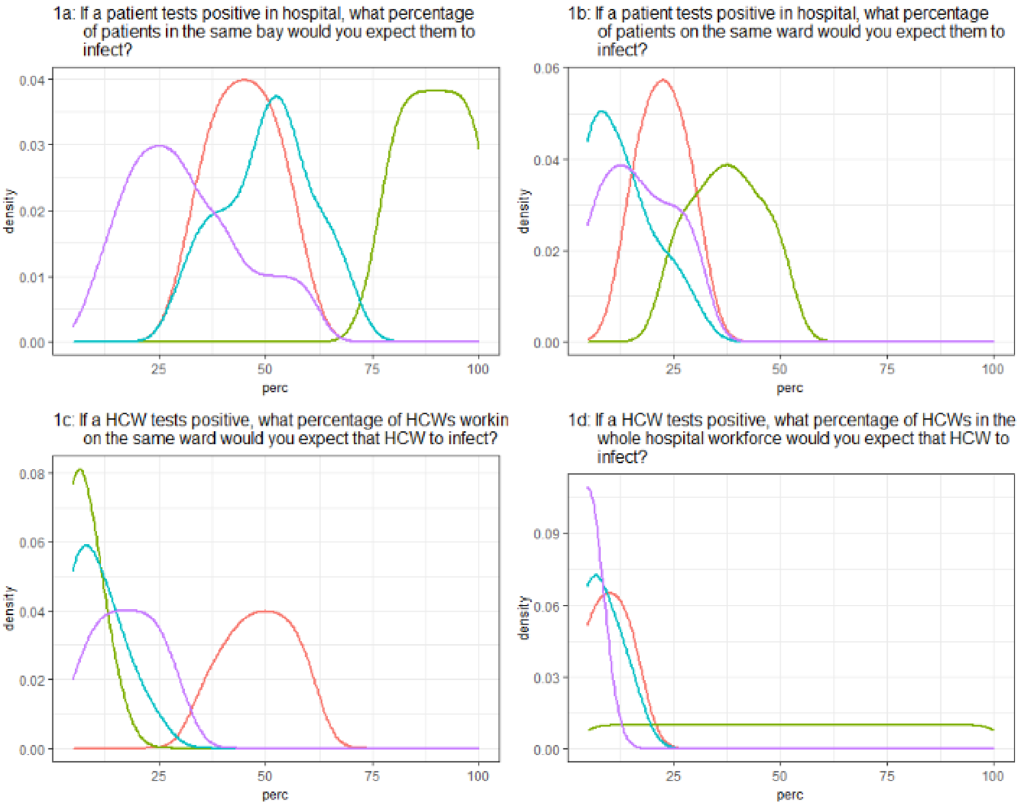
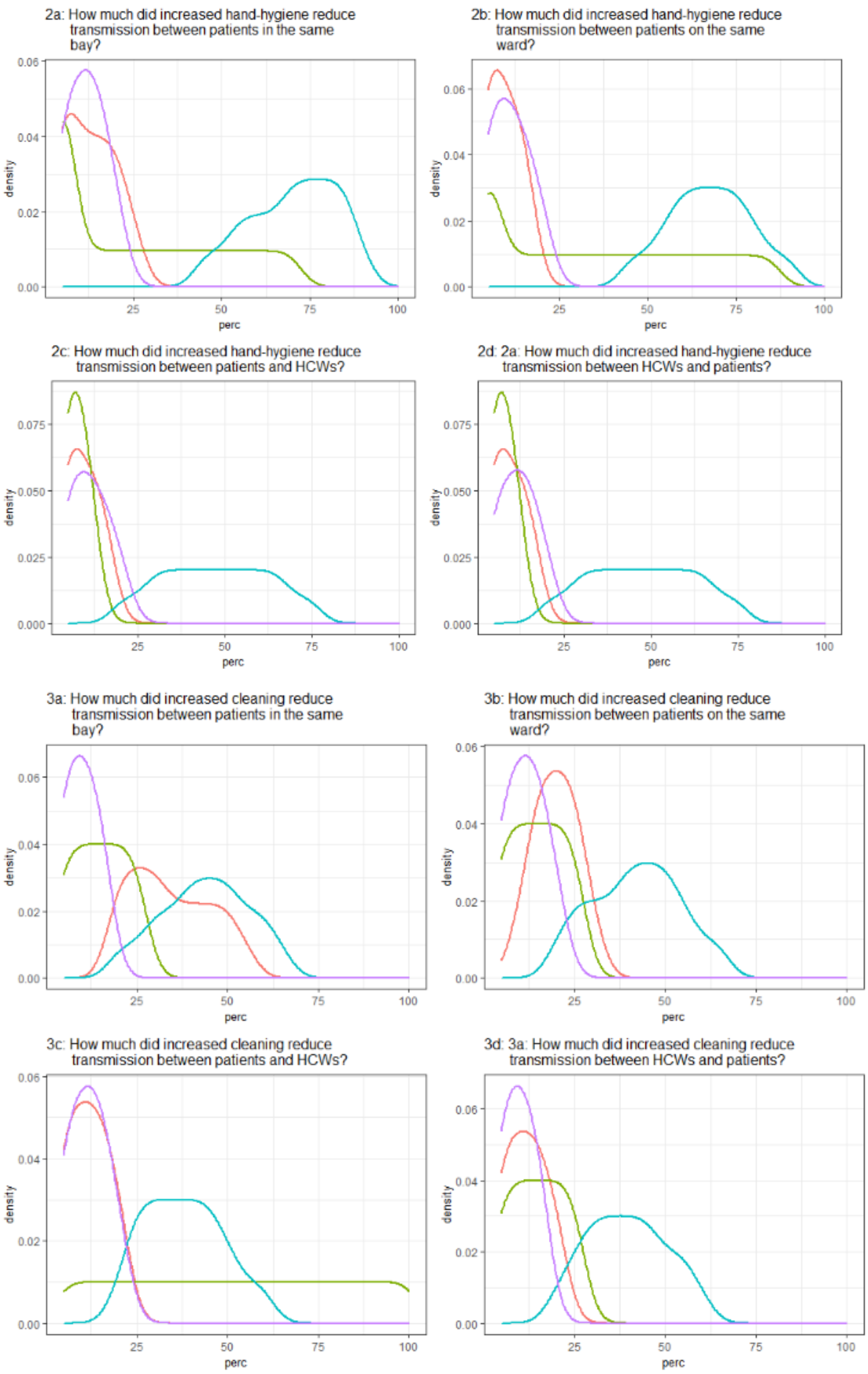
Supplementary File 2

Expert elicitation

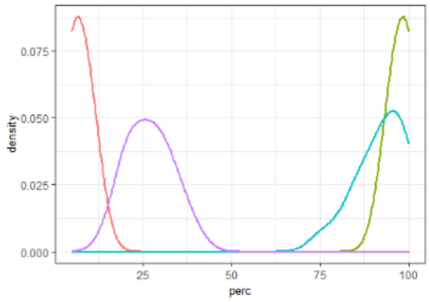
Expert elicitations are a way of providing ‘best estimates’ for parameter values when there is a paucity of evidence in the literature. Our elicitation process involved contacting multiple experts and asking them to answer six multipart questions using a ‘chips and bins’ approach. This approach results in distributions that can be used to form ranges for the parameters of interest. In our study experts were asked questions about the efficacy and compliance with interventions to reduce the spread of SARS-CoV-2 in hospitals and given 20 ‘chips’ to be placed in ‘bins’ at 5% intervals. The elicitation exercise was conducted in January 2022. Response distributions were created in *R* using the density of each individual respondent. Where possible, elicited ranges were used to supplement data from the literature to generate parameter ranges that adequately reflect reality. Participants were provided with clear instructions and an introductory example before being asked to complete the questions of interest. A sample of the worksheet sent to participants is included in Supplementary File 3.

The corresponding distributions are as follows;

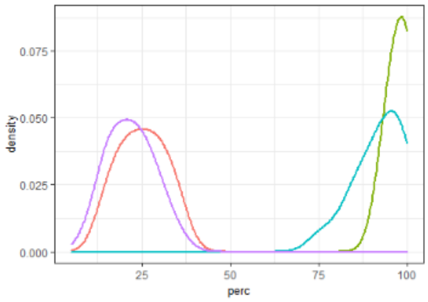



2a: How much did increased hand-hygiene reduce transmission between patients in the same bay?
2b: How much did increased hand-hygiene reduce transmission between patients on the same ward?
2c: How much did increased hand-hygiene reduce transmission between patients and HCWs?
2d: 2a: How much did increased hand-hygiene reduce transmission between HCWs and patients?
3a: How much did increased cleaning reduce transmission between patients in the same bay?
3b: How much did increased cleaning reduce transmission between patients on the same ward?
3c: How much did increased cleaning reduce transmission between patients and HCWs?
3d: 3a: How much did increased cleaning reduce transmission between HCWs and patients?
density
perc
25
50
75
100

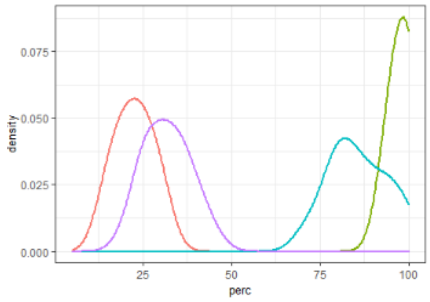
4a: How much did universal masking by HCWs reduce transmission from patients to HCWs?



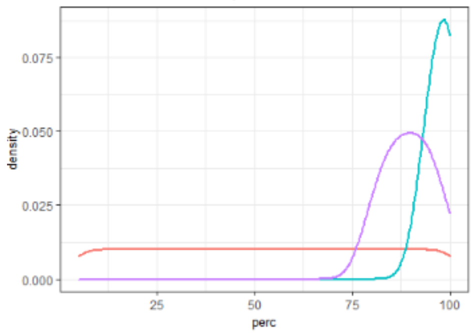
4b: How much did universal masking by HCWs reduce transmission from HCWs to patients?



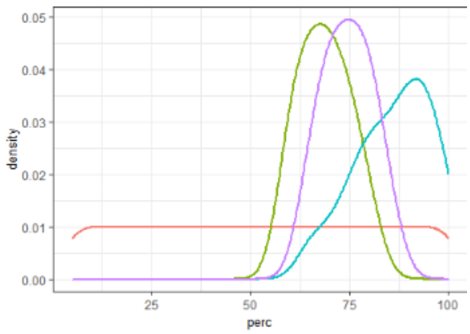
4c: How much did universal masking by HCWs reduce transmission between HCWs?



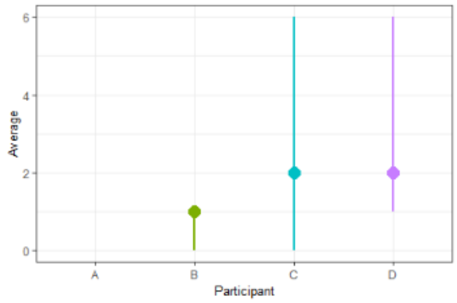
5a: What percent of their time while in the hospital do HCWs remain masked with patients?



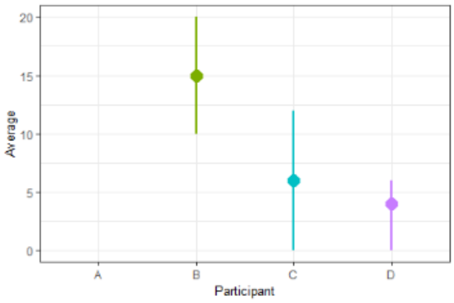
5b: What percent of their time while in the hospital do HCWs remain masked with other HCWs?



6a: How many non-HCWs visitors to a patient ward (e.g. for repairs or other people that are critical for service) were there in a day over the second wave?



6b: How many non-HCWs visitors to a patient ward (e.g. for repairs or other people that are critical for service) were there in a day before the pandemic?



6c: How many personal visitors did an average patient get in a day before the pandemic?

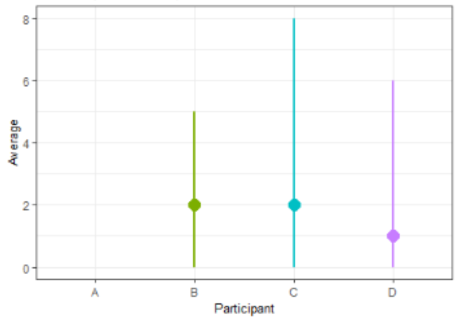


Figure 1. Distributions from expert elicitation. Responses from 4 experts shown. Straight horizontal lines indicate that expert did not feel confident assigning a distribution for a question.

Meta-analysis of efficacy of masking for reducing transmission to patients and HCWs

The efficacy of masks for preventing transmission of SARS-CoV-2 in hospitals was assessed though a meta-analysis. Twelve studies examining the effect of masks for reducing transmission of SARS-CoV-2 were analysed and included in this study [1–12]. Using the *meta* and *metafor R* packages, the number of cases and controls in these studies were included in the meta-analysis and a forest plot was generated. The estimate for the risk-ratio of those who wore masks compared to those who did not was 0.51 [0.28-0.95].

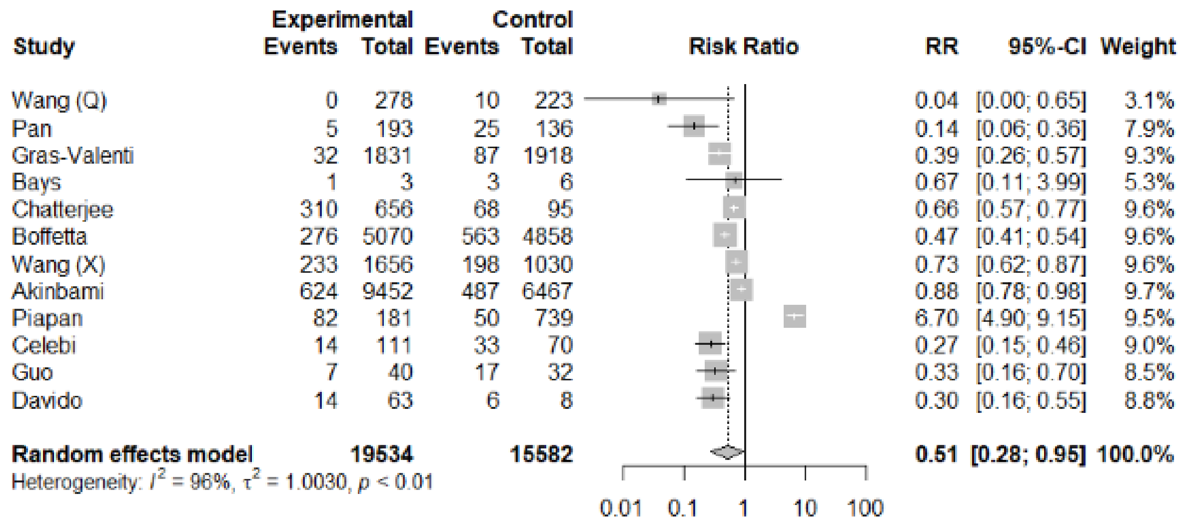


Figure 2: Forest plot of meta-analysis on studies of SARS-CoV-2 infection rates in HCWs that did or did not wear masks.

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