Witness Name: Professor Sir Andrew Pollard
Statement No.: 1
Exhibits:
Dated: 05/05/2023

UK COVID-19 INQUIRY

WITNESS STATEMENT OF Professor Sir Andrew Pollard

Exhibits:

AP/01 – INQ000115386 - 2023-03-03-M1SAGE01AP-Draft minute JCVI flu subcommittee June 2019_final.pdf
AP/02 – INQ000115387 - 2023-03-03-M1SAGE01AP-Draft minute JCVI flu subcommittee September 2019.pdf
AP/03 – INQ000115388 - 2023-03-03-M1SAGE01AP-First_Pre-SAGE_minutes_Ebola_in_DRC_-_18_May_2018.pdf
AP/04 – INQ000115389 - 2023-03-03-M1SAGE01AP-Item 2 - NERVTAG_subcomm_TOR.pdf
AP/05 – INQ000115390 - 2023-03-03-M1SAGE01AP-Minute 2019 10 Draft.pdf
AP/06 – INQ000115391 - 2023-03-03-M1SAGE01AP-NERVTAG PPV_Dec_2015_Outcomes_Final.pdf
AP/07 – INQ000115392 - 2023-03-03-M1SAGE01AP-sage-ebola-minutes-29-october-2014.pdf
AP/08 – INQ000115393 - 2023-03-03-M1SAGE01AP-sage-ebola-minutes-8-december-2014.pdf
AP/09 – INQ000115394 - 2023-03-03-M1SAGE01AP-Second_Pre-SAGE_minutes_Ebola_in_DRC_-_5_October_2018.pdf
AP/10 - INQ000115395 - 2023-03-03-M1SAGE01AP-UKVN-Annual-Review-20_21-20230111100153.pdf
AP/11 - INQ000115396 - 2023-03-03-M1SAGE01AP-UKVN-Annual-Review_19-20211006071038.20.pdf
AP/12 - INQ000115397 - 2023-03-03-M1SAGE01AP-Vaccines_Project_annual_review.pdf

I, Sir Andrew Pollard, will say as follows: -

I am Director of the Oxford Vaccine Group at the University of Oxford and a specialist in paediatric infectious diseases at Oxford Children's Hospital. I am also chair of the Department of Health and Social Care's (DHSC) Joint Committee on Vaccination and Immunisation (JCVI) since 2013 and held roles at the World Health Organizations SAGE (vaccine policy committee) for 6 years until 2022. I did not chair the COVID19 JCVI committee during the pandemic as I led the clinical development of the Oxford-

AstraZeneca vaccine, but have continued to chair JCVI with regard to all other vaccines. At WHO I was a member of committees on HPV (cervical cancer) vaccines an COVID19 vaccines, and chair for influenza and pneumonia vaccines.

The Oxford Vaccine Group is a research group of ~ 150 researchers in the University's Department of Paediatrics which researches the design, development and testing of vaccines with research activities in the UK, Asia, Africa and Latin America. JCVI is an independent Departmental Expert Committee and a statutory body which advises the Government on a) the safety, efficacy/effectiveness and cost-effectiveness of new vaccines following a Ministerial request and b) monitors the UK immunisation programme to provide advice on changes that may be required in response to changing pathogen epidemiology, vaccine performance or safety and c) scans the horizon for future vaccines which may improve the health of the UK population.

I studied medicine at St Bartholomew's Hospital Medical School, qualifying in 1989 and trained in the NHS and in Canada specialising in paediatrics and infectious diseases. My academic training includes a BSc in experimental pathology (which focussed on the immune system) in 1986 and a PhD in immunity to meningitis bacteria in 1999. I have been a senior academic at Oxford University since 2001 and a consultant in paediatric infectious diseases at Oxford Children's Hospital. I have worked extensively on vaccines for meningitis and pneumonia providing data that underpins global policy on their use and over the past decade ran pivotal studies which led to WHO policy on typhoid vaccines, with 50 million children vaccinated in the past 12 months. On outbreak/epidemic vaccines, I led H5N1 bird flu vaccine studies in 2005, critical trials for DHSC in 2009 on H1N1 swine flu vaccines in children, trials of an Ebola vaccine in 2014/15. From 2020, I led the clinical development of the Oxford AstraZeneca COVID19 vaccine across 3 continents resulting in the distribution of 3.5 billion doses globally.

1. Government scientific advisory roles

From 11th June 2009 to 21st January 2020, I have had the following government scientific advisory roles:

a) Chair of JCVI from 2013 – current
b) Member of Ebola SAGE 8 December 2014, 29 October 2014, 18th May 2018, 5th October 2018

c) Member of UK vaccines R&D network (chaired by Chris Whitty) from 2015 -current
d) Co-chair (with Professor Sir Jonathan van Tam) of the joint NERVTAG-JCVI committee which reviewed the H5N1 pandemic influenza stockpile in 2015 (and 2022/23)

2. JCVI

I was appointed as Chair of JCVI in 2013 following the retirement of the previous chair, Professor Sir Andrew Hall. Over the past 10 years I have chaired all of the main JCVI meetings (3 per year) and attended the majority of the subcommittee meetings (which cover particular vaccines or disease areas and provide their advice the main committee). I have not participated in the JCVI COVID19 committee, which was formed in 2020, as I recused myself in view of my work on the development of the Oxford-AstraZeneca vaccine and the potential for conflict of interest.

Most of the work of JCVI focuses on the NHS immunisation programme and control of endemic infectious diseases affecting children and adults rather than pandemics or pandemic preparedness. This is because the role of the committee has been in assessing new products (being developed by industry) and overseeing the existing NHS immunisation programme and responding to requests on specific vaccines from DHSC. War-gaming pandemics caused by novel viruses is not part of the terms of reference of the committee and no requests to JCVI have been made in the past 10 years to consider potential pandemic threats. The exception is influenza, where the committee has given advice on pandemic vaccines because of the availability of products which could be assessed. However, the committee has considered outbreaks of diseases where there are existing vaccines including for example meningococcal disease, Ebola, Mpox (monkeypox), polio, and diphtheria.

In these meetings my role is as chair, to coordinate the meetings, hear the perspectives of the committee and invited experts and help formulate the conclusions of the meetings.

JCVI is a highly effective committee which advises the UK Health Departments on new vaccines, overseeing and advising changes to the NHS immunisation programme. The committee has been doing this work continuously since 1963 and is the blueprint for the

WHO policy committee and similar National technical advisory groups in other countries. A JCVI-equivalent committee is recommended by WHO as an independent body to advise Governments in all countries. JCVI works on constant review of vaccines used in the UK by the NHS and in travel clinics. Work of the Committee on new vaccines is at the request of the Secretary of State for Health (under the NHS constitution), but intelligence on new vaccines in the pipeline that are nearing licensure is gathered by JCVI and provide to DHSC to inform this process. If a vaccine is considered safe, effective and cost-effective (according to standard Treasury rules) by JCVI the Secretary of State is obliged to implement it under the NHS constitution. The committee meets 3 times per year, but also constitutes multiple subcommittees each year and holds extraordinary meetings at other times to consider urgent matters that arise in a year and can meet more regularly as needed (eg COVID19 committee). The committee has prior to the pandemic met only in person, but since the pandemic hybrid meetings or online-only meetings have been held to ensure that momentum is not lost. Members of JCVI are appointed by DHSC following advertisement, shortlisting and interview. The appointments panel consists of representatives from DHSC, UKHSA immunisation Department and the JCVI chair. No remuneration is paid to members of JCVI but they do receive travel expenses. The members of the committee span a range of clinical, public health, scientific, technical, modelling, lay and implementation backgrounds representing critical expertise to provide the best policy advice and to review evidence as outlined in the JCVI terms of reference. Meetings are held in private, but minutes are always published online within 6 weeks of the meeting. Conflicts of interest are assessed regularly and updated at each meeting and considered in the context of the guidance in the terms of reference of JCVI.

The composition of JCVI appropriately reflects the broad range of academic and clinical disciplines required to draw together information and provide sound public health advice to DHSC on vaccines. The structure which also allows industry presentations on the latest unpublished data and additional experts to be brought together for the vaccine/disease-specific subcommittees means that the very broadest information and knowledge can be sought to develop policy advice for the main committee to consider. DHSC are aware that at present JCVI is not sufficiently diverse with just 3 female members (as of March 2023) and one non-white member among a committee of 16 individuals listed on the JCVI website.

Members of JCVI are very active in other national and international committees (eg WHO) on vaccines, which brings considerable additional knowledge and expertise to UK policy advice.

JCVI is supported by a secretariat based in UKHSA, which was under-resourced prior to the pandemic and it was difficult to keep up with the workload driving the pace of change in immunisation. The secretariat expanded to cope with the pandemic workload but it is not yet clear whether this is sufficient to manage peacetime vaccine advice as they remain overstretched. To avoid capacity issues in future, there needs to be a clear plan in place and agreed with DHSC/UKHSA for an increase in capacity to cope with the workload of a pandemic as soon as it is apparent that JCVI will be called upon.

Beyond the secretariat, the biggest obstacle to the work of JCVI over the past decade has been the availability of independent modelling of vaccine impact for the UK population and its cost-effectiveness (required for the HM treasury) which has undoubtedly held up introduction and decision-making for life-saving vaccines. Modelling for vaccine use in influenza pandemics has been done prior to 2020 informed by 1918 and 2009 data and experience.

As mentioned above, with the exception of influenza (and now COVID19), JCVI did not have a function to specifically advise on potential pandemic vaccines as there are no licensed products currently available for a future pandemic which could be considered. A recent request from DHSC on high containment infectious disease vaccines focused on licensed products and so JCVI was not in a position to comment beyond influenza (and non-pandemic threats such as Ebola). However, it is worth noting that there is no other independent Government expert committee which is properly constituted with the relevant technical expertise to consider the potential use of early-development candidates that exist today.

<u>Pandemic influenza vaccines were discussed at the following JCVI meetings:</u>

a) **Monday 3 June 2019 10:00 16:00 INFLUENZA SUB-COMMITTEE OF THE JOINT COMMITTEE ON VACCINATION AND IMMUNISATION [Exhibit AP/01 - INQ000115386]**

I chaired this subcommittee meeting which was constituted to review information and data from manufacturers on their pandemic vaccine candidates to consider their

potential for use as part of the UK's pandemic preparedness strategy. We also reviewed pandemic modelling work.

b) **Monday 9 September 2019 10:00 16:00 INFLUENZA SUB-COMMITTEE OF THE JOINT COMMITTEE ON VACCINATION AND IMMUNISATION [Exhibit AP/02 - INQ000115387]**

Continuations of the first meeting, again with me as chair, with one manufacture presenting (MEDICAGO), we also had a presentation from MHRA on regulatory process, a narcolepsy review, Pandemic modelling and an economic assessment.

c) Advice from these subcommittees went to main **JCVI October 2019 meeting agenda item: Pandemic influenza preparedness [Exhibit AP/05 - INQ000115390]**

At this meeting, which I chaired, the Committee agreed that it would be important to have early access to more than one vaccine for a) security of supply and b) and because there may be differences in the population you target where different vaccines may be appropriate. The characteristics of different available vaccines and the potentials of new technologies was discussed. This meeting carefully evaluated pandemic-specific vaccine strategies for an influenza pandemic and provided advice to DHSC on likely scenarios in the case of an influenza pandemic. The models showed that vaccines were unlikely to be available until 6 months after a pandemic was declared using existing flu manufacturing technologies (using hens eggs for manufacturing) and engagement on shortening timelines was needed. Importantly, JCVI also emphasized the need to consider non-pharmaceutical interventions to buy time for vaccine development, to ensure that there were processes in place to shorten licensure timelines. There is more detail in the minutes.

D) Ebola was not discussed in a pandemic specific context (as this is an unlikely pandemic agent) but was discussed in the context of pre and post exposure advice at several JCVI meetings.

3. Ebola SAGE 2014 and 2018

I was invited to Ebola SAGE meetings to provide advice as a vaccine expert and chair of JCVI.

The Ebola SAGE meetings were coordinated by the CMO/CSA and included representation from various Government advisory bodies, public health experts, modellers and JCVI as documented in the minutes of the meetings. The meetings provided a forum for sharing of information across committees and Government and directing important actions to provide planning for response to the outbreaks as they impacted both the UK health workers and those being deployed to the affected areas, as well as thoughts on how best to drive clinical studies to support vaccine development and the affected countries. Attendance at the meetings was not remunerated, but travel expenses were provided. These meetings were held over a period of a few months during the discrete epidemics and were constituted to monitor and advise on the acute event. There was a SAGE secretariat which supported these meetings.

a) 29th October 2014 **[Exhibit AP/08 - INQ000115393]**

This meeting was convened to respond to the West African Ebola outbreak. I attended this meeting of the Ebola SAGE as a member representing JCVI. I think this was the first meeting to which I was invited and the second Ebola SAGE. There was brief discussion about the vaccine landscape with all vaccines at a very early stage, there was limited discussion about their potential deployment.

I note that there was a previous meeting on 16th October at which vaccination was discussed but the minutes do not indicate that JCVI was represented.

b) 8th December 2014 **[Exhibit AP/07 - INQ000115392]**

I also attended as the JCVI representative. At this meeting there was brief discussion about clinical trials of the vaccines and thoughts about trial design in Sierra Leone. There was some discussion about enrolling healthcare workers in the clinical trials.

c) **18th May 2018 [Exhibit AP/03 - INQ000115388]**

This meeting was convened to review the DRC Ebola outbreak and I attended as JCVI representative. It was noted that there were no licensed vaccines at the time and their release for contacts or healthcare workers would be organised through WHO (today there are now 2 licensed products).

d) **5th October 2018 [Exhibit AP/09 - INQ000115394]**

This meeting was convened to review the DRC Ebola outbreak and I attended as JCVI representative. The meeting emphasised that only the Merck vaccine had efficacy data (from the 2014/15 outbreak) and was being used in DRC.

e) UK Mission to WHO on Ebola with Oliver Letwin (Minister without portfolio) and Sally Davies (CMO). I attended the mission to WHO as an adviser to the CMO in my role as JCVI chair. At this meeting the use of vaccines in West Africa was discussed with WHO and other member states and I supported the CMO on scientific advice about the vaccines.

4. Joint JCVI-NERVTAG pre-pandemic influenza stockpile committee [Exhibit AP/06 – INQ000115391]

a) Meetings held on Friday 13th March 2015 & Thursday 23rd April 2015 (minutes of these meetings held by the NERVTAG secretariat and have not been provided to me) – these two meetings are summarised in a note of NERVTAG on 27th November 2015 **[Exhibit AP/06 – INQ000115391]**

I was asked to jointly chair this meeting with Jonathan van Tam, who was the Chair of NERVTAG at that time prior to his role as DCMO. This was an ad hoc joint committee, which has recently been reconstituted (in late 2022), now with Sir Peter Horby at the NERVTAG chair. The constitution of the committee included members from JCVI and from NERVTAG plus invited experts. The committee was not remunerated but travel expenses were paid. The committee was supported by the NERVTAG secretariat. There were only two meetings held in 2015.

In 2015, the committee considered the pre-pandemic H5N1 stockpile which was expiring and advised that potency testing was undertaken to assess whether the shelf-life could be extended. Although the vaccine was found to be potent there were concerns about use beyond its expiry date, but it was felt reasonable to keep the doses as long as possible. The committee were not convinced of the value of replenishing the stockpile since the wild virus had drifted away from the genetic makeup of the vaccine and flu experts did not expect this to be useful in a pandemic. The committee also noted that

there was a range of threats from other flu types (H7, H9 etc) and that it made less sense to focus just on H5.

5. UK vaccines network [Exhibits AP/10 - INQ000115395, AP/11 - INQ000115396 and AP/12 - INQ000115397]

This group is chaired by CMO Professor Sir Chris Whitty and oversees spending of Government funds to catalyse and direct development of vaccines for various outbreak and pandemic threats. It was set up in 2016 in response to the Ebola outbreak to advise on the list of bacterial and viral pathogens that should be included in the scope of threats and to direct funds for spending through Innovate UK. I have been a member of the committee advising on vaccine development questions and prioritisation. I attend the committee in my role as chair of JCVI and as a vaccine expert. The committee is not remunerated. The committee includes public health, virology, vaccine, animal health and industry expertise to provide advice. The importance of this committee is that it is the only forum of independent experts to my knowledge which is considering the technical side of (non-influenza) vaccines as counter-measures for future pandemics and how to catalyse by investment their early development. The committee has met a one or two times per year since 2016 with a gap during the COVID19 pandemic. The committee's work is linked to Government funding for vaccine development which was awarded for 5 years in 2016 (though Innovate UK and has recently been renewed.

6. The state of pandemic planning

Prior to 2020, JCVI has been involved in discussions on influenza pandemic planning and has worked jointly with NERVTAG to consider pandemic influenza, including review of different modelling scenarios (led by Peter Groves who was previously the DHSC analyst), stockpiles of prepandemic vaccines and pandemic-specific vaccines. Prior to Brexit, there was a clear understanding of the processes for licensing pre-pandemic influenza vaccines and a mock-up pandemic process through the European Medicines Agency, but this has not been tested post-Brexit to my knowledge by MHRA. Specific JCVI advice would be precipitated early in a new influenza pandemic which would be driven by the characteristics of that pandemic, especially based on those identified as highest risk who would be prioritised for vaccination – note that for COVID19 it was the elderly but for 1918

influenza younger adults had the highest risk. The recent H5N1 risk since 2022 has galvanised further planning meetings on pandemic influenza.

However, to my knowledge, beyond influenza, JCVI was not asked by DHSC to consider planning for other pandemic threats or to form a pandemic subcommittee to advise on vaccines for other viruses or bacteria including the potential for stockpiles or pandemic-specific vaccines. The absence of a request to take on this work likely relates to the business-as-usual role of JCVI which is to advise on products that are near to license or already licensed rather than hypothetical vaccines. A recent request on high containment infectious diseases focussed on licensed products, which excludes most pandemic threats except influenza.

It does seem that it would be important to consider pandemic planning more broadly by JCVI, especially since the experience and knowledge of pandemic COVID19 that his held by the current committee will be lost as a result of turn-over of members in the years ahead. Having a clear framework for approaching different pandemic scenarios could help in formulating decisions in a future pandemic.

However, it should be noted that having JCVI regularly managing the NHS immunisation programme and assessing new peace-time products since 1963 has built a broad expertise in the committee which provides considerable resilience when JCVI is asked to switch to pandemic response. Note that this is distinct from NICE, which does not consider vaccines in its portfolio or oversee broad ongoing NHS programmes such as immunisation, making the role of JCVI distinct and critically important for pandemic preparedness. Bringing pandemic planning to JCVI in peacetime would strengthen the expertise of the committee and keep preparedness at the forefront of the committee's thinking as new technologies are developed. I have experience of other National Immunisation Technical Advisory Groups (NITAGS) around the world, and in my view, having an expert vaccine committee with the breadth and depth of knowledge held by JCVI is exceptional, even in high income countries. The resilience provided by a technical committee (JCVI) reporting to DHSC that is familiar with developing policy advice and has the experience of continuous review of policy for complex biological products such as vaccines cannot be underestimated.

I have only been invited to SAGE meetings that were reactive to the specific threat of Ebola and I am not aware of meetings which were held as part of planning for hypothetical situations. There may be other groups working on vaccines specifically for Government pandemic preparedness but I am not aware of anyone with the vaccine technical expertise who is involved in developing that advice and this would seem to be a gap. In 2022 there were some meetings that were considering potential scenarios for future pandemics which were coordinated by DHSC. In my view vaccine expertise on SAGE should be considered essential for any infectious threat.

Prior to the pandemic it was well recognised that there were inequalities in how communities access health services in general and immunisation in particular, with especially low vaccine update among certain ethnic, religious and socially disadvantaged groups. While the media portray the problem as largely vaccine hesitancy or anti-vaccine sentiment, UKHSA have identified that the largest part of the problem is access. To improve vaccine uptake in a pandemic, understanding and addressing the needs of these communities in accessing immunisation during peacetime should be a major area of focus for the NHS. Addressing this issue during peacetime was not given sufficient focus or attention prior to the pandemic and so inequality in vaccine uptake during the pandemic was not unexpected.

Beyond these specific communities, there is widespread misunderstanding and misinformation about vaccines which is difficult to address in the midst of a pandemic when ill-informed opinions have already been established, and needs to be systematically tackled for future generations. To defend the population against future pandemics, perhaps understanding of science in general and the specific role of vaccines in defending health must be incorporated better into our education system so that future generations are equipped to make informed decisions.

7. Recommendations

1. **In peacetime, maintain the broad expertise which is currently included on JCVI which brings together the different clinical, modelling, and scientific disciplines with lay representation to**

provide the best assessment of evidence to inform public health advice on vaccines, so that this expertise is available and well-rehearsed as policy advisors when a pandemic strikes.

2. Ensure that the JCVI secretariat is sufficiently staffed to build the capacity for managing the routine workload and that there are clear plans to ensure that there is sufficient surge capacity for a switch to pandemic advice should another pandemic arise.
3. Ensure that JCVI regularly reviews pandemic influenza vaccine planning to make certain that advice keeps abreast of scientific developments in the epidemiology of non-seasonal influenza viruses and novel vaccines.
    a. Continue to advise DHSC on a prepandemic stockpile for currently circulating Avian influenza viruses (jointly with NERVTAG)
    b. Advise DHSC on creating an environment for development of new generation multi-valent pandemic influenza vaccines by big pharma for future better and broader stockpile resilience.
    c. DHSC should assure availability of industry partners for the UK and a pathway for use of a pandemic-specific influenza vaccine in case of a pandemic.
    d. DHSC should drive investment into novel pandemic- specific influenza vaccines that can meet the 100 day mission.
4. Beyond flu, JCVI should be asked to convene a pandemic vaccine subcommittee to a) examine different scenarios for generic vaccine deployment in the face of a pandemic and b) ensure that new knowledge about the potential use of vaccines in development for specific families of bacteria or viruses is incorporated into pandemic planning c) to war-game the use of vaccines in different groups (eg age, pregnancy, immunocompromise).
5. DHSC to review processes for expediting licensure of prepandemic and pandemic vaccines with MHRA in the current post-Brexit situation. This would be an important component of the G7 100 day mission.

6. **Advise whether or not stockpiles of other novel vaccines approaches should be considered to improve speed of response for non-influenza pandemic vaccines.**
7. **Develop a better understanding of immunisation-access issues in hard-to-reach communities for vaccines and establish better contact, communication and confidence in these communities during peacetime so that high immunisation can be achieved in the case of a pandemic.**
8. **Consider how understanding of science in general, and knowledge about use of vaccines in particular can be incorporated into the education system so that whole population is better informed to make routine and pandemic vaccine decisions in the future.**

Statement of Truth

I believe that the facts stated in this witness statement are true. I understand that proceedings may be brought against anyone who makes, or causes to be made, a false statement in a document verified by a statement of truth without an honest belief of its truth.

Signed: Personal Data

Dated: 05/05/2023