

## Interest in Infectious Disease Fellowship Since the Pandemic

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### Brief Report

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## INTRODUCTION

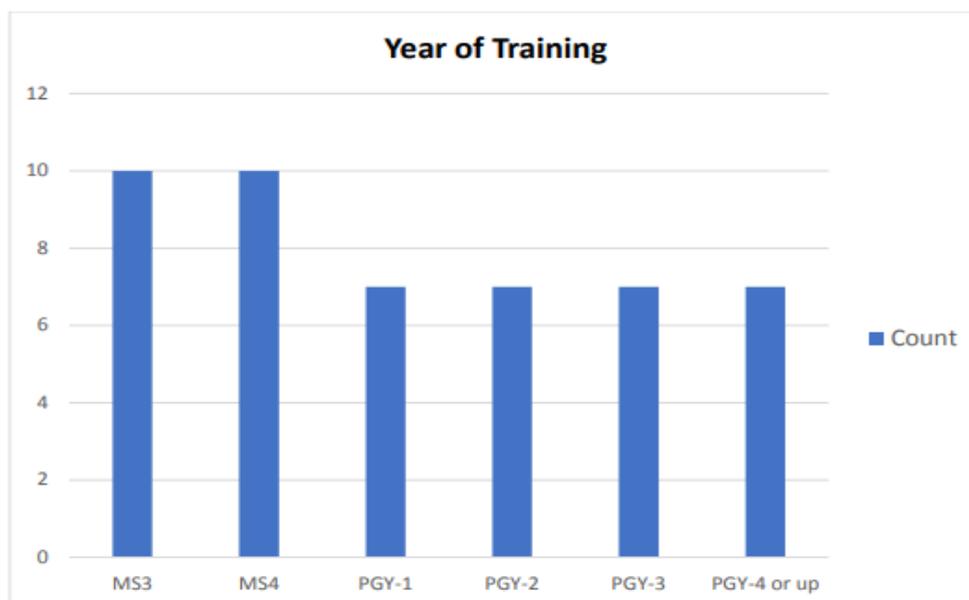
Infectious Disease (ID) fellowships have a long track record of being left vacant for decades <sup>[1]</sup>. In fact, over the past several years, applications to ID fellowship programs have overall been on the decline <sup>[2]</sup>. The unattractiveness of this subspecialty has led to an alarming shortage in ID specialists across the nation, especially in rural areas <sup>[3,4]</sup>. As the Coronavirus-19 (COVID-19) pandemic rampaged across the globe, the reliance on ID specialists escalated even more, and consequently; the ID specialists experienced exponentially more burden. ID calls and work hours increased drastically. In fact, according to one hospital, the number of calls increased by 500% <sup>[5]</sup>. As the world braced itself during this pandemic, the next concern arises as to if we will face future pandemics. Studies argue that there will indeed be more emerging infectious diseases and pandemics to come <sup>[6]</sup>. Previous studies warning the negative effects of climate change on human health through the proliferation of vectors spreading zoonoses continue to be reinforced by modern literature <sup>[7]</sup>. Therefore, it is obvious that the world needs more highly trained ID specialist to control these future outbreaks <sup>[8]</sup>. The Infectious Disease Society (IDSA) continues to struggle to attract physicians to the ID subspecialty including the development of Grants <sup>[9]</sup>. Studies suggest residents who are exposed to ID rotations earlier in their training have a higher likelihood of pursuing ID fellowship <sup>[10]</sup>. Furthermore, data indicate that medical students are more likely to pursue a career in ID if their medical curriculum in ID and microbiology was rated very good and if they had an ID mentor <sup>[10]</sup>. Data is lacking regarding what effect the pandemic has had on the attractiveness of the ID specialty. Is it possible through their intense exposure with ID throughout the pandemic that medical students and/or residents' interest in ID increased and made them more likely to apply for an ID fellowship? This paper will discuss the negative impact of the pandemic on the already unattractive ID specialty calling for more effective efforts to improve its outlook.

## METHODS

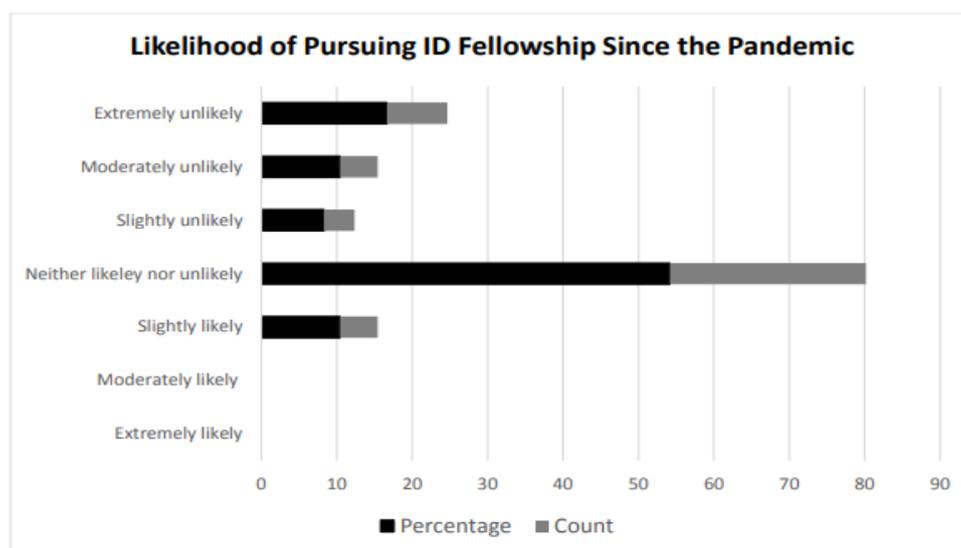
**Patient and Public Involvement:** No patients were involved. An anonymous survey was distributed to medical students and residents at a university hospital asking how likely they to pursue an ID fellowship since the pandemic. The distribution across levels of training was fairly equal (**Figure 1**). Forty-eight individuals responded. As seen from (**Figure 2**), most trainees did not have an increased interest in ID. The trend was similar across the different years of training.

## DISCUSSION & IMPLICATIONS

The ID specialty has a long track record of being undesirable. Studies suggest that the comparatively low salary of the ID subspecialty is the biggest deterrent for residents to pursue the ID specialty <sup>[11]</sup>. Furthermore, studies indicate that those who do choose to pursue an ID specialty had developed an interest before they began residency <sup>[12]</sup>. This implies that in addition to increasing the salary of the ID specialists, more effort must be made to recruit ID fellows. Recruitment strategies such as marketing ID to students may help persuade them into pursuing ID fellowship. Furthermore, it is likely that the pandemic has compounded the



**Figure 1.** The distribution across levels of training was fairly.



**Figure 2.** The distribution across levels of training was fairly.

negative view of the ID subspecialty even further despite the admiration for the ID specialist and recognition of the dire need for them. An obvious reason for this is the intense stress and anxiety that was triggered by the pandemic. Medical students across the globe have developed increased mental health issues. In fact, according to one global study, there was a striking number of students who developed burnout, substance abuse and mental disorders <sup>[13]</sup>. Another study revealed that a quarter of medical students had self-reported anxiety <sup>[14]</sup>. The entire medical profession may have become less intriguing for prospective students since the pandemic according to studies arguing the daunting nature of the medical profession <sup>[15]</sup>. Therefore, it is reasonable to assume that the ID subspecialty has been particularly negatively affected by the pandemic. A study from China supports this suspicion as it demonstrated that the anxiety of medical students was correlated with decrease likelihood of pursuing a career in ID <sup>[16]</sup>.

## CONCLUSION

In summary, this study implies that the ID fellowship continues to be a less desirable specialty for prospective students and residents even after the COVID-19 pandemic. Potential reasons for this finding are many. Firstly, prospective fellows may have witnessed the added stress and unpredictability of the ID specialty.

### Ethics statements

- a) Contributorship: Budder Siddiqui was the sole author and contributor for this study.
- b) Funding: not applicable
- c) Competing interests: none

- d) Data sharing: No additional data available.
- e) Acknowledgements: none
- f) The IRB has exempted this study as Non-Human Research.

They may have also found it intimidating to deal with outbreaks and difficult to face the uncertainties and dynamic forces. Furthermore, they may have become overly anxious to pursue the specialty due to the obvious increased risk of contracting and/or spreading a contagion to their loved ones. Limitations of this study include the small sample size and being conducted at a single center. Further largescale studies are needed to determine whether the lack of ID interest persists even after the COVID-19 pandemic. If this negative trend is indeed true, then more efforts must be made to increase ID interest to counter the shortage of ID specialists and to cope with future pandemics.

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