



## Original Article



## Current Status of Knowledge, Skill, and Attitude of Recent Medical Graduates Regarding Medicolegal Work in Lahore City

Zubia Iqbal<sup>1</sup>, Aimen Zain<sup>2</sup>, Tayyaba Amjad Mustafa<sup>1</sup>, Asiya Fazal<sup>1</sup>, Muhammad Hassan<sup>3</sup> and Muhammad Asif<sup>4\*</sup><sup>1</sup>Department of Forensic Medicine, Ameer-ud-Din Medical College, Postgraduate Medical Institute, Lahore General Hospital, Lahore, Pakistan<sup>2</sup>Akhtar Saeed Medical College, Rawalpindi, Pakistan<sup>3</sup>Department of Forensic Medicine, Abu Umara Medical and Dental College, Lahore, Pakistan<sup>4</sup>Department of Forensic Medicine, Sialkot Medical College, Sialkot, Pakistan

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Department of Forensic Medicine, Sialkot Medical College, Sialkot, Pakistan  
[sincerwithu@gmail.com](mailto:sincerwithu@gmail.com)Received Date: 12<sup>th</sup> September, 2025Revised Date: 31<sup>st</sup> October, 2025Acceptance Date: 18<sup>th</sup> November, 2025Published Date: 30<sup>th</sup> November, 2025

## ABSTRACT

Medicolegal responsibilities, including autopsy performance, injury documentation, and courtroom testimony, are essential components of clinical practice. In Pakistan, recent medical graduates often lack adequate preparation in these areas, raising concerns about their readiness for legal and ethical duties. **Objectives:** To assess the knowledge, skills, and attitudes of recent medical graduates in Lahore regarding medicolegal responsibilities, and to identify gaps to inform curriculum reform. **Methods:** This cross-sectional descriptive study was conducted from 1 January to 31 March 2025 in Lahore General Hospital, Lahore. A total of 394 medical graduates (within two years of graduation and having completed house jobs) were selected through stratified random sampling. A validated, self-administered questionnaire assessed knowledge, skills (self-reported), and attitudes (Likert-scale items). Data were analyzed using SPSS version 26.0 at a 95% confidence level. **Results:** Only 28% of participants demonstrated adequate knowledge ( $\geq 70\%$  score), with better performance in informed consent (71.1%) and death certification (62.9%), and poor understanding of sexual-assault protocols (20.6%) and injury documentation (17.5%). Just 15.2% felt confident performing medicolegal tasks, and only 12.2% had observed an autopsy. While 78% agreed that medicolegal competence is essential, only 26% felt adequately trained during medical school. Notably, 71% expressed interest in further training. Graduates from public institutions had slightly better knowledge and exposure. **Conclusions:** Recent medical graduates in Lahore exhibit significant gaps in medicolegal knowledge and practical readiness. Structured medicolegal education and practical exposure must be integrated into undergraduate curricula to ensure competent and legally accountable practice.

## INTRODUCTION

Medicolegal responsibilities such as autopsy performance, injury documentation, report writing, and legal proceedings are crucial aspects of clinical duties expected from new medical graduates. In Pakistan, despite the importance of these roles, the knowledge, practical competencies, and attitudes of young doctors toward medicolegal work are reported to be inadequate [1]. A study conducted in Lahore revealed that while most doctors acknowledged the importance of medical ethics, only 22%

showed interest in pursuing forensic specialties, and a significant portion lacked basic knowledge of medicolegal procedures [2]. Regular training to update the knowledge of medicolegal issues is necessary to ensure continuous improvement in healthcare delivery and administration of justice, including modules on consent, negligence, autopsies, and courtroom testimony [3]. To strengthen medicolegal capacity, the University of Health Sciences (UHS) Lahore recently introduced a one-month Certificate



in Medicolegal Examination for Medical Officers (MOs) and Women Medical Officers (WMOs) across Punjab [4]. Globally, studies have also reported similar deficiencies. In Italy, only 14% of medical students had observed autopsies or attended court proceedings, while in Saudi Arabia and Egypt, more than half were unfamiliar with legal reporting procedures [5-7]. Such global findings emphasize the universal challenge of integrating medicolegal competency into undergraduate medical training. Despite recent local initiatives, major gaps persist in medicolegal education and professional development. Professionalism, a core domain encompassing ethical and legal responsibilities, remains underemphasized in most medical curricula in Pakistan [8]. Studies indicate that medicolegal education receives limited hours, lacks structured assessments, and is often delivered without practical exposure [9]. Consequently, fresh graduates report deficiencies in communication, procedural skills, and confidence when handling real-world medicolegal cases [10]. Doctors are further required to comply with the regulations of the Pakistan Medical and Dental Council (PMDC) and the Punjab Healthcare Commission (PHC), both emphasizing ethical standards, documentation, and patient safety [11, 12]. Failure to meet these expectations may result in legal consequences, professional misconduct allegations, and even loss of licensure, highlighting the need for early medicolegal training. Given these challenges, the present study was undertaken with the aim of evaluating the current level of medicolegal competence among recent medical graduates in Lahore. Specifically, the study aims to assess their knowledge, skills, and attitudes toward medicolegal responsibilities, identify the educational and practical gaps in training, and provide evidence-based recommendations for curriculum enhancement and continuing professional development. Medicolegal competence is essential for medical graduates to ensure ethical practice, patient safety, and legal accountability. Despite its importance, recent graduates in Pakistan demonstrate inadequate knowledge, skills, and attitudes toward medicolegal responsibilities. This study aimed to assess the knowledge, skills, and attitudes of recent medical graduates in Lahore regarding medicolegal responsibilities and to identify gaps to inform curriculum reform.

## METHODS

This cross-sectional descriptive study was conducted from January to March 2025 in major teaching hospitals and medical colleges of Lahore, including Lahore General Hospital, Mayo Hospital, Jinnah Hospital, and Services Hospital. Ethical approval was obtained from the Institutional Review Board of Postgraduate Medical Institute, Lahore (Ref. No. 7255/PGMI/AMC). Participation

was voluntary, and confidentiality was strictly maintained. The study population consisted of recent medical graduates who had completed their degrees within the past two years, who had completed their house job and were employed or seeking employment in public or private healthcare institutions. The sample size of 394 participants was determined using Cochran's formula:  $n = Z^2 \times p \times (1-p) / d^2$ , where  $Z = 1.96$  (95% confidence level),  $p = 0.5$  (assumed prevalence of adequate knowledge), and  $d = 0.05$  (margin of error). Stratified random sampling ensured representation from different institutions and genders. Graduates unwilling to participate, or those who had received formal medicolegal or forensic training beyond the undergraduate level, were excluded. A structured, self-administered questionnaire was used, developed through literature review and expert consultation. It comprised three sections assessing: Knowledge: Multiple-choice items on laws, consent, documentation, and postmortem procedures. Skills: Self-assessment and case-based questions on practical competence. Attitude: Five-point Likert-scale items evaluating perception, confidence, and interest in medicolegal work. The questionnaire was adapted from previously validated instruments [13]. The total possible score ranged from 0 to 30; scores  $\geq 70\%$  were considered "adequate knowledge." Validity was confirmed through expert review (CVI = 0.87) and reliability through Cronbach's  $\alpha = 0.82$ . A pilot test on 30 participants (excluded from final analysis) ensured clarity and feasibility. Data were collected by trained data collectors after obtaining verbal informed consent. Data were analyzed using SPSS version 26.0 at a 95% confidence level.

## RESULTS

A total of 394 graduates participated. The mean age was  $25.3 \pm 1.2$  years. Among participants, 228 (58%) were female and 166 (42%) male. A majority (61%) graduated from public medical colleges and 39% from private institutions (Table 1).

**Table 1:** Demographic Characteristics of Participants (n=394)

Variables	Category / Unit	Frequency (n %) / Mean $\pm$ SD
Age	Years	25.3 $\pm$ 1.2
Gender	Female	228 (58%)
	Male	166 (42%)
Type of Institution	Public Medical College	240 (61%)
	Private Medical College	154 (39%)

\*"n (%)" indicates frequency and percentage; show the % symbol once at the top of the column only.

Only 28% (108) of participants demonstrated adequate knowledge ( $\geq 70\%$  score). The most familiar areas were informed consent (71.1%) and death certification (62.9%), while weaker areas included sexual-assault protocols

(20.6%) and injury documentation (17.5%) (Table 2).

**Table 2:** Knowledge of Medicolegal Topics Among Participants

Medicolegal Topic	Frequency (%)
Informed-Consent Procedures	280 (71.1%)
Death Certification	248 (62.9%)
Medicolegal Documentation of Injuries	69 (17.5%)
Sexual-Assault Case Protocol	81 (20.6%)
Police Information Handover (MLO Role)	114 (28.9%)
Legal Age of Consent and Liability	172 (43.7%)

Only 15.2% (60) of respondents felt confident performing medicolegal duties such as injury-report writing or court testimony. About 12.2% (48) had observed an autopsy, and fewer than 10% (38) had written any medicolegal report during their house job (Table 3).

**Table 3:** Self-Reported Skills Related to Medicolegal Practice

Medicolegal Topic	Frequency (%)
Confident in Writing Injury Reports	60 (15.2%)
Observed a Medicolegal Autopsy	48 (12.2%)
Attended Court Proceedings	22 (5.6%)
Wrote any Medicolegal Report	38 (9.6%)
Trained Formally in Medicolegal Procedures	51 (12.9%)

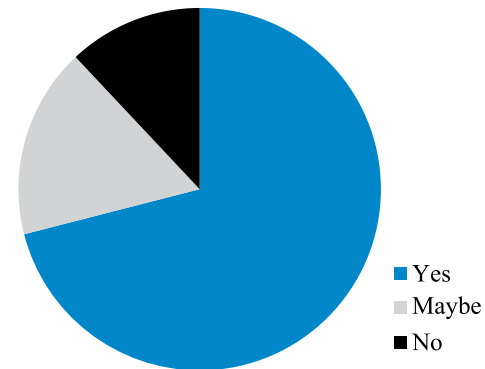
Regarding attitudes, 78% (307) agreed that medicolegal competence is essential for practice, while only 26% (103) felt adequately trained during medical school. About 71% (280) expressed interest in attending further training (Table 4).

**Table 4:** Attitudes Toward Medicolegal Education and Practice

Statement	Agree (%)	Neutral (%)	Disagree (%)
Medicolegal Competence is Essential	307 (78%)	59 (15%)	28 (7%)
The Undergraduate Curriculum Prepared me Adequately	103 (26%)	95 (24%)	196 (50%)
I Feel Confident Performing Medicolegal Duties	75 (19%)	130 (33%)	189 (48%)
I Would attend Medicolegal Workshops	280 (71%)	67 (17%)	47 (12%)
Medicolegal Work Should be a Compulsory In-House Job	252 (64%)	83 (21%)	59 (15%)

Graduates from public institutions showed higher mean knowledge scores (62.1%) compared to private ones (58.3%), though not statistically significant ( $p=0.08$ ). However, public graduates reported significantly greater practical exposure ( $p<0.05$ ) (Figure 1).

**Would you Attend a Workshop or Training Course in Medicolegal Work?**



**Figure 1:** Interest of Participants in Attending Medicolegal Training Workshops

## DISCUSSION

This study highlights a critical gap in the medicolegal preparedness of recent medical graduates in Lahore. Despite completing their house jobs, most participants lacked both knowledge and practical skills needed for core medicolegal duties. The demographic pattern shows a predominantly female cohort (58%) with a mean age of 25.3 years, similar to trends reported in South Asian medical institutions [9]. Inclusion of graduates from both public and private colleges provided a comprehensive understanding of institutional differences. Although public-sector graduates demonstrated slightly higher mean knowledge scores (62.1%) than private graduates (58.3%), this difference was not statistically significant ( $p=0.08$ ) [1]. However, exposure to medicolegal cases was significantly higher among public-sector graduates ( $p<0.05$ ), likely due to higher patient loads and more frequent legal referrals in government hospitals [14]. Overall, only 28% of respondents scored  $\geq 70\%$  in medicolegal knowledge, indicating inadequate understanding of essential concepts. While awareness of informed-consent procedures (71.1%) and death certification (62.9%) was relatively satisfactory, familiarity with injury documentation (17.5%) and sexual-assault protocols (20.6%) remained alarmingly low [10]. Comparable studies from Lahore and other regions of Pakistan report a similarly weak grasp of documentation and trauma assessment procedures among young doctors [15, 16]. Practical competence was even more limited: only 15.2% felt confident writing an injury report, fewer than 10% had completed a medicolegal document, 12.2% had observed an autopsy, and just 5.6% had attended court proceedings [1, 9, 11]. Literature demonstrates that even in structured international systems, practical exposure is insufficient unless supported by targeted training interventions. Evidence from burn-case documentation in Lahore also indicates recurrent errors linked to poor undergraduate training and lack of supervised practice.

Participants' attitudes, however, were encouraging. Most graduates acknowledged the importance of medicolegal work 78% agreed that medicolegal competence is essential, and 71% showed willingness to attend further training [16-19]. Despite this interest, only 26% believed their undergraduate curriculum adequately prepared them for real-world medicolegal duties. This aligns with previous findings that lecture-based instruction alone is ineffective for developing clinical reasoning and documentation skills in forensic medicine [20]. Collectively, the combination of poor practical exposure, inconsistent institutional opportunities, and strong learner motivation highlights an urgent need for curriculum reform. Short-term strategies such as certificate-based workshops, case-based learning, structured simulations, and courtroom observation sessions could immediately enhance competence. Long-term reforms should adopt international best practices, including formal medicolegal rotations, simulation-based training laboratories, supervised documentation, and standardized assessment of skill-based competencies.

The cross-sectional design limits the ability to establish causality between education or training and medicolegal competency. Additionally, reliance on self-administered questionnaires may introduce reporting bias and overestimation of actual skills and knowledge. Future longitudinal studies with objective assessments of practical skills are recommended to better evaluate medicolegal competence over time. Long-term reforms should adopt international best practices, including formal medicolegal rotations, simulation-based training laboratories, supervised documentation, and standardized assessment of skill-based competencies.

## CONCLUSIONS

Despite acknowledging the importance of medicolegal responsibilities, recent medical graduates in Lahore show critical deficiencies in both knowledge and practical preparedness. Immediate curriculum reforms, integrated training modules, and experiential learning are required to ensure that medical graduates can competently and confidently handle medicolegal responsibilities.

## Authors' Contribution

Conceptualization: ZI

Methodology: ZI, MA

Formal analysis: AF

Writing review and editing: AZ, TAM, MH

Review and Editing: ZI, AZ, TAM, AF, MH, MA

All authors approved the final manuscript and take responsibility for the integrity of the work

## Conflicts of Interest

All the authors declare no conflict of interest.

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