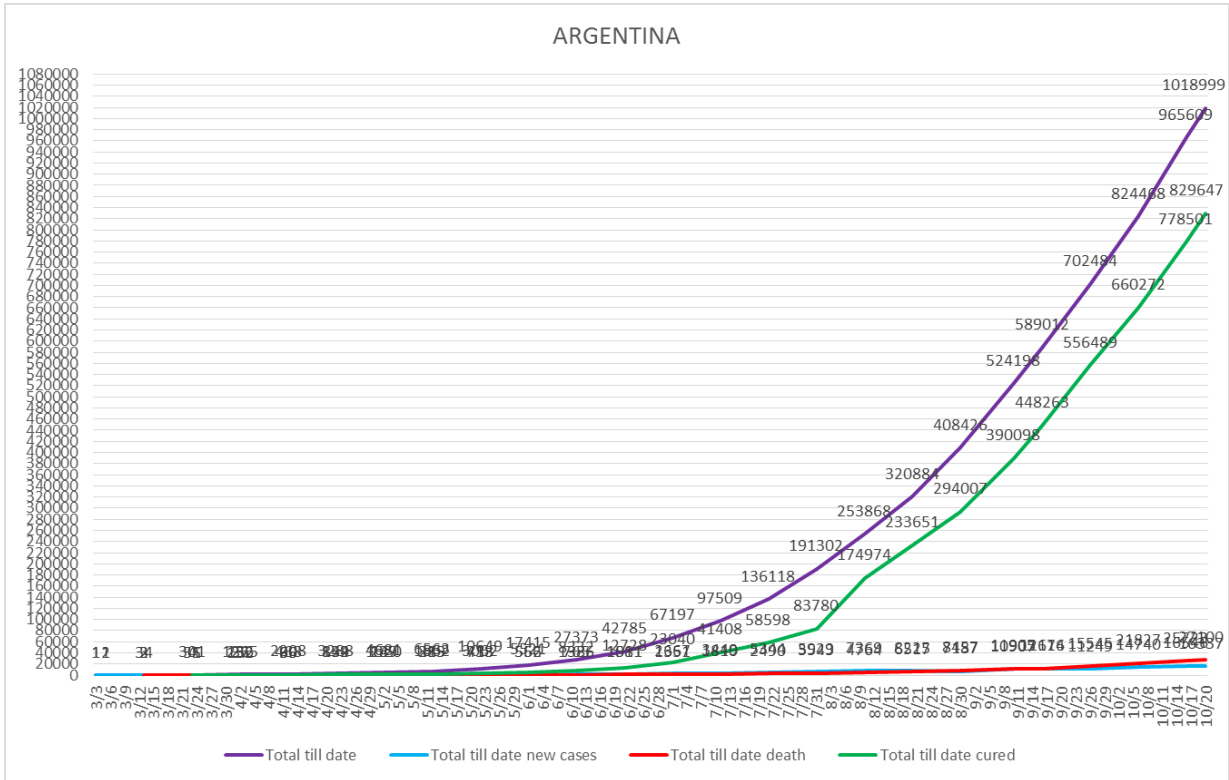
## MONITORING

### 1. ARGENTINA

The total number of infected, deaths, new cases and recoveries is as follows:

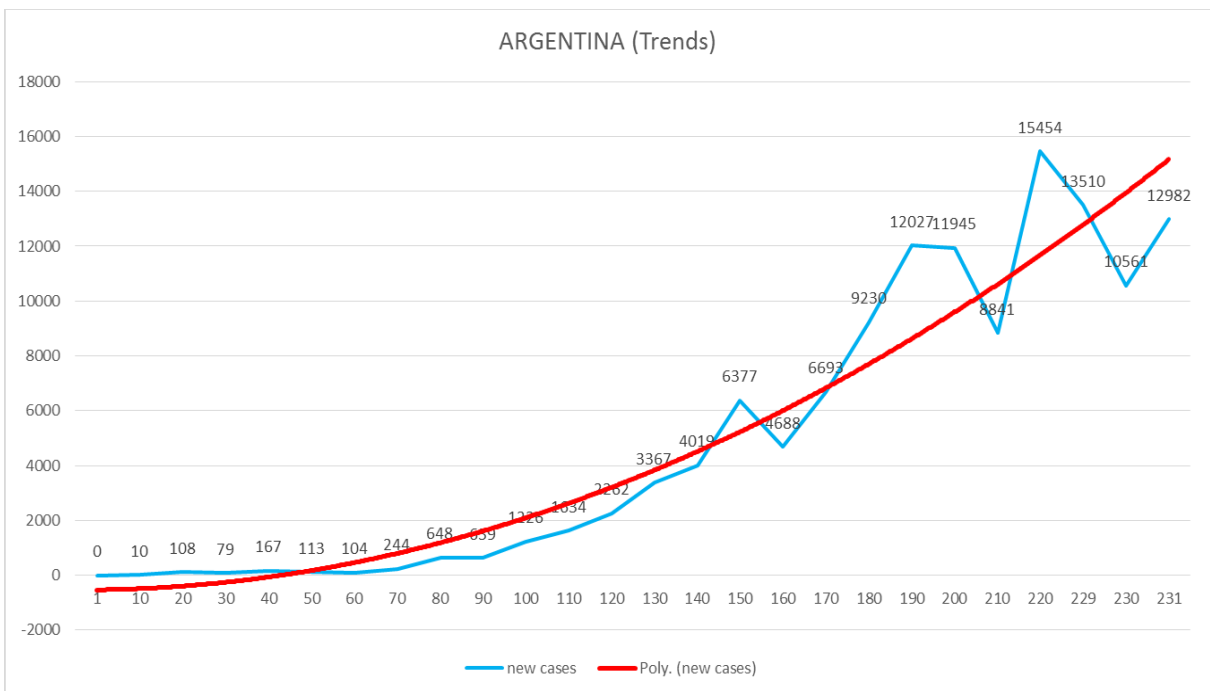
- Infected – 1 018 999 (Sixth in the World);

- Coronavirus deaths – 27 100 (2,6 %);
- New cases for the last 24 hours as of 20.10.2020 – 16 337;
- Recovered after illness – 829 647 (81 %).



Cases per 1 M of the population – 22 484.

Trends. The number of new cases is growing exponentially and uncontrollably at the moment.

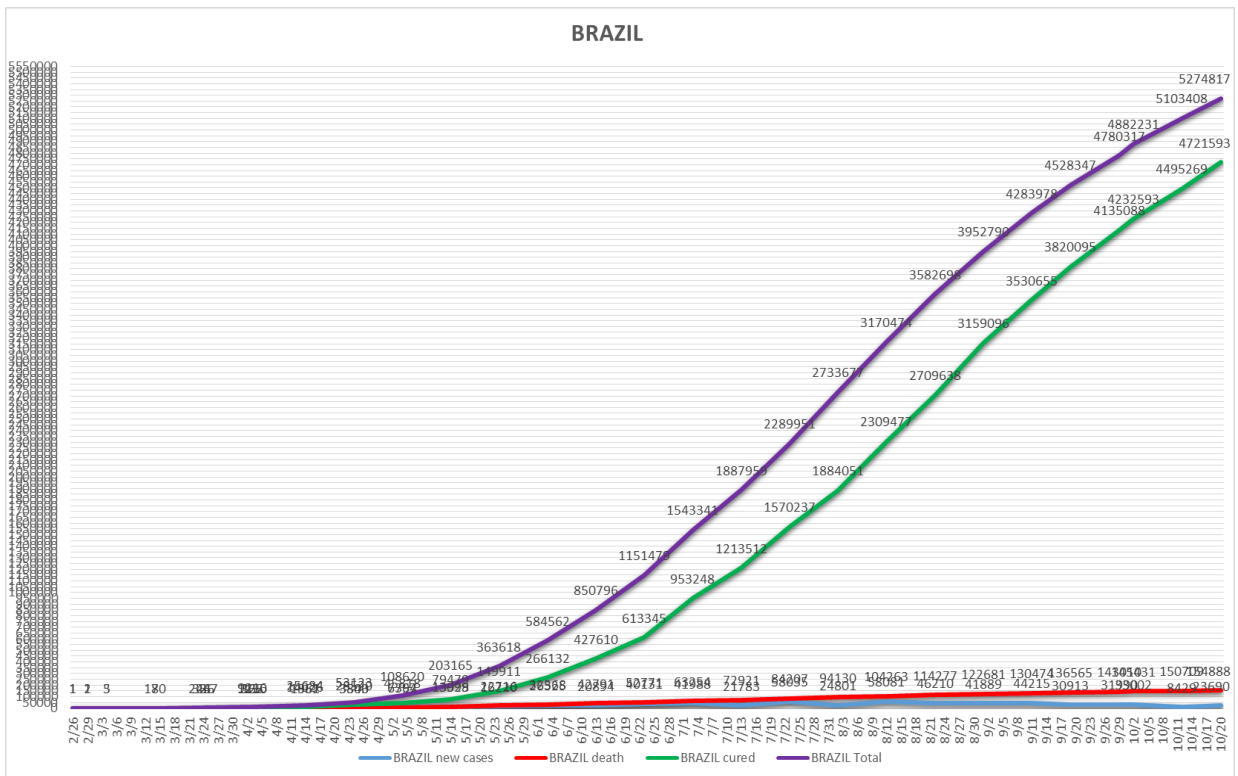


To date, there are no indications of a peak or approaching a peak in the coronavirus spread in Argentina.

## 2. BRAZIL

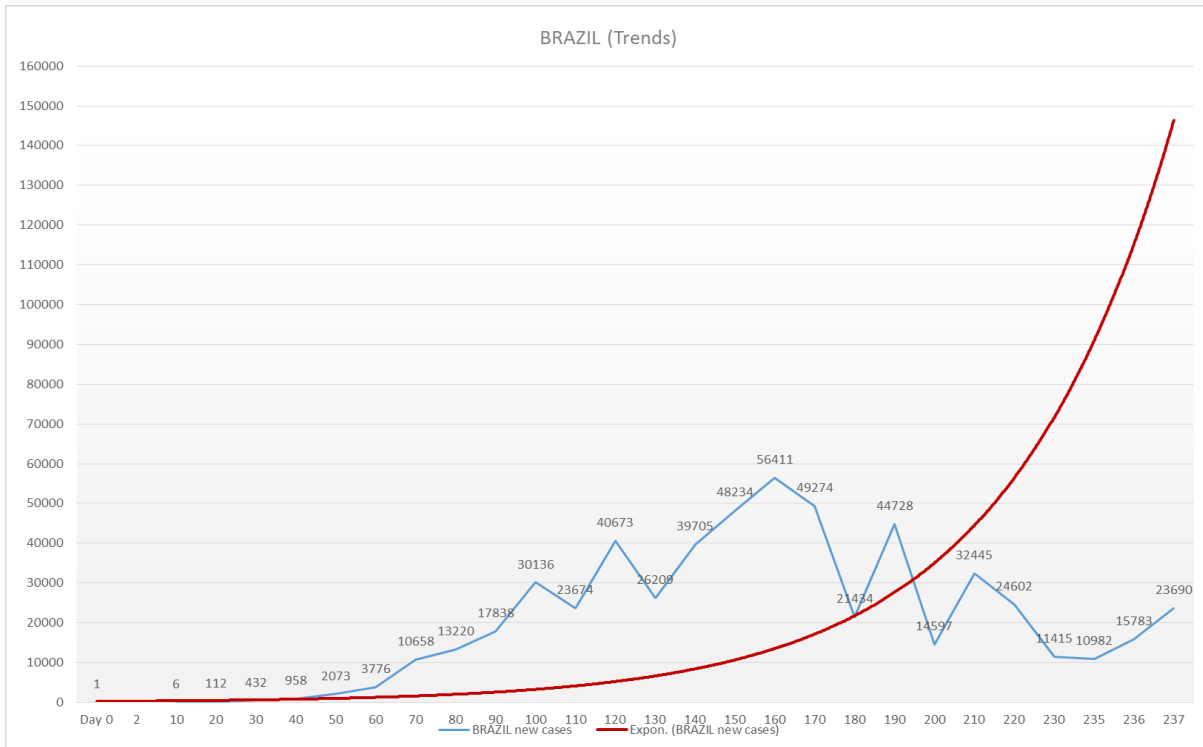
The total number of infected, deaths, new cases and recoveries is as follows:

- Infected – 5 274 817 (Third in the World);
- Coronavirus deaths – 154 888 (2.9 %);
- New cases for the last 24 hours as of 20.10.2020 – 23 690;
- Recovered after illness – 4 721 593 (90 %).



Cases per 1 M of the population – 24 762.

Trends. The number of new cases is growing exponentially and uncontrollably at the moment.



To date, there are no indications of a peak or approaching a peak in the coronavirus spread in Brazil.

### 3. CANADA

Newly confirmed COVID-19 cases reported by the provinces have brought the national total to 198,000 cases and over 9,700 deaths. Over 167,000 people have recovered — over 84 per cent of the remaining confirmed cases. More than 10.5 million tests have been performed to date.

Officials in Quebec, Canada’s worst hit province announced that more regions would become “red zones.” It means they will face the highest level of restrictions as health officials try to limit the spread of the virus.

The announcement comes after Quebec reported at least 1,000 daily cases for the sixth time over the past seven days. No other province has ever recorded 1,000 daily cases even once throughout the pandemic. It means that, restaurants and bars will only be able to offer takeout options.

Dining rooms and most entertainment venues will have to close, as well as gyms. High schools in red regions will also be given to Thursday to apply additional hygiene rules, such as full-time mask use, while extracurricular activities will be suspended.

Police checkpoints are being set up at five locations to ensure Quebecers are aware of the rules, such as if they attempt to travel between regions.

In Quebec, more than 1,000 new patients were identified for the sixth time over a seven-day stretch, as worrisome trends continue to develop in multiple regions of the province.

Ontario reports a record-high case spike, with 100 new patients linked to schools.

Alberta reports record-high spike, prompting new voluntarily restrictions for Edmonton zone.

Data from Alberta Health shows the number of new daily cases has continued to rise among five- to nine-year-old and has shot up, especially, among 10- to 19-year-olds.

Canada’s second wave of the COVID-19 pandemic is intensifying as it can be seen from the chart. As a whole, the nation is now adding 42 cases per million population a day, the highest level since May 9. The increase is being driven largely by Quebec, which is adding 87 cases per million population. It is doubling its number of new cases every 10 days, compared to Ontario, which is doubling its new cases every 13 days.

The number of infected people reached and surpassed the level of infected people from the first wave. The number of deaths is now relatively low, but some experts say there is a two-week delay between the increase in the number of infected people and the increase in the number of death toll.

Canada | Most recent numbers

REPORTED CASES	COMPARED TO PREVIOUS DAY	
Infected	198,148	0
Active*	21,276	0
Recov.	167,112	0
Deaths	9,760	0

\*infected people who have neither died nor been officially considered recovered

HOSPITALIZATIONS	COMPARED TO PREVIOUS DAY	
Currently*	1,007	0
ICU	205	0

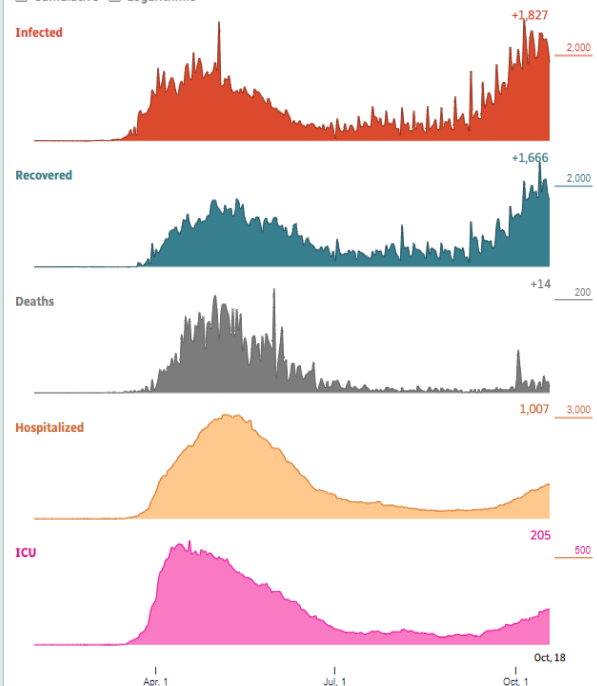
\*including people in ICU

PEOPLE TESTED

Thanks to the messages of several readers, we noted uniformity problems in the way people tested are counted in Quebec, in the other Canadian provinces and in the figures compiled by the Public Health Agency of Canada. We are working to correct this issue and to republish these numbers as quickly as possible for all provinces.

Canada | Reported daily cases

Cumulative  Logarithmic

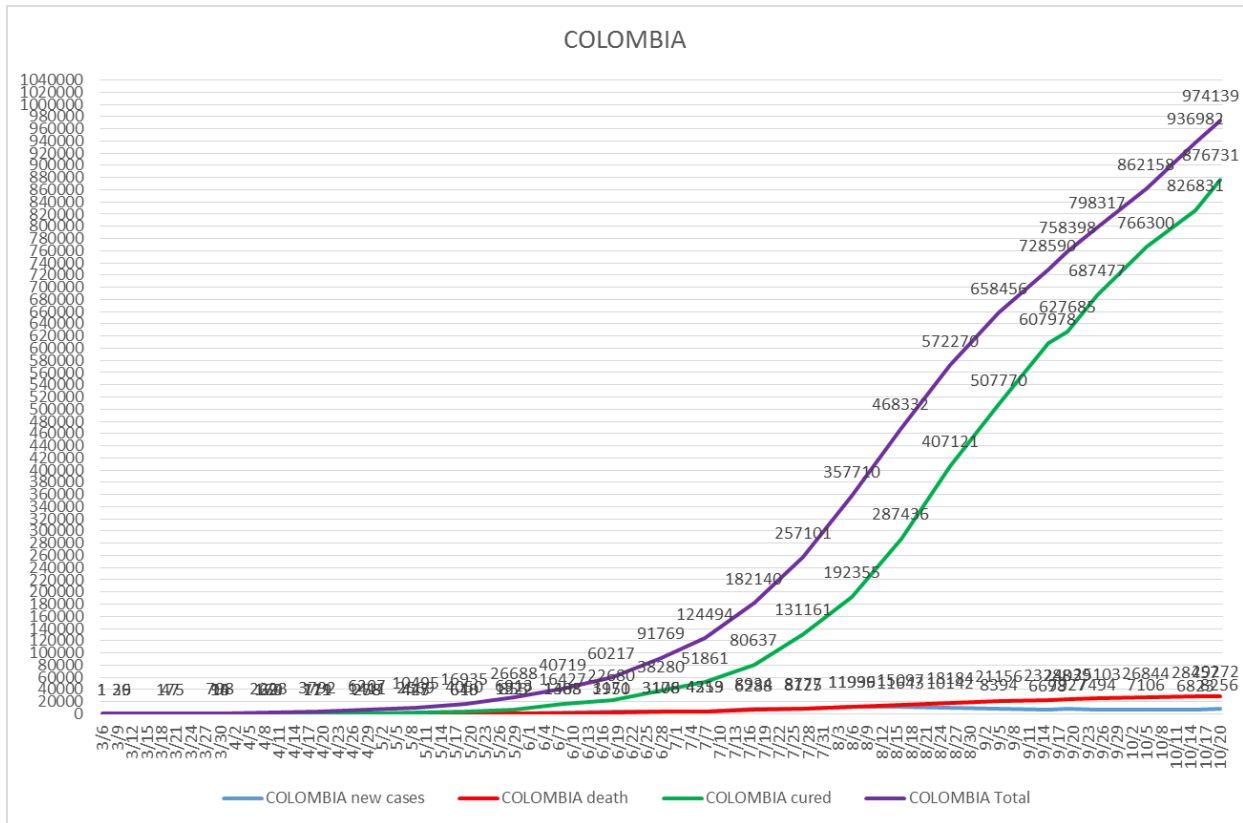


Now, after several weeks of increasing numbers of new cases, hospitalizations are growing in COVID-19 hotspots. Experts say it is only a matter of time before the death toll starts rising.

## 4. COLOMBIA

The total number of infected, deaths, new cases and recoveries is as follows:

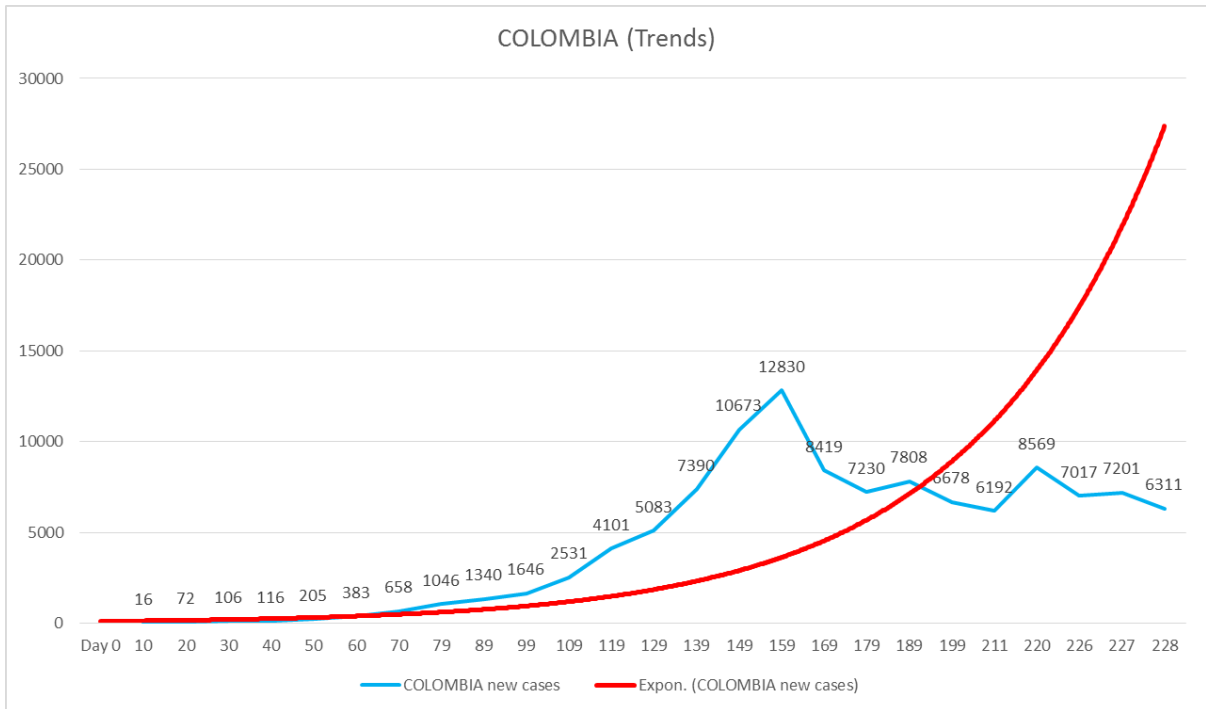
- Infected – 974 139 (Seventh in the World);
- Coronavirus deaths – 29 272 (3 %);
- New cases for the last 24 hours as of 20.10.2020 – 8 256;
- Recovered after illness – 876 731 (90 %).



Cases per 1 M of the population – 19 083.

Trends. The number of new cases is growing exponentially and uncontrollably at the moment.





To date, there are no indications of a peak or approaching a peak in the coronavirus spread in Colombia. The number of recovered people is notable.

## 5. FRANCE

France has reported a large jump in new Covid-19 cases ahead of a night-time curfew being imposed on Paris and eight other cities on Saturday.

A further 32,427 infections were confirmed on Saturday, up from 25,086 the day before. New restrictions were announced on Wednesday by President Emmanuel Macron to combat the soaring infection rate across France.

Residents of Paris, its suburbs and 8 other cities including Marseille and Lyon will not be able to leave their homes without "valid" reason between 21:00 and 06:00 from Saturday for at least four weeks. Mr Macron said he aimed to reduce the daily rise in cases to 3,000.

Prime Minister Jean Castex said police would be deployed to enforce the curfew, but people will still be allowed to leave for work or to visit hospital or the pharmacy.

On Thursday, French police raided the homes of senior government and health officials as part of an investigation into their handling of the pandemic.

The government has faced criticism over shortages of equipment and slow response times.<sup>3</sup>

While the executive is preparing to put new metropolises on maximum alert, as its spokesperson Gabriel Attal announced on Wednesday, the coronavirus epidemic continues to

<sup>3</sup> <https://www.worldometers.info/coronavirus/country/france/>

grow in France. Public Health France lists in its daily report 166 deaths linked to Covid-19 in hospitals over the past 24 hours. At least 34,048 people have succumbed to the disease since the start of the epidemic in France, including 23,036 in hospitals.

Some 26,676 people have tested positive for the new coronavirus since Tuesday and the test positivity rate (proportion of positive people out of all those tested) continues to increase, also indicates Public Health France. It stood at 13.7% on Wednesday (it was 13.6% on Tuesday).

The number of new intensive care admissions also continues to increase. This indicator is particularly observed by the authorities, who fear an influx of patients who would clog emergency and intensive care departments.

This Wednesday, there are 1,584 new admissions over a week, specifies the SPF online database. The current national capacity is around 5,000 intensive care beds. In its report for the day, the government indicates that 2,239 people are currently in intensive care, including 284 admissions since the day before.

In all, 9,375 patients have been admitted to hospital in the past week, due to contamination with the virus. This means that there are currently 13,162 people infected with the coronavirus, currently hospitalized, or 1,754 more in 24 hours.

Finally, 1,852 new clusters (foci of infection grouping together "at least three confirmed or probable cases, in a period of seven days", according to the definition given by Public Health France) are under investigation, that is to say 139 more than on Tuesday.<sup>4</sup>

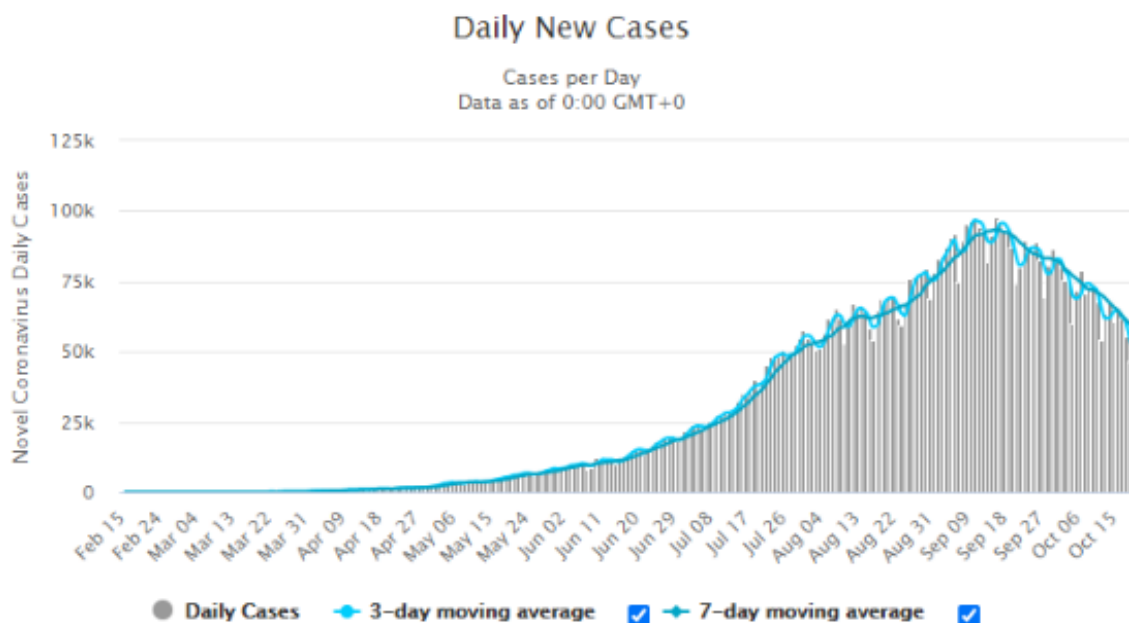
## 6. INDIA

As of 21 October, India remains the second worst affected country in the world by the COVID19 pandemic. However, the positive trend that was noticed at the beginning of October continued and the number of the daily new cases and daily deaths steadily decreased during the last two weeks. The daily new cases which have been above 80 000 and even above 90 000 in September, dropped below 60 000 during the last week. 17 October was the last day when India registered more than 60 000 new infections. The active cases also decreased significantly to less than 800 000 during the last week (in comparison with more than 1 000 000 at the second half of September). Not surprisingly, the daily deaths that numbered over 1 100 at the end of September dropped below 900 in October and during the last week varied from 600 to 700. Nevertheless, the COVID19 crisis in India

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<sup>4</sup> <https://www.leparisien.fr/societe/sante/coronavirus-en-france-pres-de-27000-nouveaux-cas-et-166-deces-en-24-heures-21-10-2020-8404368.php>

remains serious and on 10 October the country reached 7 000 000 infections. As of 21 October 2020, India has totally 7 705 158 registered COVID19 cases, 716 710 of them active and 116 653 deaths.



The positive trend further encourages the Indian government to continue its policy of lifting pandemic-related restrictions. Despite the criticism, this policy was applied even in September when COVID19 trends were very negative. As of today, many important businesses resumed work with additional precautions, including the entertainment and tourism. Only the schools so far remain closed and this will continue at least until 01 November.

There are reports that the government's policy to lift as many restrictions as possible has a positive impact on the Indian economy that was negatively affected by the lockdown measures enforced during the first wave of COVID19. The Governor of the Reserve Bank of India even declared that "India's economy is almost at the doorstep of revival process" and encouraged banks and non-banking financial companies to raise capital to ensure adequate credit availability for businesses once the revival took hold. He added that the Indian government would have to revisit its fiscal roadmap once the worst effects of the pandemic would be contained.

## 7. ISRAEL

The number of infected in the country reached a total of 306,503 cases of coronavirus and 2,278 deaths (low death rate 0,8). Israel remains twenty fourth in the world in this indicator. The share of the recovered is approximately 99.2 percent of the total number of infected in Israel.

Daily new cases 1131 on 20 OCT.

Health Minister Yuli Edelstein admitted that authorities were falling short in their mission to keep schools from operating in ultra-Orthodox areas, as Haredi schools and yeshivas opened illegally for a second day Monday, including in high-infection areas.

Schools in Jerusalem, Elad and other ultra-Orthodox areas belonging to the Talmud Torah system were open again Monday, according to Hebrew media reports. However, schools nationwide are officially shut due to virus restrictions, hundreds of Haredi elementary and high school yeshivas — including in high infection areas — have opened in defiance of the law at the order of a senior rabbi, with many ultra-Orthodox officials justifying the move and police only sporadically enforcing the restrictions.

On Saturday, Rabbi Chaim Kanievsky, a top rabbi in the non-Hasidic Lithuanian ultra-Orthodox community in Israel, instructed schools to reopen in defiance of government decisions, leading hundreds of schools to illicitly open their doors.

The opening of schools is seen as a massive danger, with many of the ultra-Orthodox areas having high infection rates and indoor spaces understood to be major virus incubators. Schools in the rest of the country have remained shut for that reason.

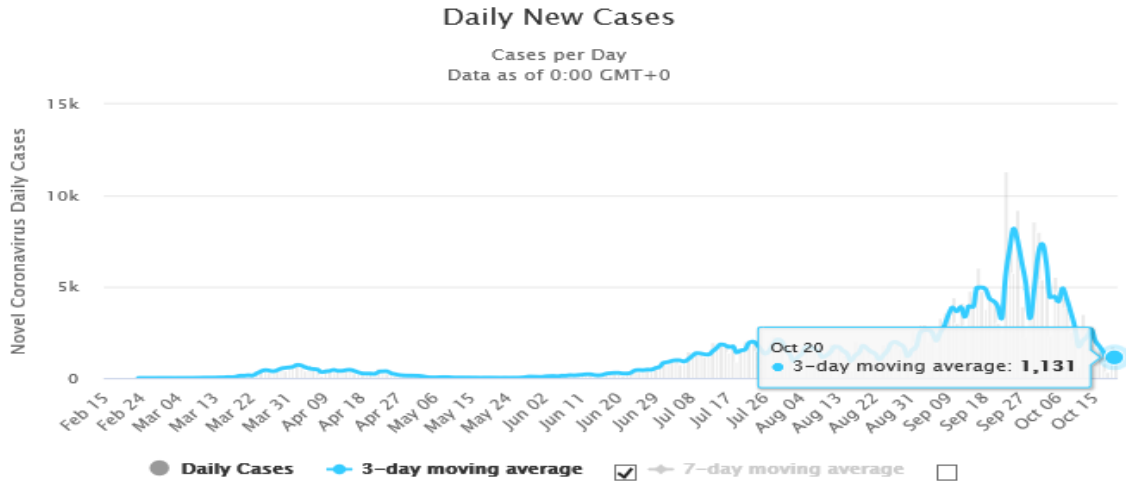
Shares of tests coming back positive among the ultra-Orthodox have been substantially higher than among the general population.

The Israel Institute for Biological Research announced Monday that it has named its coronavirus vaccine candidate Brillife. The “bri” is the first part of the Hebrew word for health; the “il” stands for Israel and “life,” explained IIBR director-general Prof. Shmuel Shapira.

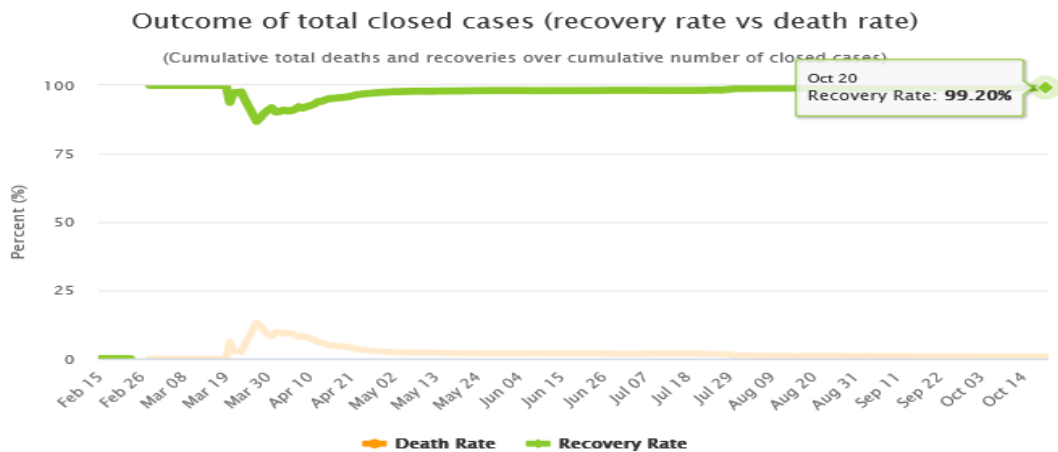
Defense Minister Benny Gantz visited the institute in Ness Ziona on Monday to receive an update on the vaccine’s progress. He was informed that the team is on schedule to start Phase 1 human trials at the end of the month. Gantz said that if the process is successful it stands to benefit the entire State of Israel and possibly the whole world.

Phase 1 human trials are expected to take place at Hadassah University Medical Center in Jerusalem and Sheba Medical Center at Tel Hashomer. Earlier this month, the hospitals told The Jerusalem Post that they had begun recruitment of the first 100 health individuals who will participate in the trial. If the safety of the product is proven in Phase 1, another 1,000 people are expected to be recruited to take part in a Phase 2 study. That should happen sometime in the spring.

## Daily New Cases in Israel



## Outcome of Cases (Recovery or Death) in Israel



**SOURCES:**

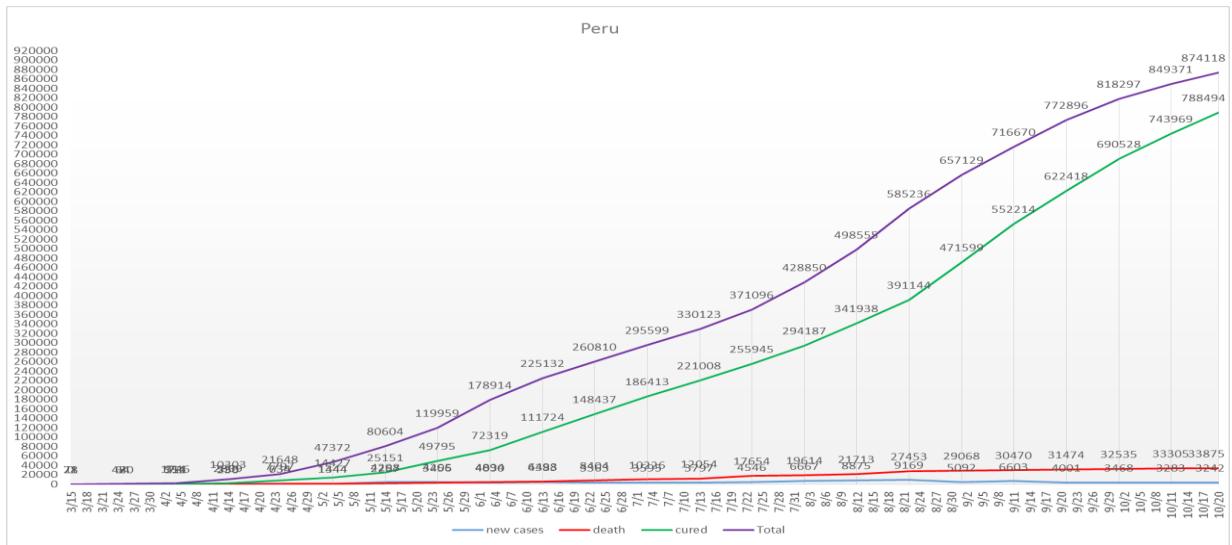
- <https://www.ibtimes.com/israel-returns-lockdown-jewish-new-year-begins-amid-rising-covid-19-cases-3048217>
- <https://www.msn.com/en-us/news/world/israel-to-revert-back-to-full-lockdown-as-coronavirus-cases-climb/ar-BB19aUNA>
- [https://en.wikipedia.org/wiki/COVID-19\\_pandemic\\_in\\_Israel](https://en.wikipedia.org/wiki/COVID-19_pandemic_in_Israel)

## 8. PERU

The total number of infected, deaths, new cases and recoveries is as follows:

- • Infected – 874 118 (Ninth in the World);
- Coronavirus deaths – 33 885 (3.9 %);
- New cases for the last 24 hours as of 20.10.2020 – 3 242;

- Recovered after illness – 788 494 (90 %).



Cases per 1 M of the population – 26 400.

Trends. The number of new cases is growing exponentially and uncontrollably at the moment.

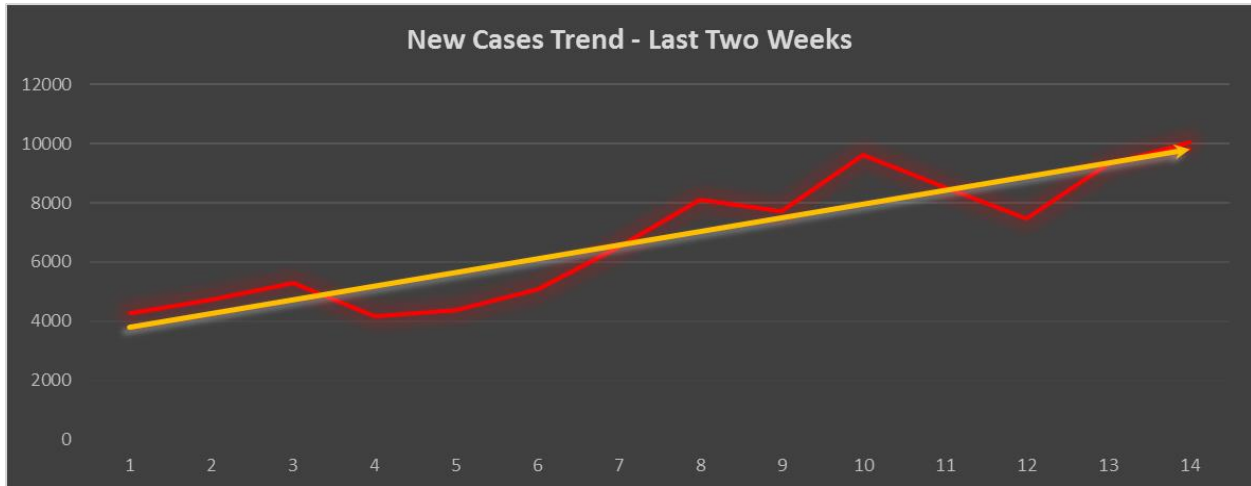


To date, there are no indications of a peak or approaching a peak in the coronavirus spread in Peru.

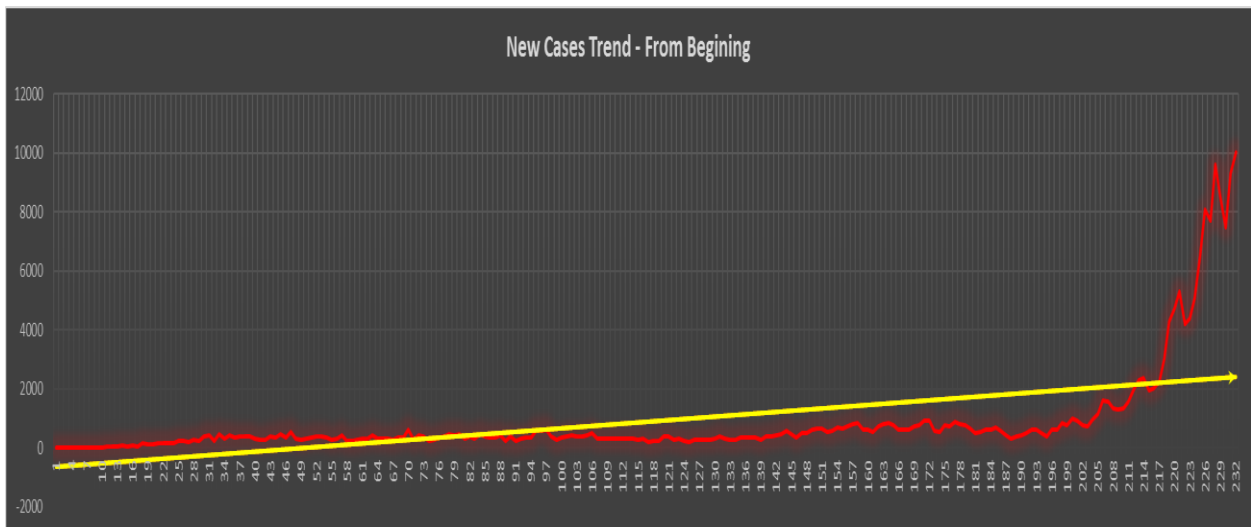
## 10. POLAND

From the beginning of pandemic number of infected people has grown and reached 202 579 (+ 95 260), disease trend rate is much higher comparing to previous period and is far above

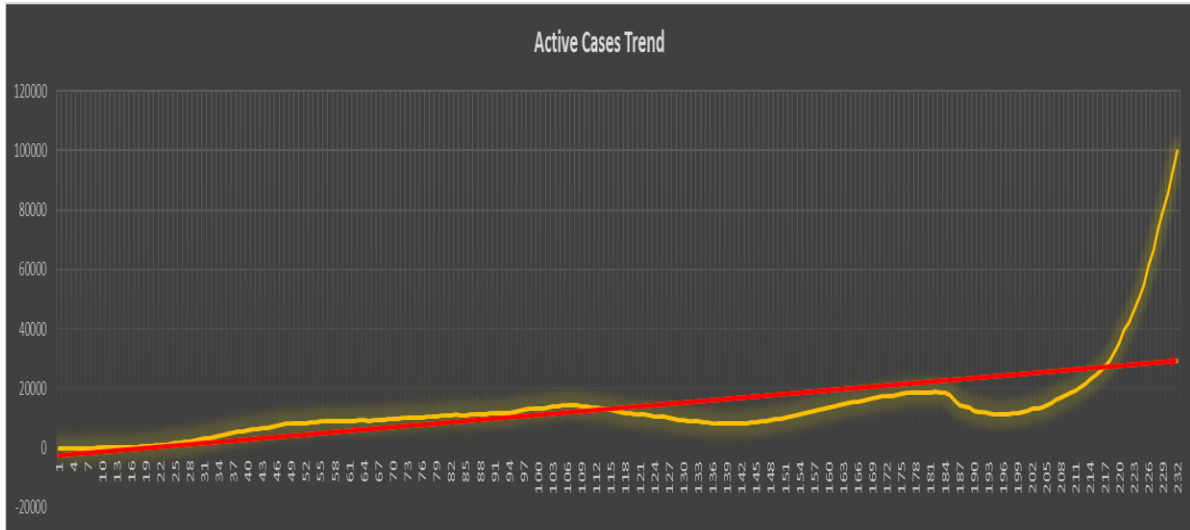
linear trend line. Currently average number of infected is 6 998 (recently 1 885) people a day during last two weeks, which placed Poland on 11th place in Europe and 16th on the world. However, during last week Poland reached next daily record of new cases, 10 040 on 21st of OCT 2020.



Now number of new cases is much higher than ever from the beginning of pandemic and leveraged average number of daily cases to around 7 000.



Number of active cases trend line started to grow, and now is close to 100 000 cases and much above overall trend line.



Number of tests done so far is 4 109 390 / +575 693 from last report. Reported number of people cured from coronavirus so far – 98 884 / +23 538 from last report which is one the same level like previous period. 3 851 (+1 059) people died so far.

***Morbidity rate by district in Poland***

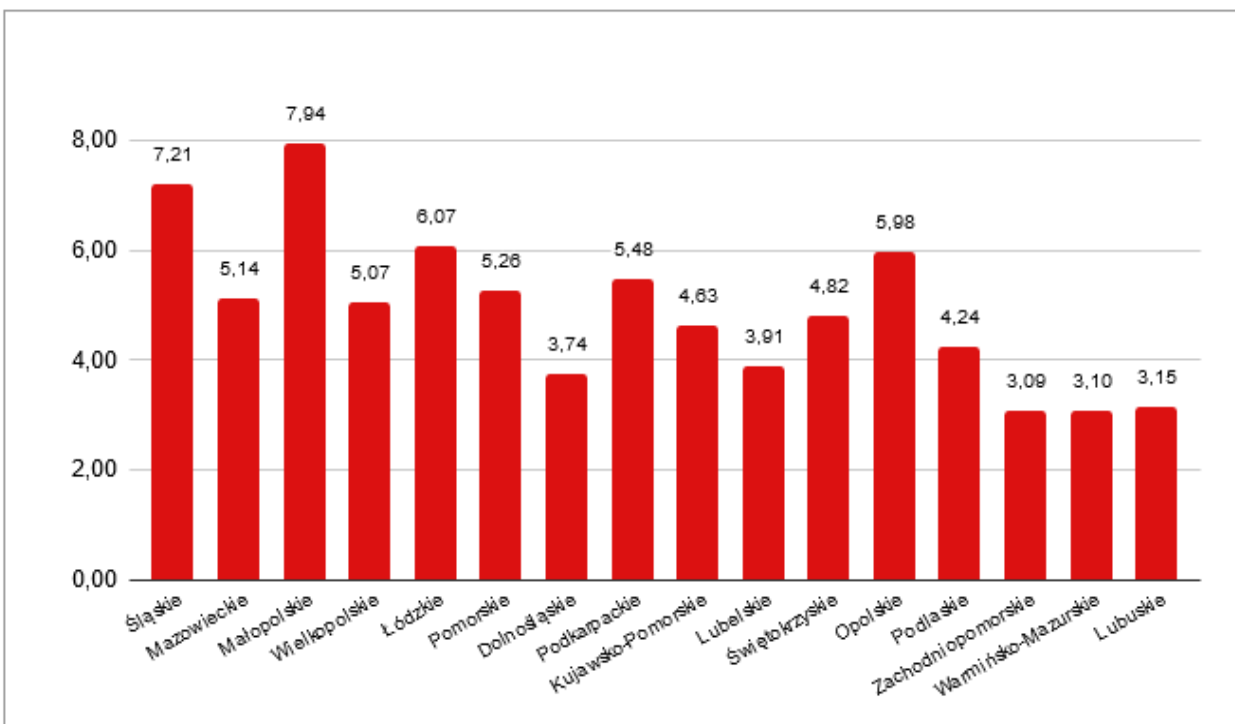
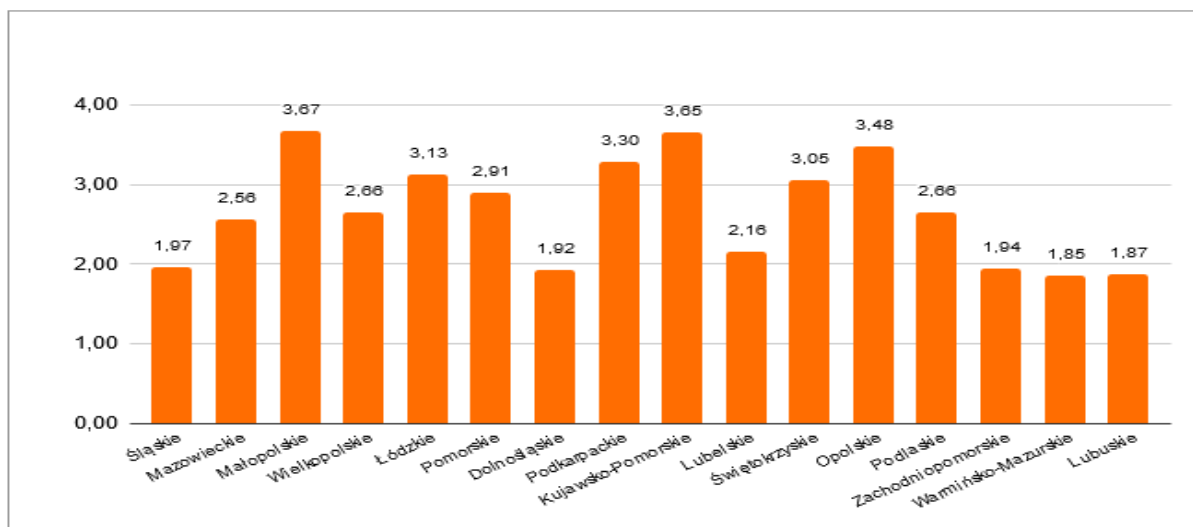


Chart above presents morbidity rate divided by district. This rate is much higher than previously and leading district (Małopolskie) is close to eight, which means that one infected person statistically can transmit the virus to eight other people.



**Active cases per 1k inhabitants**

It is quite visible that pandemic is escalating in Poland and Government is gearing up for a massive surge in coronavirus infections, looking for beds and staff everywhere. It was announced that there would be 16 temporary hospitals dedicated only for COVID-19 patients. First, one is being built at the National Stadium in Warsaw. Ultimately, there will be 2 thousand places, 500 places are being prepared so far. Patients will go there if there is no longer room for them in regular hospitals.

Parliament is working about important act of law, which has latest coronavirus package, or rather an amendment to several laws, contains many necessary provisions:

- statutory regulation of wearing masks;
- fines for lack of face masks;
- doctors who treat COVID-19 patients will be exempt from criminal liability if they make an unintentional mistake;
- medical personnel sent to quarantine or confinement will be fully paid;
- each member of the medical staff involved in the fight against COVID-19 will receive an additional 100% salary (currently it is 50%).

According to the forecast, the number of people in hospitals may exceed 14,000 by the end of the month, which means that field hospitals at the National Stadium and in each voivodship will become an urgent solution.

The dynamics of the increase in active cases since the end of September shows most strongly where Poland is in the epidemic: there is no question of weakening, either is at the top (which, paradoxically, would not be the worst news), or is just climbing to the top.

## 11. PORTUGAL

In Portugal, the number of active cases of infection with the coronavirus has decreased on 20 October for the first time since August, with 39,625 cases reported.

According to data from the daily monitoring (by the national directorate for health) of the Covid-19 pandemic, the last time there was a decrease in the number of active cases was on 15 August, when 12,621 cases were reported. The official data provided since the beginning of the pandemic show that the number is close to the highs recorded in April.

On the other hand, the epidemiological bulletin of 20 October also reveals that the number of recovered cases exceeds the number of confirmed ones: 1932 cases of recovery of patients and 1876 confirmed cases. Since the beginning of the pandemic, 61 898 people have recovered from the disease.

The recent bulletin shows Portugal has 1237 people in hospital, a figure close to 19 April, when 1243 people were hospitalised due to the infection with the coronavirus.

The day with the highest number of hospitalisations so far was 16 April, with the registration of 1302 hospitalised people. Regarding intensive care, the data reveal that there are 176 people interned (12-20 October) in these units, the same number as on 27 April. The maximum number of internments in Intensive Care Units was registered on 7 April, the day on which 217 people were in these units.

Since the beginning of the COVID-19 pandemic, Portugal has recorded a total of 103 736 confirmed cases and 2213 deaths.

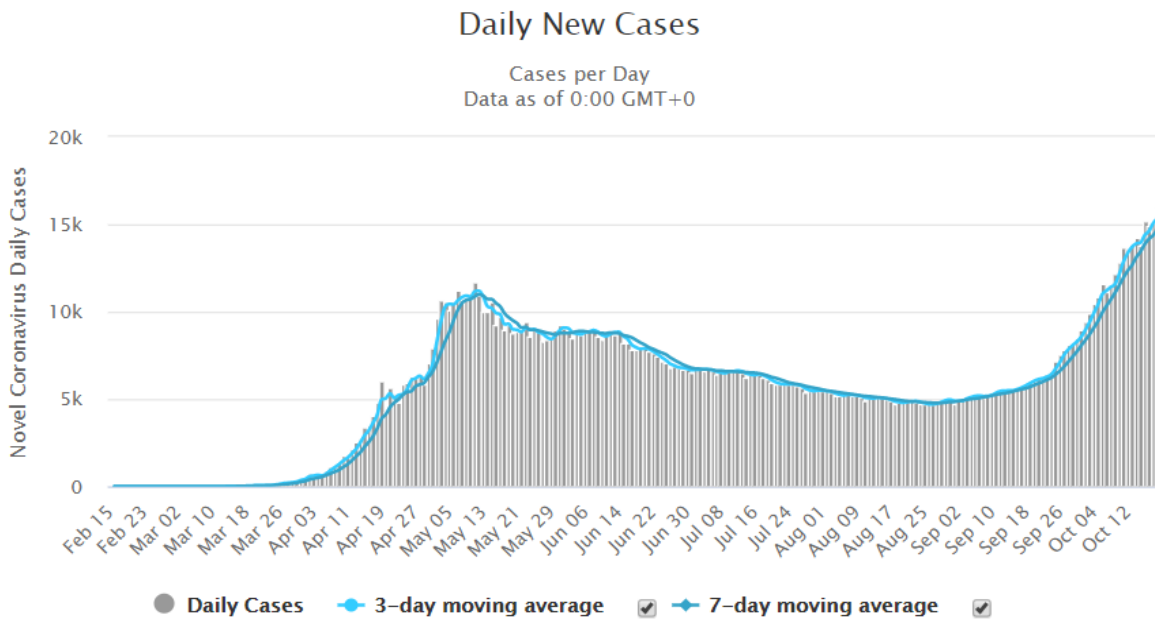
Tougher measures have been imposed in Portugal since October 15 to contain record levels of coronavirus cases, including stricter limits on gatherings and heavier penalties for rule-breaking establishments. Gatherings are limited to five people. Weddings and baptisms can be attended by a maximum of 50, but university parties are banned. Fines for businesses which do not comply with the rules will be doubled from an upper limit of 5000 to 10 000 euros.

Meanwhile it has been estimated that pandemic sets to leave lasting scars on the Portuguese economy, with the government predicting gross domestic product to contract 8.5% for 2020 year.

## 12. RUSSIA

A new anti-record has been broken in Russia (20 October) - nearly 16,000 new cases of coronavirus per day alone. This is the highest figure since the beginning of the epidemic in the country so far. The total number of people infected with COVID-19 reached 1,415,316, and the number of those recovered - 1,075,904. Health authorities warn that hospital beds for patients with coronary arteries in Russia are already running out. 90% of them are already filled, and in some regions the mentioned indicator is approaching 100% and the medics are sounding the alarm.

The most worrying situation is in Moscow, where the new cases of coronavirus are 5376. For this reason, the city authorities are discussing the closure of nightclubs and bars in the metropolis. Due to the worsening epidemic situation, the free transportation of pensioners and children in public transport in the capital was cancelled for two weeks. Moscow authorities are discussing the return of stricter measures against the spread of coronavirus in the metropolis. Students from 6th to 11th grade go on distance learning. Malls and cinemas are expected to close in the next 2 weeks.



Due to the proliferation of COVID-19, the mayor of Moscow issued a decree dismissing the students on a two-week vacation from October 5th to 18th. In addition, the amount of the fine was officially announced for Moscow companies that do not transfer at least 30% of their staff to work from home. They will pay up to 1 million rubbles or nearly 11,000 euros.

Russian authorities have given regulatory approval to a second coronavirus vaccine after early-stage studies. The peptide-based, two-shot vaccine, EpiVacCorona, was developed by the Vector Institute in Siberia and tested among 100 volunteers in early-stage, placebo-controlled human trials, which lasted more than two months and were completed two weeks ago. The volunteers were between 18 and 60 years old.<sup>5</sup>

Scientists developing the vaccine said that it produced enough antibodies to protect the person who had it from the virus and that the immunity it creates could last for up to six months.

An advanced study involving tens of thousands of volunteers that is necessary to establish safety and effectiveness of the vaccine was scheduled to start in November or December.

Deputy Prime Minister said that 40,000 people will take part in the advance studies of EpiVacCorona. It remained unclear whether the vaccine would be offered for a wider use while the trials are still ongoing.

Russia's first vaccine, Sputnik V, was developed by the Moscow-based Gamaleya Institute and approved by the government on Aug. 11, after early trials among 76 volunteers were completed. On 14 October, Russian President personally broke the news on national television and said one of his daughters had already been vaccinated, experienced slight side effects and developed antibodies.

As Russia boasted about being the first in the world to approve a vaccine, experts said that in line with established scientific protocol, much broader studies among tens of thousands of people were needed to ensure the safety and effectiveness of the vaccine before it is given widely.

Russian health authorities announced advanced trials of Sputnik V among 40,000 volunteers two weeks after it received government approval. Officials also said that vaccination of risk groups, such as doctors and teachers, will be carried out in parallel to the studies.

### **13. SPAIN**

The Spanish government is considering introducing a nighttime curfew across the whole of the country, in a bid to bring down coronavirus infections. The executive believes, however, that it would need to do so under a state of alarm given that there is no other option that would give it the legal framework to limit a fundamental right such as that of movement in this way.

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<sup>5</sup> [https://www.thehindu.com/news/international/russia-approves-2nd-coronavirus-vaccine-after-early-trials/article32858693.ece?utm\\_source=pushnotifications&utm\\_campaign=pushnotifications&utm\\_medium=ALL\\_USER](https://www.thehindu.com/news/international/russia-approves-2nd-coronavirus-vaccine-after-early-trials/article32858693.ece?utm_source=pushnotifications&utm_campaign=pushnotifications&utm_medium=ALL_USER)

The Health Ministry as pointed to the fact that other European countries are considering curfews confirmed the possibility on October 20, 2020. However, the central government states that it would not go ahead with a countrywide curfew if there is not an agreement to do so among all of Spain's regions.

Article 116 of the Spanish Constitution describes three legal categories for emergency situations: state of alarm, state of emergency and state of siege. It is the first situation that was implemented by the Spanish government at the outset of the health crisis in March 2020, paving the way for one of the strictest coronavirus lockdowns in the world.

Presently Spain nears the milestone of one million confirmed coronavirus infections. Since the start of the pandemic, a total of 974 449 coronavirus cases have been detected in the country.

On October 19, it was registered a new record high number of cases reported in a single day. There the Health Ministry documented 37 889 cases, the highest number seen in one daily reports. Previously, the peaks in the data were registered in late September, with around 31,000 cases.

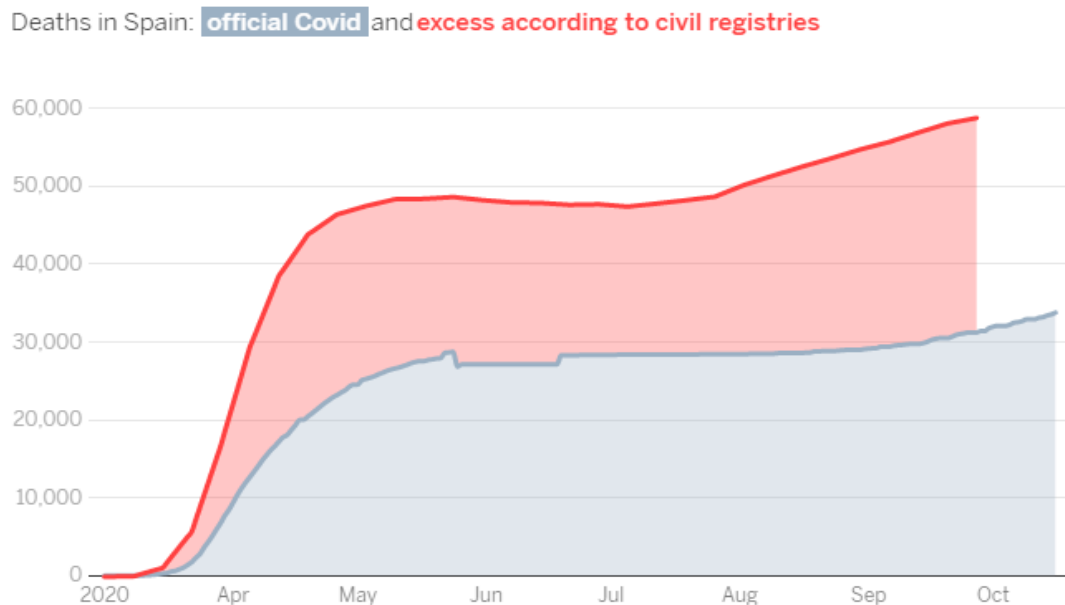
The 14-day cumulative number of coronavirus cases per 100,000 inhabitants also came in at a record high, at 312. There are, however, large differences between the regions when it comes to this indicator. The regions that exceed the 500-case barrier are Navarre (945 cases), Melilla (713), La Rioja (531) and Aragón (509). This data point is one of the three criteria currently being used by the central government and the regions as triggers for stricter measures to be implemented, including perimeters confinements and social limits (the other two are the positivity rates of PCR tests and occupation levels of intensive care unit (ICU) beds). Only the Canary Islands, with 77 cases, is currently under the 100 level.

According to last report from October 19, Covid-19 related deaths were 459 over the last seven days. Statistics in Spain show 11,000 excess deaths during the second wave of the coronavirus, compared with the same period last year. Since these are deaths from all causes, the difference between the observed and the expected death count since July, using data from the National Statistics Institute (INE) based on civil registry records, could be partly explained by the summer heat.

But the Carlos III Public Health Institute, which runs a mortality monitoring system called MoMo, has only categorized 1 959 deaths as caused by heat this year, the same number as last year.

The 11,000 figure is twice the official coronavirus death toll notified by the Spanish

Health Ministry, which has registered 5,400 Covid-19-related deaths since July. The graph shows the evolution of both figures.



There are different factors that could explain the difference. On the one hand, the ministry only counts victims who tested positive for coronavirus. But at this point in time, there should be few people dying without a test, in contrast with the situation in March, when only individuals with clear symptoms were getting checked for the virus.

It is also possible that the information released by the ministry is incomplete or not up to date. It is a known fact that the SiViES system used by regional authorities to send data to the Health Ministry shows half as many Covid-19 hospitalizations as the count made by the actual hospitals. A similar problem could explain the difference between the 5,400 deaths relayed by SiViES and the 11,000 excess deaths observed by civil registries across Spain compared with the same period last year. If the average of the last five years is used, the difference is 10,800 excess deaths.

A third possibility is that the excess death count includes deaths from other causes. This could be individuals whose illnesses went undiagnosed during the crisis months, or who received poorer medical treatment. Such cases would not be part of the official Covid-19 death tally, yet could be attributed to the overall health crisis caused by the virus.

## 14. UNITED KINGDOM

Britain –the worst affected European country during the COVID-19 pandemic with

nearly 44,000 related deaths is now seeing a second wave of the virus, recording 21,331 new cases and 241 deaths on 20 October.

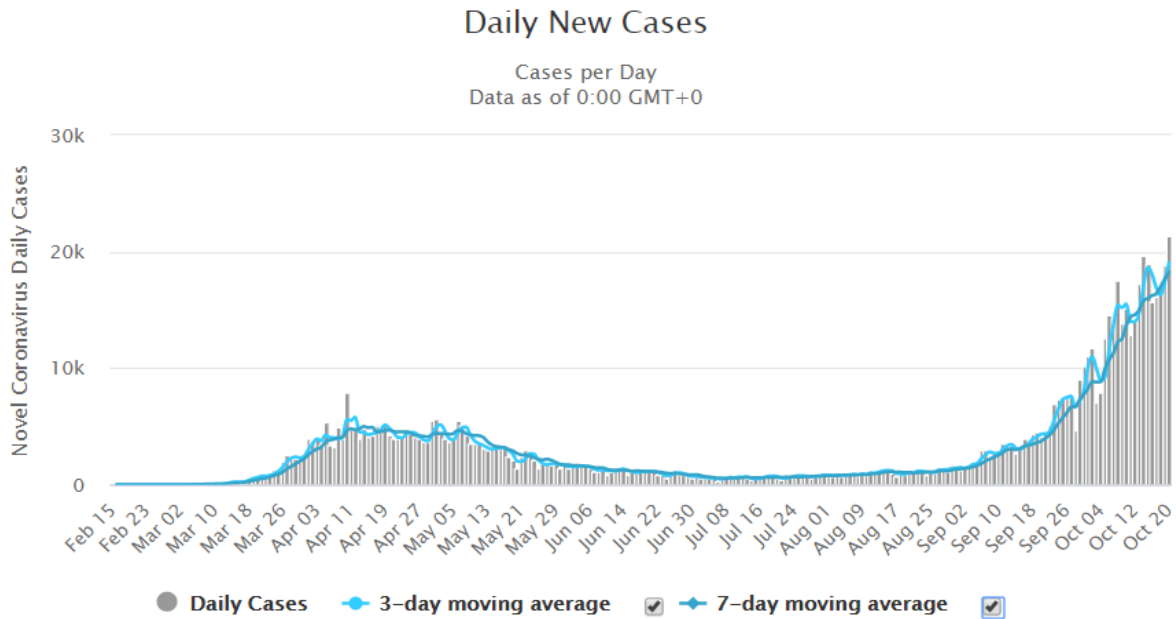
Since last Friday, Wales has banned the entry of people from other areas with a high prevalence of the virus. 950 new cases of coronavirus were reported in Wales on Sunday. Since the start of the pandemic in Wales, 35,600 people have been reported infected, 1,700 of whom have died.

This is the second of a total of four historical and geographical areas of Britain, in which quarantine is required due to the coronavirus, notes the Associated Press. As of Friday, Northern Ireland, with a population of 1.9 million, has closed pubs and restaurants for four weeks and school holidays have been extended by 14 days. More than half of the population in England - or about 28 million - currently live under local measures.

British Prime Minister said on 20 October he would impose tougher lockdown restrictions on the Greater Manchester region in northern England despite failing to reach a deal on funding support with local leaders. He is resisting pressure for a second national lockdown, fearful of the disastrous economic effects, and instead pursuing a localised strategy of imposing three tiers of increasingly stringent restrictions in virus hotspots in England. The plan has been resisted by leaders in the north, where the worst of the latest outbreaks are concentrated, who say the government is not providing them with enough financial support to cope with the tightest restrictions. Johnson unilaterally imposed top tier restrictions - which include the forced closure of pubs which do not serve food and an advisory not to travel in or out of the region - after talks with local leaders about a voluntary move into the tier failed. <sup>6</sup>

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<sup>6</sup> <https://www.channelnewsasia.com/news/world/uk-imposes-tougher-covid-19-measures-on-manchester-13323466>



Researchers in the U.K. are set to deliberately infect young, healthy volunteers with SARS-CoV-2. The challenge study, which has £33.6 million (\$43.6 million) in government support, could shed light on how people react to the virus and accelerate development of vaccines. Challenge studies have been used to study vaccines and medicines against influenza and a range of other viral pathogens. The studies entail the infection and close monitoring of volunteers in highly controlled environments. Advocates of the approach have pushed for its use in the study of vaccines against COVID-19 since early in the pandemic in the belief it can accelerate development.

Now, the U.K. has taken a big step toward running the first COVID-19 challenge study. Working with funding from the U.K. government, specialist contract research organization hVIVO, Imperial College London and The Royal Free Hospital are set to start a challenge study in January.

The timing of the study and nature of its first stage means the move may come too late to have any effect on when vaccines become widely available. Initially, the researchers will focus on identifying the smallest amount of the coronavirus that is needed to cause COVID-19 in up to 90 paid volunteers aged 18 to 30. The study will take place at a specialist Royal Free Hospital unit in London. <sup>7</sup>

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<sup>7</sup> <https://www.fiercebiotech.com/biotech/u-k-set-to-infect-volunteers-coronavirus-world-s-first-covid-19-challenge-study>



Data from the study, which still requires regulatory and ethical approval, are expected in May. The use of the challenge model to study how vaccines work in humans can only begin once data from the initial characterization stage are available.

By then, multiple companies may have shown that their COVID-19 vaccines prevent infection in large phase 3 clinical trials, positioning the U.K. and other countries to embark on mass immunization programs. Even so, people involved in the study see value in developing the challenge model.

## 15. USA

The United States has reported more than 8.2 million cases and more than 219,500 deaths. Eleven states set records for new cases over the just-ended seven-day period while three states had a record number of deaths. Over the past week, there have been an average of 56,615 cases per day, an increase of 30 percent from the average two weeks earlier. Case numbers in the United States are rising rapidly as states in the Midwest and Rocky Mountains struggle to control major outbreaks, and as new hotspots emerge elsewhere in the country.

The national trajectory is only worsening. Wisconsin has opened a field hospital. North Dakota, which not long ago had relatively few cases, now has the most per capita in the country. In addition, across the rural West, states like Alaska, Wyoming and Montana that had long escaped the worst of the pandemic have seen case numbers soar to alarming new records.

Deaths, though still well below their peak spring levels, averaged around 700 per day by mid-October, far more than were reported in early July. Deaths tend to rise a few weeks after a rise in infections, as there is typically a delay between when people are infected, when they die and when deaths are reported.

American life has been fundamentally reordered because of the virus. Concerts, parades and high school football games continue to be called off. Countless people have found themselves jobless and struggling to afford housing. Many schools and colleges have held few or no in-person classes this fall. More than 178,000 cases have been linked to colleges and universities over the course of the pandemic. Thousands more cases have been identified in elementary, middle and high schools.

Case numbers are rising nationally as uncontrolled outbreaks continue to spread in the Upper Midwest and Rocky Mountains, and as the Northeast sees early signs of a resurgence.

In New York, officials fear clusters in some neighborhoods and suburbs could spread

further. Schools and non-essential businesses in nine New York City neighbourhoods will close again due to an uptick in coronavirus cases, Mayor Bill de Blasio announced.

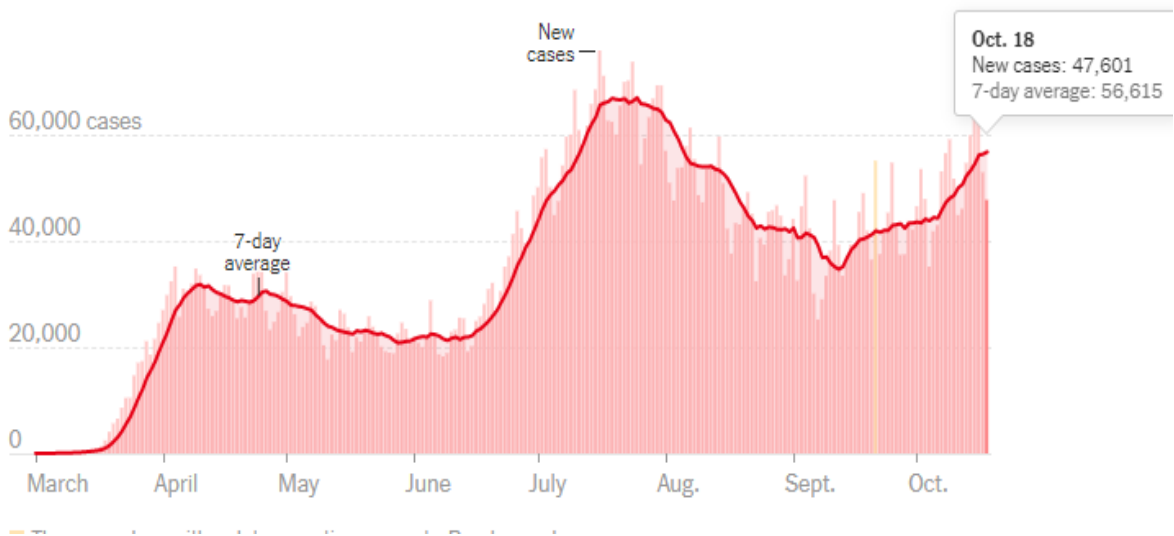
In addition, in Utah, Montana, Wyoming and other Western states, new infections have emerged at or near record levels.

The coronavirus has left no state unscathed. However, its impact has been wildly uneven. Officials in California, Florida and Texas, the states with the most known infections, have identified a combined 2.4 million cases. In a few less populous states, including Vermont and Maine, there are fewer than 10,000 patients. Moreover, in some remote counties, total cases number in the single digits.

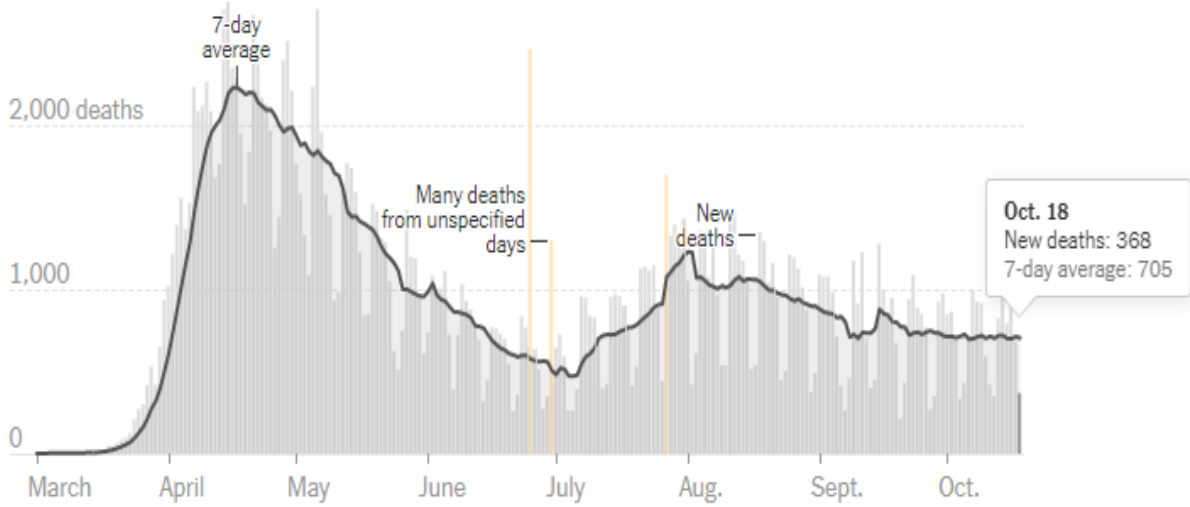
Nevertheless, unlike in the early days of the pandemic, it is not so simple to say that big cities have been hit hardest. For much of the fall, small and mid-sized cities in the Upper Midwest and West have added cases at the highest rates. In addition, on a per capita basis, many places with the most cases have been smaller metropolitan areas in the Southwest.

The USA remains the most severely infected country in the world by the COVID 19 in relation with new cases and death tolls.

**New reported cases by day in the United States**



### New reported deaths by day in the United States



As the virus continues to circulate widely within the United States and thousands of new cases are still being identified each day true normalcy remains a distant vision.

## CONCLUSIONS

1. The number of confirmed COVID-19 cases across the planet has surpassed 40 million, more than 1.1 million deaths and more than 9 million active cases.
2. With the flu season looming, the rate of new cases in the U.S. and other countries is rising at rates not seen in months.
3. Worldwide, deaths have fallen slightly in recent weeks to about 5,200 a day, down from a peak of around 7,000 in April.
4. So far, in the new surges, deaths have not increased at the same pace as infections.
5. There are evidences that second COVID19 wave is now ongoing across Europe and around the World.
6. The new measures have being taken across Europe in stopping COVID-19 from overwhelming its hospitals. Those include new requirements on mask-wearing in Italy and Switzerland, closing schools in Northern Ireland and the Czech Republic, closing restaurants and bars in Belgium, implementing a 9 p.m. curfew in France and having targeted limited lockdowns in parts of the U.K.
7. The Republic of Ireland will impose restrictions on level 5 coronavirus across the country for six weeks. It becomes the first country in the European Union to return to full quarantine.
8. Cases of the disease are continuing to surge in many countries. Some that had apparent success in suppressing initial outbreaks have seen infections rise again.
9. Asia and South America are the continents that currently have the highest number of daily-confirmed cases.
10. Until now 1 130 500 deaths from COVID-19 are recorded worldwide, almost 227 000 of which are from the United States, which has the world's highest death toll.
11. USA, India, Brazil, Russia, and Spain are the top 5 countries with the highest number of new cases per day. Mexico, Russia, Ukraine, Poland and Indonesia are the top 5 countries with the highest number of daily deaths. Therefore, India, USA and Brazil are still the 3 worst affected by COVID19 countries in the world.
12. The U.S. once again has the highest new case rate in the world. The seven-day daily average in the U.S. is nearing the 60,000 mark — the level the country maintained for weeks this past summer during an alarming surge.
13. New cases have gone up by nearly 30% from two weeks ago in the U.S

14. India has seen its rate of new cases fall in recent weeks, after a meteoric rise in August and September. More than 114,000 people there have died from COVID-19.
15. Governments are still looking for social and political responses to the COVID-19 pandemic and for striking the right balance between the restrictive measures to confine the pandemic and the measures to ease the economy.
16. Pandemic has significant socio-economic impact especially in India, Middle East, Africa and South America, which is already leading to growing unemployment and increasing poverty of local societies. This can trigger social dissatisfaction, widening differences between social classes and civil unrest.
17. There is no commonly established treatment for the new disease. There are several vaccines in process of development by different producers. The development of a proved and effective vaccine is expected in the spring of next year at the earliest.
18. This pandemic crisis is a unique opportunity to enhance further the solidarity between the alliance and the cooperation and coordination with other organizations such as EU and UN. NATO should demonstrate coherence and support in the current crisis by putting in place political and military measures, to ensure the long-term health of the alliance.
19. Most countries around the world rely on the so-called. antigenic tests, which show results within minutes, but are not as accurate as standard polymerase chain reaction (PCR) molecular tests, which are lacking in some places.

## **RECOMMENDATION (for improvement of emergency situation SOPs)**

Due to continuing spread of the coronavirus infection, with decision № 673 the Bulgarian Council of Ministers, on 25 September 2020 extended the declared emergency epidemic situation from 14 May 2020. As of 22 October 2020, an anti-epidemic measure was introduced by ministry of Health for wearing a mask or other means covering the nose and mouth outdoors. It will be valid in case of crowding and impossibility to observe a physical distance of 1.5 m from the citizens. All children over the age of 6 are required to wear a mask or other means covering the nose and mouth. It is not necessary to observe a distance of 1.5 m between the members of one household. Customers will be able to be served without a protective mask if mechanical partitions made of glass or other transparent material allowing disinfection are installed. In addition to the different measures declared by the government, one would expect that the state's healthcare system would react to the emergency situation and would change the way in which patients experiencing the well-known COVID19 symptoms would be treated, all the way from the early diagnosis to full recovery.

However, during the regular COVID19 research and analysis of the CMDR COE, experts from the center noticed that the way in which the Bulgarian health system is reacting to possible new COVID19 cases remains the same, as it would react to any other illness experienced by Bulgarian citizens. The Bulgarian citizens or country's guests who want to be tested for coronavirus, because of various reasons (work, travel, COVID19 symptoms, etc.) have few different options:

1. Go to certified laboratory and pay for the test;
2. Get a referral for free medical examination from the Regional Health Inspectorates (RHI) (given that certain conditions are met);
3. As of today, the Bulgarian citizens also can get a referral for free medical examination from their personal General Practitioner (GP) (if the doctor believes that they may be infected, given the patient's symptoms).

Either way, in order to be tested for coronavirus in accordance with the current procedures, people with COVID19-like symptoms will have to travel – by private car or taxi with another driver, by public transport endangering many passengers or even walking on the streets among the other pedestrians). With the options 2 and 3 listed above (which many will prefer as free of

charge) people who are potentially infected with COVID19 will have travel even additionally – 1<sup>st</sup> to the RHI or GP to get referral, then to the lab and back home. Obviously this:

1. Increases the time until the tests are completed and results available. During this prolonged period, the potential COVID19 patients will be in contact with more people for longer and thus conditions for quicker spread of the infection are created.

2. Forces people to travel more to be tested and this makes social distancing more difficult. As seen from paragraph 2 of this report, many big cities are looking for alternatives of the public transport, while in Bulgaria are doing the opposite. And because of the particularities of our public transportation system, keeping social distancing or following other precautionary measures is quite difficult, if not impossible. No doubt this aid the infection to spread even quicker.

Therefore, CMDR COE is offering the following recommendation to be considered by the respective decision makers:

If somebody is experiencing medical conditions, which can lead to the conclusion that one is infected with coronavirus (based on the well-known COVID19 symptoms, GP's advice can be sought via phone) he/she should be handled in a similar way as the patients requiring emergency healthcare assistance. Namely, the patient should stay at home (not exposing others, his GP included, to risk), should call 112, explain his symptoms and wait for a specialized, adequately equipped and trained team of experienced medics to arrive and check his condition and do the COVID19 test (as necessary) on the spot. If additional medical tests, that require hospitalization, are necessary, the patient still can be safely transported to a suitable healthcare facility without endangering the health of the other unaware and improperly protected people. In this way, the unnecessary personal contacts will be avoided or at least reduced and the RHIs will have better visibility on the spread of the pandemic.

Of course, this will present additional requirements to the Bulgarian healthcare system. The procedures for emergency assistance in case of pandemic would have to be revised and the state must ensure sufficient funding for additional medical teams and their training and equipment.