Original Article

Adequacy of completion of radiology request forms

K Saneej[1], C Amarnath[2], T S Swaminathan[3]

Radiology request forms are the sole mode of communication between the referring doctor and the radiologist in a hospital setup. Their importance, however, is highly underestimated. A radiological investigation may prove fruitless if a proper clinical background and the probable conditions to be ruled out are not provided with the request1. Inadequate information can also lead to errors in patient identification and delay in dispatching reports to the correct destination, and can reduce the value of the report. Moreover the follow up of the patient's disease process is important in the field of radiology, especially in an academic set up where correct patient identification details are precious tools. Here I set out to perform a process audit of the adequacy of completion of such request forms in Barnard Institute of Radiology, Madras Medical College, Govt General Hospital, Chennai.

A representative sample of 200 randomly selected request forms2 received by the radiology department in early November 2007 was reviewed. These included requests for a variety of examinations from different departments within Government General Hospital Chennai. A database of the collected forms was created, noting which of the various fields were adequately completed.

Of the 200 request forms reviewed none proved to be complete. The percentages of various fields completed were patient's name – 84% ; patient's age – 80.5% ; referring ward no- 72% ;IP/OP/MRD No- 77%; referring doctor's signature- 79%; referring doctor's name – 7% ; name of responsible unit chief – 19.5% ; patient's address- 0.5%; Request given in proper requisition form - 33.5% question to be answered – 13.5; the patient's clinical background field was filled in 38.5% forms. However these were more often incomplete and unable to fulfill their purpose. Moreover only 33.5% requests were sent in the prescribed form, the rest were in plain papers

It is quite essential to bring about a change in this practice of sending incomplete radiology request forms. The referring clinicians should concentrate on giving a detailed clinical background to derive fruitful investigations and good reports. [*J Indian Med Assoc* 2018; **116:** 6-7 & 16]

Key words **: Request forms, adequacy, completely filled, clinical details.**

There exists a generalized notion that a radiologist is bound to perform any investigation requested by medical practitioners or specialists. This needs to change. Clinical radiologists form a part of a multi-disciplinary team. Their role is to aid their colleagues to reach a specific diagnosis and since the advent of interventional radiology, to provide treatment for various conditions. Referral for an imaging examination is generally regarded as a request for opinion from a specialist in radiology[1].

In order to achieve the above it is imperative that radiologists are provided with adequately filled request forms. All forms should be adequately and legibly completed thus avoiding any misunderstandings that may arise. Referring doctors should state the reasons behind their referral thus enabling radiologists to understand the clinical problem that they need to address using their expertise in the field of radiology[1].

Barnard Institute of Radiology, Madras Medical College, Government General Hospital, Chennai 600003
[1]DMRD, Postgraduate trainee
[2]MD, DNB, FRCR, Assistant professor
[3]MD, DMRD, FICR, Director

No standard format for radiology request form is available, and different hospitals use their own personalized version. Here I set out to perform a process audit of the adequacy of completion of radiology request forms in Barnard Institute of Radiology, Government General Hospital, Madras Medical College, Chennai, using the following as standard.

The standard :

All submitted radiology request forms should contain the following information[2] :

- The case summary (clinical background)
- The specific question to be answered(queries)
- The patient's name age and sex
- The patient's address
- The ward & IP/OP (MRD) number
- The name & signature of the referring doctor
- The name of the unit chief responsible for the patient's well being

Material and Methods

In assessing the prevailing practice I have reviewed 200 randomly selected request forms received by the radi-

ology department in early October 2007.These were selected in a random manner by clerical staff so as to avoid bias. They included a balanced variety of requests for an array of examinations including Plain radiography, Fluoroscopic radiography including Barium studies & Conventional Angiograms, Ultrasound, Doppler, CT & MRI.They included referrals from different departments both from a ward setting as well as from the out patient clinics. Referrals from private general practitioners were not included.

For each form, we noted the presence or absence of adequate information in the appropriate field. A database of the various forms was subsequently created, and the results were compared to the above standard.

Results

The standard clearly states that all radiology request forms should be adequately completed. Our audit's data analysis revealed that NONE of the 200 forms reviewed were completed in full. The patient's name was present in 168 forms. Patient's age and sex were written in 161 and 153 forms respectively. The ward was included in 144 forms, and the responsible unit chief's name was evident in 39. The patient's full address was provided in only 1 form, the referring doctor's name in 14 and his/her signature in 158 forms. A specific question to be answered was only encountered in 27 forms, and despite the clinical background field having been filled in 77 forms, these were more often incomplete and did not fulfill their purpose. A chart depicting the percentages of completion of the various fields can be seen in Table 1.

Discussion

A multi-disciplinary approach to patient management is based on adequate communication between the various team members, in order to provide the patient with the best possible service.

Radiology request forms are essential communication tools used by doctors referring patients for radiological investigations. Their importance, however, as can be seen from the results elucidated by my audit, is highly underestimated. The presence of incorrect, or even worse, the absence of patient demographic data and contact details may lead to serious errors in patient identification, and may render the need to recall or contact a patient an impossible task. The same applies to the inability of the radiologist to contact the referring doctor or the caring consultant for further discussion if the names of the above are not clearly documented on the request forms.

Table 1 — *Percentage of forms with completed fields*

Form Fields	Value	Percentage
Patient's name	168	84
Patient's age	161	80.5
Referring doctor's signature	158	79
IP/OP(MRD) number	154	77
Patient's sex	153	76.5
Ward number	144	72
Clinical background	77	38.5
Proper request form	67	33.5
Name of responsible Unit chief	39	19.5
Question to be answered	27	13.5
Name of referring doctor	14	7
Patient's address	1	0.5
Complete in full	0	0

The Royal College of Radiologists suggests that all radiologist reports should address the questions posed by the referring doctors. However, this can only be achieved by increasing the awareness of referring practitioners of the need of such specific questions, as well as the need for a full clinical picture to be provided in the request for radiological investigations. By knowing the patient's clinical background, and the query posed by the patient's caring professionals, the radiologist will be in a position to decide on the best radiological examination necessary, and subsequently combine the radiological findings with the clinical picture to reach a final or differential diagnosis. It is ultimately the full responsibility of the radiologist to ensure that the patient is not exposed to unnecessary radiation, in view of the harm that this may cause.

Review of literature :

We must realize that inadequate request form completion is not a problem present only in our country. One article published by Ruben Depasquale et al4 states that only 4% of the 200 request forms reviewed were completed in full. The percentages of the various fields completed were: patient's name and surname - 100%; patient's full address - 77%; patient's age - 29%; referring ward - 95%; referring doctor's signature - 100%; referring doctor's name and surname - 34%; name of responsible consultant - 91%; question to be answered - 25%. The patient's clinical background field was filled in 93%.

In a letter to the editor by P. A. Nedumaran3, states that following an audit entitled "Do the reports address the questions?" revealed that only 62% of hospital requests, 51.5% of A&E requests and 26.4% of GP requests had a specific clinical question.

Conclusion and Recommendations :

Optional patient oriented care mandates that remedial action be taken in order to change the currently inadequate radiology referral process. Discussions on the possible actions or changes that could be implemented in order to reach this goal, led to the following list of suggestions:

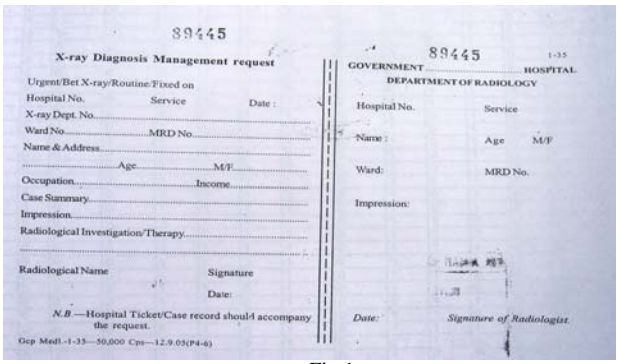
- An internal request note addressed to the dean, medical superintendent, directors, unit chiefs, professors, assistant professors, lecturers, post graduate students and Interns elucidating the above findings and the risks they carry and stressing the need to change current practice.

(Continued on page 16)

(Continued from page 7)

- Instructions to radiological staff to return any inadequately completed forms at a stage before these are actually recorded in the department's database. Currently, with the exception of X-ray request forms, elective requests pass through the hands of radiology residents including urgent requests prior to appointment being given. Returning of request forms is to be done with great care in order to avoid any unwanted delays of urgent examinations and above all any patient suffering, whilst ensuring safe practice.
- Structuring a lecture entitled "How to Help the Radiology Department Help You.", that would be delivered to new medical staff at induction.
- Applying necessary changes to the current request forms, ensuring that adequate spacing is provided for the required fields.
- Ensure adequate supply of proper request forms in all departments. Do not accept requisitions in simple piece of papers, taking due care not to cause patient suffering
- It would be necessary to repeat the audit 6 months following the implementation of the changes suggested above and 6-monthly thereafter.

The version of request form in our department can be seen in Fig 1


89445

X-ray Diagnosis Management request

Urgent/Bet X-ray/Routine/Fixed on

Hospital No. Service Date :

X-ray Dept. No.

Ward No. MRD No.

Name & Address

Age M/F

Occupation Income

Case Summary

Impression

Radiological Investigation/Therapy

Radiological Name Signature

Date:

N.B.—Hospital Ticket/Case record should accompany the request.

Ocp Medl.-1-35—50,000 Cps—12.9.05(P4-6)

89445 1-35

GOVERNMENT HOSPITAL

DEPARTMENT OF RADIOLOGY

Hospital No. Service

Name : Age M/F

Ward: MRD No.

Impression:

Date: *Signature of Radiologist*

Fig 1

References

1 Royal College of Radiologists — Making the Best Use of a Department of Clinical Radiology: Guidelines for Doctors. 5th Edition. London: *RCR* 2003; 15

2 Godwin R, de Lacey G, Manhire A, editors. Clinical Audit in Radiology, 100+ recipes. London: *Royal College of Radiologists* 1996; 36-7.

3 Nedumaran PA — Correspondence: Do the reports address the questions? *British Journal of Radiology* 2002; **75:** 565-6

4 Are Radiology Request Forms Adequately Filled In? Ruben Depasquale MD Malcolm P Crockford DMRD, FRCR. *Malta Medical Journal* 2005; **17:** 36-8.