e-ISSN: 0976-822X, p-ISSN:2961-6042

Available online on http://www.ijcpr.com/

International Journal of Current Pharmaceutical Review and Research 2025; 17(11); 284-290

Original Research Article

Evaluation of Inclusion of Medical Record Writing Training Among Students of Phase-3 Part-1 M.B.B.S.

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Received: 01-08-2025 Revised: 15-09-2025 / Accepted: 21-10-2025

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Conflict of interest: Nil

Abstract

Background: Medical record keeping is a critical skill for healthcare professionals, ensuring accurate documentation, effective communication, and quality patient care. Despite its importance, the integration of medical record writing into medical education is often overlooked or inadequately addressed.

Aims and Objectives: The objective of this project was to evaluate the impact of including formal training on medical record writing in the Phase 3, Part 1 MBBS curriculum. The evaluation was focused on the student's understanding of medical documentation, their ability to maintain accurate and comprehensive records, and their perception of the training's utility in clinical practice.

Material and Methods: This Prospective Interventional study was done on 100 medical students of phase 3-part 1 M.B.B.S of C.I.M.S. Chhindwara, MP, India, over 6 months duration, after approval from Institutional ethics committee and written informed consent from participants. Key components of the evaluation included the assessment of student's baseline knowledge and skills in medical record writing before the training using a curated Pre-test in google form. Implementation of structured training sessions on proper medical record documentation techniques through a curated lecture. Reassessment of student's baseline knowledge and skills in medical record writing after the training using a curated Post-test in google form and evaluation of student's progress by comparing the Pre-test and Post-test. Mean Pre-test score of every student will be compared with the mean post-test scores using paired t-test.

Results: The pre-test mean score was 44.29 (SD = 7.96), while the post-test mean score increased significantly to 52.85 (SD = 6.21). Statistical analysis using a paired t-test revealed a t-value of 8.2746 with a p-value of 0.0001, indicated that the improvement in scores was extremely statistically significant. These results demonstrate that the training intervention had a positive and substantial impact on the students' medical record-writing skills.

Conclusion: This study demonstrated the effectiveness of structured training in medical record writing for Phase-3 Part-1 M.B.B.S. students. The significant improvement in post-test scores highlighted the impact of such an intervention in enhancing students' knowledge and skills in clinical documentation. The findings emphasized the need to formally integrate medical record writing training into the undergraduate medical curriculum. Doing so will not only improve student's competency in maintaining accurate and comprehensive medical records but also contribute to better communication, continuity of care, and medico-legal preparedness in their future clinical practice.

Keywords: Clinical Documentation; Curriculum; Medical Record Writing; Medical Students; Pre-Test; Post-Test; Training.

Introduction

Medical record writing is an integral component of medical practice, serving as the primary tool for documenting patient information, diagnoses, treatment plans, and progress over time. Accurate and comprehensive medical records are vital for ensuring effective communication among healthcare providers, facilitating continuity of care, and enhancing patient safety.[1] Furthermore, In the changing era of increasing indemnity claims & increasing penetration of public and private health insurances among Indian population, the knowledge of medical record writing among undergraduate medical students is of utmost importance.[2]Well-maintained records serve legal and ethical purposes, providing a formal account of healthcare delivery, which can be essential in cases of litigation or audits.[3]

However, despite the critical role that medical records play in healthcare, medical students often do not receive sufficient formal training in the intricacies of record writing during their education. In many medical curricula, students are primarily focused on clinical knowledge and diagnostic skills, with insufficient emphasis on documentation skills, which are essential for their future roles as healthcare provider. [4] This gap in training could lead to inaccurate, incomplete, or unclear documentation, increasing the risk of medical errors and compromising patient care.

Phase 3, Part 1 of the Bachelor of Medicine, Bachelor of Surgery (MBBS) program marks a critical transition point in medical education, as students begin to engage more directly with clinical practice. During this phase, students are expected to interact with patients, participate in clinical decision-making, and document patient information in medical records. However, the quality of their documentation skills may not be adequately addressed in the curriculum, resulting in potential deficiencies in their ability to produce high-quality medical records.

The purpose of this project was to evaluate the inclusion of structured medical record writing training among Phase 3, Part 1 MBBS students. By integrating such training into the curriculum, this project aimed to enhance students' understanding of the importance of medical record keeping and improve their ability to document patient information accurately and effectively. This evaluation assessed both the immediate impact of the training on students' documentation skills and their perceptions of the training's relevance to their clinical experience.

The project also explored whether such training contributes to student's overall preparedness for clinical rotations, where they were expected to produce medical records that are not only clear and accurate but also legally compliant and ethically sound. It was considered the types of training methods most effective for teaching medical record writing, whether through workshops, seminars, or hands-on exercises, and seek to understand the challenges students face in adapting to documentation requirements.

Ultimately, the inclusion of medical record writing training in the MBBS curriculum seeks to fill a crucial gap in medical education, promoting a higher standard of documentation and improving healthcare outcomes. The findings from this evaluation can inform future curriculum development, ensuring that students are equipped with the necessary skills to provide safe, effective, and comprehensive care in their future medical practice.

Aim & Objectives: Aim of present study was to evaluate the inclusion of Medical Record writing training among students of phase 3 part 1 M.B.B.S.

Objectives:

1. To sensitize the students regarding Medical Record Writing Training.
2. To implement Medical Record Writing Training for phase 3 part 1 M.B.B.S. Students in my institute.
3. To assess the need of inclusion of Medical Record Writing Training among phase 3 part 1 M.B.B.S students.
4. To evaluate the outcome of inclusion of this project among phase 3 part 1 M.B.B.S students.

Methodology

This Prospective Interventional study was done on 100 medical students of phase 3-part 1 M.B.B.S of C.I.M.S. Chhindwara, MP, India, over 6 months duration, after approval from Institutional ethics committee and written informed consent from participants.

Data Collection tools: Pre-test & Post-test were done using Google Forms.

Data management tool: Gantt chart

Pre-Test Assessment Form

Project Title: Evaluation of Inclusion of Medical Record Writing Training among Students of Phase-3 Part-1 M.B.B.S.

Instructions: Please indicate your level of agreement with each statement by circling the appropriate number. Use the following scale:

- 1-Strongly Disagree
- 2-Disagree
- 3- Neutral
- 4- Agree
- 5- Strongly Agree

1) I have a clear understanding of the importance of medical record writing in clinical practice.

Ans 1 2 3 4 5

2) I feel confident in my current knowledge of the components of a medical record.

Ans 1 2 3 4 5

3) I understand the legal implications of medical record writing.

Ans 1 2 3 4 5

4) I have prior experience in writing medical records during my training.

Ans 1 2 3 4 5

5) I feel I am adequately prepared to write a medical record in a clinical setting.

Ans 1 2 3 4 5

6) I am familiar with the electronic health record (EHR) systems used in healthcare.

Ans 1 2 3 4 5

7) I am familiar with the common terminology and abbreviations used in medical records.

Ans 1 2 3 4 5

8) I find the concept of medical record writing to be complex and challenging.

Ans 1 2 3 4 5

9) I feel that effective communication in medical records is essential for interdisciplinary collaboration.

Ans 1 2 3 4 5

9) Which of the following is true regarding medical record documentation?

a) It is acceptable to alter a medical record if new information comes to light.

b) Medical records must be written clearly and legibly, with any errors corrected by striking through and initialling the correction.

c) Medical records can be discarded once the patient is discharged from the hospital.

d) Only doctors are responsible for documenting medical records.

10) In case of a legal dispute, which of the following is MOST important about a medical record?

a) It should contain the patient's signature on every page.

b) It should be complete, accurate, and signed by the healthcare provider who documented it.

c) It should contain subjective opinions and interpretations by the healthcare provider.

d) It should only include the diagnosis, omitting treatment plans.

11) What is the time frame for retaining medical records according to standard medical practice?

a) Medical records should be kept for 1 year after the patient’s last visit.

b) Medical records must be kept for a minimum of 5 years after the last visit.

c) Medical records must be kept indefinitely.

d) Medical records should be destroyed after the patient's death.

12) Which of the following abbreviations is commonly used in medical records to indicate "as needed"?

a) PRN
b) QID
c) BID
d) TID

13) Which of the following best describes the SOAP format used in medical documentation?

a) A method for summarizing the patient's family history

b) A structure for documenting symptoms, observations, and treatment plan

c) A system for maintaining laboratory test results

d) A classification system for diseases

14) What is the correct way to document a patient’s medication allergies in their medical record?

a) Include it in the "Treatment Plan" section

b) List it under "Patient’s History" or "Allergy Section" with the specific allergens

c) Record the allergy in the patient's discharge notes only

d) Do not record it if the patient denies having any allergies

15) Which of the following is a key advantage of Electronic Health Records (EHR) over paper-based records?

a) EHRs are easier to modify without documentation trails

b) EHRs are more prone to data loss

c) EHRs allow for faster and more accurate sharing of patient data between healthcare providers

d) EHRs are less secure than paper-based records

16) Which of the following would be considered a "legal" error when documenting in a medical record?

a) Failing to include a patient's contact information

b) Inaccurately transcribing a verbal order from a doctor

c) Adding a patient's family history information without their consent

d) Writing subjective opinions instead of objective facts

17) When documenting a patient's refusal of treatment, the healthcare provider should:

a) Ignore the refusal and proceed with treatment

b) Document the refusal clearly, including the reason (if given) and any discussion with the patient

c) Only document the refusal if the patient becomes ill later

d) Leave the refusal undocumented to avoid legal implications.

18) I believe that formal training in medical record writing is necessary for my clinical education.

Ans 1 2 3 4 5

19) I feel that additional training in medical record writing will improve my clinical practice.

Ans 1 2 3 4 5

Additional Comments:

Please provide any additional thoughts or suggestions regarding medical record writing training:

Thank you for your participation!

Your responses will help improve the training program for future students.

Post-Test Assessment Form

Project Title: Evaluation of Inclusion of Medical Record Writing Training Among Students of Phase-3 Part-1 M.B.B.S.

Instructions: Please indicate your level of agreement with each statement by circling the appropriate number. Use the following scale:

- 1-Strongly Disagree
- 2-Disagree
- 3- Neutral
- 4- Agree
- 5- Strongly Agree

1) I have a clear understanding of the importance of medical record writing in clinical practice.

Ans 1 2 3 4 5

2) I feel confident in my current knowledge of the components of a medical record.

Ans 1 2 3 4 5

3) I understand the legal implications of medical record writing.

Ans 1 2 3 4 5

4) I have prior experience in writing medical records during my training.

Ans 1 2 3 4 5

5) I feel I am adequately prepared to write a medical record in a clinical setting.

Ans 1 2 3 4 5

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d) Only doctors are responsible for documenting medical records.

11) In case of a legal dispute, which of the following is MOST important about a medical record?

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c) It should contain subjective opinions and interpretations by the healthcare provider.

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Ans 1 2 3 4 5

20) I feel that additional training in medical record writing will improve my clinical practice.

Ans 1 2 3 4 5

Additional Comments:

Please provide any additional thoughts or suggestions regarding medical record writing training:

Thank you for your participation!

Your responses will help improve the training program for future students.

Statistical analysis:

Data were analyzed using SPSS version 21. Mean Pre-test score of every student was compared with the mean post-test scores using paired t-test. A p-value <0.05 was considered statistically significant.

Results:

The study included 100 students of Phase 3 Part 1 MBBS, who underwent a structured training program on medical record writing. The pre-test mean score was 44.29 (SD = 7.96), while the post-test mean score increased significantly to 52.85 (SD = 6.21). Statistical analysis using a paired t-test revealed a t-value of 8.2746 with a p-value of 0.0001, indicating that the improvement in scores was extremely statistically significant. These results demonstrate that the training intervention had a positive and substantial impact on the students' medical record-writing skills.

Table 1: Student's Pre-test and Post-test responses (n=100)

Responses	Mean±SD	t-value	P-value
Pre-test	44.29±7.96	8.2746	0.0001 **(S)**
Post-test	52.85±6.21		

S - Significant

Discussion

The findings of this study highlighted the significance of structured training in medical record writing for Phase-3 Part-1 M.B.B.S. students. The improvement observed in post-test scores compared to pre-test scores demonstrated the effectiveness of the intervention. This suggested that incorporating formal training sessions into the medical curriculum can bridge the gap in this critical area of clinical education.

Medical record writing is fundamental to patient care, facilitating accurate documentation, seamless communication between healthcare professionals, and legal accountability. Despite its importance, it often receives insufficient attention in undergraduate training. The results of this study aligned with similar research that underscores the value of teaching practical, documentation-related skills to medical students.[6-13]

One of the study's strengths was the use of total population sampling, ensuring representation of the entire Phase-3 Part-1 cohort. Additionally, the use of validated tools and a structured intervention module ensured the reliability of findings. The Gantt chart effectively managed the study timeline, contributing to its methodological rigor.

However, the study had certain limitations. Firstly, it was conducted in a single institution, which might limit the generalizability of the results to other medical colleges with varying academic environments. Secondly, the study primarily relied on pre-test and post-test scores, which measured short-term learning gains but did not evaluate the long-term retention of skills. Future research could explore these aspects to provide a more comprehensive assessment.

The significant improvement in post-test scores observed in this study supports the recommendation that medical record writing should be formally included in the curriculum for undergraduate medical students. Integrating this skill into clinical postings or dedicated modules would enhance student's competence and readiness for real-world clinical practice.

Overall, this study provides valuable insights into the importance of targeted training for developing essential skills among medical students, contributing to improved clinical documentation and patient care in the long term.

Conclusion

This study demonstrates the effectiveness of structured training in medical record writing for Phase-3 Part-1 M.B.B.S. students. The significant improvement in post-test scores highlights the impact of such an intervention in enhancing students' knowledge and skills in clinical documentation.

The findings emphasize the need to formally integrate medical record writing training into the undergraduate medical curriculum. Doing so will not only improve student's competency in maintaining accurate and comprehensive medical records but also contribute to better communication, continuity of care, and medico-legal preparedness in their future clinical practice.

Further research across multiple institutions and with long-term follow-ups is recommended to validate these results and explore the broader implications of such training. Incorporating this skill into medical education can significantly enhance the overall quality of healthcare delivery.

Further recommendation: The literature suggests a strong need for formal, structured training in medical record writing within medical education. While some studies have shown the positive impact of such training on student skills and readiness for clinical practice, there is a lack of widespread implementation. As Phase 3, Part 1 MBBS students begin their clinical rotations, integrating medical record writing training into the curriculum could bridge the gap and ensure that students are well-prepared for the documentation responsibilities of their future practice.

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