

An English journalist describes the challenges we face during COVID pandemic using maths. She explains which variables affect how hard it may be to be free of the disease.

<https://www.youtube.com/watch?v=8rVBnFEEWXE> jusqu'à 5:48

1. Which of the following statements is true?

- a. We will definitely get rid of COVID, it's just a question of time.
- b. The end of COVID is in sight.
- c. Whether we will ever defeat COVID is up in the air right now.
- d. None of the above.

2. Which of the following statements is true?

- a. Identifying how many people need to be vaccinated is so complex that scientists are still working on it.
- b. The formula is well understood but there are other issues.
- c. The government is considering stopping vaccination once they reach the H threshold.
- d. There is a variable that we have no way of knowing.

3. R0 is:

- a. How contagious the virus is.
- b. How virulent the virus is.
- c. How effective the vaccine is.
- d. How many people the UK needs to vaccinate to be safe.

4. Efficacy (in this context) is:

- a. How available the vaccine is.
- b. How many resources are required to make a dose.
- c. How long the vaccine is effective for.
- d. How good the vaccine is at staving off infection.

5. What did the clinical trials that have been done look at?

- a. How deadly the virus is.
- b. Whether people are safe and don't need to protect themselves or others once vaccinated.
- c. How likely a vaccinated person is to go to hospital.
- d. None of the above

6. Which of the following statements is true?

- a. We now know that the Astra Zenica vaccine prevents almost 70% of transmissions.
- b. It appears that the Astra Zenica vaccine stops more than 65% of transmissions.
- c. We have no idea how good the Astra Zenica vaccine is at preventing transmission.
- d. Astra Zenica are claiming that their vaccine stops transmissions.

7. Why do small percentage variations of the reproduction number matter so much?

- a. Because it makes the virus more dangerous.
- b. Because the longer we wait the worse things become.
- c. Because it drives up the immunity threshold very fast.
- d. None of the above.

8. New virus variants are stated to be:

- a. More virulent.
- b. A problem because they mean lockdown is not working.
- c. Not a cause for concern as they are accounted for in the standard COVID model.
- d. More infectious.

9. Which of the following statements is true?

- a. Lockdown actually harms our understanding of transmissibility of the variants.
- b. Lockdowns don't help fight the new variants.
- c. The new variants don't change the model significantly.
- d. None of the above.

10. Which of the following statements is true?

- a. We don't know if herd immunity is an effective strategy for disease control.
- b. We don't know if herd immunity is an effective strategy for COVID.
- c. We know that herd immunity is feasible for COVID.
- d. We know that we will not be able to achieve herd immunity for COVID.