

# COMPLETENESS AND ADEQUACY OF CLINICAL AND DEMOGRAPHIC INFORMATION IN NON- GYNAECOLOGIC SURGICAL PATHOLOGY REQUISITION FORMS: AN ANALYSIS OF 1046 CASES.

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## ABSTRACT

**BACKGROUND:** An important cornerstone in health care delivery is the field of surgical pathology and one of its major aims is to provide a complete, precise and comprehensive diagnosis within a short period of time. In achieving this, the clinician needs to properly fill a surgical pathology requisition form.

**METHOD:** All the consecutive requisition forms from January 1, 2018 to April 30, 2018, totaling 1046 were evaluated for completeness of the information. The requesting clinicians were unaware and cytologic smears were excluded. Patient confidentiality was maintained as no names were recorded. All the Information on the forms was recorded as being present or absent. Analysis was done using the Statistical Package for Social Science version 20.

**RESULTS:** Altogether 1046 forms were evaluated and (100%) of the sample population bore the surnames and first names. Ages were recorded in 93.7%. Similarly, 68.2% of the forms did not bear the hospital number. Clinical summary and date of request were absent in 42.9% and 35.4% of the forms respectively. Clinicians name/ signature and investigation required were absent in 25.1% and 21.1% of the forms respectively. Overall, 77.6% of information was provided while 22.4% not provided.

**CONCLUSION:** The names were completely filled in all the requisition forms. Others were incompletely filled. These findings should be communicated to Clinicians and the recurring attitude of allowing House Officers to fill the requisition forms should be discouraged. Efforts should also be made to let Clinicians appreciate the importance of good clinical information since this determines to a large extent the output of laboratory results.

**KEYWORDS:** Surgical pathology, requisite form, laboratory result.

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## INTRODUCTION

An important cornerstone in health care delivery is the field of surgical pathology and one of its major aims is to provide a complete, precise and comprehensive diagnosis within a short period of time. In achieving this, the clinician needs to properly fill a surgical pathology requisition form.

Insufficient information or mistake arising from the process of filling out this request form could have a significant and major impact on the quality of laboratory output and, ultimately, on the patient's treatment outcome or safety.<sup>1,2</sup>

Generally, the practice of laboratory medicine has been divided into three phases namely; the pre-analytical, analytical and post analytical phases.<sup>3-4</sup>

Scientific studies have shown that most errors (50-70%) occur in the pre-analytical phase while the analytical and post analytical phases constitute 10% and 15% respectively. Thus the pre and post-analytical which lie entirely outside of the control of the laboratory constitute approximately 93% of the total laboratory errors.<sup>5-7</sup> These days, pre analytical phase is now recognized as the most vulnerable part of the total testing process.<sup>8</sup>

Several studies in surgical pathology have also reiterated that most failures occur in the pre analytical and post analytical segment, the first being more prone to errors.<sup>9-10</sup> The uniqueness of this phase is that it can influence and affect the analytical and post analytical phases thus making it a critical step.

Most common pre-analytical errors are incomplete or misleading clinical information, wrong clinical procedure, container mislabeling, wrong fixative and poor preservation.<sup>11</sup> Others

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include requisition forms not bearing the names and signature of the physicians, forms not bearing clinical summary as well as the location of the patient on the ward in cases where patients are hospitalized.

To the best of our knowledge, most of the documented studies focused mainly on the analytical and post-analytical phases in histopathology. Makary et al<sup>12</sup> and Nakhleh et al<sup>13</sup> in the US looked at surgical specimen identification, lost specimen, mislabeled and unsuitable specimens. Similar work was also done by Burton et al in Sheffield, UK<sup>14</sup> where clinical details were not provided in 6.1%. There is a strong perception among Histopathologists that Clinicians do not supply adequate information when filling out requisition forms. The objective of this study was to determine the frequency of completeness and adequacy of filled surgical pathology requisition forms when histopathologic examinations are requested.

## METHODOLOGY

Auditing of the requisition forms were carried out in the histopathology laboratory of the department of pathology and forensic medicine of the institution. This is a tertiary health care centre which serves the entire and the neighboring states and has 544 beds. Prior to the auditing, ethical approval from the institution's ethical committee was sought for and obtained.

All the consecutive requisition forms sent to the department from January 1, 2018 to April 30, 2018 and totaling 1046 were evaluated for completeness of the information. The requesting clinicians were unaware and cytologic smears were excluded. Patient confidentiality was maintained as no names were recorded. Information sought for included (demography): name, other names, date of birth, age, hospital number and clinical information which such as clinical summary, clinical diagnosis, clinician's name and date of request.

The information provided in each form was recorded in a spread sheet and all analysed with SPSS statistical package for social science version 20. The data generated were then presented in frequency distribution tables to summarize the information.

## RESULT

Altogether 1046 forms were evaluated. As regards demographic information, Table 1 shows that 100% of the sample population bore the surnames as well as the other names. Although, dates of births were not recorded in 88.3% of the forms, the ages were recorded in 93.7%. It was also observed that 68.2% of the forms did not bear the hospital number.

**Table 1: showing the proportion of demographic information completed**

Parameter	Completed n (%)	Not completed n (%)
Surname	1046 (100.0)	0 (0.0)
Other name	1046 (100.0)	0 (0.0)
Date of birth	122 (11.7)	924 (88.3)
Age	1012 (96.7)	34 (3.3)
Gender	1044 (99.8)	2 (0.2)
Hospital number	400 (38.2)	646 (61.8)
Overall	<b>(74.4)</b>	<b>(25.6)</b>

Table 2 shows the information on the clinical summary and date of request were absent in 42.9% and 35.4% of the forms respectively. Similarly, Clinicians name/ signature and test required were absent in 25.1% and 21.1% of the forms respectively. Overall, 77.6% of information was provided while 22.4% not provided. See Table 3.

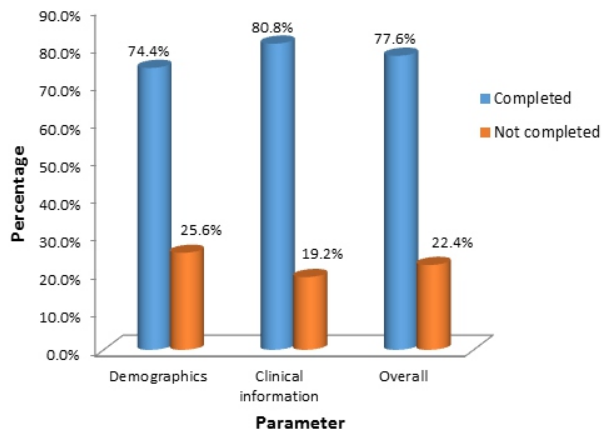
**Table 2: Showing the proportion of clinical information completed**

Parameter	Completed n (%)	Not completed n (%)
Clinical summary	597 (57.1)	449 (42.9)
Diagnosis (clinical)	1037 (99.1)	9 (0.9)
Nature of specimen	995 (95.1)	51 (4.9)
Hospital ward/clinic	1000 (95.6)	46 (4.4)
Date of request	676 (64.6)	370 (35.4)
Test required	825 (78.9)	221 (21.1)
Clinician's name/signature	783 (74.9)	263 (25.1)
Overall	<b>(80.8)</b>	<b>(19.2)</b>

**Table 3: Comparing the demographics with clinical information**

Parameter	Completed (%)	Not completed (%)
Demographics	(74.4%)	(25.6%)
Clinical information	(80.8%)	(19.2%)
Overall	<b>(77.6%)</b>	<b>(22.4%)</b>

**Figure 1: Showing the comparison of the percentage with the parameters.**



## DISCUSSION

An emerging significant part of a standard medical practice in the last hundred years is the laboratory diagnosis. This has been recognized as an essential tool not only for diagnosis and monitoring of disease but also for prevention, risk stratification and therapeutic monitoring.<sup>15</sup>

Detailed demographic information helps in identifying the patient and allows correlation with previous investigations. A well written statement of the nature or type of the specimen helps to avoid identification errors. Knowledge of the test required directs the sample to the appropriate laboratory. Similarly, adequate clinical information will exclude irrelevant tests and subsequently inappropriate investigations could be declined.<sup>16</sup> Good clinical summary calls for the use of special staining techniques, and permits the pathologist to direct its report to the clinical needs. For example, a renal biopsy for immunofluorescence may be erroneously processed for another test if adequate information is not given. In addition, details from the requesting Clinician are invaluable and allow for additional information to be sought. Failure to provide such information may impede the diagnostic process and might lead to delays in reporting.<sup>17</sup>

The aim of this work was to look at the adequacy and completeness of requisition forms filled by Clinicians. Overall, in this study, the only information that appeared in all request forms was the patient's name although; insignificant proportion had no gender and age information. These represent 0.2% and 3.3% respectively. This finding is similar to the works of Burton JL et al<sup>14</sup> and Edeghonhgon in Ghana et al<sup>18</sup> in which the

name was the only information that appeared on all requests. In this study, approximately two-thirds of the study population bore no hospital numbers. These further compounds the problems where contact information of the requesting Physician is absent on the forms. In these cases it becomes very difficult to seek for details information either on the clinical summary or for additional investigation that might be required. In the same vein, clinical summary was not written in 42.9%. This is much higher than previously high figure of Sharif MA et al in Pakistan who reported a figure of 36%<sup>19</sup> and 2.4% and 6.1% by Nakhleh<sup>16</sup> and Burton<sup>14</sup> in US and UK respectively. The very high figure in this study could be due to the assertion that the House Officers usually fill the request forms. Senior Registrars and where not available the requesting Physicians are better placed to fill the form appropriately.

Provisional diagnoses and wards where patients were being admitted were well stated in 99.1% and 95.1% of the requisition forms respectively. This finding is an improvement over a similar previously done study in 2011 in Ghana where 52.2% of the forms did not bear the wards or place where patients were admitted.

## CONCLUSION

This study has shown that only the names were completely filled in all the requisition forms. Two-thirds had no hospital number and approximately only half of the forms provided the clinical summary. These findings should be communicated to Clinicians and the recurring attitude of allowing House Officers to fill the requisition forms should be discouraged. Efforts should also be made to let Clinicians appreciate the importance of good clinical information since this determines to a large extent the output of laboratory results.

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Nil

### Conflicts of interest

There are no conflicts of interest

### Author's contribution

SSS is a Senior Lecturer and Consultant Pathologist who was responsible for the conceptualization, design of the study and did the literature search. FFA is an Associate Professor

who contributed to the literature search and did the statistical analysis. SDA is a Lecturer 1 who retrieved the data from the achieve while JOO is a Professor who did the critical review of the article for intellectual content.

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