The UK should investigate the claim that Chlorine Dioxide in Solution (CDS) offers a prophylactic and early treatment for viral infections, such as Covid-19

Supplementary Information

1. The UK was regularly listed at the top of the WHO COVID-19 dashboard among the countries with the **highest daily deaths** for week after week well into 2021 (https://covid19.who.int/table). This was partly because of the WHO/US NIH & FDA/ NICE recommendation against the use of off-patent drugs as prophylactic and early outpatient treatments for COVID-19. During lockdowns, infected people were asked to self-isolate at home until they were unable to breathe and became sick enough to require intensive care in hospitals. The only WHO approved treatments are for hospitalised patients https://www.who.int/emergencies/diseases/novel-coronavirus-2019/question-and-answers-hub/q-a-detail/coronavirus-disease-covid-19.

2. In the meantime, dedicated physicians in the US and Bolivia were frustrated when they had to stand by and watch people dying because they were barred from using life-saving treatments by health regulators who adhered to the WHO warnings.

   - **In USA,** it took a concerted effort by physicians, especially the American Frontline Doctors, and Senators to persuade the National Institutes of Health to revise its ban on the use of Ivermectin for the treatment of COVID-19 outside the hospital setting or a clinical trial (NIH, 11 Feb 2021).

     > The U.S. Senate Homeland Security and Government Affairs Committee held a two-part hearing on **Early Outpatient Treatment: An Essential Part of a COVID-19 Solution** (part I; part II). What comes through is the frustration of physicians whose practice-based evidence and albeit non-random clinical trials on the effectiveness of off-patent antimalarial drugs were dismissed by the NIH and FDA. They were adamant that early treatment with these drugs prevented infection and that it had saved already infected patients by deactivating the COVID virus .They insisted that the ban on early treatment was causing preventable death. Dr McCullough (8.55 min in Part I) stated that COVID-19 needs different treatments at different stages of its progress. Dr Risch (15 mins in Part I) points out that the great majority of drugs in current use were known to be safe and effective well before randomised trials. He argued that the recommendations against their use were based on irrelevant trials on very sick patients in hospital. The front line physicians had found them effective as prophylactics and early treatments. He cited evidence from several countries that Hydroxychloroquine is a safe and effective outpatient treatment which can prevent hospitalisation. Dr Kory (35 min in Part II) said that the frontline doctors had found that people (including their own members) who had taken the Nobel-prize winning Ivermectin did not catch COVID-19. There was disbelief that doctors using these drugs, which have already been approved as safe, were being threatened with prosecution. Senators wrote to the FDA and NIH asking for reviews of the basic sciences and epidemiologic studies; and, an update of the treatment guidelines accordingly to include early outpatient treatments which had been found to be safe and effective against COVID-19.

     The NIH revised recommendation is "*There are insufficient data for the COVID-19 Treatment Guidelines Panel (the Panel) to recommend either for or against the use of ivermectin for the treatment of COVID-19. Results from adequately powered, well-designed, and well-conducted clinical trials are needed to provide more specific, evidence-based guidance on the role of Ivermectin in the treatment of COVID-19".* During the Senate hearing Dr Jha insisted that such clinical trials were a diversion during the emergency. Despite the lack of conclusive evidence, physicians are now able to exercise their discretion and use Ivermectin as an outpatient treatment within the NIH guidelines to save COVID patients instead of standing by and doing nothing.

   - **In Bolivia,** a similar campaign resulted in legalised treatment of COVID-19 with Chlorine Dioxide. When COVID-19 deaths spiked in Bolivia, the Senate in Cochabamba **legalised the use of Chlorine Dioxide** under medical supervision as a prophylactic and early treatment in

July 2020. The CDS was produced in hospitals, universities and approved others. The subsequent dramatic reduction in the in the number of COVID-19 deaths from September 2020, led to Bolivia introducing similar legislation in October 2020 (law number 1351). According to the US Embassy in Bolivia, there was **no national lockdown or curfews** in January and February 2021, international air and local transport were still operational and the children are back at school. Despite this, the **number of deaths has remained low**.

- COMUSAV (a coalition with more than 3000 doctors in over 20 countries) claims that the reduction in deaths is due to **early treatment with CDS** and that it has identified **safe therapeutic doses of CDS** for successful treatment of COVID-19 patients (at 51:30 mins into video). Manuel Aparicio (41:30 mins into video) reports that 91.5% of 10,000 relatives of infected patients who took CDS did not get infected and some 8.5% only had mild symptoms if infected but did not develop respiratory failure. He provided a detailed description of the various protocols used at different stages. Since, they were barred from conducting prospective double-blind trials they relied on retrospective clinical studies. His data from 1000 patients shows oxygen saturation rising from under 70% to over 90% within 5 days; in contrast, oxygen saturation levels went progressively down in patients who refused CDS. There was a 99.6% survival and discharge of hospitalised patients. Illustrative evidence was presented for two case studies (monitored for several months with blood test, CT-scan and oximeter images, blood pressure readings and blood tests). They showed recovery without toxicity. Photo images (1hr 57 min) show improvements in peripheral circulation and oxygenation and the benefits of CDS for treating what look like very bad foot ulcers. Other speakers also presented their self-financed science-based clinical trials in several countries, including Japan. Again, there is despair at the lack of permission for double-blind clinical trials, in all but Bolivia.

  Although Bolivia's neighbouring countries are still adhering officially to WHO Guidelines and warnings, people started to self-medicate with CDS or were treated by COMUSAV doctors under the **Helsinki Declaration** (1 hr 31 mins). The Mayor of Campeche reported that COVID-19 cases were in decline in 7 States after using CDS as advised by the military doctors in Mexico.

  Other countries, like Ecuador, also had a similar pattern of **spikes in deaths followed by a dramatic decline, which has been sustained well into 2021** (Figure 1). A snapshot of 7-day death totals on the WHO dashboard, standardised against the total population, showed that the UK had three times as many deaths in Bolivia and 9.5 times that in Ecuador (Table 1). Their consistent low daily deaths are striking compared with UK's high rates despite the latter's comparative wealth, its well-established NHS and the imposition of public health measures. Scientific research is needed to rule out the hypothesis that treatment with CDS is not a contributing factor to their low COVID deaths, to justify continued dismissal of COMUSAV's claims.

3. When Americans started to self-medicate with CDS, the FDA published repeated warnings, which have been widely cited as the authoritative expert view. These warnings refer to anecdotal hearsay when an authoritative double-blind clinical trial had found ClO_2 to be safe even at 24 mg/l per day. The paper, first published in 1981, in the Journal of Fundamental and Applied Toxicology, was republished several times, including by the US Environmental protection Agency under whose auspices the study had been undertaken. The researchers concluded that *"..within the limits of the study, the relative safety of oral ingestion of chlorine dioxide and its metabolites, chlorite and chlorate, was demonstrated by the absence of detrimental physiological response*." Toxicity depends on dosage and their study found 24 mg/l of ClO_2 to be safe; this is well above the EPA's maximum of 0.8% for potable water.

The FDA also equated CDS (ClO_2) with MMS and worse still with bleach (NaClO). Even when President Trump was falsely accused of telling people to drink bleach (when he had used the word disinfectant) by the mainstream media and even by the then presidential candidate Joe Biden, the FDA did not correct its misrepresentation of scientific facts. If a single person had been injured or had died through CDS ingestion, this would have hit the headlines.

However, the **FDA is right to warn against the dangers of self-medication**, especially since the COMUSAV protocols calculate dosage based on body weight and stage of disease and adjust protocols to take account of contraindications and side effects. This is why Bolivia legalised the use of CDS only under medical supervision and COMUSAV marshalled an army of volunteer doctors to fight COVID-19 in other countries and make clinical observations on CDS safety and efficacy.

4. There have been recent publications in peer-reviewed medical journals on the antiviral properties of CDS. There have also been a number of Chinese, US and worldwide **patents** granted for the external AND internal use of CDS in disease prevention and treatment (Appendix 1). These include a Chinese patent granted in 2014 for preparing pure CDS for **intravenous treatment of *known or unknown malicious virus-infected persons***.

I am therefore baffled that SAGE and the UK Ministry of Health and Social Care were happy to just rely on public health measures while waiting for vaccines, and let so many suffer and die with COVID-19. Vaccines are not appropriate for elderly people with pre-existing medical conditions, for those with allergies or for immunocompromised patients. The new generation of vaccines do not claim to be 100% effective and several governments have suspended vaccination after side effects and deaths and many poorer countries cannot access them. Given this, we need other options.

While these concerns are being brushed aside, there seems to be an unwarranted opposition to even considering alternative treatments which doctors are already using in other countries. As Dr Ouskoui MD (7.01 mins in video) observed at the US Senate Hearing, "*the fact that third world countries, second world countries have been more innovative and outperformed us in terms of survival is something which needs questioning .. one has to wonder if our bloated academic bureaucracy has been more of a hindrance than a help during this health care crisis*" . In the UK, Professors Peter Horby and Martin Landray also said on the BBC4 Inside Health programme (23 Mar 2021) that there is a need to review current approaches to clinical trials, which are a hindrance when we have new viruses needing rapid decisions on treatment options. Professor Horby (12 mins 38 sec) also stressed that when there is massive disagreement over treatments, the only way to resolve it is to do a proper trial. The Recovery Trial at Oxford led to the global use of Dexamethasone for COVID patients in hospital. We need to extend such trials to prophylactics and early treatments since they can reduce pressure on the NHS and also because different treatments may be needed at different stages of the disease.

People (and not just doctors as outlined above) are becoming distrustful of WHO and expert advice, which undermines confidence in governments. If government does not trial prophylactics and early treatments, the public are not going to self-isolate, do nothing and settle for palliatives until they can no longer breathe. They will resort to self-medication in despair and fear.

The UK government has a duty to explore ALL promising treatment options to save patients, businesses and the UK economy. It should not rely on a vaccine-based strategy alone for coping with this and future pandemics when physicians elsewhere are claiming that there are other life-saving options and seem to be going to extraordinary lengths to prove that early outpatient treatments can save lives. The US NIH has recommended clinical trials for Ivermectin. The UK should investigate COMUSAV's claims for CDS, especially given the UK's poor performance in the WHO statistics and time graphs of daily COVID deaths, compared to the South American countries where COMUSAV is active.

Yours sincerely,
Mrs XXXX, 24 March 2021

Figure 1: COVID deaths in the United Kingdom, Bolivia and Ecuador
Source: https://covid19.who.int/ (1 Mar 2021)

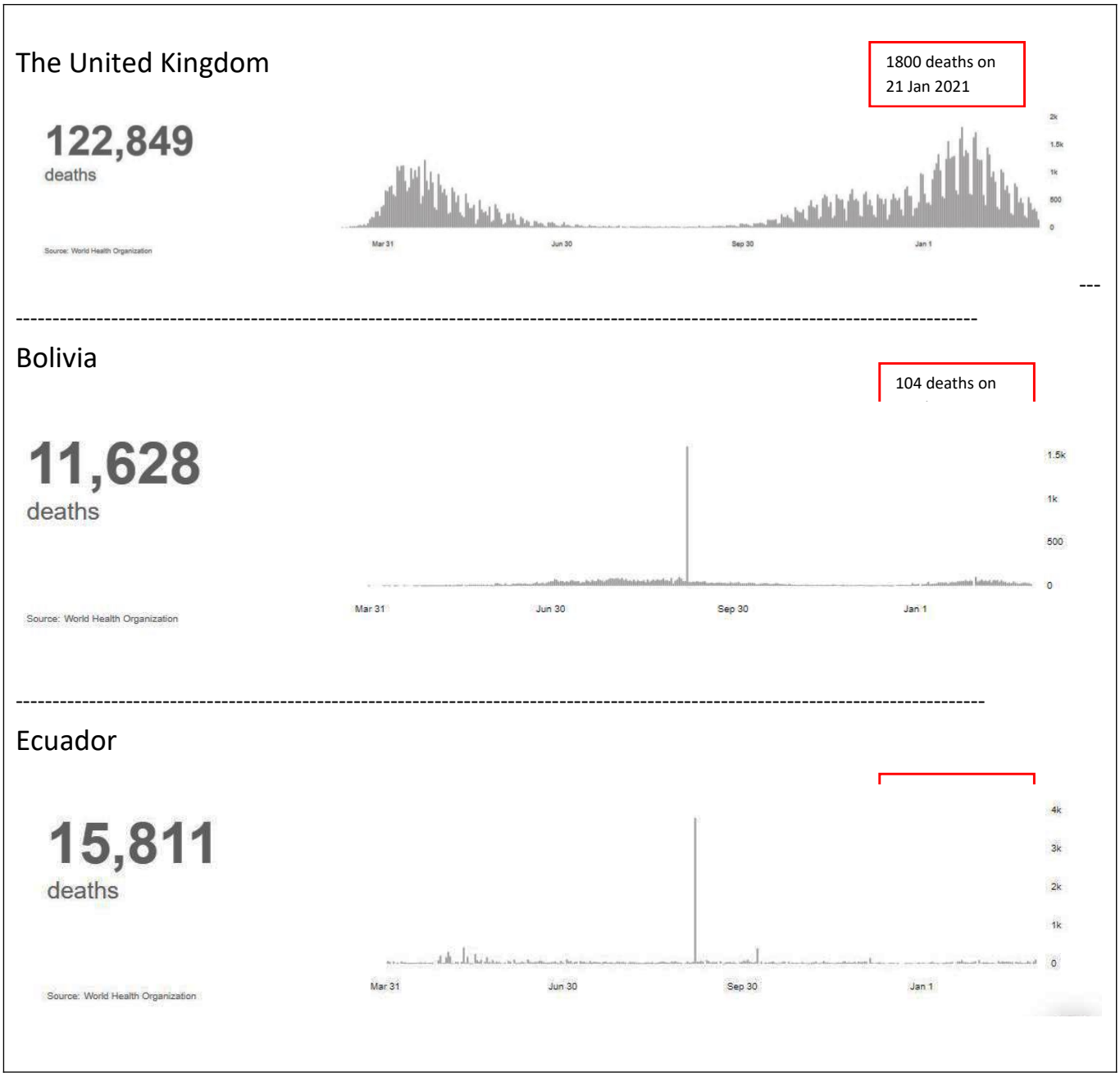

Table 1: Deaths in UK, Bolivia and Ecuador (checked on 5 Feb 2021 @16.40)

	Total population[1]	Total infected (per 1000)[2]	Total deaths (per 1000)[2]	Deaths in last 7 days (per million)[2, 3]
UK	67,886,011	3,871,829 (57)	109,335 (1.6)	7448 (109.7)
Bolivia	11,673,021	222,447 (19)	10,571 (1.0)	404 (34.6)
Ecuador	17,643,054	253,339 (14)	14,968 (0.85)	202 (11.5)

Sources: [1] Worldometer - real time world statistics (worldometers.info)
[2] WHO COVID-19 dashboard
[3] 7-day totals are preferable since the daily deaths fluctuate.

The WHO data and graphs show that in the 7 days leading up to 5 Feb 2021, the UK death rate (deaths per million people) was over 3 times that in Bolivia and about 9.5 times that in Ecuador. The data for 2021 shows that even after vaccination, the UK continued to lose more lives pro rata than the South American countries.

Appendix 1 : Some patents for medical applications of Chlorine Dioxide

- In 2000 a US Patent was granted to Friedrich W. Kuhne to kill the **HIV virus** in blood for transfusion and ClO_2 is now routinely used to purify the blood.
  US6086922A - Use of a chemically-stabilized chlorite matrix for the parenteral treatment of HIV infections - Google Patents

- In 2014, Chinese Patents granted to **刘学武** for application of ClO_2 for **anti-aging and tumour treatment.** CN103720709A - Cell apoptosis inducer containing chlorine dioxide and application thereof to preparation of cosmetics, or anti-aging or antineoplastic drugs - Google Patents
  In 2017, this was extended for worldwide application - https://patents.google.com/patent/WO2017152718A1/en

- In 2014, Chinese Patent was granted to **周伟文** *for Preparation method of pure chlorine dioxide solution and method for treating Ebola virus infection, and for* ***known or unknown malicious virus-infected patients***. It claims that regular annual treatment with ClO_2 can prevent cancer incidence.
  https://patents.google.com/patent/CN104586880A/en

- In 2018, the still active US Patent was granted to Howard Alliger for ClO_2 injections for treating **cancerous tumours, including naïve, metastatic and recurrent cancer**. US10105389B1 - Method and compositions for treating cancerous tumors - Google Patents. The patent holder provided images as evidence.

- In 2018, worldwide patent granted to Andreas Kalcker for preparation of pure CDS for injectable treatment of infectious diseases and inflammation in humans and animals. WO2018185346A1 - Pharmaceutical composition for treating infectious diseases - Google Patents

  In 2019, worldwide patent granted to Andreas Kalcker WO2018185347A1 - Pharmaceutical composition for the treatment of internal inflammations - Google Patents COVID produces an inflammatory response and CDS has an anti-inflammatory effect.

- In 2019 a US Patent was granted to Liu and Liu for making ClO_2 for therapeutic applications such as in-vivo stem cell regeneration, anti-tumor and anti–aging; this was extended into an International Patent in 2006. US020190015445A120190117 (trainingsdiebewegen.com).