Witness Name: Professor Anders Tegnell Statement No. 1 Exhibits: AT/001 Dated: 2 October 2023 UK COVID-19 INQUIRY

WITNESS STATEMENT OF PROFESSOR ANDERS TEGNELL

I, PROFESSOR ANDERS TEGNELL, will say as follows:

Introduction

- 1. I am an MD with a specialisation in clinical infectious diseases. I also have a PhD in infectious diseases and a masters in epidemiology (then later from London school of Hygiene and epidemiology).
- 2. During the pandemic I was the Swedish state epidemiologist and head of department at the agency as well as deputy director.

Career History, Professional Expertise and Publications

- 3. I worked in clinical medicine in various hospitals and disciplines until the late 1990s with a three year period as a medical officer for WHO in Lao PDR in the early 1990s. Then I moved into the area of public health mainly in national agencies but also short periods for WHO and 18 months with the European Commission. During the first years mainly as an expert but since then in different managerial capacities as head of first sections and later departments.
- 4. I am trained in clinical infectious diseases but in later years mainly dealt with the epidemiology of communicable diseases including outbreak management and coordinating communicable disease control at national level.
- 5. I have spent time analysing biological warfare and terrorism and worked with that both in Sweden and at EU level. In that area I have had a special interest in dangerous pathogens such as viral hemorrhagic fevers.
- 6. My main academic interest has been in vaccine programs where I have published papers and supervised a few doctoral students. In later years

my main interest has been in the analysis of the broad public health problems. I set out a list of my major publications at Annex A.

Core Political and Administrative Decision Making

The Inquiry is concerned with understanding your role and involvement in core political and administrative decision-making by the UK Government, namely those decisions that were taken by the Prime Minister/No. 10, the Cabinet and Cabinet Committees supported by senior political, scientific and medical advisers officials and advisers, to manage the emergency response to Covid-19. It is understood that you attended a meeting with the Prime Minister and others at Downing Street on or around the 20th September 2020 at which the need for a second lockdown and/or circuit breaker was specifically discussed, along with more general conversations concerning the Covid-19 response. It is further understood that other participants included the then Chancellor of the Exchequer, Dominic Cummings, Professor John Edmunds, Professor Angela McClean, Professor Sunetra Gupta and Professor Carl Heneghan. Please confirm whether this is correct and who else was present.

7. It was a digital meeting and to the best of my recollection, nobody else was present.

It is understood that various members of the Cabinet, including the Chancellor of the Duchy of Lancaster, Secretary of State for Health and Social Care, and the Chief Medical Officer and Government Chief Scientific Advisor were not at this meeting. Are you aware of the reasons why they were not in attendance? Was their attendance/non-attendance discussed?

8. No

Please provide full details of the meeting, including the following: How was the meeting organised and by whom?

9. I was asked to attend by the prime minister's office and sent a link to the meeting

If not you, who invited you to attend the meeting? When were you first approached to attend the meeting?

10. About a week before

Do you know how you came to be approached to attend the meeting?

11. No

For example, who suggested that you could provide relevant information and advice? Did you know any of the other attendees personally or through other contacts?

12. I know all of them by reputation. I have attended any meetings with them in the past. Mathematical modelling of infectious diseases is a small field and they are all well known to everybody interested in that area.

Details of the meeting, what was discussed, including any documents, reports, scientific articles, data, and views expressed. Details of any advice given. Was the meeting recorded or minuted? If so, please provide a copy of any minutes you received following the meeting.

13. No records were shared with me. I exhibit to this statement the one document I have access to from this meeting (AT/001 - INQ000283501).

It is understood that you were asked to set out your current scientific assessment of the situation for discussion with other members of the scientific community. The meeting was to discuss the following question: "Should government intervene now, and if so, how?" What was your scientific assessment of the situation at that time? Did you consider that the government should intervene at that time and if so, how?

14. My role was to report on the Swedish experience and the measures we had taken and the pandemic development in Sweden. I did not give any advice but gave a brief overview of the situation in Sweden.

What was your view on a circuit breaker and/or second lockdown?

15. See above. I expressed no view

What were your views on the measures (for example the NPIs) taken in response to Covid-19 at that time? Did you consider the UK response to Covid-19 to be effective?

16. See above I did not express any opinion on the UK response

Did you consider the measures taken at that stage by the UK Government to be proportionate or out of proportion to the threat?

17. See above.

Did you, or anyone else present at the meeting, express the view that there was already herd immunity within the UK population? Did you consider that there was herd immunity and if so, to what extent?

18. I cannot remember that anybody expressed views of herd immunity. Several studies available at that time made quite clear that a herd immunity at that level did not exist in any of the studied communities.

Did you, or anyone else present at the meeting, express the view that there would be no second wave? If so, please set out full details.

19. No

Did you, or anyone else present at the meeting consider that the UK would have to learn to live with Covid-19, as it does with other infectious diseases such as influenza, and pneumococcal pneumonia?

20. That aspect was not discussed in the meeting in my recollection.

Did you, or anyone else present call on the Prime Minister to normalise his language with regard to the rise in Covid-19 cases because of the seasonal affect such as influenza?

21. No

What scientific and other advice did you understand the Prime Minister and core decision makers to be receiving with regard to the Covid-19 response and the use of NPIs? Did you agree with the advice being provided? If not, why not?

22. Two conflicting views were expressed, for and against a circuit breaker from the two universities. I did not express any view.

Did you have any concerns regarding the adequacy or sufficiency of scientific and other expert advice (including where relevant, any underpinning data) on which decisions about the UK Government's response to Covid-19 were based? If so, what were these concerns?

23. No

Did you consider that the SAGE system, under which SAGE and its subcommittees advised on scientific matters, was appropriate for dealing with the Covid-19 pandemic?

24. I do not have enough information to review the role of SAGE during the pandemic

Did you consider scientific and expert structures, including SAGE and its subcommittees, and advice sufficiently representative of the various interests (e.g. health, economics, at-risk and vulnerable groups) and counter views? To what extent, in your view, were other factors, such as economic, societal, educational and mental health impacts sufficiently modelled?

25. See above

During the meeting, or at any other time, did you set out your view on the current position in Sweden and the Swedish experience (as at 20 September 2020) to the Prime Minister, Ministers or other individuals involved in core decision making? What was that assessment? Did you consider at that time the Swedish response to be working?

26. Yes at that time, the spread in Sweden was comparatively low

To what extent did you consider it to be successful?

27. During the first wave Sweden had a very high incidence and mortality which of course shows that the response was not totally successful

Did you have any concerns or reservations about the response in Sweden?

28. Yes, we did not manage to protect our elderly and many other disadvantaged group suffered more than the population at large

Did you attend any other formal or informal meetings concerned with core political and administrative decision-making and the response to Covid-19? If so, please provide full details.

29. No

Please set out and provide details of any direct or indirect contact prior to and after the 20th September 2020 meeting with the Prime Minister and other participants concerning the response to Covid-19.

30. None

Please set out and provide details of any other direct or indirect contact with other individuals involved in core decision making with regard to the UK Government's response to the Covid-19 pandemic, for example other Ministers, civil servants and Special Advisers.

31. No

For the above purposes, contact includes all forms of communication, formal and informal e.g. the use of WhatsApp and other messaging platforms. If so, please provide full details including the method of communication, areas of discussion, any advice given and views expressed by each party. Please also confirm whether and to what extent there are any records of such contact or material retained by you, including messages.

32. None

The Swedish Experience

The Inquiry is concerned to understand at a high level, the response taken to the Covid-19 pandemic in Sweden. It is understood that you were the Chief epidemiologist for the Swedish public health authority and played a central role in the Covid-19 response, having been described as its chief architect.

It is understood that core decision making with regard to the response to Covid-19 was predominantly undertaken by the Swedish public health authority as opposed to by politicians and government decision makers. Is this correct? Please provide a summary overview of decision-making structures utilised in the Covid-19 pandemic response in Sweden.

- 33. Sweden has three levels of government: national, regional and local. There is a high degree of regional and local autonomy. However, law making as well as judicature are entirely a matter for the national State. Sweden is divided into 21 counties and 290 municipalities. The counties (Regioner) are, amongst other things, responsible for ensuring that everyone living in Sweden has equal access to good healthcare. The municipalities are for example responsible for childcare, primary and secondary education, elderly care and care of the disabled. The principle of local self-government gives the counties and the municipalities the authority to design and structure their activities in the light of local conditions.
- 34. The Government Offices is a government agency that acts as the Government's staff and supports the Government in governing Sweden and realising its policies. The Government Offices include the Prime Minister's Office, the ministries and the Office for Administrative Affairs. A minister heads each ministry. In addition, a ministry may have other ministers with responsibility for specific portfolios. Every minister has a staff of politically appointed officials, for example state secretaries, political advisers and press secretaries. Officials in the various departments and divisions within the ministries prepare most government business.
- 35. Each ministry is responsible for a number of government agencies tasked with applying the laws and carrying out the activities decided on by the Riksdag and the Government.
- 36. Every year the Government issues appropriation directions for the government agencies. These set out the objectives of the agencies' activities and how much money they have available to them. The Government therefore has quite substantial scope for directing the activities of government agencies, but it has no powers to interfere with how an agency applies the law or decides in a specific case. The government agencies take these decisions independently and report to the ministries. In many other countries, a minister has the power to intervene directly in an agency's day-to-day operations. This possibility does not exist in Sweden, as 'ministerial rule' is prohibited.
- The Government is responsible for recruiting and appointing the heads (directors-general) of government agencies.
- 38. There are three fundamental principle of the Swedish crisis management system. These are responsibility, similarity and proximity.
- 39. In short:

- a. *Responsibility* The authority/region/municipality etc that has the responsibility under normal circumstances also has it during a crisis.
- b. *Similarity* During a crisis, the activities should work as much as possible in the same way as under normal circumstances.
- c. *Proximity* A crisis should be handled where it occurs and by those that are most affected and responsible. That is for example the municipality or the region. The state should go in first if the local resources are not enough.
- 40. Sweden's constitutional order does not allow for the declaration of a state of emergency. Fundamental civil rights and freedoms can only be suspended in the case of war. Public health emergencies are therefore regulated by ordinary law, which allocates responsibilities. It is legally impossible to enforce a General quarantine or 'lockdown' measures.
- 41. The Communicable Diseases Act is based on the individual's own discretion and the law contains few mandatory provisions. The Swedish system focuses on an individual duty to prevent contagion of disease. Each person suspecting that he or she may be infected with an infectious disease is obliged to take the necessary precautions to protect others.
- 42. All regulations measures and decisions enacted under the on the Communicable Diseases Act must be, as all Swedish health care, based on based on science and proven experience. The regulations can furthermore not be more far reaching than what is justifiable regarding the specific danger to human health (the principle of proportionality). Measures taken under the Communicable Diseases Act shall respect the equal value of all human beings and the integrity of individuals and, when directed at children, take into account the child's best interests. Coercive measures on individuals can only be taken if no other less restrictive possibility is available.
- 43. The Parliament may delegate powers to enact certain rules to the Government, which in turn may sub-delegate powers to various public authorities. The Public Health Agency has enacted almost 100 Regulations and General Advices related to covid-19 during the time when covid-19 was classified as a disease dangerous to public health and to society. Most of these Regulations where based on sub-delegated powers from specific and time limited covid-19 laws.

Please outline the strategic response to Covid-19 adopted by Sweden between January and March 2020.

44. During the early stages trying to keep the virus from establishing in Sweden but from March trying to mitigate its effects and flatten the curve

What was your understanding of Covid-19 and how did it develop between January and March 2020?

45. We followed the scientific literature and the information supplied mainly through WHO and ECDC. During this time, much of the basic epidemiological data on covid came first from China later from Italy.

At what point were the essential features of the virus and disease (especially its asymptomatic nature, and means of transmission) properly understood by you?

46. This has developed over time and has changed as the virus developed

What was the timeline for this information being available?

47. Not quite sure how to interpret this

To what extent did Sweden adopt a herd immunity strategy?

48. Not at all, such a strategy does not really exist

To what extent did Sweden adopt a containment/delay or flatten the curve strategy?

49. This was the main aim of the strategy

What role did testing and contract tracing play in the strategy and response in Sweden?

50. A very important role but during some periods limited due to lack of capacity

Did Sweden operate any border controls, quarantine or impose measures such as isolation on entry to the country?

51. To a limited extent

How did the strategy and response to Covid-19 change in Sweden throughout the course of the pandemic?

52. The basic strategy was maintained but in details, it was adapted over time

To what extent did the response to Covid-19 in Sweden follow existing pandemic planning?

53. To certain extent but extensive adaptations was needed

To what extent was the Swedish response to Covid-19 underpinned by scientific advice? How was scientific advice commissioned and communicated?

54. The agency have extensive internal expertise where most of the advice was developed. It was then discussed with a number of external actors partly from academia.

What modelling did you and the Swedish government rely upon in making decisions concerning the strategic response? To what extent did it differ from that used by the UK Government?

- 55. Early spring 2020, when the uncertainty around the new virus and how it spread was huge, the PHA made own scenarios based on best available data with the explicit goal to minimize number of assumptions. The scenarios, depicting a realistic worst-case scenario in term of hospital occupancy (separated into ICU/need for ventilators and ordinary inpatient care) for each region during the first wave. The scenarios were updated when new data became available. First scenarios, based on data from Wuhan together with data on the Swedish demography/prevalence of underlying illness, were published on March 20th, 2020. The scenarios were updated when data from Italy became available, April 3rd 2020 and finally based on Swedish data, May 14th.
- 56. The early scenarios differed quite much from other modelled scenarios produced at that time; our scenarios forecasted much smaller number of hospitalizations. The reason was that we choose not to simulate the dynamic spread, due to the large uncertainty especially concerning the fraction unreported cases. The approach used by the Swedish PHA is described in the attached report "Estimation of hospital care beds".
- 57. Late spring 2020, when we got the first results from our population-based point-prevalence studies in Stockholm, and we therefore could estimate he fraction unreported cases, we performed our own SEIR-simulations. First four regional estimations on the number of infected persons were presented in June 2020 (https://www.folkhalsomyndigheten.se/publikationer-och-material/publikationsarkiv/e/estimates-of-the-number-of-infected-individuals-during-the-covid-19-outbreak). In these simulations, we varied the contact-intensity to represent various scenarios for the future spread.
- 58. As a decision support regarding the summer and how domestic travelling may affect the spread and need for hospital care, we performed and presented three scenarios for the summer in which the contact intensity was varied. The seven regions assessed to be most affected by summer travelling were included in the analysis of June 15th 2020 (https://www.folkhalsomyndigheten.se/contentassets/29b815266baa4b4 09905c096be773df5/effekter-okade-kontakter-okat-resande-sverigesommaren-2020.pdf). At the same time, we presented 2 scenarios of the development summer and spring for each region (https://www.folkhalsomyndigheten.se/contentassets/29b815266baa4b4 09905c096be773df5/prognos-sommar-host-alla-regioner.pdf).
- 59. In December 2020 we presented the first of in total 16 scenarios of the future spread and estimated need for hospital care, as part of a governmental commission. From report number 8, (February 2022), we no longer presented separate scenarios for the 22 regions, only national scenarios.

60. We also presented reports where specific questions, mostly vaccine related, were analysed and modelled: (the effect of vaccinating children 5 – 11 years old (February 2022) https://www.folkhalsomyndigheten.se/publikationer-och-material/publikationsarkiv/v/vaccination-mot-covid-19-till-barn-yngre-an-12-ar-beslutsunderlag-januari-2022/, the effect of vaccinating children 12-15 years old (September 2021) https://www.folkhalsomyndigheten.se/publikationer-och-material/publikationsarkiv/c/covid-19-vaccination-av-barn-fran-12-ar-is sverige--beslutsunderlag-september-2021/ and general effects of vaccinating persons 20+ (March 2021) https://www.folkhalsomyndigheten.se/publikationer-och-material/publikationsarkiv/v/vaccination-mot-covid-19/.

The Inquiry is specifically considering UK Government decisions concerning the imposition of, easing of, or exceptions to the following NPIs:

a. The three national lockdowns (March 2020 - July 2020; November 2020 - December 2020; January 2021 - April 2021);

61. No formal lockdown used

b. Local and regional restrictions (including the introduction of a tiered system);

- 62. In the fall of 2020 Sweden had a few months of local differentiation of restrictions but it was never used extensively
- c. Circuit breakers, in particular the proposed circuit breaker in September 2020;

63. Not used

d. Working from home;

64. Was used throughout the whole pandemic

e. Reduction of person-to-person contact/social distancing;

65. Was used throughout the whole pandemic

f. Self-isolation requirements;

66. Was used throughout the whole pandemic but they were not mandatory

g. The closure and opening of schools; and

67. Distance learning was used in high schools and universities and shorter closures was used at local level for the lower levels

h. The use of face-coverings.

68. Only in buses and trains for a short time in early 2021

Please outline the approach taken by the Swedish government with regard to each of these NPIs, to the extent that they were utilised in the response to Covid-19 in Sweden.

69. See above

How did medical and scientific expertise and data inform Swedish government decision-making in relation to NPIs?

70. See above

Do you consider that the right NPIs were considered and used at the right time in Sweden, particularly in the period from January to March 2020?

71. We do not know at this stage since no formal evaluation has been performed

To what extent did you and others involved in the Swedish response to Covid-19 assess the likely impact of contemplated NPIs on vulnerable and minority groups?

72. Extensively discussed but difficult to get into practise

How was the danger to health posed by the virus weighed up against the perceived danger of societal and economic damage caused by the imposition of social restrictions because of NPIs?

73. The agency's main responsibility is public health, other aspects was taken into consideration by the government

Please set out in overview the approach taken in Sweden to mass gatherings. It is noted that Stockholm hosted the Eurovision Song Contest in March 2020. This has been described as a super-spreader event. On reflection, do you consider that such gatherings should not have gone ahead?

74. No increase in cases was seen after the event so it cannot be called super spreading. Actually the geographic area were the event took place had a lower level of spread at that time than cities on the other side of the border ie in Denmark

It has been reported that a directive dated 17 March 2020 to Stockholm area hospitals stated that the elderly (over 80 years of age) and those with a body mass index above 40 should not be admitted to intensive care, because they were less likely to recover. It is understood that most nursing homes were not equipped to administer oxygen and residents instead received morphine to alleviate their suffering. Similarly there are reports of the young being refused hospital treatment because it was believed that they were too young to suffer

serious Covid-19 complications. Is this accurate? If so, to what extent was this official government policy? What was the policy towards the elderly and other vulnerable groups and how did it change throughout the pandemic?

75. These questions must be directed to Region Stockholm and Stockholm's stad (municipality). See answer to question no 24.

Please set out in overview the approach taken to care and nursing homes. Was it effective?

76. It is very difficult to make a statement on this in the time given. The approach differed widely between different homes and at different times. They were also affected to varying degree some had no cases at all some had an extensive spread of the disease. It has been difficult to find any consistent correlation between different possible reasons of this in the limited follow up that has been possible so far. In conclusion many but not all of them were severely affected so the measures in place cannot be said to have been effective.

You will be aware that enforcement of various NPIs in the UK took place either through the promulgation of guidance or through legislation imposing criminal sanctions for breach. What was the Swedish approach to enforcement?

77. To generalise we could say to no legal sanctions were aimed at individuals and their behaviour but legal sanctions were aimed at some establishments like restaurants organisers of big events etc.

To what extent did the population in Sweden comply with guidance issued?

78. Varied over time but our impression is that compliance was relatively high.

How and when was this measured?

79. Through regular questionnaires but also through following for example mobile phone data. Incidence of diseases that are spread in a similar manner data from subway traffic and visitors to department stores etc

Were levels of adherence to guidance instructive in considering the Covid-19 response?

80. Yes with the compliance, we could observe we could to certain extent adapt the response

To what extent was compliance modelled and/or anticipated?

81. Since the effect of many of the interventions to a high degree was unknown with did not try to include them in our models directly. As you can see in the models, we used a kind of composite value for social distancing but that was not connected to any specific interventions.

What role do you consider the particular social and demographic conditions in Sweden to have affected upon behavioural change?

82. Difficult to know but repeated investigations have shown that there are a very high level of trust in the agency in the population. On the other hand we do know that we have groups in the society were this does not apply

How did the approach to Covid-19 in Sweden compare to that in other countries and specifically its Nordic neighbours (Norway, Finland, Denmark, Iceland) and to the UK?

83. This is a very complicated question and the differences have changed over time. We are not able at this stage to give a complete answer.

How does Sweden compare in terms of death rates and excess mortality?

84. Death rates are higher in Sweden than our Nordic neighbours but lower that the UK. Exact data can be taken from a number of sources, as I am sure you are aware. Excess mortality differs slightly depending on the method but Sweden is at the same level as the Nordic countries and sometimes lower. UK has a considerable higher excess mortality

You will be aware that the approach in Sweden has been criticised at various stages during the pandemic, for example by the Vetenskapsforum COVID-19 (Science Forum COVID-19) and internationally. Please set out in broad terms the nature of those criticisms.

85. In general, they have asked for stronger more legally enforced measures often due to a lack of understanding of the actual situation

What, if any of those criticisms do, you consider valid?

86. To have had resources for more extensive testing and contact tracing early on would have been better but there were restraints that were hard to overcome. The same can be said for the elderly homes and parts of the migrant population. The criticism were highly varied over time and often not very specific about what to do just to do more which makes it difficult to answer this question in any detail. It also very seldom touched on the areas I mentioned were we had real problems

Did you welcome dissenting opinions?

87. Yes, when it is constructive and offers alternative that are feasible.

To what extent did you consider the criticisms at the time?

88. We discussed all options at the agency through the pandemic.

To what extent do you consider the strategy adopted in Sweden to have been a success? On reflection, is there anything that you would have done differently?

What is your view now on the efficacy of more stringent NPIs, for example lockdowns, circuit breakers, the prohibition on mass gatherings and/or events?

89. We cannot answer the question at this stage we are hopefully at the global level in a stage of evaluation and hopefully we can get some answers later on.

What lessons do you consider the UK can learn from the Swedish approach?

90. We leave that to the UK authorities to answer but are of course happy to share experiences in a bilateral setting if this is deemed useful

What lessons can be learned from the global response to Covid-19? Are there any other countries whose response is particularly instructive in this regard?

91. We strongly believe that the context is extremely important and any lessons from other countries has to be carefully considered before implemented. The open sharing of experiences during the pandemic has been very important and we would not like to name any specific countries.

Statement of Truth

I believe that the facts stated in this witness statement are true.



Dated: __October 2 2023_____

Annex A - List of Major Publications

Schilling S, Follin P, Jarhall B, Tegnell A, Lastilla M, Bannister B, Maria Fusco F, Biselli R, Brodt HR, Puro V. European concepts for the domestic transport of highly infectious patients. Clin Microbiol Infect. 2009 Aug;15(8):727-33. doi: 10.1111/j.1469-0691.2009.02871.x. Epub 2009 Jun 12. PMID: 19523164.

Tegnell A, Dillner J, Andrae B. Introduction of human papillomavirus (HPV) vaccination in Sweden. Euro Surveill. 2009 Feb 12;14(6):19119. PMID: 19215721.

Götz HM, Tegnell A, De Jong B, Broholm KA, Kuusi M, Kallings I, Ekdahl K. A whirlpool associated outbreak of Pontiac fever at a hotel in Northern Sweden. Epidemiol Infect. 2001 Apr;126(2):241-7. doi: 10.1017/s0950268801005313. PMID:

11349975; PMCID: PMC2869689.

Bossi P, Tegnell A, Baka A, Van Loock F, Hendriks J, Werner A, Maidhof H, Gouvras G; Task Force on Biological and Chemical Agent Threats, Public Health Directorate, European Commission, Luxembourg. Bichat guidelines for the clinical management of haemorrhagic fever viruses and bioterrorism-related haemorrhagic

fever viruses. Euro Surveill. 2004 Dec 15;9(12):E11-2. PMID: 15677844.

Dannetun E, Tegnell A, Normann B, Garpenholt O, Giesecke J. Influenza vaccine coverage and reasons for non-vaccination in a sample of people above 65 years of age, in Sweden, 1998-2000. Scand J Infect Dis. 2003;35(6-7):389-93. doi: 10.1080/00365540310011065. PMID: 12953950.

Brouwers L, Boman M, Camitz M, Mäkilä K, Tegnell A. Micro-simulation of a smallpox outbreak using official register data. Euro Surveill. 2010 Sep 2;15(35):19651. Erratum in: Euro Surveill. 2010 Sep 2;15(35):7. Erratum in: Euro Surveill. 2010 Sep 9;15(36):19660. PMID: 20822732.

Ternhag A, Tegnell A, Lesko B, Skaerlund K, Penttinen P. Basic Surveillance Network, a European database for surveillance data on infectious diseases. Euro Surveill. 2004 Jul;9(7):19-22. PMID: 15318006.