Newsbytes, 9/17

Raymond D. Aller, MD, and Hal Weiner

Why so few women in pathology informatics?

Alexis Carter, MD, did not realize she was a rare bird when, as a resident more than a decade ago, she acted on her penchant for health informatics. Dr. Carter had become interested in the field while working under a clinical chemist who developed computer programs that notified him when instruments weren't performing as expected or when a lab result required further investigation. This led her to enroll in three months of informatics training during her fifth year of pathology residency. Later, her molecular pathology fellowship director allowed her to take a second fellowship year to work with the molecular informatics division.

Dr. Carter

Fast-forward to the 2015 Pathology Informatics Summit, when Dr. Carter took stock of the approximately 300 attendees of one session and realized only seven of them were women. "[That conference] was my wake-up call," says Dr. Carter, a physician informaticist in pathology and laboratory medicine at Children's Healthcare of Atlanta. For her, the implications were clear—women are underrepresented in informatics, despite the preponderance of women entering pathology.

"Fifty-four percent of incoming pathology residents and over 30 percent of [pathology] faculty are women," she adds. "If you look at the incoming residents, the proportion of faculty that are women is only going to rise."

Armed with her observations from the 2015 summit, Dr. Carter began compiling data on female representation in clinical informatics, which she and six female pathologist colleagues presented as a poster at the Pathology Informatics Summit in May. The poster, titled

"An Opportunity for Pathology to Trailblaze: Bridging the Gender Gap in Clinical Informatics," compared percentages of female physicians overall to percentages of female physicians in pathology and clinical informatics. The data showed strong female representation in the field of pathology and a clear gender gap in clinical informatics.

For example, between 2013 and 2015, 1,106 physicians of any specialty sat for the clinical informatics subspecialty board examination. Of those 1,106, only seven were female pathologists, a number lower than even

the number of female deans of academic medical schools, female pathology chairs, and female academic medicine department chairs.

This statistic is particularly alarming because clinical informatics plays such a central role in pathology and patient care, Dr. Carter says. In fact, according to her research, pathologists are three times as likely as other medical professionals to be clinical informaticians. “The real irony is in informatics we’re always complaining that not enough people understand what we do, yet we’re missing out on half our [potential] population,” she continues.

Adding to the conundrum is that there doesn’t seem to be a definitive explanation for the shortage of women in pathology informatics, Dr. Carter says. For example, although the clinical informatics subspecialty exam is fairly new—the American Board of Preventive Medicine and American Board of Pathology began offering certification for clinical informatics in 2013—Dr. Carter doesn’t see that as an explanation for the gender gap.

“Molecular pathology only became a board-certified subspecialty about 15 years ago, and although I don’t have numbers on this, from the outset it seemed to be closer to half-and-half gender-wise,” she says.

Neither does she believe sexism to be a major factor. “In pathology, I have only rarely experienced people treating me differently because I was female,” she notes. Still, when she mentors women trainees, she deliberately addresses the gender gap, in part to assess what’s preventing women from pursuing informatics.

“When I talk to women who are interested in informatics but not pursuing it as a career . . . I ask what the barriers are, and many feel intimidated by IT,” she says. She uses these opportunities to dispel trainees’ fears about informatics, pointing out that molecular pathology, for example, is also a highly technical and increasingly computer-based discipline.

“Any time you expose someone to a subject area, you’re giving them the ability to decide whether or not this is something they’re interested in,” she says. “That’s really a huge chunk of the game.”

Mary Edgerton, MD, PhD, a contributor to the Pathology Informatics Summit poster and associate professor of pathology at the University of Texas MD Anderson Cancer Center, agrees. She believes encouraging women to pursue math and science in the earlier stages of education would help draw more women into informatics. “What I think would be useful would be to go back . . . to the undergraduate level and encourage women who are thinking of going to med school to take a little more math and a little more computer science,” she says. “That truly positions you advantageously when seeking out informatics because you’re familiar and comfortable with the area.”

Requiring all residents to participate in an informatics rotation would also likely influence more female trainees to pursue informatics as a career, Dr. Carter says. While small residency programs may not have a clinical informaticist on faculty, those programs can use a CAP curriculum called Pathology Informatics Essentials for Residents, or PIER, to teach the basic foundations of CI.

Becoming comfortable with informatics, regardless of gender, is a goal of the pathology residency program at the Hofstra Northwell School of Medicine, Hempstead, NY, says James Crawford, MD, PhD, senior vice president and executive director of laboratory services. The program engages in a number of activities to promote gender equity and reduce disparities in the field, such as a mandatory clinical laboratory management rotation.

“Since informatics is part of the leadership and management of a pathology department and laboratory service line, this [rotation] is one mechanism through which all our pathology residents, regardless of gender and background, have the opportunity to see the power of pathology informatics,” he says.

Dr. Crawford, however, believes the work of promoting gender equity in informatics should occur on multiple fronts. In other words, informatics as a field of study should be promoted not only among women pathology residents but also among the laboratory workforce at large.

“Access to pathology informatics should be democratized,” he says. “Those who carry specific subspecialty

credentials, either through fellowship training, board certification, or both, should provide leadership in their local department to empower all consumers of pathology information, which is quite honestly the entire laboratory professional workforce."

To that end, he advocates encouraging women from a wide range of positions within laboratory science to attend and submit abstracts to conferences such as the Pathology Informatics Summit. "The bedrock [of the conference] is original, innovative projects," he says. "We should be inclusive with these projects across data scientists, pathology residents-in-training, faculty, management, and medical students."

At the 2016 Pathology Informatics Summit, Dr. Carter organized the inaugural Gathering of Women in Pathology Informatics, an informal gathering of female and male pathologists that provided a networking opportunity for women in informatics and a collegial atmosphere, particularly for female pathology trainees. This year, the group held a more formal, women-only dinner where they were able to discuss challenges as women in the field.
"Since having those meetings," says Dr. Carter, "I have been getting a number of requests from female residents to discuss careers in informatics, so it is my hope that this will have an impact on the gender gap."

Dr. Carter also attends a similar event, called WINE, or Women in Informatics Networking Event, which is held at the American Medical Informatics Association summits. The Healthcare Information and Management Systems Society too offers female-focused networking receptions, but neither association's events are geared specifically to female pathologists.

"I soundly reject the idea that somehow IT is wired into the Y chromosome," Dr. Carter told CAP TODAY, citing again the need for mentoring support and educational and networking opportunities. Reflecting back on her pathology residency and the hours spent working in the clinical chemistry lab, Dr. Carter adds, "I doubt I would have pursued informatics if I hadn't had these opportunities. Having somebody in my residency program who was willing to teach me . . . was critical." *—Charna Albert*

Allscripts to expand portfolio with McKesson IT purchase

Allscripts and McKesson have entered into a definitive agreement under which Allscripts will acquire McKesson's hospital and health system information technology business.
With the purchase of McKesson Enterprise Information Solutions, Allscripts will own McKesson's McKesson Lab laboratory information system and Paragon EHR system, as well as its revenue cycle, lab analytics, blood bank, and content-management solutions.

Allscripts will offer Paragon as an integrated EHR and revenue cycle management solution for the small hospital market segment while continuing to market the Allscripts Sunrise EHR to larger institutions. Bringing Paragon under Allscripts' umbrella will double Allscripts' EHR hospital client count in the United States, the company reported in a press release.

The transaction is expected to close during the fourth quarter of this year.
***Allscripts**, 800-334-8534*

Sunquest debuts molecular LIMS and genetics software

Sunquest has announced the general availability of Sunquest Mitogen, a scalable molecular laboratory information management system and genetic analysis software suite that streamlines data and processes across wet and dry labs.

The hosted, cloud-based platform is designed for complex molecular diagnostic lab workflows and processes. It offers extensive auditing capabilities and sample tracking through every step and transfer, providing users with the ability to view the sample path by process step, user, or time frame. The modular solution also provides integrated

genetic variant analytics and reporting, with built-in templates, automated filters, and user-configured logic, and can generate full-featured and editable reports in minutes.

Mitogen interfaces with EMR systems and other clinical software and instrumentation.
***Sunquest Information Systems**, 877-239-6337*

Haemonetics plasmapheresis system attains FDA clearance

Haemonetics has received FDA 510(k) clearance for its NexSys PCS plasmapheresis system.

The system's open architecture design facilitates bidirectional connectivity to donor-management systems, allowing automated collection procedure programming and automated end-of-procedure documentation.
***Haemonetics**, 800-225-5242*

[hr]

Dr. Aller teaches informatics in the Department of Pathology, University of Southern California, Los Angeles. He can be reached at raller@usc.edu*. Hal Weiner is president of Weiner Consulting Services, LLC, Eugene, Ore. He can be reached at* hal@weinerconsulting.com*.*