

## Case study in the field of medical exposure in France

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- Action belongs to the framework of the global RP project (radon management, radiological risks and medical field)
- It is implemented by:
  - Local urban public authority (PMA – metropolitan area of Montbéliard)
  - Collaboration of IRSN (French Institute of RP and Nuclear safety) and the University of Franche-Comté
- Aim: to develop RP culture for student nurses and school pedagogic staff
- Why ? there is a lack of information about RP in the training of nurses and in their official pedagogic program

- Target stakeholders
  - Student nurses of 3<sup>rd</sup> year & indirectly school pedagogic staff
- Aim of the action
  - Improve engagement process for **self-protection** actions, **advices and explanations** to patients
  - **Give keys** to apply protocols and to disseminate RP culture to colleagues
- Action has been developed according two steps:
  - A conference for volunteers nurses (16 students/80) about RP with practical cases in different situations and domains (nuclear medicine, diagnostic radiology, etc...)
  - A compulsory course (80 students) integrated in an unit of the official program

- RP culture is essential to understand why set up protection action and give information to patient
- Content of the course (2h) realised by a **RP expert of the hospital (legitimity)**
  - Definition and identification of radiation sources (units, radiation sources, radiation effects and value scale: annual exposure and repartition of the different exposure situations, dose related to thorax scannography or radiography)
  - RP regulation (actors of RP, exposure limits, dosimetry, measurement)
  - Exposure situations (radiology, interventional radiology, nuclear medicine, radiotherapy, some figures of associated patient and staff dose levels)
  - Information available into patient file (procedures and information between staff and team)
  - Means of protection (dosimetry, personal RP, dissemination of RP information to patients ...)

## RP culture in the medical field Processes and tools to develop RP culture

- First step: **conference for volunteer** student of the 3rd year study which has demonstrated the Interest for both student and pedagogic staff
- Second step: **course placed in the official programme**
  - Upstream: RP questions included in tutorials dedicated to digestive cancer
    - to identify the level of RP knowledge (diagnostic with ionizing radiation ?)
    - to have a feedback about their RP experience in internship (description of a practical case)
  - Conference built from the analyse of the students report
- Necessary to give **concrete examples** in order to illustrate what is RP
  - The concept is unknown by the nurses (definition, terminology)
  - The nurses don't understand at the beginning the interest of RP information and protection actions
- As the duration of the course is limited: give **additional resources**
  - Internet links to scientific society
  - Examples of protocols used in hospital
  - Course implement ...

## RP culture in the medical field Evaluation of the level of RP culture

- RP is not included and dealt with into the training programme of nurses so **evaluation through a feedback questionnaire** is necessary :
  - what the students had memorized ?
  - what their needs were ?
  - Information will change their work behaviour ?
- Evaluation **only about the contents** of the conference
- Evaluation of the RP behaviour during their professional activity is the role of the national RP authority (only collective knowledge)
- To improve the contents : necessary to realize interviews or questionnaires to nurses working in hospital and liberal nurses but difficulty to contact them and to have time

## RP culture in the medical field Highlighting the role of RP culture

- RP culture contributes to **improve** students and future nurses engagement process for self-protection actions, advices and explanations to patients
- RP culture allows to **give keys** to apply protocols and to disseminate RP culture to colleagues

- Course seems answer to the needs and concerns of students
- Evaluation of the conference highlights that elements of RP culture transmitted during the course:
  - give keys to students to protect themselves,
  - disseminate RP culture to their colleagues and also to patients
- **Necessary to integrate RP culture in official pedagogic program**  
The difficulty is the limited time to tackle RP in a program already very full
- **Local experience**  
To disseminate this experience to regional or national level, it is necessary to have the help of the national RP authority, professional association and government (ministry of health)
- **Role of expert in RP (Competent Person in RP)** in hospital is known only for monitoring dosimetry personal. Nevertheless, to develop culture RP, it will be necessary that all health professional know his role