

Herd immunity is often invoked as an ethical justification for vaccination and/or coercive vaccine mandates.^{1–3} However, the term 'herd immunity' has multiple referents,⁴ which can result in ambiguity, including regarding the role of herd immunity in ethical arguments and policy debates. Specifically, where it is claimed that individuals have a moral obligation to contribute to herd immunity this may be used to justify coercive policies (ie, if one is obligated to do something one is less entitled to not do it, and so coercion is more acceptable from an ethical standpoint). Maintaining R , the average number of secondary cases per infection, below 1 by keeping the immune fraction above a particular 'herd immunity threshold' (herd immunity in the first sense), is often understood to be a necessary condition for elimination in such circumstances.⁶ Second, for pathogens where immunity from infection or vaccination is relatively ineffective at preventing subsequent (re)infection, accumulation of immune individuals results in the development of an endemic equilibrium.⁷ Rather than being eliminated, such pathogens continue to circulate, often mutate, and (re)infect members of the population whose immunity wanes over time; examples include respiratory syncytial virus (RSV), influenza viruses, seasonal coronaviruses and SARS-CoV-2.^{7–9} The absence of elimination should not be confused with the absence of herd immunity, and indeed the term 'herd immunity' is often used to describe the accumulation of immunity in a population due to endemic viruses.⁸ In the endemic equilibrium case, herd immunity (in the second sense) nevertheless produces important benefits. First, for pathogens such as measles or smallpox where immunity from infection or vaccination is highly effective at preventing (re)infection (sometimes referred to as 'sterilising' immunity), accumulation of immune individuals can result in elimination, that is, the sustained reduction of local transmission to zero.