

The right to know: ethical implications of antibody testing for healthcare workers and overlooked societal implications

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Received 17 May 2020
Accepted 22 May 2020

ABSTRACT

After the initial surge in cases of coronavirus (COVID-19), the outbreak has been managed differently in different countries. In the USA, it has been managed in many different ways between states, cities and even counties. This disparity is slowly becoming more and more pronounced with the advent of antibody testing. Although many argue over the potential merits of antibody testing as an immunity passport to allow the economy to restart, there are other implications that stand at the heart of the bioethical debate that are often overlooked. Particularly with COVID-19, there are many uncertainties and the discourse alone of antibodies presumes misinformation that may outweigh the epidemiological benefits of antibody testing. Although this paper does not seek to eliminate antibody testing, it does highlight the need for appropriate counselling both on a personal level with each patient but on a more global level. This moral standard of appropriate education is key to allowing the continued autonomy needed during this pandemic.

INTRODUCTION

The discussion that has continued since the initial severe acute respiratory syndrome virus and avian influenza epidemics has focused on the potential for immunity among the general population and the moral obligation to treat that is often faced by healthcare professionals and institutions.^{1 2} The current pandemic continues to spread rapidly and there is an ever-growing unease about jump-starting the country, the world and the economy again. Although these are important factors to take into consideration, there are some unique challenges faced with the current coronavirus (COVID-19) that transfigure this conversation into one about responsibility.

With the superfluity of different antibody tests coming into the market with different specificities and sensitivities, the word ‘antibody’ engenders a certain sense of relief or comfort that may not be practical addressing the general population. Although our understanding of vaccinations and immunity to disease is predicated on the idea of IgM antibodies being the first to develop to fight off an infection followed by IgG antibodies remaining longer term, coronavirus may not be something that can be as easily pre-empted as other illnesses that have vaccines and that generate a similar response. With a virus that potentially generates a significant proinflammatory state in a multiorgan system fashion, it is hard to understand the potential for immunity, the risk with repeat infection,

the potential for viral mutations and the long-term impact of this situation.^{3 4}

In addition to the challenges of immunity, the idea of antibodies creates a challenge for understanding the true epidemiological nature of the spread of COVID-19. Although the majority of public health professionals and institutions understand that antibody testing is not a free pass to restarting the economy, the fact that this is primarily an epidemiological study is misunderstood by a majority of the public and can easily be misconstrued to be comparable with immunity.

EPIDEMIOLOGICAL AND POPULATION BENEFITS

Gathering epidemiological data about the spread of COVID-19 and its potential impacts on different demographics and populations is important.⁴ This information can be used to work to better solutions for segregated minorities and for targeted and widely infected populations. The need to understand the pattern of spread is important to allow for better long-term planning on how to manage this pandemic, as well as how to manage potential disease in the future. When looking from the lens of a bioethicist, the potential beneficence to underserved populations as well as the entire global community is immense and unparalleled.⁵ The argument is not whether this potential benefit from a public health outreach, containment and understanding is critical for better preventing disease spread, but simply if this potential benefit outweighs all the other potential risks.

Even in the past couple of weeks, large cities, primarily New York City, have seen a large efflux of the wealthy out of the densely populated core.⁶ A recent surge in articles has highlighted the inequity and lack of justice surrounding the antibody testing, movement and spread of the disease among the wealthy and the more indigent populations in larger cities. This inherently widens the wealth gap that already exists in the USA, but even more importantly helps determine where resources should be allocated, how hospitals should or should not proceed with cases, and where the potential long-term impacts will need more care in the future. All these details are not necessarily immediately realised, but form a broader public health narrative that can be used to curb such vast discrepancies in the future.

UNPROVEN WORK-RELATED RISK POTENTIAL

In addition to discrepancies seen between disparate populations, healthcare workers face a distinct



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To cite: Vakharia K. *J Med Ethics* Epub ahead of print: [please include Day Month Year]. doi:10.1136/medethics-2020-106467

challenge. Although the idea of antibody testing is great from an epidemiological perspective, it sadly offers limited benefit from a medical standpoint. The challenge arises, particularly in the medical community and exaggerated at the front lines, when the discourse surrounding antibody testing remains around the idea of herd immunity and using antibody testing to determine where people work and the extrapolated idea of immunity passports.

Although slightly dystopian in its view, the idea of immunity passports is being felt at micromanagement levels as well. Workers who have had only a minor illness when testing positive for COVID-19 or those whose antibody tests return positive and who may have been asymptomatic carriers at one point are designated 'survivors'. The notion of survivorship, like with patients with cancer, is not held in the same regard. When antibody testing is mixed with survivorship, it offers a shield of protection that blinds many to understanding this disease in its entirety. People are suddenly confronted with a moral obligation towards volunteerism in place of the current voluntarism.

As noted by the Hastings Center, there are many who are falling on either side of the COVID-19 antibody debate. The potential implications of antibodies and whether they confer immunity are being hotly contested and draw similarities to the great vaccine debate and whether the risks of vaccination outweigh the benefits.⁷ As a society, the moral obligation to work towards an idea of herd immunity is natural, but fraught with so many uncertainties, it is hard to justify parallel discourse. With the growing literature and data suggesting the possibility of mutations, unequal impacts on different people and the potential repercussions of the spike protein for those with IgG immunity already, can society in good faith adopt a moral prerogative to put antibody-positive people in the front line? Or does the uncertainty and possible long-term health consequences mean that these people should be a protected population?

IS THERE A RIGHT TO KNOW?

Ethically, the central tenets of most of our discussions revolve around the ideas of non-maleficence, beneficence, justice and autonomy. Although autonomy is regarded as important but sometimes justifiably sacrificed for the greater good, does autonomy and the right to know supersede the potential lack of control and lack of knowledge that antibody testing may confer? Although the COVID-19 pandemic is unique, the USA has faced a similar conundrum before in the 1990s. When the HIV epidemic was in full throttle and our understanding limited, mandatory testing was debated, but there were no effective or consistent ways to enforce the difficult logistical and legal problems that arose. Similarly, there are many challenges and potential for stigmatisation that arise with COVID-19 testing as well.

Healthcare workers form a group of individuals who recognise the potential of COVID-19, the impact it has had, and are still willing to go to work and continue to face the challenge. Although morally understandable, prudence dictates that healthcare personnel at high risk of exposure, regardless of their antibody status, take full precautions with every encounter. Unlike the HIV epidemic, COVID-19 is aerosolised and spreads not by knowingly taking sexual or intravenous risk, but even by unknowingly being exposed. If antibody testing had no impact on the daily workings of a hospital department, did not change an individual's exposure risk and had no effect on the precautions everyone must take, then why take the test? Is it a risk to the patient simply to take a blood test and confer next to no benefit from this information?

POTENTIAL FOR ABUSE/MISINTERPRETING RESULTS

The epidemiological studies that could arise from testing exposed healthcare personnel are enormous. The data may show the rate of conversion. It may highlight safe practices and help change the way we handle certain situations in the hospital. But tracing is incredibly hard with the number of contacts, the number of transitions of care and the potential for every exposed surface being considered contaminated. The biggest challenge faced by antibody testing may in fact be psychological.

There is no compendium of information that helps sift through the vast amount of data being collected on COVID-19 or even the number of research papers being written on the subject. Scientific sharing is crucial at this time more than ever before, but because of the lag in understanding, can we justify the potential cost to those people who are antibody-tested?

When the HIV epidemic was becoming more prevalent, the idea of giving antibody testing information to patients was focused on the idea that sharing information would lead to motivating a change in habits.⁸ Bad needle practices and recognition of sexual contacts were a feasible and understandable benefit to the potential psychological impact an antibody test would have on an individual.⁹ In the current era, a negative test can be deflating. But how is this even possible? How can a negative test be deflating to a healthcare worker? It seems counterintuitive. Most people would be ecstatic that they did not test positive for antibodies to a potentially lethal virus.

The rationally irrational response is expected. The higher your risk exposure, the higher your contacts and the more isolated one feels, the more likely it seems that healthcare personnel think they have had COVID-19 or have antibodies. Although anecdotal, many of these personnel are disappointed when they test negative and continue to protect themselves as they had before. But knowing that they have not contracted the disease and that the worst may yet still be coming is a feeling that, although pervasive in the current climate, can weigh on anyone who has to face it daily. In addition, those who do test positive seem fearless. They are the ones willing to go into any room and help out even without an N95 mask on. These cavalier feelings, particularly among younger physicians who feel that they will likely fight off COVID-19 better, are simply unsupported by the literature. But cavalier actions can lead to a slippery slope of consequences.

Recognising these psychological tolls, is there any role to testing people to understand the epidemiological risks and not telling people their antibody status? This flies in the face of autonomy and mirrors the earlier paternalistic sentiments of medicine in the early 1900s, but also allows for more control of information and limits the spread of false predispositions. This may not be the perfect answer, but these are the two ends of the spectrum. Somewhere in between will likely be the safest ethical and social decision.

NEED FOR APPROPRIATE TARGETED COUNSELLING

In these unusual circumstances where every action is magnified by a certain magnitude by the potential for public health benefits, it is important to increase testing. The Centers for Disease Control has continued to expound the need to increase our testing capabilities and suggests that our current testing is not nearly where it needs to be.¹⁰ There is built-up momentum for antibody testing and this will likely have beneficial repercussions regarding opening up businesses, potentially helping allocate healthcare resources, and focus our research on the best treatment modalities, but this is not being realised at this time with

the current knowledge of the virus and with the current rate of testing. Within a week, the tests that have been done may be obsolete as the world begins to see reopening as a possibility.

There are really no ethical justifications not to notify patients about their antibody status if they are tested. The focus on changing behaviours seen by prior epidemics has transformed during this pandemic. It is a moral imperative, more than the benefit to the community and public health, that those who are tested undergo appropriate counselling. Because of the inundation of COVID-19 stories, research and data, it is important to temper patients' expectations, guide them to understanding the ephemeral nature of testing and recognise the potential long-term consequences of this testing.

CONCLUSION

Some might hear all of this and say that testing allows for us to be informed and more information is more power, but implicitly in this statement is that medicine and healthcare professionals are morally obligated not only to serve their patients and their community, but to make sure that they fully understand the ramifications of any test result. With limited knowledge about the significance of COVID-19 antibody testing at this time, it is hard to use this to stratify work in a healthcare setting or to use it for any purpose beyond epidemiological studies on the spread of the disease.

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Contributors This is the sole work of KV and is a product of his own viewpoint.

Funding The authors have not declared a specific grant for this research from any funding agency in the public, commercial or not-for-profit sectors.

Competing interests None declared.

Patient consent for publication Not required.

Provenance and peer review Not commissioned; internally peer reviewed.

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