

**Early clinical exposure of medicolegal cases to 2<sup>nd</sup> MBBS students in forensic medicine****Abhishek Ingole<sup>1</sup>, Swapnil Patond<sup>2\*</sup>, Tripti Srivastava<sup>3</sup>, Sudhir Ninave<sup>4</sup>, Prakash Mohite<sup>5</sup>**<sup>1,2</sup>Associate Professor, <sup>3,5</sup>Professor, <sup>4</sup>Professor and Head, <sup>1</sup>Dept. of Community Medicine, <sup>2,4,5</sup>Dept. of Forensic Medicine and Toxicology, <sup>3</sup>Dept. of Physiology, JNMC, DMIMS, Sawangi (Meghe) Wardha, Maharashtra, India**\*Corresponding Author: Swapnil Patond**

Email: Swapnil1985@yahoo.co.in

**Abstract**

The National medical commission bill 2017 mainly focused to provide high standard medical education along with clinical teaching in early medical profession, which is helpful in student more competent in actual handling medicolegal cases amongst students during the second MBBS course. Clinical exposure to various medicolegal cases in forensic medicine helpful in getting better understating about actual handling the medicolegal cases. Early clinical exposure has been compared with routine didactic teaching method, is found to be more helpful to students. Early clinical exposure helps in understanding the topic and clears the ideas of students.

The present study was carried out in JNMC Wardha. The total of 70 students participated in this study. This is helpful to raise the perception, awareness about various medicolegal cases. A group of students were exposed to clinical teaching and autopsy demonstration. The group of 70 students was accompanied by the expert from Forensic Medicine department. A various Medico-legal case of Injuries and poisoning which were taught during routine diadactic lectures to students of second MBBS students. From the present study it is clear that clinical teaching and actual handling of the medicolegal cases will definitely improves the skill and knowledge of students and improves the medicolegal work quality.

**Keywords:** Medicolegal cases, Early clinical exposure, Didactic teaching.**Introduction**

The National medical commission bill 2017 mainly focused to provide high standard medical education along with clinical teaching in early medical profession, which is helpful in student more competent in actual handling medicolegal cases amongst students during the second MBBS course.<sup>1</sup>

Along with the didactic lecture which is routine method of teaching the Forensic Medicine subject, clinical exposure to various medicolegal cases at early level can help in improving the various skills at Second-year MBBS level.<sup>2,3</sup>

Clinical exposure to various medicolegal cases in forensic medicine helpful in getting better understating about actual handling the medicolegal cases. Early clinical exposure has been compared with routine didactic teaching method, is found to be more helpful to students. Early clinical exposure helps in understanding the topic and clears the ideas of students.

Various research has described that early clinical teaching in forensic medicine, raised student's performance, helped them to correlate clinical teaching to basic medical knowledge, Enhanced skills, impel students to learn and helped them to develop various clinical and analytic skills.

The objectives of the present study were to Asses the cognitive skills possessed by the participating second MBBS students. Raised medicolegal cases during the practice of profession of medicine is now the subject of concern, therefore by giving early exposure of students to various medicolegal cases will helpful to make students more capable in handling the cases.

Therefore this study is carried out to Asses the necessity of clinical exposure and its Significance for proper examination certification and documentation cases of medicolegal significance in Forensic Medicine.

**Aim**

To study the effectiveness of early clinical exposure to Medicolegal cases in Forensic Medicine.

**Objectives**

1. To Sensitize the students about early clinical exposure to Medicolegal cases
2. To conduct bedside examination of Medicolegal cases
3. To determine the effectiveness clinical exposure on students learning.

**Materials and Methods****Study Design:** Medical education research**Subjects:** This study was conducted at the JNMC Sawangi (Meghe), Wardha. The sample size is 70 Students of Second MBBS.**Duration of Study:** 6 Month**Data collection tools:** predesigned and pretested questionnaire addressing the utility of early clinical exposure will be prepared using a 5 point Likert scale.**Sample Size:** 70

Sample size calculation for single cross sectional survey

$$n = \frac{1.962p(1-p)(DEFF)}{d^2}$$

P= estimated expected proportion

d= direct estimated precision

DEFF= estimated design effect

If the working proportion p for an indicator is not known usually value of 0.5(or 50%) is used because it produces the largest sample size.

If DEFF=1%

p=0.5 or 50%

d=0.10

Sample size =66.05

So approximate round figure of 70 considered.

The present study was carried out in JNMC Wardha. The total of 70 students participated in this study. This is helpful to raise the perception, awareness about various medicolegal cases.

A group of students were exposed to clinical teaching and autopsy demonstration. The group of 70 students was accompanied by the expert from Forensic Medicine department. A various Medico-legal case of Injuries and poisoning were taught during routine didactic lectures to students of second MBBS students.

The same group of students were then taken to wards, casualty, and autopsy demonstration for examination of various medicolegal cases. Evaluation of the understanding of Student's of various Medico legal cases were done by the pre- & post-test Assessment methods. Along with evaluation feedback from teaching faculty was also taken.

The significance of the study was carried out along with the p-value of each various response of the group of students from the questionnaire provided to the students. The response of questioner was taken before and after the actual exposure to medicolegal cases.

By noting the response in 5 point scale the assessment of the feedback was carried out statistically.

Present study will help to spread knowledge of various medicolegal cases and actual handling of the medicolegal cases during practice of medicine which make them more competent in documenting and certifying cases.

#### Inclusion Criteria

students of 2<sup>nd</sup> MBBS.

#### Exclusion Criteria

students those who are not willing to participate.

#### Methodology

1. Permission of Ethical Committee.
2. Consent.
3. Critical evaluation of the results.

#### Scope

To determine whether early clinical exposure in forensic medicine, enhanced student's performance, helped them to relate clinical conditions.

#### Limitations of study

1. Particular study only confined to this institute only.

**Table 1: Comparison of didactic lecture and clinical teaching of medicolegal cases score in students**

	Mean	N	Std. Deviation	Std. Error Mean	Mean Difference	t-value	p-value
Pre Test	2.54	70	0.67	0.08	1.64±0.91	14.98	0.0001,S
Post Test	4.18	70	0.59	0.07			

Student's unpaired t test

2. Limitations of the present study were that it was conducted on only one batch of 70 second year medical students using case scenarios that pertained only to the medicolegal cases. Outcome.

#### Measures of Study

To know the better prediction and accuracy between two methods.

#### Statistical analysis

The results will be analyzed using SPSS software.

#### Results

All the 70 participating students were jointly exposed to the same series of TDLs, same facilitator for clinical teaching and took identical pre and post-tests. Therefore, the consequences of possible confounding variables would be nullified.

Statistically significant differences ( $p=0.0001$ ) were perceived between the mean student-wise correct responses in the pre-and post-tests (Table 1). P value was found to be significant for the questions.

#### Formula for calculating learning gain

Absolute learning gain: [(% post test) – (% pre-test)]

Relative learning gain: [(% Post test)-( % pre test) / (% pre-test)\*100

Normalize gain: [(%Post Test)-( % pre-test)/[100-( % Pre test)]

#### Discussion

Medical education has changed in focus and methodologies since its early beginnings and more recently has become more professionalized and community oriented.<sup>4</sup>

According to study conducted by LACombe MA, Students subjected to the routine Syllabus have confined information about the heterogeneity of cases faced by the doctors.<sup>5</sup>

Study conducted by authors' shows that Clinical teaching and Clinics has the, better understanding between the student and teacher, by sharing of observation and coming to a common conclusion.<sup>6,7</sup>

The implementation of Clinical Forensic Medicine teaching will give an opportunity to teach students medicolegal aspect in an efficient way which will definitely improve the medico legal examination and medico-legal report writing as suggested by Khandekar et al.<sup>8,9</sup>

**Table 2: performance of students in bedside clinical teaching**

Intervention	Mean Pre Test Score	Mean Post Test Score	ALG	RLG	Normalized Gain “g”	Interpretation
Student’s performance in bedside clinical teaching	2.54±0.67	4.18±0.59	32.86%	64.62%	0.66	Bedside clinical teaching has moderate effectiveness

Mean score for students performance is out of 5

### Conclusion

From the present study it is clear that clinical teaching and actual handling of the medicolegal cases will definitely improves the skill and knowledge of students and improves the medicolegal work quality. Various important topics like examination of injury, age certification, and sexual offences cases can be taught in clinical positing, autopsy demonstration and during casualty visit. We can also introduce the clinical posting at 4<sup>th</sup> and 5<sup>th</sup> semester of second MBBS. We can also introduce Casualty posting for Interns under Forensic medicine which is presently optional.

**Conflict of Interest:** None.

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