Understanding Motivations behind Medical Student Involvement in COVID-19 Pandemic Relief Efforts

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Abstract

Introduction

Purpose: Although students were removed from clinical settings at the beginning of the COVID-19 pandemic due to concerns of burdening physicians and depletion of PPE, some leaders suggested that this was an opportunity to do that which was previously seen as unnecessary. We aim to quantify the degree to which factors influenced a student’s decision to do or not volunteer during the pandemic and to understand the attitudes towards their duty to serve.

Method: A secure web-based survey was distributed to students at 23 different US allopathic medical schools between April and June 2102.

Results: Of the 509 students who completed the survey, 67.6% volunteered in pandemic-related activities and a majority volunteered in non-patient-facing roles. Community service, new skills, and departmental activities were top 3 influencing factors for students who volunteered, while risk to others, time commitment, and risk to self were top 3 influencing factors for students who chose not to volunteer. Students interested in primary care specialties agreed to a greater degree that physicians have a duty to serve in pandemic relief efforts. Our study found that a particular medical student's motivation for volunteering during the pandemic is a combination of altruism, available time, and self-serving nature. In our study, 67.6% of medical students volunteered of their own volition without school-required participation in such efforts. Additionally, students who volunteered had statistically higher interest in serving the community than those who did not volunteer. Self-serving motivations, including additional research opportunities, networking, and benefit to residency applications, account for almost one fifth of the key factors that influence a student's decision to volunteer. A student's self-selected specialty may reflect their motivation. Other studies have found that medical students with a lower degree of altruism are significantly more likely to choose high-income specialties. When looking at a student's self-selected specialty, it is not clear if the source of altruism influences their decision to serve. We also found that motivations for volunteering may differ between medical students and other specialties respectively.

Assumption of risk by Students

The AAMC recommended that medical students be excluded from direct patient care activities while medical schools developed plans to safely re-integrate medical students into the clinical space.1 In our study, students who chose not to consider risk of exposure to themselves or others as significantly more important factors in their decision than students who did volunteer. The AAMC identified the need for barriers to integrating medical students into clinical settings: health insurance status, testing availability, and in-person evaluation and supervision (PPE). These barriers may also deter students from volunteering in non-clinical settings. For example, the lack of appropriate masks when delivering groceries or childcare may also have influenced on students' decisions not to volunteer. Even with appropriate PPE, there is still a risk of serious illness or death. The median age of our cohort is 25.94 (1.5), which falls within an age group that carries up to 6.4% risk of hospitalisation and up to 3% risk of death related to COVID-19.16 In addition to the risk of significant bodily harm, students may assume in volunteering in patient-facing roles during the COVID-19 pandemic that they are at risk of exclusion from the clinical environment due to COVID-19 may delay a student’s ability to enter clinical rotations, obtain licensure, or even graduate from medical school.

Conclusions

Although 3.0% of all students did not have any available opportunities to volunteer, 67.6% of students indicated that they volunteered with non-curricular activities that added in the perceived value of their education. Of these students who volunteered, they did not work in patient-facing roles but rather worked remotely to support local schools, and even a sense of service. Although narrative published have discussed the ethical implications of medical student involvement in the pandemic, there have been no studies exploring the motivation behind medical student volunteering.

Our aims were to identify and quantify the degree to which factors influence a student's decision to participate in volunteer activities. Different categories of students, characteristic attitudes towards a choice or duty to serve based on personal motivations, and characteristic student attitudes towards a physician's duty to serve based on future residency type. Understanding motivations and attitudes toward volunteering not only provide an ethical framework in which to discuss medical student involvement in the pandemic, but also help inform future guidelines for medical student involvement in extraordinary situations.

Methods and Materials

Inclusion criteria: US allopathic medical schools - schools that did not graduate medical students early

REDCap survey: Demographics - volunteer involvement - influencing factors - Agreement with physician's duty to serve

Data analysis in R with statistical significance at p < 0.05

Table 1. Baseline demographic characteristics and student participation (N = 599).

<table>
<thead>
<tr>
<th>Age (MEAN (SD))</th>
<th>NO OF LEAVES OF ABSENCE</th>
<th>ANY MEDICAL SCHOOL VOLUNTEERING</th>
<th>OVERALL (N = 599)</th>
</tr>
</thead>
<tbody>
<tr>
<td>405 (67.6)</td>
<td>20.5%</td>
<td>67.6%</td>
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</table>

Volunteer Activities

Although 3.0% of all students did not have any available opportunities to volunteer, 67.6% of students indicated that they volunteered with non-curricular activities that added in the perceived value of their education. Of these students who volunteered, they did not work in patient-facing roles but rather worked remotely to support local schools, and even a sense of service. Although narrative published have discussed the ethical implications of medical student involvement in the pandemic, there have been no studies exploring the motivation behind medical student volunteering.

Motivation for Volunteering

Our study found that a particular medical student’s motivation for volunteering during the pandemic is a combination of altruism, available time, and self-serving nature. In our study, 67.6% of medical students volunteered of their own volition without school-required participation in such efforts. Additionally, students who volunteered had statistically higher interest in serving the community than those who did not volunteer. Self-serving motivations, including additional research opportunities, networking, and benefit to residency applications, account for almost one fifth of the key factors that influence a student’s decision to volunteer. A student’s self-selected specialty may reflect their motivation. Other studies have found that medical students with a lower degree of altruism are significantly more likely to choose high-income specialties. When looking at a student’s self-selected specialty, it is not clear if the source of altruism influences their decision to serve. We also found that motivations for volunteering may differ between medical students and other specialties respectively.

Conclusions

Overall, we found that there were different motivating factors for students who decided to volunteer compared to students who did not: community service, new skills, and time commitment were top 3 factors for students who choose to volunteer while risk to other, time commitment, and risk to serve were primary factors for students who did not volunteer. We also found that motivations for volunteering may change over the course of medical training: three-fourths of third-year medical students and half of fourth-year medical students volunteered for COVID-19 related relief efforts. Compared to students interested in radiology/pathology and other specialties, students interested in primary care specialties agreed to a greater extent that physicians have a duty to serve in low risk settings and remote settings. However, medical students in general agreed that students should be allowed to volunteer in COVID-19 related relief efforts. Underclassmen and seniors in US States continue to experience increases in COVID-19 cases, institutions should involve medical students in evaluating what the acceptable risks are compared to the ethical educational benefits off student involvement in patient care.

References

1. AAMC, Graduation Year Medical Student Participation During the COVID-19 Pandemic: Medical Students, National Service, and Public Health. J Health Econ. 2020;77:101975. Published online 2020. doi:10.1016/j.jhealeco.2020.101975. 2. AAMC, Medical Student Involvement in Extraordinary Situations: Example Responses. April 9, 2020. 3. AAMC, A Bold Response to the COVID-19 Pandemic Relief Efforts. April 9, 2020. 4. Allaf M, Raubenheimer K. On the duty of physicians to serve in pandemic relief efforts. Wis Med J. 2020;119(1):6 [0.60] vs 4.50 [0.85] 5. Malshitzky E, Kestin Y, Barak Y, et al. Physicians’ attitude toward patient care roles with a low risk of disease exposure, non-patient care roles, and remote work when compared to students who did not volunteer (Mean [SD]; low risk to self: 4.31 [1.11] vs 4.19 [1.01]; p = 0.037; non-patient care: 4.15 [1.11] vs 4.03 [1.01]; p = 0.027; remote work: 4.57 [1.00] vs 4.32 [1.00]; p < 0.001). In addition, students who volunteered agreed to a greater extent with the statement that physicians have a duty to serve in settings of all risk levels (Mean [SD]; high risk to self: 4.51 [0.77] vs 4.19 [1.01]; p = 0.011; low risk to self: 4.75 [0.60] vs 4.50 [0.80]; p = 0.003; non-patient care: 4.29 [1.11] vs 4.05 [1.26]; p = 0.002; remote work: 4.60 [0.86] vs 4.45 [0.92]; p = 0.003). Students interested in primary care specialties agreed to a greater extent that physicians have a duty to serve in low risk settings and remote settings compared to radiology/pathology and other specialties (Mean [SD]; low risk to self: 4.72 [0.63] vs 4.47 [1.25]; p = 0.027; remote work: 4.58 [0.80] vs 4.43 [1.03]; p = 0.049).

Discussion

Figure 1. Types of student volunteer involvement.

Figure 2. Top 3 factors influencing students' volunteers' decisions. Duty to Serve.

Figure 3. Students’ attitudes regarding duty to serve in different settings.

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Methods and Materials

Results

Motivations for Volunteer Activities

Students who volunteered most frequently rated community service, new skills, and time commitment as a top 3 primary factor in their decision, while students who did not volunteered most frequently cited risk to others, time commitment, and to risk to self as a top 3 primary factor in their decision.