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Chancellor Dr. rer. nat. Angela Merkel
Federal Chancellery
Willy-Brandt-Straße 1
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Kiel, March 26, 2020

Open letter

Dear Chancellor,

As emeritus of the Johannes Gutenberg University in Mainz and for many years head of the Institute for Medical Microbiology and Hygiene there, I feel obliged to the far-reaching restrictions on public life that we are currently taking on to reduce the spread of the COVID-19 virus to question critically.

It is expressly not my concern to downplay the dangers of the viral disease or to spread a political message. However, I feel it is my duty to make a scientific contribution to correctly classifying the current data situation, putting the facts that we know up to now in perspective - and also asking questions that are in danger of being lost in the heated discussion.

The main reason for my concern is the really unforeseeable socio-economic consequences of the drastic containment measures that are currently being used in large parts of Europe and are already being practiced to a large extent in Germany.

It is my wish to discuss critically - and with the necessary foresight - the advantages and disadvantages of restricting public life and the resulting long-term effects.

There are five questions that have so far been answered inadequately, but are essential for a balanced analysis.

I would like to ask you for a rapid response and appeal to the Federal Government, as it were, to develop strategies that effectively protect high-risk groups without cutting back on public life across the board and sowing the seeds for an even more intense polarization of society than is already happening.

Yours faithfully,

Prof. em. Dr. med. Sucharit Bhakdi

1. Statistics

Infectious diseases - founded by Robert Koch himself - traditionally distinguish between infection and illness. A disease requires clinical manifestation. [1] Therefore, only patients with symptoms such as fever or cough should be included in the statistics as new cases.

n other words, a new infection - as measured by the COVID-19 test - does not necessarily mean that we are dealing with a newly ill patient who needs a hospital bed. However, it is currently assumed that five percent of all infected people become seriously ill and require ventilation. Based on this, projections indicate that the health system could be overburdened.

My question: Did the projections differentiate between symptom-free infected and actual sick patients - i.e. people who develop symptoms?

2. Dangerousness

A number of corona viruses have been in circulation for a long time - largely unnoticed in the media. [2] Should it turn out that the COVID-19 virus should not be assigned a significantly higher hazard potential than the already circulating corona viruses, all countermeasures would obviously be superfluous.

n the international recognized journal "International Journal of Antimicrobial Agents" a work will appear shortly that addresses exactly this question. Preliminary results of the study can already be seen today and lead to the conclusion that the new virus does NOT differ in its dangerousness from traditional corona viruses. The authors express this in the title of their work “SARS-CoV-2: Fear versus Data”. [3]

My question: What is the current occupancy rate in intensive care units? Patients diagnosed with COVID-19 compared to other coronavirus infections, and to what extent is this data taken into account in the further decision-making by the federal government? In addition: Has the above study been noted in the previous plans? Of course, the following must also apply here: Diagnosed means that the virus also plays a significant role in the patient's condition, and that previous illnesses do not play a major role.

3. Dissemination

According to a report by the Süddeutsche Zeitung, not even the much-cited Robert Koch Institute knows exactly how much is tested on COVID-19. However, the fact is that with increasing test volume in Germany, a rapid increase in the number of cases has recently been observed. [4] It is therefore suspected that the virus has already spread unnoticed in the healthy population. This would have two consequences: first, it would mean that the official death rate - on March 26, 2020, there were 206 deaths from around 37,300 infections, or 0.55 percent [5] - was set too high; and secondly, that it is no longer possible to prevent spreading among the healthy population.

My question: Has there been a random sample of the healthy general population to validate the real spread of the virus, or is it timely?

4. Mmortality

The fear of an increase in the death rate in Germany (currently 0.55 percent) is currently being discussed particularly intensively in the media. Many people worry that they can shoot up like in Italy (10 percent) and Spain (7 percent) if there is no action in time.

At the same time, the mistake is made worldwide of reporting virus-related deaths as soon as it is determined that the virus was present at death - regardless of other factors. This violates a basic requirement of infectiology: the diagnosis can only be made if it is ensured that an agent has a significant share in the disease or death. The working group of the scientific medical societies expressly writes in its guidelines: "In addition to the cause of death, a causal chain must be specified, with the corresponding basic illness in third place on the death certificate. Occasionally, four-part causal chains must also be given."[6]

There is currently no official information as to whether, at least in retrospect, more critical medical file analyzes have been undertaken to determine how many deaths are really due to the virus.

My question: Has Germany simply followed the trend towards general suspicions of COVID-19? And: does it intend to continue this categorization uncritically, as in other countries? How should one differentiate between real corona-related deaths and accidental virus presence at the time of death?

5. Comparability

The terrifying situation in Italy is repeatedly used as a reference scenario. However, the true role of the virus in this country is completely unclear for many reasons - not only because points 3 and 4 apply here as well, but also because there are exceptional external factors that make these regions particularly vulnerable.

This includes the increased air pollution in northern Italy. According to WHO estimates, this situation resulted in more than 8,000 additional deaths per year in the 13 largest cities in Italy alone, even without a virus. [7] The situation has not changed significantly since then. Finally, it has also been shown that air pollution in very young and older people increases the risk of viral lung diseases very strongly. [9]

In addition, 27.4 percent of the most vulnerable population in this country live with young people, in Spain even 33.5 percent. In Germany it is only seven percent for comparison [10].

In addition, according to Prof. Dr. Reinhard Busse, Head of the Department of Healthcare Management at the TU Berlin, is significantly better equipped than Italy in terms of intensive care units - by a factor of around 2.5 [11].

My question: What efforts are being made to bring these elementary differences closer to the population and to make people understand that scenarios such as those in Italy or Spain are not realistic?

Credentials:

[1] Dictionary of Infection Protection and Infection Epidemiology. Technical terms - definitions - interpretations. Robert Koch Institute, Berlin 2015. https://www.rki.de/DE/Content/Service/Publikationen/Fachwoerterbuch_Infektionsschutz.html (accessed on 26.3.2020)

[2] Killerby et al., Human Coronavirus Circulation in the United States 2014–2017. *J Clin Virol*. 2018, 101, 52-56

[3] Roussel et al. SARS-CoV-2: Fear Versus Data. *Int. J. Antimicrob. Agents* 2020, 105947

[4] Charisius, H. Covid-19: How well does Germany test? Southgerman newspaper. https://www.sueddeutsche.de/gesundheit/covid-19-coronavirus-testverfahren-1.4855487 (accessed on 27.3.2020)

[5] Johns Hopkins University, *Coronavirus Resource Center*. 2020, https://coronavirus.jhu.edu/map.html (abgerufen am 26.3.2020)

[6] S1 guideline 054-001, rules for carrying out the medical morgue. *AWMF Online*, https://www.awmf.org/uploads/tx_szleitlinien/054-002l_S1_Regelnzur-Durchfuehrung-der-aerztlichen-Leichenschau_2018-02_01.pdf (Retrieved on March 26, 2020)

[7] Martuzzi et al. Health Impact of PM10 and Ozone in 13 Italian Cities. World Health Organization Regional Office for Europe. WHOLIS number E88700 2006 [8]

European Environment Agency, *Air Pollution Country Fact Sheets 2019*,

https://www.eea.europa.eu/themes/air/country-fact-sheets/2019-country-factsheets (abgerufen am 26.3.2020)

[9] Croft et al. The Association between Respiratory Infection and Air Pollution in the Setting of Air Quality Policy and Economic Change. *Ann. Am. Thorac. Soc.* 2019, 16, 321–330.

[10] United Nations, Department of Economic and Social Affairs, Population Division. Living Arrangements of Older Persons: A Report on an Expanded International Dataset (ST/ESA/SER.A/407). **2017**

[11] Deutsches Ärzteblatt, Overloading of German hospitals by COVID-19 unlikely according to experts,https://www.aerzteblatt.de/nachrichten/111029/Ueberlastung-deutscherKrankenhaeuser-durch-COVID-19-laut-Experten-unwahrscheinlich (accessed on 26.3.2020)