

Short communication

Circumventing the Challenges of Inappropriately Filled Radiological Requests in Sub-Saharan Africa: Experiences from an Infectious Disease Hospital

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Abstract

Radiological requests are vital communicative tools by Physicians to Radiologists. Improperly filled radiological requests are frequently encountered in our practices as radiologists; a trend which can negatively impact patient care. A properly filled request will prevent unwarranted radiation exposures and improve service delivery by Radiology departments. This article amply expresses our practice experiences (not unique to our centre alone) as they relate to poorly filled radiological investigation requests and the practical approach we have developed and adopted over time which has been quite helpful in addressing this age-long problem.

Keywords: Radiological Requests; Inadequate; Diagnostic Accuracy; Turnaround Time, Sub-Saharan Africa.

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Quick Response Code:



Introduction:

Radiological requests can best be described as a medium of communication between the physicians managing a patient, and a Radiologist. Thus, a radiological request should be holistic, and able to provide valuable insight into pertinent sociodemographic variables and medical history which should guide a Radiologist in arriving at a tentative or definitive diagnosis of a patient's condition.¹

The Royal College of Radiologists (RCR) has stated in its guidelines that all investigation requests to Radiology departments should be adequately filled to avoid misinterpretation of requests.²

It is also the duty of the attending Radiologist to decide whether a request is justifiable. Justification of radiation exposure is one of the core principles of radiation protection, the other being optimization and dose limitation.^{2,3}

Inadequately and improperly filled radiological requests are commonly encountered in our various practices as Radiologists in Health facilities within Sub-Saharan Africa where manual and paper-based radiological investigation request cards are still very much operational.

An improperly filled radiological request may deprive Radiologists of important information about a patient's medical condition, associations, and predisposition, thus limiting the scope of diagnosis.

Several studies done within sub-Saharan Africa have revealed that most radiological request forms are often not properly filled. Over time, from our own experience in our various practices, we have observed a rising trend in the number of poorly filled radiological requests we encounter. This trend, if unchecked, would ultimately pose dire consequences in diagnostics and patient care.^{4,5,6,7}

A properly filled radiological request should include certain vital information such as the date the request was made, the Patient's name, age, gender, hospital number, radiological/imaging reference number, patient's address, phone number, patient's clinical history, last menstrual period (LMP), Physician's working diagnosis, name of referring clinician and signature, the receiving Radiographers or Radiologist's name and comment (if any).

The impact of a poorly filled radiological request is quite tremendous. It could result in unnecessary delay in achieving imaging, prolonged patient waiting time, unwarranted repeated exposures to radiation which could increase patients absorbed radiation doses and its attendant harmful effects (stochastic and deterministic effects), prolonged turnaround time for radiological reports, delay in arriving at a diagnosis, and economic loss.⁵

Lack of adequate supervision of the junior cadre physicians by speciality seniors when filling radiological requests, burnout amongst doctors which perhaps is due to a lower doctor-patient ratio occasioned by the recent massive emigration of doctors from Sub-Saharan Africa to Western Countries for greener pastures, poor knowledge on how to fill radiological requests by those who fill such, patients' literacy level and ineffective communication, etc, are some of the reasons we think are responsible for improper filling of radiological requests.

Components of improperly filled request forms may include for instance, failure to indicate the patient's actual age, and the usage of nomenclature like Adult "Ad" or Pediatrics "Pd" respectively; omission of working diagnosis which is probably the most prevalent. Other notable omissions include neglecting to indicate the managing consultant when the form is filled. Another serious error is the wrong choice of investigative modality standing

alone or compounded by flimsy clinical examination (another very serious emerging problem!) which makes the clinician mislead him or herself to the point of requesting a radiological investigation.

The issue of self-referral for imaging is also an ugly trend, where some patients present to Radiology departments for imaging evaluation without prior consultation and clinical evaluation by a doctor. Also, some other patients present as external referrals from rural primary healthcare facilities manned by personnel who are not core health professionals, or from traditional herbal homes. Many a time, such referrals may be without a written request or are poorly filled by someone without the requisite clinical knowledge, thus hampering rapid imaging turnaround time for reeling out radiological reports.⁸ These requests may not be justifiable after undergoing the usual scrutiny in Radiology departments, while others are referred for proper filling.

Timing is of particular importance to us whose primary location of practice is at one of Nigeria's leading infectious disease hospitals. As Radiologists, we consider short-duration image acquisition time as one practical approach for preventing infection spread when imaging high-risk infectious patients. As with other Tertiary Health facilities in our sub-region, this is of particular importance to us because our region is plagued by the highly infectious seasonal endemic scourge of viral hemorrhagic fever, particularly Lassa fever.

Some practical steps we have developed in tackling the long-term perennial issue of improperly filled requests include verbally eliciting omitted information from the patients or close relatives through interactive communication or clarifying ambiguous clinical information by placing calls directly to the attending clinicians. Verbally eliciting the clinical history while simultaneously performing quick physical examinations on the same patients, especially those undergoing sonographic evaluation (depending on the body region for examination) has also been helpful. However, in our practice, we have had instances where some patients have outrightly refused to provide answers to valuable questions (not answered by the request) asked by radiologists during bedside procedures. Some of these patients become very apprehensive when asked questions. There is also the wrong assumption by some patients that the various computer systems used in radiological imaging are self-explanatory. They do not understand that their signs and symptoms are just as relevant as the images generated in arriving at a conclusive diagnosis.

Our approach has been slightly different when reviewing and reporting radiographic images already acquired for some non-specific and deficient requests. Under such circumstances, we have had compelling reasons to recall some patients back for physical inspection of the indicated body region, and in some other instances, we have had to insist on repeat redirected imaging, while employing the most appropriate imaging technique tailored towards the patients' peculiar needs at the time.

Above all, the principles of radiological investigation which cover all the aspects mentioned earlier, are likely to have been taught in medical schools as part of the Radiology curriculum during Radiology Clinical rotations. It is therefore most significant and surprising that the improper filling of forms is still so prevalent. This situation may be a reflection on the poor emphasis placed on this issue during undergraduate medical- and other- education in Nigeria and other parts of the World, for that matter.

The electronic medical record (EMR) system recently introduced at our institution has indeed revolutionised our practice as Radiologists and has also helped to reduce to the barest minimum the challenges of inadequately filled radiological requests, as all clarification about patients' 'relevant clinical information can be made by the Radiologist just by simply clicking on the patient's medical records on a computer at his work desk.

Also, once an imaging report is made, the referring physicians can see the report almost immediately, and review the patient with the same quite promptly, making it suitable for emergency situations.

This innovation, however, does not diminish the importance of completing a form correctly; the transmission of information between medical specialists including the way it is carried out, as well as the exactitude of information and the conveyance of ideas remains sacred. It remains imperative, therefore, that the clinician achieves that always. Besides, the Radiologist's effort at sustaining good turnaround time and ensuring diagnostic accuracy will be defeated if he/she has to frequently review patients' clinical information because of deficiencies or inaccuracies on the clinician's part bordering on filled radiological requests.

In conclusion, a radiological request is a vital communication tool for a physician to a Radiologist. A properly filled request, be it manual or electronic, has the capacity to improve diagnostic accuracy, reduce patient waiting time, and unwarranted radiation exposure, reduce infection spread and economic wastage, and improve turnaround time for radiological reports and overall service delivery in Radiology departments. Therefore, health practitioners who request radiological examinations as part of patients' evaluation should also consider appropriate and adequate filling of such radiological requests a top priority.

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