

Written evidence submitted by Helen Ramsar

This submission is based on Helen Ramsar's current research on British soft power, vaccine nationalism and medical diplomacy. In point 1 the UK is well positioned within the global health international community, yet the Covid crisis has exposed weak or absent protocols across all aspects of pandemic preparedness. Rising vaccine nationalism and medical protectionism is severely testing multilateral cooperation. Point 2 considers the NHS's baseline capacity and offers evidence of insufficient pandemic preparedness. Deeper planning is needed, and to be situated more centrally within national security strategy. 3 points to the urgent need to protect the UK life science sector from the impact of halted clinical trials and reduced research funding. It is critical to the UK's ability to continue pioneering pharmacological countermeasures to biosecurity risks.

1. UK within the global health international community.

1.1. The UK is well placed within the global health international infrastructure and a generous supporter of global health security commitments, for example, currently the third largest funder to the WHO and in June 2020 co-hosted the GAVI Vaccine Alliance Summit.

1.2. Yet doubts over UK competence and effectiveness in dealing with its Covid crisis may impact its soft power reputation and credibility on matters of pandemic preparedness within the international community.

1.3. Biosecurity risks to the UK are compounded when the international atmosphere is one of mistrust and lacks politically credible mechanisms for rapid and transparent sharing of information. This is essential when the first days and weeks of an outbreak are critical for scientists and policy-makers to grasp how infectious the pathogen, how lethal, and the transmission mechanism.

1.4. Wet Markets around the world will host biosecurity risks until tackled internationally. Banning them is complicated. Yet the obvious place to launch a new campaign is in China, particularly as early in this pandemic President Xi spoke out against the wild animal industry and for Biosecurity Law.¹

1.5. Scientists have been warning that most emerging pathogens originate in wildlife and spill-over into human hosts due to a range of ecological, demographic and socio-economic changes.² Identifying new threats and hotspots, isolating and tackling them will require a very multi-disciplinary and multi-national approach. In hosting COP26, the UK has an opportunity to keep the intersection of global health and environmentalism high on the agenda.

1.6. Vaccine nationalism compounds biosecurity risks when political leaders fail to uphold the principles of science over politics. For example, the delays in Chinese customs approving shipments of CanSino vaccines for human trials due to start in Canada alongside the ongoing political tensions over Canada's arrest of Huawei executive Meng Wanzhou. President Putin confirmed approval had been given to Russia's vaccine, 'Sputnik V', even before it

¹ President Xi, Speech to the Standing Committee of the Political Bureau of the CPC Central Committee, *Qiushi Journal*, 3 February 2020, http://www.qstheory.cn/dukan/qs/2020-02/15/c_1125572832.htm

² Jane Qui, 'One world, one health: combating infectious diseases in the age of globalization', *National Science Review*, Vol 4, Issue 3, May 2017, pp.493–499.

completed human trials. President Trump appears to be pushing for a US vaccine to time with the 2020 Presidential Election.

1.7. A poorly tested vaccine could be more harmful than no vaccine. For without transparency over trial protocols and published peer-reviewed results, there is every chance a vaccine produces serious adverse reactions, gives a false sense of immunity thereby increasing the rate of transmission, is simply not trusted so undermines immunisation in general, and risks making any second attempt at national immunisation all the harder.

1.8. Equitable global access and distribution of Covid vaccines is a will o' the wisp. Yet in the globalised world, and as many of the world's ongoing conflicts are in poorer countries, it is in the UK own national security interest they be equally vaccinated. The reality is at least two access routes: independently for those who can afford it, and via the likes of COVAX for those who cannot.

1.9. It is foreseeable that counterfeit medicines, and the risks they pose, will enter the global market as demand is greater than legitimate supply.

1.10. Western intelligence agencies have taken a public stand a number of times to call out cyber-attacks on Covid-19 organisations for intellectual property and trial data. The UK government can back up these signals with commitment, for example by pursuing sanctions where possible through the new UK Magnitsky Act.

1.11. Dual-use research and technology risks may be particularly applicable to North Korea's bid to develop a domestic vaccine. Previously dependent on the WHO and GAVI for national immunisation programmes, North Korea announced in July it had a domestic vaccine in trials. Its new vaccine programme, ostensibly launched on humanitarian grounds to tackle the Covid crisis, may have the dual purpose of developing a biological weapons arsenal.

1.12. The UK's withdrawal from the EU is relevant. The pharmaceutical industry is arguably the most regulated in the world and it will be challenging for the UK to replicate the regulatory infrastructure it has shared with the EU.

2. The UK was inadequately prepared for pandemic.

2.1. The soft power of the NHS was given centre stage during the 2012 Olympics Opening Ceremony. Yet the UK appears to perform less well than similar countries on the overall rate at which people die when successful medical care could have saved their lives.³ Chronic NHS shortcomings, later-than-usual diagnoses or inadequately treated concomitant diseases during lockdown, and health ramifications of Covid-19, combine considerable strain and risk to the UK's frontline against pandemic.

2.2. Official communication to offset concerns around 'personal sovereignty' has been underestimated, be it over mass testing, tracing surveillance, mask-wearing or vaccines. Slow or inconsistent government messaging compounds the biosecurity risk when in turn people are hesitant, inconsistent or refuse to comply.

³ For example, see Mark Dayan et al, *How Good Is The NHS?*, Institute for Fiscal Studies, June 2018, p.4, <https://www.ifs.org.uk/uploads/HEAJ6319-How-good-is-the-NHS-180625-WEB.pdf>

2.3. During the confusion, fear, sickness, grief and anger across populations, public confidence and trust in the institutions developing, approving, manufacturing, distributing and administering medicines and accelerated vaccines, as well as the officials asking the public to trust them and issuing rules, are all critical to a high enough proportion of the public accepting them.

2.4. The impact of the PPE shortage during Phase 1 will lead to significant litigation. The NHS 'cost of harm' bill for 2018/19, before Covid-19, was approximately £9billion.⁴

2.5. The availability of ventilators emerged as a revealing index of pandemic preparedness.

2.6. Medical oxygen supplies started to run out faster than automatic systems could notify stockists more was needed. Watford General Hospital declared a major incident on 4 April - 2020 when over-demand caused oxygen pressure to drop across its system, endangering all on the system.⁵

2.7. ICU consultants were having to draw up new protocols in real-time, which in reality is having to make very difficult decisions around complex medical ethics in the heat of a crisis.

2.8. Anaesthetists reported running low or out of essential sedatives (propofol), opioid painkillers (fentanyl and alfentanil), muscle relaxants, and drugs for critically-low blood pressure.

2.9. The shuttering of factories - particularly in China that produces most active pharmaceutical ingredients (APIs) and India that imports them to manufacture generic drugs for global markets –highlighted UK exposure to supply chain vulnerabilities. The UK needs to diversify; a small number of countries with a monopoly on supply has proved a risk in itself.

2.10. Worldwide shortages led to a surge in medical protectionism. 91 jurisdictions placed a total of 202 bans or export restrictions on medical supplies and medicines since January 2020.⁶

2.11. A particularly nasty manifestation of medical protectionism would be the deliberate denial of medicines or vaccines to targeted minorities within a population.

2.12. The UK talked a good talk about pandemic preparedness but this does not appear to have translated into deep dives across departments to anticipate far-reaching ramifications and invest. There were warnings of the sheer scale. One assessment of the impact and cost of the 2003 SARS outbreak on Far Eastern countries put the cost to China alone at US\$6.1 billion (0.5% of GDP).⁷

⁴ NHS Resolution, *Annual Report & Accounts 2018/2019*, HC 2371, 11 July 2019, p.9.

⁵ NHS, *Critical Incident at Watford General Hospital*, 4 April 2020, <https://www.westhertshospitals.nhs.uk/newsandmedia/mediareleases/2020/april/criticalincidentatwatfordgeneralhospital.asprd>

⁶ Global Trade Alert, '21st Century Tracking of Pandemic-Era Trade Policies in Food and Medical Products', last updated 4 September 2020, <https://www.globaltradealert.org/reports/54>

⁷ Asian Development Bank, *Asian Development Outlook 2003 Update, 2003*, p.88, <https://www.adb.org/sites/default/files/publication/30245/ado-2003-update.pdf>

2.13. Pandemic planning implementation does not appear consistent across Whitehall.⁸

2.14. There is an opportunity with the forthcoming Integrated Review for biosecurity risks and thorough pandemic preparedness to be situated more centrally within national security strategy.

3. Urgent need to protect UK life sciences.

3.1 UK life sciences play a pioneering role in the development of innovative pharmacological countermeasures (medicines, treatments, vaccines) to human disease pathogens like SARS-CoV-2.

3.2. In 2017/2018 the UK pharmaceutical industry generated £41.8 billion turnover, employed over 113,000 people, and accounted for around one per cent of the UK's output and 7.7 per cent of manufacturing GVA, while medical technology and medical biotechnology contributed 233,400 jobs across 5,142 companies and a turnover of £63.5 billion.⁹

3.3. Testament to the soft power of British scientific institutions, as well as the high thresholds of its regulatory and approval bodies, the UK is regarded as a gold standard in GCP (Good Clinical Practice) and GMP (Good Manufacturing Practice). This must be protected; reputational damage cannot be repaired quickly.

3.4. The UK has a serious Covid-19 vaccine candidate with Oxford University/AstraZeneca. Preliminary results were published openly in *The Lancet* to allow for scientific peer-review. AstraZeneca is close to securing deals for 2 billion doses worldwide. Still, trials have been halted due to a serious adverse reaction, highlighting the possibility that no viable vaccine emerges.

3.5. Yet the sudden pause, end or delay to clinical trials across all therapy areas, since lockdown shut laboratories and hospitals had to focus on Covid, risks devastating the pipeline of UK research into diseases and treatments. For patients worldwide, there is hope in clinical trials trying something new when other treatments have failed – for many the difference is between life and death. For young researchers on the cusp of careers in life sciences, the impact to their immediate work, passion and ingenuity is an enormous risk to the sector; for within this cohort lies future discoveries and breakthroughs. Retaining them and their ongoing work is critical.

3.6. Education is the UK's fifth largest export with £12.8 billion generated annually by international students.¹⁰ The ongoing pandemic is likely to make it hard to retain them and attract new ones. Some predict a loss of £2.5 billion.¹¹ This risks the talent pipeline for UK research, start-ups and spin-offs that all feed into UK life sciences.

⁸ For example, see question by Sir Simon Wessely on whether it is true the Director-General of MI5 ordered pandemic measures for Thames House "well ahead" of other departments, Royal Society of Medicine, RSM In Conversation Live with Sir Andrew Parker, 15 May 2020, <https://www.youtube.com/watch?v=LATwQXc2Lbo>

⁹ House of Commons Business, Energy and Industrial Strategy Committee, *The Impact of Brexit on the Pharmaceutical Sector*, 8 May 2018, HC 382, p.5.

<https://publications.parliament.uk/pa/cm201719/cmselect/cmbeis/382/382.pdf>

¹⁰ The British Council, 'Study UK launches new campaign in 16 countries to drive up international student recruitment', 10 August 2020, <https://www.britishcouncil.org/organisation/press/study-uk-launches-new-campaign-16-countries-drive-international-student-recruitment>

3.7. The UK government committed to reaching £22 billion per year invested in R&D by 2024/25.¹² Yet there is an urgent gap to fill. The Association of Medical Research Charities warns of a £310 million annual shortfall over several years.¹³ With charity shops closed and fundraising events cancelled during lockdown, medical charities' ability to fund early-stage, high-risk research and attract young talent into the pipeline is severely at risk, posing greater risk to the Government's goal to increase R&D.¹⁴

10 September 2020

¹¹ Richard Adams, 'Coronavirus UK: Universities face £2.5bn tuition fee loss next year', *Guardian*, 23 April 2020, <https://www.theguardian.com/education/2020/apr/23/coronavirus-uk-universities-face-25bn-tuition-fee-loss-next-year>

¹² HM Government, *UK Research and Development Roadmap*, July 2020, p.4, https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/896799/UK_Research_and_Development_Roadmap.pdf

¹³ ARMC, Open Letter to the Prime Minister, 1 September 2020, <https://www.amrc.org.uk/Handlers/Download.ashx?IDMF=edc650e6-7fcd-4a2f-a7dc-c31beaed3c02>

¹⁴ Sir Paul Nurse, 'Britain's status as world leader in biomedical research is in great danger', *Daily Telegraph*, 5 September 2020, <https://digitaleditions.telegraph.co.uk/data/339/reader/reader.html?#!preferred/0/package/339/pub/339/page/70/article/78986>