

**Title:** Improving the Competence of Resident Officers in Managing Acute Myocardial Infarction, Before and After Cardiology Rotation

**Category:** Prevention

### **Abstract**

**Background:** Structured training program including simulation training has emerged as an effective method of educating resident officers, improving cognitive performance, promoting teamwork and ultimately improves quality of patient care during management of acute cardiac emergencies. As per PMDC document, management of such patients is one of the major competencies expected of all medical graduates. Hence, to provide an evidence, that structured training program are needed in our setup.

**Objective:** To measure the improvement level in the competences of resident officers, in the management of acute myocardial infarction and its complications before and after cardiology rotation.

**Methods:** This Quantitative Quasi Experimental study was conducted among resident officers of Khyber Teaching Hospital, selected via Non Probability consecutive sampling technique after seeking informed consent. The pre validated checklist was used for measuring the knowledge, skill & attitude component in managing acute myocardial infarction and its complications in simulated scenarios, by AHA trained instructors, in interventional (cardiology) and control (other medical and allied specialties) groups, before and after cardiology rotation. Data was entered and analyzed using SPSS version 19. Difference in mean scores between two groups was calculated and independent sample t test was used to calculate p value for testing our hypothesis. P value was set at  $\leq 0.05$ .

**Results:** Total of 60 resident officers included in the study, 33(55%) males and 27(45%) females. The mean age of the study population was  $24.95 \pm 1.2$  years. There was statistically significant difference with p-value  $\leq 0.05$ , in post rotation mean scores of knowledge (Post K), skill (Post S), and attitude (Post A). The pre and post rotation difference in mean scores of cardiology group was statistically significant in all components assessed, as shown by  $p \leq 0.05$  (paired sample t-test). Changes in mean scores in all domains of competency were shown in non- cardiology (control) group but when the difference in change in total scores before and after rotation of K, S and A domains of competency were calculated among two groups, it was found that cardiology group residents scored much higher and the difference from their pre rotation score was statistically significant as p- value was  $\leq 0.05$  (independent sample t-test) as compared to the control ( non- cardiology rotation ) group.

**Conclusion:** In pre and post cardiology rotation, there's statistically significant difference of mean scores in all the components of knowledge skill and attitude , hence it justify that there's an improvement in the competence scores of resident officers, in managing acute myocardial infarction and its complications after one month of structured Cardiology rotation.