

## Editorial

# Thoughts on The Sars-Cov-2 Pandemic: Healthcare Systems, Economy, Ukrainian-Russian War

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The SARS-CoV-2 pandemic and subsequent COVID-19, which has caused more than 6 million deaths worldwide, has shed light on certain interesting elements of global healthcare systems.

- a) people and things moving quickly from one part of the world to another greatly increases the risk of the spread of new infectious diseases;
- b) the presence of “weak” healthcare systems quickly influences the “stronger” healthcare systems;
- c) “universal” healthcare systems have proven to perform better than those based on private insurance;
- d) healthcare systems are heavily influenced by the economic system of their respective countries, but also by the way financial resources are used.

In Table 1 we collected approximately half of the world's population and outlined for each country certain parameters collected from the John Hopkins COVID-19 Database, the World Bank, and two compound parameters, namely the Legatum Prosperity Index and the CEO Health Care Index [1-4]. The data obtained from the John Hopkins Database refers to March 22, 2022. The CEO Health Care Index includes health care infrastructure, health care professionals, competencies, cost, quality medicine, availability and government readiness. Compared to the initial phases of the pandemic, when the fatality rate was around 4% and about 25-30% of patients went to the Intensive Care Unit, now the fatality rate is generally around 1-2%, except in the poorest countries [5]. No matter which economic system is taken into account (sharing economy, circular economy, etc.), the performance of a healthcare system is generally conditioned by the amount of investments as well as by the method of spending. With respect to this statement, said data found in Table 1 highlights an interesting situation. India, which has the lowest per capita income among the countries we've analysed (US\$ 1,927.7 per year), has performed respectably during this pandemic with a fatality rate of 1.2% and approximately 60% of the population vaccinated. In the Legatum Prosperity Index of the 167 countries considered India placed 101st for 2020, and in the CEO Health Care Index it ranked in 19th place for 2021 with regard to quality of health services, well above countries such as the USA and Italy, despite an investment in healthcare equal to 3% of the GDP (Gross Domestic Product), well below what is invested by the USA and Italy.

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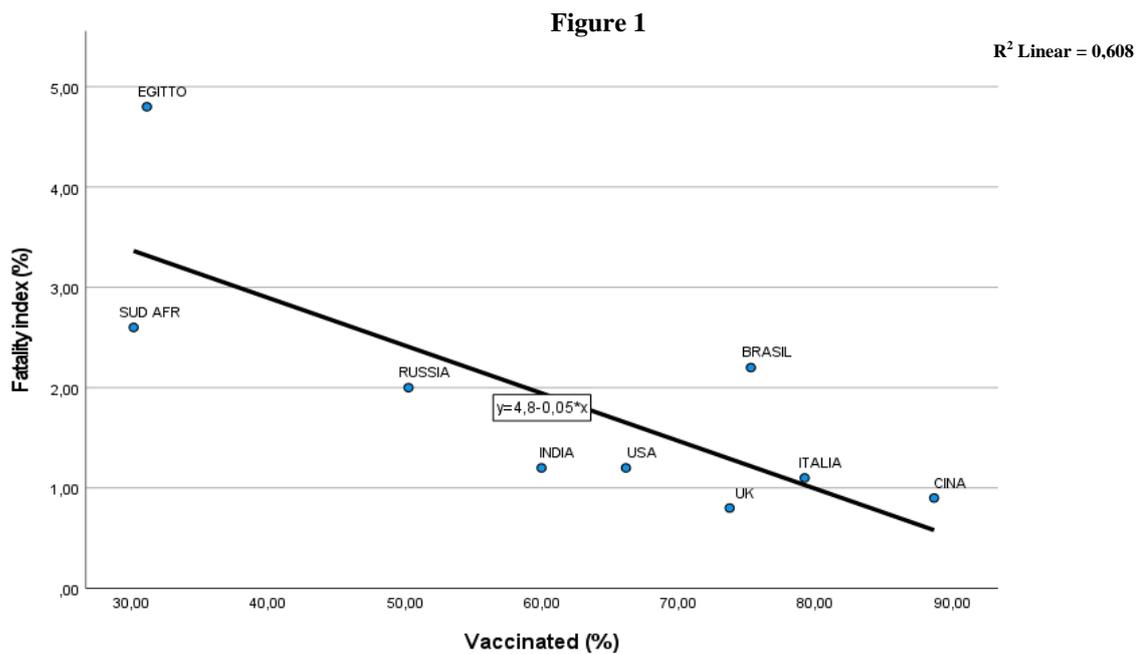
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Table 1.

<b>Country</b>	<b>Vaccinated (%)</b>	<b>Fatality (%)</b>	<b>GDP (\$ per capita 2020)</b>	<b>GDP for Health (% health expenditure 2019)</b>	<b>Legatum Prosperity Index (Position 2021)</b>	<b>CEO Health Care Index (Position 2021)</b>
<b>United Kingdom (UK)</b>	73,72	0,8	41,059.2	10,2	13	10
<b>USA</b>	66,14	1,2	63,593.4	16,8	20	30
<b>Italy</b>	79,2	1,1	31,714.2	8,7	31	37
<b>Brazil</b>	75,27	2,2	6,796.8	9,6	68	63
<b>China</b>	88,66	0,9	10,438.8	5,4	54	46
<b>India</b>	59,97	1,2	1,927.7	3,0	101	19
<b>Egypt</b>	31,13	4,8	3,569.2	4,8	121	84
<b>South Africa</b>	30,16	2,6	5,655.9	9,1	85	53
<b>Russia</b>	50,25	2	10,126.7	5,6	70	58

If we analyse the situation in India, the result is a universal healthcare system. With the 2018 reform, this system has allowed about half a billion people (out of a total of 1.3 billion) to have access to healthcare services, with the scheduled opening of approximately 150,000 new medical centres.

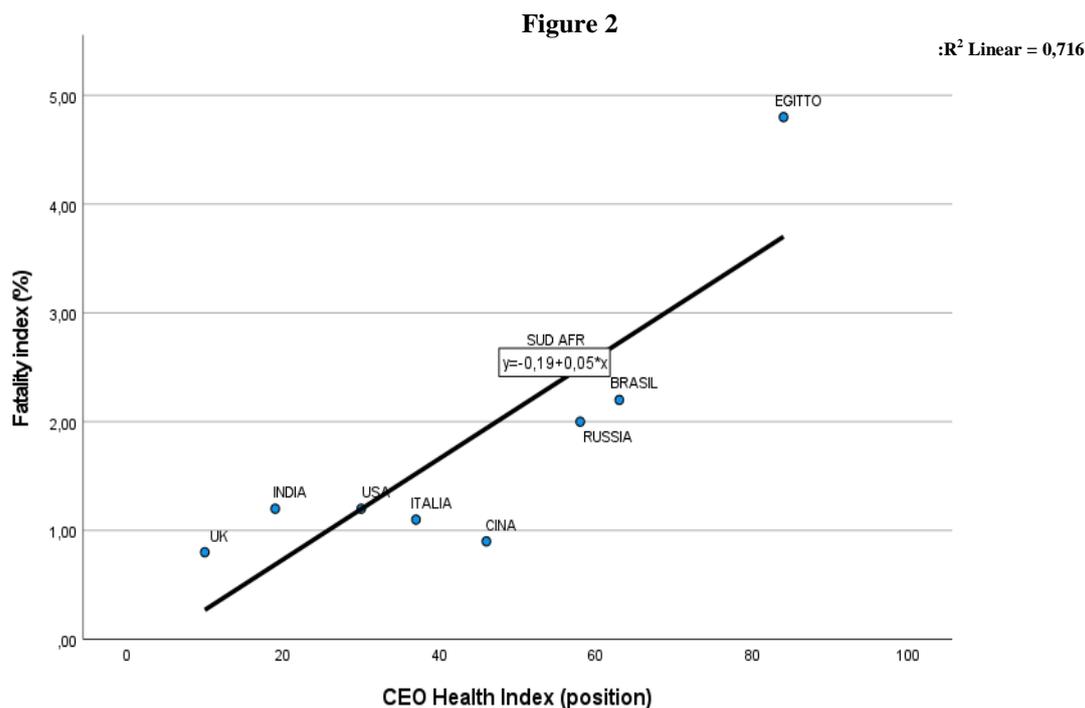
The statistical evaluations of the data made available through a multiple linear regression model including all the limitations, especially with regard to compound variables such as the Legatum Prosperity Index and CEO Health Care Index, have shown that the percentage of individuals vaccinated and the CEO Health Care Index are the most significant variables in determining fatality as reported in Figures 1 and 2. (IBM SPSS Statistics 28.0).



While in the Western world a strong commitment has been made, including financial, against chronic-degenerative diseases, in the lowest-income countries 6 out of the 10 most common causes of death are transmissible diseases, such as HIV, hepatitis, respiratory infections, malaria and infectious diarrhoea. Given the current speed of transportation, an infectious disease with a high contagion index is able to quickly move around the world. With SARS-CoV-2 we forgot the lesson imparted by Carlo Urbani with SARS, as we noted in our book “Virus intelligenti. La Storia dimenticata” [“Smart Viruses. The forgotten History.”], published in Italy [6]. The rapid closing of borders in the areas where SARS originated, as insistently requested and obtained by Carlo Urbani, avoided roughly 8 million deaths, but we, in the West, probably didn’t even notice while Carlo Urbani was dying of SARS!

In short, the time for evaluating Health only in particularistic terms has passed, because global interconnectedness exposes all the systems to the risks of transmissible diseases, and it would be wise to review the lessons that history has left us with. In particular, what the Republic of Venice has been implementing since the 15th century and onwards with early and systematic quarantines (isolation), without even knowing anything about viruses, bacteria and parasites. Finally, the current war between Russia and the Ukraine will certainly have a negative impact on the spread of SARS-CoV-2 variants, even if little is said about it. Given the low percentage of vaccinated individuals in the Ukraine (about 36% of the population), the current poor hygiene conditions, the gatherings in shelters, and the high contagiousness of the variants in circulation, we should expect an increase of fatalities in the weaker sections of the population. Moreover, the continuous migratory flows from the Ukraine into other European countries will most likely lead to an increased number of infected people on this continent.

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