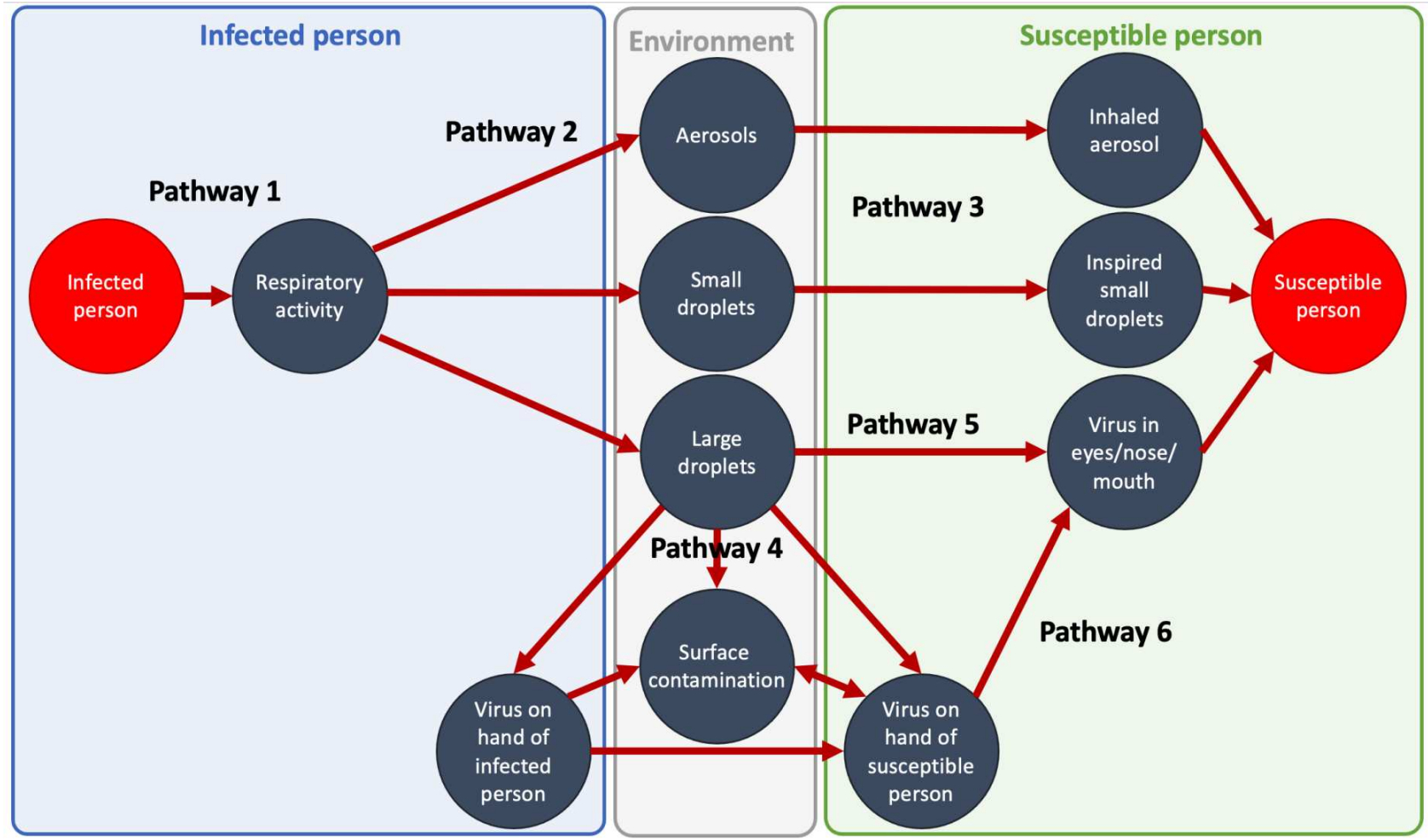
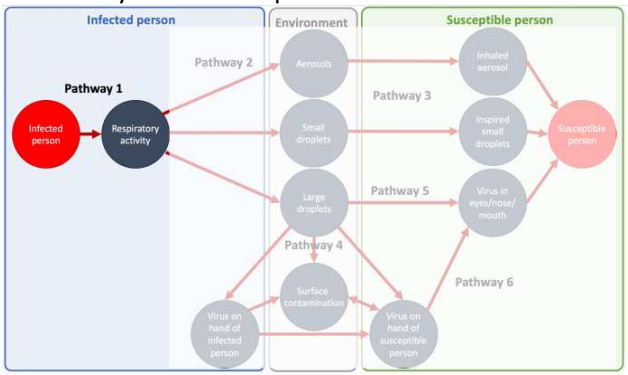
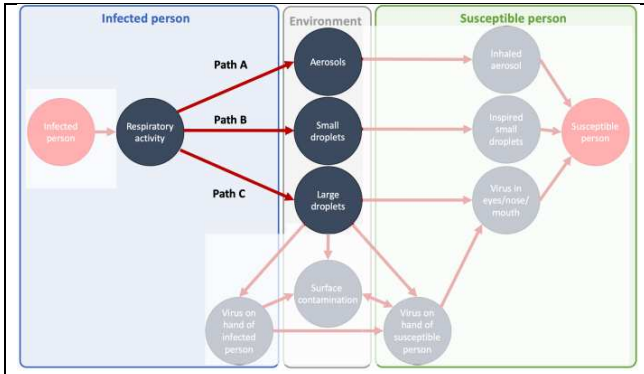

Infected person
Environment
Susceptible person
Pathway 1
Pathway 2
Pathway 3
Pathway 4
Pathway 5
Pathway 6
Infected person
Respiratory activity
Aerosols
Small droplets
Large droplets
Surface contamination
Virus on hand of infected person
Virus on hand of susceptible person
Inhaled aerosol
Inspired small droplets
Virus in eyes/nose/ mouth
Susceptible person

Pathway	Estimates sought (red = round 2 only)
Pathway 1: factors that affect the amount of virus exhaled by an infected person  Activity only (elicited as relative percentage compared to baseline)	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**
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: **- silent (just breathing normally)** **- speaking at average volume** (i.e. not projecting their voice) **- speaking loudly** such as in a classroom, theatre or lecture **- coughing** **- singing** **- exercising** **- eating**

<table>
<tr>
<td rowspan="3"> 

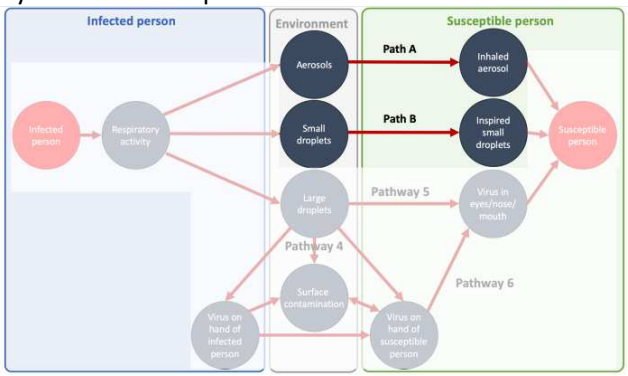
Activity
& mitigation

(both elicited as percentage splits)</td>
<td>Is there any evidence for or against, or reason to believe or not believe, that any of the new variants of concern of SARS-CoV-2 may behave differently in any way in this pathway?</td>
</tr>
<tr>
<td>Now tell us about the percentage range of infectious virus split between each pathway (A: aerosols, B: small droplets and C: large droplets) if…

- the infected person is wearing a home-made cotton face covering
- the infected person is wearing a simple ‘surgical’ face mask
- the infected person is wearing a FFP3 face mask or similar
- the infected person is wearing a plastic face visor</td>
</tr>
<tr>
<td>Now tell us about the percentage loss of infectious virus along each pathway (A: aerosols, B: small droplets and C: large droplets) if…

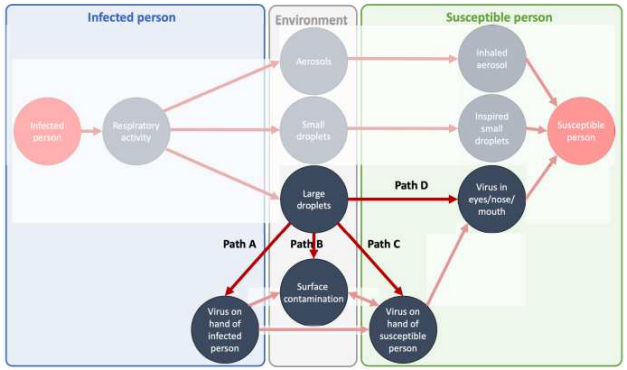
- the infected person is wearing a home-made cotton face covering
- the infected person is wearing a simple ‘surgical’ face mask
- the infected person is wearing a FFP3 face mask or similar
- the infected person is wearing a plastic face visor</td>
</tr>
<tr>
<td>Pathway 3: factors that affect the amount of virus that can be inhaled or inspired from the environment</td>
<td>Considering just the distribution of viable, infectious virus in different sized liquid droplets in the air after an infected person has been in the space, please let us know how much you think will be lost to the environment along each of Path A and Path B, and how that will be affected by each of a range of scenarios.

Of that starting volume of infectious virus (now considered 100%), the ranges of the percentage reduction of infectious virus from aerosols (<10 micrometres) (path A) and small droplets (10-100 micrometres) (path B) if both the infected person and susceptible person were 2m from each other in:
- a small, unventilated room together</td>
</tr>
</table>

by an uninfected person  Environment & mitigation Baseline split elicited Then all environment and mitigation effects elicited as percentage reductions (i.e. loss to environment)	- a **small, ventilated room** - a **large, unventilated room** - a **large, ventilated room** - **outdoors** Considering only Path A (aerosols, <10 micrometres), what ranges of percentage reduction of the viable infectious virus that was produced by the infected person do you estimate **if they were closer than 2m** in the following conditions: - a **small, unventilated room** - a **small, ventilated room** - a **large, unventilated room** - a **large, ventilated room** - **outdoors** Considering only Path A (aerosols, <10 micrometres), what ranges of percentage reduction of the viable infectious virus that was produced by the infected person do you estimate **if they were further apart than 2m** in the following conditions: - a **small, unventilated room** - a **small, ventilated room** - a **large, unventilated room** - a **large, ventilated room** - **outdoors** Considering only Path B (small droplets, 10-100 micrometres), what ranges of percentage reduction of the viable infectious virus that was produced by the infected person do you estimate **if they were closer than 2m** in the following conditions: - a **small, unventilated room** - a **small, ventilated room** - a **large, unventilated room** - a **large, ventilated room**

	- **outdoors** Considering only Path B (small droplets, 10-100 micrometres), what ranges of percentage reduction of the viable infectious virus that was produced by the infected person do you estimate **if they were further apart than 2m** in the following conditions: - a **small, unventilated room** - a **small, ventilated room** - a **large, unventilated room** - a **large, ventilated room** - **outdoors** Is there any evidence for or against, or reason to believe or not believe, that any of the new variants of concern of SARS-CoV-2 may behave differently in any way in this pathway? Please give as much detail as you can for your opinion.
	Now consider the following potential mitigations. By what percentage do you think 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	First we would like you to tell us your estimates for 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), directly onto the hands of a susceptible person (path C) or

surfaces and then via hands and surface contamination



Activity

Splits for each activity elicited (and question asked about time effect on splits)

onto all surrounding surfaces (path B), compared with those remaining in the air (path D), in a range of different scenarios. These values should sum 100%.

- the infected person is standing in the same room as the susceptible person, **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

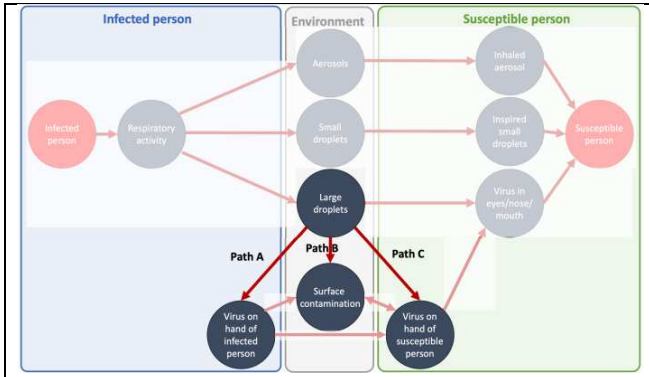
- the infected person and susceptible person are **both regularly touching the same items**, such as if they were playing a board game, both typing at the same computer in close succession, or passing plates between each other at a meal.

- the infected person and susceptible person are **regularly and directly contacting each other**, such as taking part in a contact sport, or dancing together.

How would the **length of time** the infected person spent in the environment affect the proportional split of infectious virus that would likely travel along each of these four pathways?

Is there any evidence for or against, or reason to believe or not believe, that any of the new variants of concern of SARS-CoV-2 may cause a different proportional split?

In this next section, please consider how certain mitigations or conditions might affect the percentage of the virus that will actually reach the next node along the three pathways shown in the diagram. We will give you different scenarios and this time please type in the range of the percentage reduction of the amount of infectious



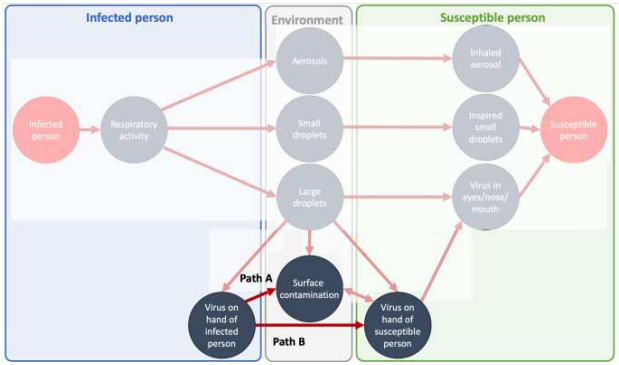
Mitigations

Percentage decrease along each path (loss to environment) elicited for mitigation

virus that you think 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
- the infected person was wearing a face covering
- the infected person was behind a perspex screen
- the infected person practised good respiratory hygiene
- the infected person was wearing gloves
- the infected person was in the space for half as long

Is there any evidence for or against, or reason to believe or not believe, that the new variant of SARS-CoV2 may behave differently in any way in this pathway?



Activity and mitigations

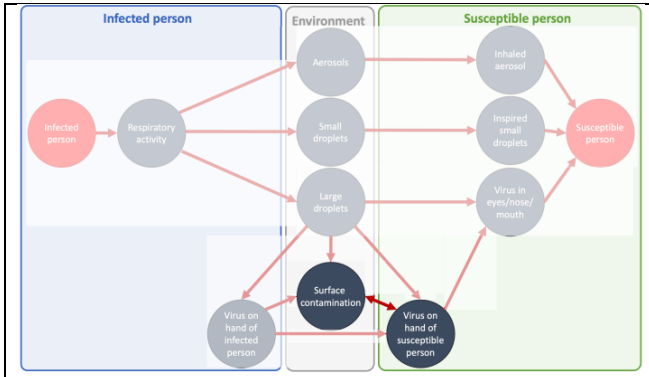
Splits for each activity elicited

In this section we would like you to tell us your 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) under a number of different scenarios. Please assume at first that there are no mitigations such as hand washing and that the encounters are long enough to reach a steady state in terms of virus transfer.

*- the infected person is standing in the same room as the susceptible person, **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 othe**r, perhaps fleeting contact with*

Percentage decrease along each path (loss to environment) elicited for mitigations	*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 othe**r, such as taking part in a contact sport, or dancing together.* Is there any evidence for or against, or reason to believe or not believe, that any of the new variants of concern of SARS-CoV-2 may behave differently in any way in this pathway? Now we would like to hear your opinions on how much mitigations might reduce the viral spread along these two pathways. What **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) do you think there would be 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 infected person were in the scenario for only half the time*



Activity and mitigations

Splits for each activity elicited
Percentage decrease along each path (loss to environment) elicited for mitigations

In this section we want to hear your estimates for how much virus would likely be transferred between **contaminated surfaces** and the **hands** of a susceptible person in various scenarios. 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:

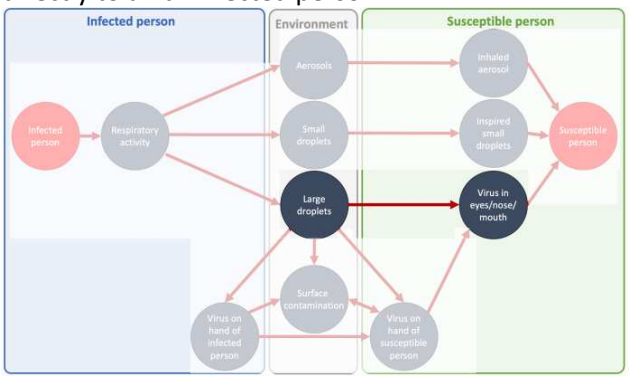
*- the surface is a **wooden** table or desk that the susceptible person is sharing with the infected person (no mitigations like cleaning).*

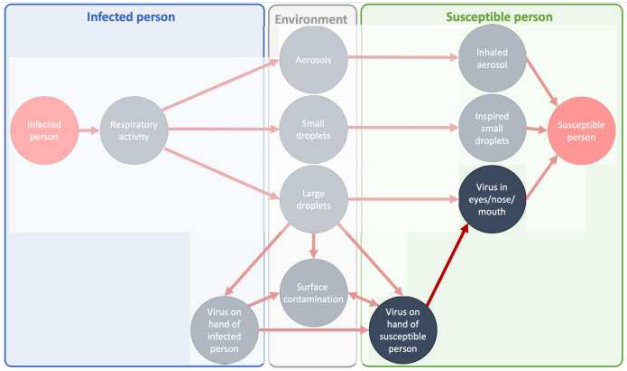
*- the surface is **ceramic or metal** condiments, handrail, touch screen or plates being shared with the susceptible person (no mitigations like gloves).*

*- 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).*

Is there any evidence for or against, or reason to believe or not believe, that any of the new variants of concern of SARS-CoV-2 may behave differently in any way in this pathway?

Now, thinking about how much various mitigation activities might decrease viral transmission: please tell us the **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) *- the susceptible person practised good hand hygiene* We propose to treat the transmission of virus from the hands of a susceptible person back to a surface (after initial contamination) in the same way as initial virus transmission from an infected person to a surface. If there are any reasons not to do this, please let us know.
Pathway 5: factors that affect the direct transmission of the virus from large droplets (>100 micrometres) directly to an uninfected person  Environment and mitigation losses only	In this section we would like to hear your opinions on how much virus is likely to be transmitted from large droplets in the air to a susceptible person's mucous membranes under different conditions. 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

(elicited as percentage not lost)	We now ask you to consider potential mitigations. By how much do you think the amount of infectious virus received by someone via large droplets in the air will be reduced if: - They are **wearing a home-made cotton face covering.** - They are **wearing a 'surgical' face mask.** - They are **wearing a FFP3 or equivalent face mask** - They are **behind a perspex screen.** - They are **wearing a plastic face visor**
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  Environment and mitigation losses only (I couldn't think of any different environments so it's just the one baseline one) (elicited as percentage not lost)	In this section we would like to hear your opinions on how much virus is likely to be transmitted from a susceptible person's hands to their mucous membranes under different conditions. We'll ask firstly about under normal conditions, and then with some potential mitigations in place. What percentage of **infectious virus** from someone's hand will reach their mucous membranes a viable form, with no mitigations in place? Is there any evidence for or against, or reason to believe or not believe, that the new variant of SARS-CoV-2 may behave differently in any way in this pathway? Please give as much detail as you can for your opinion. By what percentage do you think the amount of viable infectious virus travelling from someone's hand to their mucous membranes will be reduced if: - they are **wearing a face covering** - they are **wearing gloves** - they are **wearing a face shield** - they **practise good hand hygiene**

	We are assuming that 'not touching your face' will reduce this pathway to zero.