



Development of a training module on infection control practices for interns and postgraduate students

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Introduction :

- Training session on Infection Control practices improves the knowledge of interns and postgraduate medical students regarding Standard precautions, Biomedical waste management and hand hygiene practices leading to better patient care.

Objectives of the study

- **To** determine the effectiveness of training sessions conducted on Infection control practices among health care professionals.
- To assess the standard and scope for improvement of a training session.

Material and methods :

- The study was carried out during April – June 2025 among interns & post graduate residents by the Microbiology & Community medicine department.
- The participants were given a pre-test audit questionnaire to assess their preliminary knowledge on IPC practices.
- The participants were then given training regarding Standard precautions, Biomedical waste management & Hand hygiene practices for 1 hour by different faculties. Standardized materials were used for the training.
- Following the training, the post–test audit questionnaire was given to assess the change in the performance post training. The audit questionnaires were made based on the guidelines of CDC and WHO ^{1 2 3} .

Material and methods contd..

- For all questions, a correct response of each categorical variable was scored 1 and an incorrect response was scored 0.
 - Participants were evaluated for their pre & post training knowledge after submission of the questionnaires and were divided into 3 categories based on their scores.
 - 0-9 = POOR
 - 10-15 = MODERATE
 - 16-20 = GOOD
- A feedback form was given to the participants at the end of the training.

[illegible]

RESULTS

- A total of 108 Healthcare Workers (82 Post graduates and 26 Interns) participated in the study.

Table 1 : Distribution of participants according to the categories of knowledge in pretest and post-test (n=108).

Categories	Pre-Test , N%	Post-Test, N%
POOR	33 (30%)	6 (6%)
MODERATE	60 (56%)	22 (21%)
GOOD	15 (14%)	80 (73%)

- The mean pre-test score of the participants was 12 ± 3 SD whereas the mean post test score was 17 ± 3 SD.
- Majority of the participants in our study had moderate preliminary knowledge of IPC practices in the pre-test which is similar to findings of *Shrestha et al*⁴ and *Assefa et al*⁵

Table 2 : Comparison of Pre-test scores of participants in related studies :

Present Study	<i>Shrestha et al</i>	<i>Assefa et al</i>
12 \pm 3 SD	13 \pm 2 SD	11 \pm 2 SD

RESULTS :

- In our present study , it was observed with training , there was a significant improvement in knowledge of healthcare workers.
- There was overall significant statistical change in the pre-test and post-test knowledge of participants regarding IPC practices (p value < 0.001)
- Significant statistical change was observed in the subtopics of IPC – Standard precautions , Hand hygiene & Biomedical waste management between the pre–test & post-test scores of the participants.

Table 3 – Paired T test to show statistical significance between pre-test & post-test scores

		Topic	Co-relation	P - value
Pair 1	PreTest & Post Test	Standard precautions	0.573	< 0.001
Pair 2	PreTest & Post Test	Hand hygiene	0.554	< 0.001
Pair 3	PreTest & Post Test	Biomedical waste management	0.509	< 0.001
Pair 4	PreTest & Post Test	Overall	0.616	< 0.001

- A similar statistically significant increase in knowledge was observed after training in studies done by *Savul et al*⁶ and a multicentric study on IPC⁷

OUTCOME OF THE STUDY :

- With the improvement in infection control practices compliance, good practices among Health care providers was established.
- This will help in substantial reduction of Hospital Acquired Infections among patients.
- A standardized infection control training module was devised based on the analysis of the knowledge of the students as well as their feedback.
- There was positive feedback from the wards and clinicians regarding the IPC practices of the participants post training.
- We were encouraged to hold such training sessions more frequently for other healthcare workers in the hospital.

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PDF Links to the QUESTIONNAIRE and STUDY

MATERIAL:
<https://www.pdfFiller.com/s/8yw-k6Zuj>