

International Workshop on
Optimization of Radiation Protection of Medical Staff

Round table

Lessons learned to optimize
occupational radiation protection

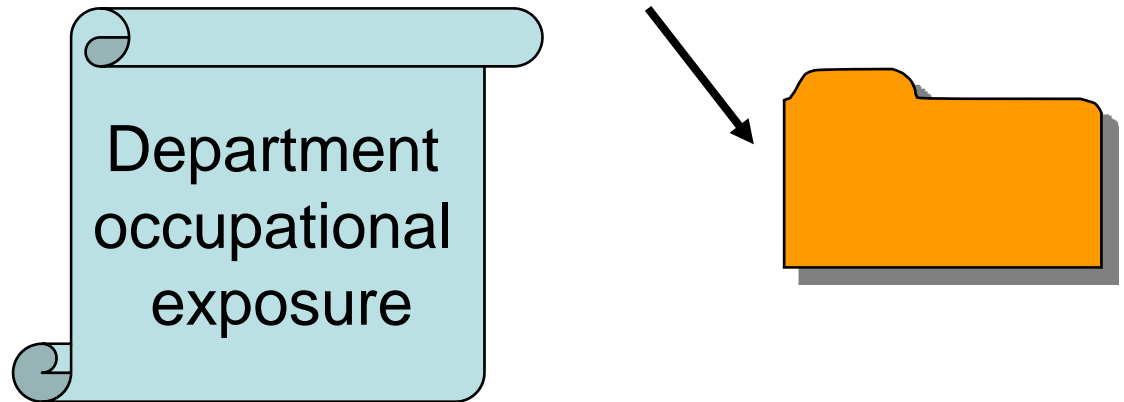
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To be or not to be aware of the own occupational exposures?

- Theoretically: everybody
- Practically: some people

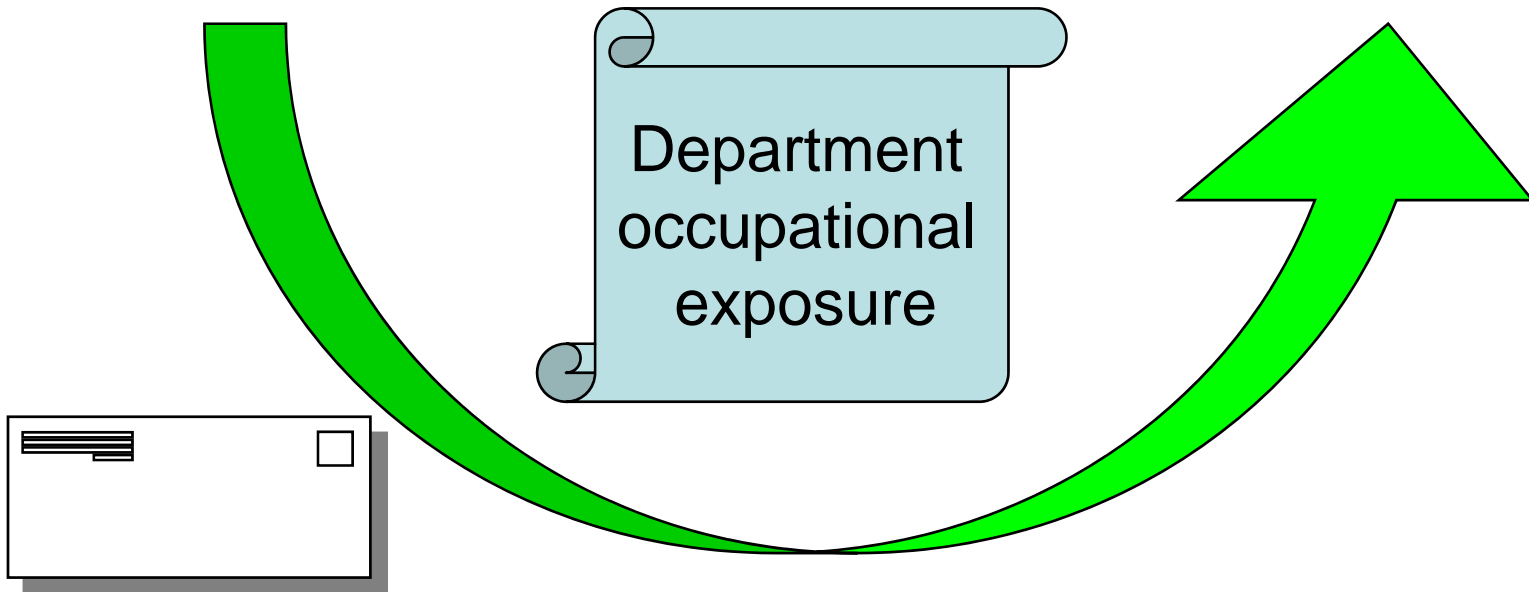
RP Service → Department Director ~~X~~ → Worker



How should awareness be improved?

- Occupational exposures
- Underlying causes of exposures and how to control

RP Service → Department Director ~~→~~ Worker



Dose reference levels for groups

People beyond the reference Hp(10) level

	Reference Dose
PET Lab	0.40
MN	0.20

Why these values?

Dose reference levels for groups

People beyond the reference Hp(10) level

	Reference Dose	User	1	2	3	4	5	6	7	8	9	10	11	12	
PET Lab	0.40	Lab-1			0.78		1.35	0.41	0.49		0.47	0.83	0.68		
		Lab-2					0.45		0.81		0.56		0.97		
		GMP-1								0.52					
		GMP-2									0.99				
		Mainten													
		Staff													
MN	0.20	Nurse-1			0.28	0.3	0.21	0.39					0.23		
		Nurse-2	0.29	0.45							0.23	0.23			
		Nurse-2	0.21				0.28		0.21						

Investigate: High value
Exceeding frequently

Reasons for individual dose elevation

- Contamination
- Workload increased
- Activity carefully loaded in a syringe
- Intervention in a synthesis module
- Cyclotron maintenance/intervention
- Setting up a new radiopharmaceutical



Were they aware of the risk?

Activities that need attention

- potential high dose
- doses are not well known



- Cyclotron intervention
- PET Radiopharmaceutical production
- Radiometabolic treatments: new or not very frequent

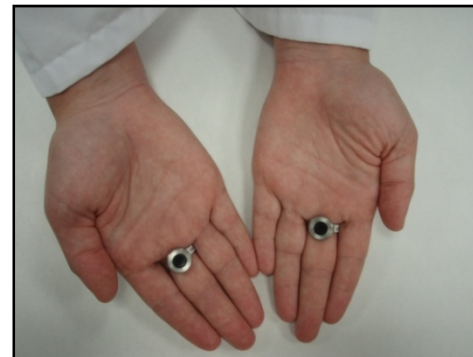


Our experience with the ORAMED project

- Good practice
 - technicians /nurses rotation
 - Massive shielding



- Maximum/measured dose ≈ 3



How to improve RP?

- Training
- Standardization of minor procedures



- Active dosimeters in PET
 - Dose vs Dose rate + Alarm



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