

## **ASSESSMENT OF THE AWARENESS LEVEL OF RADIATION SAFETY REGULATIONS AMONG THE GENERAL MEDICAL DOCTORS AT EMERGENCY DEPARTMENT'S IN LARGE HOSPITALS IN YOGYAKARTA PROVINCE- INDONESIA**

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### **ABSTRACT**

**Background:** Radiographic use has more than doubled within the past 25 years, with roughly 377 million radiographic procedures performed annually in the United States. The benefits of imaging, however, are opposed by increased radiation exposure to patients. Various international organizations such as WHO, UNSCEAR, ICRP and IAEA have recommended a set of guidelines focus on radiation safety to protect patients from unnecessary radiation exposures. It is believed that the awareness of ionizing radiation dose values is one of the main stages in patient's radiation protection. The first step of radiation protection can be started by ordering the radiological investigations, if general medical doctors are aware of radiation dose received in different radiological investigations, they will avoid unnecessary examinations to the patients.

**Objective:** The main objectives of this research were: evaluate the awareness level and risk assessment of radiation protection (safety) among the general medical doctors in emergency department's in large hospitals in Yogyakarta province- Indonesia, and also evaluate the relationship between awareness level and risk assessment of radiation protection and years of working, training on radiation protection, and radiation safety courses.

**Methods:** This was a descriptive research, applied a cross sectional survey. The medical doctors were asked to give their responses on the number of the questions related to the awareness of radiation safety regulations between the general medical doctors at emergency department. The data were collected from 50 of General medical doctor's in 3 hospitals in Yogyakarta, the hospitals are: RS. Dr. Sardjito, RS Panti Rapih, and RSA UGM. The research variables consist of dependent and independent variables. Independent variables was: years of working, background of radiation protection, radiation safety courses, type of hospital, gender. Dependent variables: Awareness of radiation safety regulations. Data was collected by using the questioners as measurement instrument. The respondent filled the questioner In the presence of the researcher. Data analysis was performed using SPSS 22 computer software package, by using Chi-Square analysis.

**Results:** there was no differences in the awareness level of safety regulations, but the awareness level of safety regulations is not adequate and poor. This study founded 94% of general medical doctor's with low level of awareness of radiation protection, and 6.0% of all participants have awareness level of 100 %.

**Conclusion:** The awareness level of radiation safety regulations of general medical doctors who were working at emergency departments was not sufficient. And the awareness level of safety regulations for most general medical doctors is not adequate. There was no relationship between awareness level and risk assessment of radiation protection and years of working, training on radiation protection, and radiation safety courses.

**Keywords:** Emergency department, general medical doctor, awareness level about radiation risk.