

What Preparedness Advice for COVID-19 Did Radiology Departments Follow?

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It has been more than 2 long years since reports first started emanating from China in late 2019 of a new, highly contagious coronavirus causing severe illness and death. In January 2020, the seriousness of the disease became even more apparent as COVID-19 started infecting large numbers of people around the world. By the end of January and early February, as the disease mushroomed into a global pandemic, articles began to appear in *Radiology* describing the chest radiographic and CT findings of COVID-19 pneumonia (1,2).

Radiologists soon realized that the imaging needs of patients with COVID-19 made radiology departments a potential “hot spot” for infecting staff and other patients. On February 18, 2020, an article by Kooraki et al (3) was published online by the *Journal of the American College of Radiology* that included steps radiology departments could take to reduce the spread of the virus within their departments. The *Radiology* editorial board also recognized the importance of keeping radiology departments as safe as possible, and that scientifically based information on how to do this needed to be communicated to departments worldwide. On February 20, 2020, the editors contacted an international group of radiologists who were active in radiology preparedness for COVID-19 at their institutions. The six radiologists were asked to write up what actions they were taking to prepare for and deal with the pandemic, using the best science available at the time. The responses were collated and “Radiology Department Preparedness for COVID-19: *Radiology* Scientific Expert Review Panel” was published online on March 16, 2020 (4). This review contained many recommendations that ranged from training all radiology employees on infection control protocols and using personal protective equipment (PPE) to following standardized hospital protocols for decontaminating imaging rooms.

In this issue of *Radiology*, Herpe and colleagues (5) present the results of a survey dispatched in the summer of 2020 to assess the compliance and impact of the *Radiology* expert review panel’s recommendations on radiology departments. The survey was sent to 40 French radiology departments reflecting a wide range of institutions. The survey asked which recommendations were implemented in the first 4 weeks after publication of the expert review panel guidance. Of the 40 departments, 38 replied, consisting of several of each hospital type (university, general, and private), department size (from five or fewer to more than 20 radiologists), and incidence of COVID-19 in the local area during the 4-week period.

All 38 radiology departments stated that they modified their institutional practices during those first 4 weeks after publication of the recommendations. The most popular source for guidance was the *Radiology* expert review panel, cited by 86% of the respondents. The authors found that there was greater than 50% compliance for most of the recommendations, such as (a) screening patients for COVID-19 at the radiology front desk, (b) providing training for department employees on COVID-19 infection control, (c) centralizing PPE supplies, (d) implementing standard operating procedures for patients with known or suspected COVID-19, (e) dedicating imaging equipment only for patients with COVID-19 and performing bedside imaging when possible, and (f) using standardized protocols for decontamination of rooms.

Some of the other recommendations were not followed as often. For example, 61% of hospitals dedicated a CT scanner for patients with COVID-19 but less than 50% dedicated a radiography or US unit for these patients. Only 13% of the hospitals implemented remote interpretations during the study period, although 37% of the hospitals already had remote capability before COVID-19. The authors also found that, while 92% of hospitals instituted new standard operating procedures for patients with suspected COVID-19, only 68% did so for patients with known COVID-19 (possibly because they were following existing protocols for airborne infectious diseases).

The authors also added two additional survey questions for the radiology departments. The first was whether the department formed a dedicated radiographer team for imaging patients with COVID-19—less than 50% had. Although a dedicated team trained in PPE use and infection control procedures is ideal, it may be challenging to find a group of technologists and sonographers

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See also the article by Herpe et al in this issue.

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willing to image all the hospital's patients with COVID-19 each day. At my institution, even our most accommodating technicians eventually got tired of donning and doffing the so-called "bunny suit." The authors also surveyed and found that none of the hospitals had negative pressure rooms (ie, isolation rooms for patients with infectious diseases) for CT and/or chest radiographic examinations.

It is not surprising that only a small percentage of departments were able to implement remote interpretation during the survey's 4-week period. Rapidly implementing a work-from-home picture archiving and communication system (PACS) workstation can be challenging. It takes time to purchase the necessary hardware to view and dictate studies and to set up secure communication between a radiologist's home and servers inside the hospital firewall. More departments were undoubtedly able to install home PACS workstations in the ensuing months of the pandemic. These home workstations have proven very beneficial for many radiology departments; they have allowed diagnostic radiologists to work remotely during COVID-19 quarantine and have reduced crowding in the reading room during periods when there is a COVID-19 surge. These departments will be much better prepared if, or when, we have a future pandemic.

In the months since the publication of the expert review panel recommendations, new information about departmental COVID-19 best practices has emerged. In March 2020, most infectious disease scientists did not realize the extent of the asymptomatic spread of COVID-19. Thus, it was not standard practice to wear a mask in the workplace at all times and not only when near patients with suspected COVID-19. The expert review panel had also particularly stressed measures to reduce fomite transmission. Although decontamination of equipment after imaging a patient with COVID-19 is important, we now know that the risk of fomite transmission when imaging a patient is low (6).

Most of the expert review panel recommendations still seem appropriate. I can only presume that the guidance in

their editorial, and subsequent publications, helped radiology departments reduce work-related infections among staff and transmission between patients undergoing imaging. As has become clear, the most important factors in reducing COVID-19 spread in radiology departments is universal masking and vaccination, in addition to standard PPE recommendations. The ongoing challenge is to minimize the time employees spend together without a mask, particularly during meals (7).

In summary, Herpe et al (5) found that 86% of French hospitals surveyed used the March 2020 *Radiology* COVID-19 expert review panel recommendations to guide their modifications of radiology department COVID-19 practices. This finding reinforces the importance of *Radiology*, with its influence and worldwide reach, responding quickly to provide scientifically based information that impacts radiology departments in times of crisis.

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