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Assessment of health infrastructure in tackling COVID-19: A case study of European and American scenario

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A B S T R A C T

The COVID-19 coronavirus pandemic is an unparalleled threat in today’s quickly developing climate, and we face it as a global community. Like climate change, it is challenging our resilience from environmental health, social security, and government, to knowledge exchange and economic policy in all sectors of the economy and all fields of growth. So much as climate change, everybody's coming together would require the initiative. Throughout Europe and America, several organizations have mobilized to ensure that the neediest are not left behind, encouraging emergencies and disruptions avoidance and preparedness. The coronavirus outbreak has highlighted the growing community's strengths and vulnerabilities that it has influenced, and has provided us with the ability to benefit from each other's accomplishments and shortcomings. The comparison graph has also been shown in this paper displaying European and American scenarios. The globe might feel smaller amid disaster states and global travel bans, but it is a period when teamwork and looking outward were never more relevant.

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1. Introduction

In the coming weeks, the local journalists should take a thorough look at some of the approaches brought forward to cope with the massive knock-on impact of the coronavirus pandemic centred at the centre of impacted populations. It will involve large-scale policy interventions, such as how France and Germany sought to help small enterprises and how Switzerland attempted to assist parents impacted by the crisis. These may often require smaller-scale approaches, such as national, neighbourhood association, or individual hospitals or company initiatives to reduce the outbreak's effects. No nation has prevented the pandemic or addressed the ensuing crisis, but measures are being placed in motion to tackle its catastrophic effects [1].

There is also a worldwide emphasis on how to reduce the negative effects of this epidemic from the creation of novel drugs to policy assistance for companies and from strategies to cope with depression to financial help for freelancers. Looking into how countries tackle the pandemic and evaluating how effectively various approaches perform is important not just to show the indicators of success, but also to keep decision-makers responsible. These articles will notify the rest of our coverage progress. If a program has positive results at one location, we'll look at what that response would take to export elsewhere. When it struggles, we should look at what’s required to fix it. Responses in a different context cannot be copied entirely with expectations of the same results, but we will look for key takeaways that can inform policies elsewhere.

It doesn't mean that we're going to turn our focus; we're going to keep focusing on the problems that still await an answer. And don't worry, we'll also continue to write the essential practical guides and up-to-date news reports you need to navigate your life here. We do recognize that the crisis has a particular effect on the lives of people outside their home nation who might lack a social network in their foreign home and are therefore more likely to have insecure accommodation and employment.

1.1. Support from world health organization

For countries most susceptible to the COVID-19 pandemic, the World Health Organization and the European Investment Bank
would improve collaboration to enhance public safety, procurement of critical tools, training, and hygiene investments. The latest alliance between the United Nations health service and the world’s largest central bank, revealed earlier today at WHO headquarters in Geneva, would aim to improve stability in the economic and social effects of potential health emergencies [2].

1.1. Improving efforts to tackle coronavirus in local public health

WHO and EIB will enhance cooperation to help governments in low- and middle-income countries finance and secure access through central procurement to essential medical supplies and protective equipment.

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1.1.2. Building resilient health care systems in vulnerable African countries

The WHO and the EIB will improve collaboration to meet urgent COVID-19 needs and collectively establish tailored resources to increase public health spending, speed up progress towards universal health coverage. The partnership will benefit from the EIB’s projected response of nearly EUR 1.5 billion to address the health, social, and economic impact of COVID-19 in Africa. This will meet urgent health sector concerns and include both strategic assistance and medium-term funding resources for specialized hospital services. The collaboration provides for rapid identification and fast-track funding approval for health care, medical equipment, and supplies. The first partnership process would see expenditure on public health in ten African countries.

1.1.3. Long-term cooperation in the reduction of public health sector deficiencies

Today’s agreement creates strong cooperation to address industry uncertainty, and promote public health spending, speeding momentum towards universal health coverage. Enhanced coordination between the WHO and the EIB would reinforce national public health systems’ resilience and increase developing countries’ preparedness against potential pandemics by improvements in primary care services, health personnel, and enhanced water, sanitation, and hygiene. The potential partnership would boost the EIB’s regional contribution to COVID-19, amounting to EUR 5.2 billion beyond the European Union.

1.1.4. Investing further to combat antimicrobial resistance

Within the latest deal, the EIB and WHO will help the creation of the EU Malaria Fund, a joint public-private €250 million project aimed at addressing business shortcomings that maintain more successful malaria care.

1.1.5. Boost malaria treatment performance

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1.1.6. Strengthening aid to healthcare, life sciences, and Covid-19

The European Investment Bank has received more than EUR 2 billion annually in recent years for investments in healthcare and life sciences. The EIB is currently evaluating more than 20 initiatives in the field of vaccine production, diagnosis, and care in the sense of the COVID-19 pandemic, contributing to future investments in the EUR 700 m region. The EIB engaged in the EU’s ongoing pledging campaign for the global response to coronavirus that took place on 4 May.

2. Steps were taken to tackle this pandemic situation

Several steps were taken by America and Europe in this situation to come out of this and few are explained in brief below [3].
2.1. The slowdown of viral spread

The EU has closed its external borders to non-necessary travel to further restrict the spread of the virus in Europe and beyond, thus ensuring vital commodities continue to flow through the EU via the implementation of green lanes. For the European Center for Disease Prevention and Control, which offers immediate risk evaluations and epidemiological alerts on the epidemic, additional services are foreseen [4].

2.2. Providing medical supplies

EU-countries have quick access under the Civil Protection Mechanism to the first-ever RescUE medical equipment stockpile, such as ventilators and protective masks. Moreover, the EU has set up a huge international tender to allow member states to make joint purchases of equipment and drugs and is mobilizing €3.10 billion in EU aid to buy more tests and help patient care for medical staff. An international campaign has already been coordinated by the EU to collect an estimated €7.6 billion for drugs, medications, and diagnostics to counter coronavirus worldwide [7].

2.3. Fostering research

The EU’s research program Horizon 2020 is funding 18 research projects and 151 teams across Europe to help quickly find a vaccine against Covid-19. The goal is to enhance treatment, planning, health intervention, and therapy.

2.4. Stepping up European Solidarity

The European Parliament has approved new rules authorizing Member States to offer EU Solidarity Fund financial aid to cover health emergencies. With the fund’s newly expanded scope, up to €800 million will be made available this year for member states to combat the coronavirus pandemic.

2.5. Helping developed nations deal with this pandemic

As part of an EU plan for a concerted regional solution to counter the Covid-19 outbreak, the Commission has released €20 billion to aid non-EU countries to battle the crisis.

2.6. Ensure the information is accurate

The transmission of coronavirus contamination endangers the health of individuals. MEPs called for a European source of information to ensure that everyone has access to accurate and verified information in their own language and asked social media firms to address disinformation and hate speech.

2.7. Reallocating EU nationals

Thanks to the EU Civil Defense System, tens of thousands of Europeans trapped by the epidemic have been returning home.

2.8. Sheltering employment

In order to ensure that workers can keep their employees as the coronavirus outbreak forces businesses to run out of business, the Commission has recommended assistance for state-supported short-term business (Sure). The European Commission has also released €1 billion in subsidies from the European Fund for Strategic Projects to enable banks and other borrowers to supply up to €8 billion in collateral in support of some 100,000 European firms.

![Graphical representation of the total deaths due to COVID-19 cases in EUROPE, US and World.](image_url)
2.9. Sustaining the economy

The EU is bringing together a funding plan of €540 billion to cope with the recession and to help staff, companies, and member states. Furthermore, the European Central Bank offers €750 billion in debt relief through the recession, as well as €120 billion in quantitative easing and €20 billion in bond purchases. MEPs have agreed to make €37 billion accessible to EU countries from current EU Institutional Funds to address the coronavirus outbreak and to finance hospitals, companies, and staff [5,6].

2.10. Ensuring recovery for the EU

To help the EU rebound from the pandemic’s economic and social effects, the European Commission will be bringing forward a fresh plan for the EU’s long-term budget for 2021–2027, which will contain a stimulus package. MEPs called for the funding of a comprehensive rehabilitation and restoration program by an expanded EU long-term expenditure, current EU assets, and financial instruments, as well as so-called rehabilitation bonds. The Commission has provided its post-lockdown blueprint for a successful and organized escape plan including broad-scale monitoring and human safety materials.

3. Graphical comparison of several parameters belongs to America and Europe

The data of this pandemic situation is being provided by many websites and e-services when we see the comparison of this all data we can see the design of the graphs which is representing the total number of cases and the total number of deaths are in the same manner (Fig. 1).

Similarly in Fig. 2, total number of deaths in all over the world will be reaching 300,000 soon and 350,000 in US.

On a comparison of total number of cases to that of total number of deaths we found that from all over the World 2.3 percent of positive cases patient is dying, whereas two in every 100 in EUROPE and 2.3 in every 100 in America is the death rate. As per some of the previous research it will be a bell curve but we can see from this both graphs that it has not reached its peak yet, which is an important figure required to predict the next outcome for the gaussian curve.

4. Conclusion

As per the current scenario we are facing because of this pandemic situation of COVID-19, named Corona, there is no such medication or vaccine available to fight from this. There is only a pause button that can be activated by lockdowns as adopted by many countries. Not only America or Europe but the same problem is being faced by all countries in the world. Some vaccines may come by Jan 2021, but for now, there is only a hope by which we can rely on. Being in the complete lockdown is the best way to fight from this, according to many researchers. Technology can only reduce the chances of spreading rather than curing it or stopping it. It can be seen from the comparison of the graphs provided by whoever’s that the speed of this virus spread is quite similar in all the countries which also have good numbers of recovery rates.

Declaration of Competing Interest

The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

References

[1] https://www.thelocal.se/20200522/how-europe-is-facing-the-coronavirus-crisis.
[2] https://www.europarl.europa.eu/news/en/headlines/society/20200327ST076004/10-things-the-eu-is-doing-to-fight-the-coronavirus.
[3] https://www.who.int/news-room/detail/01-05-2020-who-and-european-investment-bank-strengthen-efforts-to-combat-covid-19-and-build-resilient-health-systems-to-face-future-pandemics.
[4] https://timesofmalta.com.
[5] Urindra Suthar, Sukanya Das, Ajay Nagpure, Chaitanya Madhurantakam, Satya Brat Tiwari, Pallavi Gahlot, Vinay Kumar Tyagi, Epidemiology and diagnosis, environmental resources quality and socio-economic perspectives for COVID-19 pandemic, J. Environ. Manage. (2020), 111700.
[6] Ibn-Mohammed, K.B. Mustapha, J. Godsell, Z. Adamu, K.A. Babatunde, D.D. Akintade, A. Acquaye, H. Fuji, M.M. Ndiaye, F.A. Yamoah, S.C.L. Koh, A critical analysis of the pacts of COVID-19 on the global economy and ecosystems and opportunities for circular economy strategies, Resour., Conserv. Recycl. 164 (2021) 105169.
[7] www.europarl.europa.eu.

Further reading

[8] https://covid19.who.int/.
[9] https://www.worldometers.info/coronavirus/.