

AbstractID: 14438 Title: IAEA Smart Card Initiative for Patient Exposure

The concept of "radiation passport" or something similar has been around for over a decade but the current impetus is based on a) realization of increased radiation doses to *individual* patients in diagnostic and interventional procedures and b) possibility of electronic means to *achieve tracking* of procedures. Monitoring itself has proved to be strong tool for optimization, but the untapped potential to aid in justification needs to be recognized. The topic of smart card to obtain cumulative record of patient exposure was initially discussed in the International Conference organized by the International Atomic Energy Agency (IAEA) in 2001 and then a project was initiated by the IAEA in 2006. However, the active actions were started in 2008. Although the scope of the Smart Card project was comprehensive, it tended to give a narrow impression and, thus, the new name **Smart Card/SmartRadTrack** has been adopted. It includes following possibilities:

- a. An electronic card that contains a patient's information, including radiation exposure history.
- b. A card only as a digital signature to access the radiation exposure data that is actually available online.
- c. The information about radiation exposure history and associated dose, wherever feasible, is made available in e-health records in a manner that can help track individual patients' exposure over time. With interoperability, it should provide the possibility of access from anywhere like money in bank accounts.
- d. In countries where neither an electronic card nor e-health record is feasible, a methodology to achieve information on tracking all radiological procedures, such as a vaccination card, could be initiated.

The project is aimed at:

1. Developing methodologies to track history of radiological procedures.
2. Helping countries establish policies and mechanisms for tracking indices of radiation exposure for diagnostic examinations and interventional procedures involving ionizing radiation to individual patients.
3. Developing guidance where the number of procedures alone, rather than dose, are sufficient which, combined with generic radiation dose figures, can provide dose estimates.
4. Providing information to strengthen the basic tenets of radiation protection, namely justification and optimization.
5. Cooperating with bodies associated with manufacturers to aid in developing hardware and software for tracking of procedures and individual patients' radiation dose indices.
6. Promoting development of international standards for tracking radiological examinations and procedures across different countries.
7. Making provisions in safety standards to require tracking of radiological examinations and procedures and to assess cumulative radiation dose to individual patients.

The talk will present results of a recent survey that is ongoing to know the current status in terms of existing programs with similar objectives in different countries in the world and actions planned for 2010-2011.

Learning Objectives:

1. Understand the underlying basis for the project on cumulative assessment of radiation exposure of the patient in series of examinations and procedures.
2. Understand the issues involved in tracking of series of radiological procedures and radiation doses.
3. To become familiar with the current status globally and understand the way forward to achieve tracking of radiological procedures for an individual patient.