

## Radiologist Workforce Changes: Going Remote or Hybrid

Madison R. Kocher, MD, MBA, Christoph I. Lee, MD, MS, MBA

The COVID-19 pandemic, advances in workflow technologies, and the mainstreaming of remote work have introduced a new model for the practice of radiology, as well as a new standard for work-life balance. What was once limited by internet speed, PACS integration, and regulatory issues is now a hybrid or remote radiology practice norm. Teleradiology has long been identified as a way to provide value to practices by reducing turnaround time and helping provide better geographic and after-hours coverage [1]. However, overall and perceptions, acceptance, downstream effects of remote work, after its acceleration particularly during the pandemic, remain to be seen.

The current study by Dibble et al in this issue of JACR [2] sought to explore and better understand shifts radiology practices and employment trends, which fortuitously explored perspectives at the height of the pandemic in October 2021. The **ACR** Commission on Human Resources has conducted an annual workforce survey every year with the exception of 2020 to better understand shifts in radiology practice types, specific subspecialty needs, employment trends, and retirement trends. The authors used questionnaire with mostly closeended questions. Of note, the study was particularly limited by a low response rate of 3.8% and selection bias during a time of COVID-19–related workforce shortages. On the whole, the study authors found that radiology practices grew during the pandemic, with 62% of practices hiring radiologists in 2021 and 2022. Most notably, 82% of practices allowed remote work of some kind, with 36% of radiologists reporting that they work remotely and nearly half of radiologists wanting to work remotely in the future.

Despite the limitations of the study, we are also anecdotally seeing a substantial rise in remote and hybrid work models for radiologists as we emerge from COVID-19. Remote work enables time savings to promote work-life balance by avoiding lengthy and allows displacement from distracting reading rooms [3]. It may also enable the steady upward trend of part-time radiologists, particularly women, to increase the general workforce, which was observed in the 2018 workforce survey [4]. It seems that more and more practices are offering remote partnership-track positions, allowing radiologists to remain in their present locations but potentially improve their salaries and quality of life. However, we must proceed with caution when interpreting these survey results and anecdotal trends, recognizing that fears of the pandemic may have

affected survey responses and that current sentiments about remote radiology workflows may not be maintained over time.

Specifically, shifting more image interpretation and communication remotely will have significant consequences to our interactions with referring physicians and radiology trainees. Radiologists will be further physically removed from direct patient care, and our value proposition to referring physicians may be negatively impacted. Resident education would be different, and new standards for remote readouts and radiology teaching would need to be developed and evaluated. In a study by Heldt et al performed around the same time as this ACR workforce survey, the authors found that both trainees and faculty prefer in-person learning to remote learning; however, only a minority of trainees and faculty felt that a complete return to in-person learning would be the most effective option [5]. Additionally, a subsequent study by Bass et al reported that 51% of trainees thought that remote work had a negative or very negative effect on education, even though 88% of the faculty with remote workstations reported lower daily stress levels [6]. Paradoxically, 77% of trainees and 63% of faculty voted for remote work to continue or expand, even as we from the COVID-19 pandemic. Although remote work seems to be an attractive option, there is less interaction and lightbox teaching, and it remains unknown what the long-term effects will be on resident training.

In summary, although these survey results may be an anomaly because of the circumstances, they may also serve as a harbinger of things to come. Postpandemic, we may be entering a new standard for our work environment and a shift in desire for greater work—life balance with more time away from our traditional reading rooms. It will be critical moving forward to follow trends toward more remote and hybrid radi-

ology models with follow-up workforce surveys, and any unforeseen negative consequences with the loss of in-person interactions will have to be mitigated.

## REFERENCES

- 1. Rosenkrantz AB, Hanna TN, Steenburg SD, et al. The current state of teleradiology across the United States: a national survey of radiologists' habits, attitudes, and perceptions on teleradiology practice. J Am Coll Radiol 2019;16:1677-87.
- Dibble EH, Rubin E, Duszak R, et al. The 2021 ACR/RBMA workforce survey: practice types, employment trends, and hiring needs. J Am Coll Radiol 2024;21:493-502.

- Oppenheimer DC, Harvey JA. Remote radiology: point-enhance efficiency, promote work-life balance, and ameliorate staffing issues. AJR Am J Roentgenol 2023;221:17-8.
- Bender CE, Bansal S, Wolfman D, Parikh JR. 2018 ACR Commission on human resources workforce survey. J Am Coll Radiol 2019;16(4 Pt A):508-12.
- Heldt JP, Agrawal A, Loeb R, et al. We're not sure we like it but we still want more: trainee and faculty perceptions of remote learning during the COVID-19 pandemic. Acad Psychiatry 2021;45:598-602.
- Bass RZ, Smith AD, Langston MC, Frazier MB, et al. Trainee and faculty perceptions of remote PACS workstations and next steps in a large US academic medical institution. Curr Probl Diagn Radiol 2022;51:146-51.

Madison R. Kocher, MD, MBA, is from the Department of Radiology, Duke University School of Medicine, Durham, North Carolina. Christoph I. Lee, MD, MS, MBA, is from the Department of Radiology, University of Washington School of Medicine, and the Department of Health Systems & Population Health, University of Washington School of Public Health, Seattle, Washington; is Director of the Northwest Screening and Cancer Outcomes Research Enterprise at the University of Washington; and Deputy Editor of *JACR*.

Dr Kocher states that she has no conflict of interest related to the material discussed in this article. Dr Lee received personal fees from GRAIL, Inc for service on a data safety monitoring board, personal fees from the ACR for journal editorial board work, and textbook royalties from McGraw Hill, Inc, Oxford University Press, and UpToDate, Inc, all outside the submitted work. Both authors report being employed at nonprofit institutions. The authors are non-partner/non-partnership track/employees.

Madison Kocher, MD, MBA: Duke University, Department of Radiology, 2301 Erwin Road, Durham, NC 27705; e-mail: Madison.kocher@duke.edu