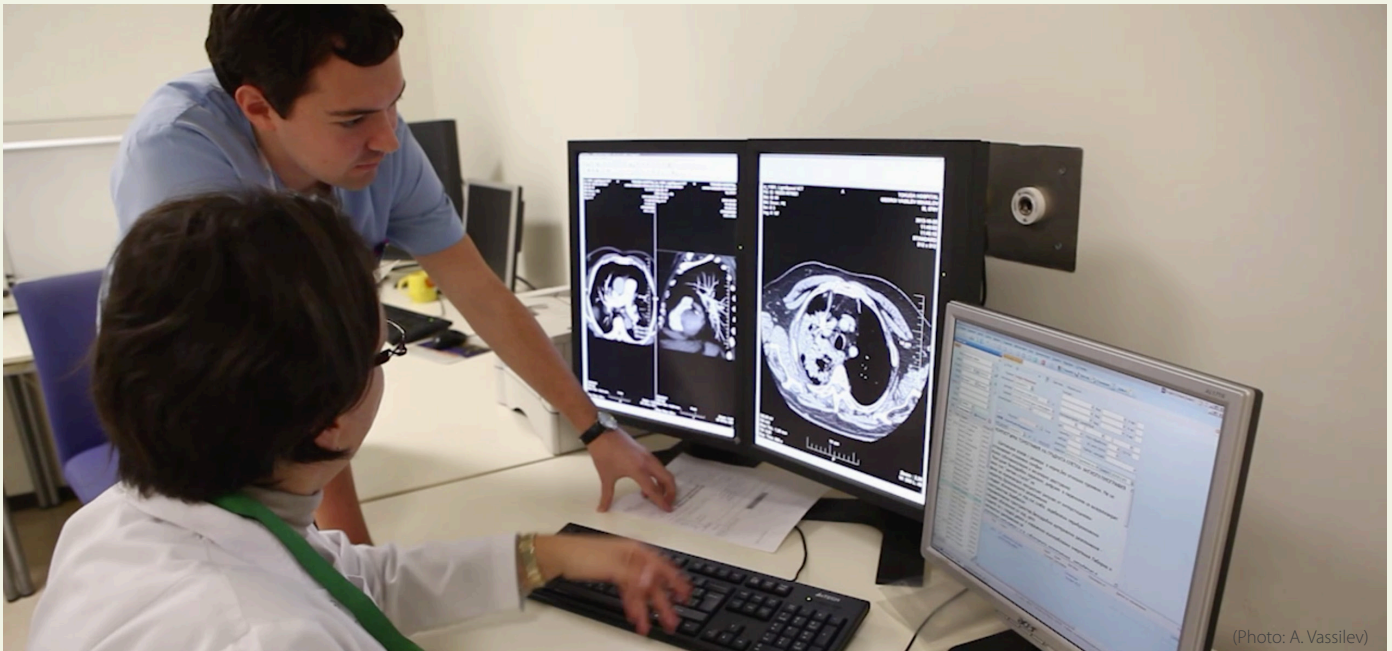


Protecting patients: promoting safety culture in diagnostic imaging



(Photo: A. Vassilev)

Unintended and accidental patient exposure to radiation through diagnostic imaging can be significantly reduced by increasing awareness of safe practices, participants at an IAEA meeting heard in March 2017.

“Even though incidents related to unnecessary and extreme exposure conditions are rare, they can be avoided and their severity can be substantially reduced if imaging procedures are performed appropriately,” said Jenia Vassileva, Radiation Protection Specialist at the IAEA Technical Meeting on Preventing Unintended and Accidental Medical Exposures in Radiology, held at IAEA Headquarters in Vienna from 6 to 8 March 2017.

Participants in the meeting, which brought together regulators and health professionals from 25 countries and a number of international organizations, found that accidents and incidents in X-ray imaging typically happen because of a lack of awareness among professionals and patients regarding the potential harmful effects of unintended medical exposure. This may be caused by insufficient knowledge of the risks and relevant contributing factors among medical professionals and regulatory and public health authorities.

Over 4 billion radiology procedures are conducted annually worldwide. Medical imaging techniques, such as X-ray radiography, computed tomography and image guided interventional procedures, are valuable sources for the diagnosis of several health conditions and for guiding treatment. However, experts acknowledge that there may be health risks associated with unintended exposure. These can include skin injuries, hair loss and, if a woman is pregnant without knowing it, risk to the foetus.

Dina Farag Hussein, a radiologist from the Egyptian Atomic Energy Authority, explained the potential impact of radiation exposure in pregnant women. “Diagnostic imaging requires extreme caution, particularly when it is used in female patients who are suffering from irregular menstrual cycles or long-standing periods of infertility,” she said, adding that such patients tend not to realize they are pregnant until the later stages owing to these pre-existing conditions; as a result, they can be accidentally exposed to radiation in the first 5-11 weeks of pregnancy.

Participation from across disciplines was key to the success of the meeting, said Donald Frush, Chair of the

Image Gently Alliance, a coalition of health-care organizations dedicated to providing safe, high-quality paediatric imaging worldwide. “Having all the separate voices here is very important from my standpoint, because you get a dynamic sense of what various professional inputs in areas of expertise are,” he said.

The IAEA’s role

At the meeting the IAEA presented its reporting and learning system for image guided interventional procedures with risks for skin injuries, called Safety in Radiological Procedures (SAFRAD).

“The IAEA will continue to support Member States to implement the International Basic Safety Standards through various actions,” said Vassileva. “Our online platform, Radiation Protection of Patients (RPOP), assists the medical community and patients through various education and training materials. Our free webinars provide opportunities for professionals to participate from anywhere to learn about the latest topics in radiation protection in medicine.”

— *By Nanako Kogiku*