I recently searched in my kitchen drawer for a spatula. The drawer is a jumble of wooden spoons, potato mashers, hand-crank mixers, corkscrews, and other devices I use from time to time to open jars, flip burgers, or prepare dinner. As I searched, I knew the spatula was right before my eyes, but I couldn’t find it. That is, I literally couldn’t see it until I called up the image of a spatula in my head: black handle, bent metal shaft, worn slotted plastic working end. Once I did, I immediately “saw” the spatula that had been right in front of me the whole time. Of course, my eyes could physically see the image of the spatula from the moment I opened the drawer, but my mind could not recognize it until I recalled what it was supposed to look like in the jumble of utensils.

The phrase that comes to mind to describe this kind of experience is, “believing is seeing.” Kenneth Moritsugu, MD, MPH, former acting surgeon general of the United States, has quoted an ancient Chinese proverb that says it this way:

“Nine tenths of what you see is behind your eyes.” I interpret this to mean that we can recognize those things we are prepared to recognize by culture, training, or practice.

Of course, it will come as no news to readers of this journal that this principle holds true in scientific research as well as in the rest of life. Bias, conscious or not, is ubiquitous in research. Even with the best of intentions and methodological controls, scientists risk seeing what they are prepared to see. In an area as subjective, complex, and politicized as medical education, this principle should give us particular cause for care as we interpret data that describe our efforts and their effects. Our preparation and background, as well as considerable emotional and financial investment in our particular view of the world, surely can influence, if not determine, what we “see.”

The article in this issue by Bahn and colleagues presents an example of the kind of medical education research where the eye of the beholder could influence interpretation of results. Bahn’s paper reports a straightforward and potentially useful comparison of the learning experiences of third-year medical students completing 4-week family medicine and internal medicine components of an ambulatory clerkship, as measured by patient encounter logs. The authors state frankly that their working hypothesis was “...data derived from the patient encounter logging procedures would not differ markedly between two primary care disciplines.” And, despite pointing out that they found “significant differences in patient encounters,” the authors conclude that “The study suggests that community-based clinical rotations in family medicine and internal medicine when viewed side by side in the context of a single clerkship are very comparable...The results were generally consistent with our working hypothesis.”

I highlight this apparent contradiction because the conclusion could have significant effect on the training of medical students. The casual reader (say, a medical school dean) might conclude that if family medicine and internal medicine experiences “are very comparable,” this might provide room to free up valuable medical school curriculum time by eliminating one of these clerkships. But, are they really so comparable? The answer lies in a closer look at the data, with eyes prepared to see a different pattern.

Bahn and colleagues collected data from student encounter logs that recorded patient demographics, diagnoses, and level of student involvement in care. This is a fairly standard way to describe student experiences in ambulatory clerkships. In this case, however, the authors made some key decisions that...
my eye, the difference between student involvement in physical examinations is subtle, while the difference in patient mix for preventive services is substantial.

There is a more important issue in this study’s methodology that should influence our interpretation of its results. I would suggest that any conclusion about the study results is influenced by the way the authors asked their question. They set out defining, a priori, students’ experiences in the two specialties by data about patient diagnoses. Perhaps this reflects the world view of the discipline of internal medicine, in which diagnosis and treatment are often the major focus of discussion. However, family physicians’ care of patients emphasizes far more than just diagnoses. It includes doctor-patient relationships, health promotion, comprehensiveness of care, and care in a community context. Viewed this way, well-child care is a much more complex activity than simply taking a history, doing a physical examination, and labeling a diagnosis. It is an opportunity to build a relationship with a family, educate them to enhance health, often to provide care to other family members in the room, and to ensure that community resources are appropriately used by the family for their benefit. These may indeed be “subtle” to eyes tuned to see medical care as mainly diagnosis and treatment of disease, but they are anything but subtle in the care of patients in family practice.

Other authors have examined clerkships with instruments tuned to the richness of clinical primary care. Studies using encounter logs have described large differences in experiences between primary care specialties, varied severity of illness by clinical practice site, women’s health care, documentation of multiple diagnoses, differences in experience by gender of preceptor and student, and influence of different methodologies of encounter log data collection. Still other studies describe combined internal medicine and family medicine rotations, student time allocation in internal medicine clerkships, prevention activity of training practices, rural and urban community medicine experience as part of clinical rotations, and teaching about social issues such as prejudice.

In contrast, the study by Bahn and colleagues provides a preliminary look at student encounters that focused only on patient mix and diagnoses at one institution’s primary care clerkship in internal medicine and family medicine. While the study is notable because its results question the uniqueness of a family medicine clerkship, it will require much more nuanced measurement of the practice of primary care to detect the differences in what students learn from clerkships in these very different specialties.

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