

# Report of the Technical Meeting of the IAEA Smart Card/SmartRadTrack Project

18-21 October 2010, VIC, Vienna, Austria



The meeting was attended by 46 participants from about 31 countries, Africa (6), Asia (11), Europe (17), Latin America (4), USA (3), Canada (2), ISRRT (1), and WHO through video conference (2).

It was clear that patient exposure tracking is now a reality in some countries, but so far only covering a few dozens of hospitals - not nationwide. The technology is, however, advancing at a fast pace to realize the goals of the project sooner rather than later. While a large number of countries have this possibility restricted only to individual hospitals, some countries are advancing towards a nationwide system. The image data transfer standards now involve radiation exposure indices with which major vendors are now complying. It is envisaged that existing bottlenecks will be taken care of in the coming years. While sub-national systems are a reality, and national systems a possibility achievable within a few years, the international systems are something that will require a political agenda. The need was expressed at the meeting for inclusion of requirements on patient's radiation exposure history in the BSS. The promotional "call-for-action" role that the IAEA is playing, besides being initiator, was considered essential and visionary towards achieving radiation protection of the patient in future.

## Observations

It was realized the most major picture archiving and communication (PACS) vendors are now providing features to track radiological examinations of an individual patient within the PACS network

- There was a unanimous feeling that the project is of utmost importance at this juncture;
- Structured dose report implementation is about to reach a significant number of vendors and systems.
- Communication of structured dose reports between different vendors of PACS is a reality
- Communication of structured dose reports across hospital information system (HIS) is technically possible, but requires further involvement of IT domain expertise
- Nationwide: Some countries have plans for nationwide PACS and thus it appears that a number of countries shall have the capability for nationwide access to patient's radiological examinations on click of a mouse.
- There are attempts on the part of eHealth organizations and Governments to establish communication across countries. These attempts extend beyond region (e.g. Europe) and are aimed at connecting Europe, USA and Canada.
- There were interesting observations about work that has been taken up in some countries in recent years and the progress made is phenomenal;

- A presentation by Finland indicated radiation exposure tracking is now a reality within 33 hospitals of the Helsinki county region and also possible through some steps in data transfer from other parts of the country. The same is true for Sweden and possibly Denmark;
- Canada has included patient exposure registry in Canada's Infoway electronic health records solution blueprint 2015;
- Israel presented that their Ministry of Health Policy directive issued in 2010 has included a record of dose indices;
- Some countries have acquired technology to make it possible to track a patient's exposure within a hospital (Estonia, Malta, Bosnia and Herzegovina, Israel, Poland, Czech Republic, Belgium);

### **Way forward**

1. To establish a joint position statement of the IAEA with other international organizations that can be sent to Member States so as to have an impact on decision makers;
2. To give a formal shape to recommendations that have been developed through the Smart Card/SmartRadTrack meetings and send to Member States;
3. To include requirements in the revised BSS so as to incorporate patient radiation exposure tracking.
4. Launch an action plan APT: Awareness (A) pilot project (P) and encourage dissemination through *translation* (T) into local languages other than UN languages;
5. To select model countries who have shown good progress in patient exposure tracking and develop programs.
6. To establish an expert panel for this project on radiation exposure tracking based on practical implementation of patient exposure tracking;
7. To support conduct of utility surveys for patient exposure tracking;
8. To develop training modules to penetrate non-imaging professionals for awareness on dose tracking;
9. Manufacturers should develop technologies to aid in tracking an individual patient's radiation dose indices from medical imaging; this should include a check box for previous CT examinations.