

To: [REDACTED]@rivm.nl
Cc: [REDACTED]@rivm.nl; [REDACTED]@ecdc.europa.eu; [REDACTED]@ecdc.europa.eu; [REDACTED]@ecdc.europa.eu
From: Corporate Governance Secretariat
Sent: Tue 12/22/2020 3:55:51 PM
Subject: RE: FOR YOUR REVIEW: COVID-19 vaccination and prioritisation strategies
Received: Tue 12/22/2020 3:56:07 PM

Dear [REDACTED]

Thank you for the kind feedback and apologies for the admittedly short notice for providing comments. Please see below the response from our colleagues in charge of this topic.

Reply to comment 1:

This modelling approach was informally discussed by our [REDACTED] with [REDACTED] and the WHO EURO working group, and no particular concern was raised given the objectives of the modelling.

As stated on page 3 of the report *"The objective of this analysis is to compare the relative effectiveness and efficiency of different vaccine prioritisation strategies by target group. This analysis is not intended to make a forecast of how COVID-19 epidemiology will evolve in the EU/EEA in the vaccination era. The latter will depend on vaccine characteristics, future policy on non-pharmaceutical interventions and other behavioural change."* The strategies presented are thus just relative to each other for a given vaccine and there is no attempt to predict the timing of or the absolute impact of each vaccine or strategy (which would be very dependent on the epidemiological baseline assumption of steady ongoing transmission).

It is clear that most of these variables cannot be predicted in a realistic way and may be subject to human decisions (policies, behaviour, compliance) or natural events (vaccine escape variants, seasonality, natural trends). These aspects are very difficult to predict and to model with a sufficient accuracy. Choosing a time varying baseline may blur the interpretation of the findings (relative effectiveness and efficiency of alternative vaccination strategies) by introducing too much of a baseline variability that may still not be correct.

Additionally, the R is not constant regardless of vaccination coverage. The equilibrium is in the absence of any vaccination. Once a (transmission-preventing) vaccine is introduced, R will start to fall.

If there is more transmission ($R > 1$), then having a vaccine that prevents transmission generally becomes more useful.

Reply to comment 2:

As stated under Strategy 3 of the document, the approach of vaccinating adults 18-60 years is not assuming efficacy against infection and onward transmission. Our report is just stating that it is a more valuable approach to consider in case there is any efficacy against transmission. If there is limited supply and no efficacy against transmission, we do not consider this approach to be of value in the initial phases of vaccine deployment. If COVID-19 vaccines instead worked against transmission, this strategy could gain increasing value over time as vaccine supply would increase.

Strategy 2 is vaccination of healthcare workers. As stated in the document, the vaccination of healthcare workers in the initial phases may be justified by several good reasons. If a vaccine is efficacious against clinical disease, healthcare workers will be directly protected against severe COVID and will not stay away from work due to symptoms during the intense phases of the pandemic. If a vaccine also protects against transmission, the vaccination of healthcare workers will represent an additional added value by indirectly protecting vulnerable healthcare residents and patients. Only in this latter case (a vaccine that prevents transmission), it is foreseen a strong impact of this vaccinating healthcare workers on the overall COVID-19 morbidity and mortality. Considering that healthcare workers are generally subject to "healthy worker bias", meaning that they are generally in decent health and they have not reached retirement age, their direct protection alone will have a limited impact on the overall mortality and severity of COVID-19 at the population level. These points are all discussed under Strategy 2.

For these reasons, we don't believe these statements under strategy 2 and strategy 3 are in contradiction.

Best regards,

[REDACTED]

From: [REDACTED]@rivm.nl
Sent: 18 December 2020 19:00
To: Corporate Governance Secretariat <[REDACTED]@ecdc.europa.eu>
Cc: [REDACTED]@rivm.nl; [REDACTED]@rivm.nl
Subject: RE: FOR YOUR REVIEW: COVID-19 vaccination and prioritisation strategies

EXTERNAL EMAIL - Do not click on any links, open attachments or reply, unless you recognise the sender's email address (5.1.2e @rivm.nl) and believe the content is safe.

Dear team,

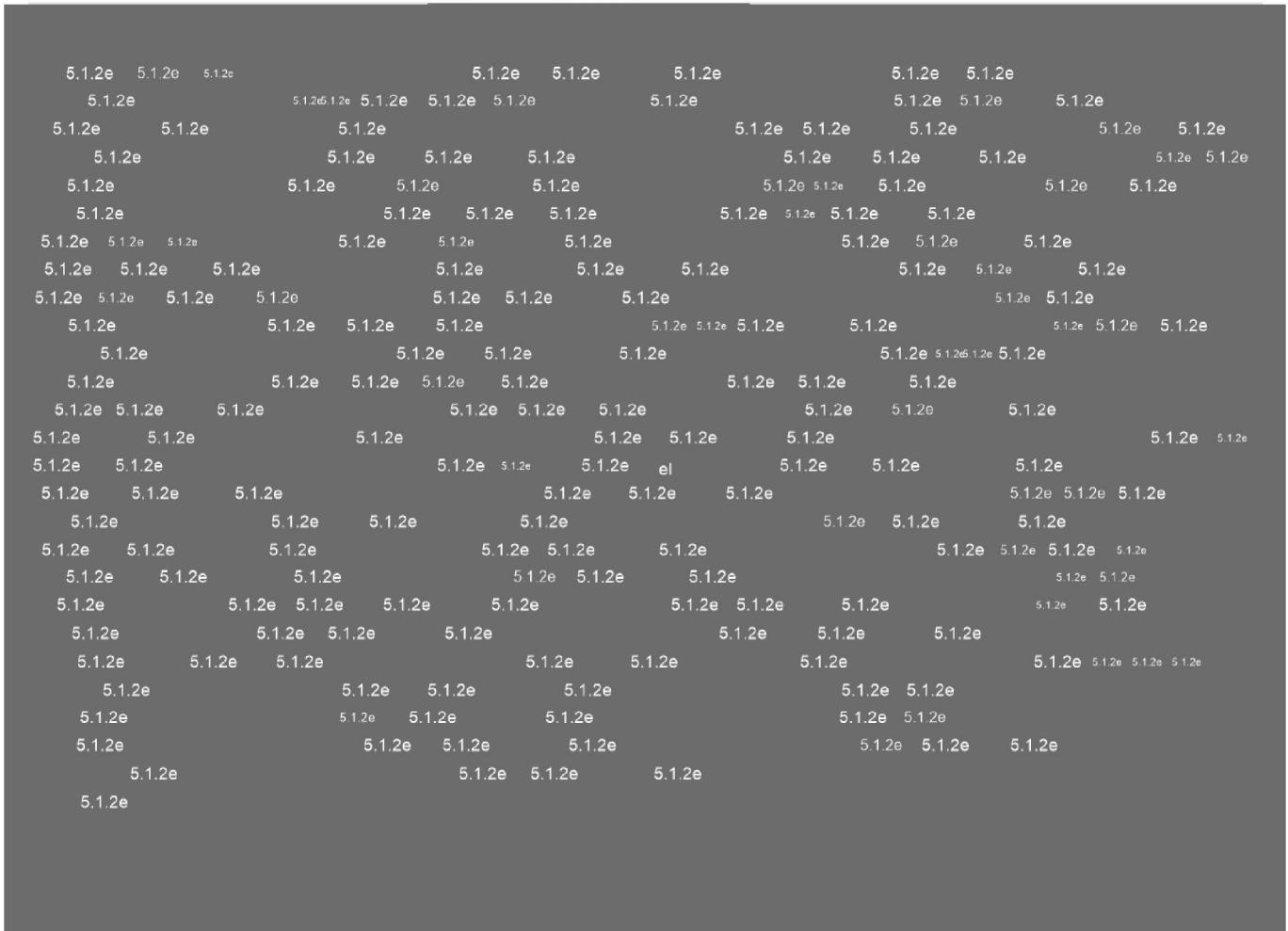
Since the deadline for responding is (too) short, we only can provide a few very high level comments.

The most important one being that it is not clear what it means that a 'steady ongoing transmission' is assumed in the analyses, and to what extent this would impact the conclusions. Especially since in the document itself it is stated that this assumption is not realistic. Does it mean that a stable Rt is assumed, irrespective of vaccination coverage? Or that the same measures are being used throughout the vaccination period? Both do not seem to be realistic, resulting in incorrect comparisons between the different vaccination strategies – of which some will impact transmission at much lower coverages than others.

Some statements regarding which approach to prioritize seem contradictory: under strategy 3 it reads: *However, in general, other approaches should be prioritised in the context of initial limited supply or in case the COVID-19 vaccines showed very limited efficacy against SARS-CoV-2 infection and onward transmission.* However, this is related to the effect of the vaccine on transmission. Under strategy 2 this indeed is mentioned: *Prioritising healthcare workers for vaccination against COVID-19 becomes an effective and efficient approach to reduce COVID-19 overall morbidity and mortality if the vaccine quite effectively prevents infection and onward transmission.*

Best regards,

5.1.2e



Dubbel