



Audit of Histopathology Request Forms in a Teaching Hospital: Assessing the Adequacy of Clinician-Provided Information for Diagnosis

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Abstract

Context: The laboratory request form is the first contact a patient has with the laboratory and it is where important information about the patient is required by the pathologist to make their input in the management of the patient. Insufficient patient information can lead to delay in issuing pathology reports and could be a source of diagnostic error.

Objective: The study aimed to evaluate the adequacy of information on the request forms accompanying histopathology samples submitted to the Department of Morbid Anatomy and Histopathology, LAUTECH Teaching Hospital, Ogbomoso, Nigeria.

Settings and Design: This was a retrospective study in the Department of Morbid Anatomy and Histopathology, LAUTECH Teaching Hospital, Ogbomoso, Nigeria.

Methods and Materials: There was a standardized histopathology request form that all the departments across the hospital used to send their requests for histopathological examination. Each request form was assessed for the presence and completeness of the necessary items in the forms.

Statistical analysis used: Data obtained was analysed using both Microsoft Excel and Statistical Package for Social Sciences 23.0 (SPSS version 23.0). Results were presented in tables.

Results: Most of the specimens received were breast tissues (22.8%). Most requests were from the surgery department accounting for 57.0%. Doctor's contact number was the least completed information (74.4% missing). Patient contact numbers were missing in 45.8% of requests made. Clinical information was not provided in 11% of the request forms. In 83.2% of the forms, clinical information provided was not adequate. None of the request forms contained all the necessary information required for histopathological diagnosis. There was a significant statistical association between nature of specimen and key variables like contact number of clinicians, clinical information and adequacy of clinical information with p-value of 0.05.

Conclusion: This study showed clinicians did not supply adequate information in most of their requests for histopathology services. There is need to sensitize clinicians on importance of providing adequate

information in histopathology request forms.

Keywords: Adequate, clinical information, quality, request form, histopathology

Key Messages: There is a paucity of information supplied by clinicians in requesting for histopathology services. In addressing this

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problem, clinicians need re-orientation and sensitization on clinical importance of providing adequate information in histopathology request forms.

Introduction

The laboratory request form is the first contact a patient has with the laboratory and it is where important information about the patient is required by the pathologist to make their input in the management of the patient.¹ Insufficient patient information can lead to the pathologist not having enough details to make a diagnosis and also not having enough physician details necessary to contact the relevant managing team. This can ultimately lead to delay in turnaround time (TAT) and ultimately affects the quality of the histopathologic report generated.² Quality encompasses timely-done and well-elaborated reporting with diagnostic accuracy. A timely-reported and accurate histopathologic report can help the treating physician carry out a definitive management plan on time.³

Historically, laboratory quality assessment focused on the accuracy of the analytical phase of specimen processing. However, with advancements in diagnostic technology, errors in the analytical phase have significantly decreased, shifting attention to pre-analytical factors as a major source of laboratory errors.^{4,5} The pre-analytical phase is now recognized as the most critical stage affecting the quality and efficiency of histopathological processing.⁶ Completion of request form is an important element of pre-analytical phase.

Insufficient, inaccurate, and illegible information in these request forms has been associated with pre-analytical errors. It has even been reported in a study that up to 10% of the samples received in the pathology laboratories were not accompanied by their request forms.² Such errors could happen because the requesting clinicians usually underestimate their vital role in the pre-analytical quality assurance of the diagnostic procedures.⁴ Since histopathologists do not see patients personally, they are greatly dependent on complete and detailed patient information on the request forms that accompany the histopathological specimens for making an accurate diagnosis and some studies done in the past have highlighted this

pattern of incomplete patient and clinical details.^{4,7,8,9} International best practices emphasize the need for standardized and well-structured request forms to enhance diagnostic accuracy and patient safety.^{4,5} Missing clinician contact details, in particular, can impede timely communication regarding critical findings, delaying interventions that could improve patient outcomes.⁶ In view of these concerns, the study aimed to evaluate the adequacy of information on the request forms accompanying histopathology samples submitted to the Department of Morbid Anatomy and Histopathology of a teaching hospital.

Methods and materials

This was a retrospective study in the Department of Morbid Anatomy and Histopathology of a teaching hospital in Nigeria. The hospital is one of the referral hospitals in the Oyo State, South West, Nigeria and has broad specialty and subspecialty departments. There is a standardized histopathology request form that all the departments across the hospital used to send their requests for histopathological diagnosis.

We included 500 consecutive requests made in the year 2019. Hardcopies of these requests were retrieved from the laboratory archive. Each request form was assessed for the presence and completeness of the following items: age, gender, address, hospital number, tribe, occupation, contact number, relevant clinical information, provisional or differential diagnosis, and the full name and contact number of the requesting clinicians. The request forms were also categorized into major departments and organ systems.

To minimize inter-observer variability in evaluating the adequacy of clinical information, a standardized assessment checklist was used, and two independent pathologists assessed the forms. Discrepancies were resolved through consensus. Forms that were missing entirely from the archive or were too illegible for data extraction were excluded from this study.

The data obtained was analyzed using Microsoft Excel and Statistical Package for the Social Sciences (SPSS) software (IBM. SPSS statistics for Windows. Version 23.0. Armonk, NY: IBM). Chi-squared test was used to test relationship between categorical variable. P-value of less than 0.05 was considered to be statistically significant. Results

obtained were presented in tables and charts. The study was conducted according to the Helsinki Declaration. Patients' and the requesting providers' confidentiality were maintained. Ethical clearance was obtained from the Ethical Review Committee of the hospital with protocol number LTH/OGB/EC/2023/419.

Results

The histopathological request forms coming from other hospitals outside the study centre termed "outside" which accounted for 62 (12.4%) of all the request forms as shown in Figure 1.

Table 1: Frequency of missing information in histopathology request forms analyzed

Form information	Frequency (missing information)
Patients' Age identifiers	11 (2.2%)
Sex	1 (0.2%)
Hospital number	194 (38.8%)
Address	213 (42.6%)
Phone no	229 (45.8%)
Tribe	45 (9.0%)
Occupation	221 (44.2%)
Clinical details	
Nature of specimen	5 (1.0%)
Clinical information	55 (11.0%)
Adequacy of clinical information	416 (83.2%)
Clinical diagnosis	35 (7.0%)
Doctors' details	
Name	182 (36.4%)
Phone number	372 (74.4%)
Signature	331 (66.2%)

Table 2: Distribution of missing information in request forms according to name of facilities

	LTH facilities	Outside facilities	P-value
Patients' identifiers			
Age	8(72.7%)	3(27.3%)	.130
Sex	1(100.0%)	0(0.0%)	.706
Hospital number	154(79.3%)	40(20.6%)	<.001
Address	190(89.2%)	23(10.8%)	.349
Phone number	189(82.5%)	40(17.5%)	.002
Tribe	28(62.2%)	17(37.8%)	<.001
Occupation	197(89.1%)	24(10.9%)	.214
Clinical details			
Nature of specimen	5(100.0%)	0(0.0%)	.021
Clinical information {CI}	49(89.1%)	6(10.9%)	.722
ACI	362(87.0%)	54(13.0%)	.381
Diagnosis	24(68.6%)	11(31.4%)	<.001
Doctors' details			
Name	171(94.0%)	11(6.0)	.001
Phone number	333(89.5%)	39(10.5%)	.027
Signature	287(86.7%)	44(13.3%)	.396
Total	438(87.6%)	62(12.4%)	

LTH: LAUTECH Teaching Hospital

Completeness of Request Form Information

The patient's gender was the most completed information on the request forms (99.8%), followed by patient age (97.8%) and clinical diagnosis (93%). While clinical information was not provided in 11% of request forms, it was not adequate in 83.2% of the requests as shown in Table 1. The doctors' contact numbers were not included in 74.4% of forms. Also, patient contact numbers were missing in 45.8% of forms reviewed. Also, details like address, hospital number, and doctor's name were left out in about 42.6%, 38.8%, and 36.4% of forms respectively as shown in Table 1. The majority of request forms lacked essential clinical and contact information and none of the 500 request forms audited had all the requested information.

Departmental Distribution of Request Forms

Of the 500 histopathology request forms, most were received from various departments in the teaching hospital with frequency of 438(87.6%) with the surgery department accounting for 285(57.0%) requests received, followed by 94(18.8%) and 29 (5.8%) from obstetrics and gynaecology and internal medicine departments respectively as shown in Tables 2 and 3. The least number of request forms came from the family medicine department 1(0.2%). This shows the surgical department was the highest contributor of histopathology samples emphasizing its primary role in tissue-based diagnoses.

Distribution of Specimen Types

Table 4 shows that most of the specimens received were breast specimens (22.8%), followed by gynecological specimens (21.4%), and urological specimens (17.8%). Gastrointestinal, soft tissue, and skin specimens accounted for 14.4%, 8.0%, and 6.4% respectively. Ear, eye, nose, throat, thyroid, and salivary gland specimens were included in head and neck and accounted for 4.8% as shown in Table 4. This shows breast and gynaecological specimens were the most frequently submitted, reflecting the common surgical workload in the hospital, particularly for oncological and reproductive pathology.

Statistical Associations

A significant association was found between the

Table 3: Distribution of missing information in request forms across various departments

Department	ENT	FM	IM	O&G	O	Outside	P	S	P-Value
Patients' Details									
Age	0(0.0)	0(0.0)	1(9.1)	1(9.1)	0(0.0)	3(27.3)	0(0.0)	6(54.5)	.839
Sex	0(0.0)	0(0.0)	0(0.0)	0(0.0)	0(0.0)	0(0.0)	0(0.0)	1(100.0)	.998
Hospital Number	4(2.1)	1(0.5)	15(7.7)	39(20.1)	3(1.5)	40(20.6)	2(1.0)	90(46.4)	<.001
Address	3(1.4)	0(0.0)	19(8.9)	27(12.7)	3(1.4)	23(10.8)	5(2.3)	133(62.4)	.002
Phone Number	5(2.2)	0(0.0)	19(8.3)	28(12.2)	3(1.3)	40(17.5)	6(2.6)	128(55.9)	<.001
Tribe	1(2.2)	0(0.0)	2(4.4)	4(8.9)	0(0.0)	17(37.8)	0(0.0)	21(46.7)	<.001
Occupation	2(0.9)	0(0.0)	19(8.6)	28(12.7)	3(1.4)	24(10.9)	7(3.2)	138(62.4)	<.001
Clinical Details									
Specimen	0(0.0)	0(0.0)	0(0.0)	1(20.0)	0(0.0)	0(0.0)	0(0.0)	4(80.0)	.847
CI	3(5.5)	0(0.0)	0(0.0)	7(12.7)	1(1.8)	6(10.9)	1(1.8)	37(67.3)	.336
ACI	16(3.8)	1(0.2)	12(2.9)	77(18.5)	2(0.5)	54(13.0)	9(2.2)	245(58.9)	<.001
Diagnosis	1(2.9)	0(0.0)	1(2.9)	6(17.1)	1(2.9)	11(31.4)	1(2.9)	14(40.0)	.027
Doctor's Details									
Name	5(2.7)	0(0.0)	7(3.8)	35(19.2)	0(0.0)	11(6.0)	3(1.6)	121(66.5)	.009
Phone Number	8(2.2)	0(0.0)	26(7.0)	59(15.9)	2(0.5)	38(10.5)	8(2.2)	230(61.8)	<.001
Signature	14(4.2)	0(0.0)	14(4.2)	74(22.4)	2(0.6)	44(13.3)	4(1.2)	180(54.1%)	.005
Total	16(3.2)	1(0.2)	29(5.8)	94(18.8)	4(0.8)	62(12.4)	9(1.8)	285(57.0)	

*Values in parenthesis arc in percentage
 CI: Clinical information, ACI: Adequacy of clinical information, ENT: Ear, Nose and Throat, FM: Family Medicine, IM: Internal Medicine, O&G: Obstetrics and Gynaecology, O: Ophthalmology, P: Pediatrics, S: Surgery

Table 4: Distribution of missing information in request forms according to specimens

	BST	Breast	G	FGT	H&N	L	Other	Skin	U	P-value
Patients' details										
Age	1(9.1)	3(27.3)	2(18.2)	1(9.1)	0(0.0)	0(0.0)	1(9.1)	1(9.1)	2(18.2)	.445
Sex	0(0.0)	0(0.0)	0(0.0)	0(0.0)	0(0.0)	0(0.0)	0(0.0)	1(100)	0(0.0)	.066
Hosp no	14(7.2)	50(25.8)	22(11.3)	47(24.2)	9(4.6)	5(2.6)	4(2.1)	16(8.2)	27(13.9)	.177
Address	21(9.9)	52(24.4)	24(11.3)	29(13.6)	8(3.8)	9(4.2)	4(1.9)	20(9.4)	46(21.6)	.001
Phone	20(8.7)	54(23.6)	31(13.5)	37(16.2)	12(5.2)	9(3.9)	4(1.7)	20(8.7)	42(18.3)	.168
Tribe	7(15.6)	18(40.0)	3(6.7)	6(13.3)	0(0.0)	3(6.7)	2(4.4)	3(6.7)	3(6.7)	.001
Occupation	20(9.0)	55(24.9)	26(11.8)	32(14.5)	8(3.6)	7(3.2)	4(1.8)	20(9.0)	49(22.9)	.003
Clinical details										
Specimen	0(0.0)	0(0.0)	0(0.0)	0(0.0)	0(0.0)	0(0.0)	5(100.0)	0(0.0)	0(0.0)	<.001
CI	6(10.9)	6(10.9)	2(3.6)	8(14.5)	3(5.5)	3(5.5)	0(0.0)	0(0.0)	27(49.1)	<.001
ACI	33(7.9)	104(25.0)	62(14.9)	91(21.9)	21(5.0)	14(3.4)	5(1.2)	15(3.6)	71(17.1)	<.001
Diagnosis	3(8.6)	13(37.1)	2(5.7)	7(20.0)	1(2.9)	1(2.9)	1(2.9)	1(2.9)	6(17.1)	.501
Doctor's details										
Name	16(8.8)	38(20.9)	28(15.4)	39(21.4)	9(4.9)	7(3.8)	3(1.6)	9(4.9)	33(18.1)	.951
Phone number	30(8.1)	86(23.1)	51(13.7)	67(18.0)	17(4.6)	13(3.5)	6(1.6)	28(7.5)	74(19.9)	.026
Signature	27(8.2)	65(19.6)	53(16.0)	85(25.7)	18(5.4)	10(3.0)	3(0.9)	15(4.5)	55(16.6)	.005
Total	40(8)	114(22.8)	72(14.4)	107(21.4)	24(4.8)	16(3.2)	6(1.2)	32(6.4)	89(17.8)	

*Values in parenthesis arc in percentage
 CI: Clinical information, ACI: Adequacy of clinical information, BST: Bone and soft tissue, G: Gastrointestinal, FGT: Female genital tract, H&N: Head and Neck, L: Lymphoreticular, U: Urology

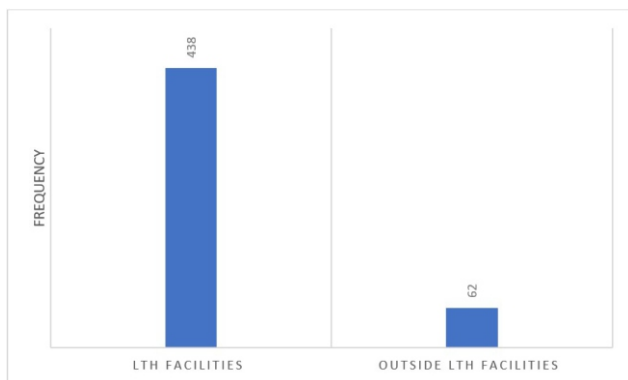


Figure I: Bar chart showing distribution of histopathology cases seen within and outside LTH facility.

LTH: LAUTECH Teaching Hospital

facility making the request and variables such as hospital number, patient phone number, tribe, nature of specimen, clinical diagnosis, name of requesting doctor, and doctor's phone number ($p < 0.05$) (Table 2).

Similarly, the department submitting the request was significantly associated with variables including hospital number, patient address, phone number, tribe, adequacy of clinical information, requesting doctor's name, contact number, and signature ($p < 0.05$) (Table 3).

Furthermore, significant associations were also observed between specimen type and variables such as address, tribe, nature of specimen, clinical information, adequacy of clinical details, requesting doctor's phone number, and signature ($p < 0.05$) (Table 4).

These statistical associations highlight systemic gaps in request form completion, particularly in clinician and patient contact details, which vary by department and specimen type.

Discussion

Pathology request form is a form of a referral note to convey the relevant information about the patient to the pathologist. The information that needs to be included in the request forms are

the biodata, nature of specimen, clinical information, and the details of requesting doctors among others. This information guides pathologists in making accurate histopathological diagnosis. Our study showed that none of the request form contained all the required information required for proper evaluation of histopathology slides. We observed age and gender of the patients were not given in 2.2% and 0.2% of forms filled. Our finding was lower than what was reported by Alagoa and Udoye with 11.5% and 3.0% of forms not containing the age and gender of patients respectively.¹⁰ The importance of filling in the age of a patient on the laboratory request form is vital for accurate diagnosis as some diseases are peculiar in

certain age groups.

Residential area or address, tribe and occupation are vital information that can help to understand epidemiology of some diseases. This information may also point to occupational and environmental risks factors associated with certain diseases. In our study, address was omitted in 42.6% of request forms that we reviewed. Our finding was higher than the observation by Ohayi et al.¹¹ More so, occupation of patients was omitted in 44.2% of reviewed forms. Our finding was lower than observation in a similar study by Ohayi et al.¹¹

The hospital number which is sometimes used to trace patient records to extract clinical information and diagnosis was also found to be absent in 38.8% of all request forms received during this time frame. Our finding was higher than what was published by Uchendu JO et al (8.3%) but lower than what was reported by Forae and Obaseki (54.2%).^{7,12} Lack of hospital number makes it more difficult to have access to patients' clinical details. Though this method of using the hospital number to trace patient details and clinical information is time-wasting, as it and may contribute to increasing the turn-around time of patient results. A study by Ferrara et al. shows that this may be the only option available which further underscores the importance of completing the hospital number in our hospital setting.¹³

In this study, patient contact number was omitted in 45.8% of request forms. This finding was higher than what obtained by Abbasi et al (6.18%).¹⁴ Importance of phone number in digital era should not be under-estimated. It is an important means of contacting the patient directly in case additional information is needed concerning their medical history or any missing details on the request form. In some cases, pathologists communicate to patients to relay important histopathology results or on any delays in getting their results with a view to allaying their fears and anxiety.

Furthermore, all forms should have the patient's clinical details which might include anatomical location and description of specimens, surgical or endoscopic findings, imaging results, relevant laboratory investigations, diagnosis and differential diagnosis as necessary. This is to help the histopathologists have an insight into clinicopathological basis of diseases. Appropriate

and detailed clinical information also guide pathologists to streamline their histopathologic reports. In our study, the nature of specimen was omitted in 1% of the forms reviewed. Our finding was lower than what were reported by Abbasi et al. and Alagoa et al.^{10,14} Not knowing tissue or organ could be a source of fatal error in histopathology as the nature of specimen determines how tissue should be processed and guide pathologists on to make diagnosis and write accurate report.

It was found that 11% and 7% respectively had no clinical information and diagnosis which was less than what was found in the study by Abbasi et al. which reported an absence of a clinical history of 19.95% and a differential diagnosis of 17.4%.¹⁴ Similarly, in another study by Nakhleh and Zarbo, errors due to missing clinical information accounted for 77% of all identification and accessioning deficiencies in the surgical pathology lab out of which, lack of clinical information on request forms accounted for most of the deficiencies (40%).¹⁵ We also found that clinical information was not adequate in 83.2% of requests. Adequacy of clinical information was determined by lack of relevant clinical information which we could aid pathologists in making appropriate diagnosis.¹³ Request forms without relevant clinical history, examination findings, laboratory or imaging findings were determined to have inadequate clinical information.

The inadequacies were different among different departments with request forms from internal medicine being more completed than those from the surgery department which was in contrast to the study done by Abbasi et al. who found that request forms from surgeons were filled in more adequately than those from internal medicine.¹⁴ This contrast could be due to fewer specimens received from internal medicine compared to those from the surgery department. We also observed the request forms coming from private "outside" facilities had a paucity of information. This underscore poor standard of care in private hospitals in the country as there was no way to ascertain if those request forms were actually filled by qualified medical doctors. Atanda et al. also observed that this kind of omission reflected the practice of poor record keeping in private practice.⁹

Skin specimens showed that clinical information

was provided in all of the cases studied. Urological specimens were the least with clinical information and had none in 27 of the 89 forms audited. Where the request forms had some clinical information, we observed that clinical information was not adequate. Clinical information is not the same for all specimen. For example, dermatopathology cases usually require detailed differential diagnosis but rarely radiologic findings. Some pathologies of head, neck, bone, soft tissue, respiratory organs and gastrointestinal system may require imaging findings if available.¹⁴ Request forms for evaluation of prostatic tissue should contain serum level of prostatic specific antigen as indicated by Popoola et al.⁸

Furthermore, the name of the requesting clinician was not supplied in 36.4% of all forms studied. Our finding was higher than the observation made by Alagoa and Udoe who reported the name of requesting doctor was not included in 15.5% of the request forms. The ophthalmology department stood out in this regard as the only department that provided the physician's name in all cases reviewed. The requesting physician's name may be the only contact the histopathology department has with the medical or surgical team and it might be the only link in getting the clinical information needed for proper histopathological evaluation of specimens on time. Ironically, this might require the pathologists to physically trace physicians by asking around for their contact details just to ensure patients receive the quality care they intended to get. The doctor's contact number was the least completed information (74.4% missing). Abbasi et al. also observed that most of the request forms lacked contact number of the requesting doctor.¹⁴ Interestingly, in 50% of requests from both surgical specialties like Ear, Nose and Throat(ENT) and Ophthalmology had no contact information of clinicians was available compared to 26(89.7%), 59(62.8%), 8(88.9%), 230(80.7%) for Internal medicine, Obstetrics and gynaecology, Paediatrics and Surgery departments respectively. Also, histopathological forms coming from facilities outside the hospital lacked doctor's contact numbers in majority of the cases (39 out of 62) of the cases which is interesting considering the fact that most of these places are a distance away from the teaching hospital and would require an extra effort

to be able to locate the managing physicians in order to obtain further and reliable clinical information to support a histopathological diagnosis.

The use of a standard histopathology form in our hospital is to alleviate the burden of getting details from prescription forms. However, we observed that continuation sheets, and forms for radiology, microbiology, chemical pathology, and hematology investigations were sometimes used to just write out the patient's name and whatever other details requesting physicians feel they need to include. The problem of inadequately filling these already standardized forms suggest that some doctors do not really understand the importance of filling histopathological forms correctly.

Traditionally, house officers and registrars fill most of the request forms and in most cases, they do not have complete knowledge of the patient's condition and may not have been at the operating room during the surgery. This may be the reason for some omissions observed in in this study. Just as noted by Atanda et al, the most appropriate person to fill these forms should be the care giver with the most information about the patient's condition.⁹ Also, since the histopathology report is as good as the amount of clinical information provided by the physicians on the request forms, we suggest that our histopathology request form should be reviewed and updated to add more spaces for details that would guide clinicians especially junior doctors in filling request forms. For example, the name of the consultant in charge of the patient, which in some instances may be different from the physician who filled the request form. In view of this, we propose that the name and contact details of both the consultant and the requesting doctors, should be featured on the form. Popoola et al. also made similar recommendation and this would enable laboratory staff to make enquiries from either of the two categories of physicians to update the information that is available.⁸ Other information that needed to be featured in the proposed form are parity as well as day of last menstrual period for women, relevant clinical signs, pertinent laboratory investigations, endoscopic or imaging findings as necessary, type of procedures, surgical findings, previous medical, herbal, or surgical intervention, previous histology or cytology report and anatomical location of the specimen among others.

The education of doctors on the importance of adequately completing histopathology request forms is crucial for improving laboratory quality.^{6,16} However, previous studies have shown mixed results regarding the effectiveness of clinician education. For instance, Abdullah et al. reported that a one-time educational intervention did not significantly improve form completion rates, which was attributed to poorly designed request forms in that setting.¹⁷ In contrast, Osegbe et al. demonstrated a significant improvement in form completion in a chemical pathology laboratory after sustained clinician education and increased interaction with laboratory physicians.¹⁸ These findings underscore the need for periodic audits, ongoing education, and continuous engagement between pathologists and clinicians to ensure sustained improvements in form completion.

In addition to clinician training, technological advancements have shown promise in improving the accuracy and completeness of request forms. In Saudi Arabia, the use of electronic-based request forms significantly reduced errors compared to paper-based forms.¹⁹ Other recommendations include tracking systems integrated with the Laboratory Information System (LIS) to improve specimen collection, accessioning, and overall quality assurance.²⁰ Automated form validation could also be implemented, where electronic systems prompt clinicians to complete missing essential fields before submission.

Conclusions and Recommendations

Our study identified gaps in the completion of pathology request forms, with missing clinical and contact details being common. These inadequacies may negatively impact the timeliness of histopathology diagnosis and patient safety by delaying communication between pathologists and treating physicians.

To address these issues, we recommend:

1. Periodic clinician education and engagement to reinforce the importance of complete and accurate request form submission.
2. Redesigning request forms to improve clarity and ease of completion, incorporating mandatory fields for critical information.
3. Implementing electronic request systems with

built-in validation checks to prevent submission of incomplete forms.

4. Integrating tracking systems within LIS to enhance specimen management, tracking, and communication between clinicians and laboratory staff.
5. Future research to assess the direct impact of incomplete request forms on patient outcomes and diagnostic turnaround times.

By adopting these measures, pathology laboratories can enhance diagnostic efficiency, improve patient outcomes, and contribute to overall quality improvement in laboratory services.

Limitations

This study was limited to an academic medical centre, the findings may not represent practice in other setting. Another limitation of this study was our inability to assess and determine the effect of inadequate clinical information on accuracy and timeliness of histopathology diagnosis and implications on treatment outcome.

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