

Case Study: Working the Wards



Interventional radiology fellow Dania Daye, MD, PhD, shares her firsthand experience volunteering to care for COVID-19 patients.

Key Takeaways:

- Dania Daye, MD, PhD, interventional radiology fellow, is among more than a dozen radiology residents and fellows at Massachusetts General Hospital who have volunteered to help care for COVID-19 patients in the wards. She recently worked four overnight shifts.
- Daye provided clinical care, talked to families about end-of-life wishes, admitted patients to the hospital, coordinated care when patients required intensive care, and witnessed the impact of healthcare disparities.
- Daye says the experience gave her renewed appreciation for clinical care, and she plans to integrate what she learned into her practice as an interventional radiologist.

When leaders at Massachusetts General Hospital (MGH) issued a call for volunteers to help care for the rising number of COVID-19 patients, many radiology residents and fellows stepped up to help, as highlighted in [this Imaging 3.0 case study](#). Dania Daye, MD, PhD, interventional radiology fellow, was among them. She recently worked four overnight shifts, from 7 p.m. to 7 a.m., caring for COVID-19 patients in the wards, and she has offered to do it again, if necessary.

In this Q&A, Daye shares insights about how she prepared for her service and discusses some of what she witnessed and learned during those four nights — including how the experience will impact her interventional radiology (IR) work going forward.

Q. When we last spoke, you were preparing to volunteer in the wards, but you hadn't actually been called to serve yet. When did you start working with COVID-19 patients, and what did a typical shift entail?

A. The second week of April, I was scheduled to work as part of the general medical ward service. They are scheduling volunteers for four days in the wards at a time. I was scheduled for nights, and the shifts were 12 hours, from 7 p.m. to 7 a.m. Honestly, I have not done nights or general medicine since my intern year, which was five years ago, although I spent one month recently in the ICU as part of my IR training. I had to review quite a bit of my basic internal medicine knowledge to make sure I had the tools I needed to provide good clinical care.

At night, there is a certain degree of independence expected, and the stakes are a little bit higher. Although, there was always someone I could contact if I had any questions. On an average night, I would cover 15 to 20 patients and admit two to three new patients. COVID-19 patients who come to the hospital are unfortunately very sick and have a lot of medical comorbidities, so I'm so glad that I reviewed a lot of my general medicine training before I went to the wards.



Dania Daye, MD, PhD, interventional radiology fellow, was one of several radiology residents and fellows at Massachusetts General Hospital who volunteered to help care for COVID-19 patients in the wards.

Q. Was there anything in particular that you reviewed or that you did to prepare for the work?

A. A lot of the patients who are coming in have hypoxia. This is expected with COVID-19, so I spent a lot of time reviewing the management of hypoxia, including things like blood gases. I also reviewed the new treatment guidelines that are coming out for COVID-19 and some of the new management approaches that are being taken in a lot of the hospitals right now, including proning of patients, administering hydroxychloroquine and antibiotics when needed, and conducting clinical trials for new treatments options that are being offered at MGH, including remdesivir.

Unfortunately, during my four nights in the wards, I ended up having to transfer four patients to the ICU in the middle of the night. I had reviewed all of the onboarding clinical and operational material right before

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During her time volunteering in the wards on nights, Daye says she saw the importance of teamwork in medicine. Hematologist Anem Waheed, MD, also volunteered with the surge teams on nights.

I started in the wards, which outlined the workflow and chain of command. It was really helpful to know how and when I needed to pull the trigger and call someone to arrange for an ICU bed. Preparation was key in this case. I give a lot of credit to the general medicine service at MGH, which prepared a lot of onboarding material for people like me who have not done general medicine for a couple of years and who may not be familiar with the typical workflow of the clinical services in the hospital. When I read all the material that they provided, I felt more than prepared to tackle this.

Q. Were they looking for volunteers because there are so many providers out sick or just because of the influx of patients, or a combination of the two?

A. There is certainly a huge influx of patients that cannot be handled by the current resources available in the internal medicine department. Unfortunately, MGH is in the situation where we have the highest number of COVID-19 patients in the region — at least that was the case the last time I looked at the data. So certainly, a lot of the resources are strained.

We're very lucky at MGH, though, to have a very good disaster planning program that has been planning for something like this for a very long while. So, we have the physical resources available in terms of equipment, etc. But with a good proportion of the hospital now occupied with COVID-19 patients, more physicians

are needed to care for them than what the current capacity of our general internal medicine service allows. Because of this, there was a call for volunteers from a lot of different departments whose members have had prior internal medicine training. In addition to radiology, they're pulling people from many other specialties, including urology, dermatology, psychiatry, and neurology, among others.

So, they have a master plan with surge teams, which are in addition to the typically available medicine teams. Their main goal is to admit patients who are affected with COVID-19 or being ruled out for COVID-19. They have something like 10 to 20 teams and, as more patients come to the hospital, they activate more teams sequentially.

Q. Unfortunately, families are not permitted to be with COVID-19 patients. What experiences did you have with patients' families as part of this work?

A. The most humbling experience was when we had a patient who was extremely sick and decided she did not want to be intubated and wanted just supportive comfort measures. She ended up passing away on one of the nights I was on duty, and I will say that the hardest part was that no family was allowed to be with her. I give so much credit to the nursing team that was there. The nurses stayed by her bedside and held her hand when she passed.

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I did the death exam, and I would say that is one of the most challenging things we do as physicians. I had not done that since my intern year. It was definitely a reminder about how humbling medicine can be. And I will say that talking to the patient's husband in the middle of the night about his wife passing away was one of the most difficult conversations I had during those four nights in the wards. It was definitely a reminder that medicine is all about compassion and the humanity of dealing with these situations and giving people the dignity that they want when they're passing.

While that was one of the most striking experiences I had during my nights in the wards, there were a lot of sick people who I had to transfer to the ICU and who had to be intubated. And many of these conversations with the families had to happen over the phone, as well. We're really in unprecedented times; I have never seen these types of things happen before. Usually, when you're transferring someone to the ICU, people want to say goodbye, give one last kiss, and everyone is there in person. The fact that there are no visitors allowed by policy, it's really putting a lot of emotional strain on the staff, and a lot of the staff has to step up to be there for the patients when their families cannot be. That's definitely a harsh reality of the current situation.

I distinctly remember a patient I was talking to about intubation, and his condition was deteriorating very quickly. We had to call his wife and have a conversation on the phone about what he would want and exactly how far should we go with the treatment plan. His wife was crying on the phone and pained that she could not see him. She could not give him a kiss. It was definitely sobering to be a part of that conversation. I mean, it's really, really tough. I've never practiced medicine like this before.

Q. I'm not sure how you could, but did you prepare to have those conversations with families?

A. I would say probably this was the part I was least prepared to deal with. The medical knowledge, you can study for, and you can take care of patients adequately. It's just that the emotional part is definitely draining. This pandemic is putting us in situations that I don't think the healthcare system has seen before, and the emotional toll is huge.

Q. That's a lot to carry with you. How did you manage your own mental health through that and prevent burnout and depression?

A. It's more important than ever for the healthcare workers to take care of themselves because of how draining things are on the front line. I have been

religiously using my exercise bike and working out and doing things along those lines to keep from burning out. I take every opportunity I can to catch up with friends and family. I also try to read and keep connected to what's important to me. By focusing on things that refill my battery, I can keep going and take care of people in the hospital.

Q. Earlier, you mentioned the importance of teamwork. What role did teamwork play in your time in the wards?

A. The nursing team working with me at night showed me the ropes and helped me navigate the administrative systems that I was unfamiliar with using. At the same time, they were there taking care of patients on the front lines. It was phenomenal. I don't think any of us would be able to do our work as physicians without them. I saw how important teamwork is in healthcare.

Q. During our last conversation, you spoke a little about the importance of properly donning and doffing personal protective equipment (PPE). Has MGH taken any other measures to keep providers safe while caring for COVID-19 patients?

A. One interesting thing that I saw was that MGH has implemented a video-based system for communicating with patients. With this system, each COVID-19 patient has an iPad in their room, and both nursing staff and physicians can use an app on our phones to talk to the patient on a video call without having to go into the room every couple of minutes to check on them. It helps reduce the number of times we go into the room, and that definitely reduces the use of PPE, which we have to don and doff a new set of every time we go into a patient's room. I thought that was an innovative way to try to provide high-quality patient care without using a lot of PPE or exposing the staff more than necessary.

Q. What are your thoughts about the healthcare disparities associated with COVID-19? What did you witness there in that regard?

A. At MGH, we're in a unique situation in that we cover a city just outside of Boston called Chelsea, which has a large Spanish-speaking population. Unfortunately, that community has been extremely hard hit by COVID-19. I think the latest released data by the state of Massachusetts shows that Chelsea has the highest rate of infection of any place in Massachusetts.

I would say probably greater than 50% of the patients that I was taking care of were Spanish speaking. It was eye-opening to see how this disease is affecting people of certain ethnicities disproportionately. I felt helpless at many points trying to speak to these patients

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because although I speak two other languages, I do not speak Spanish. And I wished I could speak Spanish because it's hard to comfort patients and to connect with them as much as you'd like to when you have to use an interpreter, which the hospital provided. This pandemic is bringing healthcare disparities to the forefront.

Witnessing these disparities has been particularly eye-opening for me because I'm co-chair of the MGH radiology diversity and inclusion committee. Since finishing my work in the wards, I've been working with the committee on efforts to address some of these disparities. We plan to target a lot of programming towards our Spanish-speaking population in Chelsea and the surrounding areas to help them through difficult times. MGH has been leading a lot of efforts in that city, and through radiology, we're offering a lot more resources in Spanish for the people getting X-rays in that community and making sure that teams have Spanish speakers who can help make for a better patient experience for that population and hopefully lead to better outcomes. It is unfortunate and striking how badly that population has been affected, and something has to be done. I'm glad that MGH has stepped up to help.

Q. Have you offered to serve in the COVID-19 wards again should the need arise?

A. I am more than happy to go back and do it again, now that I've done it once and have the experience. I've let people know that I'm willing to do it again, especially since we are anticipating a surge happening in the next two weeks in the Boston area. This is the perfect illustration of the fact that radiologists are physicians, first and foremost. Whenever we're called upon, we can serve in these roles and serve our patients. At the end of the day, patients come first.

Q. How will this experience inform your traditional IR work going forward?

A. This has definitely been a formative experience for me. It has changed my perspective about our role in healthcare delivery as radiologists and as interventional radiologists. In IR and all of radiology, the push right now is to become more clinical and more patient centered, and this experience helped reinforce my thoughts about the importance of patient-focused care. Honestly, I think this experience has set me up to be a better clinician moving forward and to be a lot more patient centered. As I was ordering X-rays on my patients in the middle of the night and reading them, it was really nice to be able to put things in the clinical context when I was both the radiologist and the clinician. There is a lot of value in having radiologists being more integrated into care delivery to provide recommendations that are more relevant to the clinical context. I'm going to integrate a lot of what I learned during this experience back into my IR clinical experience, and it will inform how I care for patients moving forward.

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