

## KNOWLEDGE AND ATTITUDE REGARDING MEDICOLEGAL ASPECTS OF HEALTHCARE IN THE CONTEXT OF THE NEWLY ENACTED CRIMINAL JUSTICE SYSTEM OF INDIA AMONG INTERNS AND JUNIOR DOCTORS

Biyabani Naushad Husain<sup>1</sup>, Rahil Shaikh<sup>2</sup>, Ashok Jiwane<sup>3</sup>, Umesh Kumar Choudhary<sup>4</sup>

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**Corresponding Author:**

**Dr. Biyabani Naushad Husain,**  
Email: dmaushadbiyabani08@gmail.com

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<sup>1</sup>Associate Professor, Department of Forensic Medicine and Toxicology, Hi-tech Medical College & Hospital, Rourkela, Odisha, India.

<sup>2</sup>Assistant Professor, Department of Community Medicine, CSMSS MCH, Chh. Sambhajinagar, Maharashtra, India.

<sup>3</sup>Assistant Professor, Department of Forensic Medicine, Datta Meghe Medical College, Nagpur, Maharashtra, India.

<sup>4</sup>Professor, Department of Forensic Medicine and Toxicology, American International Institute of Medical Sciences Udaipur, Rajasthan, India.

### ABSTRACT

**Background:** With the implementation of India's new criminal justice laws—Bharatiya Nyaya Sanhita (BNS), Bharatiya Nagarik Suraksha Sanhita (BNSS), and Bharatiya Sakshya Adhinyam (BSA)—on July 1, 2024, medical professionals face updated medico-legal responsibilities. Interns and junior doctors, being the first responders in clinical and emergency settings, must be legally aware to fulfill their roles effectively. The objective is to assess the knowledge and attitude of interns and junior doctors regarding medico-legal responsibilities in the context of the newly enacted criminal justice system. **Materials and Methods:** A cross-sectional questionnaire-based study was conducted among 112 participants (95 interns, 17 junior residents) at a tertiary care teaching hospital. The questionnaire included 11 knowledge-based and 6 attitude-based items related to medico-legal responsibilities and awareness related to BNS, BNSS, and BSA. Data were analyzed using descriptive statistics. **Result:** Knowledge scores were moderate to low. Awareness was good for informed consent (67.4%) and the legal transition from IPC to BNS (63.2%). Awareness was poor for Zero FIR (27.5%), POSH Act (28.2%), and passive euthanasia (18.6%). Only 38.4% knew the correct duration for medico-legal record preservation. Despite limited knowledge, attitudes were positive: 81.2% expressed concern about legal consequences due to inadequate training, 86.5% were willing to attend medico-legal CME sessions, and 72.3% believed the new laws increased their legal responsibilities. **Conclusion:** The study highlights a significant gap in medico-legal knowledge among early-career doctors despite a strong willingness to learn. Structured medico-legal training and regular CME programs are urgently needed to prepare clinicians for their expanded legal obligations under newly enacted criminal justice system of India.

## INTRODUCTION

The intersection between healthcare and law has become increasingly vital in clinical practice. Medical professionals—especially interns and junior doctors—are expected not only to deliver care but also to fulfill legal responsibilities involving injury certification, consent documentation, death reporting, and medico-legal case registration which they often encountered while dealing with patient care. Apart from routine medicolegal work, intern

and junior doctors should have basic knowledge about the laws related to medicolegal aspect of health care and recent amendments in laws related to health care. Several obligations have evolved significantly with the recent reform of India's criminal justice system, which came into effect on July 1, 2024.

This reform replaced three colonial-era laws—the Indian Penal Code (1860), Code of Criminal Procedure (1973), and Indian Evidence Act (1872)—with Bharatiya Nyaya Sanhita (BNS), Bharatiya

Nagarik Suraksha Sanhita (BNSS) and Bharatiya Sakshya Adhiniyam (BSA) respectively.<sup>[1]</sup>

The newly enacted laws prioritize justice over punishment and emphasize citizen rights. Several provisions under these laws directly affect healthcare professionals like BNSS Section 176(3) mandates forensic expert visits at all heinous crime scenes, Zero FIR, electronic complaint systems, and audio-visual (AV) recording of victim statements have become standard requirements, gender-neutral terminology has been introduced for sexual offences, MLC protocols, recordkeeping mandates, and legal responsibilities of physicians have been modernized.<sup>[1]</sup> So, the knowledge and awareness regarding these reforms are at most important particularly to the junior doctors and intern which will soon entered into medical practice .

Advancement in technology had made great impact on health delivery system. As per Bharatiya Sakshya adhiniyam 2023 {section 2(1) (e)}, the definition of “evidence” now includes electronic records produced before the court. Considering this provision of law, consent recorded by audio visual form is legally valid.<sup>[2]</sup>

Consent is a free and voluntary agreement or permission given for a specific act or purpose. Minimum age for consent to be valid is 12 years with fulfilment of criteria for valid consent and for the clinical autopsy consent from relatives required.<sup>[2]</sup>

POSH Act refer to the sexual harassment of women at workplace (prevention, prohibition and Redressal) and proper guidelines for preventing sexual harassment in the workplace which is applicable to both private and public sector.<sup>[3]</sup> Active euthanasia is illegal in India and crime under section 103 (1) of BNS2023. However, on January 2023, Supreme court of India had modified the guidelines about advance directives and withdrawal of life support. Thus, the passive euthanasia is legalized in India.<sup>[2,4]</sup> Regarding medical record keeping, every physician shall maintain the indoor medical records of patients for a period of 3 years from date of commencement of the treatment in a standard proforma laid down by the medical council of India.<sup>[5]</sup>

Despite the legal overhaul, there is currently no literature assessing the knowledge and preparedness of junior medical professionals under these new provisions. The need to understand whether frontline clinicians are ready to handle these responsibilities is urgent, given that interns and junior doctors are often the first to attend to medico-legal cases in emergency departments.

Historically, even under the older legal framework, several studies revealed widespread lack of medico-legal preparedness. Giri et al. (2010) found that 81% of interns were unaware of when deaths should be reported to police.<sup>[6]</sup> Kadu et al. (2016) noted that less than one-third of interns could identify the correct authority to conduct medico-legal autopsies.<sup>[7]</sup> Jambure et al. (2017) observed poor understanding of terms like HOTA, COPRA, and legal consent, especially in emergency cases.<sup>[8]</sup> Considerable

variations in the knowledge and practices of medico-legal aspects among healthcare professionals in India was found by Singh et al.<sup>[9]</sup>

A study by Reddy and Abhinandana (2023) revealed that 67% of junior doctors lacked clarity on the legal age of consent for physical examination and protocols for handling brought-dead cases.<sup>[10]</sup> Choudhary et al. (2022) reported that 99% of fresh graduates could not independently manage medico-legal cases, and 97% had never attended medico-legal training workshops.<sup>[11]</sup>

Additionally, a structured questionnaire-based study by Padmakumar and Palekakkara (2021), which assessed 120 medical graduates found only 20.8% knew the correct legal age for physical examination, 62.5% did not know the correct agency to notify in child sexual abuse cases, and a majority misunderstood laws related to euthanasia, dying declaration, and medical documentation. The study concluded that theoretical exposure in Forensic Medicine and Toxicology was inadequate for practical legal compliance.<sup>[12]</sup>

All these studies were conducted prior to the implementation of the new criminal codes, and none evaluate awareness regarding medicolegal aspect of clinical care in new criminal justice system of India. Given the legal, ethical, and practical implications, it becomes critical to evaluate the knowledge and attitude of today’s medical trainees with respect to these newly enacted laws.

#### **Objective:**

- To assess the knowledge and attitude regarding medico-legal responsibilities among interns and junior doctors in the context of the newly enacted Criminal Justice System.
- To assess the knowledge related to medicolegal aspect of clinical health care among intern and junior doctors.

## **MATERIALS AND METHODS**

**Study Design:** A cross-sectional observational study using a structured questionnaire format.

**Study Setting:** Hi-tech Medical College and Hospital Rourkela, Odisha, a tertiary care teaching hospital in India, including departments such as Medicine, Surgery, Obstetrics & Gynaecology, and Emergency.

**Study duration:** conducted from July 2024 to January 25.

**Study Population:** Interns (CRRIs) and Junior Residents (first-year postgraduate trainees) actively involved in clinical care.

**Sample Size:** A total of 107 participants were included in the study. The sample size was calculated using Epi 7™ info program, based on a 95% confidence interval and a 5% margin of error. Previous literature (Reddy et al) was taken into account.<sup>[6]</sup> The estimated sample size was 107 individuals.

### Inclusion Criteria

- Interns and junior doctors with  $\leq 3$  years of clinical experience.
- Willing to provide informed consent.

### Exclusion Criteria

- Senior residents or faculty.
- Participants who have completed certified medico-legal training.

### Data Collection Tool

A pre-tested structured questionnaire was developed based on existing studies on medico-legal awareness [2–8] and new provisions under BNS, BNSS, and BSA.<sup>[1]</sup> The questionnaire was formulated and carefully revised based on the minimal knowledge requirements for interns, postgraduates to handle Medicolegal cases which was discussed with subject experts. A pilot study was conducted among five post-graduate students and five interns to assess the validity and repeatability of the questionnaire, resulting in a Cronbach's alpha of 0.73. Data was collected by administering the pre-tested questionnaire, which consisted of two parts. The first part recorded demographic information parameters like age, gender and designation. The second part

consisted of 17 questions covering different aspects of medicolegal issues. The questions were classified into 2 groups which included part of Knowledge (containing 11 questions) and second about Attitude (containing 6 questions) regarding Medicolegal Aspects of Healthcare in the context of the newly enacted criminal justice system of India. Voluntary participation and anonymity were ensured.

**Ethical Considerations:** Approval from the Institutional Ethics Committee (IEC)

**Statistical Analysis:** The data obtained was entered into MS Excel and analysed. Numerical data was summarised using the mean and standard deviation, while categorical data were expressed as percentages.

## RESULTS

### 1. Participant Profile

A total of 112 participants were enrolled in this study, including 95 interns (84.8%) and 17 junior residents (15.2%), all of whom were actively involved in direct clinical care across major hospital departments.

**Table 1: Distribution of Study Participants by Gender and Designation (N=112)**

Gender	Frequency	Percentage
Male	68	60.7%
Female	44	39.3%
Designation	Frequency	Percentage
Intern	95	84.8%
Junior Resident	17	15.2%

Males formed the majority of participant in this study Interns formed the majority of the study population, reflecting their frequent involvement in medico-legal procedures at the bedside, especially in emergency settings.

### 2. Knowledge-Based Findings

The questionnaire included 11 knowledge-based questions addressing key medico-legal domains under India's newly enacted criminal laws. Overall awareness was found to be moderate to low.

**Table 2: Knowledge-Based Response Summary (N=112)**

Question No.	Knowledge-Based Item	% "Yes" Response
Q1	Minimum legal age for valid consent for physical examination	58.9%
Q2	Importance of informed consent in clinical practice	67.4%
Q3	Awareness of IPC/CrPC being replaced with BNS/BNSS/BSA	63.2%
Q4	AV recording requirement for sexual offence victim statements	46.8%
Q5	Meaning of 'Zero FIR' under BNSS	27.5%
Q6	Legally authorized personnel for medico-legal autopsy	59.8%
Q7	Minimum duration for preserving medico-legal records	38.4%
Q8	Consent requirement from relative for clinical autopsy	50.0%
Q9	Whom to inform when a 16-year-old sexual assault survivor presents	29.7%
Q10	Awareness of POSH Act	28.2%
Q11	Awareness that passive euthanasia is permitted in India	18.6%

The percentage of correct responses ranged from 18.6% to 67.4%. While awareness was relatively high for informed consent and legal transitions (Q2, Q3), significant deficiencies were seen for contemporary issues like Zero FIR, POSH Act, and passive euthanasia—each scoring below 30%. The mean correct response rate across all questions was

approximately 45%, indicating a critical gap in medico-legal knowledge among early-career doctors.

### 3. Attitude-Based Findings

Six attitude-related statements were assessed using a 5-point Likert scale. Results are summarized as the percentage of participants who responded with "Agree" or "Strongly Agree."

**Table 3: Attitude-Based Response Summary (N=112)**

Question No.	Attitude Statement	% Agreement or Concern
Q12	Confidence in documenting and managing medico-legal cases	58.0%
Q13	Awareness of procedural changes for sexual assault & unnatural death cases	37.5%
Q14	Preparedness to provide courtroom testimony	48.2%

Q15	Concern about facing legal consequences due to lack of training	81.2%
Q16	Willingness to attend CME/workshops on BNS, BNSS, and BSA	86.5%
Q17	Belief that medico-legal responsibilities have increased under the new laws	72.3%

While only 58.0% felt confident in medico-legal documentation, and just 48.2% felt ready to testify in court, there was strong concern (81.2%) about legal consequences due to lack of training. Encouragingly, 86.5% expressed willingness to attend CME programs, and 72.3% acknowledged that the new laws had increased their medico-legal responsibilities.

Overall Interpretation was that in Knowledge participants showed moderate understanding of basic medico-legal concepts, but awareness of recent legal changes—especially those impacting frontline decision-making—was low. The lowest awareness was noted for passive euthanasia and procedural duties for sexual assault survivors.

In Attitude despite knowledge deficits, the attitude toward improvement was strongly positive. Most participants expressed a desire for structured training and acknowledged increased legal responsibilities under newly enacted laws. This suggests that appropriate educational interventions could bridge the current knowledge gap.

## DISCUSSION

This study aimed to evaluate the knowledge and attitude of interns and junior residents regarding medico-legal responsibilities in the context of India's newly enacted criminal laws—Bharatiya Nyaya Sanhita (BNS), Bharatiya Nagarik Suraksha Sanhita (BNSS), and Bharatiya Sakshya Adhinyam (BSA)—which replaced the Indian Penal Code (IPC), Code of Criminal Procedure (CrPC), and Indian Evidence Act in 2024. This study also emphasis on knowledge of few important laws related to healthcare like POSH act, Euthanasia and record keeping rules.

Our findings reveal significant deficiencies in knowledge among early-career doctors, despite a generally positive and proactive attitude toward medico-legal education and accountability.

Participants demonstrated moderate awareness of traditional medico-legal concepts, such as informed consent (67.4%) and the transition from IPC to BNS (63.2%). However, knowledge of more contemporary and critical components of the new laws was notably poor. Only 27.5% were aware of the concept of Zero FIR under BNSS, while awareness of the POSH Act and legal permissibility of passive euthanasia was 28.2% and 18.6%, respectively. Knowledge regarding audio-visual recording of sexual offence victim statements and reporting obligations in cases involving minors was also suboptimal. These findings are consistent with earlier studies. Reddy et al,<sup>[6]</sup> found that only 32.2% of participants knew the correct age for consent, and that awareness of record retention, police notification in poisoning cases, and other procedural legal requirements was inconsistent. Similarly, Padmakar

et al,<sup>[12]</sup> reported that only 25% of respondents were aware that passive euthanasia is legal, and fewer than half could identify appropriate reporting authorities in cases involving minors.

Even among more experienced doctors, knowledge remains unsatisfactory. Giri et al,<sup>[6]</sup> observed that only 35% of residents could correctly identify deaths requiring police intimation, while a majority of interns had misconceptions regarding consent, autopsy procedures, and handling of medico-legal cases. In our study, only 38.4% of participants were aware of the proper duration for MLC record retention, similar to the poor documentation awareness reported by Singh et al,<sup>[9]</sup> where only 21.8% of healthcare professionals used electronic medical records and a significant number relied on verbal consent even in surgical cases. The consistency across these studies underscores the systemic deficiency in medico-legal preparedness at the undergraduate and internship levels.

Despite the knowledge deficits, participants displayed encouraging attitudes. In our study, 81.2% expressed concern over potential legal consequences due to inadequate training, and 86.5% indicated willingness to attend medico-legal CME sessions or workshops. A substantial number (72.3%) acknowledged that the medico-legal responsibilities of junior doctors have increased under the new criminal codes. These findings align with Choudhary et al,<sup>[11]</sup> who reported that 97% of new medical graduates had never attended medico-legal workshops, and 95% felt unprepared to handle medico-legal cases. Likewise, Jambure et al,<sup>[8]</sup> found that both interns and postgraduate students struggled with injury certificate writing, death certificate formatting, and understanding medico-legal documentation, despite expressing interest in structured medico-legal training.

The gap between knowledge and responsibility can be attributed to deficiencies in curriculum design and practical exposure. Several studies, including ours, emphasized that the current forensic medicine curriculum is heavily theoretical and insufficient for real-world application. Kadu et al,<sup>[7]</sup> and Giri et al,<sup>[6]</sup> both advocated for mandatory forensic postings during internship, while Singh et al,<sup>[9]</sup> recommended enhanced medico-legal content in undergraduate and postgraduate programs. In our study, the majority of interns reported no prior exposure to medico-legal court procedures or documentation protocols, highlighting a pressing need for reform.

The implications of this knowledge gap are especially significant in light of the expanded legal responsibilities introduced by BNS, BNSS, and BSA. Under these acts, doctors are legally mandated to conduct audio-visual victim interviews, accurately document injury and autopsy findings, and respond appropriately in medico-legal emergencies.

However, as shown by our data and corroborated by Jambure et al,<sup>[8]</sup> and Kadu et al,<sup>[7]</sup> awareness of such practical responsibilities remains inadequate. Misconceptions such as believing that telephonic orders are legally valid, or that autopsy requires family consent in all cases, persist even among resident doctors.

Our study, together with the reviewed literature, supports the urgent need for educational reform. We recommend that medico-legal training be made mandatory during internship, including supervised exposure to autopsies, medico-legal documentation, and courtroom procedures. Further, we propose the institutionalization of CME sessions focused on recent legal updates, including Zero FIR, mandatory AV recording, and survivor examination under BNSS. Simulation-based medico-legal drills, such as mock injury certification and testimony, should be integrated into clinical teaching to build confidence and competence among early-career doctors.

## CONCLUSION

The introduction of BNS, BNSS, and BSA represents a landmark shift in India's legal landscape, significantly impacting healthcare professionals. While our study participants demonstrated ethical commitment and a positive attitude toward medico-legal responsibilities, their preparedness for practical application remains insufficient. The findings underscore the necessity for curriculum restructuring, training reinforcement, and sustained medico-legal awareness to ensure that clinicians can navigate their legal obligations effectively and ethically in the evolving medico-legal environment.

**Limitations:** This was a single-center, cross-sectional study, limiting the generalizability of findings to other regions and institutions. The cross-sectional design captures participant knowledge and attitude at a single time point, without accounting for

longitudinal improvement or the impact of ongoing reforms and training initiatives. Since the implementation of BNS, BNSS, and BSA is relatively recent, participant familiarity with these laws may evolve over time, which a cross-sectional study cannot assess.

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