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“Online Conferencing Software in Radiology: Recent Trends and Utility”

Videoconferencing platforms have recently gained wide attention due to the COVID-19 pandemic, both within and outside of the medical community. This literature review discusses various applications of online meeting technology to the radiologic community, not only in response to the recent pandemic but also thereafter. Various platform features are outlined and discussed, specifically with respect to collaboration, training, and patient care. Platforms of focus include GoToMeeting, Microsoft Teams, WebEx, Zoom, and Skype.

Videoconferencing technology allows users who otherwise may be physically distant to connect in a relatively low cost, timely, and with respect to the COVID-19 pandemic, socially distant, manner. Radiologists can collaborate with industry specialists, basic scientists, students, and with each other, as demonstrated in virtual peer learning models. In response to the COVID-19 pandemic, much of medical education has shifted to a virtual model, with many 3rd and 4th year curricula expanding to include more virtual clinical experiences. Features like share screen, annotation, and control sharing allow medical students and radiology residents to work side-by-side with their mentors. Videoconferencing platforms in combination with three-dimensional modeling programs or Jupyter notebooks can be useful in teaching radiology residents, students, and colleagues how to use these seemingly challenging programs. Lastly, further review demonstrates patient care is impacted by this technology. Some institutions have adopted virtual multidisciplinary conferences and tumor boards; in one such example, this virtual format was largely preferred by physicians. By incorporating clinician input with radiologic findings, radiologists felt more confident in their diagnosis and in many cases revised their report.

Radiology is largely a technologically driven profession requiring immense communication with other healthcare professionals and patients. Videoconferencing technology offers a unique opportunity to capitalize on and improve collaborative efforts. This literature review summarizes many of these perspectives while offering some cautionary considerations when using this technology.