

Herd immunity confusion

Hopefully, at some point, we will have a vaccine against severe acute respiratory syndrome coronavirus 2, and we will use this to seek ways of generating herd immunity, ie, promoting widespread immunity in the population and reducing transmission so that the epidemic will end without having to vaccinate everybody.^{1,2}

Herd immunity is a real phenomenon that occurs whether the immunity generated is naturally acquired or vaccine-induced. This term has been used for many decades applied to diseases of people, livestock, and wildlife.²

In a paper describing the history of the term, David Jones and Stefan Helmreich³ selectively quote an interview I gave on BBC Newsnight at the start of the epidemic in the UK on March 12, 2020, in which I attempted to explain this phenomenon.⁴

At the time, it was clear that the UK would be experiencing an epidemic, but how that would develop in the coming weeks, months, and years was unknown. In the same interview, I also said that “the better we manage it, the longer it will be. The worst case would be to have an uncontrolled epidemic”.⁴

The epidemic is ongoing, and it remains the case that although most people remain susceptible to infection, control of transmission has to be through non-pharmaceutical interventions. Isolation and quarantine, physical distancing, and contact tracing will be required until transmission is reduced by immunity. Ideally, this immunity will be vaccine-induced rather than through transmission of the disease.

There have been increasing suggestions that one option is to simply protect everyone who is at risk of infection and allow the epidemic to spread in those at low risk. In this same interview from March, 2020,⁴ I noted that this approach is conceptually appealing but impossible in practice.

It is not a strategy I endorse. I was not aware, until I read Jones and Helmreich's Perspective,³ of the historic association of the term herd immunity with racial and eugenic interpretation. I strongly dissociate myself from any link with this meaning and clarify that I was referring to herd immunity purely in the scientific sense.

Since the interview, the term has also become layered with further political interpretations, and even used to label strategies, but they are not clearly defined.

The scientific and medical communities have a duty to inform and support the public, especially during times that threaten lives with an unknown disease. Technical terms are part of the scientific language, and scientists should explain what they are and the ideas behind them. Otherwise discussion of how societies are going to cope with this pandemic becomes impossible, and cohesive and coherent strategies cannot be agreed.

If discussion about strategy becomes polarised on suppression versus epidemic, or lockdown versus freedom, then we lose the opportunity of finding a way through this pandemic that minimises the total harms.

I declare no competing interests.

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- 3 Jones D, Helmreich S. A history of herd immunity. *Lancet* 2020; **396**: 810–11.
- 4 BBC Newsnight. Coronavirus: can herd immunity protect the population? March 12, 2020. <https://www.bbc.co.uk/programmes/p086hjc> (accessed Oct 19, 2020).



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