Written Evidence Submitted by Geoff Snell

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My credentials for writing

1 From 1969 to 1986 I was a laboratory scientist at the then Ministry of Agriculture, Fisheries & Food's (MAFF) Central Veterinary Laboratory. Initially I was a parasitologist but then was in microbiology for 12 years. Attendant learning included an applied zoology degree. I became familiar with the concept of zoonoses (diseases of animals transmissible to people).

2 In 1986 I moved to MAFF's Internal Audit Division and retrained as an internal auditor. I moved to the Manpower Services Commission's (MSC) Internal Audit Division in 1989. Soon after that I became a senior auditor. I was involved in auditing a wide range of systems in both MAFF and MSC and its successors. Internal audit is concerned with the adequacy and effectiveness of internal control systems in every area of an organisation's business, not just finance. I became a counter-fraud specialist in 1996 and retired as Head of Counter Fraud for the Learning & Skills Council in 2008.

3 I am writing because I want the country to be better prepared for the next epidemic/pandemic than it was for Covid-19. To that end I have included paragraph 12 (suggested improvements to preparations) in a letter to the Prime Minister, copied to The Secretary of State for Health and Social Care. I have sent copies of my larger paper from which this submission is taken to:

- my MP (Olivia Blake) with the request that she forwards a copy to the Leader of the Opposition,
- The Chair of the Public Accounts Committee
- The National Audit Office
- Hugh Pym and Laura Kuenssberg at the BBC.

I have had no replies apart from acknowledgements from the Public Accounts Committee, and National Audit Office.

Summary

4 The UK government was unprepared for the covid-19 pandemic. Had the warnings from previous recent outbreaks of zoonoses, significant organizations and individuals been heeded, the UK might have had the same level of preparation for testing and tracing contacts as had South Korea, with similar outcomes in numbers of cases and deaths. Potential preparations against further epidemics/pandemics are listed, which, if adopted should lead to the UK being better prepared for any outbreak. With increasing population pressure forcing contact with wildlife in wilderness areas and increasing interconnectedness through air travel further epidemics/pandemics of zoonoses are very highly likely. Key to future UK preparedness will be a change of government and societal attitudes away from efficiency and leanness towards resilience. The World Bank's cost/benefit analysis is in favour of preparation.

Our preparedness for Covid-19

5 Lockdown with the messages 'stay at home', 'flatten the curve', 'protect the NHS' was imposed on 23rd March 2020. Within a few days I realised this was because we were totally unprepared for Covid-19. This realisation was substantiated by later statements in the news media all of which evidenced a lack of government preparedness (e.g. Sir David King, Government Chief Scientific Adviser, 2000-2007,

"Britain was better placed to face a pandemic in 2008/9" and "since 2010 things have been run down." (Interview, BBC1 television news, 12th April 2020); Sir Paul Nurse, Head of the Francis Crick Institute, "the government was unprepared" ('Question time' BBC 1, 1st May 2020); Matt Hancock, Secretary of State for Health, admitting that the government had moved away from a 'test & track' strategy on the 12th March because of a lack of capacity. ('Today' BBC Radio 4, 4th May 2020)).

The warnings missed

6 For whatever reason, successive governments failed to act on warnings from significant people (e.g. Larry Brilliant, 2006, epidemiologist on the smallpox eradication team ('Inside Science' BBC Radio 4, 30th April 2020); Bill Gates (2015) pointed out global unpreparedness for a pandemic ('Andrew Marr Show' BBC1, 12th April 2020).) and events (e.g. Ebola (multiple outbreaks since 1976), bird flu (multiple outbreaks since 1997), Severe Acute Respiratory Syndrome (SARS, 2003), swine flu (2009) and Middle East Respiratory Syndrome (MERS, 2012); Exercise Cygnus in England (2016) and Exercise Iris in Scotland (2018)).

7 By contrast, South Korea experienced MERS in 2015 with 200 cases, 38 deaths and a cost of US$8 billion. They therefore prepared for the next outbreak, covid-19 ('In Business' BBC Radio 4, 23rd April 2020). A key part of their preparations was a test and trace operation from the start. The outcome to 28th May was: 11,344 cases and 269 deaths from a population of 51.5 million. On the same date the UK outcome was: 267,240 cases and 37,640 deaths from a population of 66.65 million.

The results

8 The result was that the UK was unprepared.

9 From the start, there were shortages of everything: laboratory facilities, testing equipment and reagents, Personal Protective Equipment (PPE), intensive care unit beds (covid-19 patients were treated in normal hospital wards), ventilators. Government procurement was forced to scramble on international markets against other countries for everything. Scientific advice was constrained by lack of resources. "A lack of capacity drove strategy rather than strategy driving capacity." (House of Commons Science and Technology Committee quoted on 'Today' BBC Radio 4, 19th May 2020).

10 Matt Hancock, the Secretary of Health & Social Care's position is summed up in a profile of him broadcast on the 26th April ('Profile of Matt Hancock' BBC Radio 4), 'He's pulling all the right levers, but there's nothing there'. There was nothing there because preparations were not made.

11 The UK was unable to follow the South Korean example.

What could have been in place

12 At the time I realised our lack of preparation, I made the following list of preparatory actions applicable to any epidemic/pandemic. I amended the detail in the light of further information. Preparations might include:

1. ***A permanent independent expert commission charged with keeping up to date with potential threats, overseeing planning, and maintaining response arrangements in line with advances in technology.*** Plans and arrangements for testing and contact tracing and everything else were inadequate. The remit of Public Health England (PHE) is too broad. Its emphasis is not on pandemic preparation. Its Strategic Plan for 2020 to 2025 refers briefly only to pandemic flu

(www.gov.uk/government/publications/phe-strategy-2020-2025 Accessed 5th July 2020). SAGE's (Scientific Advisory Group on Emergencies) remit is too limited to carry out this task. It is only called when the government feels it needs it. The New & Emerging Respiratory Virus Threats Advisory Group (NERVTAG) is purely advisory (www.gov.uk/governmemt/groups/new-and-emerging-respiratory-virus-threats-advisory-group Accessed 5th June 2020), although its remit could be expanded to undertake executive functions. Either that, or a new organisation linked to NERVTAG should be created to fulfil executive functions.

2. ***Mothballed Nightingale hospitals.*** (Carl Heneghan, Professor of Evidence-based Medicine, Oxford University, said, "When we look back there will be serious questions to answer about all the decisions made. What's been very noticeable is that we always seem to be one step behind on the policy. If it's not ventilators, it's tests, if it's not tests, it's PPE. It's an important lesson that we have to invest to create overcapacity for these moments. We've really cut to the bone in this country far too much." (www.theguardian.com/businness/2020/may/04/the-inside-story-of-the-uks-nhs-coronavirus-ventilator-challenge 4th May 2020. Accessed 30th May 2020). He suggests a return to the concept of the fever (isolation) hospital; fully equipped beds reserved for infectious disease outbreaks ('Inside Science' BBC Radio 4, 7th May 2020). However, there is an aversion across the public sector to redundancy of any sort in public services. The NHS faces the same pressure towards 'leanness' as all government departments. In the financial year 2018/19 the NHS bed stock was 141,000. It is reported that overnight, general, and acute bed occupancy averages 90.2% and regularly exceeds 95% in winter. This is said to be well above the level considered safe by many (www.kingsfund.org.uk/publications/nhs-hospital-bed-numbers "NHS hospital Bed Numbers: Past, Present, Future" March 2020. Accessed 13th June 2020). There is little slack for emergencies. Dedicated isolation hospitals (mothballed Nightingales) would avoid closing many NHS routine services. Saffron Cordray, NHS Providers, said that the cost of reconfiguring the NHS for covid-19 would be a slow return to routine treatment ('Today' BBC Radio 4, 25th May 2020). The NHS Confederation said that returning to normal service would be difficult and predicted waiting lists would double to 10 million by the end of the year('Today' BBC Radio 4, 10th June 2020). Treating Covid-19 patients in ordinary hospital wards having created capacity by stopping all non-urgent treatment, and leaving the Nightingales underused may not have been the best decision. Apart from a permanent core, emergency staffing of isolation hospitals might come from NHS staff, recalled recent NHS leavers and retirees, medically trained military band personnel and, as was suggested this time, furloughed flight attendants. Since doctors and nurses are required to undergo continuous revalidation adequate retraining time would be needed. Perhaps this might be provided by a period of annual recall like that of the army reserve forces. Interviewed on the armed forces' part in the response to covid-19, General Sir Nick Carter, Chief of the Defence Staff, said that going forward, although boring, resilience is needed rather than leanness and efficiency ('Today' BBC Radio 4, 8th May 2020).
3. ***Stockpiled personal protective equipment, ventilators, test, and other equipment.*** As part of our preparations for nuclear war there were depots managed by the large haulage and warehousing companies with food stockpiles, field kitchens and lorries (They were also useful backup for civil emergencies like dock strikes.). The transferring of a 'just in time' mindset from car production into the public sector does not work in overwhelming emergencies. Kim Trautman, of NSF International (a US company with a UK subsidiary involved in product testing, inspection and certification in many areas including ventilators and other medical devices),

formerly of the US Food & Drug Administration, wrote on the US and UK situations, "We may have become too efficient from a manufacturing and government perspective. Because we haven't stockpiled we've lost a lot of the mentality of the First and Second World Wars. Therefore, we've gone too lean and efficient – which is great from a business perspective, but not when something like this happens. This is where stockpiling, and those warehouses full of emergency products, come into play." (www.nsmedicaldevices.com/analysis/ventilator-regulation-covid-19 Accessed 30th May 2020). Stockpiling would avoid the need for competition for scarce resources on international markets.)

4. ***The rehoming from abroad of contracts for essential, high volume, low profit items, such as PPE*.** Again, this would avoid the need for competition for scarce resources on international markets. It would also help ensure quality and safety standards are met. More broadly I believe there is a need to recognise that there are strategic industries, such as public health, which, wherever possible, should not be dependent on overseas supply chains. This could have a positive effect on UK employment.
5. ***Call-off contracts with drug and chemical companies both for drugs and test reagents.*** Suppliers would be required to sell preferentially to the NHS, again avoiding the need for competition for scarce resources on international markets.
6. ***Call-off contracts with companies to adjust their production to make necessary equipment*** These would be with experienced companies, or consortia including them, making equipment based on proven models that meet regulations.
7. ***Call-off contracts with transport companies to ensure distribution.***
8. ***A list of designated post holders in the NHS and other organisations at strategic and operational levels who would be required to act in an emergency.*** It would include postholders in every organisation with interviewing skills who could be trained as contact tracers to supplement public health officials.
9. ***A list of laboratories (state, university, commercial, medical, and veterinary) with trained people and equipment able to take on testing to be called on in emergency.*** This would avoid the lack of testing capacity experienced this time.

The likelihood of further outbreaks

13 Further outbreaks of zoonoses are highly likely.

14 Peter Daszak, of the Eco Health Alliance estimates there are 1.7 million undiscovered viruses. 70% of new infectious diseases are zoonoses (Antony Fauci, US national Institute for Allergies & Infectious Diseases, 'The Virus Hunters' PBS America, 15th May 2020). Zoonotic viral outbreaks are increasing in frequency (Mark Honigsbaum, City University London, 'World at One' BBC Radio 4, 28th May 2020). In the last 50 years there has been a fourfold increase in virus spill-overs from animals to people ('The Virus Hunters' PBS America, 15th May 2020).

15 With increasing pressure on wilderness and interaction with wildlife and our interconnectedness through air travel, pandemics are bound to happen again.

16 Before it wound up its pandemic unit in 2012 the World Bank had calculated the cost/benefits of preparing for pandemics for developed countries: spending of US$3.4 billion spread over 3 or 4 years would save US$80 billion (Former World Bank official, 'In Business' BBC Radio 4, 23rd April 2020.).

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