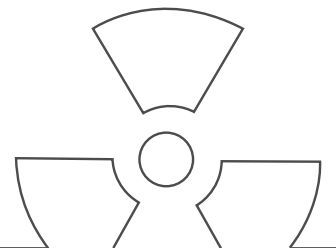
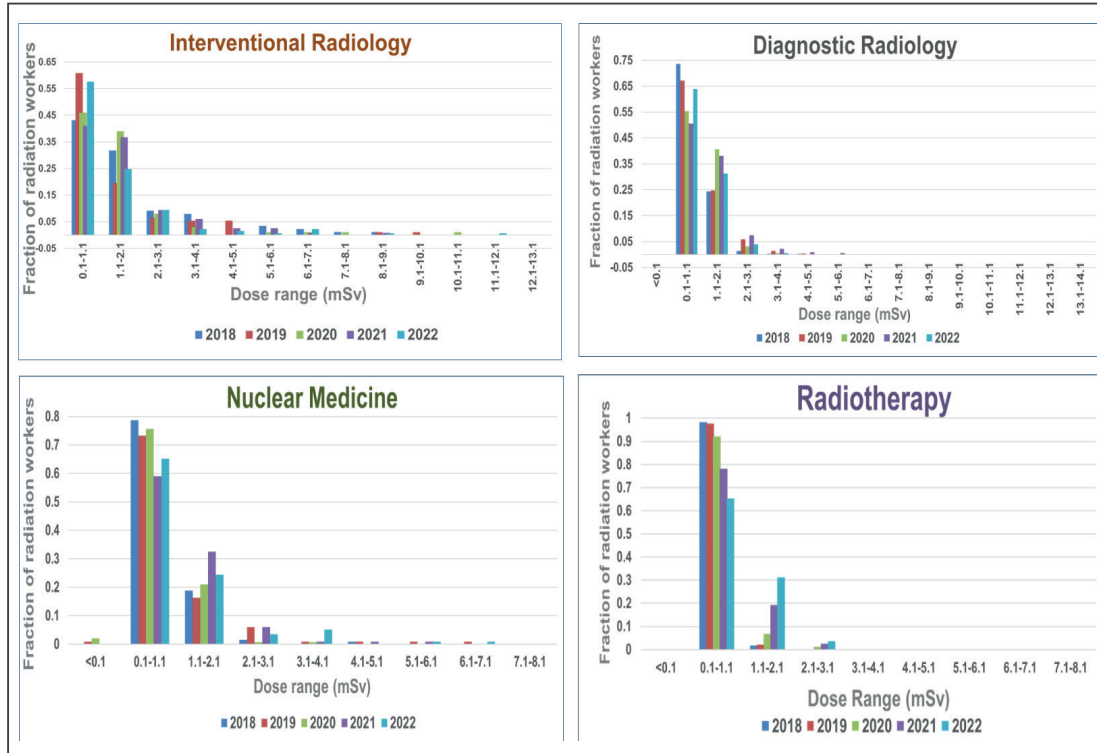




Information System on Occupational Exposure in Medical Practices

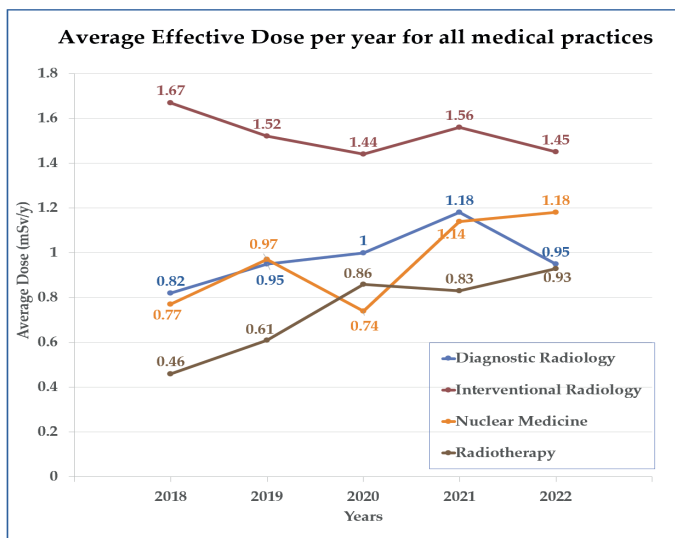
The Nuclear and Radiological Regulatory Commission (NRRC) has established a national information system for occupational radiation exposure. An occupational exposure database was developed for all monitored workers. Initial analysis for the last five years (2018 -2022) was conducted, and it includes occupational radiation doses for 4000 medical radiation workers, involving 32 Diagnostic Radiology (DR), 16 Nuclear Medicine (NM), 6 Radiotherapy (RT) facilities.





Distribution of workers per dose range for different medical practices over a period of five years.

The results show that the annual average effective dose for the five-year period was (1.53 mSv, 0.98 mSv, 0.96 and 0.74 mSv) for Interventional Radiology, Diagnostic Radiology, Nuclear Medicine, and Radiotherapy respectively. Among these four practices, Interventional Radiology represents the highest annual average effective dose. On the other hand, the ratio of the annual average effective dose was (1.67 to 1.45) which represents a 13% reduction with a 56% increase in the number of workers from 2018 to 2022. The distribution of radiation workers per dose range was established for all the medical practices, resulting in the estimation of dose constraints.



This information system is considered as the initiation base of a wider and more comprehensive occupational exposure monitoring and long-term investigation of future records to reduce occupational radiation dose to radiation workers.