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Commentary

Hearts, minds, nudges and shoves: (How) can we mobilise communities for vaccination in a marketised society?

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This commentary provides a framework for thinking about communities and vaccination. The concept of 'herd' or 'community immunity' – and hence the rationale behind mass vaccination – arises from communal interaction. Conceptions of community, therefore, are at the heart of vaccination policy and practice. Advocates of vaccination often employ 'community immunity' as a persuasive message, but this might fail to appeal to the specific target audience they are trying to reach. Different understandings of community, and different values associated with parenting, can determine whether appeals to community are compelling or fall on deaf ears.

When we talk about community with regard to vaccination, we may be invoking one of two disparate concepts. Firstly, we can conceptualise 'the community' as all the people around us in our everyday lives. People interconnected through neighbourhoods, work, school, daycare and public transport can infect each other with disease, so 'community immunity' refers to vaccination as a social responsibility to keep diseases away. A review found that ~30–60% of parents consider this benefit to others as an important reason to vaccinate, 'perhaps the second most important reason.' [1].

There is another meaning of 'community.' We can also conceptualise (multiple) communities of personal choice; physical or virtual communities congregating around specific institutions, ideals, political goals or lifestyle practices. These communities may have specific ideologies and attributes. Their members will be more like each other, and less like 'the rest of us.' Vaccine refusers constitute one such community.

Our focus here is the intersection of both kinds of community: the broader, everyday community in which the risk of infectious disease may develop, and the communities of personal choice to which individuals feel a real sense of belonging.

Our first contention is that despite many parents being motivated to vaccinate for the good of others, the concept of protecting the broader 'community' may fail to appeal to some individuals. The marketization of health as a product that is the responsibility of the individual destroys a sense of responsibility for others. A whole literature describes how we are being remade in the late modern age to act as the autonomous, utility maximising individuals that neo-classical economists imagine us to be [2]. Elevation of the market as the highest order of human interaction supplants ideals such as communal solidarity. Choice, responsibility, agency, making 'good' decisions and looking after your own are the hallmarks of our current age. Why would we vaccinate to protect the community when it's all about the individual?

Moreover, in the communities of choice that do mean something to us, we don't interact with a wide range of people. Private healthcare and schooling accentuate this, further limiting our exposure to people we don't choose to be around. Community has become an abstract concept, or indeed is actively discouraged by prevailing ideologies. Back in 1995, social researchers Rogers and Pilgrim were surprised that vaccine rejecting parents are the minority, since they epitomise how we are all exhorted to make health and life decisions [3], a point echoed by contemporary researchers [4].

Jennifer Reich observed astutely how this plays out in privileged, 'imagined gated communities.' Parents recognise that 'community immunity' is a real thing, and that consequently vaccination might be appropriate for children in daycare centres, or those denied breastmilk and organic food. However, compensatory health beliefs [5] lead these parents to conclude that they are protecting their own children via other means, whilst they delay or selectively vaccinate. They reflect little on how opting out of the social contract affects those with less choice about how to live [6,7].

Relatedly, another reason that appeals to the broader 'community' may fail is that parents may de-identify with the broader mainstream if they believe that their families are special or enlightened. Parents who engage in high effort, high maintenance lifestyle practices mentally construct an 'unhealthy other' who is their perceived opposite. It's not just that they see parents who follow mainstream practices like vaccination as 'sheeple' (this slur is precisely why we use 'community' rather than 'herd' immunity in this piece). Additionally, they depict mainstream parents as unhealthy for relying on western medicine, using over the counter painkillers, antibiotics and sunscreen, and feeding their children

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processed food [3,8,9]. The further one distances oneself from these markers of mainstream society through 'virtuous' parenting, the more the broader community looks impersonal and toxic. Moreover, it becomes an object of fear when parents perceive it as coercive, because it expects them to contribute to communal well-being via vaccination [10]. There is thus a lack of belief in *community itself*.

For some families, compensatory health beliefs go as far as nullifying the need for vaccination at all. Those who believe that they can effectively achieve immunity through food, complementary medicine, lifestyle or exposure to disease [10] may not see the vaccination of others as helpful. Ironically, these parents often also live in strong, vibrant and interconnected communities. This is evident in their accounts of how their beliefs in vaccination develop – through social encounters, through adhering to the perceived identity of people like them, through seeking information from those who claim or are granted expertise within that culture [9]. It is also evident in their descriptions of labour-intensive communal practices around organic food and alternative education [6,9]. Here, we have people who live in 'real' communities - the kinds that could make claims on us - but don't believe in the immunity conferred by vaccination.

It's a perfect storm when these two things come together, leaving us with weak claims to both community and immunity. We need to explore what tools are in the box for policymakers – and what tools we are prepared to use. We need to pay attention to what works, but we also need to engage with the limitations of strategies, especially those strategies with which we are comfortable.

Many of the strategies available fall into the realm of behaviour change. Behavioural economists, social psychologists, health promotion researchers and public policy experts are increasingly interested in how we can motivate individuals to make decisions that benefit themselves and their societies. This literature is evolving, and some debates remain unsettled. Recent research suggests, for example, that providing scary information about diseases does not persuade those already inclined to reject vaccines [11].

Scare campaigns fall into the broader category of 'persuasion as governance' [12]. Scare campaigns seek to persuade with fear, but the positive flipside is campaigns that seek to win 'hearts and minds.' Positive persuasion can use social identity-based approaches salient with individuals' values and perceptions of themselves [13]. To address the 'community deficit' we have identified, perhaps communal reciprocity could be regenerated through 'hearts and minds' campaigns creatively reimagining how we live together. A campaign run by one of us in a distinct geographical area of Australia sought to do this [14].

However, there are real limitations to this approach. Firstly, whilst smaller communities may indeed have communal traditions of solidarity available, this is difficult to scale up for the broader, abstract notion of community. Secondly, even if claims to communal solidarity can be scaled up, to what extent are they convincing, given the hegemony of neoliberal ideals? And thirdly, persuasion has its limits: if we fail to persuade, the tool becomes useless.

Despite these limitations, governments have to keep investing in 'hearts and minds', not least because persuasion, especially persuasion that engages with identity, is moral and palatable. It retains optimism in humans' capacity to take on new ideas and values [12]. We would be foolish not to utilise this 'front-line' defense against disease. Accordingly, vaccination social science should continue to pilot and evaluate strategies to persuade parents that vaccination can fit with their values, and develop and test interventions that can successfully challenge misbeliefs about vaccines.

However, when persuasion fails, there are less palatable tools in the toolbox. 'Nudges,' 'shoves,' and 'smacks' alter the choice architecture in ways that constrain and guide choice [15–17], within the doctor's clinic [18] and at a macro level through 'market as governance' financial incentives and penalties [12]. Such approaches can change behaviour without winning over hearts and minds. They may generate bad publicity for vaccination when there is a perception of coercion, and may even backfire [19,20]. Yet they may still facilitate vaccination occurring, and thus prevent disease.

Vaccination social scientists are often uncomfortable with notions of coercion, or removing the choice underscoring participation in mass vaccination programs [21]. Notably, informed consent becomes troublesome when financial or exclusion costs are associated with non-vaccination [22]. However, limiting free choice may be the unpalatable conclusion when governments have abrogated making social claims upon us.

Optimal alternative solutions would be to de-stratify and desegregate societies, with mass funding for public education and health so that we all live or die together. Such initiatives would literally reconfigure communities from abstract concepts to real entities. On this basis, the people on our trains and buses, the baby in our local shopping centre, might once again become people for whom we feel responsible. But in the absence of such radical social change, hardline policies attain vaccination coverage. US states with easier exemption policies have more exemptions [23]. Vaccination rates in Australia have increased since the government removed conscientious objection and limited some financial assistance and subsidies to the fully vaccinated (although other policy interventions are likely to have also contributed) [24,25]. If communities truly matter to vaccination, and vaccination truly matters to communities, then we may need to make use of the less palatable tools in the toolbox.

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