On Call: 24 Hours in the Life of a Resident

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Introduction

"On Call: 24 Hours in the Life of a Resident" was published in *Dartmouth Medicine*, A Magazine for Alumni and Friends of Dartmouth Medical School and Dartmouth-Hitchcock Medical Center, Fall 2005. Patrick Saine "shadowed" a resident with his camera, resulting in the edited article republished here.

The Story

Medical education is far from over when students complete their M.D.'s. They spend the next several years, the length of time depending on the specialty, as residents at teaching hospitals or academic medical centers. Residents are both learners and providers of care, training and working under the supervision of experienced physicians. As their residency progresses, the new doctors become more experienced themselves and require less direct supervision.

It used to be that residents worked 100 hours a week or more. They still work long hours, but since 2003 residents nationwide have been limited to 80 hours a week—with one day out of seven free, a minimum of 10 hours off between shifts, and a maximum of six hours post-call to complete and hand off their work. Residents can be on call no more often than every three days; during on-call periods, they sleep (when they can) in the hospital so that they are available at any hour of the day or night when emergencies arise.

Dr. Hilary Ryder, the resident featured in this photo-essay, received her M.D. from Yale in 2004. Dr. Ryder arrived at Dartmouth in July 2004 as a first-year resident, or intern, in internal medicine. Residents typically do four-week rotations in various areas within their specialty. Several teams of physicians provide care to hospitalized patients, and each team is led by a second-year resident. Dr. Ryder heads the "red team," One of Hillary's 24 hour on-call stints on this rotation began at 7:30 on a Monday morning in August.

Hilary Ryder is a second-year resident in internal medicine at Dartmouth-Hitchcock. That means, on most rotations, spending every fourth day on call meaning at least 24 hours of nearly nonstop activity.

Photographer Notes

I faced numerous challenges as I transitioned from making clinical images to photographing the clinical setting. My problem solving approach was to combine ophthalmic photography techniques with general photographic techniques. Careful framing, exposure at the decisive moment, and the patient management and story telling skills of fundus photography and fluorescein angiography were mixed with general photography's lens, camera angle and aperture options. The equipment used was an APS sized digital SLR (Canon D20). An 11-22mm wide-angle zoom lens provided appropriate coverage for the close clinical settings.

The internal publication I worked with, *Dartmouth Medicine* magazine, was keenly aware of the delicate balance between maintaining patient confidentiality and documenting a true-to-life, unrehearsed story. Obtaining patient permission was essential. It was acquired first verbally by the health care team, and then in writing by a *Dartmouth Medicine* representative (either Laura Carter or myself). My photojournalistic challenge was to capture spontaneous emotional moments despite a formalized permission form signing event. Other patient-based concerns included avoiding embarrassing moments while observing exams and framing images. The instant review of the digital SLR allowed me to share pictures with my subjects, thereby building trust as they confirmed that my images were tasteful and non-threatening.

Shooting this story challenged my stamina. I started photographing this story at 7:30 am, slept (more correctly: "napped") for 2 short hours from 3:00 to 5:00 am, then continued to photograph until 8:00am the next morning. This made for a long day, even compared to an ophthalmic photographer's usually hectic clinic schedule. Our original shooting script called for a single publishable image each hour. However, as I witnessed the constantly changing clinic moments and the extremely full resident workload, I decided that it would be better to shoot for variety and edit later. This decision led to a more varied selection and a more creative layout. At the same time, I had to remain keenly aware of the images I had exposed to avoid repeating specific compositional ideas, while simultaneously keeping a common visual thread running throughout the story.

MON 7:46AM

Dr. Ryder starts her day at morning report. Dr. Matt Walton, chief resident, runs the meeting, handing out a sheet that describes two complex cases. The other residents discuss the cases and ask questions.

MON 9:45AM

Drs. Ryder and D'Souza examine a patient. The intern "pre-rounds" in the early morning to gather pertinent data on the unit's patients, such as changes since the previous day's rounds in their physical condition, medications, or lab results. *"She reports on everything that's happened in the last 24 hours,"* Dr. Ryder explains. *"Then we all go in and examine the patient together."*

MON 10:23AM

Drs. Laquer and Brooks pay close attention as Dr. Ryder talks with another patient and his wife. *"We walk in, we talk to the patient and we examine him,"* Hillary says. Morning rounds also include reviewing that day's treatment plan with the patient and answering any questions the patient may have.

MON 10:45AM

Residents are almost constantly on the move, so they take advantage of every chance encounter as they go about their work. *"When we run into people who we share patients with, we just stop and talk about them."*



MON 11:15AM

The red team meets daily from 11:00 a.m. to noon for teaching rounds, often lectures on topics relevant to patients the team is caring for, but sometimes visits to a patient's bedside to learn the finer points of their physical diagnosis.

MON 12:08PM

Dr. Ryder has just been paged. Interns usually get paged by nurses. But "*on-call residents are either paged by their intern or by the ED (Emergency Department), their attending, or occasionally nurses*," Hillary explains. Or, she adds, "*M.D.'s will page the on-call resident with new admissions.*"

MON 2:08PM

Drs. D'Souza, Ryder, and Laquer are in the residents' team room looking at a CT scan of a patient's chest. Hillary is concerned because the scan shows a lot of fluid. At 2:20, Dr. Laquer returns with the news that the scan shows no clots, but that large bilateral pleural effusions (significant accumulation of fluid between the rib cage and the lungs) on both sides of the chest are evident.



MON 3:47PM

Drs. Pastel, Palmeri, D'Souza, and Laquer race to a code-blue emergency; an unconscious person somewhere in the DHMC complex. It turns out that an elderly outpatient had gone into cardiac arrest during a routine diagnostic procedure.

MON 3:54PM

Dr. Ryder directs the determined efforts to revive the patient. The code blue team administers CPR and medications, as well as shocks from a defibrillator.

MON 4:16PM

The patient hasn't responded, so a nurse has contacted the woman's next-of-kin on the phone; then Hillary gets on the line. "*I'm the on-call physician*," she tells the patient's son. "*I'm calling about your mother.*" Hillary explains what has happened and says, gently, "*The chances of her coming back after almost half an hour are very unlikely.*" Hillary then hands the phone back to the nurse and returns to the patient. "*Stop compressions. Charge. Are we clear? Let's shock.*" Soon the woman's heart goes into ventricular fibrillation, a series of rapid, irregular contractions and eventually it stops beating completely.

MON 4:35PM

Drs. Pastel and Ryder are completing paperwork. Dr. Pastel was the "charter" during the code, Hillary explains. "*She charted when medications were given and all the other procedures when they were done*". These included when compressions started and stopped, when the ECHO machine was run, when shocks were administered and so on. "*At the end, all the residents have to sign off*," she adds. Drs. Ryder and Pastel and a few other members of the code blue team also stood quietly beside the patient during a brief memorial service conducted by a DHMC chaplain.



MON 5:29PM

Dr. Ryder has almost reached the ED when she spies one of her patients waiting on a gurney in a hallway. *"Hi,"* she says as she recognizes him, calling him by name and asking how he's doing. He seems glad to see her. He had been brought down from the inpatient unit for a CT scan, which has been taken and now he's waiting for a member of the transportation staff to wheel him back up to his room.

MON 5:40PM

Dr. Ryder and emergency department nurse Mary Trono examine one of the patients who is being admitted to the hospital this evening through the ED. As part of the admissions process, Hillary will ask the patient about her medical history and current condition along with a physical examination.

MON 5:46PM

As Hillary examines the patient, she checks for lymphadenopathy (swollen lymph nodes), which are often associated with inflammation or infection.



MON 6:08PM

By now several new patients have been admitted to Hillary's unit and she's at a computer in the ED writing their admission notes.

MON 7:36PM

The red team got to the DHMC cafeteria for dinner just before it closed at 7:30 p.m. Dr. Laquer is now enjoying his meal while Hillary answers yet another page. *"I've been called about a few patients that we need to admit,"* she says.

MON 8:03PM

After dinner, Hillary heads back upstairs. She is now in the Post-Anesthesia Care Unit (PACU), writing up orders for a patient who is about to be transferred from the PACU to her unit on One East. *"This is a patient who'd had a big heart attack,"* explains Hillary, *"He'd been too surgically unstable to go to cardiac catheterization, so they had just stabilized him and I was taking care of him overnight to prepare him for the catheterization in the morning."*



MON 9:15PM

Dr. Ryder is talking with Matt Laquer, the medical student on her team, reviewing orders for the patients that he has been helping to care for. Hillary makes sure that her medical students and interns have a chance to work on interesting cases, meaning cases on which they are most likely to learn something. *"I want you to see as much as possible,"* she told Matt earlier in the day.

MON 10:03PM

Dr. Ryder has stopped in a hallway to comfort the patient who is being transferred to her unit from the PACU. *"I wanted this patient to stay in ICU (intensive care unit),"* says Hillary.

TUES 2:11AM

Drs. Laquer and Ryder are still hard at work, writing patient notes. Notes written by medical students don't count as the only daily progress notes for a patient; the intern must read, correct, and cosign the notes. At the end of each day, the resident sits down with the entire team to review what's been done and make a preliminary plan for the next day.



TUES 2:47AM

Dr Ryder is finally about to get a little sleep. On her way to bed, she stopped in the central telemetry unit to check some cardiac information on one of her patients. Satisfied that her patient is okay, she heads for her dorm-like call room, slips off her white coat (but keeps her scrubs on), and climbs into bed. She'll be paged if she's needed.

TUES 5:03AM

Just over two hours later, the code-blue pager has summoned Hillary and her team to the Cardiac Care Unit. After reviving the patient, the team didn't leave straight away, since *"we thought the patient was going to recode, which he did,"* says Ryder. They revived him again.

TUES 6:46AM

Drs. Laquer, D'Souza, and Ryder are conferring at the work table behind a nursing station when a nurse delivers some distressing news about one of their patients. He had become agitated and ripped the intravenous tubes out of his arm before anyone was able to stop him. Hillary heads right down to the patient's room and decides how to handle the situation. The team has already begun making rounds on their other patients.

TUES 7:46AM

It's time for morning report again. Hillary hands over her code blue pager. After morning report ends, Hillary continues checking on her patients passing on relevant information to todays' on call team. Hillary finally heads for home after 30 hours in the hospital, around 1:00 p.m.