

Evaluation of Radiological Health Danger Indices Arising from Diagnostic X-Ray Rooms

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Abstract : The effective dose of selected health care workers who are constantly exposed to X-ray radiation was measured using thermoluminescence dosimeters (TLD) placed over the lead apron at the chest region in all categories of medical personnel investigated. To measure radiation in all the selected hospitals to ascertain the exposure of x-ray machines at exactly 1m from the primary source. The work was carried out within a year in each of the selected centers. The personnel examination records containing the type of examination each day, peak tube voltage, tube current, and exposure time, including the actual number of films used, were obtained. A total of 40 personnel were examined in government hospital Agbor, 21 in central hospital Owa Alero and 18 in Okonye hospital. The method used here has also been used by other researchers. Findings showed that the results obtained from the three hospitals investigated in this work were found to conform with the recommendations of the National Commission on radiological and protection {NCRP} 70 and 116 protocols. The Radiologist in the three study areas has the highest dose level, but of particular note is the dosage of the radiologist in Okonye hospital. This, as observed, is because the protective shielding parameters were inadequate and this could result in severe health consequences over time.

Keywords : radiology, health, Agbor, Owa

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