

Biosafety versus Occupational Health and Hygiene

How safe is the worker?

The Biosafety Officer (BSO),
The hospital infection control professional
The occupational hygienist:
a different view?

Edwin Hagelen
The Netherlands



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Introduction



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Introduction



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The players:

- **Biosafety Officer** : wants to keep the micro-organism inside (the lab)
- **The hospital infection control professional** : wants to keep the micro-organism away from the patient
- **Occupational hygienist**: wants to keep the worker healthy

Do they have the same view?

Biosafety officer in The Netherlands



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- Researcher (graduated, PhD)
- Appointed by the management of the (university) hospital
- Ministry of Housing, Spatial Planning and the Environment
- Keep the genetic modified micro-organisms (GMO) inside
- Admittance policy:
- Registration of the workers
- Risk assessment before starting work with GMOs

Hospital infection control professional in The Netherlands



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- (former) Laboratory technician (bachelor education) or nurse (in-service)
- (mostly) Part of the Department for Microbiology
- Ministry of Health, Welfare and Sport
- To avoid nosocomial infections
- Standard precautions, disinfection and personal protective equipment
- Scope is the whole hospital
- Research by infection registrations and prevalence survey

Occupational hygienist in The Netherlands



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- Technical background or university (graduated)
- (Mostly) Part of the Occupational Health Services (in/extern)
- Ministry of Social Affairs and Employment
- To avoid health problems, as low as reasonably achievable
- Emphasize on occupational hygiene strategy for safe working conditions
- Scope is the whole hospital
- General risk assessments

A different view ?



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Occupational hygienist ?



Biosafety officer ?



Hospital infection control professional ?

Who is in control of the micro-organisms?



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Let's do a risk assessment: but who or what is at risk?

- the (other) patient: sometimes source, sometimes host
- the personnel (the nurse, the researcher, the lab-technician, doctor, etc.)
- the environment
- the visitor

What will be assessed?

- the standard precautions, Standard Operation Procedures (SOP)
- the exceptions, the worst case situations or the normal condition

Who is in control of the micro-organisms?



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How

- standard risk assessment on the micro-organism?
- risk assessment on the worker or visitor?
- a prevalence survey or registration of infections?

When?

- before starting work with micro-organisms?
- during normal conditions, as a routine control?
- only after incidents or high nosocomial infections ?

What does the OH see?



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Occupational hygienist

- starts a risk assessment
- considers the standard precautions to avoid contact
- patient = source of micro-organism
- doesn't see the nosocomial infections
- environment is no subject
- disinfectants can be a threat

What does the HICP see?



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The hospital infection control professional

- discover a nosocomial infection →
- starts to investigate if other patients are infected
- considers the standard precautions to avoid contact
- personnel = source or transmission of micro-organism
- wants to disinfect all the (patients)wards
- wants the patient to go home a.s.a.p.
- environment is no subject

What does the BSO see?

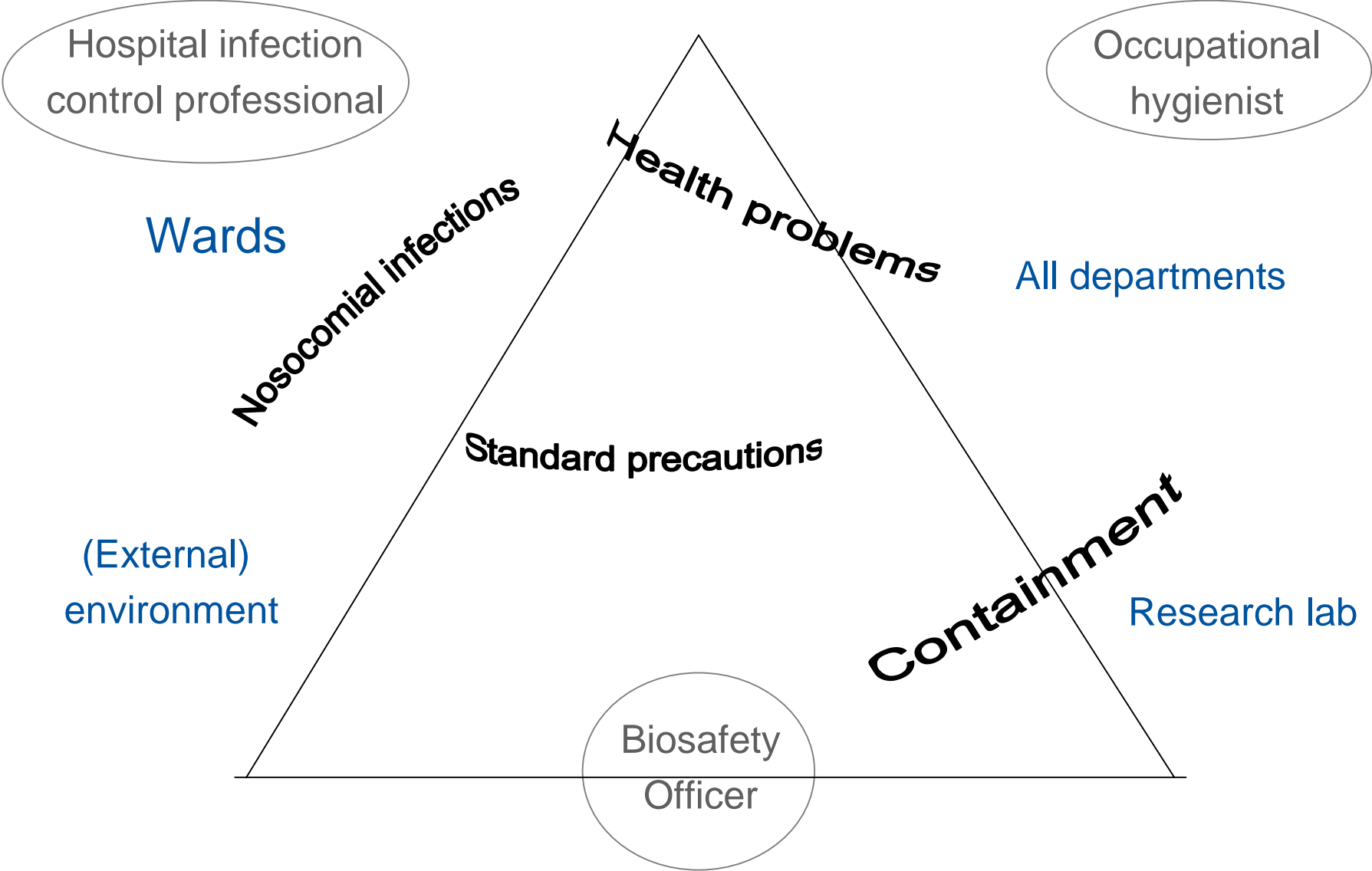


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The biosafety officer

- control on standard precautions
- starts to investigate before starting research with the micro-organism
- personnel = transmission of micro-organism to environment
- wants to disinfect to avoid spread outside the containment
- don't want the patient or personnel to take home the micro-organism
- spread to patients is no issue?

Risks considerations



Risks considerations



Hospital infection control professional

Occupational hygienist

Patient

Other Patients

Patient family

Visitors

Nosocomial infections

Healthcare workers
(Nurses, doctors ...)

Support personnel
(food distribution, cleaning)

SOP

Equipment

Health problems

Standard precautions

Researcher

Lab technician

Containment

Biosafety Officer

Solution in UMC

Expert committee of professionals on risk assessment:

occupational hygienist

hospital infection control professional

safety expert

health physician

environmental experts

worker and management representatives

radiation hygienist

This **committee**,

- Meets every month
- Considers all the risk assessments including the biosafety
- Decides about when and where and how the risk assessments will take place
- Chaired by occupational hygienist of the Occupational Health Services

Discussion



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- 1 regulations / law (1 ministry) will solve problems?
- Make BSO also responsible for biological agents (not GMO)?
- All professionals in one department or make one professional responsible for everything?
- Keep clinical microbiologists out of risk assessments?
- Listen to each other !
- Other countries, other solutions?