

1 APPENDIX:

2

3 *Competing narratives on SARS-CoV-2 transmission (adapted from¹²)*

4

5 The flawed “inside track” narrative which shaped UK government policy runs broadly as
6 follows:

- 7 1. Viral particles emitted from infected individuals can be divided into droplets ($\geq 5 \mu\text{m}$), which
8 transmit within 2 metres, and aerosols ($< 5 \mu\text{m}$), which would account for any transmission
9 beyond 2 metres.
- 10 2. The virus is clearly present in short-range respiratory droplets but lack of consistent
11 identification of SARS-CoV-2 in air samples means that evidence for airborne transmission is
12 weak.
- 13 3. The randomised controlled trial occupies a special position in the hierarchy of evidence; other
14 study designs are of inherently lower quality. Systematic reviews should privilege randomised
15 controlled trials and give less weight to studies of lower methodological quality.
- 16 4. Policies should be based on directly-relevant empirical findings, not on theoretical speculation,
17 “low-quality” empirical studies or indirect evidence.
- 18 5. Handwashing, surface cleansing and (in some circumstances) masking of healthcare staff and
19 sick patients have been shown in randomised controlled trials to reduce transmission of
20 respiratory disease. These interventions are therefore evidence-based.
- 21 6. The same level of evidence is lacking for masking asymptomatic members of the public, cleaning
22 indoor air by ventilation or filtration, and providing higher-grade protection (e.g. respirator
23 masks) for healthcare staff. These interventions are therefore not evidence-based.
- 24 7. Changing policy in the absence of robust evidence is unscientific.

25 A key “outside track” narrative, ignored by policymakers until late in the pandemic, runs as
26 follows:

- 27 1. As aerosol scientists have shown, aerosols are extremely complex; they vary in size (up to 100
28 μm) and travel in turbulent, non-linear trajectories. It is hence impossible to define a single
29 “safe” distance.
- 30 2. Aerosols transmit *predominantly* at close range (within 1 metre), hence close-contact
31 transmission cannot be attributed solely (or even predominantly) to droplets.
- 32 3. There is strong and consistent evidence from many different kinds of study that aerosol
33 transmission occurs (Box 1) and that airborne precautions (column b in Table 1) are effective.
- 34 4. Policies should be based on a narrative synthesis of heterogeneous evidence, including
35 mechanistic studies and real-world case studies, and should not necessarily privilege randomized
36 controlled trials.
- 37 5. These findings support airborne prevention measures (column 1b in Table 1).
- 38 6. A precautionary approach (changing policy when evidence *suggests* aerosol transmission, even if
39 it falls short of definitive scientific proof) is justified when the risks of not acting are high.

40

41 TIMELINE OF KEY NERVTAG AND SAGE DECISIONS ON MASKS

42

43 Reproduced with permission from Alex Hunt's article:

44 [https://newseu.cgtn.com/news/2020-06-06/Timeline-The-UK-s-arguments-against-face-](https://newseu.cgtn.com/news/2020-06-06/Timeline-The-UK-s-arguments-against-face-masks-for-all-R4ZUizpUfm/index.html)
45 [masks-for-all-R4ZUizpUfm/index.html](https://newseu.cgtn.com/news/2020-06-06/Timeline-The-UK-s-arguments-against-face-masks-for-all-R4ZUizpUfm/index.html)

46

47 **13 January, 2020:** Nervtag holds its first COVID-19 meeting. No mention of face masks.
48 On screening of air travelers it says: "Based on the currently available evidence, taking
49 particular note of SARS rather than influenza and also what we currently know about the
50 novel coronavirus, Nervtag does support the current position that port of entry screening
51 is not advised. Nervtag is fully aware of the single case in Thailand detected by a thermal
52 image scan but, in spite of that, the Nervtag recommendation does not change."

53 **21 January:** Nervtag meets: No mention of face masks

54 **22 January:** SAGE meets: No mention of face masks

55 **28 January:** Nervtag meets: "The existing advice in the UK (for pandemic flu) is that face
56 mask wearing by the general public is NOT recommended." The committee was asked if
57 this should change.

58 "Despite China making it mandatory in some cities for the public to wear face masks...
59 the committee reported that there is no evidence to support that the wearing of face
60 masks by the general public reduces transmission. It was also noted that this may add to
61 fear and anxiety."

62 **28 January:** SAGE meets: No mention of face masks for general public

63 **30 January:** Nervtag meets: No mention of face masks

64 **3 February:** Nervtag recommends washing hands, covering nose and mouth when
65 coughing or sneezing and the use of hand gel if there is no soap. It also says people should
66 be asked to avoid touching their eyes, nose and mouth.

67 Wearing a face mask by people with COVID-19 symptoms is recommended, "if tolerated."
68 But the wearing of face masks by well-people living with symptomatic people is not
69 recommended, because it won't make any difference to whether they get infected.
70 Wearing face masks by well-people interacting with well member of the public (either
71 occupationally or otherwise) is not recommended

72

73 Members noted that the evidence for [mask] use is very weak and limited for those with

74 prolonged contact with symptomatic individuals in the same household. The evidence for
75 [mask] use in the general public is near nil.

76 **3 February:** SAGE meets: No mention of face masks

77 **4 February:** SAGE meets: SAGE heard that Nervtag advises that there is limited to no
78 evidence of the benefits of the general public wearing face masks as a preventative
79 measure. Face masks and other personal protective equipment in the community is only
80 advised for health and social care workers visiting individuals who may be infectious.

81 It says there is some evidence that wearing of face masks by symptomatic individuals may
82 reduce transmission to other people, and therefore Nervtag also recommends that
83 symptomatic people should be encouraged to wear a surgical face mask, providing that it
84 can be tolerated.

85 **6 February:** SAGE meets: No mention of face masks

86 **7 February:** Nervtag: No mention of face masks

87 **11 February:** SAGE meets: No mention of face masks

88 **13 February:** SAGE meets: No mention of face masks. Instead, in the discussion about
89 other possible measures there is a warning about 'presenteeism' – it says 20 percent of
90 people go to work when feeling ill. It also says that any civil unrest usually relates to
91 underlying social issues, rather than to a specific crisis; the crisis itself tends to be the
92 flashpoint that exposes the underlying issues.

93 **18 February:** SAGE meets: No mention of face masks

94 **20 February:** SAGE meets: No mention of face masks

95 **21 February:** Nervtag: No mention of face masks for the general public

96 **25 February:** SAGE meets: Says that evidence of social distancing and school closures in
97 Hong Kong, Wuhan and Singapore can reduce the R number to 1. Does not mention face
98 masks.

99 **27 February:** SAGE meets: The reasonable worst case scenario was that 80 percent of UK
100 people will be infected with 1 percent of them dying. (that's about 550,000)

101 **3 March:** SAGE meets: No mention of face masks

102 **4 March:** Nervtag: Discussion of merits of different types of personal protective
103 equipment, but not face masks for the public

104 **5 March:** SAGE meets: No mention of face masks

105 **6 March:** NERVTAG: Members raised concerns around explaining why face masks were
106 acceptable for healthcare staff but not the general public.
107

108 The minutes give this answer: "The difference is that healthcare staff are trained to use
109 the masks and know when to change the masks when they become soggy or
110 contaminated however with the general public, there is no control over how they would
111 use the surgical face masks so they may use the same one for a week which is
112 inappropriate."

113 "CS added that the surgical face masks are used by healthcare staff as part of a PPE
114 ensemble and used alongside goggles, gloves and an apron and it is the combination of all
115 of this that prevents contamination."

116 **10 March:** SAGE meets: Discussion of social distancing rules and reports from Italy,
117 France, Germany and Spain on how their measures have worked. No mention of face
118 masks.

119 **13 March:** SAGE meets: Unanimous that measures seeking to completely suppress spread
120 of Covid19 will cause a second peak. "SAGE advises that it is a near certainty that
121 countries such as China, where heavy suppression is under way, will experience a second
122 peak once measures are relaxed." No mention of face masks. This is the week that saw the
123 UK bringing in its lockdown measures.

124 **16 March:** SAGE meets: Discussion over need to shut schools, get people to self isolate and
125 to test and social distancing. No mention of face masks.

126 **18 March:** SAGE meets: No mention of face masks. School closures need to happen, SAGE
127 says. There is a concern that grandparents might be exposed to risk by having to take over
128 childcare, but they hear an argument that it was most likely to impact single parents, and
129 their parents tend to be younger, in their 50s, rather than in the more at risk age groups.
130 Czechia made masks compulsory in supermarkets and on public transport. Slovakia
131 followed a week later.

132 **20 March:** Nervtag: Discussion of COVID-19 aerosol route from coughing.
133 Recommendations from the committee should have a scientific basis, but also consider
134 the priorities for the availability of PPE in the UK, particularly with FFP3 masks.

135 **23 March:** SAGE meets: Reaffirms view that closing borders would have negligible impact
136 on growth of cases. No mention of face masks.

137 **26 March:** SAGE meets: No mention of face masks

138 **27 March:** Nervtag: No mention of face masks. There was a discussion about nasal gargling
139 with iodine for health care workers.

140 **29 March:** SAGE meeting: No mention of face masks (in Austria face masks are made
141 compulsory for anyone going into a shop – its daily rate of infection drops sharply)

142 **31 March:** SAGE meeting: (R estimated at 0.6 and 0.9). No mention of face masks

143 **2 April:** SAGE meeting: No mention of face masks. This is the 22nd SAGE meeting and it
144 includes the decision that "a future meeting of SAGE will look at what the UK can learn
145 from actions on other countries."

146 **7 April:** SAGE meets: NERVTAG concluded that the increased use of masks would have
147 minimal effect in stopping people becoming infected. SAGE asked for more detail on
148 whether this view would change if it was found that pre-symptomatic people had high
149 levels of infectiousness. The U.S. had now recommended people wear face coverings,
150 basing the recommendation on their ability to stop people who do not know they have
151 COVID-19 infecting other people.

152 **9 April:** SAGE meets: Notes that the World Health Organization has said there is
153 currently no conclusive evidence that face masks are beneficial for community use.

154 **14 April:** SAGE meets: Evidence does not currently support use of face masks to protect
155 the wearer in the general population, although if someone is infectious it will reduce
156 transmission. It says the evidence is marginally in favour of a small effect but only in
157 specific circumstances - in enclosed environments. Downsides are needing to ensure
158 people still social distance and the impact on supply chains for health workers. Agreed
159 that a shorter paper on face masks for ministers to be presented at the next meeting.

160 **16 April:** SAGE meets: Agreement that face masks can be recommended as part of
161 measures to release lockdown and social distancing measures but... must not threaten
162 supplies for health staff, masks must not be allowed to lead to symptomatic people leaving
163 their homes. Agreement for Chief Medical Officer to produce a summary of
164 recommendations of wearing face masks.

165 **20 April:** Scientific Pandemic Influenza Group on Behaviours (SPI-B) paper on
166 behavioural considerations of telling everyone to wear face masks: It begins with the
167 warning "we are unaware of evidence relating to these hypotheses."

168 They say that "if they (face masks) are recommended the message should be that they are
169 in addition to social distancing and should be a sign that the wearer is trying to protect
170 other people, rather than themselves."

171 But the risks are: People wearing them badly, reusing them and not disposing of them
172 properly; use of "ineffective homemade masks" because of a lack of supply of adequate
173 ones; People may be falsely reassured by wearing face masks so do not wash their hands
174 so much. Also raises inequality issues - those unable to afford or go outside to buy or
175 make them; harassment of people who are not wearing face masks, which could
176 undermine collective solidarity, and also says there are policing implications if people
177 wear face masks.

178 **21 April:** Sage meets: The effect of wearing face masks is weak, likely to be small but not
179 zero. The evidence for using face masks is "marginally positive." But: Any policy decision
180 must not jeopardise supply of masks to health and care workers. Distancing remains the
181 preferred option but on public transport and some shops where distancing is not possible,
182 cloth masks could be "at least partially effective." No evidence to support long term mass
183 wearing of face coverings or wearing them outdoors. Can't rule out that those with
184 symptoms might feel able to break quarantine by wearing a mask, others might
185 repeatedly put a face mask on and off and that could lead to "increased hand-face
186 contact." CMO paper to be drafted for ministers.

187 **21 April:** Scientific Pandemic Influenza Group on Behaviours (SPI-B) – warns of a risk in
188 new crimes – including "theft of masks if designated as compulsory for public transport."

189 **23 April:** Sage meets: UK funded research project to look at how long the virus can stay
190 on a face mask "it may survive for up to seven days."

191 **28 April:** SAGE meets: No mention of face masks

192 **30 April:** SAGE meets: No mention of face masks

193 **1 May:** SAGE meets: No mention of face masks

194 **1 May:** SAGE meets: No mention of face masks. In a media conference, after Scotland
195 recommended people wear face masks, Prime Minister Boris Johnson says face coverings
196 could be a useful tool in lifting the lockdown because, despite weak science, they will
197 "give people confidence they can go back to work."

198 **5 May:** SAGE meets: No mention of face masks

199 **7 May:** SAGE meets: No mention of face masks. This is the last meeting for which the
200 minutes have been published.

201 **11 May:** Boris Johnson announces lockdown-easing measures including advice that people
202 in the UK wear "face coverings" – not surgical masks as they want to reserve them for
203 health workers – in enclosed public spaces where they cannot social distance, such as on
204 public transport and in some shops. It is not mandatory and masks are still rarely seen by
205 shoppers and pictures are shared of people on public transport not wearing masks.

206 **4 June:** The transport secretary announces that face coverings will be mandatory on
207 public transport in England, from 15 June. He said these face coverings should not be
208 surgical masks but things like homemade masks or scarves. He says surgical masks must
209 be reserved for healthcare workers and says that social distancing and hand washing
210 remain the most important measures. There is no mention of making face masks
211 compulsory inside shops or in any other part of daily life.

212

213 [https://newseu.cgtn.com/news/2020-06-06/Timeline-The-UK-s-arguments-against-face-](https://newseu.cgtn.com/news/2020-06-06/Timeline-The-UK-s-arguments-against-face-masks-for-all-R4ZUizpUfm/index.html)
214 [masks-for-all-R4ZUizpUfm/index.html](https://newseu.cgtn.com/news/2020-06-06/Timeline-The-UK-s-arguments-against-face-masks-for-all-R4ZUizpUfm/index.html)

215

216 FREEDOM OF INFORMATION REQUEST ON INFECTION PREVENTION AND CONTROL
217 CELL

218

219 Reproduced from https://www.whatdotheyknow.com/request/uk_ipc_cell_details

220

221

222

223 Dear NHS England,

224 As you have confirmed you have had correspondence with the UK Infection Prevention Control
225 Cell could you please provide :

226 a. Contact details including postal and e mail address for the UK IPC Cell.

227 b. Details as to the legal status of this body , ie is it a purely independent organisation or part of a
228 government department or agency eg Public Health England , and if so which ?

229 c. Details as to when this body was formed , who appointed the advisers that conducted the
230 review used to update the Jan 21 2021 Covid -19 IPC guidance and who leads the body .

231 d. The date that the UK IPC cell was engaged to conduct the above review , and who made the
232 decision to engage it for this purpose ?

233 e. the identity of the members of the UK IPC cell providing scientific advice

234 Yours faithfully,

235 Matt Richards

236

237

238 Dear Matt Richards,

239 Thank you for your Freedom of Information (FOI) request dated 2 March
240 2021.

241 [copy of request]

242 NHS England holds this information.

243 a. Contact details including postal and e mail address for the UK IPC
244 Cell.

245 UK IPC cell contact via email at [1][\[email address\]](#)

246 b. Details as to the legal status of this body, i.e., is it a purely
247 independent organisation or part of a government department or agency
248 e.g., Public Health England, and if so which?

249 The IPC Cell was set up in response to the public health threat of
250 COVID-19. NHS England/Improvement set up an emergency response structure
251 within the organisation, the National Incident Response Board (NIRB) being
252 the key operational arm of this with different committees called ‘cells’
253 feeding into it. One of these cells is the IPC cell.

254 c. Details as to when this body was formed, who appointed the advisers
255 that conducted the review used to update the Jan 21, 2021 COVID-19 IPC
256 guidance and who leads the body.

257 The IPC cell was established after the first Wuhan Novel Coronavirus
258 incident management team (IMT) meeting on 23 January 2020.

259 The IPC cell function is to provide infection prevention and control
260 advice, review/develop guidance for the NHS and NHS commissioned services.

261 The UK IPC cell membership includes senior IPC representatives from Public
262 Health Wales (PHW), Public Health Agency (PHA) Northern Ireland, Health
263 Protection Scotland (HPS)/National Services Scotland, Public Health
264 England (PHE) and NHS England/Improvement. They report into their own
265 organisation governance systems.

266 NHS England / NHS Improvement have been the lead organisation hosting,
267 minuting and coordinating cell meetings.

268 d. The date that the UK IPC cell was engaged to conduct the above review,
269 and who made the decision to engage it for this purpose?

270 The remit of the IPC cell includes reviewing international guidance and
271 the published literature (national and international) to assess the
272 learning and scientific evidence base to inform IPC practice
273 recommendations, specifically the prevention of transmission and
274 management of COVID-19 in NHS settings.

275 e. the identity of the members of the UK IPC cell providing scientific
276 advice”

277 Senior IPC representatives from Public Health Wales (PHW), Public Health
278 Agency (PHA) Northern Ireland, Health Protection Scotland (HPS)/National
279 Services Scotland, Public Health England (PHE) and NHS
280 England/Improvement.

281 The IPC measures recommended are underpinned by the National Infection
282 Prevention and Control Manual practice guide and associated literature
283 reviews. [2]<http://www.nipcm.hps.scot.nhs.uk/>

284 We hope this information is helpful. However, if you are dissatisfied, you
285 have the right to ask for an internal review. This should be requested in
286 writing within two months of the date of this letter. Your correspondence
287 should be labelled “Internal Review” and should outline your concerns
288 and/or the area(s) you would like the review to consider. Internal Review
289 requests should be sent to:

290 NHS England
291 PO Box 16738
292 REDDITCH
293 B97 9PT

294 Email: [3][NHS England request email]

295 Please quote the reference number FOI - 2103-1345429 in any future
296 communications.

297 If you are not content with the outcome of the internal review, you have
298 the right to apply directly to the Information Commissioner for a
299 decision. The Information Commissioner's Office (ICO) can be contacted at
300 the following weblink:

301
302 [4]<https://ico.org.uk/global/contact-us/>

303 Please note there is no charge for making an appeal.

304 Please be aware that in line with the Information Commissioner's directive
305 on the disclosure of information under the FOI Act, your request will be
306 anonymised and published on our website as part of our disclosure log.

307 Please do not reply to this email. This message has been sent from a
308 central mailbox. To communicate with NHS England regarding Freedom of
309 Information (FOI) requests, enquiries or complaints we ask these are sent
310 directly to NHS England's customer contact centre. This is to ensure all
311 communications are progressed correctly. Their postal address, telephone
312 number and email details are as follows: PO Box 16738, Redditch, B97 9PT;
313 0300 3 11 22 33, [5][NHS England request email].

314 Yours sincerely,

315 Freedom of Information
316 Communications Team
317 Office of the Chairs, Chief Executive Officer and Chief Operating Officer

318 NHS England
319 PO Box 16738
320 REDDITCH
321 B97 9PT

322 Tel: 0300 311 22 33

323 Email: [6][NHS England request email]

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325 [show quoted sections](#)

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