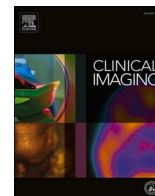




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Back to the future: Looking back while looking ahead at changes to educational conferences in the COVID-19 era[☆]

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The COVID-19 era is in its second year and the changes it has imposed across medical education have been addressed in several recent articles.^{1–4} The lack of in-person meetings, replaced by virtual gatherings or conferences via such programs as Zoom (Zoom Technologies), Microsoft Teams (Microsoft, Inc.), and WebEx (Cisco Systems), is typically acknowledged as the primary alteration in the landscape.^{1–4} Advantages of a remote model include convenience, the ability to involve people at remote sites, and the absence of basic structural challenges like conference room size and availability. To many professionals, disadvantages focus on the lack of connectivity and in-person presence.⁵ The classic unstructured or side conversations before, during, and after meetings are more challenging through a remote viewing conference. The sense of normalcy is also diminished by remote access.

Meeting content and experiences have unavoidably changed with this new workflow paradigm. While many models can be suggested, we review our own Faculty CT Conference and how it has evolved in the COVID era. Although this is not a format everyone can readily adapt, it reinforces the point that moving forward often requires looking back. At times of stress, trying to make the best of what is possible may provide opportunities that previously never would have been considered. Some challenges for implementing this model are considered and suggestions are made based on our own experience.

1. The meeting format: past and present

For the past decade, we conducted bimonthly diagnostic faculty noontime meetings to discuss body CT cases. The division director would present and lead discussions on CT cases selected based on several factors including missed diagnosis, excellent diagnosis, interesting and uncommon pathology, or simply cases with notable teaching points. All cases are de-identified and all HIPAA standards are followed, with no history numbers, dates, or patient numbers seen.

Although cases were shown to the group, no one was specifically assigned to discuss a case, and it was all very informal. Meetings were attended by 10–15 faculty members and 1 CME credit was provided, which for some was an added incentive. In a division that does not break for lunch and has up to four faculty at remote outpatient sites, it was often impossible for some people to attend. Even faculty in the hospital who may have been only 5–8 min away from the conference room were not always able to participate when on a busy clinical service.

When COVID ended in-person meetings in mid-March 2020, we faced two alternatives. The first was to simply cancel or postpone the meeting in the short term and adjust our schedule according to the unfolding pandemic and its management. The second was to move the meeting online using Zoom as our platform since we had Zoom available for free through an institutional contract.¹ Once we decided to continue the conference, we had to select the proper format. Previously, cases

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were chosen from the active interesting CT case file collected by the organizer of the meeting, then shown in real time on the PACS system (Carestream) and reviewed interactively. While this approach could be managed on Zoom, we thought that the most efficient method would be to show cases prepared in a PowerPoint format. This would allow for optimizing the case mix while minimizing the downtime between cases as well as any potential technical issues. Cases could then be grouped by diagnosis (e.g., autoimmune pancreatitis), organ system (e.g., chest), or clinical challenge (e.g., incidental adrenal mass).

While the pre-COVID audience consisted only of faculty, we decided to open the Zoom version of the meeting to faculty, fellows, and residents. Further, we kept our Wednesday at noon schedule but opted for a weekly meeting with the goal of compensating for the loss of educational opportunities at the outset of the pandemic. With cases selected by the host, we typically had 20–30 cases per session with anywhere from 2 to 10 slides (2 images per slide) per case. We chose this format rather than 4 images per slide (or more) because people would be accessing the session from various devices ranging from large monitor computer screens to iPads and iPhones. Only pertinent images were provided and, to be even more efficient, we did not present the full dataset with a scroll feature in most cases.

The question was then how to conduct the conference. We decided to make it more interactive and engaging by calling on individual faculty to discuss the cases. In a Zoom conference, participants can choose to show their face or name or remain anonymous with nicknames or phone numbers. There are concerns that this hot seat case-based teaching method may cause excessive stress or humiliation for participants who do not know the correct answer.⁶ To mitigate such issues, we asked faculty to confirm who would be comfortable addressing challenging cases within their area of expertise ahead of scheduled meetings with the hope that no one would avoid conferences due to discomfort over the prospect of being called on. For example, a faculty who focused on thoracic imaging would be shown chest cases and not pancreatic masses. The ability to listen to “experts” discuss a case offered several advantages: people felt more comfortable being called on in front of their peers and trainees; the high level of the discussions by the faculty taking the case benefited all the attendees.

Calling on faculty to discuss cases is not new but is rarely used in practice. We recall that in decades past the noon conference was a special treat when once or twice a year residents quizzed the faculty. Few departments carry on this tradition today. However, we decided to go back to the past in this regard to renew the future. One intriguing consequence of the Zoom conference is the interaction of the faculty when everyone seems to separate by space and time as we try to endure the COVID era. Banter between the examiner and the responder is meant to feel like two friends chatting and not a pressure-filled scenario akin to defending a thesis. Even when the correct answer is not identified the discussion of what was considered is most valuable. At times, faculty who were not actively taking the cases chimed in, providing helpful hints in the chat box, which also enhanced camaraderie among the faculty. The goal of presenting each case was comparable to the classic “board exam” where the key was the discussion more so than the answer. In fact, a conversational tone may have been one of the more important elements, along with responding to the desire to avoid complete isolation, in facing the challenges of holding remote meetings. During in-person meetings, participants have body language and visual cues as regular components in such communications. With remote conferences in which CT slides are the primary visual input, we had only the warmth of our voices to set the tone. To encourage such a tone, the moderator opened each meeting by stating clearly that the goal of each session was to share knowledge and experience informally, with no concern about being called on unexpectedly, and with the intention of achieving a full learning experience by displaying how participants are

thinking through the process. The discussion or interaction, not the answer, was identified as the goal.

Since we moved to remote conferences, we have oscillated between 29 and 45 attendees as compared to 10–15 in the pre-COVID era of in-person meetings. At the height of the first wave, when all the radiologists were scattered with only a skeleton crew in the department, this weekly conference provided an opportunity to break the isolation and loneliness many of us experienced and offered a welcomed escape. Although our clinical volumes began to return to normal in the summer of 2020, we have maintained an attendance in the low 30s each week, which we consider an encouraging main outcome measure. We continue to see new challenging cases weekly, and the conference has become a higher profile event.

2. Lessons learned and what will change post-COVID

While we all look forward to seeing COVID-19 in the rearview mirror and returning to our routines, one wonders how the conference will change. We believe that a hybrid program will emerge in which we can be in person or remote for some of the reasons described above. In the COVID era, we have sacrificed much of our human interactions, which will surely return in time. However, some adaptations were long overdue and extending our reach may be one of them. The fact that we have the opportunity to involve our residents and fellows as well as faculty no matter where they are assigned to work will be a driving force to keep the conference format to its new paradigm. Perhaps we will have a hybrid model with an in-person meeting with others participating remotely even after returning to more normal conditions. While remote communications are not conducive to the spontaneous side conversations typical of in-person meetings, we have found that several people are willing to continue discussions beyond the Zoom call, if they have the time. This approach may also compensate for some of the distance created in remote settings. To encourage such dialogs, or to discuss other issues such as new projects, the moderator stated clearly that he was available via email or to speak on the phone after the session or at a later time.

3. Conclusion

The past 20 months have challenged all of us and in the radiology department impacted our tripartite mission of patient care, education, and research. While many of the changes forced upon us by the need for social distancing will hopefully disappear, some may remain if proven valuable or a better way to perform a process. Although we yearn for the opportunity to sit mask-free next to a resident or colleague to review cases, some changes will survive a return to normalcy. We believe our remodeled and reconfigured case conference is one of them.

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