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## Volume 7 - Issue 5, 2007 - Country Focus:Radiology in Finland

### Management Challenges for Radiology in Finland: Reorganising Departmental Activities for Greater

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**Municipalities in Finland are responsible for arranging healthcare services for the people living in their area. The hospital district of Helsinki and Uusimaa, owned by thirty-one member municipalities, is a publicly-funded specialised medical care organisation. Helsinki city is the biggest municipality owner of the group, providing services to over 1.5 million people. The University of Helsinki is also an owner of this organisation, and includes fifteen hospitals, of which eleven have university hospital status.**

Since 2004, the HUS Helsinki Medical Imaging Centre (HMIC) is responsible for the provision of radiological services for the hospital district of Helsinki and Uusimaa. HMIC offers radiological services to fourteen hospitals.

Municipality owners also have their own primary healthcare organisations, which have been equipped with conventional radiographic and ultrasonographic tools since the 1970's. When the Hospital District of Helsinki and Uusimaa was established, Helsinki City handed over its primary healthcare radiological services to HMIC. After that, many other municipalities took the same decision, and today HMIC offers primary radiological services in sixteen of its thirty-one owner municipalities. The integration of specialty and primary radiological services reduces overlapping activities, increases the use of radiological equipment and decreases the number of radiological exams, generating cost savings for the municipalities.

#### Financial Facts about HMIC

The 2007 budget of HMIC is 68.7 million Euros. Pre and post-tax profits are forecasted to be 1 million Euros. The number of employees is 790, of which 171 are radiologists, 466 radiographers, and 153 other staff. The number of radiological exams is 800,000 per year. Conventional radiography accounts for 69% of all exams, CT 10%, ultrasound 13%, and MRI 5%.

The annual investment level is under 10 million Euros. There are nine MRI scanners, of which one is a 3T unit, as well as thirty ultrasound scanners and fifteen CT scanners, of which two are 64-slice scanners. The organisation also has fourteen DR and twenty CR systems for conventional radiography.

#### Protocols that Serve Patients and Doctors

HMIC operates on the principal of the patient's right to be examined with the right radiological equipment based on careful clinical tests done for the patient and patient's disease history. The right imaging protocol is also provided. Exam results must be available when the referring doctor needs them for treatment decision-making. In big organisations like HMIC, there are very varied pools of radiological knowledge. Networking this knowledge results in more accurate radiological diagnoses and enables quicker consultations. The patients can choose the department where the exam is done, except for MRI and CT exams.

#### Uniform Processes

In order to efficiently manage a big organisation, processes must work fluidly. With fourteen radiological departments and studies carried out in 30 different buildings, core and supportive processes cross all HMIC departments in order to achieve uniformity. The two core processes are diagnostics and research/teaching. HMIC has four diagnostic processes: conventional radiography; ultrasonography; CT and MRI; fluoroscopy,

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angiography and radiological interventions. The purpose is to do the radiological exam in a uniform way across the whole organisation. With this in mind, each of the fourteen radiological sites are networked. The integration of radiological services between these buildings is supported by the HUSPacs IT solution and a domestic RIS. HUSPacs is one the biggest regional PACS in Europe.

The owner of each diagnostic process is responsible for developing, planning, and coordinating their process and for planning investments in radiological equipment. The target is to allocate scarce resources in an efficient way between the different departments. When planning radiological investments, attention is paid to the utilisation capacity of the investment. Process owners also participate in allocating the use of human resources.

#### **Economic Background**

HMIC is a non-profit or low-profit public organisation, which finances its activities from money coming from services given to patients and paid for by the responsible municipalities. The economic situation of the municipalities determines the targets and frames for HMIC. HMIC uses so much capital for its huge running costs that global business models are followed to ensure smooth management. Much attention is paid to cost-control. HMIC's size gives it synergies and excellent opportunities to utilise scale of economies, for example in investments.

#### **Human Resources**

In Finland, there is a shortage of radiologists. Public hospitals have difficulties in hiring radiologists, and the workload for those in employment is high. In HMIC, the additional challenge is to balance the workload of radiologists and radiographers between different departments. HMIC has hired private sector radiologists to read and report exams to assist in this. In public hospitals, the incentives for personnel are fewer than in private practices. However, the trend is to increase incentives in public hospitals also. As a hospital with university status, HMIC pays attention to educating personnel. The interesting nature of radiological work at the university hospital appeals to many radiologists and radiographers.

#### **Management**

HMIC is an organisation of many kinds of professionals. This presents a challenge in leading and managing the enterprise. Having university hospital status does not make it easier. The essential role of the managing director is to be visionary. Changes in radiological business are rapid and must be noted in the development and planning of activities. At the same time, increasing healthcare costs cause additional challenges for management. The main task of the managing director is to ensure that economic and functional targets, assessed by the HMIC board and the Council of the Hospital District of Helsinki and Uusimaa, are achieved.

Radiological departments are run by chief radiologists and chief radiographers responsible for arranging daily work in their departments. Department chiefs must negotiate with process owners for daily investment and human resource needs. The role of the headquarters of HMIC is planning, development and coordination of radiological activities within the whole HMIC organisation.

#### **Achievements**

Every year we see positive results from our tight managerial procedures. The ordered exams have been carried out at the right time, within time limits set by Finnish standards. Costs have been within target budgets. An annual decrease in indexed costs has been at the level of 3%. This has resulted in a good price stability, and for the three last years, the nominal prices have remained unchanged.

#### **Future Challenges**

Until the present time, HMIC has concentrated on expanding and taking over integrated radiological services in the Hospital District of Helsinki and Uusimaa. In the near future, the target is to reorganise radiological activities to achieve additional synergies, economies of scale and cost savings and to secure regional radiological services for patients. When reorganising HMIC's activities, identifying and balancing the interests of the stakeholders is crucial. In the near future, further development of processes is required.

Published on : Sat, 15 Dec 2007