Rapid Mobilization of Medical Students to Provide Health Care Workers With Emergency Childcare During the COVID-19 Pandemic

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Abstract

Problem
In March 2020, the novel coronavirus 2019 (COVID-19) pandemic spread rapidly within the United States and began overwhelming the health care system. To conserve personal protective equipment, reduce the spread of the virus, and keep student learners safe, leaders of medical schools across the country made the difficult decision to suspend in-person clinical experiences. As medical students were sent home and hospital systems ramped up their response to the virus, many essential health care workers (HCWs) faced an immediate challenge. As “nonessential” services such as schools and daycare centers abruptly closed, HCWs serving on the frontlines in inpatient settings needed a way to both fight the pandemic and care for their children.

Approach
Medical students at Oregon Health & Science University were able to rapidly OR organize to provide childcare for essential HCWs. For roughly 8 weeks following the state of emergency (March 13 through May 15, 2020), students used Twitter and emerging technology to match families in need of childcare with a trainee volunteer.

Outcomes
By May 15th, the service had successfully fulfilled 181 of the 202 requests for childcare (90%) over the course of 8 weeks. Of the 181 completed childcare requests, 172 (95%) were fulfilled by an individual (1:1 volunteer-to-household pairing), and 9 (5%) were fulfilled by 2 or more volunteers.

Next Steps
The trainees who provided childcare will apply the skills learned (e.g., clear communication, grassroots organizing, triaging, leveraging new technology) to patient care. Broader applications for this system include organizing volunteers to conduct contract tracing or to provide public health information in languages other than English. Future research includes examining the effect of the service on the productivity, morale, and mental health of both those who provided and received childcare.

Problem
Childcare for the health care workforce
Even in the best of times, the health care workforce often faces difficulties in accessing childcare. Many health care workers (HCWs) are single parents, and they often work in shifts at unusual hours that clash with the traditional business hours of most childcare services. Additionally, many HCWs work in on-call situations, which require them to arrange childcare on short notice. These realities are driving factors of burnout, producing enormous cost to the medical system. The difficulties in accessing childcare are only exacerbated in a widespread crisis, such as the novel coronavirus 2019 (COVID-19) pandemic.

A community in crisis
In response to the COVID-19 pandemic, many states closed schools and childcare facilities to reduce the number of cases. On March 16, 2020, K-12 schools were closed in the state of Oregon, followed by childcare facilities. HCWs on the frontlines of the pandemic faced not only putting themselves at risk and, upon their return home, their families, but also an urgent need for childcare. Childcare was crucial for preserving the health care labor force and preventing absenteeism during COVID-19.

Simultaneously, health professions schools throughout the United States were also experiencing the effects of COVID-19. Weighing considerations of patient care and student safety, many medical school leaders made the difficult decision to suspend clinical rotations. Oregon Health & Science University (OHSU) School of Medicine administrators informed medical students of the decision to suspend in-person clinical rotations on March 13, 2020. The decision disrupted the education of roughly 350 medical students who were suddenly left without in-person coursework. Approximately 25 minutes after receiving this announcement, OHSU medical students, recognizing a grave need, sent out a tweet offering childcare support to HCWs. The tweet included #MedTwitter to directly communicate with the community of medical providers and students on Twitter who share knowledge and information through this hashtag.

Approach
Uniquely skilled volunteers
Health professions students, well suited to offering community support in crisis, are especially fit for providing childcare during a pandemic. The
basic requirements of matriculating to a medical school (e.g., passing a background check, drug screen, Basic Life Support training) dovetail with minimal qualifications for a professional childcare provider. In addition, given their education, health professions students know to take social distancing precautions seriously and can recognize symptoms requiring them to self-quarantine. Above all, health professions students have a commitment to care for those in need.

Sign-up and request forms
On the day clinical experiences were suspended, we created a Google Form that allowed students to indicate their desire to volunteer and HCWs to request childcare (see Supplemental Digital Appendix 1A at http://links.lww.com/ACADMED/B88). This primary request form rapidly circulated on Twitter as physicians and local medical organizations shared the link with their networks. The initial tweet alone garnered 30,813 impressions (the number of times a tweet has been seen) and 1,192 engagements (the number of times users have interacted with a tweet by, e.g., liking it, retweeting it, or clicking on an embedded link).

For each request, we first identified a student volunteer who lived in a neighborhood near the HCW. Next, we connected the volunteer and the HCW, and they worked out the logistics. Our initial goal was to provide 1:1 matches, a labor-intensive process. Upon consulting with a faculty mentor, a 3-tiered system for triaging requests, based on each requesting HCW’s unique circumstances, was implemented (Figure 1). The initial goal was to provide 1:1 matches, a labor-intensive process. Upon consulting with a faculty mentor, a 3-tiered system for triaging requests, based on each requesting HCW’s unique circumstances, was implemented (Figure 1).

Childcare for all
We felt offering childcare at no cost was essential so that no HCW would avoid seeking help because of financial limitations. Student volunteers, however, experienced financial threats of their own. Financial aid was in question and part-time work opportunities vanished as a result of stay-at-home orders. Therefore, we created a Venmo account for donations to support volunteers who were providing childcare while experiencing financial hardship. While we were initially concerned that this donation system would not be robust enough, many volunteers reported that HCWs were tipping them, despite being offered the service for free. In addition, as of May 15, 2020, our general fund had received a total of $3,980, and every volunteer who expressed a need received a donation.

Rapid expansion and distribution
To reach all HCWs who might benefit, we implemented several outreach methods. We created a 24-hour hotline using Google Voice to field calls from HCWs. We distributed the request form via multiple physician email lists and hung posters with a link to the request form on the OHSU campus. The childcare request form quickly spread to additional health systems within the Portland metropolitan area, including Kaiser Permanente, Legacy, and Providence. Media interest grew, and coverage included an article by OHSU’s communications staff, a local television interview, and a story in the local paper.5,6

The volunteer network also quickly grew beyond OHSU to include students from the University of Portland School of Nursing, Western University of Health Sciences, and Pacific University. To accommodate volunteers from diverse health fields, the childcare request form specified “health professions students” as opposed to “medical students.”

Safety and triage
A number of precautions were taken to ensure the safety of volunteers and the families they served. The childcare request form included fields for the children’s ages, allergies, special needs, etc., as well as fields for pets and other pertinent information that would allow volunteers to self-select a household where they felt comfortable offering care. Timely, clear communication was key to gaining the trust of the HCWs requesting childcare. HCWs were therefore encouraged to express expectations to volunteers ahead of time in recognition of the reality that not all students had childcare experience. The student leaders who managed the service remained in close contact with volunteers and HCWs to address concerns and instituted a low threshold cancellation policy, allowing either party to cancel for any reason. While childcare is never risk-free for children or for those who provide the care, none of the HCWs and none of the volunteers raised concerns beyond the few instances when a volunteer canceled on short notice because they were feeling unwell. While none of the volunteers encountered any personal liability or legal concerns, local regulations, especially regarding background checks, should be reviewed carefully in other settings.

Even as childcare services expanded rapidly to meet the growing demands for health care necessitated by the pandemic, the service remained completely student-run. While we had no faculty supervisor, we felt it prudent to seek recommendations for handling increased requests. Upon consulting with a faculty mentor, a 3-tiered system for triaging requests, based on each requesting HCW’s unique circumstances, was implemented (Figure 1).

While we were able to identify a volunteer to fulfill the majority of the childcare requests (see Outcomes, below), we were unable to meet all of them. A student leader directly contacted HCWs whose requests were denied, providing an explanation and a list of alternate childcare options. Without exception, HCWs requesting care met these communications with understanding and gratitude.

Outcomes
In the course of 8 weeks, the service collected 635 responses: 423 from student volunteers offering support and 212 responses from HCWs requesting support. Of the 212 requests, 202 (95%) were requests for childcare. As of May 15th, we successfully fulfilled 181 (90%) of the requests for childcare; 15 requests (7%) were canceled or withdrawn after families identified other childcare resources and 6 requests (3%) remained open/unfilled. Of the 181 completed childcare requests, 172 (95%) were fulfilled by an individual

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(1:1 volunteer-to-household pairing) and 9 (5%) were fulfilled by 2 or more volunteers who worked together. The HCWs requesting care comprised the following: 95 physicians (45%), 91 nurses (43%), 8 hospital technicians (4%), 6 social workers (3%), 6 medical assistants (3%), and 1 physician assistant, physical therapist, and janitorial staff member (<1% each).

The initial request rate grew rapidly and then stabilized over time, affected by the gradual reopening of childcare facilities (see Supplemental Digital Appendix 2 at http://links.lww.com/ACADMED/B89).

**Next Steps**

**Applying learning to future care**

Creating, implementing, and managing a robust system for rapid delivery of childcare to HCWs provided us with several learning opportunities in parallel with our traditional curriculum.

Our system was implemented in response to a clearly defined problem. Student leaders collaborated to rapidly modify the service to address changing needs in real time. While a more careful planning process is typical for community organizing, the crisis necessitated providing the service quickly and adjusting as challenges arose. We took advantage of modern open-source tools (e.g., Google Forms) to expedite implementation, and we leveraged #MedTwitter, an increasingly important resource that allows for the rapid transmission of ideas in the medical education community. While many students have some level of experience with these technologies, they are not a standardized part of every MD program. Organizing the childcare service introduced such contemporary tools into our education.

Strong communication skills are vital for success on clinical rotations. Patients benefit from medical students who can efficiently assess their needs in a caring and competent manner. Similarly, with childcare, parents have specific needs and are understandably cautious about enlisting the help of students who are effectively strangers. In both settings, students need to communicate effectively to quickly and appropriately gain trust.

In medical school, students learn concepts of triage but rarely have a direct role in deciding its tiers. In managing this service, we developed a system for triaging childcare requests (Figure 1) and took responsibility for the outcomes of that protocol. The student leaders regularly received requests for childcare services that had to be either denied or delayed to prioritize those with higher "acuity" and for the good of public health.

This service benefitted from remaining completely student-run and completely independent. While it was started by OHSU students, we were careful to make clear that it was not organized, funded, or provided by any institution. The volunteers were not all OHSU students, and the service was not offered exclusively to OHSU employees. This independent grassroots structure afforded us flexibility around concerns of institutional liability. Just as medical students have the freedom to volunteer at, for instance, a soup kitchen, without considering their enrollment, so too can students offer childcare to their neighbors. We do not raise this point to argue against working with or within one's institution. Rather,

**Figure 1** Triage algorithm for childcare requests developed by health professions students providing childcare on a voluntary basis to HCWs serving on the frontlines in inpatient settings during the COVID-19 pandemic. Screening questions for HCWs about their roles and responsibilities were included in the secondary request form (left) and responses were used to assign priority labels (right). These priority labels were displayed on the sign-up sheet such that volunteers would try to address requests in sequential order. Requests that did not meet tier 1–3 criteria were not displayed on the sign-up sheet. When a request was declined, a student leader would notify the requesting HCW directly and provide a list of alternative childcare options. Abbreviation: HCW, health care worker.
we illustrate the benefits of fostering community organizing skills and taking action. Ultimately, we were able to identify a community need and address it without waiting for instructions or asking for permission.

Ideal medical students possess insight into their own strengths and weaknesses and know when to appropriately ask for help. We practiced the skill of seeking help or consulting others when we encountered situations with no clear solutions and could not reach a consensus on how to act. For example, we sought advice from a faculty mentor on how to maximize volunteer safety.

In summary, this service allowed students to gain experience with grassroots organizing using modern technologies, practice thoughtful communication, employ judicious resource management, implement changes in real time, and hone relational leadership skills—all skills that will improve the care of future patients.

Future directions
The service described here provides an example of rapid mobilization of medical students to address 1 structural vulnerability exposed by the COVID-19 pandemic. The same infrastructure could be adapted to help meet a variety of other challenges facing society during this crisis and beyond. For example, the tools we used (Twitter, Google Forms, Google Voice) could be repurposed to mobilize student volunteers for contact tracing. Bilingual students could rapidly organize to help spread public health information to communities facing language barriers. As police brutality leads community members to gather and protest systemic racism, medical students could build a network to create and distribute personal safety materials.

While data demonstrate our service was highly used, future studies could investigate the effect of the service on the morale, productivity, and mental health of students and of HCWs. In times of crisis, HCWs are at increased risk of burnout given the demands on their time and attention. Supportive work environments and services such as the one we provided that consider employees’ family responsibilities can counter burnout and promote resilience. Students also benefit from having a role to play, and regaining control over uncertain circumstances has been shown to protect against burnout. Future research could investigate how COVID-19 burnout may have shaped students’ attitudes about service and teamwork.

Among the many lessons taught by the COVID-19 pandemic, at least 1 is clear: A sustainable infrastructure for childcare that can be rapidly scaled in a pandemic is crucial for the success of the health care workforce in meeting patient needs. While the primary focus of medical students should be training for their future careers, community service clearly presents learning opportunities that translate to patient care.

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