Supplementary information 2: forest plots of participants’ estimates of variables in round 1

**Pathway 1**: factors that affect the amount of virus exhaled by an infected person

Compared to an infected person with a normal respiratory rate, not speaking (considered to be 100%), the percentage range of infectious virus produced by someone with normal respiratory rate who was:

- **speaking at average volume** (i.e. not projecting their voice)
- **speaking loudly** such as in a classroom, theatre or lecture
- **coughing**
- **singing**
- **exercising**
- **eating**
- **infected with a new variant of concern**

BMJ Publishing Group Limited (BMJ) disclaims all liability and responsibility arising from any reliance on this supplemental material which has been supplied by the author(s).
Pathway 2: factors that affect the amount of virus put out into the environment in the form of aerosols, small droplets & large droplets

The percentage range of infectious virus split between path A (aerosols <10 micrometres) path B (small droplets 10-100 micrometres) and path C (large droplets, over 100 micrometres) for someone who was:

- **speaking at average volume** (i.e. not projecting their voice)
  - path A (aerosols <10 micrometres)

- **speaking loudly** such as in a classroom, theatre or lecture
  - path A (aerosols <10 micrometres)

- **coughing**
  - path A (aerosols <10 micrometres)

- **singing**
  - path A (aerosols <10 micrometres)
exercising
path A (aerosols <10 micrometres)

path B (small droplets 10-100 micrometres)

path C (large droplets, over 100 micrometres)

eating
path A (aerosols <10 micrometres)

path B (small droplets 10-100 micrometres)

path C (large droplets, over 100 micrometres)

silent
path A (aerosols <10 micrometres)

path B (small droplets 10-100 micrometres)

path C (large droplets, over 100 micrometres)
The percentage range of infectious virus split between each pathway if...

**the infected person is wearing a home-made cotton face covering**

- **path A (aerosols <10 micrometres)**
- **path B (small droplets 10-100 micrometres)**
- **path C (large droplets, over 100 micrometres)**

**the infected person is wearing a simple ‘surgical’ face mask**

- **path A (aerosols <10 micrometres)**
- **path B (small droplets 10-100 micrometres)**
- **path C (large droplets, over 100 micrometres)**

**the infected person is wearing a FFP3 face mask or similar**

- **path A (aerosols <10 micrometres)**
- **path B (small droplets 10-100 micrometres)**
- **path C (large droplets, over 100 micrometres)**
Pathway 3: factors that affect the amount of virus that can be inhaled or inspired from the environment

Of that starting volume of infectious virus (now considered 100%), the ranges of the **percentage of infectious virus that would reach a susceptible person in viable form** from aerosols (<10 micrometres) (path A) and small droplets (10-100 micrometres) (path B) if the infected person and susceptible person were 2m from each other in:

- **A small, unventilated room together**
  - path A (aerosols <10 micrometres)
  - path B (small droplets 10-100 micrometres)

- **A small, ventilated room**
  - path A (aerosols <10 micrometres)
  - path B (small droplets 10-100 micrometres)

- **A large, unventilated room**
  - path A (aerosols <10 micrometres)
  - path B (small droplets 10-100 micrometres)

- **A large, ventilated room**
  - path A (aerosols <10 micrometres)
  - path B (small droplets 10-100 micrometres)

- **Outdoors**
  - path A (aerosols <10 micrometres)
  - path B (small droplets 10-100 micrometres)
If the infected person and susceptible person were **less than 2m** from each other in:

- **a small, unventilated room together**
  - Path A (aerosols <10 micrometres)
  - Path B (small droplets 10-100 micrometres)

- **a small, ventilated room**
  - Path A (aerosols <10 micrometres)
  - Path B (small droplets 10-100 micrometres)

- **a large, unventilated room**
  - Path A (aerosols <10 micrometres)
  - Path B (small droplets 10-100 micrometres)

- **a large, ventilated room**
  - Path A (aerosols <10 micrometres)
  - Path B (small droplets 10-100 micrometres)

- **outdoors**
  - Path A (aerosols <10 micrometres)
  - Path B (small droplets 10-100 micrometres)
If the infected person and susceptible person were more than 2m from each other in:

**a small, unventilated room together**
- path A (aerosols <10 micrometres)
- path B (small droplets 10-100 micrometres)

**a small, ventilated room**
- path A (aerosols <10 micrometres)
- path B (small droplets 10-100 micrometres)

**a large, unventilated room**
- path A (aerosols <10 micrometres)
- path B (small droplets 10-100 micrometres)

**a large, ventilated room**
- path A (aerosols <10 micrometres)
- path B (small droplets 10-100 micrometres)

**outdoors**
- path A (aerosols <10 micrometres)
- path B (small droplets 10-100 micrometres)
The amount of infectious virus received by the susceptible person would likely be reduced along path A (aerosols, <10 micrometres) or path B (small droplets, 10-100 micrometres) if:

- They are wearing a **home-made cotton face covering**
- They are wearing a **‘surgical’ mask**
- They are wearing a **FFP3 mask or similar**
- They are wearing a **plastic face visor**
- They are sitting behind a perspex screen?
Pathway 4: factors that affect the transmission of the virus from large droplets (>100 micrometres) to surfaces and then via hands and surface contamination.

The proportions of the amount of infectious virus present in large droplets (>100 micrometres) produced during respiration by an infected person that would likely be passed on to the hands of the infected person (path A), onto all surrounding surfaces (path B), or directly onto the hands of a susceptible person (path C), compared with those remaining in the air (path D), in a range of different scenarios:

- Not shaking hands or making physical contact directly, only touching occasional shared surfaces such as door handles or objects on a supermarket shelf.

- The infected person is sitting opposite the susceptible person, both making contact with the same table, but not directly with each other, perhaps fleeting contact with the same object such as condiment containers on a table or passing a book/leaflet/napkin.

![Graphs showing transmission pathways](image-url)
The infected person and susceptible person are both regularly touching the same items, such as if they were playing a board game, both typing at the same computer in close succession, or passing plates between each other at a meal.

The infected person and susceptible person are regularly and directly contacting each other, such as taking part in a contact sport, or dancing together.
The range of the percentage reduction of the amount of infectious virus will reach the next node along each of these three pathways. (Path A: The hands of the infected person; Path B: The surfaces around the infected person; Path C: The hands of the susceptible person) if:

- the infected person was in a well-ventilated space (such as room with the windows open)
- the infected person were outdoors
Estimates for the proportions of the infectious virus present on the hands of an infected person that would likely be passed on in a viable form to surrounding surfaces (path A), compared with those that might be transferred directly to the hands of another person (path B) if there were no mitigations, and the encounters were long enough to reach steady state of virus transfer in a range of situations:

Not shaking hands or making physical contact directly, only touching occasional shared surfaces such as door handles or objects on a supermarket shelf.

The infected person is sitting opposite the susceptible person, both making contact with the same table, but not directly with each other, perhaps fleeting contact with the same object such as condiment containers on a table or passing a book/leaflet/napkin.

The infected person and susceptible person are both regularly touching the same items, such as if they were playing a board game, both typing at the same computer in close succession, or passing plates between each other at a meal.

The infected person and susceptible person are regularly and directly contacting each other, such as taking part in a contact sport, or dancing together.
Percentage decrease of viable infectious virus that would likely be passed on via path A (onto surfaces touched by the infected person) and path B (directly onto the hands of another person) if:

..the infected person used good hand hygiene such as alcohol hand sanitiser before entering the scenario.

...the infected person put on clean gloves before entering the scenario.
The percentage of viable infectious virus that would likely be transferred from all contaminated surfaces to the hands of a susceptible person who touches it if:

...the surface is a **wooden** table or desk that the susceptible person is sharing with the infected person (no mitigations like cleaning)

...the surface is **ceramic or metal** condiments, handrail, touch screen or plates being shared with the susceptible person (no mitigations like gloves)

...the surface is **paper or card** such as envelopes, leaflets or cardboard packages in a supermarket being shared with the susceptible person (no mitigations like gloves)

Percentage reduction of viable infectious virus that would likely be passed from a contaminated surface to the hands of a susceptible person who touches it if:

...the surface is cleaned thoroughly with an alcohol-based cleaning product

...if the susceptible person were wearing gloves (N.B. We mean onto the surface of the gloves)
**Pathway 5:** factors that affect the direct transmission of the virus from large droplets (>100 micrometres) directly to an uninfected person

The percentage of viable infectious virus contained in large droplets in the exhaled air from an infected person that would likely directly reach the mucous membranes of a susceptible person:

- **...who was within 2m of the infected person in an unventilated room**
- **...who was further than 2m from the infected person in an unventilated room**
- **...closer than 2m in a well-ventilated room**
- **...further than 2m in a well-ventilated room**
- **...closer than 2m outdoors**
- **...further than 2m outdoors**

(no responses mean participants had selected that they thought the results would not differ from above)

The percentage reduction in the amount of infectious virus received by someone via large droplets in the air if:

- **...they are wearing a home-made cotton face covering**
- **...they are wearing a disposable ‘surgical’ face mask**
- **...they are wearing a FFP3 or equivalent face mask**
- **...they are behind a Perspex screen**
Pathway 6: factors that affect the transmission of the virus from an uninfected person's hands to parts of their body where the virus could then infect them

Percentage of infectious virus from someone's hand that will reach their mucous membranes in a viable form, with no mitigations in place:

The percentage reduction in the amount of viable infectious virus travelling from someone's hand to their mucous membranes if:

...they are wearing a face covering

...they are wearing gloves

...they are wearing a face shield