



# COVID-19

INSIGHTS AND FACTS

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PREPARED BY

**MARKET RESEARCH FUTURE**

(Part of Wantstats Research & Media Pvt. Ltd.)

# EXECUTIVE SUMMARY



World Health Organization (WHO) declared COVID-19 a pandemic in March 2020 owing to the surging outbreaks in several countries across the globe. A public health emergency was declared, and measures were circulated so as to prevent the spread of the virus. Currently, the quick spread of COVID-19 is having a pervasive impact across different industries and markets. COVID-19 has pushed the healthcare companies to emulate several business models, other than the traditional ones.

The digital transaction is one of the prime changes and these changing needs has highlighted the rapid movement in research as well as manufacturing of several medical supplies that are of utmost importance in the times of such crisis. It has been observed that few countries such as South Korea, Taiwan, and Singapore have controlled the spread of COVID-19 before it could reach the community level. On the other hand, well-developed economies such as the US, Italy, the UK, Spain, France, and Germany are trying their best to thrive in this situation, even after having a robust healthcare infrastructure. This has resulted in a very high impact of COVID-19 on the healthcare industry. However, precautionary measures such as strict social distancing and lockdown taken by many countries that include India, Italy, Germany, France, Spain, and the US have resulted in the decline in the number of cases of COVID-19. However, China has a low rate of new COVID-19 patients and is in a position of restarting its economy.

Most of the companies have extended their production capacity to meet the ongoing demand. Along with that, many automobile players, such as Ford, General Motors, Maruti Suzuki, Mahindra Group, are integrating with medical device manufacturers to step into the healthcare industry. For instance,

- Ventec Life Sciences entered into a partnership with General Motors (GM) to mass-produce critical care ventilators in response to COVID-19 pandemic at GM's Kokomo, Indiana manufacturing facility
- Smiths Medical announced a contract deal with the UK government for the manufacturing of 10,000 ventilation units to fight coronavirus pandemic
- Getinge increased its capacity by 60% compared to its previous production capacity of 10,000
- Drägerwerk AG & Co. KGaA and the UK defense contractor Babcock signed contract agreements. As per this contract, Drägerwerk AG & Co. KGaA will provide ventilators to the NHS in upcoming period
- Medtronic announced to upscale its production with 40% and is working hard to make it double in the coming days
- Philips has doubled its ventilator production capacity from ~1000 ventilators a week to ~2000 ventilators capacity a week
- GE Healthcare has come up with an agreement with Ford to fill the gap between demand and supply.

# EXECUTIVE SUMMARY



Further, It has been observed that many companies are repurposing their production lines to join the fight against COVID-19. Along with this, there are many industrialists and luxury hotels that are entering into the hygiene masks and quarantine center services, respectively.

Moreover, the healthcare industry has become a direct target of cybersecurity attacks. There has been a rise in the series of phishing campaigns and ransomware attacks. Hospitals have shifted their focus to managing this extraordinary emergency. In light of this, government officials are taking steps to combat these attacks. For instance, European Network and Information Security Agency (ENISA) has offered cybersecurity advice to support hospitals by conducting webinars to counter cybercrimes. This aids in the advancement of the EHR and EMR systems, as well as hospital information exchange services. In addition to that, many new start-ups are also contributing to the fight against COVID-19 by introducing apps that help to track COVID-19 cases. A Canada-based company Emerge, a blockchain startup based in Toronto, is introducing a public safety system app called Civitas to assist local authorities in many nations.

Apart from rise in demand and shortage of medical supply capacity, the spread of medical protectionism, in terms of tariffs, subsidies, import and export quotas, has been one of the biggest problems for supply chains in healthcare so far. And though obstacles are eliminated there are still sourcing problems. Malaysia's shutdown may result in a shortage of global supplies of rubber from companies such as Top Glove. However, The G20 heads-of-state meeting has committed to "minimizing trade and global supply chain disruptions" caused by the coronavirus outbreak. Encouragingly, there is a determination to ensure that medical supplies and important agricultural products are distributed "where they are needed the most ". Not only has the pandemic affected such disruptions, but it has also affected the mental health of citizens, surging the sales of antidepressants and other pharmaceutical drugs. Below is the impact analysis of COVID-19 on the sectors of the healthcare industry.

The aid from the government as well as private companies is essential in combating the crisis. Middle Eastern countries, including Bahrain and Qatar, are gaining support from the governments as well as private firms to expand pharmacy services. For instance, in April 2020, as part of the precautionary measures implemented by the Kingdom of Bahrain to curb the spread of the COVID-19, the Salmaniya Medical Complex (SMC) launched the home delivery service for prescribed medicines to ensure the health, safety, and comfort of the patients. Furthermore, the Government of Canada invested USD 7.1 million toward the repatriation of its citizens and donated USD 2 million to the World Health Organization to fund WHO's COVID-19 efforts. Similarly, to help European hospitals manage their patients in the extended ICU beds quickly, GE Healthcare is offering the hospitals increased access to its software platforms that allow doctors and nurses to digitally document patients' vital signs. This elucidates the impression that mainstreaming telemedicine is the most transformative change hospitals have made to provide healthcare in the post-coronavirus disease world. In light to this, the response strategies that need to be fulfilled so that the community outbreaks can be easily managed by portrayed in the below figure:





## IMPACT ANALYSIS ON HEALTHCARE

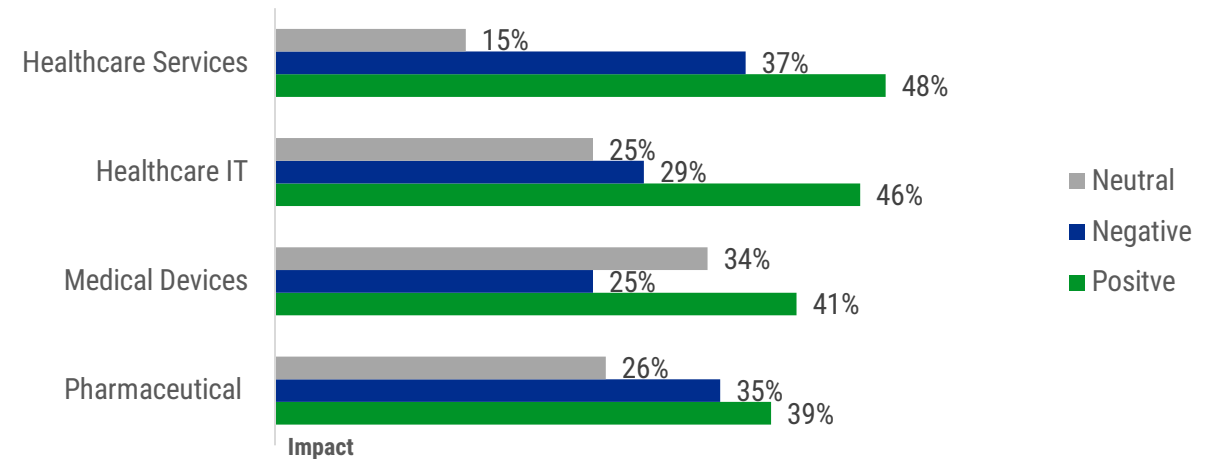
US Food and Drug Administration (US FDA) changed their regulatory process and introduces the Emergency Use Authorization (EUA) for medical devices such as personal protective equipment (PPE), in vitro diagnostic (IVD) tests, ventilators, respirators, and among others that used for during the management of COVID 19 patients. The Emergency Use Authorization (EUA) can speed up the premarket approvals process and helps manufacturer to quick launch its medical device in the market.

The Covid-19 pandemic has had an adverse impact on the private healthcare sector, resulting in 70- 80 % drop in footfall, test volumes and 50-70 % drop in revenue in the last 10 days of March.

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The pharmaceutical industry faces significant challenges and cost burdens around clinical trial patient recruitment, retention and adherence. About 80% of pharmaceutical trials do not meet enrolment deadlines, resulting an average loss up to USD 1.3 million per day for a given drug candidate. The **Solution is wearable devices and m-health apps.**

FIGURE 1 IMPACT ANALYSIS ON HEALTHCARE





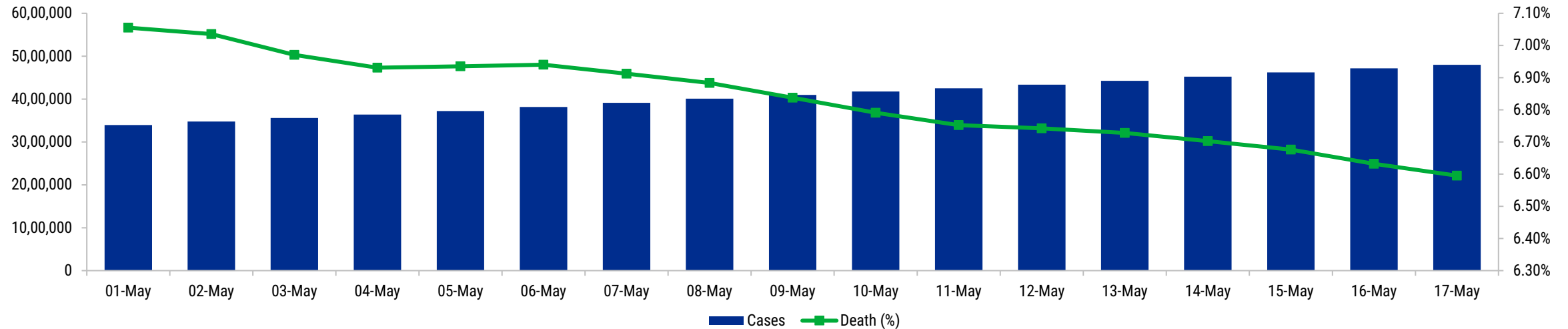
## RESPONSE STRATEGIES

The primary healthcare is not merely about physicians and nurses treating patients with an illness. It goes a lot deeper than that. Effective primary healthcare also means that authorities should draft actionable policies that can effectively deal with possible health threats to the people. Additionally, at the ground level, people, families and the larger community must also be equipped to take responsibility of their health.

All three levels of primary healthcare can be improved by heeding the imperatives that the COVID-19 crisis has been communicating. Below are some of these imperatives:

- 1 Investing in strengthening of healthcare infrastructure
- 2 Focus on health information exchange
- 3 Utilizing telemedicine as a preferred channel
- 4 Preparedness of hospitals to combat community outbreaks

# EPIDEMIOLOGY DATA



Sources: World Health Organization, Johns Hopkins University, European Centre for Disease Prevention and Control (ECDC), Centers for Disease Control and Prevention, and others

Total  
Cases

4,799,266

(Global)

Total  
Deaths

316,520

(Global)

New Cases Registered during 1st  
May 2020 to 17th May 2020

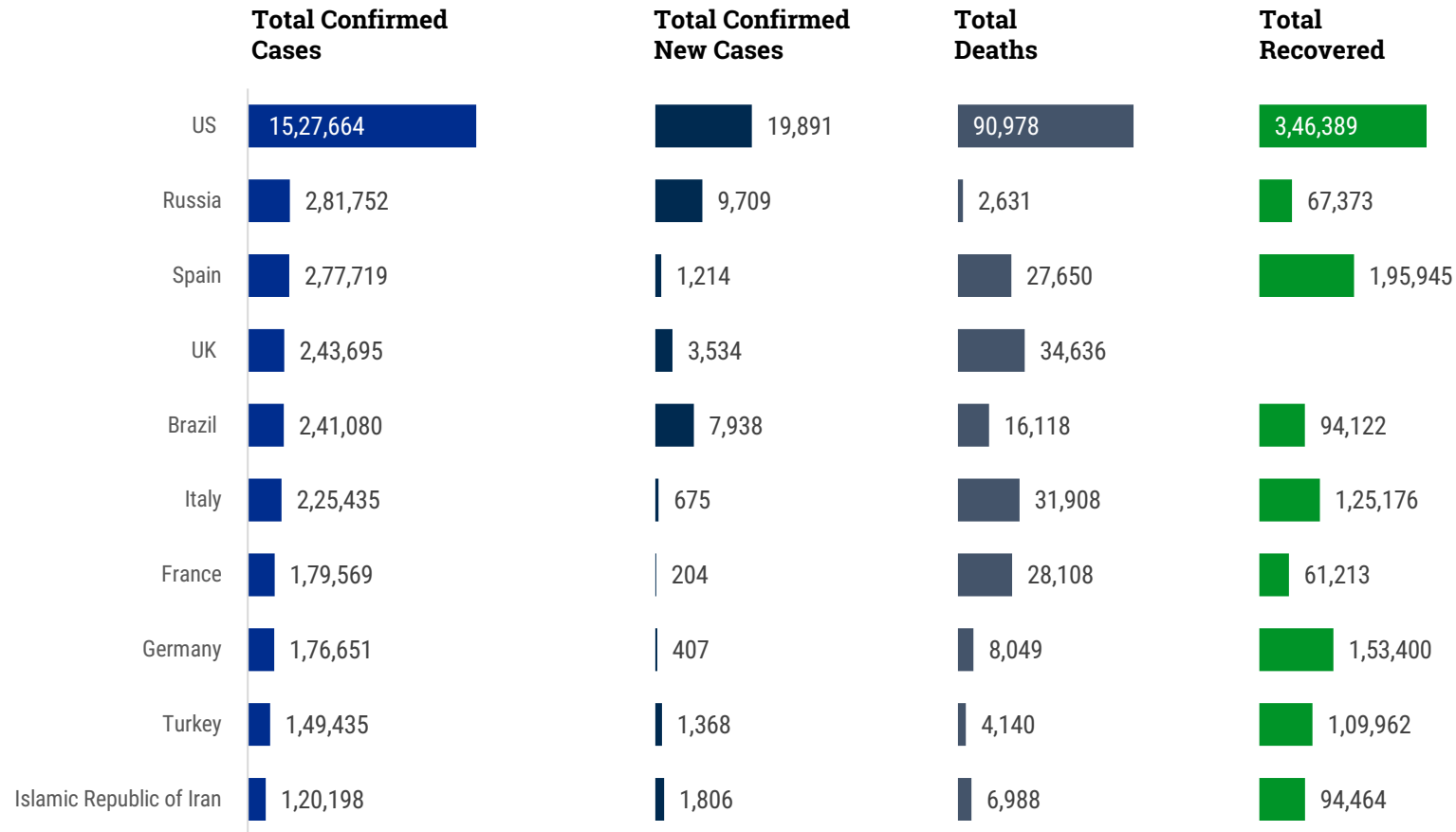
1,405,113

(Global)

Death rate Decreased  
from

7.06% to 6.60%

during 1st May to 17th May 2020

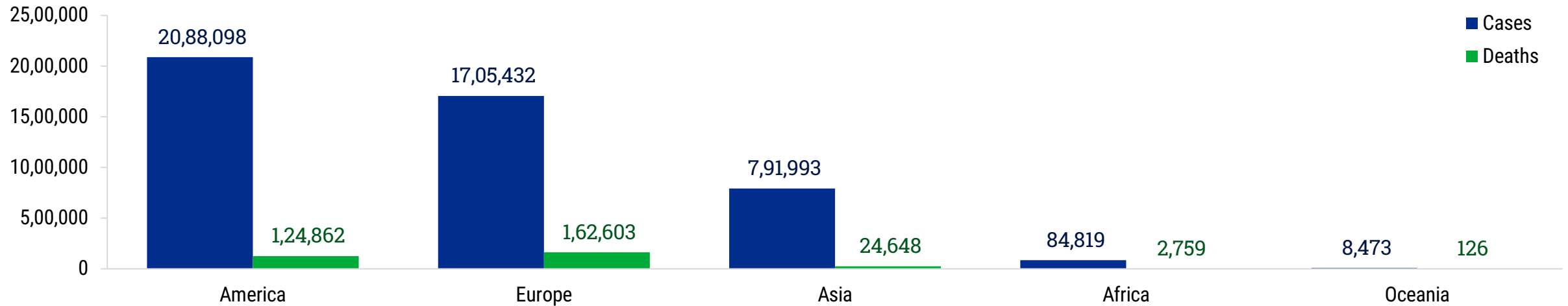


## COVID-19 Impact on Global Economy

- The industries hardest hit by COVID-19 are commercial aerospace, travel and insurance. however, oil and gas, automotive and fashion industries are facing significant losses.
- US Oil Prices turned negative for the first time
- Chinese industrial production was highly impacted
- The stock market has reacted to the COVID-19 pandemic with disturbing instability, as traders have panic-sold out of fear.
- International Monetary Fund (IMF) says that the global economy will shrink by 3% this year.

Sources: World Health Organization, Johns Hopkins University, European Centre for Disease Prevention and Control (ECDC), Centers for Disease Control and Prevention, and others





Sources: World Health Organization, Johns Hopkins University, European Centre for Disease Prevention and Control (ECDC), Centers for Disease Control and Prevention, and others

- Asia America and Europe combined accounted for approximately 90% of the total COVID-19 cases across the globe
- Americas recorded around 40% cases of the total with high incidence rate in countries such as US, Brazil, Peru, Canada, Mexico, and Chile.
- Major European countries impacted by COVID-19 includes Spain, UK, Italy, France, Russia, and. Germany.
- Asian countries significantly affected by COVID-19 are Iran, India, China, and Pakistan.



# COVID-19 VACCINE



Although no vaccine has completed clinical trials, there are multiple attempts in progress to develop such a COVID-19 vaccine. The Coalition for Epidemic Preparedness Innovations (CEPI) is organizing a USD 2 billion fund for rapid investment and development of vaccine candidates. This indicated in April that a vaccine may be available under emergency use protocols in less than 12 months or by early 2021. Moreover, In May 2020, the WHO organized a telethon to raise USD 8 billion from 40 countries to support rapid development of COVID-19 vaccines and deployment of an international "Solidarity trial" for simultaneous evaluation of several vaccine candidates reaching Phase II-III clinical trials. The Global Alliance for Vaccines and Immunisation (GAVI) is financing and organizing clinical groups in under-developed countries with COVID-19 vaccination preparedness.

Several federal governments are dedicating resources for national and international investments including:

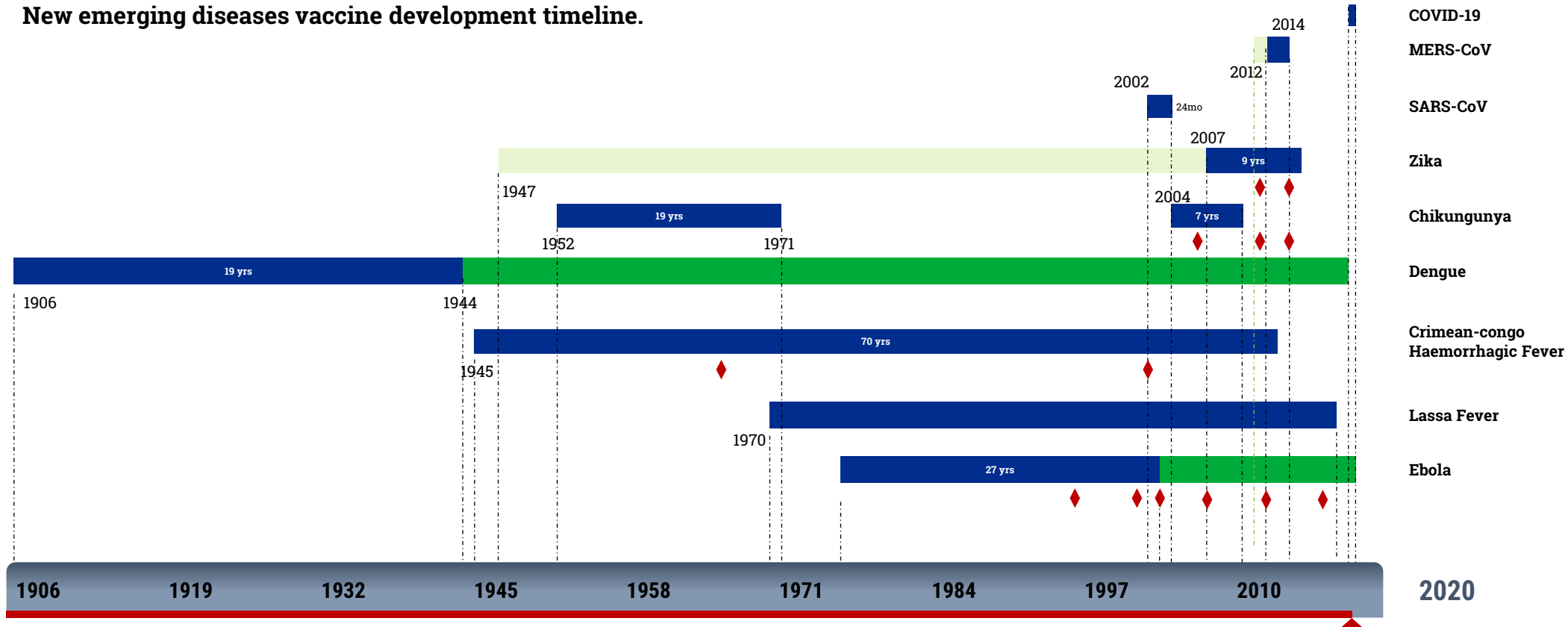
DATE	COUNTRY/REGION	DEVELOPMENT
<b>March-late April, 2020</b>	Canada	The Canadian government announced CAD 275 million in funding for 96 research vaccine research projects at Canadian companies and universities, with plans to establish a "vaccine bank" of several new vaccines that could be used if another coronavirus outbreak occurs.
<b>April, 2020</b>	China	The Chinese government is providing low-rate loans to vaccine companies and research institutes through its central bank, and enabled land transfers to build production plants.
<b>April, 2020</b>	European Union	The European Commission provided an €80 million investment in CureVac, a German biotechnology company, to develop a mRNA vaccine.
<b>April,2020</b>	United States	The Biomedical Advanced Research and Development Authority (BARDA) a federal agency, announced USD 483 million investment in the vaccine developer, Moderna and its partner, Johnson & Johnson.

Source: Press Releases, and MRFR Analysis

# COVID-19 VACCINE



## New emerging diseases vaccine development timeline.



Serum Institute of India (April 2020)

"The company expects (COVID-19) vaccine to be out in the market by September - October, only if trials are successful with safety and assured efficacy. Further, the company will be starting trials in India for this vaccine hopefully over the next 2-3 weeks' time,"








Source: Press Releases, and MRFR Analysis, WHO

Amgen will test Otezla as a COVID-19 therapy treating respiratory distress in late-stage patients, with the company saying April 30 that it plans to put the oral psoriasis drug into trials.

# COVID-19 VACCINE



## Major Players Operating on coronavirus treatments or vaccines

COMPANY	TREATMENT TYPE	BACKGROUND
 	Antibody treatment	AMGN and Adaptive Biotechnologies Corp. ADPT seeks to discover antibodies that can be used to prevent or treat COVID-19
 	mRNA vaccine	Pfizer Inc. announced March 17 it would help develop and distribute BioNTech SE's COVID-19 vaccine candidate, though the deal excludes China. The 360 patients in the U.S. trial had started to receive the first doses of the four vaccine candidates included in the study as of May 5. Dosing in 200 participants in the German trial began April 23
	Vaccine	The company has announced a string of wide-reaching collaborations during the pandemic, most notably a deal with Sanofi to jointly develop a vaccine candidate
	DNA-based vaccine	Inovio Pharmaceuticals Inc. is testing its vaccine candidate in a Phase 1 clinical trial at two sites in the U.S, University of Pennsylvania and Center for Pharmaceutical Research
	Vaccine	The company announced Feb. 11 that it was working with BARDA to test its vaccine candidate, with each party providing USD 1 billion for research and development and the public-health organization funding the Phase 1 trials.

Source: Press Releases, and MRFR Analysis



# THANK YOU

**WANTSTATS RESEARCH AND MEDIA PVT. LTD.**

Email: [salesteam@marketresearchfuture.com](mailto:salesteam@marketresearchfuture.com)

Contact: Ph: +1-646-845-9349 (US) / +44 208 133 9349 (UK)