Laboratory Request Forms – How Well do Doctors Fill Them? A Look at the Practice at the Niger Delta University Teaching Hospital, Okolobiri, Bayelsa State, Nigeria.

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ABSTRACT

BACKGROUND

Laboratory investigations are often required to manage patients in the hospital. Laboratory request forms serve as a medium between the pathologists and the clinician. Improperly filled laboratory forms may result in misdiagnosis and inadvertent mix-up of patients results. We therefore undertook to document the extent to which Doctors properly fill laboratory request forms at the Niger Delta University Teaching Hospital, Okolobiri.

METHODS

One thousand two hundred laboratory request forms which had already been filled out by various Doctors in the hospital between January and June, 2013 were randomly selected and analysed. The forms were evaluated to assess the completeness of information entered by the requesting Clinician.

RESULTS

The patients' names and investigations requested were entered on all forms. 3.0% of forms did not state the gender of the patient, while 11.5% did not even give the age of the patient. 9.6% did not specify the patient's location and 34.0% did not have the patient's hospital number. 25.5% of forms also did not have the name of the attending Consultant and 15.5% did not have the name of the requesting Doctor, while 27.1% of all forms were not signed by the requesting Doctor. A working diagnosis was not stated on 16.5% of forms. Also, the date of collection and nature of the specimen were not stated on 21.5% and 11.0% of forms respectively.

CONCLUSION

Laboratory request forms are not always properly filled by Clinicians. Only the patients' names and the requested investigations were filled on all forms. There is the need to remind Clinicians of the importance of carefully filling laboratory request forms.

KEYWORDS: Laboratory request; form completion; Doctors documentation; Nigeria.

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INTRODUCTION

Modern medical practice is becoming increasingly dependent on reliable clinical laboratory services[1]. The management of patients often require laboratory investigations to be conducted as a means of confirming the patient's diagnosis and follow-up. Laboratory request forms serve as a major medium between the requesting or managing Doctor and the laboratory Scientists or Pathologists. These forms usually accompany the patient's specimen to the laboratory.

In order to reach a proper diagnosis, the requesting Doctor must properly fill out the laboratory request forms. This is important

because laboratory results have been shown to influence up to 70% of medical diagnosis[2].

Failure to completely fill in all required information could also result in problems of patient identification. This could result in confusion as the laboratory results may be wrongly appropriated to another patient or sent to another Doctor other than the managing Doctor. This is particularly so in large hospitals were thousands of patients are attended to daily. Also, information such as age, sex, nature of specimen among others helps the Pathologist in making a proper diagnosis and even in conducting research.

We have observed that some Doctors do not fully complete the laboratory forms of their patients. We therefore undertook this study to ascertain the situation as it is in our hospital.

METHODOLOGY

This is a retrospective study conducted at the Niger Delta University Teaching Hospital, Okolobiri, a new tertiary hospital situated in the Niger Delta region of Nigeria.

One thousand two hundred laboratory request forms which had been filled out by Doctors and investigations completed were randomly selected from all request forms filled over a 6-month period; between January and June, 2013 were individually analysed.

Information on whether or not the requesting Doctor properly filled out the following details on each form as applicable: age, sex, hospital number, ward/ Department, diagnosis/ clinical details, name of the requesting Physician, name of Consultant, date of requesting the investigations, were documented.

Laboratory forms analysed included those from all units in the Pathology department, including microbiology, chemical pathology, haematology and blood transfusion and anatomical pathology.

All data obtained were entered into a pro forma and analysed using the IBM SPSS version 20.0 software. Results obtained are presented in tables.

RESULTS

It was observed that certain patient information and other data were not uniformly required by all units in the Pathology Department and were therefore not indicated on their forms. For example, some forms required such information as the name of Consultant while others did not.

A total of one thousand two hundred laboratory forms were analysed. All 1,200 forms required that the age and the names of the patients be filled. The names of the patients were filled on all forms. In 1,062 (88.5%), the Doctors filled in the ages of the patients, however, 138 (11.5%) did not fill in the ages of the patients. Also, for the gender of the patients, 1,164 (97.0%) forms did have the gender of the patients, 36 (3.0%) did not carry the gender of the patients. The dates on which the forms were filled were absent on 258 (21.5%) of forms. However, it was present on 942 (78.5%).

The diagnosis or clinical information was stated in 1,002 (83.5%), while 198 (16.5%) of all the forms did not contain such information. The nature of the specimen submitted to the laboratory was stated in 921 (89.0%), while it was not in 114 (11.0%) of 1,035 laboratory forms which required such information.

The hospital number for identifying patients was present in 792 (66.0%) and absent on 408 (34.0%) of forms.

Of the 1,200 laboratory forms, the names of the managing Consultants were not required on 132 forms. Of the remaining 1,068 forms, 798 (74.7%) had the names of the Consultants on them while 270 (25.3%) did not. Also, important were names and signatures of the requesting Doctors i.e. the Doctors who filled out the forms. 252 laboratory forms did not require the names of the Doctors on their forms. Of the remaining 948 which did, 801 (84.5%) had the names of the Doctors on them

while 147 (15.5%) did not. The Signatures of the requesting Doctors were also required on 1,053 forms only. Of these, 768 (72.9%) of the forms were signed while the remaining 285 (27.1%) were not.

The location (ward, Out- patient department) of the patient was indicated on 1,017 (90.4%) while 108 (9.6%) of 1,125 forms did indicate patients' location.

Table 1:

Criteria Total forms	Forms with criteria not filled	Forms with criteria filled
1. Patient infor mation		
Name of patient 1,200 (100%)	0(0%)	1,200 (100%)
Gender 1,200 (100%)	36 (3.0%)	1,200 (100%)
Age 1,200 (100%)	138 (11.5%)	1,062 (88.5%)
Location of patient 1,125 (100%)	108 (9.6%)	1,017 (90.4%)
Hospital number 1,200 (100%)	408 (34.0%)	792 (66.0%)
2. Clinician information		
Name of Consultant 1,068 (100%)	270 (25.5%)	798 (74.7%)
Name of requesting Doctor 948 (100%)	147 (15.5%)	801 (84.5%)
Signature of Doctor 1,053 (100%)	285 (27.1%)	768 (72.9%)
3. Clinical information		
Diagnosis 1,200 (100%)	198 (16.5%)	1,002 (83.5%)
4. Specimen information		
Date of investigation 1,200 (100%)	258 (21.5%)	942 (78.5%)
Nature of specimen 1,035 (100%)	114 (11.0%)	921(89.0%)
Required investigation 1,200 (100%)	0(0%)	1,200 (100%)

DISCUSSION

The use of computers and automated equipment in the Laboratories has reduced errors in the analysis of specimen. However, errors could occur during pre-analytic process[2]. The pre- analytic phase is mostly outside the control of the laboratory and is mainly dependent on the Clinician who is responsible for completing the laboratory request forms. Wrong details or incomplete information are known to be responsible for certain errors in diagnosis. As simple as it appears to be, these omissions are common and greatly compromise the proper management and safety of the patient. Sometimes, laboratory forms are filled with hand writings that are poorly legible and inappropriate abbreviations are often used. In spite of this, a lot of efforts have previously been directed at investigating analytic errors without equal attention on the pre- analytic phase[2]. Consequently studies evaluating the pre- analytic phase are uncommon [3].

Our study reveals that of the 1,200 laboratory forms evaluated; only the names of the patients and the investigation requested for were filled out in all the forms. Other studies appear to agree with our findings[4,5, 7]. In their various studies, Adegoke and Idowu[6] noted that all the forms analysed had the names of the patients properly filled. The names of the patient and the requested investigations seem to be the most basic information. Of course, the patient's name is the first tool of identification and must not be omitted. An omission of the patient's name clearly makes the requested investigation useless. Oladiende et al [8] also observed that all request forms had the name of the patients; in addition, in their study, the name of the attending Physician was also included on all forms. Our study reveals that all other parameters were not fully completed on the request forms by the Clinicians.

The age and gender of the patients were not given in 11.5% and 3.0% of forms filled. This is similar to findings by other studies [4,9]. However, Oladiende and his colleagues observed that the age of the patients were either absent or inappropriately filled in 43% of forms they analysed. This appears to be rather high. The importance of filling in the age of a patient on the laboratory request form cannot be overemphasized. Several disease conditions are peculiar in certain age groups. Also, certain laboratory indices are also age dependent.

The location of the patient was absent in 9.6% of our analysed forms. This is similar to others but significantly lower than the 20.1% obtained by Oladiende and his group.

In our study, we observed that 2.5% of forms did not have the names of the attending Consultant, 15.5% did not have the names of

the requesting Doctor and 27.1% of forms did not carry the signatures of the requesting Doctor. This is similar to other reports from Nigeria[6], although Oladiende and his colleagues reported that all forms were duly signed by the requesting Doctor. Often, results are sent to the wrong Doctor because such forms have not been properly filled by the requesting Doctors.

The tentative diagnosis or other clinical details were not entered in 16.5% of the forms we evaluated. This finding is similar to those of Nutt and Erasmus[1] in South Africa .This is much higher than those reported by Oladiende and colleagues in Nigeria and Nakleh and Zarbo[10] in the United States of America.

The investigation requested for was filled in all forms we evaluated. We found out from other studies that the pattern was not too different; although none of these other studies recorded a 100% rate like we observed in our study.

In our study 21.5% of the forms did not have the date of request while 11.0% of the forms did not state the nature of the specimen. These error rates are also much higher than those from other studies. It is important that the nature of the specimen be clearly stated on the forms in addition to the investigations requested by the Clinician. This assists in proper handling of the samples and avoids any confusion that could arise.

CONCLUSION;

In conclusion, we have observed that Clinicians do not always properly complete laboratory investigation forms. We noticed that only the patients' names and the investigations requested were filled out on all forms. All other criteria on the laboratory request forms were not fully completed. The gaps observed in this study are not an acceptable practice. We therefore recommend that all Clinicians to make efforts at properly filling laboratory request forms as this also forms part of our care for our patients.

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