

# Template for mapping and skills development to create a dossier for radiographers: experience in a single center.

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Healthcare organizations, Diagnostic Imaging, Oncological Radiotherapy

## ABSTRACT

### introduction

Healthcare professionals working in healthcare organizations are crossed by processes of diversification of talents, cultures, needs and abilities that must be carefully identified and valued in an organized context of professional skills. For every modern healthcare organization it is important to have systems for mapping and monitoring skills and knowledge to enhance and develop human resources by adopting organizational changes with the aim of improving patient services.

### aim of the study

In the departments of Diagnostic Imaging and Oncological Radiotherapy of the ASL of Rieti, a skills mapping and monitoring project was created in order to exploit the needs (hired professional) and talents (newly hired professional) of each member of the team in the process of his training. This project has the need to develop and expand the specific "skills" of each operator, such as the knowledge, skills and abilities of the professional who represent the added value of the health service, of the services provided to patients which ultimately contribute to the improvement of the whole organization.

A specific Working Group was set up at the Department of Health Professions of the ASL of Rieti which analyzed the organizational context of the UOCs involved in the project, their branches and the services they provide. Specific focus groups were then created for the creation of Job Descriptions and responsibility matrices. Subsequently, the training needs were analyzed and finally the training file was drawn up for each individual professional. The training file has become the tool to direct and personalize the training of each individual member of the team.

### discussion and results

The implementation of the skills mapping and monitoring project and the use of the training file has allowed us to adopt a new method and to create a dynamic document which, through periodic re-evaluations and updates, allows us to map the skills that are acquired over time by the radiographer and to allocate it according to his aptitudes and skills. The acquisition of new skills has allowed us to have more multidisciplinary professionals without affecting individual specificities and talents.

### conclusions

The results achieved demonstrate how the creation of an individual training file for the healthcare professional, in addition to being an excellent incentive system for staff training, represents a valid tool for mapping and monitoring skills in a cyclical and continuous way, allowing the management to have every moment the real picture of the Human Resources deployed, of the skills and training gaps.

## INTRODUCTION

We live in an era where a rapid evolution of knowledge can be observed and where being able to understand what is done and how it is done becomes essential. The ever-increasing and continuous innovations in the healthcare sector require that the organizers of the services must find methods and systems capable of maintaining the standards of quality, efficiency and effectiveness of each healthcare and medical assistance intervention. Healthcare professionals working in healthcare organizations are crossed by processes of diversifi-

cation of talents, cultures, needs and abilities that must be carefully identified and valued in an organized context of professional skills.

The word "competence" can have different interpretations and declinations. The psychologist Francesco Fraccaroli in his famous work "Learning and training of organizations", defines competence as "a dynamic set of iteration between the individual and his work which manifests itself when he selects knowledge, skills and attitudes useful for achieving a good result in a specific context".

In the healthcare world, the most important and relevant competence factors are:



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- **Motivation:** transforms the individual's skills and competences into construction elements. Motivated workers aim for results by improving their performance;
- **Aptitudes:** personal characteristics that often appear in stressful situations where self-control and resourcefulness are required;
- **Specific knowledge:** technical and professional knowledge of the working environment;
- **Skills:** cognitive and behavioral skills aimed at daily work performance.

Today, the transversal skills of healthcare professionals must be supported by motivation, the ability to reflect and know how to use learning strategies and behavioral self-correction.

For every modern healthcare organization it is important to have systems for mapping and monitoring skills and knowledge to enhance and develop human resources by adopting organizational changes with the aim of improving patient services.

A correct and effective mapping of skills, followed by a careful analysis of the training needs of each healthcare professional, is able to align them with the organizational set-up necessary for the diagnostic and healthcare setting. We move from a "push" logic, where the professional suggests his training, to a "pull" logic in which the needs of the organization direct the training needs. The organization is no longer based on individual "Top Performers" but the goal is to create "Top Performance" of the team involved in the project.

### AIM OF THE STUDY

In the departments of Diagnostic Imaging and Oncological Radiotherapy of the ASL of Rieti, a skills mapping and monitoring project was created in order to exploit the needs (hired professional) and talents (newly hired professional) of each member of the team in the process of his training.

This project has the need to develop and expand the specific "skills" of each operator, such as the knowledge, skills and abilities of the professional who represent the added value of the health service, of the services provided to patients which ultimately contribute to the improvement of the whole organization.

The Mapping and Monitoring model of UOC Skills through tools such as job descriptions, structured interviews, files, targeted training interventions and training dossier, aims to provide an operational tool that improves the management and efficiency of the service, enhances individual health professionals and the training of the team, allows for the interchangeability of skills between the healthcare professionals involved and ensures Patient Safety through continuous monitoring.

Through the Department of Health Professions of the ASL of Rieti, a Working Group was set up headed by the Director of the Department, the head of the Technical Company Organization and Diagno-

stic Imaging and three radiographers responsible for coordinating the department.

The organizational context of the UOCs involved in the project, their branches and the services they provide was analysed. Focus groups were then set up, one for each branch of the organization of the UOCs, in which the professionals belonging to each area to be analyzed took part in order to determine the drafting of the Job Descriptions. These are based on the concepts of activity and competence, paying particular attention to the specific professional responsibilities of the different professionals who work in a given service. They are operating manuals where daily activities are described, where methods and tools are defined to obtain the orderly functioning of the organization through optimal use of the human resources available.

The job description is subject to the development of responsibility matrices through which each operator can be responsible, involved and informed. The responsibility matrix is a graphical representation that highlights the individual activities assigned to each operator within a company organization. For this reason, our Job Descriptions include the Responsibility Matrix (RAM) prospectus.

After creating the Job Descriptions with the related Responsibility Matrices, we analyzed the training needs through a mapping of skills: after a targeted interview with each professional, a real preventive form was structured in order to establish the professional skills possessed by each radiographer.

The preventive form model includes information relating to origin and above all to the specific skills acquired throughout the entire working career, including previous experiences.

The next phase involved the creation of the training file for each radiograph, which through periodic re-evaluations is updated for the progress of the professional's specific skills and abilities.

This first phase of the needs analysis was especially important for newly hired professionals as they were mainly assigned to services in which they had already acquired skills and abilities.

We then carried out a skills gap analysis to identify the specific training needs of each radiographer regarding their assignment, in order to broaden skills and knowledge, increase and expand their professional career, create greater transversality and flexibility in them.

To identify individual training needs, we have developed individual training schedules starting from the analysis of the individual activities involved in the process, each of which represents an objective or, in analytical terms, a pre-established and measurable result indicator, accompanied by the planned training period, the self-assessment, from the evaluation of the tutor and the signatures for



acknowledgment.

The objectives were useful for identifying the intermediate steps, through the indicators that had been set at the beginning of the training program, useful not only for evaluating and measuring achievement within the set times, but also for having a measurable and quantitative methodological tool.

After the Training Gap evaluation phase, we merged the training and preventive forms, which became part of the radiographer's training file, becoming a dynamic document: through periodic reassessments and updates, it allows you to record and monitor the progress and the expansion of the skills acquired by the healthcare professional.

After identifying the training gaps and analyzing each Training File, customized training interventions were organized and designed. These were administered to them through the Field Training Method (FTM) by identifying suitable expert tutors who followed and evaluated the training. At the end of each training intervention, the results were evaluated and the Individual Training Booklet was updated.

In the design and implementation phases of the project we followed the classic 4 phases of the Deming Cycle, dividing the work into :

- Plan Phase: creation of the working group, analysis of the context, creation of specific Focus Groups by area, creation of Job Descriptions, creation of digital models of preventive and monitoring forms, creation of the digital model of the Training File;
- Do Phase: structural interviews, compilation of preventive and training forms, compilation of individual training files;
- Check phase: analysis of training gaps, planning of individual training interventions;
- Act phase: administration of individual training interventions, evaluation of results, assignment of the health professional.

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## DISCUSSION AND RESULTS

The implementation of the skills mapping and monitoring project and the use of the training file has allowed us to adopt a new method and to create a dynamic document which, through periodic re-evaluations and updates, allows us to map the skills that are acquired over time by the radiographer and to allocate it according to his aptitudes and skills. The acquisition of new skills has allowed us to have more multidisciplinary professionals without affecting individual specificities and talents.

Through the creation of individual training courses, we have involved all professionals making them an active part of the process: some have been trained, others have held the role of tutor for colleagues. We have observed that, in addition to being a valid training tool, the project has become a real organizational management tool through which we can guarantee a valid support for measuring performance and greater synergy and flexibility of radiographers, with the aim to reduce organizational problems and ensure high quality standard of patient services.

At the end of the first complete cycle of the Project, the professionals are able to autonomously carry out all the activities within the various assignment services and about 30% of the radiographers have developed transversal skills and abilities such as to allow them to carry out activities in different sectors from that of assignment and remaining within the same unit.

The results demonstrate that the creation of an individual Training File for the healthcare professional is an excellent incentive system for staff training, furthermore it represents a valid tool for mapping and monitoring skills in a cyclical and continuous way, allowing the heads of Departments to have the situation of Human Resources deployed, skills and training gaps. In our experience, these have also proved to be an excellent health management tool, very useful for planning services and allocating personnel. Furthermore, it has been shown to increase staff motivation, new skills training and ensure a high quality standard of patient services.



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