

EFFECTIVENESS OF INDUCTION PROGRAMME FOR MEDICAL INTERNS: WELL BEGUN IS HALF DONE

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ABSTRACT

Background: A well planned induction programme conducted for medical interns, is a foundation for an effective internship and eases the transition from medical college to internship. **Objective:** To evaluate the effectiveness of induction programme for interns. **Methods:** Thirty interns who were yet to start their internship and were part of induction programme were included in the study. A well-consolidated questionnaire containing ten multiple choice questions (MCQs) based on the relevant topics discussed in the programme was used to assess the effectiveness of the induction programme. Feedback was taken from the interns at the end of the programme. Data was analyzed with descriptive statistics namely mean and standard deviation and Students' paired t-test was used to compare pre and post test score. **Results:** The mean pre-induction score was 4.76 ± 1.10 and the mean post induction score was 6.6 ± 1.28 (statistically significant, P value <0.05). The interns' feedback indicate that majority of them (n=25, 83%) were satisfied with the programme. Interns were very satisfied/ satisfied with relevance of topics (n=28, 93%), time allotment (n=27, 90%) and clarity (n=20, 67%). Only 14 (47%) interns found the clinical skill demonstrative sessions satisfactory. **Conclusion:** The induction programme was effective and well received by the interns. The feedback from the interns was positive and satisfactory. More focus on time management and clinical skill demonstrations were notable aspects from the interns' feedback. Inclusion of role plays, short period supervised workshops or onsite hospital training as a part of induction programme would be feasible approaches to further improve the programme.

KEY WORDS: medical interns, induction programme, clinical skills

INTRODUCTION

The medical internship is a phase of training where a medical graduate is expected to conduct the actual practice of medicine and health care and acquire skills under supervision so that he/she may become capable of functioning independently (1). It is a period of transition from a medical graduate to a medical practitioner (2).

According to the Medical Council of India (MCI) every intern is required to undergo Compulsory Rotatory Residential Internship (CRRRI) training for a period of 12 months, involving compulsory and elective clinical postings in various medical and surgical specialties, to the satisfaction of the college authority and state health university so as to be eligible

for award of the degree of MBBS and full registration (1). The intern year is an important formative year which presents some unique challenges to the doctors. These challenges may include quick adaptation to a busy working environment in a relatively short period, working as part of a multi-disciplinary clinical team often under pressure, and dealing in a professional and empathetic way with patients who may have complex clinical and personal issues. Some of these challenges can be addressed through a comprehensive induction programme at the beginning of the internship training (3).

The Interns Induction programme is a two-day program (scheduled according to the state health university in Kerala) wherein the interns are introduced to the various aspects of the clinical practice and their duties and responsibilities as a part of the health care system through various lecture and demonstrative sessions by clinical and nonclinical experts.

Very few studies exist in the Indian settings focusing on the internship training programmes. Interns active participation and feedback play an essential role in the success of the induction programme and also to review the existing pattern of the programme and support future improvements. Hence the present study was taken up to assess the effectiveness of the induction programme for interns.

METHODS

A total of 30 interns who were yet to begin their CRRM training were included in the study. Induction programme is a two day programme, it involves a first day session wherein experts of various clinical and non-clinical departments actively participate and educate the interns regarding their duties and responsibilities, hospital working patterns, collection and interpretation of investigations, infection control, medico-legal aspects, medical ethics, adverse drug reaction (ADR) reporting, patient communication, hospital waste management etc., each speaker is given a time of 60 minutes for each topic. The second-day session is a clinical skill demonstrative session, of the total duration of 6 hours involving demonstration of necessary life support and emergency care, performing venipuncture or phlebotomy, iv cannulation, the

collection of blood samples, urinary bladder catheterization etc.

A well-consolidated questionnaire (table 1) was made, a total of ten questions of MCQ pattern were designed relating to the topics covered in first and second-day sessions of the induction programme. The questionnaire was given to the interns at the start of the induction programme; interns were asked to answer the questionnaire within a time period of 15 min without any assistance or reference (Pre-induction questionnaire). The same questionnaire was given to the interns at the end of the induction programme (post-induction questionnaire). Each correct answer was given a score of one, and the wrong answer was given a score of zero. At the end of the session, feedback was also taken from the interns. Prior approval from the Institutional ethics committee and written informed consent from the study participants were obtained after explaining the procedure and purpose of the study.

STATISTICAL ANALYSIS

The data were analyzed with descriptive statistics namely mean and standard deviation. Students paired t-test was used to assess the statistical significance of post-test scores. The resultant P value of <0.05 was considered as statistically significant.

RESULTS

Table 2 shows the descriptive statistics of the scores and the results of student paired t-test. The mean preinduction score was 4.76 ± 1.10 and the mean post induction score was 6.6 ± 1.28 . The post-test score was statistically significant (P value <0.05). This indicates there was a significant improvement in the scores following the induction programme.

Table 3 shows the feedback of the interns at the end of the programme. Five questions were included in the feedback form focusing on the time allotment, relevance and usefulness, clarity and demonstrative sessions. Overall seven interns (23%) found the programme very satisfactory, and 18 (60%) found it satisfactory. Twelve (40%) were very satisfied, and 15 (50%) were satisfied with the time allotted for the various topics. Seven (23%) and 21 (70%) found the topics discussed relevant and useful. Twenty (9: very

satisfied and 11: satisfied) of the interns (67%) found that clarity was satisfactory. Only 14 (47%) found the demonstrative sessions satisfactory, the rest of them were either neutral or not satisfied.

Provision for suggestions for improvement was also included in the feedback form. Twenty interns (67%) gave suggestions, and 10 of them did not. Among the suggestions time management skills, increased focus on demonstrative sessions for the development of clinical skills were the significant ones.

DISCUSSION

After the commencement of the internship, many interns experience high levels of anxiety and are not confident in many aspects of the related clinical tasks. A formal well-structured and organized induction programme has demonstrated to increase both confidence and competence of basic skills and provide provision for the supportive transition from medical college (4, 5, 6).

Improvement in the scores for Post induction questionnaire was encouraging. This would indicate that the interns were reasonably attentive, interested and receptive during the programme. In a similar study done was by Choudhari et al. in the Indian settings, the interns showed statistically significant improvement in the post programme scores. The notable aspect in their study was that they included an IIP module as a part of the induction programme. The content of the module was based on the various sessions of the induction programme, and a hard copy of the same was provided to each intern at the end of the programme (7). A Goel et al did another similar study. also showed a significant improvement in post-test scores, in this study, panel discussions, group discussions, role plays were also a part of the induction programme (8).

Considering the feedback by interns, a significant number of them found the programme satisfactory in terms of the topics covered, relevance and clarity. However, the feedback of the interns regarding the clinical skill demonstrative sessions was not all positive, only 14 interns (47%) found it to be satisfactory. In various intern surveys or feedbacks done across the globe, the clinical skill demonstration and training has been a frequent and main focus of concern (9). Feedbacks obtained in studies done by SG

Choudhari et al, HA Scicluna et al, an intern survey done by AB Padeniya et al also identify clinical skill training as one of the main causes of stressors among the interns (2,7,10).

Twenty interns had given their opinions for improvement of the programme and included sessions on time management skills and more scope for demonstrative sessions. These can be addressed by more elaborative sessions involving role plays, group discussions or even with supervised onsite hospital /clinical training, more focus on prioritizing the tasks at hand, organizing skills and teamwork (2, 11), or even intern shadowing could be beneficial. i.e. shadowing an existing intern for a week before the commencement of internship (12).

Various novel strategies have been evaluated across the globe to provide an efficient induction for interns. Some of them include e-learning, clinical skill or online learning module (13), acute care skill and soft skill workshops in small groups under supervision (2, 7), a website or online portal for regular updates and queries etc. (11). If not all of the above strategies, some of them can be implemented within the available resources and regulatory norms in the Indian medical colleges and hospitals.

From the findings in our study, we conclude that the induction programme for interns was effective as revealed by the improvement of the post-test scores. The feedback of the interns was positive and encouraging. More focus on clinical or procedural skills through possible approaches like group discussions, role plays, a brief supervised onsite hospital training or intern shadowing can further improve the effectiveness of the programme. An organized and well-structured induction programme can make a significant impact on productive internship training and ease the transition from medical college to the internship.

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TABLES

Table 1: Questionnaire given to the students for pre and post-induction tests. Questions were based on the topics covered as a part of the induction programme. Each question had only one right answer

Sl no	Questions	Correct answer (option number)
1	Routine ward duties of an intern include: a. Morning/evening check vitals b. Input/output charting c. Order investigations and interpretation d. All of the above	Option d
2	Re-dosing of antibiotics for surgical prophylaxis is required in all cases except: a. Excess blood loss >5L b. Prolonged surgery > 4hrs c. Urogenital surgeries d. Surgery >half-lives of the antibiotic chosen	Option C
3	Which is not a mandatory field for ADR reporting form: a. Patient details b. Reporter details c. Suspected drug d. Type and severity of ADR	Option d
4	Which of the following does not form a part of intra-operative duties of an intern: a. Aseptic precautions b. ASA grading (American society of anesthesiologists) c. Monitoring of the patient and documentation d. Assistance to the surgeon and anesthesiologist during the surgery	Option b
5	The members of infection control committee include: a. Microbiologist b. Hospital management c. Lead nurse d. All of the above	Option d
6	Medical records must be: a. Doctor -centered b. Patient- centered c. Hospital- centered d. All of the above	Option d
7	Arterial blood collection is indicated in testing of: a. Blood glucose b. Electrolytes c. Blood-gas analysis d. Hemogram	Option c
8	Which color code indicates disposal for sharp objects and instruments (needles): a. yellow b. Red c. White d. Black	Option c
9	Purple/lavender top of blood collection bottle is used for: a. Immunological studies b. Hemogram c. Coagulation studies d. None of the above	Option b

- 10** In CPR (Cardio-pulmonary resuscitation) technique for adults, which of the following is correct statement: Option b
- For every 50 chest compressions give 3 breathes
 - For every 30 chest compressions give 2 breathes
 - For every 20 chest compressions give 4 breathes
 - None of the above

Table 2: Mean scores of pre and post induction tests and result of Student's Paired t-test

Parameters assessed	Pre-induction score (Total score: 10)	Post-induction score (Total score: 10)	P-value
Mean score	4.76	6.6	
Standard deviation	1.10	1.28	<0.05
Standard error of mean	0.201	0.232	

Table 3: Feedback of the interns regarding the induction programme.

Statement N=30	Very satisfied n (%)	Satisfied n (%)	Neutral n (%)	Dissatisfied n (%)	Very dissatisfied n (%)
Overall were you satisfied with the induction programme?	7 (23)	18 (60)	2 (7)	2 (7)	1 (3)
Was the time allotted for various sessions satisfactory?	12 (40)	15 (50)	0 (0)	2 (7)	1 (3)
Were you satisfied with the topics discussed (in terms of relevance and usefulness)?	7 (23)	21 (70)	1(3)	1 (3)	0 (0)
Was the clarity on topics discussed satisfactory?	9 (30)	11 (37)	4 (13)	4 (13)	2 (7)
Were the Clinical skill demonstration sessions satisfactory?	6 (20)	8 (27)	5 (17)	9 (30)	2 (7)

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