

Value of the New General Radiologist in Private Practice

David C. Youmans, MD, Richard Duszak Jr, MD, Andrew B. Rosenkrantz, MD, MPA, Howard B. Fleishon, MD, MMM, Eric B. Friedberg, MD, Daniel A. Rodgers, MD

The reports of my death are greatly exaggerated.

—Mark Twain

In response to increased demand for subspecialized expertise, historically small private radiology groups have grown in both size and sophistication. As 98% of graduating residents now pursue fellowships [1], the term *general radiologist* has evolved from one describing radiologists without fellowship training [2] to those, fellowship trained or not, for whom no single subspecialty represents a majority of their billed work relative value units [3]. Although only 15% of radiologists are identified as generalists by their practice leaders, 55% of radiologists actually meet this objective and reproducible definition as “generalists” [3].

Despite the specialty’s evolution into this fellowship training paradigm, most radiologists continue to interpret substantial numbers of examinations outside their areas of additional training. Across age, gender, and practice size, the billed clinical work for approximately 85% of general radiologists is predominantly within two or more distinct subspecialty focus areas [4]. As such, it may actually be more accurate to define today’s general radiologist instead as a “multispecialty radiologist.” In fact, relatively few radiologists practice

exclusively within a specific subspecialty, with many subspecialists functioning to some degree as multispecialists [3].

Dedicated subspecialty radiologists have important roles to play working exclusively within their areas of fellowship training. Examples include academic radiologists and those practicing in “mega-group” environments with sufficient volume and work schedule flexibility. Advertising subspecialty reads may be perceived by some as a practice differentiator or even as a requirement in some markets. Nonetheless, there are strong arguments to be made not only for maintaining but for actively training multispecialty radiologists to ensure our specialty’s long-term viability.

Multispecialty radiologists cover a broad range of common examinations and lower complexity procedures efficiently and effectively, providing value at local sites of service, mirroring the existing practice of many fellowship-trained radiologists who already essentially function as multispecialty radiologists. Such coverage models are particularly important in many rural and other underserved areas where on-site coverage challenges limit patient access to high-quality radiologic services.

From a job performance perspective, multispecialty radiologists are

ideally suited to cover general emergency department, overnight, and a variety of routine imaging services in many existing practice environments. Although most teleradiology companies advertise dedicated subspecialized reading services, many actually provide most of their services via multispecialty radiologist models. One national teleradiology company, for example, reported that only a minority of emergent neuroradiologic studies were actually interpreted by dedicated neuroradiologists, with an internal quality assurance program demonstrating no difference in interpretive accuracy between subspecialized and nonspecialized radiologists [5]. Similarly, a recent report indicated that low-volume readers of neuroimaging and musculoskeletal MRI studies already read a substantial portion of such examinations [6]. A dedicated multispecialist self-identifying as responsible for reading examinations in several disciplines may perform that additional diagnostic function at least as well as highly subspecialized radiologists reading outside their areas of fellowship training and may more than offset perceived deficiencies of a traditionally defined “generalist.”

From a practice operational perspective, multispecialty radiologists provide necessary flexibility with

respect to on-site work slot scheduling at community and smaller hospitals and clinics that cannot be sustainably staffed by a wide array of on-site subspecialists. Some of these same challenges apply to corporate radiology practices, many private practices, and expanding academic practices. In the military setting, multispecialty radiologists are critical members of teams at smaller bases and posts, hospital ships, and many Veterans Affairs hospital sites [5]. In all of these scenarios, multispecialty radiologists are important workforce resources for radiology groups flexing and evolving to address changing practice needs. Of note, multispecialty radiologists are uniquely qualified to cover short-notice volume surges (eg, responsibilities at new sites of service or under extraordinary circumstances such as those recently imposed by the coronavirus disease 2019 pandemic).

From the perspective of referring providers, multispecialty radiologists are uniquely suited to provide familiar and trusted direct links to primary care practitioners and the growing body of referring nonphysician practitioners playing increasingly larger roles in patient care. Arguably, multispecialists may actually be the radiologists best positioned to consult effectively with primary care practitioners given their similarly broad scope of practice.

Multispecialty radiologists will never maintain expert command over the ever growing body of subspecialty radiology and related nonradiology literature. As diagnostic and treatment options increase and referring medical subspecialties continue to proliferate in their wake, however, radiologists in most practice settings will need to practice beyond the font of knowledge gained during their fellowship training. For these reasons, multispecialty radiologists must recognize

their limitations and consult with, or pass studies on to, true subspecialists when necessary. Artificial intelligence could help streamline this process in the future.

Although multispecialty radiologists constitute a majority of the radiology workforce, work is still needed to define and measure the benefits they provide to radiology practices, health systems, and patients. The relative productivity of multispecialty radiologists versus single-specialty radiologists both within and outside any specialty areas should be examined, as well as their reading statistics in tele-radiology, corporate, academic, and private practice radiology environments.

Given the important role of multispecialty radiologists, ongoing attention to training and sustaining multispecialty radiologists would benefit our practices, our patients, and our specialty. The new structure for initial board certification and subsequent maintenance of certification would seem to provide a pathway for encouraging the development of multispecialty radiologists, given that trainees may choose up to four areas of practice specialization. An exception is the current lack of maintenance of certification testing options for those who perform minor interventional services. Focused testing in this area could prove valuable to diplomates and practices. Many residency programs currently offer the opportunity for “mini-fellowships,” and some fellowship programs offer the opportunity to divide the year between two different subspecialties. In light of emerging literature indicating how many radiologists actually practice as multispecialists, training programs should evolve to meet actual practice needs. The creation, for example, of formal

general and multispecialty radiology fellowships could enhance patient access to high-quality imaging services in underserved communities. Such programs could provide training across anatomic areas and expand training in common minor interventional procedures. Additional training in informatics, business administration, and leadership could facilitate the success of graduates in communities where radiologists may not hold such formal roles.

In conclusion, multispecialty radiologists have played, and continue to play, a vitally important role in a wide variety of diagnostic and interventional radiology settings and are likely to become even more valuable as more referrals originate from less rigorously trained providers. Optimal patient care would be advanced by formally supporting a training system that supports subspecialty and multispecialty radiologists alike.

ACKNOWLEDGMENT

The authors thank Ashley Andrews for her assistance in formatting this submission.

REFERENCES

1. Huang J, Patel S, Scruggs R, Levin D. In pursuit of fellowship: Results from a 2016 Survey of US Trainees. *Curr Prob Diagn Radiol* 2019;48(1):22-6.
2. Liebscher L, Sherry C, Breslau J, et al. The general radiologist in the 21st century. *J Am Coll Radiol* 2012;9:554-9.
3. Rosenkrantz AB, Wang W, Hughes DR, Duszak R Jr. Generalist versus subspecialist characteristics of the U.S. radiologist workforce. *Radiology* 2018;286: 929-37.
4. Rosenkrantz AB, Fleishon HB, Friedberg EB, Duszak R Jr. Practice characteristics of the United States general radiologist workforce: most generalists work as specialists. *Acad Radiol* 2020;27: 715-9.
5. Friedberg EB, Chong ST, Pyatt RS Jr, et al. Unifying the silos of subspecialized

radiology: The essential role of the general radiologist. *J Am Coll Radiol* 2018;15:1158-63.

6. Trinh B, Calabrese E, Vu T, Forman HP, Haas BM. Low-volume and high-volume readers of neurological and

musculoskeletal MRI: achieving subspecialization in radiology. *J Am Coll Radiol* 2020;17:314-22.

David C. Youmans, MD, is from Princeton Radiology Associates, Princeton, New Jersey. Richard Duszak, Jr, MD, Vice Chair for Health Policy and Practice in the Department of Radiology and Imaging Sciences, Emory University, Atlanta, Georgia. Howard B. Fleishon, MD, MMM, is from the Department of Radiology and Imaging Sciences, Emory University, Atlanta, Georgia. Andrew B. Rosenkrantz, MD, MPA, Section Chief, Body Imaging, Department of Radiology, NYU Grossman School of Medicine, NYU Langone Health, New York, New York; and Editor-in-Chief of the *American Journal of Roentgenology*. Eric B. Friedberg, MD, is from the Division of Community Radiology Specialists, Department of Radiology and Imaging Sciences, Emory University, Atlanta, Georgia. Dr Rodgers is President of Kanawha Valley Radiologists, Charleston, West Virginia.

Dr Duszak receives related research support from the Harvey L. Neiman Health Policy Institute. Dr Rosenkrantz receives related research support from the Harvey L. Neiman Health Policy Institute. All other authors state that they have no conflict of interest related to the material discussed in this article. Drs Youmans and Rodgers are partners at their respective institutions. Drs Duszak, Rosenkrantz, Fleishon, and Friedberg are employees.

David C. Youmans, MD: Princeton Radiology Associates, 89 Jefferson Road, Princeton, NJ 08540; e-mail: david.youmans@gmail.com