



SCOPE OF THE WORKPLACE ASSESSMENT IN HEALTH CARE SECTOR



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WORKPLACE ASSESSMENT

- identifies hazards at workplace and their potential health influences
- define measures to prevent occupational injuries and diseases
- main and basic act for implementation of health protection at work and for employer's actions and obligation
- protect workers health and reduce costs for material and human damages



HEALTH CARE SECTOR

- significant employment sector
- ~ 80.000 employees
- about $\frac{3}{4}$ - women
- specific working tasks
- health risk



OCCUPATIONAL HEALTH HAZARDS IN CROATIAN ECONOMY

CROATIAN INSTITUTE OF OCCUPATIONAL HEALTH

Analysis of occupational health hazards in economic activities

Sources of data: risk assessment documents

Croatia

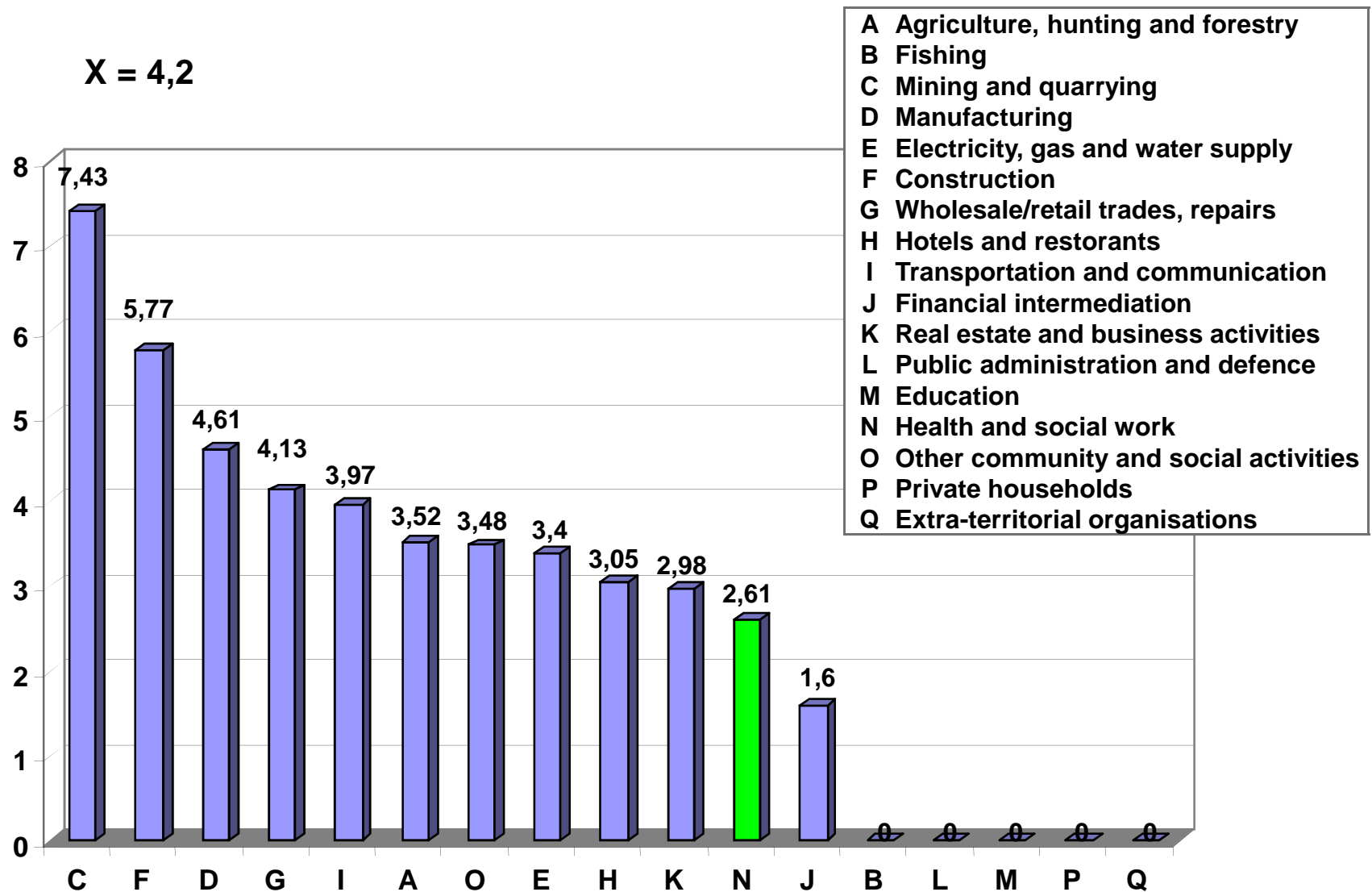
- ~ 1.400.000 employees
- 142.550 employees
= 10% of working population
- all economic activities

Health care sector

- ~ 80 000 employees
- 12 000 employees
= 15% of working population
- clinical hospital: 13 (5 055)
- general hospital: 11 (3 803)
- special hospital: 5 (2 588)
- rehabilitation center: 1 (72)
- polyclinic: 1 (80)
- first aid institution: 1 (403)



AVERAGE NUMBER OF HEALTH HAZARDS PER WORKER





OCCUPATIONAL HAZARDS

- mechanical hazards
- falling and tripping
- electric hazard
- fire and explosion
- thermal hazards

Injuries

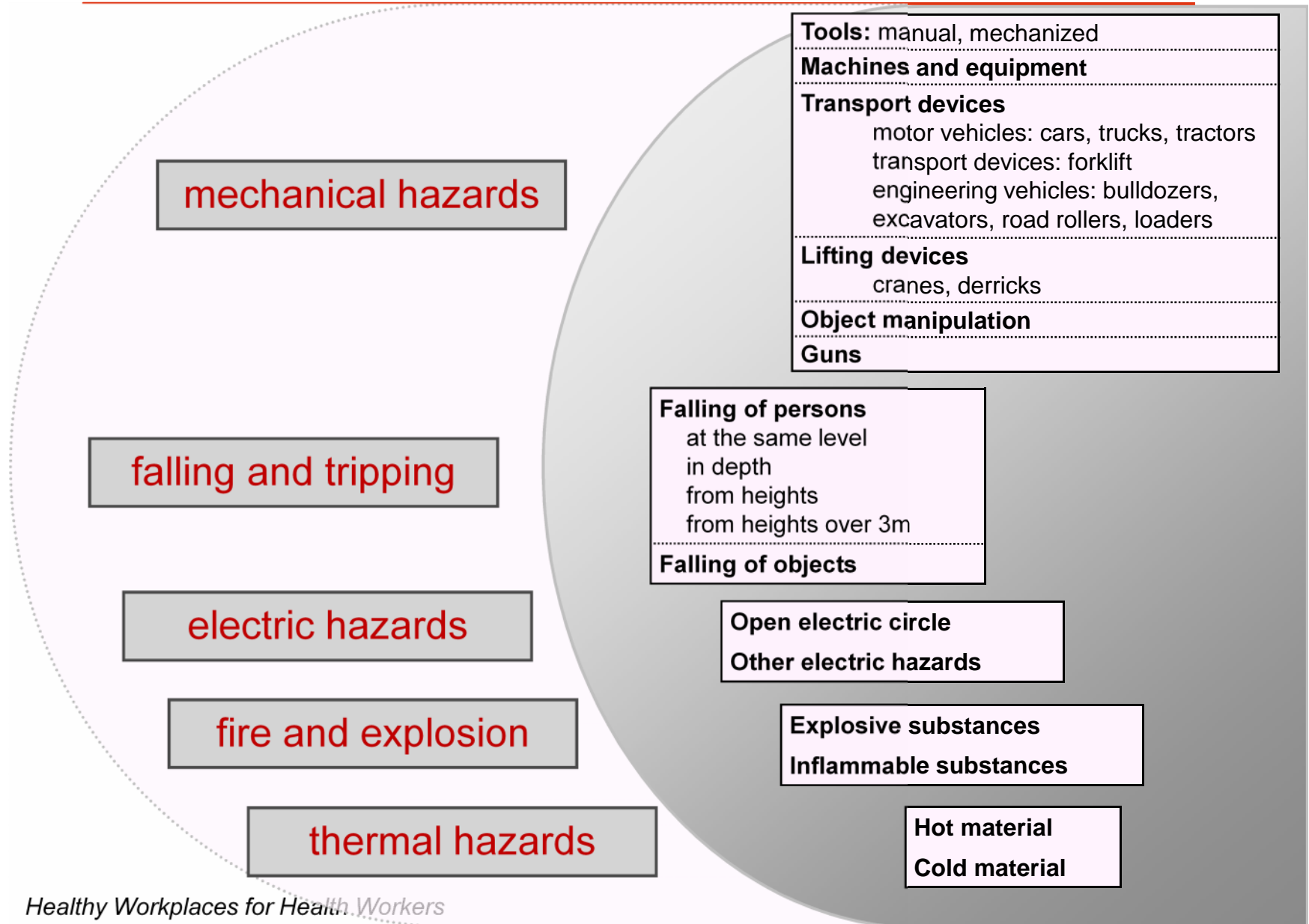
- chemicals
- biological agents
- physical agents
- statodynamic strain
- psychosocial and organizational factors

**Occupational
diseases**

**Work-related
diseases**



HEALTH HAZARDS RESULTING IN INJURIES



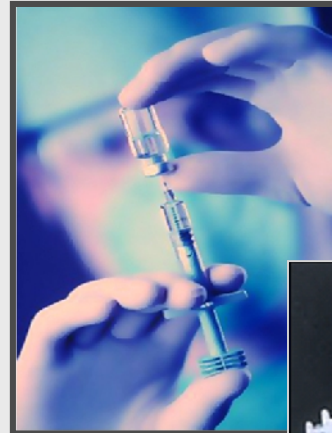


HEALTH HAZARDS RESULTING IN INJURIES

Health care sector

Mechanical hazards

- sharp instruments
- needles
- 22,6%



Falling and tripping

- moving
- 26,4%



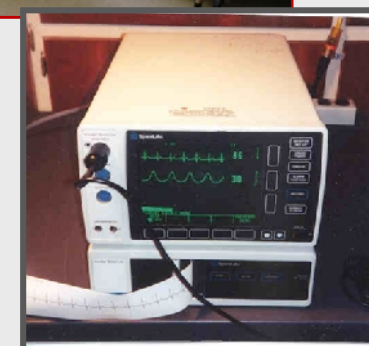


HEALTH HAZARDS RESULTING IN INJURIES

Health care sector

Electric hazard

- equipment
- 22,3%



Violent patients

- USA: ~ 40% of all attacks at workplace
- EU: 4% employees
- Croatia: ?





INJURIES AT WORK

Croatia

- number: 21.000 - 25.000/y
- rate/100.000 employees:
1.550 - 1.750

EU

- rate/100.000 employees:
~ 4.000

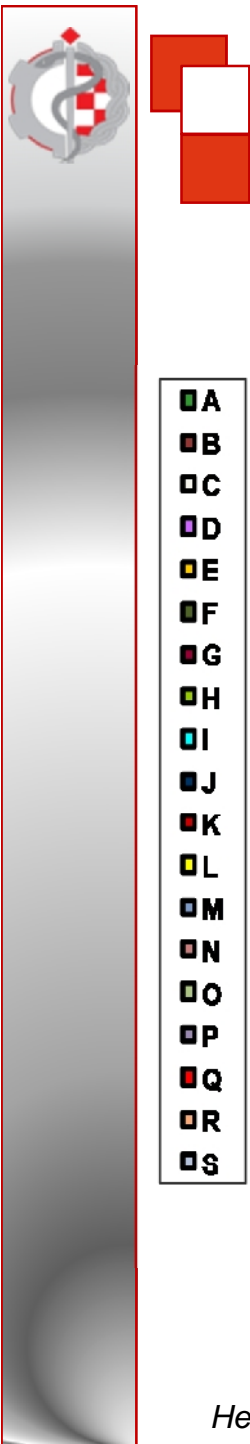
Health care sector

Croatia

- number: 1.200 - 1.500/y
- rate/100.000 employees:
1.600 - 2.100
- 5–8% of all injuries at work

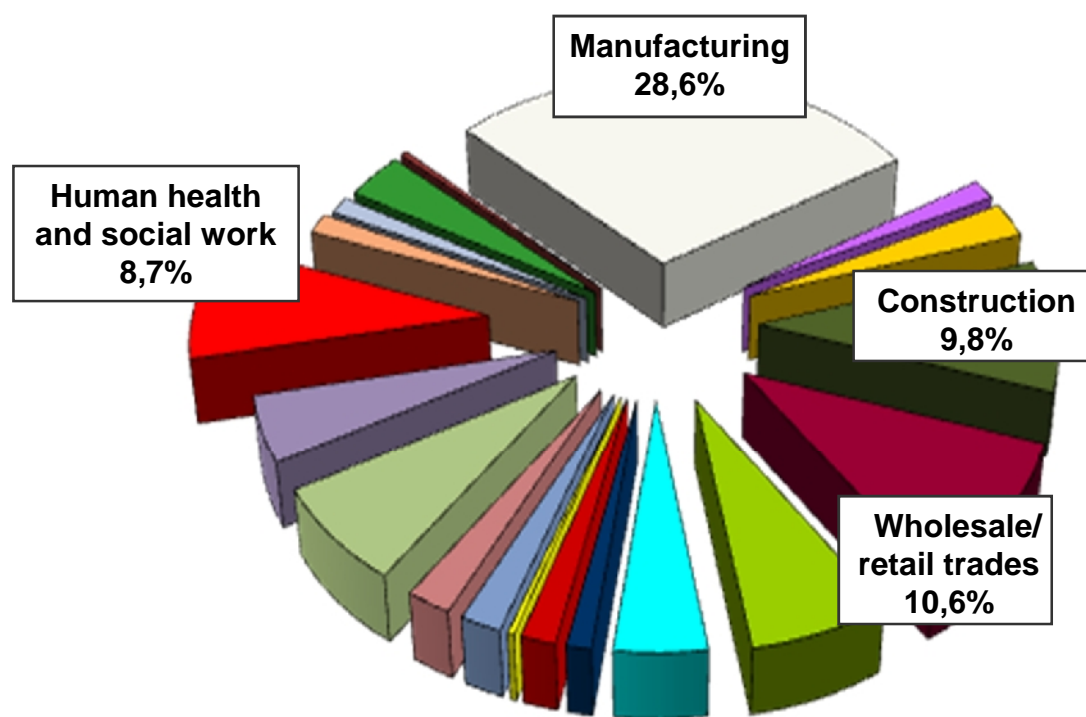
EU

- rate/100.000 employees:
~ 30% higher than average



INJURIES AT WORK

rate/100 000 employed/2010.

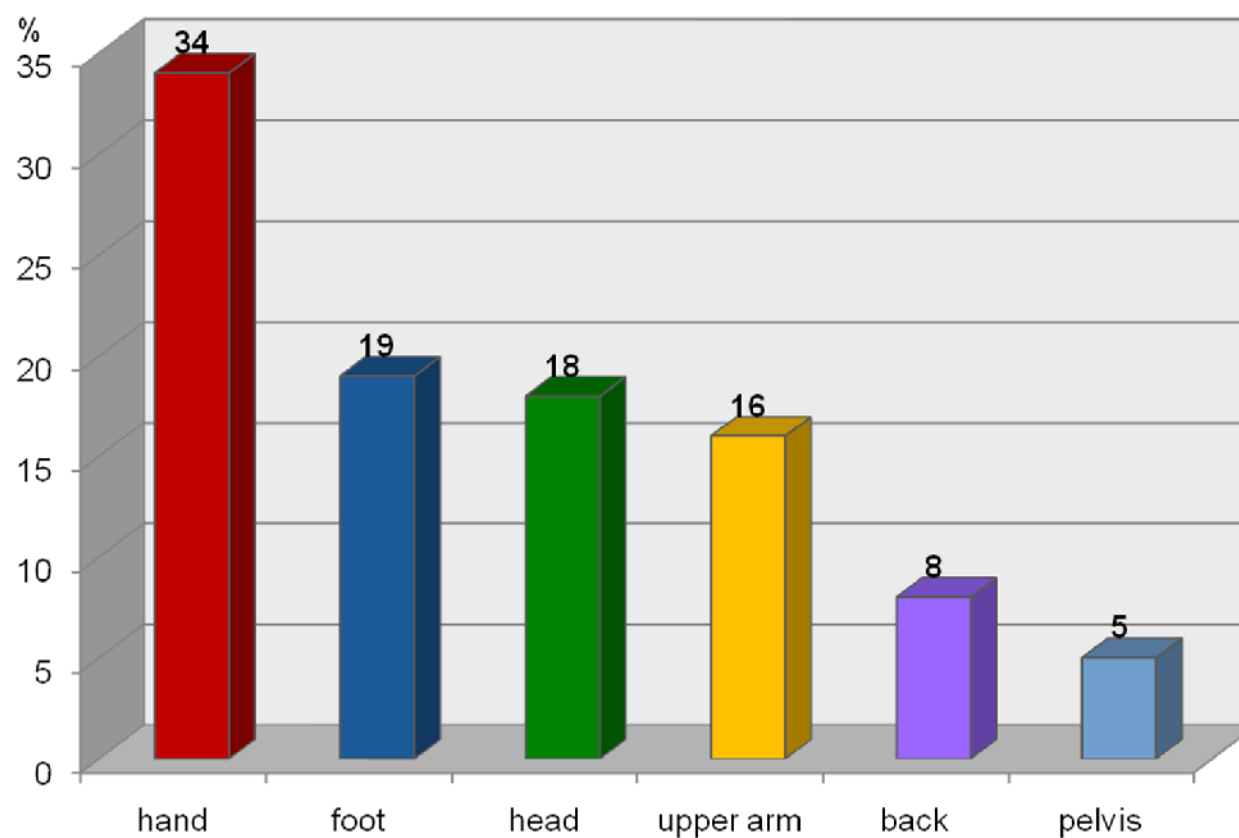


- A
- B
- C
- D
- E
- F
- G
- H
- I
- J
- K
- L
- M
- N
- O
- P
- Q
- R
- S

- A Agriculture, forestry and fishing
- B Mining and quarrying
- C Manufacturing
- D Electricity and gas supply
- E Water supply, waste management
- F Construction
- G Wholesale/retail trades, repairs
- H Transportation and storage
- I Accommodation and food service
- J Information and communication
- K Financial and insurance activities
- L Real estate activities
- M Professional and scientific activities
- N Administrative and support service
- O Public administration and defence
- P Education
- Q Human health and social work
- R Arts and entertainment
- S Other service activities
- T Private households
- U Extra-territorial organisations



INJURIES AT WORK IN HEALTH CARE SECTOR





OCCUPATIONAL HAZARDS

- mechanical hazards
- falling and crashing
- electric hazards
- fire and explosion
- thermal hazards

Injuries

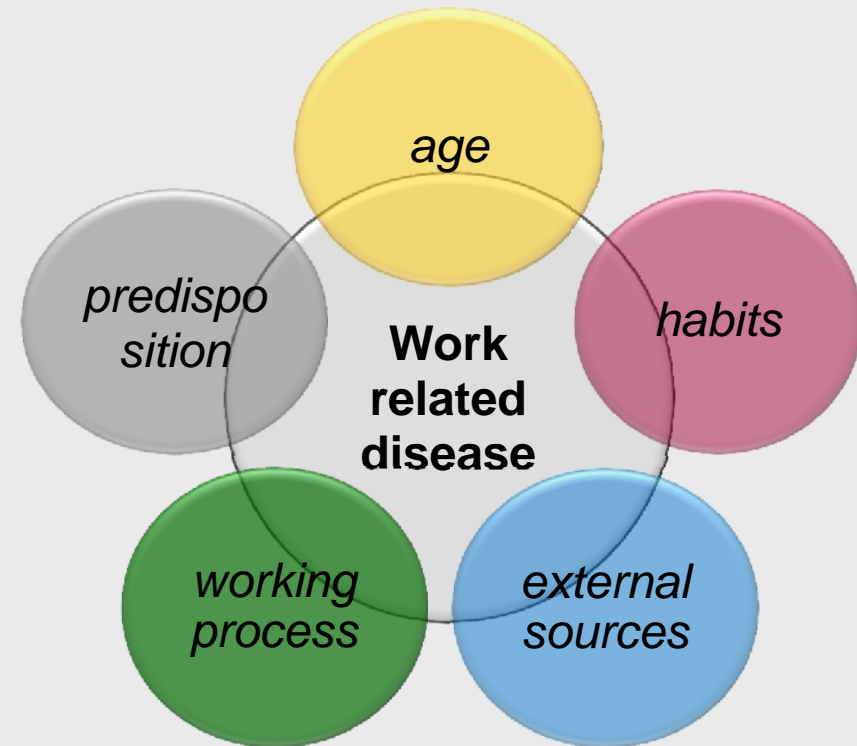
- chemicals
- biological agents
- physical agents
- statodynamic strain
- psychosocial and organizational factors

**Occupational
diseases**

**Work-related
diseases**



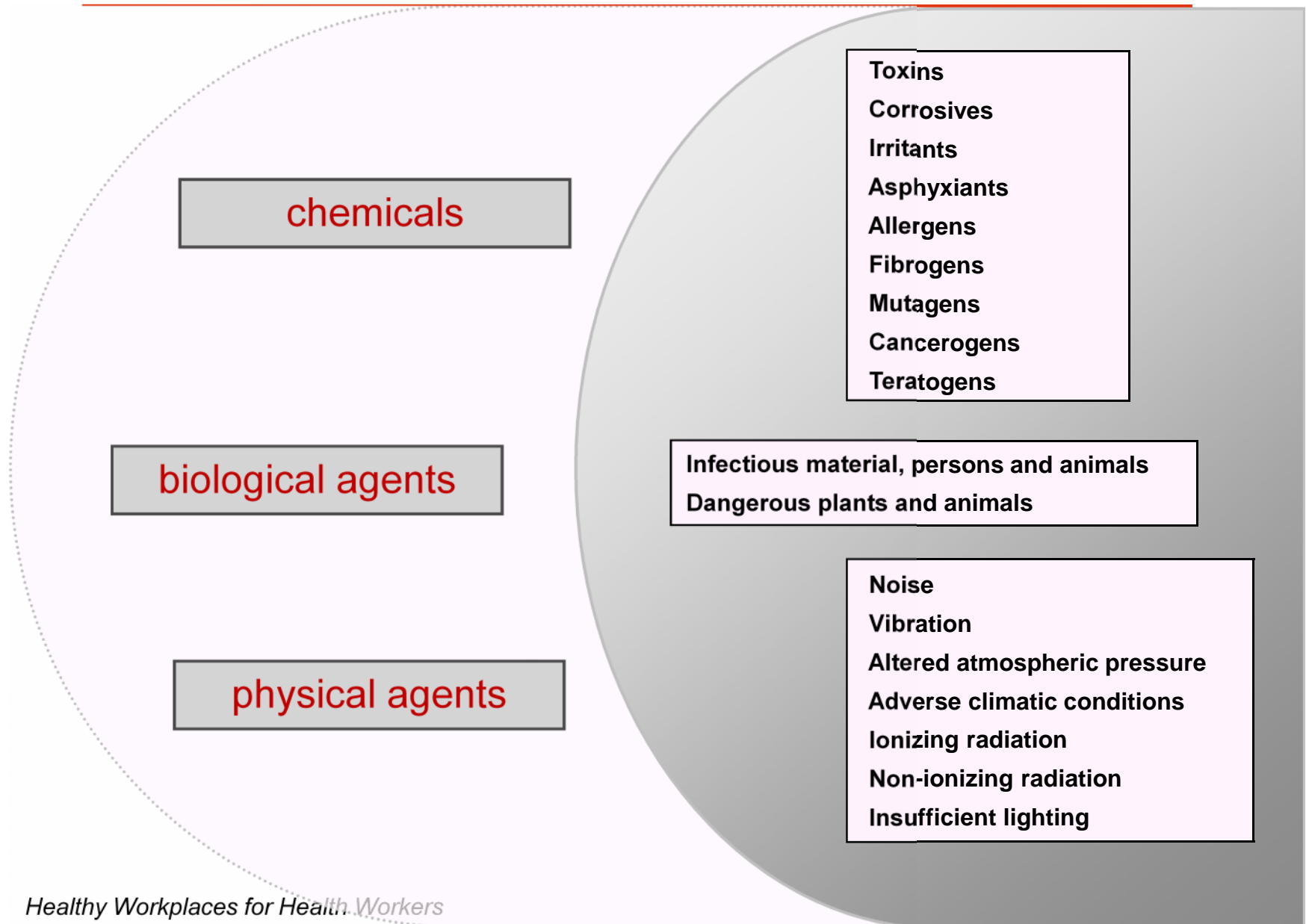
DISEASES



List of occupational diseases

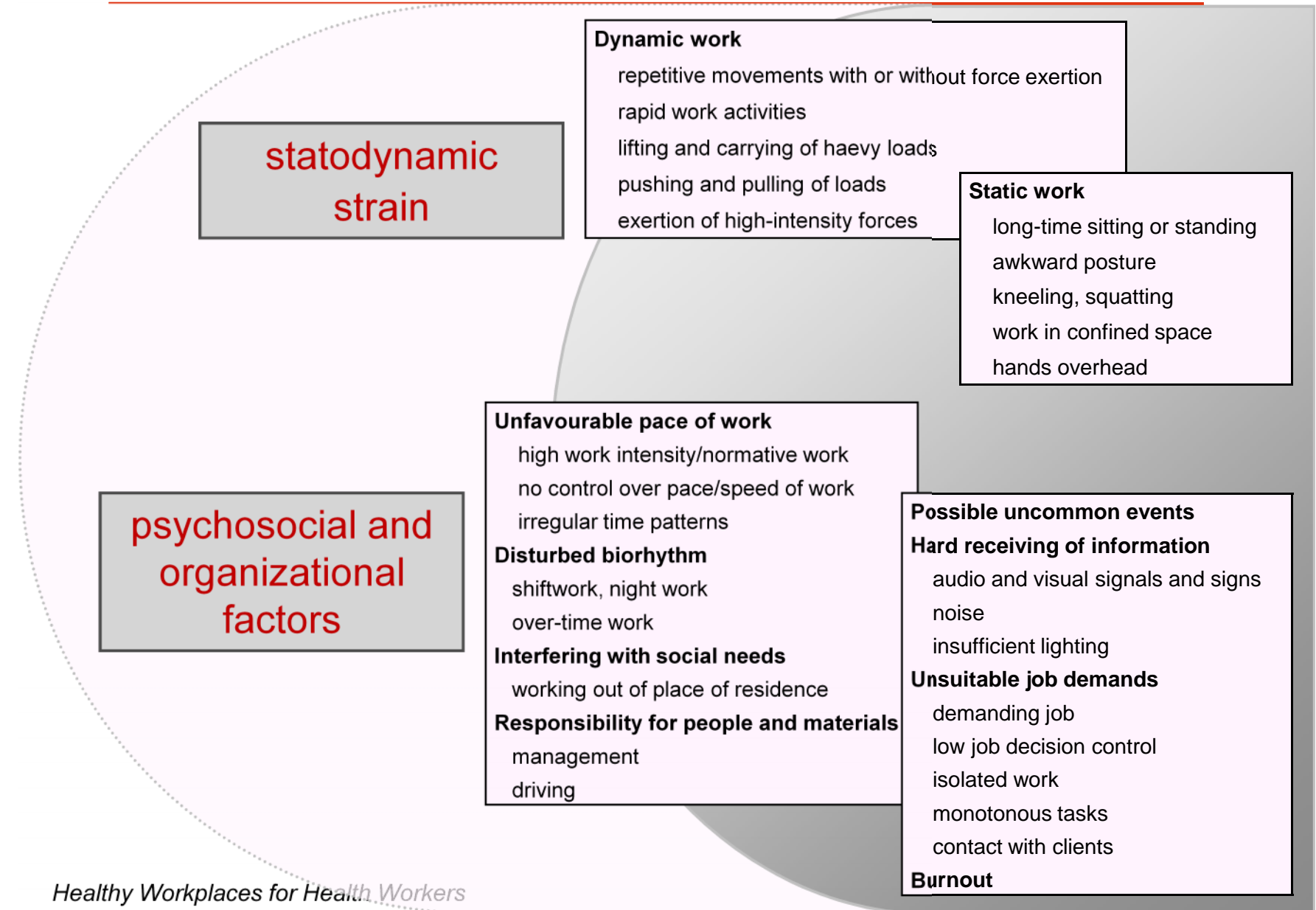


HEALTH HAZARDS RESULTING IN OCCUPATIONAL AND WORK-RELATED DISEASES





HEALTH HAZARDS RESULTING IN OCCUPATIONAL AND WORK-RELATED DISEASES





HEALTH HAZARDS RESULTING IN OCCUPATIONAL AND WORK-RELATED DISEASES

Health care sector

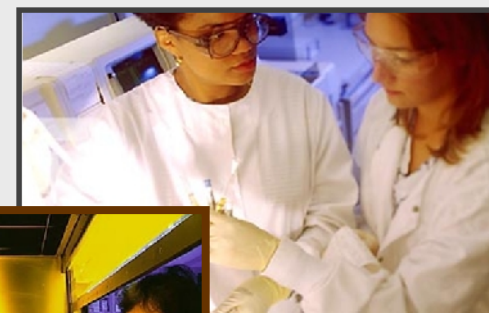
Biological agents

- contact with patients, blood, body fluids
- microorganisms
- 40%



Chemicals

- anaesthetic gases
- sterilizers
- laboratory reagents
- cytotoxic drugs
- drugs
- disinfectants
- latex
- 20%





HEALTH HAZARDS RESULTING IN OCCUPATIONAL AND WORK-RELATED DISEASES

Health care sector

Physical hazards

- ionising radiation: 1,7%
- non-ionising radiation: 4,6%
- vibration





HEALTH HAZARDS RESULTING IN OCCUPATIONAL AND WORK-RELATED DISEASES

Health care sector

Statodynamic strain

- lifting and carrying
 - pushing and pulling of loads
 - long-time sitting or standing
 - awkward posture
 - repetitive movements
-
- Croatia: 27%
 - EU: 37-47% = economy
60% = health care
-
- nurses
 - unskilled workers
 - surgeons
 - dental personnel



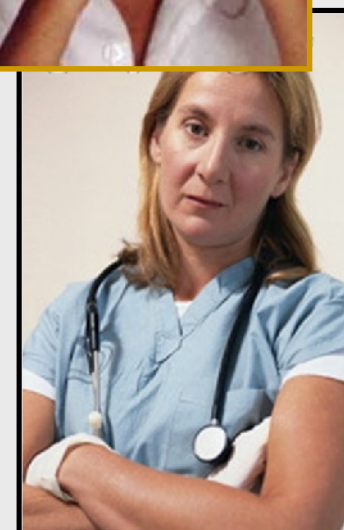


HEALTH HAZARDS RESULTING IN OCCUPATIONAL AND WORK-RELATED DISEASES

Health care sector

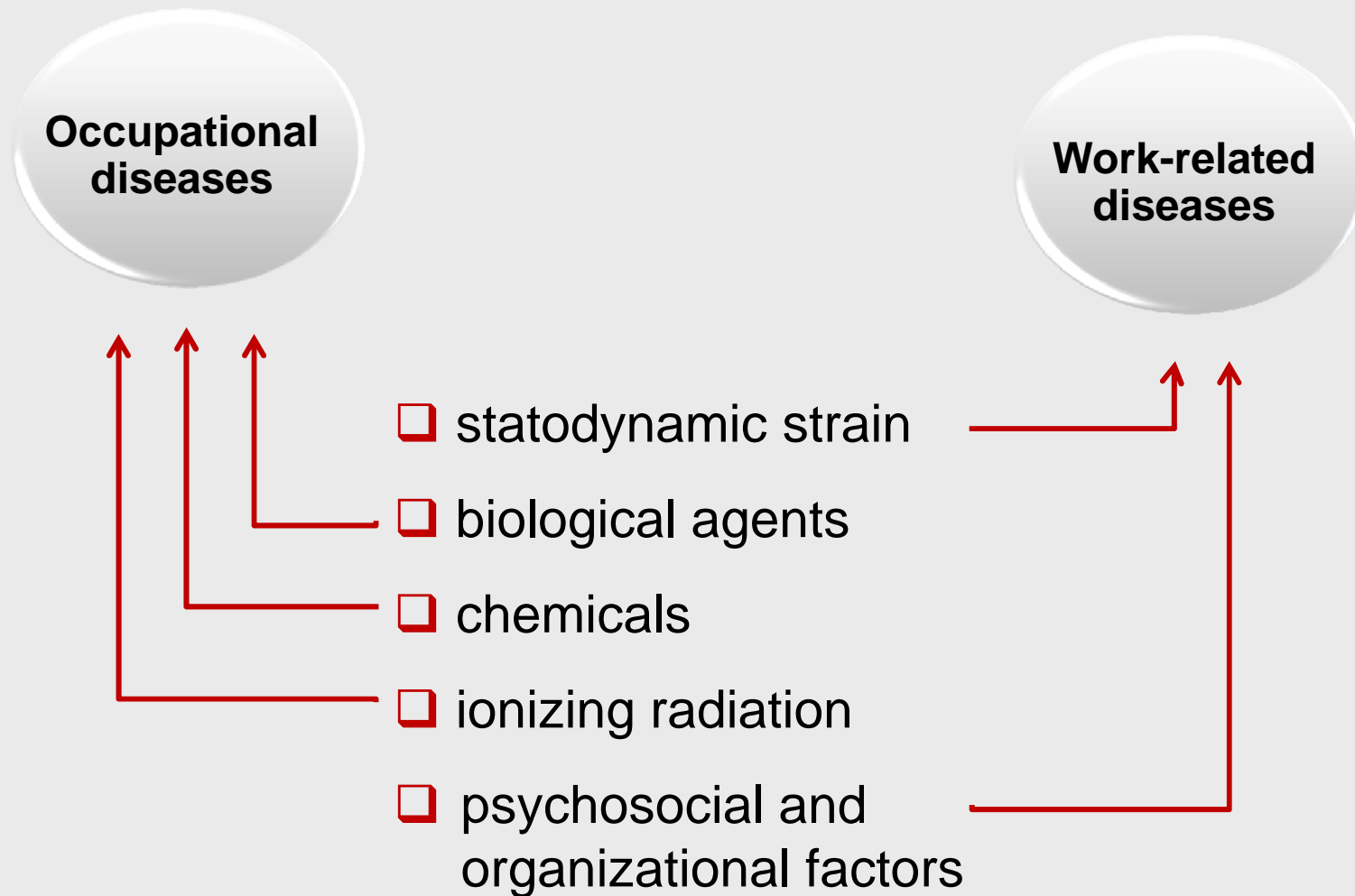
Psychosocial and organizational factors

- over-time, shift and night work
 - responsibility, decision making
 - high expectations
 - emergencies
 - contact with patients
 - confrontation with pain
 - dealing with dying people
 - violence of patients and family members
-
- Croatia: 7%
 - EU: 28% = economy
45% = health care





HEALTH RISK IN HEALTH CARE SECTOR





OCCUPATIONAL DISEASES

Croatia

- number: ~ 80 - 200/y
- rate/100.000 employees:
6 - 15

EU

- rate/100.000 employees:
~ 10 - 170

Health care sector

Croatia

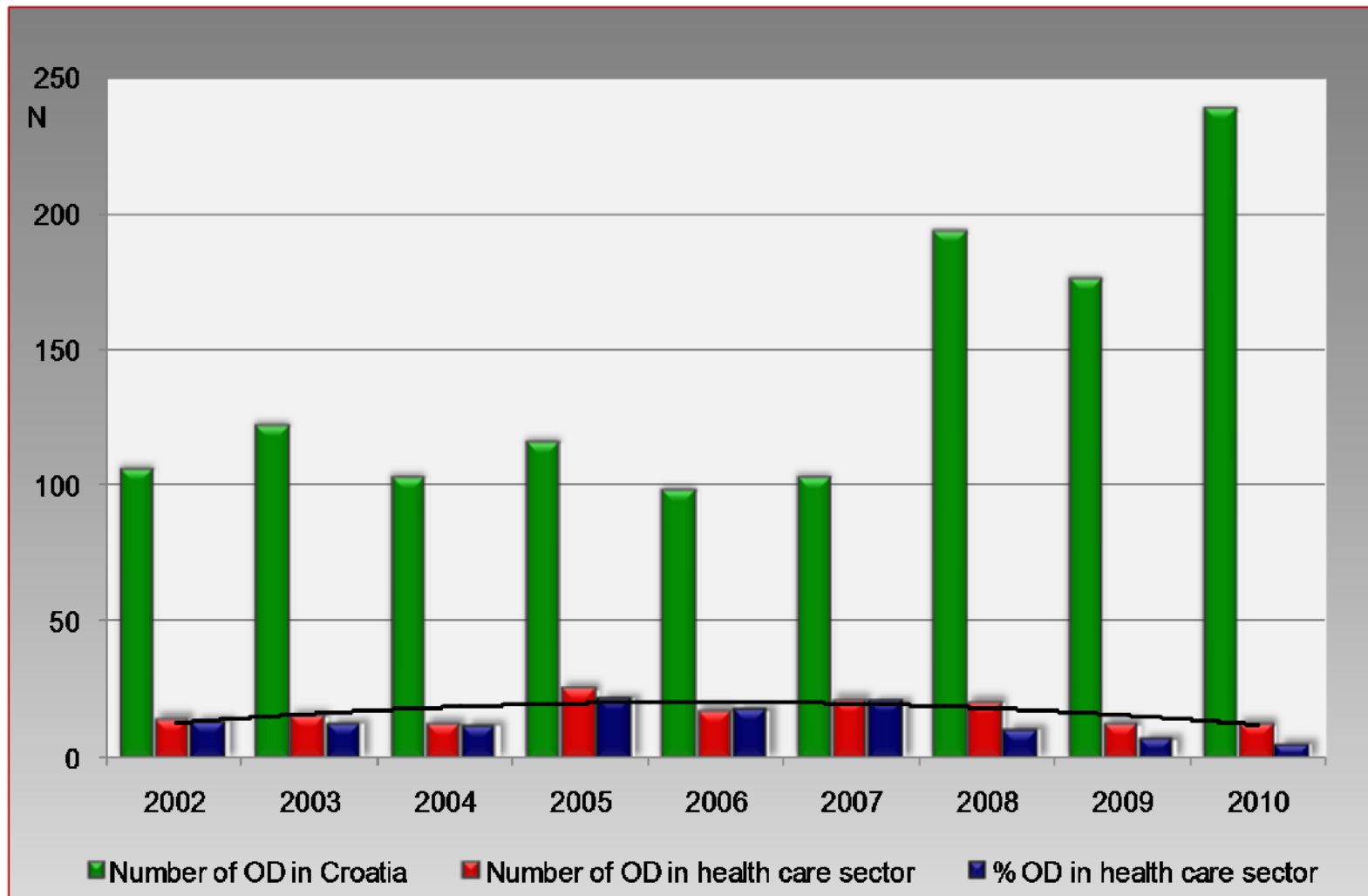
- number: ~ 8 - 30/y
- rate/100.000 employees:
~ 10 - 30
- 7–14% of all OD

EU

- rate/100.000 employees:
~ 4 – 60
- 3 - 19% of all OD in
particular state



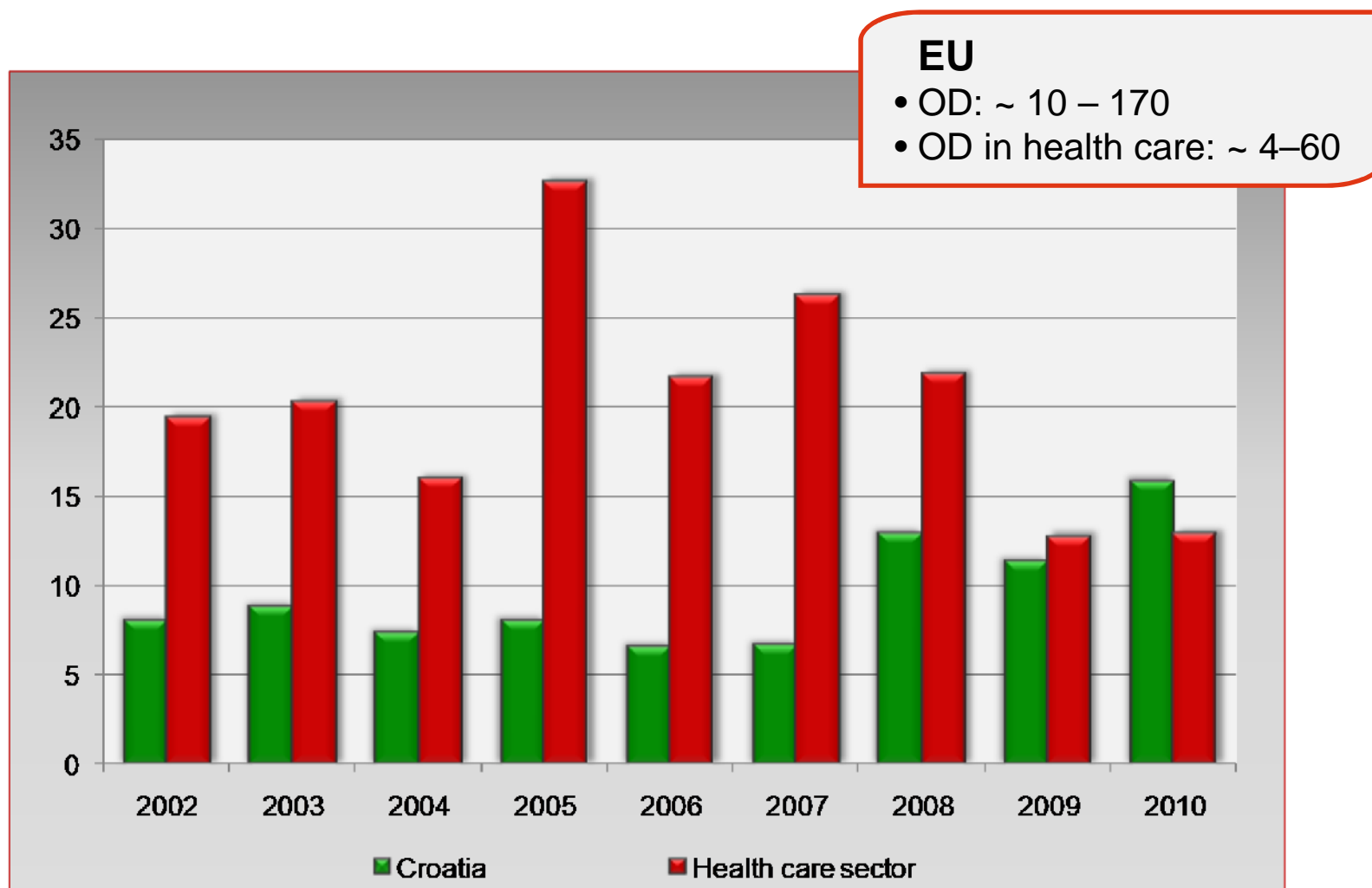
OCCUPATIONAL DISEASES





OCCUPATIONAL DISEASES

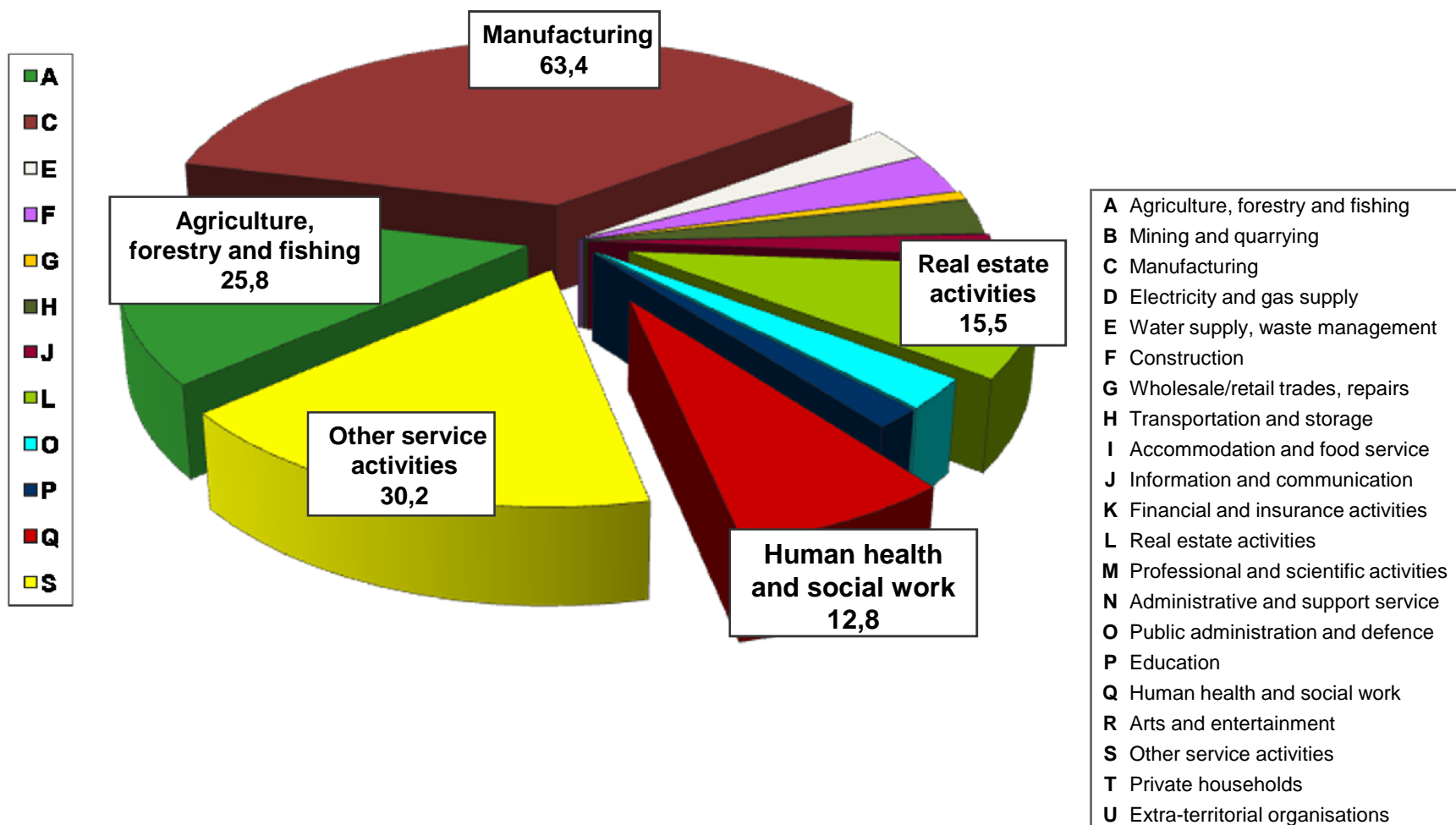
rate/100 000 employed





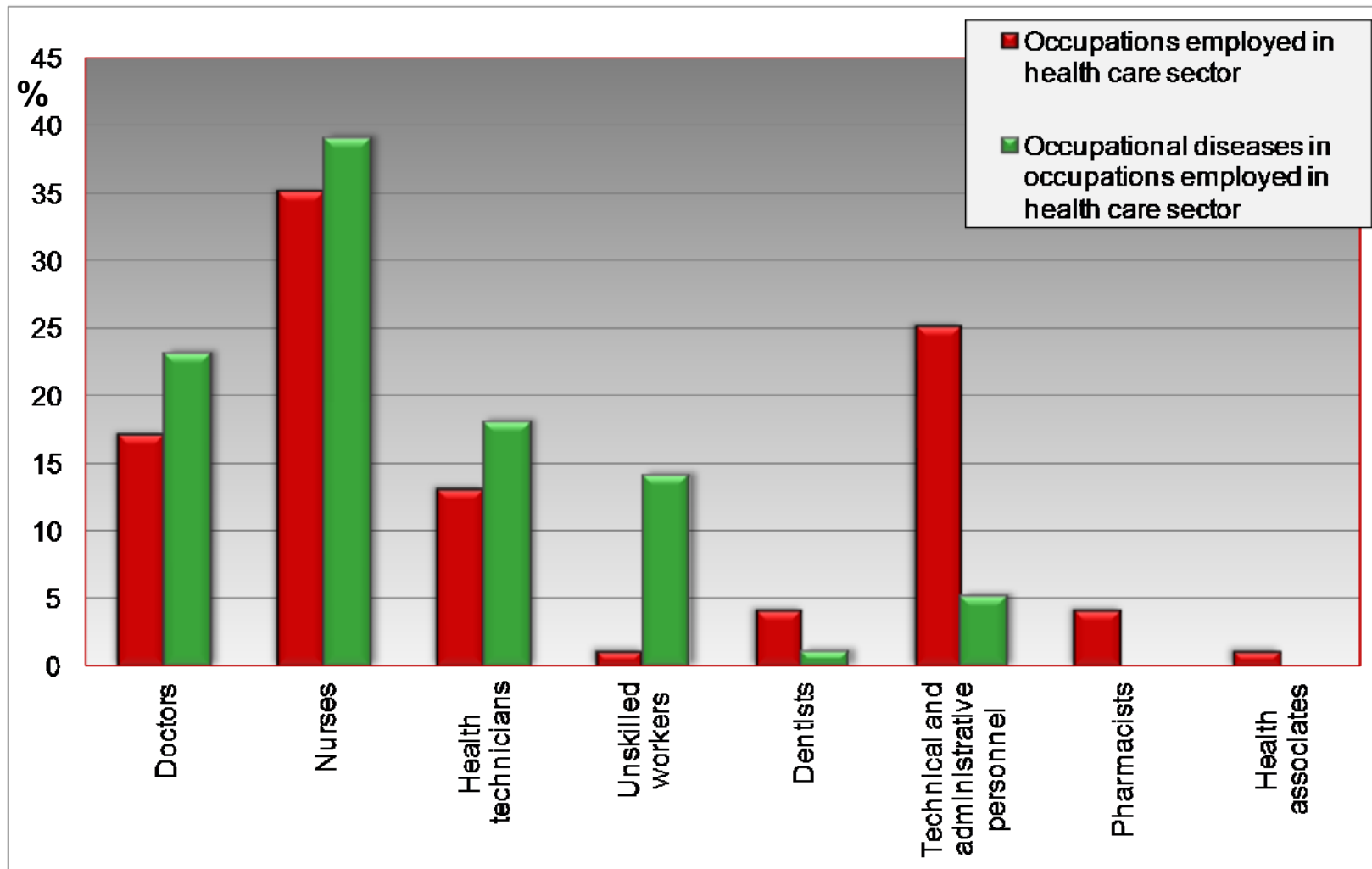
OCCUPATIONAL DISEASES IN CROATIA

rate/100 000 employed/2010.



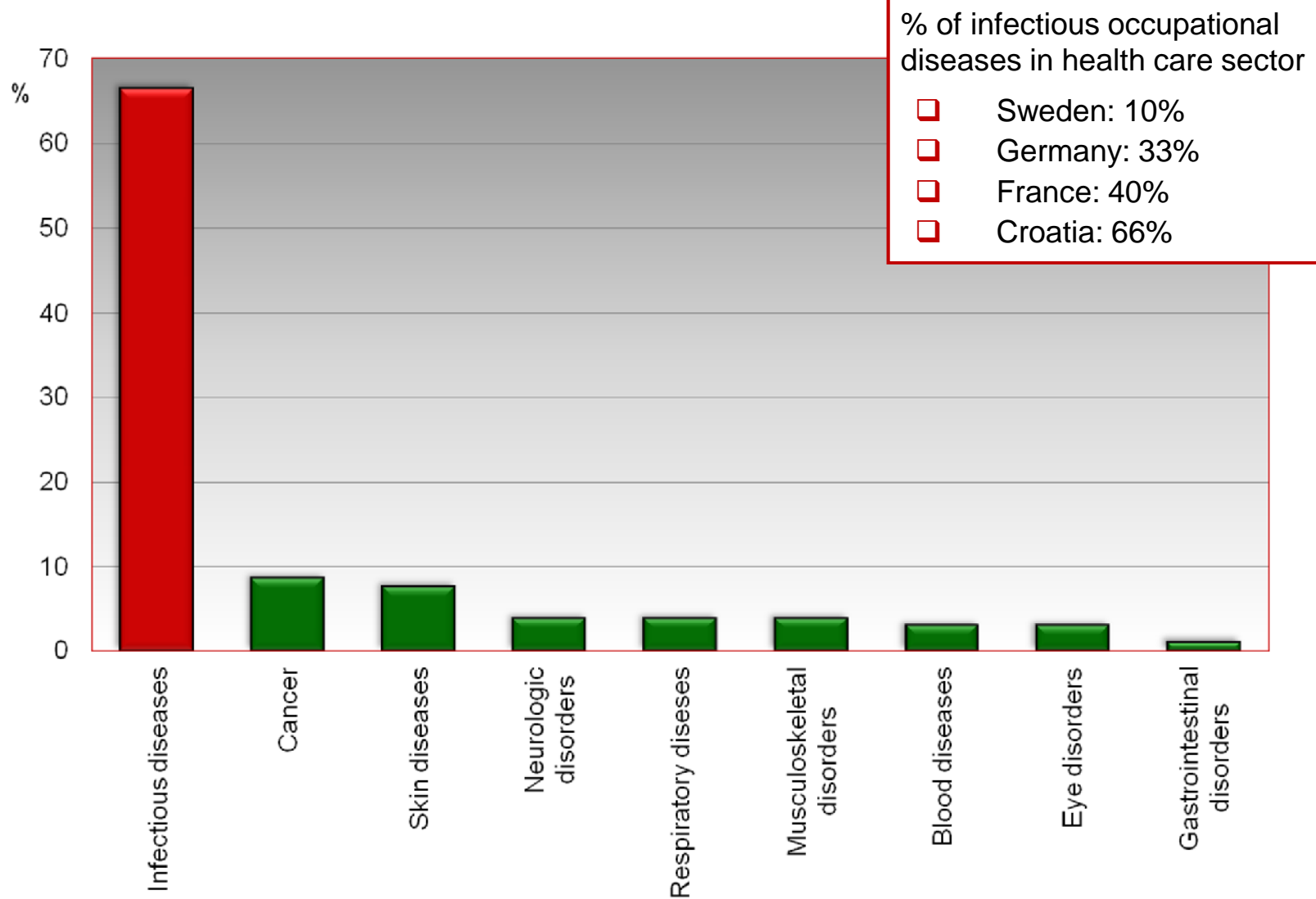


OCCUPATIONAL DISEASES IN HEALTH CARE SECTOR ACCORDING THE OCCUPATIONS - 2002.-2010.



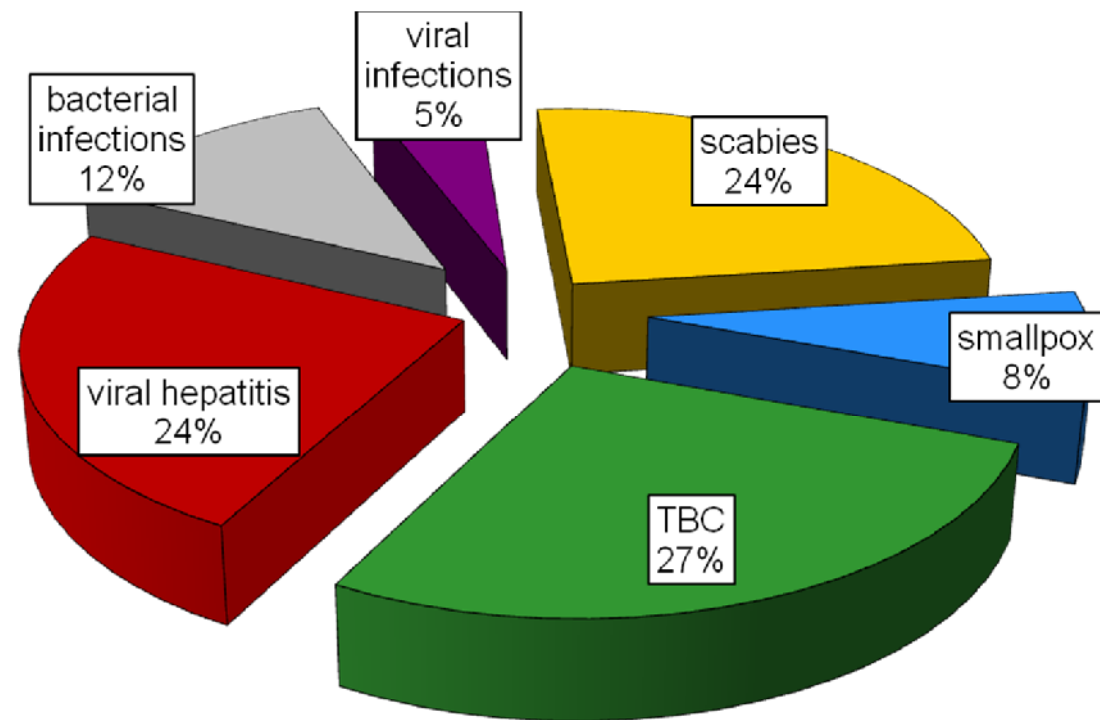


OCCUPATIONAL DISEASES IN HEALTH CARE SECTOR 2002.-2010.





INFECTIOUS DISEASES IN HEALTH CARE SECTOR 2002.-2010.





OCCUPATIONAL DISEASES IN HEALTH CARE SECTOR 2002.-2010.

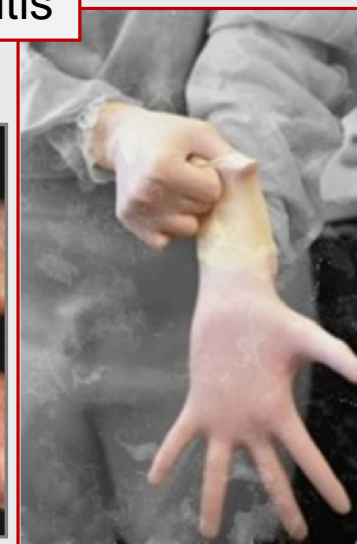
Cancer

- ☐ breast
- ☐ thyroid
- ☐ blood
- ☐ kidney
- ☐ colon



Dermatitis

- ☐ allergic
- ☐ irritative
- ☐ infectious
- ☐ radiodermatitis





HEALTH RISK ASSESSMENT

Health care sector

Injuries at work

- ◆ needlestick/sharp injuries/punctures
- ◆ cut, contusions, fractures

Work-related diseases

- ◆ musculoskeletal diseases
- ◆ psychosomatic disorders:
stress, burnout, anxiety,
irritability, depression

Occupational diseases

- ◆ infections
- ◆ cancers
- ◆ dermatitis
- ◆ cataract
- ◆ allergies
- ◆ ...



RISK ASSESSMENT

Risk

= probability * severity of damage



RISK ASSESSMENT

- ◆ Croatian Institute of Occupational Health – 1999.god.
- ◆ Course of continuing medical education of occupational physicians

***ROLE OF THE OCCUPATIONAL MEDICINE
SPECIALIST IN HEALTH RISK ASSESSMENT AT WORK***



RISK ASSESSMENT OF INJURIES AT WORK

Hazard	Source of hazard	Implemented measures	Probability	Type of injury	Severity of injury	Risk level
<i>Mechanical hazards</i>						
<i>Falling and tripping</i>						
<i>Electric hazard</i>						
<i>Fire and explosion</i>						
<i>Thermal hazards</i>						



RISK ASSESSMENT OF OCCUPATIONAL AND WORK-RELATED DISEASES

Hazard	Source of hazard	Implemented measures	Probability	Occupational disease	Work-related disease	Severity of disease	Risk level
<i>Chemicals</i>							
<i>Dust</i>							
<i>Biological agents</i>							
<i>Noise</i>							
<i>Vibration</i>							
<i>Radiation</i>							
<i>Climate</i>							
<i>Lighting</i>							
<i>Physical work</i>							
<i>Static strain</i>							
<i>Psychosocial factors</i>							
<i>Other hazards</i>							



CLASSIFICATION OF INJURY SEVERITY

Severity of injury	Characteristics of injury
Very light <i>Abrasion, small bruise</i>	<i>No danger for life Insignificant body damage Preserved function of injured body part Maintained work ability</i>
Light <i>Cut, bruise, contusion</i>	<i>No danger for life Light body damage Temporary limitation of function of injured body part Short-term work disability</i>
Medium <i>Wound, stab, larger laceration and contusion, wrench, fractures</i>	<i>Potential threat for life Significant body damage Temporary significant limitation of function of injured body part Temporary work disability</i>
Severe <i>Amputation, crushing, multiple injuries</i>	<i>Real threat for life Permanent body damage or destruction of body part Permanent work disability Mutilation</i>
Fatal or collective accident	<i>Death</i>



CLASSIFICATION OF DISEASE SEVERITY

- A** = *disease without consequences on work ability*
- B** = *disease which consequences can not significantly influence work ability*
- C** = *disease which consequences can reduce work ability*
- D** = *disease with permanent consequences which cause work disability, progressive disease*
- E** = *disease with handicap, fatal disease*



RISK QUANTIFICATION

<i>Probability</i>	<i>Severity of injury or disease</i>				
	Very light	Light	Medium	Severe	Fatal
	A	B	C	D	E
<i>Insignificant</i>	1	1	1	2	2
<i>Small</i>	1	1	2	3	3
<i>Medium</i>	1	2	3	3	4
<i>High</i>	1	2	3	4	5
<i>Very high</i>	2	3	4	5	5



RISK QUANTIFICATION AND MEASURES

<i>Risk level</i>	<i>Risk</i>	<i>Preventive measures</i>
1	insignificant	<ul style="list-style-type: none">– working conditions are satisfactory– additional measures are not needed
2	acceptable	<ul style="list-style-type: none">– working hazards do not exceed allowable limits– maintaining and long-term monitoring of working conditions
3	medium	<ul style="list-style-type: none">– working conditions can in some persons cause disorders– planning and regular performing measures– regular health surveillance
4	high	<ul style="list-style-type: none">– working conditions can endanger the health– performing measures in short term– regular health surveillance
5	very high	<ul style="list-style-type: none">– working conditions can be threat for life– stop the working proccess– performing the measures immediately– immediate health surveillance



Thank you!

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