



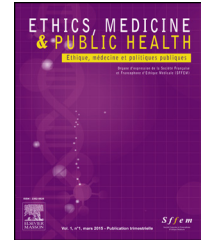
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## LETTER TO THE EDITOR

### An incentive-based approach may be the only approach to achieve COVID-19 herd immunity



#### KEYWORDS

COVID-19;  
 Incentive-based approach;  
 Vaccine hesitancy;  
 Vaccine mandate

Dear Editor,

After a debilitating year in which so many lost their loved ones, suffered social isolation, and economic ruin, COVID-19 vaccines are finally being rolled out. In the US, the Biden administration has delivered 100 million vaccinations within their first two months in office [1]. In Israel, the Ministry of Health has fully vaccinated more than half the population [2]. In the UK, the National Health Service has confirmed delivery of the first of two inoculations to more than half the adult population [3].

For the first time in a while, we see a light on the horizon. We envision picking up our lives from where we left off. But with all this hope and promise, there are storm clouds on the brew. We have yet to reach consensus on a plan. In spite of the statistics that say COVID-19 vaccines do indeed save lives, a portion of the public is still wary. This is evidenced in a recent Gallup poll that found acceptance of the vaccine at only 74% among US adults [4]. Likewise, a recent European poll revealed acceptance of the vaccine at between 44 and 66 percent [5].

Numbers such as these will prolong the pandemic. Daily deaths and cases will continue. In response, some scientists and public health officials are discussing a COVID-19 vaccine mandate. "It's Orwellian," some say. "It reeks of government control."

But, in actuality vaccine mandates predated Orwell's time. Case in point, the smallpox vaccine mandate: passed in England (1853), Germany (1874), and 10 states in the US (1919–1928), a decision that saved millions of lives [6]. To this day, most countries mandate childhood vaccinations (e.g., chickenpox, DTaP, MMR, polio), as a requirement for children attending school. To gain "herd immunity" protection against the COVID-19 virus, we may need between 60 and 80 percent of the population immunized [7]. Unfortunately, the prevalence of COVID-19 vaccine skeptics may

preclude our reaching of this goal. And so, we once again consider vaccine mandates.

Vaccine mandates can be levied through two major channels: the government or the private sector. In the US, for example, a federally ordered mandate would be challenged, as issues of public health are handled state-by-state. But state-by-state decisions may not serve the country as a whole, as these decisions tend to follow party lines. More feasible would be private sector mandates, i.e., incentive-based programs. These programs assure the customer that the service they provide is reasonably low in COVID-19 risk. Examples include airlines requiring international travelers to provide documentation of a negative COVID-19 test, as well as fitness centers requiring clients to provide a valid COVID-19 vaccine card.

These incentive-based programs have gained traction in the US. In a nationwide promotion across 41 states, Krispy Kreme Doughnuts is offering a free doughnut a day, for the remainder of the year, to customers who present a valid COVID-19 vaccine card [8]. In a month long promotion, Cleveland Cinemas was giving away free popcorn to their customers who show a COVID-19 vaccination card [9]. Throughout the month of March, the Mint Dispensary in Arizona, was giving away free edible cannabis to their COVID-19 vaccinated clients [10]. In Israel, a "green pass" provides the holder, who has recovered from COVID-19 or has been fully vaccinated, with access to theatres, concert halls, indoor restaurants and bars, venues inaccessible to unvaccinated people [11].

There have also been steps to ensure safe work and study places. In the US, for example, in December 2020, the Equal Employment Opportunity Commission ruled that businesses can require COVID-19 vaccinations from their employees, and bar employees from the workplace for non-compliance [12]. In the academic world, there is a growing list of universities (e.g., Cornell, Rutgers, Brown) that require students to be fully vaccinated [13]. Both of these examples move the population closer to the goal of herd immunity protection.

Having survived 2020, we are at the turning point, in managing the deadliest health threat of our lifetime. There are many obstacles we overcame last year; and there are challenges ahead that we must face. With regard to vaccine mandates, I suggest we change our tune. Incentive-based programs is much softer. We should satisfy ourselves with movement from the private sector, and refocus our energies as such. Within the private sector, we should support all incentive-based promotions, and acknowledge their role in our recovery. With a commitment to our work we can achieve herd immunity; and with luck, eradicate the COVID-19 virus.

## Human and animal rights

The author declares that the work described has not involved experimentation on humans or animals.

## Informed consent and patient details

The author declares that the work described does not involve patients or volunteers.

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## Disclosure of interest

The author declares that he has no competing interest.

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