



Communication — a lost art?

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Abstract

The field of radiology has benefited greatly from the technological boom that has brought greater precision, efficiency and utilization amid an exponential growth in medical science. The downside is that the same technology that has allowed the field to grow is contributing to an erosion of interpersonal communication and connection with patients and referring physicians. Remote reading has displaced us from the communal reading room, where much interaction and teaching used to take place. The “invisible” radiologist must transcend these barriers in order to preserve and strengthen the role of radiology in medical care. With modest adaptation, radiologists can regain their identity as consultants, where they have the greatest chance to show their value and thwart the drive toward commoditization.

Keywords Children · Communication · Consultant · Consultation · Pediatric radiology · Reading room

The technological boom that has in many ways streamlined workplace efficiency, and productivity has had an unexpected consequence of decreasing in-person human interaction [1]. At the same time, many of the most successful digital innovations have been in the communications field — the mobile phone, portable devices, social media and video telepresence. The coronavirus disease 2019 (COVID-19) pandemic redefined communication in spawning the “virtual reading room,” which relied heavily on such technology to communicate and teach, with some unexpected benefits in work efficiency and connection with colleagues across multiple departments [2]. Radiologists are busier than they have ever been, handling complex cases with many more images, and they are faced with a dilemma of completing myriad tasks, with many interruptions, in addition to interpreting images while trying to maintain good communication with referring physicians. Any interruption to their concentration can lead to increased errors, decreased efficiency and compromised well-being and morale [3, 4]. Have the advances in our field led to an erosion of communication and human interaction with clinicians? Many worry the answer is yes. What follows is a description of the problem and what we can do about it.

In 2011, Dr. Gary Glazer described an emerging phenomenon of declining communication between the radiologist and the patient, something he coined “the invisible radiologist” [5]. He attributed this to the emergence of cross-sectional imaging that replaced some of the hands-on modalities such as fluoroscopy and US. In addition, the past practice of communicating with the patient and technologist in the imaging suite to provide the best interpretation in context with the physical findings slowly ground to a halt as volumes grew exponentially [1]. This distancing, as well as the ability to perform much of our job remotely, raised concerns that the value offered by radiology was being eroded and the specialty was heading toward commoditization [5].

The American College of Radiology (ACR) recognized these challenges as threats to our specialty by launching the “Imaging 3.0” campaign in 2016 [6, 7]. Their purpose was to resurrect communication as the strongest measure to highlight the value of the radiologist on the health care team. The ACR eloquently identified historical phases in the field of radiology, with Dr. Glazer’s description of the original radiologist falling into “Imaging 1.0” [8]. “Imaging 2.0” was championed by the boom of technology including multi-modality cross-sectional imaging, the electronic medical record, and voice recognition with resultant increase in volumes, complexity and expectations for shorter turnaround times no matter the case complexity [8]. The escalation in volumes meant more interruptions and the potential for more errors, leading many radiologists to shut their doors and turn off their phones to get work done. Imaging 2.0 gave birth to the invisible radiologist [5].

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Not all radiologists are made equal. It is encouraging to note that subspecialties where radiologists have regular patient contact have continued to evolve and accept the challenges of Imaging 2.0, while maintaining patient connection, thus moving easily into Imaging 3.0. Interventional radiology, breast and women's imaging, and pediatric radiology have managed to adapt by preserving communication and adopting alternative strategies (as later discussed) to maintain and increase availability while maintaining quality. Imaging 3.0 draws from these subspecialties' playbooks by stressing the importance of "being present — before, during and after the imaging study" [8]. By being available and accessible, either in-person or virtually, radiologists demonstrate their enormous value on the health care team. By being focused on the patient–family unit and empathic to the clinician's needs, the radiologist re-emerges as essential, thus avoiding outsourcing.

Gone are the days where a clinician can confidently order the correct radiology study for every indication because the choices are myriad. This has motivated radiology to reinvent itself to embrace consultation. With this came the challenges of being both available to the clinicians and protected in order to read a high volume of cases. Gunderman [9] eloquently addressed these competing interests in describing four brands of consultant radiologists: isolated, available, eager and embedded. The isolated radiologist is most protected, with the highest clinical productivity and lowest availability for consultation — our invisible radiologist. The embedded radiologist makes rounds with the clinical services, runs his or her own consultation service, and is an active contributor in interdisciplinary conferences, with the lowest clinical productivity and the highest availability. Ideally, one's radiology practice is made of a team that supports both ends of this spectrum and achieves a sweet spot for productivity and availability.

A consultant wears three hats — as a teacher, expert and colleague. To master one's consultation skills, one must consider all three. The best teachers are those who know their audience, so the radiologist as a teacher must adapt when teaching clinicians because their needs are different from those of radiology trainees. The clinical team that consults with the radiologist in person or virtually often includes trainees at various levels. This setting offers radiologists an opportunity to demonstrate their value contribution beyond providing an ancillary service to functioning as indispensable members of the health care team. As an expert, the radiologist must be intentional in fine-tuning his or her listening and visual skills. As a colleague, one should ask for input and engage; in doing so, one shares mutual respect for the value offered by others.

Many have rejected rebranding their radiology department as a consultation service because it takes too much time, there are too many interruptions, and more interruptions lead to more errors. Perhaps the horse has already left the barn, because clinicians can now see their studies and read the reports

almost instantaneously, and they might be content with this. In reality, there is much to be gained by improving communication in radiology. It is unequivocally true that better interdisciplinary communication leads to higher-quality and safer health care [10]. In fact, communication error is the root cause of many quality and safety events [11]. Beyond this, radiologists within a practice with excellent consultation skills have greater job fulfillment — they feel part of a team where they are respected and valued. By exercising master consultation, the value embedded by radiology pushes back against commoditization and might even increase job security.

So, what can we do within our own departments? Many have instituted a consultant service or rotation in the clinical schedule whereby faculty or residents are available and able to answer calls, review cases, recommend imaging studies and develop protocols. Some have "visiting hours" when radiologists are free to consult, thus ensuring protected time to read cases. Reading room assistants can protect the radiologists by directing calls, connecting radiologists with clinicians and delivering results. Regular radiology work rounds for high-acuity services provide an avenue for planning imaging strategies, and these rounds can be conducted virtually to avoid travel time. Interdisciplinary educational conferences that embrace a partnership between radiology and the clinical service go a long way toward optimizing communication.

Many of these solutions are already in place in some departments. Perhaps the most effective, albeit difficult, change strategy involves re-examining what we need to do within our departments to best serve the patients and referring clinicians while maintaining a sense of well-being and purpose. Implicit in this is that no solution fits all departments, and the process must involve discussion with all stakeholders to adopt a strategy that adds value through improved communication. In their ethnographic study of reading room interruptions, Smith and colleagues [4] reduced the time between interruptions by more than 80% through strategies that included a resource radiologist who handled non-interpretive tasks, a restructured phone tree to route calls through a team of reading room assistants, transferring authority over image questions and answers to technologists, and clear signage to direct visitors to the appropriate radiologist. A more elaborate idea would be to change the layout of the reading room to include conferencing/social space (for tasks where there are expected interruptions but there is no obligation to produce reports during that rotation) alongside deep-thinking space that is insulated from all interruption [12]. To support such a change, a department would need to revamp workflow and embrace an interdependent team approach.

Communication in radiology has been challenged by advances in medicine and technology as well as quality/safety concerns that have expanded the breadth of the radiologist's role and increased the pace and complexity of our work. This has forced many departments to re-evaluate priorities and

create strategies that redefine both the radiologist's role as consultant and the methods employed to maximize communication both in-person and virtually. Communication with clinicians is not a lost art, but through this process of re-evaluation it has the potential to become a new and improved artform.

Declarations

Conflicts of interest None

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