Pathology hospitalists in place at UMich

Anne Paxton

April 2022—Asked why he robs only trains, Richard Farnsworth's Gentleman Bandit in *The Grey Fox* answers with a truth universally acknowledged: "A professional always specializes." In line with that conviction, there's little debate on the value of specialization in medicine—or, as it has evolved more recently, the extraordinary value of subspecialization in anatomic pathology. Many consider subspecialist signout to be the gold standard of review and diagnosis in pathology. Because they are dealing with a small number of pathologies, "the care that subspecialists can provide is phenomenal," says L. Priya Kunju, MD, director of surgical pathology at University of Michigan Health.

But in hospital practice at academic institutions like the University of Michigan, when it comes to time-sensitive frozen sections, subspecialization can have a downside. The need to return a diagnosis of a frozen section within 20 minutes while a surgery is in progress may require that an array of different subspecialists be close at hand, near the operating room. That may not be feasible as laboratories consolidate and pathology departments increasingly move away from the main hospital, Dr. Kunju says.

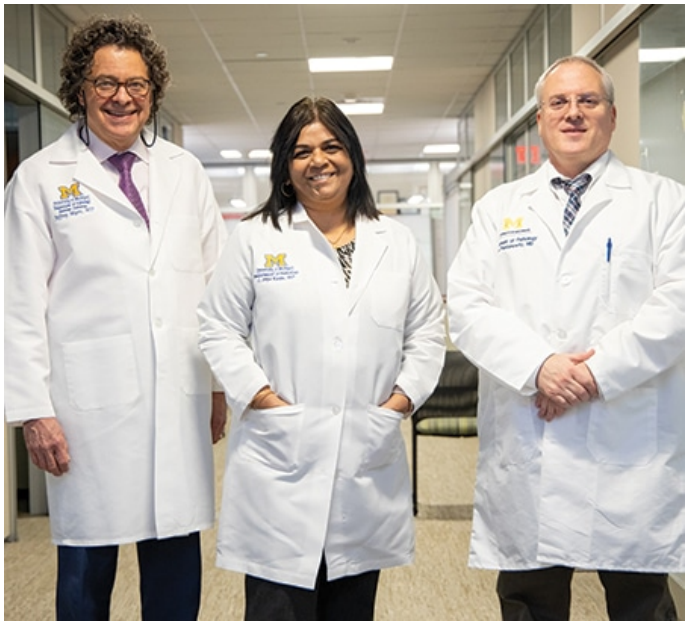
Jeffrey Myers, MD, A. James French professor of diagnostic pathology and vice chair of clinical affairs and quality in the Michigan Department of Pathology, says pathologists have less and less comfort with doing frozen sections outside their area of subspecialty interest. Virtual tools are of limited help in closing the gap, the laboratory has found. "That makes it very, very difficult to staff for this work, even if you're at the hospital. And it's even harder if you're not," Dr. Myers says.

In the subspecialty-based culture of the hospital, could a different practice model be required? About two years ago, the department's Division of Anatomic Pathology started to explore that question by (through a certain irony) developing a new subspecialty: anatomic pathology hospitalists. With the hiring nine months ago of their first two AP hospitalists, department leaders believe they may have found the critical missing piece in their workforce—and filled it. In the process, they hope they may be pioneering a far greater role for pathology in clinical practice.

University of Michigan Health, known as Michigan Medicine, confronted a dilemma in 2018 when it consolidated most of its laboratory services in a central lab in the North Campus Research Complex (NCRC), located three miles from the main hospital, moving its non-stat clinical laboratories out of the hospital along with most of the clinical faculty offices. Previously, the pathologists were within a short walk of the main hospital's operating room, says David Chapel, MD, assistant professor of pathology and one of the division's new AP hospitalists. "So whoever was covering the frozen section service would just go down, do the frozen, then return to their office and keep signing out cases."

Moving the laboratory was a business decision to consolidate and streamline pathology services while also expanding pathology's footprint. But there had been practice efficiencies in the pre-NCRC setup at the hospital that were lost, Dr. Kunju says. The frozen sections, she explains, are almost like a general surgical department. "You need to know enough over a wide breadth of pathology" to handle the work. "In the hospital, if you had a complex case and you needed help, the subspecialists were right there close by." But when departments move away from the main hospital, those efficiencies can disappear.

"Faculty, more and more—and this is not limited to Michigan but is across the board—tend to limit their participation by subspecialty interest," Dr. Kunju says. "There is almost a potential sense of lack of competence to serve the needs of general surgical pathology. Because you're so much of an expert in one field that you feel you cannot optimally serve the patient's needs."



Dr. Jeffrey Myers (from left), Dr. L. Priya Kunju, and Dr. Liron Pantanowitz. “We were creative in developing a job description for an AP hospitalist,” Dr. Pantanowitz says, “because we wanted to fashion a new position that would not just be viewed as a stepping-stone to get into our department, but as a formal career pathway.” [Photo by: Camren Clouthier]

The subspecialization trend is affecting more than the old hospital practice models, Dr. Kunju says, explaining that she witnesses the same change in private practices. “You can see that the small private practice groups are deteriorating. It’s very hard for a three-person pathology group to handle everything because subspecialization has made things so complicated. Right now a pathologist may need to look at heart biopsies, kidney biopsies, and GI biopsies and the surgeon wants the level of expertise that an academic pathologist provides. Private practices are now getting more like group practices.”

Dr. Myers agrees that small private practice groups are on the decline and large group practices are becoming the norm. “I’ve heard from many practices that as a consequence of subspecialization, hospital-based work that previously was done by one or two people is now done by 10 or 15 people.”

At the hospital, Dr. Kunju sometimes tells junior faculty who are starting frozen sections: “You don’t have to be a hero in the frozen section. You need a more general surgical pathology mindset. Sometimes, realistically, you just have to answer the question the surgeon wants, and you don’t need to give a detailed explanation. Is the margin positive? Do I think it is cancer? Do they need to take more tissue? Do they need to do extra surgery?”

At Michigan Medicine, each pathologist has their subspecialty research interest. “We are an academic institution and we don’t have a generalized surgical pathology model for signing out cases,” Dr. Kunju says. “So more and more pathologists started saying, ‘I’m not comfortable doing a frozen on pancreas because I don’t sign those cases out.’ Many have said, ‘I want the experts to do that.’”

“So we started saying, okay, we are essentially saying frozen sections are like a service. Maybe we have to think of the hospitalist as a subspecialty.”

In hospital work, Dr. Myers says, “we tend to bring way too much expertise to a substantial subset of cases at

great expense." From his perspective, Michigan's anatomic pathology hospitalist experiment is an opportunity to think differently about that disproportion.

After the laboratory's move to the North Campus Research Complex, there were benefits to having most of the pathologists under one roof in a spacious laboratory, says Liron Pantanowitz, MD, MHA, director of the Division of Anatomic Pathology. But back at the hospital, there was a scramble to adjust. "We had to use many subspecialized faculty, whom we called our frozen section SWAT team, to share in covering the frozen section service."

Faculty morale eroded after the move, Dr. Myers says, largely due to frozen sections, the "800-pound gorilla" when it comes to hospital service provided by anatomic pathologists.

As pathologists have retired and those in subspecialty roles have increased in number, "there's less and less comfort with doing frozen sections outside your area of subspecialty interest, which is very, very difficult."

"In a subspecialized academic practice, people don't feel good about having to spend the day elsewhere to do frozen sections. And our performance in those roles deteriorated, at least in terms of turnaround. I thought it was time to ask how might we do this differently. And I thought that the AP hospitalist experiment was the right experiment to run."

Drs. David and Ellen Chapel had just completed their AP fellowships at Brigham and Women's Hospital when they saw the ad last year for two AP hospitalists. "The idea," Ellen says, "was that by having dedicated hospitalists, we would essentially provide the face for the department to the different technical teams. And that is already starting to take root." [Photo by: Camren Clouthier]

Other factors also came into play. It was possible, Dr. Myers thought, that by having a critical mass of people who are focused on hospital-based pathology work, then out of that could come opportunities for research and new educational models. "I also thought it might help keep us present in the hospital in ways that matter, helping us build relationships that can influence how resources are allocated."

"I think we've learned from radiology," Dr. Myers adds, "that if you disappear by virtue of digital solutions, people

forget the value you bring to the care they provide." He also feels pathology may have lagged behind other professions in figuring out how to deploy its subspecialist experts.

The AP division had evidence-based data to confirm that the frozen section arrangement in place was costly and unnecessarily burdensome to the faculty. "Looking at the number of pathology FTEs required to cover the hospital frozen section service demonstrated just how taxing this was on our faculty," Dr. Pantanowitz says. "Hiring pathologist assistants wouldn't solve this problem."

"The complexity of our cases and the high volume of our frozen section service demanded having a pathologist on site at the hospital. There was a gap in our workforce and we needed someone who would be on the service all the time," he says. So although they couldn't find another hospital in the world to consult about how an AP hospitalist subspecialty could be launched, the AP division came up with a game plan to do so and proceeded to execute it.

The hospitalist role filled by internists developed years ago because the growing complexity of health care was harming continuity of care, Dr. Pantanowitz says. "Hospitals needed an internist who was dedicated to the patient from beginning to end during the inpatient stay."

Influenced by that model, the AP division saw AP hospitalists as a creative solution to deal with lab consolidation and relocation, he explains. "The move made it difficult to provide daily AP services that occur in the hospital, most notably covering frozen sections, when pathologists are now located off campus. Remotely managing this via telepathology, in our experience, is inadequate for a high-volume intraoperative consultation practice like ours where we can do over 100 frozen sections a day."

To Dr. Myers' knowledge, the Michigan pathology department is the first in the country to develop an AP hospitalist subspecialty. "Nobody that I know of has looked at whether you could train pathologists whose subspecialty was intraoperative care across organ-based domains to the competencies required for 90 to 95 percent of the work and see if they could function at a level that competes with their subspecialized colleagues," he says.

So there were no preexisting help-wanted templates to draw upon, and composing an advertisement for the positions required a balancing act, Dr. Pantanowitz says. "We were creative in developing a job description for an AP hospitalist, because we wanted to fashion a new position that would not just be viewed as a stepping-stone to get into our department, but as a formal career pathway. We wanted them to achieve personal success, but also to academically promote this field."

When Ellen Chapel, MD, and her spouse, Dr. David Chapel, saw the job opening the department advertised for two AP hospitalists in 2021, they had just completed their AP fellowships at Brigham and Women's Hospital in Boston—Ellen subspecializing in breast and David in GYN. One thing that drew both of them to the AP hospitalist jobs was the prospect for interaction with other hospital faculty. These were appealing positions because of the intense focus on clinical collaboration, says Ellen, assistant professor of pathology. "We love working with surgeons and clinicians. For both of us it is the most rewarding part of our jobs. We want that to be a huge part of our careers."

The two Drs. Chapel were hired to fill the new roles, and the frozen section work coexists with Ellen's own clinical work as a breast pathologist and David's work as a gynecologic pathologist. Part of their job, David says, is not to be at the research complex a lot of time "because we need to be physically in the operating room to do our intraoperative consultations." David estimates that he works at the hospital 50 to 60 percent of the time.

"A lot of pathologists just cover the frozen service," Ellen says. "We definitely do more than that. We're scheduled more often for intraoperative consultation, and we are invested in improving the frozen section service." For example, the AP division has a digital strategy allowing pathologists to scan slides remotely, which has been helpful for frozen sections in certain situations, she notes. "We're pioneering the use of digital tools in routine intraoperative consultation, which aren't commonly used at many institutions."

In addition, "We're a constant face for the surgeons to see and, in that sense, we serve in a liaison role."

At the research complex, the two hospitalists are about an eight-minute commute from the hospital, so their day might include shuttles back and forth. “But I think we can pilot a way to be a liaison and a chief communicator with our surgical colleagues,” Ellen says. “Having someone that the surgeons can see as a go-to person to say, ‘I’m having this issue with a case,’ or ‘There’s something I’m interested in bringing on,’ I think, will be sought out by other hospitals.”

The collegiality pathologists had with surgeons in many cases, because of proximity, went away when the laboratory moved off site, and Ellen sees their jobs as a way of restoring that collegiality. “The idea was that by having dedicated hospitalists, we would essentially provide the face for the department to the different technical teams. And that is already starting to take root. We’re getting to know the surgeons quite well, and we better anticipate their specific questions, their specific intraoperative needs.”

Frozen sections in most settings are covered by a mix of pathologists from varying training backgrounds, which she applauds. “But other places probably don’t have someone who takes ownership of the frozen section service and is interested in improving it.” Providing a diagnosis may be enough for most pathologists who participate in frozen sections, she notes. But being involved in process improvement and being invested in a service allows pathologists to improve their diagnostic accuracy and enables surgeons to make better clinical and surgical decisions. “And thinking of the AP hospitalist position as almost like a subspecialty allows us to do that.”

Avoiding fatigue in these settings—or, as Ellen puts it, “maintaining your optical mileage”—can be a challenge. “With frozen section it can be incredibly busy. You could get 100 cases a day or one case, or no cases. So you have to stay clinically active and mentally sharp” to match the pace.

David doubts anyone has used the word “hospitalist” in conjunction with pathology before, and he doesn’t want the AP hospitalist title to carry an implication of it not being a serious academic endeavor. “Part of our job is going to be to convince the pathology community that this is a legitimate need, it has legitimate academic applicability, we can do meaningful research from this vantage point, and it is also relevant and logistically feasible,” he says. (In fact, Dr. Kunju reports, the Drs. Chapel have already written four chapters for a book on frozen sections during their months at Michigan.)

The altered circumstances stemming from the pandemic did have an impact on the AP hospitalists’ roles, David admits. “The pandemic has decreased our frozen section volumes somewhat because the hospital has implemented limitations on the number and type of surgeries that can happen.” There were also fewer opportunities to get together with colleagues, “so I haven’t met all of the other pathologists or residents,” he says. That’s expected to improve as the pandemic eases, which he welcomes: “There’s no substitute for being there in person interacting with colleagues under the microscope.”

Having expert, energetic, and enthusiastic AP hospitalists on site has had a remarkable impact, Dr. Pantanowitz says. The two Drs. Chapel “have become a constant and welcome presence to our surgeons. Their days are action-packed, and like an ‘action potential,’ they are always available and ready to kick into action when needed.” David and Ellen are also helping to put a different face on pathology. “When we see them walking around they are almost always in scrubs.”

Dr. Pantanowitz himself is enthusiastic about how successfully the hospitalist experiment is proceeding. “It puts the pathologist into clinical practice, where they interact with patients or their physicians every day.”

As their new AP hospitalist practice model evolves, Dr. Myers believes eventually the hospitalists will be based entirely in the hospital rather than at the central laboratory. “So that’s where they would arrive in the morning and where they leave in the evening. And those who are now traveling back and forth to meet needs in the hospital won’t have to travel.”

More important, in his view, will be the hospitalists’ impact on pathologists’ relationship with clinicians. His first time in the surgeons’ locker room at a University of Michigan hospital was at a time when pathologists who worked in the frozen section lab didn’t wear scrubs. He remembers a head and neck surgeon who stopped and said

approvingly, “Wow, we’re finally seeing a pathologist in the locker room.” “Those are simple, powerful things that kind of change the way we’re perceived and how we’re valued as a member of the team,” Dr. Myers says.

“We’ve gained from having a hospitalist there with constant presence,” says Dr. Pantanowitz. Operationally, with the AP hospitalists, “we now have a much more streamlined working team in the hospital, a team that is not chopped up,” he says. The other pathologists “also now start to appreciate the workflow much better so they can easily identify where the trains are going in the wrong direction. And that’s why the AP hospitalists have been part of our QA program.”

He compares the AP hospitalists to emergency department physicians. “They have to hustle with the frozen sections because there’s a patient on the table under anesthesia. So the hospitalists are kind of like ER doctors for pathology, out there on the frontline.” Like ER doctors, hospitalists won’t have continuity in their cases, he says. “They are only there for a short component of the life of a patient specimen, which is at the time of an intraoperative consultation. They come in, make an assessment, and then step away from the case and it ultimately gets signed out by someone else. So it’s kind of the same as an ER doctor when someone comes in with chest pain. You address the chest pain and then you move them along.”

While the AP hospitalist program has not yet been subject to a long-term evaluation, “the reactions inside the hospital are all positive,” Dr. Pantanowitz says. “We do know that they have improved satisfaction from surgeons, who are happy to have someone around all the time to help solve problems expected and unexpected. And we’ve had a lot of satisfaction from the faculty, who now don’t have to do this rotation all the time. Our SWAT team is happy they don’t get pulled away to do the frozen section work.” Beyond the Michigan Medicine system, he adds, “We haven’t broadcast outside our institution that we have AP hospitalists, but the few folks who have heard about this were amazed and gave us their approval.”

Dr. Pantanowitz says the hospitalists’ presence has made even crises easier to handle. “We’ve had several unexpected problems. For example, late last year the frozen section room flooded and we couldn’t do frozen sections there. We had to move the operation to an adjacent hospital, and that was a huge operation to coordinate with the surgeons and facilities, diverting the frozen sections to make sure no patient was compromised.” Without the AP hospitalists they would have struggled. But as it turned out, “the surgeons didn’t even notice the two weeks we took to repair the room.”

Similarly, during the pandemic, when staffing the autopsy and forensic services was difficult at times, one of the hospitalists was able to step in.

There are a few risks that another pathology department might wish to consider if contemplating the addition of AP hospitalists to the staff. “We are learning that harmonizing this practice model with a subspecialty-based culture has its challenges, and that’s a lesson in change management,” Dr. Myers says. “I think also identifying meaningful opportunities for professional development that may be attached differently to our traditional ways of thinking about advances in organ-based subspecialties is a challenge. And I don’t know that anybody has the answer to that just yet.”

As other AP departments or divisions face similar potentially disruptive moves away from hospitals, the pathology leaders at Michigan hope their hospitalist experience will provide a template that others can employ to keep pathology an integral part of clinical practice in the hospital.

“Pathologists are important for inpatient hospital-based care. There’s a trend to move pathologists outside the hospital, which will leave this gap in the workforce,” Dr. Pantanowitz says. He’d like others to know that with AP hospitalists, “We have a creative solution. We believe it is an actual career pathway.”

He envisions the department one day creating a fellowship to train future AP hospitalists. “We would like people to consider this as a future new area of subspecialization. We believe it is a major contribution to the field of pathology that can benefit any department having this problem. And just as it did in internal medicine, the AP hospitalist program will be taken seriously and recognized for the value it brings to the field.”

There is a risk, Dr. Myers notes, of someone saying that the Michigan approach is an anachronism, in the belief that with digital solutions all of this work will be done remotely. But that increasingly remote practice through telepathology is not the way to go, he says, and he warns that pathology needs to avoid what has happened in radiology.

“The way I’d like to think about this experiment is eventually it would address all kinds of hospital-based opportunities in our discipline, on the clinical pathology as well as the AP side. So that maybe a pathology-trained hospitalist would be comfortable with autopsies and with rapid on-site evaluation for cytology specimens and frozen sections, and maybe with emergent needs in the blood bank. To me, that’s the kind of scope and scale of the challenge and the opportunity.”

Dr. David Chapel considers the AP hospitalist job a way for the pathology profession to shape its future in clinical practice. “The reality,” he says, “is that given spatial constraints and with the increasing ease of applications of telepathology or digital pathology, it’s almost inevitable that an increasing number of academic institutions will have their pathology facilities off site to some degree or another. And that raises the question of how pathology retains an active role in hospital clinical affairs, making that invaluable personal connection with our surgical and clinical colleagues.”

“I was excited about the opportunity to essentially blaze that trail.”

Anne Paxton is a writer and attorney in Seattle.