

## **Risk assessment and risk management in a new Centre for Nuclear Medicine/ PET.**

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### ***Objective***

As a preparation for the validation process of the new Centre for Nuclear Medicine and PET, a risk assessment and risk management system has been contracted in. Risk analysis is being performed on aspects of use of radiation in the course of all nuclear medicine and PET/CT examinations.

### ***Method and Materials***

With the aid of *adapt*, a risk management handling centre based in Bergen, we have employed their control system to assess risk and evaluate barriers necessary to accommodate both official requirements (from Norwegian legislators and hospital owner) and the specific risks associated with nuclear medicine and PET.

A working group consisting of a group of physicists, management and external expertise from *adapt*, first examined radiation risks and noted their relevance to the practical management at the Centre. The Hospital is already using the same risk management system on all use of radiation throughout the hospital, and also on management of problems concerning contagious diseases.

All situations regarding radiation protection are elaborated on and are subject to discussion within the group. The group focuses on the probability of a certain events occurrence and on the consequence of an occurrence. Types of barriers are listed as technical, organisational, probability reducing or consequence reducing. Measures of barriers are listed from numbers 1 through 23, examples are “approved competent personnel, access control, requisition form and legitimacy of examination” etc (more will be presented). All barriers are weighted. Maximum score (most likely to occur and most severe consequence) is scored 25, minimum score (least likely to occur and least severe consequence) is scored 1. Scores from 1 through 4 is given the colour green on a chart, 5 through 9 is given the colour yellow, and scores 10 through 25 is given the colour red.

Risk is estimated, and necessary barriers to reduce risk to an acceptable level are suggested.

Schematic presentation of the above will be presented.

### ***Results***

The risk evaluation and reduction process is currently being performed, and results are preliminary. Results will be available at the end of January.

### ***Conclusion***

So far as the result are available, it is the distinct understanding of the working group that the risk analysis here presented is a valuable addition to quality control and quality assurance in our department. We are currently considering using the same approach to the production of radiopharmaceuticals that will take place in the department.