



**DEVELOPMENT OF A EUROPEAN WORK-RELATED HEALTH REPORT AND
ESTABLISHMENT OF MECHANISMS FOR DISSEMINATION AND COOPERATION
IN THE ACCEDING AND CANDIDATE COUNTRIES**

**OVERVIEW AND ASSESSMENT OF THE CURRENT STATUS OF WORK-RELATED
HEALTH MONITORING AND THE INTERRELATIONS BETWEEN THE WORK-
PLACE, MENTAL HEALTH AND CVD PROBLEMS EXEMPLARY
BASED ON FIVE NEW MEMBER STATES**

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**June, 2007
Sofia, Bulgaria**

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1. PREAMBLE

1.1. Project activity

During 18 months (from February 15, 2005 to August 15, 2006) under the Grant agreement for an action number 2004101 a project was just accomplished entitled “ Development of a European work – related health report and establishment of mechanisms for dissemination and co – operation in the acceding and candidate countries “ (WORKHEALTH II Project). Coordinator of that project (“main beneficiary”) is the Federal Association of Company Health Insurance Funds – Health Department (BKK Bundesverband, Essen, Deutschland). Twenty countries are project partners including 11 old EU – member states, 7 new EU – member states (called Acceding countries – ACC), Bulgaria and Iceland. The WORKHEALTH II Project was prolonged until the end of March 2007. A 6th Plenary meeting of the project group and a Final workshop “Hearts and minds in Europe” in Brussels concluded the project with participants from EU Commission, European Network for Workplace Health Promotion (ENWHP) and other networks and organisations. It was decided to prepare and complete an expert opinion – report providing an overview and assessment of the current status of work – related health monitoring and the interrelations between the workplace and Mental health and CVD problems in exemplary based on 5 New Member States (ACCs : Bulgaria, Cyprus, Czech Republic, Lithuania and Slovenia). The expert opinion is based on the additional analysis at national status – quo reports in the field of workplace health monitoring (provided by the Federal Association of Company Health Insurance Funds, Essen, Deutschland). Taking in consideration the ongoing ideas and discussed drafts of strategic documents of EC (European Commission) (3), WHO (13, 14), ILO (6), the general statements in the printed materials produced by WORKHEALTH II Project (7,8) and the some personal experience (15).

1.2 National Organisation – supplier of the information

In Table 1. are presented the national organisations – basic suppliers of the information. All of them have similar characteristics namely:

Table 1: Suppliers of the information

COUNTRY	INSTITUTION, MAIN AREA OF ACTIVITY
BULGARIA	<p>National Center of Public Health Protection 15, "Acad. Ivan Geshov" boul., 1431 Sofia Bulgaria Director: Prof., Dr. Lyubomir Ivanov, PhD, DSc Phone: (+359 2) 9549390; Fax: (+359 2) 9541211 e-mail: livanov@nchi.government.bg Governmental organization to the Ministry of Health Main area of activity: R&D, expert consultancy, methodological and educational activities in the area of public health protection, assessment of health risk due to occupational and environmental factors, personal behaviour and life style, health promotion and integral diseases prevention.</p>
LITHUANIA	<p>National Centre for Health Promotion and Education Kalvariju str.153, LT-08221, Lithuania Tel./fax: +370 5 271 42 06 e-mail: vsuc@vvspt.lt Legal status: governmental organization Main area of activity: Providing methodological guidance for regional and local public health organizations, helping a wide range of organizations and individuals to acquire the attitudes and expertise necessary to fulfil their health promotion potentials. Health education activities on the national level</p>
CZECH REPUBLIC	<p>National Institute of Public Health Srobarova 48 100 42 Prague 10 ph: +420 267 081 111 fax: +420 272 744 354 e-mail: zdravust@szu.cz legal status: contributory organization directly controlled by the Ministry of Health of the Czech Republic Main area of activity: The National Institute of Public Health (NIPH) is a health care establishment for basic preventive disciplines - hygiene, epidemiology, microbiology and occupational medicine.</p>
SLOVENIA	<p>University Medical Centre Clinical Institute of Occupational, Traffic and Sports Medicine Poljanski nasip 58 1000 Ljubljana Slovenia T: + 386 1 522 4334 F: + 386 1 522 2478 E: institut.kimdps@guest.arnes.si Public institution Main area of activity: Occupational medicine</p>
CYPRUS	<p>Ministry of Labour and Social Insurance, Department of Labour Inspection, 1493, Nicosia, 00357 22 405623, 00357 22 663788, director@dli.mlsi.gov.cy, http://www.mlsi.gov.cy/dli Main area of activity: Safety and Health at Work, Industrial Pollution, Air Quality, Radiation Protection</p>

- national centres responsible for basic preventive disciplines, education of specialists and national initiatives (public health protection, health promotion, occupational medicine – safety and health at work),
- governmental / public organisations,
- nominated to be national Contact Office of the ENWHP.

The information presented by those organisations could be considered as critically evaluated for quality, representativeness and comparability at international level due to their experience in data generation, analysis and assessment.

The communication data could be used for further contacts except those for Lithuania, where a reorganisation changes the status of the partner.

1.3 National Organisations – potential partners in the development of the national work – related health reports

On the basis of the information in Table 2 it is possible to conclude that the list of potential partners for the development of National work – related health reports in the discussed 5 countries with minimal exceptions is too uniform:

1. Public / Occupational Health Institute (organisation) (data and assessments provider) to the Ministry of Health (assessments consumer),
2. National Labour Inspectorate and associated Institute of Occupational Safety (data and assessments provider and consumer) to the Ministry of Labour (assessments consumer),
3. National Social Insurance Institute / Organisation (data provider and assessments consumer),
4. National Organisation of Statistic (to the Government) and National Institute of Health Information (to the Ministry of Health) (data providers).

The excellent collaboration of the four organisations could be the basis of success in this area, especially if it is motivated by strong legislation (clear responsibilities) and good support by resources including ensured expertise of experienced EU – consultants. Those four organisations could do the professional part. The participation of other national organisations in the tripartite dialogue on the health and safety of economically active population could not be neglected. Through the participation of their representa-

tives in Committees at national and regional level and in the boards of the first four organisations they could influence, evaluate and introduce improvements at any stage of the creation of the National work – related health reports.

Table 2: Potential partners

COUNTRY	Organisations – sources, assessors, users of the information on work – related health
BULGARIA	<ol style="list-style-type: none"> 1. National center of public health protection (NCPHP) - Assoc. Professor, Dr. Zaprian Kolev Zapryanov, MD, PhD, Head of Department “Occupational medicine” and Laboratory “Healthy and safe workplaces”, e-mail: hlthprom@infotel.bg - Assoc. Professor, Dr. Nikola Vasilevski, MD, National coordinator of the programme “CINDI-CVD” of MH, nicvass@nchi.government.bg - Dr. Hristo Hinkov, psychiatrist, chief expert, Section “Global Mental Health”, mhproject@mbox.contact.bg 2. Executive Agency “General labour inspectorate” 3. National Social Security Institute (NSSI) 4. National Institute of Statistics 5. National Center of Health Informatics, Department “Informational resources and analyses”, 15 “Acad. Ivan Geshov” str., 1431 Sofia, tel. (+359 2) 9515238; fax (+359 2) 9515302, e-mail: office@nchi.government.bg
LITHUANIA	<ol style="list-style-type: none"> 1. The new National public health organisation 2. State Labour Inspectorate 3. State Social Insurance Fund (SODRA) of the Republic of Lithuania under the Ministry of Social Security and Labour 4. Department of Statistics to the Government of the Republic of Lithuania 5. Lithuanian Health Information Centre 6. State Patient Fund at the Ministry of Health
CZECH REPUBLIC	<ol style="list-style-type: none"> 1. National Institute of Public Health to the Ministry of Health - Jarmila Vavrinova, vavrinova@szu.cz - Ludmila Kozena, nfnt@szu.cz 2. State Labour Inspectorate / Occupational Safety Research Institute 3. Research Institute for Labour and Social Affairs 4. Association of Health Insurance Companies of the Czech Republic 5. Institute of Health Information and Statistics of the Czech Republic 6. Czech-Moravian Confederation of Trade Unions
SLOVENIA	<ol style="list-style-type: none"> 1. University Medical Centre, Clinical Institute of Occupational, Traffic and Sports Medicine, Poljanski nasip 58, 1000 Ljubljana, Slovenia - Eva Stergar, T: + 386 1 522 2695, F: + 386 1 522 2478, E: eva.stergar@guest.arnes.si - Dr. Metoda Dodič-Fikfak, MD, T: + 386 1 522 4334, F: + 386 1 522 2478, E: metoda.dodic-fikfak@guest.arnes.si - Tanja Urdih Lazar, T: + 386 1 522 2692, F: + 386 1 522 2478, E: tanja.urdih-lazar@guest.arnes.si 2. National Institute of Public Health 3. State Labour Inspectorate 4. Health and Social (Pension and Invalidation) Insurance Institute of Slovenia

	5. National organisation of statistics – Statistical Office of RS
CYPRUS	1. Department of Labour Inspection to the Ministry of Labour and Social Insurance Dr. Athanasios Athanasiou, 1 st Grade Medical Officer on Occupational Medicine, aathanasiou@dli.mlsi.gov.cy 2. Social Insurance Services, Ministry of Labour and Social Insurance 3. Statistical Service of the Republic of Cyprus

1.4 Basic information for analysed 5 countries (TABLE 3)

The population of the countries under discussion is approx. and lower than 10 millions inhabitants. Lowest is the population of Cyprus – 720 568 inhabitants. Highest is the population of Czech Republic (10 201 651 inhabitants). The population of other three countries varies between 2 (Slovenia) and 8 millions (Bulgaria).

In comparison to the mean parameters of EU – 25 countries Cyprus has good demographic parameters concerning “% population aged 65+”, “Population growth”, “Life expectancy at birth (all, male, female)” and relatively high “Gross Domestic product”. Many additional geographic (Mediterranean islet), political, economic, social, nutritional (more sea food in the diet rich in antioxidants) and other parameters support the opinion, that that member – state at this stage is comparable more with Mediterranean countries like Malta, Greece etc. than with other four countries.

Bulgaria, Lithuania, Czech Republic and Slovenia (most probably also Estonia, Latvia, Slovakia and Hungary) could form a subgroup of countries which together with their specific individual characteristics have:

- similar past of countries trying to consolidate the socialist scheme of societal structure and organisation;
- similar past economic rules of planned development, most of them being a part of Soviet Union or members of CMEA (Council for Mutual Economic Assistance);
- past political, organisational and economic centralisation on the basis of one party governing the State;
- past prevalence of state property; state owning, doing and controlling itself;
- past autocratic and paternalistic style of management;

- similar evolution during the last 10 years of 20th Century through attempt of “perestroika” to disorganisation and choice to enter the European family of countries undergoing democratic development to modern market – driven economy.

As consequences of that controversial development (turn - off at 180 degrees) could be considered (in comparison to EU – 25):

- the high rate of emigration resulting in decrease of the population absolute figures and the segment in economically active age (15 – 64 years) resp. country labour force;
- negative figures of population growth rate (Bulgaria < Lithuania < Czech Republic < Slovenia);
- lower figures of “life expectancy at birth (all, male, female)” (Lithuania ≤ Bulgaria < Czech Republic < Slovenia);
- lower GDP (Bulgaria < Lithuania < Czech Republic < Slovenia);
- lower investment in health (far below EU – 25 figure) in % of GDP and explicitly as a sum in USD (Bulgaria < Lithuania < Czech Republic < Slovenia);
- higher “new invalidity/disability cases” (especially Bulgaria and Lithuania respectively 4,2 and 3,2 times more than the mean value of EU – 25)
- higher “SDR of diseases of circulatory system (all, male, female)” (Bulgaria > Lithuania > Czech Republic > Slovenia).

The parameters “GDP, USD per capita” and “SDR, diseases of circulatory system, 0 – 64, per 1 million” are highly correlated. After log – transformation the correlation coefficient is – 0,96 (P<0,05). For male population the correlation coefficient is -0,96, for the female - -0,91. Bulgaria has the lowest value of “GDP” and highest value of “SDR, circulatory system, 0 – 64 per 1 mil.” in this group. In Bulgaria the highest proportion of the population aging 15+ years are regular daily smokers (32,7%). The “pure alcohol” consumed, litres per capita, age 15+ “for Bulgaria looks” contributing for healthy population” being lowest, but this is a typical reason to analyse deeply and in concrete country some outstanding figures without reasonable explanation. This parameter is based on the sum of market sales. Bulgaria differs from that classic situation by higher figures of home – made alcoholic drinks (brandy, wine). For additional discussion on CVD – problem see section 4.

Some considerations on the problem of mental ill health could be formulated from the parameter “SDR, mental disorder and diseases of nervous system and sense organs, 0 – 64 years old per 1 mil. inh.”. It will be very interesting if the information from health monitoring (HM) and work – related health monitoring (WRHM) could create understanding of some differences in comparison to the mean levels in EU – 25:

- lowest value in Bulgaria (all, male, female),
- highest value in Czech Republic (female).

Among those four countries Slovenia has the relatively best parameters and is suitable for benchmarking and setting short goals for other countries.

Table 3. Key indicators for population, economy, health determinants and health in 2003 (5, 9)

Parameter	EU	Bulgaria	Lithuania	Czech Republic	Slovenia	Cyprus
Mid - year population	455187616	7823557	3454205	10201651	1996773	720568
% population aged 65+	16,13	17,06	14,87	13,92	14,88	11,86
Population growth (live births – crude death rate per 1000 inh.)	0,52	-5,51	-3,01	-1,73	-1,19	4
Labour force (% of population)	---	42,9	47	50,4	49,2	48
Life expectancy at birth, years	78,31	72,39	72,24	75,4	76,52	79,37
Life exp. at birth, years, male	75,07	68,97	66,51	72,09	72,6	77,25
Life exp. birth, years, female	81,44	75,98	77,9	78,65	80,35	81,5
Gross Domestic Product, USD per capita (GDP)	20395,70	1944,00	3977,00	6808,00	11181,00	13210,00
Health spending and resources, total expenditures, % of GDP, * 1997	6 – 10*	4,2	6,4*	7,5	9,4*	
Health spending and resources, total expenditures, average USD per capita, *1997	574 - 2700*	60*	167*	391*	857*	
% of regular daily smokers in the population, age 15+, (2001 – 2003)	29,24	32,7	28,25	27,2	23,7	-
Pure alcohol consumed, litres per capita, age 15+ (2003)	11,36	5,89	12,45	16,15	11,66	11,36
New invalidity / disability cases per 100000 1- EU since 2004	327,08 ¹	1379,82	1041,08	475,94	327,78	-
SDR, diseases of circulatory system, 0 – 64 per 1 000000	51,71	170,42	128,74	78,31	52,37	-
SDR, diseases of CS, 0 – 64 per 1000000, male	78,30	252,33	212,89	119,49	85,48	-
SDR, diseases of CS, 0 – 64 per 1000000, female	26,63	95,81	60,92	33,96	19,63	-
SDR, mental disorder and diseases of nervous system and sense organ 0 – 64 / 1000000	9,23	5,79	9,10	9,64	9,13	-
SDR, MD + disease NS + SO, 0 – 64 / 1000000, male	12,58	7,31	13,05	11,94	13,01	-
SDR, MD + disease NS + SO, 0 – 64 / 1000000, female	5,94	4,28	5,59	7,38	5,21	-

2. Information from the national status-quo reports in the field of workplace health monitoring

2.1. Data on the health status: General availability

(For details see notes under the table)

The information in Table 4 gives rise of the optimistic conclusion that the health status parameters are available and with some additional efforts could be made comparable at EU – level. This process is ongoing in the frame of projects coordinated by EUROSTAT.

Demographic and mortality data are processed by National Institutions on Statistics. Those data are not subdivided by sectors and occupations.

The data for morbidity rates of the working population are collected and processed by institutions/departments of health information to the Ministry of Health most frequently as representative samples.

All other parameters (“fatal occupational diseases”, “sickness absence at work”, “compensated occupational diseases”, “early retirement” and “new invalidity/disability”) are in the competence of Social Insurance Organisations. Here is the place to state that in the discussed group of countries the Social Insurance Institution is one and highly influenced by tripartite representatives in its board and by the government through the legislation. In that case the criticism to these routine administrative data (7) could be re-evaluated. The data in that organisation are the final product of strictly legally defined expertise and control during storage, procession and presentation. On that basis it is possible to re-evaluate also the location of the Register of occupational diseases in the Public Health Institutions. It seems more reasonable to locate the register in Social Insurance Organisation (at that level are stored only finally recognised diagnoses). Public Health Institutions should be engaged in the assessment of the data in the National work – related health report, in the collaboration at EU – level and in the organisation, coordination and finalisation of surveys concerning health determinants.

Table 4. General availability of health status parameters

Country	BULGARIA	LITHUANIA	CZECH REP.	SLOVENIA	CYPRUS
Indicator					
Mortality rate in the working population	X_0^*	X_0	X_0	$X_{0,00,000}^1$	X
Number and rates of fatal occupational diseases	$X_{0,00,000}^{NII,NCPHP}$	X		$X_{0,00,000}^2$	
Incidence/prevalence of morbidity in the working population	X_0^*	X	X	$X_{0,00,000}^3$	X
Sickness absence at work in lost working years per 100.000 employees	$X_{0,00}^{** ***}$	$X_{0,00}$	$X_{0,00}$	$X_{0,00,00}^3$	
Number of compensated occupational diseases on official list	$X_{0,00,000}^{NII}$		$X_{0,00}$	$X_{0,00,00}^2$	X
Rate of early retirement as a result of occupational disease per 100.000 employees	$X_{0,00,000}^{NII}$			$X_{0,00,00}^2$	X
Rate of early retirement as a result of morbidity per 100.000 population	X_0^{NII}		X	X_0	X
New invalidity / disability cases per 100.000 population	$X_{0,00,000}^{NCHI,NII}$	X_0	X	X_0	

NOTES: BULGARIA

* - working population in economically active age (14 – 65 years, e.g.) could be obtained by subdivision of general data on the basis of age. It is not routinely done. This information is collected, processed and analysed by the National Institute of Statistics (NIS – mortality) and the National Center of Health Informatics (NCHI – morbidity and sickness absence) in collaboration. They issue annual statistical bulletin (December) containing the data for the precedent year.

** - the parameter is “frequency of lost calendar days per 100 insured employees”

NII – Data are available from the database of the National Insurance Institute. NII is responsible acc. to the legislation for the statistical processing of occupational accident data. This scheme is Eurostat standardised. From 2001 the National classification of economic activity is identical to the Statistical Classification of Economic Activity in the European Union (NCEA 2003 equal to NACE Rev.1.1, 2003), NII issues a bulletin on

occupational accident statistics every year (February) for one year before situation. The tables contain parameters in question like “days lost due to occup. accidents”, “Fatal occupational accidents”, “Disability cases resulting from occup. accidents”. NII possesses the final information on occupational diseases too.

NCPHP – The National Center of Public Health Protection is responsible acc. to the legislation for maintenance of the National Register of Occupational Diseases. The data are from the National Expert Medical Commission. The procedure is in the process of Eurostat standardisation.

*** - In Bulgaria ICD-10 classification is in use. Sickness absence data are available at national and regional (nine regions) level. Other grouping should be contracted. The path of the information from the sick leave certificate is from issuing by authorised physician/commission to the Regional Centre of Health care to NCHI where the final processing and analysis are performed. The raw data are representative sample of 25 (10-40)% of enterprises in the region (mainly large and prosperous). The raw data are stored in companies and organisations too (in accounting department) and are available and used periodically for individual data processing by company Occupational Health Service (OHS) for internal use.

SLOVENIA

¹ Data on the deceased and on the cause of death are collected routinely for the entire territory of Slovenia by the Institute of Public Health of the Republic of Slovenia (IPH RS). Mortality data compilation is governed by the Regulations on the Conditions and Methods of Death Investigation (Official Gazette of the Republic of Slovenia No. 56/93), which also lay down the tasks and duties of medical examiners and the organisation, procedures, recording and technicalities relating to the death investigation service. A special processing at IPH RS should be requested to obtain mortality rate in working population.

² The number and rates of fatal occupational diseases is known only for diseases caused by asbestos.

³ A special processing should be requested at IPH RS to obtain the data.

GENERAL

- o - Data available stratified by diagnosis
- oo - Data available stratified by sector
- ooo - Data available stratified by occupation

2.2. Data on health determinants

There is no routine practice to collect the data in table 5. Some measurement during the periodic prophylactic examinations and measurements in primary health care settings (general practitioners) are not representative and respectively useful. They are not random and selectively are embracing people with health risk factors or diseases.

It is possible provisionally to divide the parameters in table 5 in three groups according to the possible source of information:

1. **Attainable by target surveys of governmental programmes for prevention of diseases** (e.g. CINDI programme, national and international studies (1, 11)). Frequently those parameters are measured periodically on routine basis under quality control by regional institutions with preventive and health promotive functions, coordinated by National Public Health Body. To that group could be attributed “blood pressure”, “serum cholesterol”, “BMI”, “smoking”, “alcohol use”, “illicit drug use” and “physical activity”.
2. **Attainable by Occupational Health Services or equivalent consulting services.** Such data exists at enterprise/company level. The legislation encourages the data collection and processing by the Ministry of Health, but that possibility has limited realisation. Such parameters could be “nutrition at work”, “movement at work”, “outdoor air at work”, “**indoor air at work**”, “shortage of sleep”, “**exposure to harmful factors**”, “sedentary work”, “meaningful work”, “company climate”, “job satisfaction”, “social support” and
3. **Attainable from the Labour Inspectorate:** “50 h/week work”, “flexible work time” and “flexible/fixed/mobile worksites”.

Similar parameters could be found in the materials and the website of the European Foundation for the Improvement of Living and Working Conditions (4) from their periodic surveys by questionnaires. Those data are obtained by direct contact according to pre-

established procedure and questionnaire (quality controlled and representative for international comparisons).

By reproducing that procedure at national level it is possible to create and apply a national questionnaire to obtain accurate parameters of interest. At present a lot of estimates could be found (e.g. in the factological part of books containing National Health Information Strategies and Policies (9, 10)). A valuable comprehensive and quality controlled collection of parameters on health determinants (Table 5) is unlikely to exist in our 5 countries.

Table 5. Availability of data on health determinants

Country	BULGARIA	LITHUANIA	CZECH REP.	SLOVENIA	CYPRUS
Indicator					
Blood pressure (BP): - Mean/sd of systolic BP - Mean/sd of diastolic BP - % with SBP over 140 mm Hg or DBP over 90, or taking antihypertensive drugs - Prevalence of hypertension	<i>X^{IS}</i>		X	<i>X₀₀₀</i> X	X
Serum cholesterol: - Mean/sd of serum total cholesterol (mmol/l) - Prevalence of serum total cholesterol over 5	<i>X^{IS}</i>		X	 X	X
% of employees with obesity (BMI > 30)	<i>X^{IS}</i>		X		X
Smoking: - % regular smokers - % former smokers - % never smokers - % daily cigarette smokers - Figures about smoking at work	<i>X^{IS}</i>	X X X X	X	<i>X₀₀₀</i> <i>X₀₀₀</i> <i>X₀₀₀</i> <i>X₀₀₀</i>	X

Alcohol use: - % non-drinkers in population - Litre pure alcohol use per person/year - Figures about alcohol use - Figures about problem drinking	X^{IS}	X X X X	X	X X X X	X
Illicit drug use: lifetime prevalence for cannabis, cocaine, amphetamines, ecstasy, other illicit drugs	X^{IS}	X (<i>only cannabis</i>)	X	X_{000}^4	X
Figures about nutrition at work	X^{IS}				X
Figures about physical activity in the population	X^{IS}	X	X	X	
Figures about movement at work	X^{IS}				
Figures about outdoor air at work	X^{IS}				X
Figures about indoor air at work	$X_{00,000}$		X		
% of employed working at least 50h/week	X_{00}		$X_{00,000}$	$X_{00,000}^5$	
% having flexible work time			$X_{00,000}$	$X_{00,000}^6$	
Figures about flexible/fixed/mobile worksite			X_{00}	X_{000}^7	
Figures about shortage of sleep			X		
% of employees exposed to harmful factors (physical, chemical, biological) at concentration or intensity higher than national occupational exposure limit for that factors	X_{00}^{GLI}		$X_{00,000}$		
Figures about sedentary work	X^{GLI}		X		
Figures about meaningful work	X^{IS*}		$X_{00,000}$		

Figures about company climate	X^{IS*}		$X_{00,000}$		
Figures about job satisfaction	X^{IS*}		$X_{00,000}$	X_{000}^8	
% of employees having the possibility of getting assistance from colleagues if one asks for it (social support)	X^{IS*}		$X_{00,000}$		
Figures about conflicts at work	X^{IS*}		$X_{00,000}$		

NOTES: BULGARIA

IS - Information from samples. No systematic data from regular monitoring at local – regional - national levels. Such data could be obtained from general practitioners and from the pilot areas of “CINDI-CVD” national programme (quality controlled, covers 700 000 persons in 8 districts, 13 000 persons monitored every 5 years, data available at NCPHP).

GLI – Executive agency “General Labour Inspectorate” to the Ministry of Labour and Social Policy (MLSP)

* - Regarding the relation between factors provoking stress and stress related disorders, a comprehensive epidemiological survey started in 2002 as part of international study headed by WHO and University An Arbor, Michigan, USA. The representative sample of 5000 respondents provided important information about number of aspects of stress provoked physical and psychic disorders including cardio-vascular diseases. The first official results of the study will be represented until the end of 2006 and the amounted database will serve for a number of studies in many aspects in that field. Bulgarian research team is headed by Prof. Toma Tomov and allies from National Center of Public Health Protection in Sofia, Bulgaria.

OHS – Data available at local level in companies/organisations and stored by Occupational Health Services or by Company Safety and Health Specialist.

SLOVENIA

⁴ Data on lifetime use are available for the years 1994 and 1999.

⁵ Processing of data should be requested at the Statistical Office of the Republic of Slovenia, average number of working hours (usual, actual) per week is generally available.

⁶ Data for 2001 (public opinion survey) and one quarter of 2004 are available (Statistical Office of RS).

⁷ Data for 2001 (public opinion survey) are available.

⁸ Processing of data from public opinion survey should be requested.

GENERAL

oo - Data available stratified by sector

oo - Data available stratified by occupation

2.3. Data on health and safety systems

The data on health and safety systems (Table 6) look easy to obtain and relatively constant but in such group of countries in transition they have a lot of hidden problems as many of the parameters:

- obtained new theoretical and practical importance through the new legislation on healthy and safe working conditions harmonised with the framework Directive 89 / 391 / EEC (31. 12. 1992);
- obtained new meaning/content or are totally new for the country practice like “integration of OSH in the corporate philosophy”, “self-assessment of health”, “specific WHP programmes”, “employees participation in specified WHP programmes”, “reintegration of staff”, “enterprises co-operation in networks fostering OHS” and “occupational nurses”;
- are no more monitored at national level, stay at local (in OH Services, companies), have dubious comparability and could be contained only by national survey with multidisciplinary and multisectoral character.

Those considerations concern prevalently small and medium sized enterprises.

Most probably in small acceding countries there is no satisfying collection of data created through administrative (routine) way. The best way to create it at national level is to have: a) guidelines on parameters and procedures to obtain them; b) to educate regional partners for data collection and c) to run a pilot survey. The interest to some of those indices of the teams creating Country profile (6) could be stimulating (e.g. Na-

tional Profile on Healthy and Safe Working Conditions in the republic of Bulgaria is in preparation under Project “Support and stimulation of the Social dialogue for better healthy and safe working conditions in South-East European Countries” supported by ILO, WHO, IEO, ETUC (Sofia, Status Report February 2007). There are other regional activities on the same topic (14).

The instrument to obtain those parameters of health and safety systems should be “Questionnaire” addressed to few organisations:

1. Public/Occupational Health Organisation-parameters in Table 6 №№ 25, 26, 34-37 (Bulgaria, Lithuania and Czech Republic do not announce the existence of such a speciality in their countries) 39-43. For many of the parameters the participation of Occupational Health Services will be necessary especially for №№ 11-19.
2. National Labour Inspectorate-parameters in Table 6. №№ 1-10, 20-23, 27-33 and 38.
3. National Social Insurance/Organisation-parameters in Table 6. №№ 24, 44-53.

Table 6. Availability of data on health and safety systems

№	Country Indicator	BULGARIA	LITHUANIA	CZECH REP.	SLOVENIA	CYPRUS
1	% of enterprises having integrated OSH in their corporate philosophy	<i>X^{GLI}_{00,000}</i>		X	<i>X⁹</i>	
2	% of enterprises offering OSH programmes aiming to improve working conditions	<i>X^{GLI}_{00,000}</i>		X	<i>X⁹</i>	
3	% of employees participating in OSH programmes aiming to improve their working conditions			X	<i>X⁹</i>	
4	% of enterprises using ergonomic designed equipment, e.g. VDU according to TCO 99	<i>X^{GLI}</i>				
5	% of employees being provided with safe/ergonomic designed equipment at work	<i>X^{GLI}</i>				
6	% of employees working at safe/ergonomic designed workplaces	<i>X^{GLI}</i>				

7	% of enterprises providing information on risks resulting from the working conditions	X_{00}^{GLI}		<i>X compulsory</i>	X^9	
8	% of employees being informed regarding risks resulting from their working conditions	X_{00}^{GLI}	X	<i>X compulsory</i>	X^9	
9	% of employees receiving training at the start of work	$X_{00,000}^{GLI}$	X	<i>X compulsory</i>	X^9	
10	% of employees receiving training to improve skills when working in high risk jobs	$X_{00,000}^{GLI}$	X	<i>X compulsory</i>	X^9	
11	Number of preplacement medical examinations	X^{OHS}	X		X_{000}^3	
12	Coverage of employees by preplacement medical examinations	X^{OHS}	X	<i>X compulsory</i>	X_{000}^3	
13	Number of periodic occupational medical examinations	X^{OHS}	X	<i>X compulsory</i>	X_{000}^3	
14	Coverage of employees by periodic occupational medical examinations	X^{OHS}	X		X_{000}^3	
15	% of employees undergoing self-assessment of health					
16	% enterprises running specified WHP programmes				X_{00}	X
17	% employees participating in specified WHP programmes					X
18	% of enterprises/institutions providing action on reintegration of staff (especially disabled staff) when they return to work after a longer-term period of sick-leave					
19	% of enterprises supporting health-related, social, cultural and welfare initiatives					
20	% enterprises which have introduced appropriate OSH management systems (certified or otherwise documented)	X_{00}^{GLI}		X	X	X
21	% of enterprises (regularly) conducting risk assessment	X_{00}^{GLI}		<i>X compulsory</i>	X^9	X

22	Number(s) of safety engineering/occupational medical units per 10.000 employees	X^{GLI}_{00}			X^3_{00}	
23	% of employees/enterprises covered by safety	X^{GLI}_{00}		<i>X compulsory</i>		
24	Specialists of employees/enterprises covered by a system for recording, notification and compensation of occupational accidents and diseases	$X^{NI}_{00,000}$	X	<i>X compulsory</i>	$X^{not.diseases}_{00}$	X
25	Number of medical treatment centres for chemical poisonings per 10.000 employees	X^{MH}		X	X	X
26	% of enterprises active co-operating in networks fostering OSH	X				
27	Number of training units in OSH for employers per 1.000 enterprises	X^{GLI}	X			X
28	Number of training units in OSH for employers per 10.000 employees	X^{GLI}	X			X
29	Number of training units in OSH for worker representatives per 1.000 enterprises	X^{GLI}				X
30	Number of training units in OSH for professionals (safety and occupational medicine) per 1.000 enterprises	X^{GLI}	X		X	X
31	Number of tripartite bodies (government, employers, employees) on OHS	$X^{GLI}_{00,000}$	X	X	X	X
32	Safety representatives and managers/1000 employed	X^{GLI}				X
33	Number of safety specialists per 100.000 full-time workers	$X^{GLI}_{00,000}$		X		X
34	Number of occupational physicians/1000 employed	$X^{GLI,MH}$	X	X	X^3	X
35	% employees/enterprises covered by health services	X^{GLI}_{00}		<i>X compulsory</i>	$X^3_{00,000}$	X
36	Number of occupational physicians per 1000 employees	$X^{GLI,MH}$	X		X^3_{00}	X
37	Number of occupational nurses per 1000 employees				X^3_{00}	X

38	Number of labour inspectors per 1000 employees	$X^{GLI}_{00,000}$	X	X	X	X
39	Number of environmental engineers, occupational hygienists, ergonomics, psychologists, epidemiologists, health promotion leaders and other specialists (employed in the enterprises or health protection external services) per 1000 of working population	$X^{GLI}_{00,000}$		Only partial data available	X^3	
40	Number of academic institutions (universities, national institutes, others) providing education to occupational physicians, occupational nurses, safety engineers, labour inspectors, environmental engineers, occupational hygienists, ergonomics, health promotion specialists etc.	X^{NCPHP}	X	Only partial data available	X^3	
41	Number of graduates per year per 100.000 population of occupational physicians, occupational nurses, safety engineers, labour inspectors, environmental engineers, occupational hygienist, ergonomics, health promotion specialists etc.	X^{NCPHP}	X	Only partial data available	X^3	
42	Number of academic research institutions (universities, national institutes and others) carrying out scientific and development studies in different areas of OHS and WHP	X^{NCPHP}	X	X	X^3	
43	% of GNP/gross local product invested in scientific research and development studies aimed at providing data for improvement of OHS and WHP	X^{MLSP}				
44	% of employees receiving ambulant rehabilitation (rehabilitation programs for specific diseases/disorders)/year		X		$X^3_{00,000}$	

45	% of employees receiving medical rehabilitation in institution (rehabilitation programs for specific physical diseases)/year	X ^{MH}	X		X ³ _{00,000}	
46	% of employees receiving vocational rehabilitation/year	X ^{MLSP}				
47	% of employees receiving both medical and vocational rehabilitation/year					
48	% of employees returning to the same work after a sickness spell incl.	X ^{MH,MLSP}				
49	% of employees returning to another work after a sickness spell incl.					
50	% of population collecting full and partial disability pension respectively/year	X ^{NI}	X	X	X	X
51	% of population collecting full and partial disability benefit respectively/year	X ^{NI}	X		X	X
52	Expenditures on OSH / WHP by accident insurance companies, health insurance companies, public expenditure, expenditure from the enterprises, private expenditure as % of total health expenditure	X ^{NI}			X	
53	% of GDP lost due to accidents and diseases at work as a percentage of GDP	X ^{NI,NCPHP}		X	X	X

NOTES: BULGARIA

OHS – Data available at local level in companies/organisations and stored by Occupational Health Services or by Company Safety and Health Specialist.

MH – Ministry of Health

MLSP – Ministry of Labour and Social Policy

SLOVENIA

⁹ According to the Slovenian Occupational Health and Safety Act and EU directives dealing with OHS all employers are responsible for ensuring measures for

workers' safety and health at work in every aspect related to work. They are responsible for ensuring measures for preservation and promotion of workers' health and safety including prevention of occupational risks and provision of information and training, as well as provision of appropriate organisation and necessary means. They have to respect OHS standards which are set in acts and other regulations.

Each employer must prepare and implement a written safety statement specifying the manner in which health and safety shall be secured at work as well as the actual measures to be taken (e.g. training, technical measures, organizational measures, etc.). If a new hazard occurs or the risk level changes the safety statement must be revised accordingly. Safety statement is based on an identification of the hazards and assessment of the risks to safety and health at the workplace and in working environment to which the safety statement relates. The manner of preparation of a safety statement, its content as well as the data on which the risk assessment should be based are specified and prescribed by the minister competent for labour in cooperation with the minister competent for health in the light of the nature of the activities and size of the undertaking.

The data on OHS measures (written safety statement with risks assessment) have to be available in each enterprise, but they are not available for all enterprises. Employers are inspected by the labour inspectorate.

There are 16 enterprises with OHSAS standard in Slovenia.

GENERAL

- oo - Data available stratified by sector
- ooo - Data available stratified by occupation

3. General Situation of work-related health monitoring In 5 small acceding countries:

3.1. General situation of work-related health monitoring in Bulgaria

Health monitoring of working population is a traditional activity of Bulgarian occupational health practice executed by the Ministry of Health, NCPHP, Regional Inspectorates of Public Health Protection and Control (RIPHPC) and Health Care Units. In that activity were invested much more resources than in occupational risk prevention.

Nowadays the prevailing part of Bulgarian legislation is harmonized with EU framework and specific Directives. The legislation on work related health monitoring regulating the organisation and the technical details stays still unchanged and not adequate to the new preventive principles. Ordinance N 3 about the obligatory and periodic medical examinations of workers was issued on 23rd of January 1987. The draft of a new legislative document was proposed, but till now it has not been approved by the Ministry of Health.

Some practical (externalisation of problems and responsibility for diseased workers to other employers or to the state, to correct at early stage some imminent diseases and keep at work experienced professionals) and moral reasons are keeping work-related health monitoring carried out regularly till now at rational scheme:

1. Preliminary medical examinations for obtaining a job.
2. Periodic medical examinations (every 2 years) in two directions:
 - a) medical examination by physicians-specialists and prescribed lab tests for early detection of imminent diseases, early and effective cure. This approach is controlling the work-related complications of existing general diseases or is following up a status of chronic diseases in remission.

Such medical examination should answer the question of suitability for a job (Ordinance N 14 of 7th of August 1998).

- b) Job specific medical examinations and paraclinical tests to control ill health ethiologically related with occupational factors. In this case the examinations and tests are directed to the target system or organ(s) for an occupational risk factor. At exposure to chemical agents together with the limit values in the air of working environment biological monitoring of exposure by toxicokinetic

and toxicodynamic exposure tests is ordered (Ordinance N 13 of 30th of December 2003).

The document from preliminary medical examinations for obtaining a job is organised and issued by GPs, evaluated by company OHSservice and presented to employer for decision. Frequently OHS Physician prescribes specific for occupational factors tests to document past exposures and their effects (noise-audiogramme, VDU-vision, dust-pulmonary structure and function, chemical agents-toxicodynamic tests etc.). Such tests are realised mainly by the laboratory departments of RIPHPC and NCPHP.

The periodic medical examinations are organised and evaluated by specialists from OHS. Medical examinations are performed by specialists from the health care system. Paraclinical measurements and exposure tests are realised by the laboratory departments of RIPHPC and NCPHP, but also by the clinical laboratories in the health care system. All these labs have accreditation by the state accreditation agency.

The individual counselling on the basis of health monitoring and statistical processing, the analysis of findings in comparison to the occupational risk factors levels and proposals to the company management are responsibility of OHSservices. The OHS also stores the individual medical records and the statistical materials about the morbidity and sickness absence at work. All the information from the work-related health monitoring is stored at local (company) level by the OHSservice. In spite of the prescription of the Act on healthy and safe working conditions (published in 1997, active since 2005) to the Ministry of Health to organize the collection of data and analysis of the status of working environments and their effect on health, at national level there are no activities and statements.

The data from the National Register of Occupational Diseases has no publications. According to the recent publication of the Head of the Clinic of Occupational Diseases, Sofia (E. Petrova, "Occupational Diseases and epidemiological tendencies", Healthy and Safe Work, 4, 2006, p.36) and article issued by the Register (12) the most frequently diagnosed cases from the whole country at present are:

1. Occupational diseases of the nervous system;
2. Occupational diseases of muscle-skeletal system;
3. Occupational diseases caused by inorganic dusts.

3.2. General situation of work-related health monitoring in Lithuania

There are several organizations/institutions which collect information on the impact of work on health in Lithuania:

Department of Statistics to the Government of the Republic of Lithuania (www.std.lt) collect data and publish Statistical Yearbook of Lithuania on disabled persons (data provided by the State Medical Social Expertise Commission acting under the Ministry of Social Security and Labour), persons injured with lost work time due to accidents at work (data provided by the State Labour Inspectorate), persons fatally injured due to accidents at work (data provided by the State Labour Inspectorate), days lost by cases of temporary disability due to accidents at work (data provided by the State Labour Inspectorate), occupational diseases (data provided by the Occupational Medicine Centre of Institute of Hygiene). At Department of Statistics there are available data about smoking, alcohol and cannabis use, figures about physical activity of the population.

Lithuanian Health Information Centre (www.lsic.lt) is the main institution of the Health Statistics of Lithuania. Every year it presents publication which provides data on health status of Lithuanian population, determinants influencing health, activities of health care institutions as well as resources in health care. In connection with work-related health monitoring Lithuanian Health Information Centre is collecting data on number of occupational physicians.

State Labour Inspectorate (www.vdi.lt) in relation to work-related health monitoring is collecting data on incidence/prevalence of morbidity and mortality of the working population, number of fatal occupational diseases, sickness absence at work in lost working years, cases on new invalidity/disability, information about employees being informed regarding risks resulting from their working conditions, about employees receiving training at the start of work and to improve skills when working at high risk jobs, number of preplacement and periodic medical examinations, number of employees covered by a system for recording, notification and compensation of occupational accidents and dis-

eases, number of training units in OSH for employers and professionals of safety and occupational medicine, number of tripartite bodies on OHS, number of occupational physicians, labour inspectors, academic/research institutions and institutes providing education to occupational physicians, nurses, inspectors and others specialists and development studies in different areas of OHS and WHP.

State Patient Fund at the Ministry of Health (www.vlk.lt) covers in full or in part personal health care services and the cost of medicines prescribed to a patient, collects data and information on health promotion activities, breaches of legal acts in regulation of such activities, financing provided to health care institutions, residents' health conditions and status within the administrative territorial units, cases of massive diseases, natural calamities and disasters, as well as statistical data on monitoring of population's health conditions and other information required for performance of functions of the State Patients' Fund. In connection with work-related health monitoring State Patients' Fund is collecting data on number of employees receiving ambulant and institutional rehabilitation programs.

State Social Insurance Fund Board of the Republic of Lithuania under the Ministry of Social Security and Labour (www.sodra.lt) collects data of the state social insurance contributions, allocation and payment of benefits to respective beneficiaries. State Social Insurance Fund Board officially informed that data, mentioned in this questionnaire are not stored in this institution. On the other hand we have unofficial information, that State Social Insurance Fund Board for the internal usage has data on morbidity of working population registered on the basis of 'unemployment certificates'.

Occupational Medicine Centre of the Institute of Hygiene due to expected organizational changes did not complete this questionnaire and did not provide any information and data on work-related health monitoring.

There are research institutions, e.g, the Occupational Medicine Centre of Institute of Hygiene (institution is under process of reorganization), Institute of Labour and Social research (www.dsti.lt), Institute of Public Health of Faculty of Medicine of Vilnius University (www.vu.lt), Faculty of Public Health of Kaunas University of Medicine (www.kmu.lt) which periodically carry out scientific research on labour and social science, including health issues (e.g. study of researches of Occupational Medicine Centre on Musculoskeletal disorders among Vilnius trolleybus drivers according to the

professional work record and self-estimation of working conditions, published in periodical scientific journal of Institute of Hygiene “Public Health” No. 4(27), 2004).

The data in the questionnaire concerning work-related health monitoring are collected regularly every year, except data on health determinants (smoking, alcohol and drug use, physical activity) that are collected in longer (2-4 years) periods of time.

The main work-related health monitoring problem in Lithuania is unavailable data about morbidity of employees, i.e. distribution of sickness cases and days by diseases (according ICD-10 Classification) and occupations (according ISCO-88 (COM)). There are no institutions dealing with the statistics of distribution of diseases, including distribution of cardiovascular diseases and mental disorders among working population.

3.3. General situation of work-related health monitoring in Czech Republic

1. Work-related health monitoring is carried out in three ways:
 - a) Entrance health examination of every employee is obligatory. Further, based on the Act no. 258/2000 on public health protection a categorization of all jobs according to the exposure of health affecting factors at work is made compulsory (all jobs are categorized and registered in the Registry of Categorized Jobs – KAPR), which also sets the appropriate type and intervals of periodical preventive health checks depending on the job category. The health risk factors are classified as a) environmental (physical, chemical, biological, physical exertion, etc.), and b) psychological. The level of exposure is graded from 1 (no health risk for workers) to 4 (potential danger to workers' health cannot be excluded even with the application of all protective measures). The health data obtained in periodical health checks are stored at the occupational physician's office.
 - b) All occupational diseases are reported and registered at the National Registry of Occupational Diseases, operated by the National Institute of Public Health, Prague, Centre of Occupational Health. Annual reports are published.
 - c) Professional exposures to carcinogens are registered in a special registry called Registry of Professional Exposures to Carcinogens - REGEX, administrated at National Institute of Public Health, Prague.

The most often reported cause of sickness leave in CR are the musculoskeletal disorders. They also take the first place among health complaints reported by workers and ascribed to work.

3.4. General situation of work-related health monitoring in Slovenia

Work related health monitoring is a part of national statistics. Activities in the field of national statistics are carried out by the Statistical Office of the Republic of Slovenia (SORS) on the basis of the national statistics act together with authorised producers determined by the Medium-Term Programme of Statistical Surveys 2003-2007. SORS is responsible for national statistics and is directly responsible to the Prime Minister. The act determines that SORS's Director General has autonomy as regards professional and methodological issues.

Work-related health has been monitored regularly for more than 15 years on a yearly basis in Slovenia. Work-related health data gathering is required by several acts:

- Health Care Sector Databases Act (2000):
 - o Data on injuries at work
 - o Data on sick-leave
 - o Data on preventive medical checkups
 - o Register of occupational diseases
- Pension and invalidity insurance act (2003)
 - o Data on work disability

The most important work-related health data gathered at the national level are: data on sick leave, data on injuries at work and data on work related disability. The data are published by the National Institute of Public Health in Health Statistics Year Book (the last was published in 2004). The tables in Health Statistics Year Book related to health of workers which is found under the title Monitoring of health status of employees are:

- Health care staff as full-time equivalent in OTSM (Occupational, Traffic and Sports Medicine) by level of education and statistical region,

- indicators of medical staff provision as full-time equivalent of employed inhabitants in OTSM by statistical region,
- indicators of medical staff provision as full-time equivalent of employed inhabitants in OTSM by health region,
- preventive attendances to OTSM by statistical region,
- preventive attendances to OTSM by health region,
- curative attendances to out-patient clinics by type of health insurance and by statistical region,
- curative attendances to out-patient clinics by type of health insurance and by health regions,
- first five most frequent causes for attendances of employees to out-patient health care services by ICD-10 chapters,
- first five most frequent causes for attendances of farmers to out-patient health care services by ICD-10 chapters,
- first five most frequent causes for attendances of unemployed persons to out-patient health care services by ICD-10 chapters,
- reported injuries at work per 1000 employees and fatal injuries at work per 10.000 employees by place of occurrence, sex and age groups,
- injuries at work per 1000 employees and fatal injuries at work per 10.000 employees, by place of occurrence and statistical region,
- injuries at work per 1000 employees and fatal injuries at work per 10.000 employees, by place of occurrence and health regions,
- injuries at work per 1000 employees and fatal injuries at work per 10.000 employees by sex and by economic activity,
- sick-leave by spells, sick days and rates by ICD-10 groups,
- sick-leave rates for the full-time and for the part-time employment by statistical region,
- sick-leave rates for the full-time and for the part-time employment by health regions,
- sick-leave rates for workers by economic activity.

It is obvious that the regularly published data are not stratified according to Statistical Classification of Economic Activity or by occupation. Sophisticated analyses or more

deep insight to workers health are nearly impossible. There are too many obstacles to get the data (among others Personal data protection act).

Organisations/institutes responsible for and carrying out work-related health monitoring

Statistical data on work health are gathered and forwarded to the National Institute of Public Health by health care providers at different levels of health care and Health Insurance Institute of Slovenia. Data on work disability are gathered, analyzed and published by Institute of pension and invalidity insurance.

Data on accidents at work are gathered and analyzed by two different institutions in two different ways; namely the National Institute of Public Health and by the Slovenian Labour Inspectorate. The two institutions use different definitions of accident at work which results in different data on the number and structure of accidents at work. Slovenian Labour Inspectorate gathers data on accidents at work which result in more than 3 days of sick-leave and happen at work. National Institute of Public Health monitors accidents at work within the statistics on sick-leave and within the statistics gathered with R8 form that comprises accidents at work and accidents on the way to and from work regardless of duration of sick-leave.

There are no data on occupational diseases with exception for data on diseases caused by asbestos. They are gathered by the Clinical Institute of Occupational, Traffic and Sports Medicine.

Work-related health monitoring is carried out regularly and published on a yearly basis. Data on work disability are published on a monthly basis.

Work-related health monitoring includes many indicators of negative health of workers and data on health care staff specialized in occupational, traffic and sports medicine. The data are stratified by statistical region. We lack more detailed data on work related health, i.e. – stratified by economical activity of the enterprise or by occupation. From the data available it would be possible to set much more information, i.e. the health status by occupation; but this analysis needs to link two data bases: insurance (which would provide information about occupation by person) and public health information about sick-leave. This is impossible to obtain because of the requirements of the act on confidentiality of personal data. There are no publications dedicated to health monitor-

ing of employees, e.g. Work-related Health Statistics Year Book.

3.5. General situation of work-related health monitoring in Cyprus

The competent authority responsible for work-related health monitoring in Cyprus, is the Department of Labour Inspection of the Ministry of Labour and Social insurance. The Occupational Diseases Prevention Service of the Department of Labour Inspection was strengthened with a medical Doctor specialized in Occupational Medicine. The aim of this prevention service is the prevention of occupational diseases by carrying out surveys on the conditions and the work environment of workplaces where workers are likely to be exposed to agents hazardous to health and focuses on risk assessment and the preventive measures that should be taken, for both compliance with existing legislation and for further improvement of the work environment.

The Department of Labor Inspection has recently prepared an action plan for the establishment and operation of a health surveillance system of employed persons in Cyprus which is now been started. This plan was based on a study prepared by an expert and contains the procedures and future steps needed for carrying out workplace health monitoring. The aspects and elements that are taken into account are:

1. The obligations of employers, employees and examining physicians within the system.
2. The provision of arrangements for training courses, capable to ascertain availability of examining physicians and other appropriate personnel in the main centres of employment.
3. Ways and methods for conducting health surveillance in various sectors of economic activity, with priority to some high risk branches, like manufacturing and construction industry.
4. The introduction of new legislation on workers health surveillance and medical examinations.

Workplace health monitoring is in an infantile stage of development, therefore, limited information can be given on this issue. Although legislation on the notification of occupational diseases does exist, limited information can be given on work-related health problems, since very few occupational diseases have been notified to the Department of

Labour Inspection. These diseases are mainly derived from the above mentioned Occupational Diseases Prevention Services activities.

3.6. General considerations concerning work-related health monitoring and the development of National Work-Related Health Report

This analysis and discussion are too difficult. The difficulties do not concern Cyprus where the status and future steps are clear:

- good levels of demographic and health (as seen in that material) parameters;
- good socio-economic situation;
- “early stage” of work related health monitoring development – comparatively good situation on the basis of existing preparation to apply the proposals of future EU-scheme for monitoring and reporting work-related health status.

The characteristics of other four countries are too specific, controversial and difficult to be understood without considering sufficiently long historical period:

- the system “state owning, managing and controlling itself” during the socialistic period created good **financing of “work-related health monitoring” with low level of managing occupational risks** at the level of the sources of risk factors. The frequent statement of surprise of experts from market-oriented economies was “Why do you have so much detailed and approved information on the occupational risk and negative effects in your workplaces and in contrast you are implementing so small improvements in the risk situations?”;
- in some countries was used the Soviet system of **compensations “for working in conditions adversely affecting the workers health”**. That absolutely unacceptable presumption created a lot of wrong attitudes:
 - at national and enterprise managerial level- to tolerate the malpractice to accept working at the level of occupational risk factors exceeding introduced by the law Maximal Allowable Levels of harmful parameters and even adversely affecting health;
 - at level of staff – to accept such situations to have compensations: payment, free of charge food, additional days to paid leave and early retirement;
- by the harmonisation of national legislations with Framework Directive 89/391/EEC at the end of 20th Century in those countries was introduced the “really preventive principle” (occupational risk assessment and management

methodology) but due to economic, technological and behavioural (tolerating and compensating the negative occupational health impact) factors there exist a lot of **residual problems in OSH** (harmful working conditions, occupational diseases, compensations) and difficulties in practice to attain fast the EU-15 level: ergonomics, addressing largely psycho-social factors, healthy lifestyle, employees participation, WHP, company social responsibility and Lisbon criteria.

Those statements could not be applied equally to all countries – may be more to Bulgaria and Lithuania, less to Czech Republic and at lower to Slovenia.

Together with the “evolutional” problems (imposing radical interventions of national labour inspectorates) for that analysis there are another two small scale obstacles to solve:

- 1. Terminological:** considering the text in the filled questionnaires and country summaries there appear the necessity of some terminological verification. For the equivalence of terms and their meaning in different countries with different history the biggest contribution was that of ILO, WHO-EURO and more recently of EU agencies, societies, networks and conferences. Nevertheless even in those four countries there exist some locally used terms and meanings, which may introduce small but not tolerable misunderstandings. For this reason we created a Table 7 constructing the group of terms around the scale of WORKHEALTH II project (sets of data for work-related health monitoring) starting from “Ill health statistic-measuring of occupationally ill health-prevention of occupational health impairments-approaches for better health”. That Table is not ambitious to be exhaustive and absolutely precise, but is created to argue and make understandable and easily criticised the final statements.
- 2. Availability of information:** different reporters presented more information on some “sets” in Table 7. For other sets there is information in section 2 (2.1-2.3) – Tables 4-6. Some sets for a country are without information. Those differences are summarised in Table 8. Considering the sets of data it is possible to state in general that those four countries have similar achievements which could be equalized by needs-oriented joint programme. Those needs will not be uniform in each country. For example: (a) in Lithuania and Slovenia the efforts to strengthen the Registers of Occupational Diseases, to organise the sets of data on morbidity and

sickness absence of employees and to find solution of the confidentiality (Personal data protection Act) problem should be supported; (b) some corrections on the same topics will be necessary in Bulgaria; (c) all countries need to increase efforts in “Better health” set; (d) for Lithuania and Slovenia it will be necessary to clarify the content of the set “Prevention of health impairments” ; (e) in comparison to “Ill health statistics” set (where technical standardization in data collection, processing, presentation and distribution could be the basic effort) in all other sets much more good will, rational solutions and resources will be necessary to reach new information flow from local to national level by national and international surveys/programmes with additional aim to follow up the output – better health and wellbeing.

Table 7. Sets of data for work-related health monitoring

Set of data	Activities for work – related health management
Better health	<ul style="list-style-type: none"> • Corporate social responsibility (health-related social, cultural, welfare initiatives) • Workplace health promotion (WHP): programmes, employees participation • Self-assessment and self-responsibility to individual health and qualification • Enterprises with integrated OSH and WHP in their corporate philosophy and strategy • Adequate economic background and supportive state organisation/management
Prevention of health impairment	<p>Management of risk factors at workplace (OHSAS 18001), Quality management (ISO 9001 / 2004)</p> <ul style="list-style-type: none"> • workplace assessment, occupational risk assessment and management (including psycho-social and lifestyle factors) • measurements (indoor and outdoor parameters) • investigations of subjective health status by questionnaires • programmes to ensure healthy and safe working conditions (technological and organisational measures to decrease or eliminate occupational risk factors, ergonomy)
Measuring of ill health	<p>Preventive medical examinations (periodic medical check-ups, health surveillance):</p> <ul style="list-style-type: none"> • pre-placement medical check-ups (preliminary medical examination for professional selection, evaluation of the general health status/of existing occupationally ill health/of suitability for obtaining a job) • periodic occupational examinations (job specific medical examinations to document ill health etiologically related to workplace risk factors): <p>- medical examinations by specialists oriented to critical (target) organs and systems of the occupational risk factors;</p> <p>- measurements/screening tests (lab-, functional-, electrophysiological, imaging - tests; toxicokinetic and toxicodynamic exposure tests)</p> <ul style="list-style-type: none"> • periodic medical examinations for general diseases (for measuring general health status and occupational impact on general diseases like CVD, MIH etc.): - medical examinations - measurements/screening-tests
Ill health statistics	<ul style="list-style-type: none"> • Mortality incl. fatal accidents and acute occupational poisonings; • Morbidity incl. chronic effects on health-result of occupational accidents and diseases, disability, invalidity, early retirement, general diseases influenced by the occupation; • Sickness absence incl. directly caused by occupational factors.

Table 8. Available information to formulate answers to the questions formulated for that expert opinion

Country Set of data	Bulgaria	Lithuania	Czech Republic	Slovenia
Better health	± Pilot initiatives		±	±
Prevention of health impairment	+ -workplace and occup. risk assessment and management -subjective health -Programmes on HSW -indoor measurements -lifestyle factors Data in companies, OHServices, NIPHPC. Surveys possible	+ - lifestyle factors in 2-4 years period National surveys	+ -workplace and occup. risk assessment and management - compulsory -subjective health -Programmes on HSW -indoor measurements -lifestyle factors	+ -workplace and occup. risk assessment and management -subjective health -Programmes on HSW
Measuring of ill health	+ -pre-placement med. exam. -obligatory -periodic med.exam. – once in 2 years -periodic occup. med. exam. Data stored at company and OHService Surveys possible	+ -pre-placement med. exam. -periodic med.exam. -periodic occup. med. exam.	+ -pre-placement med. exam. -obligatory -periodic med.exam. -periodic occup. med. exam.	+ -pre-placement med. exam. -periodic med.exam. -periodic occup. med. exam. Problems caused by Personal Data Protection Act
Ill health statistics	+ Annual Reports Register of occupational accidents Register of occupational diseases Administrative routine data	+ Year books No data on morbidity and sickness leave of employees Administrative routine data	+ Annual Reports incl. occup. accidents and diseases Register of occupational diseases Register of professional carcinogens exposure (REGEX) Administrative routine data	+ Annual Reports No data on occupational diseases except asbestos Administrative routine data

Those statements at the end of the section give rise to the following answers to questions formulated in Annex 1 of the Agreement for that expert opinion:

1. IS WORK-RELATED HEALTH MONITORING CARRIED OUT IN THE NEW MEMBER STATES?

For Cyprus that monitoring is in preparatory phase.

In all other countries the work-related health monitoring has long lasting practice and history:

- a) before 1990 – more than it is rational; paid by the state, insufficiently quality controlled; stored at regional level, assessed by national surveys;
- b) in the period 1990 up to now – paid by employers according to the prescriptions of legislation risk assessment/labour inspectors; in different proportions:

pre-placement and periodic medical examinations for general diseases prevention and treatment-sufficiently frequently at least each 2 years (more clear interest for employers); periodic occupational examinations (job specific) with low frequency mainly for workers in special categories (I and II) for retirement. All information exists and is used at local (company, OH Services or occupational physician) level. The routine (administrative) channel for “ill health” information is going on annual basis: demography, mortality and morbidity (only for sample of working population or missing). It is important to reconsider the role of National Social Insurance Institutions as source of well controlled “ill health” information including sickness absence statistics. The potential role of National Public Health Institutions in organising national surveys is not sufficiently involved.

2. WHICH ORGANISATIONS/INSTITUTES ARE RESPONSIBLE FOR AND WHICH ARE CARRYING OUT WORK-RELATED HEALTH MONITORING?

At local level (companies) the work-related health monitoring is organised, carried out and used for preventive actions by local authority of occupational medicine (OHSservice, occupational physician, general practitioner) using possibilities of local or regional health care units and accredited laboratories.

The work-related health monitoring (WRHM) -data from local level are transferred to national level by the regional representatives of central/state organisations. The standard list of national organisations responsible for processing the WRHM-data was compiled in Section 1.3. and comprises:

- a) Public/Occupational Health Institution (performing surveys, data assessment and provider for sets “Measuring ill health”, “Prevention of health impairment” and “Better health”),
- b) National labour Inspectorate and related institutions (survey data and assessments provider for set “Prevention of health impairment”),
- c) National Social Insurance Institution-routine data provider: occupational accidents and diseases, early retirement, compensations, invalidity/disability, rehabilitation and sickness absence data (see Sections 2.1 and 2.3.). For such small new-member states there are numerous arguments (see section 2.1. and 2.3.) to reconsider the scepticism to the appropriateness of data (7) and accept the important role of Social Insurance Institution as data provider,

- d) State Organisation of Statistics and National Institution of Health Information-administrative (routine) data providers of demographic and “Ill health statistics” (mortality, morbidity).

In ACC like in the analysed group of four countries the idea to have much more partners in the development of National Work-Related Health Report should be discussed with scepticism as expensive and introducing unnecessary complications. The discussion on the leading organisation in such a National Project should have national final decision. The choice could be made between two possibilities (considering concrete local image and human resources too):

- **Ministry of Labour / State Labour Inspectorate**

Arguments: (a) the legislation is attributing leading role to that organisation in managing healthy and safe working conditions; (b) the inspectorate has a pragmatic approach to address sources of risk factors, good knowledge on the real/practical situation and effective approaches to achieve results; (c) Inspectors are highly committed and motivated, and have imperative power to introduce changes and cut dangerous/extreme negative impact. Problems may arise from: (a) susceptibility to influence by the interested employers; (b) too imperative and violating reality approach.

- **Ministry of Health / National Public Health Institution**

Those organisations at the moment are leading due to the partnership (NCO)/networking in ENWHP. The Ministry of Health is responsible for a periodic health status assessment of economically active population (15 – 64 years). Public/Occupation Health Institution has the following advantages: (a) introduces scientific approach and precision in assessments; (b) could relate technology-workplaces-occupational health and socio-economic risk factors and the data on (ill) health status; (c) could introduce more comprehensive analysis taking into account lifestyle factors, “better health” parameters and activities and has a possibility to solve difficult problems generating new information or consulting literature and competent researchers.

3. WHAT ARE THE ASPECTS AND ELEMENTS TAKEN IN TO ACCOUNT IN WORK-RELATED HEALTH MONITORING?

The general aim of the State/Government is to guarantee a natural and beneficial for the future development level of health status and wellbeing of the population. Work-

related health monitoring is used to follow up, identify problems, plan and implement corrections to decrease the negative (and sustain, even enforce the positive) impact of occupational activity and thus to reduce the level of added occupationally ill-health to the social burden. In details through work-related health monitoring:

- a) are determined patterns and mortality/morbidity/sickness absence trends,
- b) are controlled the excess and premature mortality/disability/invalidity/etc.,
- c) are identified opportunities to reduce problems and to narrow the existing inequalities in health,
- d) are argued strategies and policies.

The state/government is creating and strengthening institutions and is investing in data accumulation, processing and analysis (by administrative channels or by surveys) to have the information and control on health status, on health determinants and the implementation of the legislation and proposals for positive changes. First of all the state creates an integrated labour inspectorate to enforce the proper and overall local implementation of the legislation – a really preventive methodology.

For employers the work-related health monitoring is a human resources approach to reach and sustain healthy, skilled, motivated and with high productivity staff-members. In addition, another motive is to prove to the state/inspectorate the positive effects of the employment in the company on health and wellbeing of employees, their families, and local society (company social responsibility, CSR).

The practical implementation of this theoretical model everywhere will be by compromises creating specific differences between countries. From one point of view the biggest compromises will increase expenses for state inspections and work-related monitoring on “measuring of ill health”. In case of worsening of the situation will be activated a “vicious circle” leading to big entrepreneurs’ profits, poverty of the population, heavy social and demographic problems, degradation of the state (“banana” state). The optimistic scenario includes the expectation that in approaching the theoretical model the state efforts will decrease by reducing the tension in the labour inspectorate and by limiting work-related health monitoring to “Prevention of health impairment” and “Better health” sets (Table 7) realised practically by employers at local level.

From the point of view of this expert opinion this concept verifies the statement that during the implementation of **EU-model for work-related health report** at the start between EU 15 and some groups of ACC (e.g. discussed here) may exist objective differences (e.g. difficult to be understood fixation on “Measuring of ill health” and low level of information in “Prevention of health impairment” and “Better health” sets). May be in the process of equalising the national levels to reach EU-model for work-related health report some subsidiary specific approaches and activities of one country (or group of countries) should be taken into account to manage and accelerate the change. This expectation could be in support to the idea of benchmarking on geographic, economic, historic or other principle between Member States (application of “open method of co-ordination”) (7, 8).

4. WHAT ARE THE MAIN WORK-RELATED HEALTH PROBLEMS FACING THE NEW MEMBER STATES?

The available information is scarce and is only from Bulgaria, Czech Republic and Slovenia (see section 4.1.). The rapports concern only the prioritised lists of occupational diseases. In summary the leading three nosologies are:

- Musculoskeletal diseases (Bulgaria, Czech Republic and Slovenia);
- Diseases of nervous system (Bulgaria). Mental and behavioural disorders (Slovenia);
- Respiratory diseases (Slovenia). Diseases caused by inorganic dust (Bulgaria).

This question in ACC deserves new investigations and evaluations due to deep complex changes in last 15 years:

- legislative: the object of surveillance become all economic areas not only industry and big enterprises (e.g. the sectors of the education, public administration, services, health care etc.);
- economic: restructuring of the production sectors; closed or reorganised / privatised big enterprises; increased number of new and modern small and medium sized enterprises; difficulties with production rates and markets; foreign investors; etc.;
- populational: the size and structure of observed population become very dynamic due to emigration of work force; “grey” areas in economy; reduction of police and army personnel giving rise to more young people in economy,

which was not covered before by general surveillance; ageing of the population etc.

4. Relevance of cardiovascular diseases (CVD) and mental ill-health (MIH) in the world of work in those five countries:

4.1. Reported information in the questionnaire by countries

4.1.3 Bulgaria

Cardiovascular diseases are a serious issue for Bulgarian health care. The absolute number of deaths from those diseases has increased from 1964 to 2002 three times for men and 2.4 times for women. The overall mortality indicator for men has increased almost twice and for women – with 22%. During the last years the indicators mark a decrease but yet there is no stable trend in this direction. CVD have been leading in the total mortality structure for more than three decades.

An alarming fact is that CVD mortality rate increases in active age – mainly 20-64 years. In the age group 20-44 of men of this age range the overall mortality indicators have been increasing from 1964 to 1993 annually with 3.09% as an average; after that the trend goes downwards. In the age group 45-54 the annual increase factor by 1977 has been 3.77% followed by a mortality decrease trend. The mortality indicators for women in this age range oscillate about a level characteristic for mid-60s. In active age there is high permanent disability and temporary disability rate as well.

This tendency of CVD indicators in the country differs from their trends in the old EU member-states in most of which there are stable downward tendencies. Bulgaria is one of the countries with high CVD mortality rates.

Probably the differences are outlined by the living conditions of the population, providing the basic health prerequisites, by the level of risk factors, quality of medical care and activities on disease prevention, by the realization of policies for health promotion and integrated disease prevention.

During the last decade greater attention is paid to the mental health of the population which according to the National Conference “Stress in modern society and its social,

psychological and health impacts”, 12-13th of September, 2003, Plovdiv and to the preliminary data from a recent national survey is not good.

It must be underlined that the process of reforming the mental health care in Bulgaria could not be separated from the general health care reform during the last six years. In many aspects the changes in the general health care reflected on the provision of mental care services. The increasing importance of the mental health in the Western countries since last couple of years could be also applied to the Bulgarian situation.

The fact that the system remained behind from the overall process of reforms in other sectors was recognized by the Bulgarian government and took place in number of official documents and declarations made in close cooperation with WHO, Council of Europe, Stability Pact for SEE and European Commission. Important documents as Dubrovnik Pledge 2001 and Helsinki Declaration on mental health 2005 were signed by Bulgarian Ministers of health and adopted into the National Policy on Mental Health. Bulgarian experts participated in development of the Green Paper on mental health prepared by EC as well as in number of other important international initiatives. On national level all these efforts were presented in adopting a variety of important documents, starting with the National Mental Health Program, later transformed into National Mental Health Policy and Action Plan 2004-2012, along with important changes in the legislation as the Mental Health Chapter in the Health Act, regulations and directives regarding the treatment practices etc. On behalf of the Ministry of Labor and Social Policy important steps toward reforming and modernization of the social services were also taken. Valuable support in these efforts was given by EC through the PHARE program and especially the projects related with the mentally disabled persons.

The work on a twinning project with Finland that will provide to the country a Master Plan for development of mental health care services in Bulgaria during the next years is being finalized. This will help the ongoing process of de-institutionalization of mental health care services.

4.1.2 Lithuania

As was mentioned earlier, there are no data in Lithuania about distribution of diseases (including distribution of cardiovascular diseases and mental disorders) among working population.

According data of Lithuanian Health Information Centre during the past decade importance of registered mental health problems and cardiovascular diseases among population increased significantly (registered cases of diseases in out-patient health care institutions per 1000 population):

ICD-10 Main groups of diseases	Indicator of morbidity	Registered new cases of diseases in out-patient health care institutions per 1000 adult population (15 years)			
		1995	2000	2004	2005
Mental disorders	incidence	6.8	22.2	28.2	23.0
	prevalence	52.0	70.4	73.4	70.5
Diseases of the circulatory system	incidence	18.7	37.7	40.4	47.9
	prevalence	153.1	251.2	249.3	307.3
Total (all cases)	incidence	400.7	838.6	1012.4	1043.8
	prevalence	922.7	1578.8	1829.5	1901.6

About real trends of morbidity of population during this period it is difficult to speak, because one of the reasons of increasing registered cases of diseases was increasing the quality of statistical registration of patient visits and changes of social situation in the country.

Structure of New cases of Disability (Data provided by Lithuanian Health Information Centre)

Groups of diseases	New cases of disability			
	1993		2003	
	abs. No	%	abs. No	%
Total	23 283	100	35 961	100
of which disabled with:				
Mental disorders	1715	7.4	2846	7.9
Diseases of the circulatory system	7829	33.6	10 252	28.5

Temporal disability by causes in 1993
(Data provided by Lithuanian Health Information Centre)

Causes of temporal disability	Number of cases per 1000 insured	Number of days per 1 insured person	Average length of one case (days)
Total	584	9.6	16.5
Diseases of circulatory system	34	0.75	22.4
Diseases of the respiratory system	167	1.7	10.4
Diseases of the digestive system	29	0.6	20.8
Diseases of the peripheral nervous system and musculoskeletal system	70	1.3	18.9
Injury and poisoning	79	1.7	22
Nursing	71	0.6	8.6
Others	134	2.9	21.4

Temporal disability by causes in 2003
(Data provided by Lithuanian Health Information Centre)

Causes of temporal disability	Number of cases per 1000 insured	Number of days per 1 insured person	Average length of one case (days)
Total	521.1	5.3	10.1
Diseases	401.6	4.0	13.3
Occupational diseases	0.1	0.001	13.3
Accidents at work and the way to work	6.6	0.14	21.8
Other accidents	53.6	0.78	14.5
Nursing	59.2	0.38	6.5

Due of the different statistical classification of the data in 1993 and 2003 it is difficult to compare it.

4.1.3 Czech Republic

Circulatory diseases are not recognised as occupational diseases but their relevance to work load and work style is generally agreed upon even if there is no direct link to work conditions and the origin of disease is multifactorial. As cardiovascular diseases are the primary cause of chronic morbidity and mortality in people still in their working age they have also heavy effect on national economics not to mention their effect on quality of life of the afflicted people and their families, so their treatment and recently also efforts in prevention are regarded as of the first importance.

Mortality caused by CV diseases in the Czech Republic rose steadily from 1970 to 1990, more in women (they, of course, died in the later age than men). During the 90s the mortality rates, somewhat against expectations, went at first down and during 2000-2004 stagnated with a slight tendency to fall. This might be probably an effect of medi-

cal progress and better treatment which overcame the effect of stress from the period of political and economical transition in the nineties. An improvement in environmental conditions and a better knowledge of healthy lifestyles in general population undoubtedly played the role too.

The prevention of circulatory diseases and modification of their risk factors (smoking, diabetes, obesity, low physical activity) is the main goal addressed in the WHP programs whose importance is being more and more recognized. The good preventive programs are complex and strive to influence both somatic and mental risk factors.

Psychological work load is in the Registry of Categorized Jobs categorized in two categories of risk: 2+2R, 3rd category 2R means more risk than in category 2, but not meeting all criteria for category 3. As the database contains only description of working conditions and sex of the worker, no information on age or employment status is stored.

In the Czech Republic out of 4 706 600 of all jobs in the year 2005, 676 680 were classified as having some kind of psychological load, i.e., 14.4%. High psychological load (category 3) is described in 6.3% of all jobs with psychological stress. More men than women work in the category 3 jobs – 7.2% men, 5.3% women.

According to the sector of economic activity (NACE), in category 3 most jobs are found in education and health – 27.9%, closely followed by transport and communication – 27.3%, and mining and manufacturing – 22.0 %.

As regards occupation (ISCO), a highest percentage of jobs in category 3 is found in the group of plant and machine operators and assemblers – 38.0%, the second place take technicians and associate professionals – 26.0%, followed by service workers and shop and market sales workers – 18.2% .

It was found in many health screening and intervention programs that psychological stress at work almost always affects mental health and life satisfaction. Still, there might be some differences between the EU countries. For instance, the Czech Republic took part in “European working conditions survey 2000” (EUROSTAT), at that time at the position of the EU acceding country, and some interesting differences were found com-

pared to European average. Namely, the order of health complaints that the participants ascribed to work was different. Job stress in Europe was rated as second, immediately after the backache in the first place. In CR, this problem was rated as ninth out of the list of 19 problems, following after several somatic complaints and fatigue. The 2005 survey is now being evaluated and the results are expected this year. As some economic and social changes take place the latest findings may show some difference in perception of job stress among the Czech workers compared to 2000.

4.1.4 Slovenia

Main work-related health problems facing in Slovenia (Metoda Dodič Fikfak)

There are around 900,000 employees in Slovenia. Their health status can be estimated based on some indicators that show the level of diseases and disability.

Since the beginning of the 80s, we have been monitoring sick-leave of employees for the whole of Slovenia. Data on work-related injuries and work disability is also available at state level. Data on fluctuation of employees, jobs at risk (risk estimates) and ecological information is held by companies. There is no reliable information on occupational diseases in Slovenia since 1990 with exception of the register on asbestos related diseases which is available since 1998.

Percentage of sick-leaves, followed by the Institute of Public Health of the Republic of Slovenia, showing the absence from work due to disease, injuries, treatment and assistance, was from 1990 to 2004 between 4.5% (1991) and 5.2% (1992 and 1998). Significant are the differences between genders: in the monitored period, women were absent from work more, from 5.0% (1992 and 1995), to 5.9% (1998). Men were of course absent much less, from only 3.9% (1992), to 4.9% (1998).

The most common cause of absence have been musculoskeletal diseases, injuries outside work and work-related injuries. This remained constant during all 15 years, followed by respiratory diseases and mental and behavioural disorders.

With women, the foremost cause of sick-leave have been diseases of the musculoskeletal system, followed by injuries and poisoning outside work and work-related injuries and then mental and behavioural disorders. With men the injuries and poisoning outside work are most common, followed by musculoskeletal diseases and work-related injuries and poisoning. The data is from 2004 but remains constant through the years. Another interesting thing is the seriousness of sicknesses, or the average duration of sick-leave per diagnosis, showing that female sick-leaves are longest due to complications with pregnancy and birth, followed by neoplasms and then mental and behavioural disorders.

From 1999 till 2005 all together 120 workers died at work, 17.14 on average. The most frequent cause was falling.

Stratification according to age groups shows that those younger than 19 are mostly absent from work due to injuries, same as those between 20 and 44; older employees, between 45 and 64, are primarily absent due to musculoskeletal diseases.

In economic fields, the most sick-leaves are taken in tobacco production, forestry and leather production, followed by manufacture of other vehicles and vessels and then textile industry (data for 2004). Even at a glance, the data indicates that most sick-leaves occur in industries that are psychophysically demanding and those where the risk of job reductions and bankruptcies is the highest.

The overview of sick-leaves longer than 365 days showed that the order of causes remains the same: musculoskeletal diseases, and injuries outside work and at work.

Calculations of sick-leave for part-time work show that the primary cause is musculoskeletal diseases, followed by mental and behavioural disorders and neoplasms.

Relevance of cardiovascular diseases and mental ill-health in the world of work

(Accurate) mortality data are still one of the most reliable aggregated data on population health status and as such relatively fair indirect indicator of morbidity.

Cardiovascular diseases have been recognized as one of major public health problems of Slovenians for many years. Like in other developed countries they are leading cause of death in Slovenia. E.g. data for 2001 show coronary heart diseases are the leading cause of death in males and females; digestive system cancer and cerebrovascular diseases are the 2nd and the 3rd most frequent cause of death in males. In females the 2nd most frequent cause of death are cerebrovascular diseases and the 3rd were other heart diseases.

Compared to other countries in transition period mortality due to heart diseases is smaller in Slovenia, yet higher compared to the average of the 15 EU member states.

YPLL (years of potential life lost) indicator shows that in 2001 there were 5,012 premature deaths in Slovenia (death at age less than 65). The number of YPLL was 71,632 (52,125 in males and 19,507 in females). YPLL was most contributed by injuries and poisonings (28,6 %), neoplasms (23,9 %) and diseases of circulatory system (14,6 %).

It is worth mentioning that for the age group 65 years or less the 2nd and 3rd leading causes of death for men were cancer of respiratory system and cancer of digestive system; for women: breast cancer and cancer of digestive system. In the group of diseases of digestive system among the most frequent causes of death are liver diseases with liver cirrhosis which makes clear relation to alcohol abuse.

SDR in the age group 0-64 shows Slovenia is also loaded with suicides: compared to other transition countries Lithuania, Latvia, Estonia and Hungary have higher SDR than Slovenia which is still above the average of EU 15 countries.

CVD are interrelated with lifestyle which is related to socio-economic status. There were several surveys done trying to assess the risks of Slovenian population for CVD – mainly in the framework of CINDI (Countrywide Integrated Noncommunicable Diseases Intervention) programme. Unhealthy nutrition (app 46%; combined criterion: 3 or more meals per day; daily intake of vegetables; daily intake of fruits; daily intake of dairy products with max 1,6% fats and red meat intake less than once a day), lack of physical activity (16,4: 3,7% are never physically active, 13,9% non regularly physically active = walking 2-3-times per week to moderate physical activity 2-3-times per week), smoking (23,7%), alcohol abuse (13,4% drink in an excessive way: men more than 20g of pure alcohol a day (22,6%), women: more than 10g of pure alcohol a day (5,5 %)) and poor

stress coping (24,9 % were stressed frequently or every day) are characteristics of the Slovenian life style.

The research in school-aged children and adolescents showed that there is considerable proportion of children with unhealthy behaviours and that the situation worsens with age.

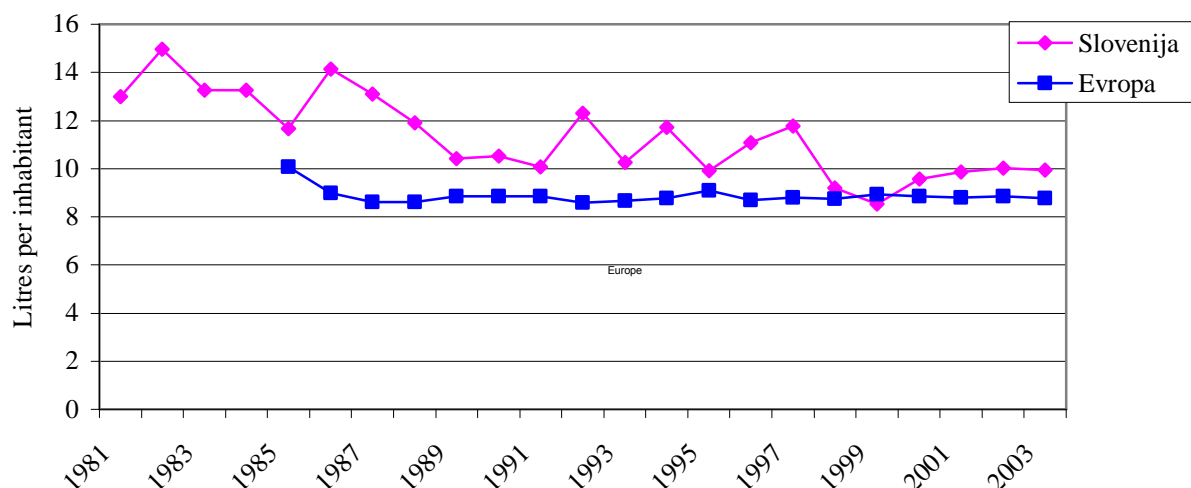
The increasing importance of mental health in Slovenia

The mortality data show that Slovenia has been overloaded with at least 2 broad mental health problems: suicide and alcohol dependency.

The problem of suicide is known for many years since the registry of suicides and suicidal attempts has been established many years ago – at the beginning of eighties. In the last few decades the annual rate is app. 30 suicides per 100,000 inhabitants. Suicide risk is higher among the elderly, men, the widowed, the divorced and persons with lower school educational attainment. Suicides are generally more frequent in the areas with a higher prevalence of alcohol-related disorders.

The most frequent mental disorders are stress, anxiety and depression. In the occasion of World mental health day we heard the information that at least one fourth of employees experience emotional problems at work frequently or every day. Who is the most exposed? Women; age group 40-49; high level of education; employed; lower social class or upper middle class; urban residence.

Slovenia is loaded by alcohol related problems, too. It is well known that the spread of alcohol related problems is correlated to the amount of consumption of pure alcohol in population. The data show that in Slovenia per capita alcohol consumption has been above European average for many years.



Source: WHO/Europe, *European HFA Database*, June 2005.

In 2003 the average registered use of pure alcohol per inhabitant was 10.1 litres or 12.3 litres per inhabitant, older than 15 years. The data from 1981 on show Slovenia is among countries with biggest alcohol consumption in Europe. There exists also unregistered alcohol use in Slovenia which is estimated 7-8 litres of pure alcohol per inhabitant. So is the burden of alcohol related problems: liver diseases, liver cirrhosis, domestic violence, (traffic) accidents and suicides.

To what extent are cardiovascular diseases and mental health problems important in your country addressed by WHP programmes?

In Slovenia health promotion (and WHP) is not developed as it could be if the statement that the country is a “social” one and that everyone should enjoy the best possible level of health would be understood literally and translated in life. There is lack of understanding where health is created, who is responsible for curing and who for health, what enables/supports health and which are the most important prerequisites for health. So there is no HP strategy in the country, but there are several partial strategies (e.g. nutrition, prevention of drug abuse). There is no educational programme on health education/health promotion on under or postgraduate level.

Health promotion of children and adolescents is relatively well developed; mental health promotion has got a lot of assets during past 4 years. But still – there are not enough resources directed to HP: this is true for research which is crucial for designing HP programs, for programmes development and evaluation.

Although a lot has been known on the disease/mortality burden due to unhealthy behaviours since 80s yet Slovenia began to make clear steps towards health promotion and healthier lifestyle of the population in the second half of the 90s. It was only in 1996 that Act on restriction of tobacco use came in force, the Act on restriction of alcohol use came in force even later – in 2003. The act on safety and health at work was accepted in 1999 and the resolution on national plan on safety and health at work in 2003. The Resolution on the national programme of nutrition policy 2005-2010 passed the parliament in 2005. Yet, the act on mental health is still being prepared. There are not sufficient resources or better to say the resources are allocated only to some health promotion (HP) programmes and research. Among the supported programmes are programmes on healthy nutrition and physical activity, quitting smoking etc. run by CINDI, some programmes on children health promotion run and mental health promotion run by NIPH.

Everything said for HP stands also for WHP, which began to develop more energetically a few years ago and is currently at an early, but vivid stage.

There are good legislative foundations for WHP. According to the Slovenian Occupational Health and Safety Act and EU directives dealing with OHS all employers are responsible for ensuring measures for workers' safety and health at work in every aspect related to work. They are responsible for ensuring measures for preservation and promotion of workers' health and safety including prevention of occupational risks and provision of information and training, as well as provision of appropriate organisation and necessary means. They have to respect OHS standards which are set in acts and other regulations.

Every worker has to pass preventive medical examination before employment and several examinations during employment. The frequency of periodical preventive health examinations during employment depends on the job risk assessment and the measures provided. The preventive medical examination (before and during) employment includes also screening for CVD and mental diseases. Psychological examination is part of preventive medical examination in cases when the work has special demands.

The resolution on national plan on safety and health at work set guidelines for WHP. Our institute began with development of Fit for work programme in 2004. After complet-

ing the research phase and the phase of development of educational programme we are facing lack of resources for implementation in more Slovenian enterprises.

Recommendations

Health (not disease curing) policy should be designed. Health should be seen as a vital developmental issue. Health promotion strategy should be designed. The development of health promotion and workplace health promotion should be supported. Data on workers health should be analysed by activity and occupation. More research of psychosocial factors influencing health behaviour should be done in this field. Data on workers health should be published at least on a biennial basis.

4.1.5 Cyprus

Relevance of cardiovascular diseases and mental ill health in the world of work

Information on cardiovascular diseases and mental ill health at workplace is very limited and can only be given for the general population. Data stratified by sector and by occupation are not available at the present.

This information can be derived from a health survey of the Statistical Service of Cyprus, which was conducted during the period September-December 2003 all over Cyprus. In this survey amongst the illnesses or health problems that were mentioned by the respondents, was hypertension (7,1%) and heart failure and other heart diseases (1,8%).

In the same survey the respondents were asked to state whether they currently have or have ever had in the past any specific chronic conditions. The highest frequency corresponded to hypertension with a percentage of 9,7% of respondents. Heart attack corresponded to 1,8% of respondents.

Chronic anxiety or depression were mentioned by the 5,7% of the respondents. With regards to the general psychological status, women appear to have greater percentages of distress, anxiety and pressure, sadness and loss of self confidence, while men appear to be able to concentrate more, to be more able to face their problems and they generally state to be happier and more able to take decisions about different issues.

With relation to psychological distress, women appear to feel nervous, downhearted and depressed more often than men, while men feel more calm, peaceful and happy.

The general perception on mental health in Cyprus, seems to be positive, since the majority of respondents stated that they are happy and with interest in life (73,9% of men and 64,1% of women) and somewhat happy (22,1% of men and 28,8% of women).

Although no clear image can be given with regard to cardiovascular diseases and mental ill health at workplace, the Department of labour Inspection gives a great importance to those issues.

Apart from the establishment of the necessary procedures for health surveillance of employed persons mentioned above, the Department of Labour Inspection has started to participate to workplace health promotion programmes of the European Network at Workplace Health Promotion, aiming to introduce this concept into the Cyprus working environment. In addition, the Department of Labour Inspection has prepared legislation on the notification of occupational diseases, which includes the European occupational diseases list. The purpose of this legislation is the development and improvement of effective preventive measures for occupational diseases, the introduction of a system for the collection of information or data concerning occupational diseases and the promotion of research in the field of occupational health.

4.2. Summary of the relevance of cardiovascular diseases and mental-ill health in the world of work in ACC.

In principle the discussed countries (ACC) could not be an exception in the world wide propagation of CVD epidemics. This reality is evident in "Health for all data base", WHO-EURO, June 2004. In addition all ACC produced in the last 15 years a lot of materials/books summarizing the facts established in the national yearly reports on health statistics, cross sectional and follow up surveys, and scientific reports. The specialists are of the categoric opinion, that the knowledge on CVD problem is sufficiently clarified and complex (morbidity and mortality burden, health risk factors level and a lot of other

details) to plan, implement and evaluate complex national programmes directed to CVD prevention and health promotion.

All rapporteurs' opinions coincide with that general statement and give explicit answers to the questions in that analysis:

4.2.1. In general, what is the relevance of cardiovascular diseases and mental ill-health related to work in the framework of public health in the New Member States?

CVD are the major public health problem in Bulgaria, Lithuania, Czech Republic and Slovenia (Cyprus as a country on "Mediterranean diet" does not alarm for a public health problem, but gives great importance to the issues concerning CVD and MIH as public and workplace need for Health Promotion (HP)/WHP interventions/programmes). They could be a major public health problem in all ACC of this type.

In our countries CVD are a primary cause of morbidity (indirect indicator) and mortality (the most reliable indicator for a population) resulting in high losses of the society (material, social and intellectual). The critical problem is that those four countries have higher and increasing level of parameters in comparison to all EU-15 countries (as country and EU-mean levels, which have a tendency to decrease year by year). According to Table 3 (morbidity-SDR, Diseases of circulatory system, 0-64 years per 1 mln. inh.), "Health for all data base" of WHO-EURO and the national reports, there are intercountry differences in descending order of concern:

- Bulgaria is one of the countries with highest CVD mortality since 1992 up to now (1). The alarming fact is that the CVD mortality is increasing in the range of active life (in people, predominantly men, aged 20-44 years).
- Lithuania has generally a similar problem.
- Czech Republic – the CVD problem is less pronounced than Bulgaria but is relevant to workload and workstyle.
- Slovenia – the parameters are lower than in other ACC, but still higher than EU-15 mean level.

The mental ill-health (especially in former “socialist” countries) is also a public and occupational health problem according to the rapporteurs. Some details will be discussed to answer the third question.

Both interrelated and sharing risk factors CVD and MIH interfere with the world of work (occupational health and safety sector of public health) in three aspects:

- CVD and MIH increase the losses of companies due to sickness absence, premature disability (imposing changes in the rhythm, load and style of work), increased risk of occupational accident (and even more heavy failures) and lost investments in qualification in case of death.
- Negative effects on the development of CVD and MIH of both the work organisation and characteristics and of the factors of working environment.
- Beneficial potential for disease prevention and WHP at the powerful setting workplace, for influence positively lifestyle risk factors of CVD and MIH development.

4.2.2. There are big differences of cardiovascular diseases in different European countries, in particular between New Member States and countries of “Old Europe”. Please, outline the reasons to explain the exceptional role of cardiovascular diseases in the New Member States!

According to the European Atherosclerosis Society, 1992, the CVD risk factors are classified as:

a) uncontrollable:

- age,
- gender,
- genetic predisposition.

b) susceptible to control by adequate treatment and changing the lifestyle issues:

- HDL – cholesterol, cholesterol and triglycerides levels,
- Obesity,
- Diabetes,
- Blood pressure,
- Smoking,
- Existing CVD.

Risk factors for pathological changes in blood pressure (hypertension) and body mass (obesity) are:

- low physical activity,
- non-rational/imbalanced nutrition,
- alcohol abuse,
- psycho-social factors causing stress and distress.

By scientific screening was compiled target constellation of CVD prevention (early discovery and treatment of CVD and of predisposing pathological states like hypertonia, diabetes, obesity etc.) and corrections in the wrong lifestyle behaviours by HP:

- imbalanced nutrition to balanced nutrition,
- low physical activity to rational physical activity,
- tobacco smoking to non-smoking,
- stress and distress to adaptation, wellbeing,
- alcohol abuse to self-control, resistant to abuse attitude.

The consequent step in the pathogenic mechanism leading to CVD include (according to the WHO, 1990):

- genetic predisposition and imbalanced nutrition may lead to hypercholesterolemia;
- smoking, diabetes, hypertonia may aggravate the hypercholesterolemia to general atherosclerosis;
- stress and low physical activity complicate the existing atherosclerotic vascular lesion to CVD.

There are a lot of possibilities to ameliorate the problematic situation with CVD and MIH in discussed group of ACC:

1. Better medical care: early detection and effective therapy of that diseases, their predisposing pathological states, and their complications.
2. Diseases prevention by screening procedures and work with individuals at risk to decrease the levels of individual risk factors to the reference intervals. At population level the benchmark should be EU-15 mean levels. The national parameters now are all above the benchmark:
 - higher levels of serum cholesterol and triglycerides,
 - higher rate of smoking,
 - higher level of Body Mass Index due to non-rational and imbalanced diet,

- higher level of alcohol abuse.
3. The same aim could be achieved as a long term goal in a national strategy by comprehensive health promotion (through ecological and setting approaches, especially at schools and workplaces) to gain “healthy lifestyle of all”:
- balanced nutrition,
 - rational physical activity,
 - non-smoking,
 - coping with stress and critical situations,
 - resistant to abuse (of alcohol, medical preparation) and dependencies (drugs) attitude.

Many of my colleagues-specialists in CVD and MIH are considering the large urgent implementation of above activities as critical responsibility of the state (public health authorities).

Nevertheless of the scepticism of some authors, the first importance is attributed to the decrease of psycho-social stress. The acceleration of positive changes and final amelioration of the situation they are associating with economic and social stabilization of our countries.

It is possible that some good ideas and consensus will be achieved in turning back to the situation in Western Europe during the 50s of 20th Century.

4.2.3. During the past decade in Western European countries the importance and significance of mental health problems has increased significantly. Does this fact also apply to the New Member States? Please, outline approaches to explain the increasing importance of mental ill-health in the New Member States!

All countries are reporting increasing importance of stress and MIH to the health problems at workplace. This statement is a little bit surprising considering the data on table 3 and the finding in the Survey 2001 of the European Foundation for the Improvement of Living and Working Conditions (4) that the work-related stress is less in Bulgaria (15%) than in EU-15 (28%) and CC-12 (29%). Many authors in Bulgaria are still reporting high level of psycho-social stress in the general population and employers in the spheres of

education and health care, transport and communication, mining and manufacturing (2, 11). Each 10th individual of the population had complaints of stress. The increased level of depression, psycho-somatic diseases (Bulgaria); poor stress coping, anxiety and depression (Slovenia), stress related to political and economic transition (Czech Republic) are noted (see Section 4.1.).

Evidently the mechanisms of increased mental health problems in “Old” EU-countries and ACC are different. In ACC the specialists are explaining the situation by disadaptation syndrome to deep social changes during the transition, insecurity in family income, fear to lose job and property, anxiety to lose successful performance and self-control (insecure personal ability to control the demands) in a society with frequent changes in rules, weak social support and networks etc.

Those problems in the society with added occupational factors create critical situations at workplace. Mental health problems additionally are provoking and worsening the status of CVD.

4.2.4. To what extent are CVD and Mental health Problems important to the New Member States addressed by WHP programmes.

All five ACC are aware of their above mentioned problems:

- In Slovenia and Bulgaria are successfully working and enlarging their coverage, supported by the State CINDI programmes.
- All countries have their Health Strategies, Action Plans and specific policies (National Mental Health Policy, Action Plan and Contracts – Bulgaria).
- All countries have Institutions of Public/Occupational Health with potential to organise and implement preventive and HP Programmes.
- All countries are organising Forums and Enterprises Networks to discuss and promote models of good practice in WHP including healthy lifestyle (“Move Europe” campaign).
- All countries are evaluating the present activity as too restricted to change the situation and are pleading for state support for overall implementation of health promotion at workplaces, schools and other settings.

5. Conclusions:

1. This analysis is an attempt to identify additional possibilities to accelerate the realisation of the “Work-related health report” in a group of ACC with similar achievements, possibilities, problems and difficulties.
2. The group of ACC countries like Bulgaria, Lithuania, Czech Republic, Slovenia (most probably Latvia, Estonia, Slovakia and Hungary as well) could form a successfully working group with similar problems but also with possibility to benchmark to each other.
3. In difference to EU-15 this group of countries most probably have to solve more residual OSH problems (harmful working conditions, occupational diseases and occi- dent’s etc.) before reaching EU-15 level.
4. For the development of “Work-related health report” at least for national organisations should be involved:
 - Public/Occupational Health Institution
 - National Labour Inspectorate
 - National Social Insurance Organisation
 - National Institution on Statistics/Health Information
5. At present only the health status parameters could be find collected by the routine (administrative) way. All other sets should be organised by new surveys based on EU standardized Questionnaires at local languages.
6. All four countries have experience at all levels of work-related health monitoring.
7. CVD are the major public health problem in Bulgaria, Lithuania, Czech Republic and Slovenia. All those countries are reporting increasing importance of stress and MIH to the health problems at workplace.
8. Both interrelated and sharing risk factors CVD and MIH interfere with the world of work (occupational health and safety sector of public health) in three aspects:
 - CVD and MIH increase the losses of companies due to sickness absence, premature disability (imposing changes in the rhythm, load and style of work), increased risk of occupational accident (and even more heavy failures) and lost investments in qualification in case of death.

- Negative effects on the development of CVD and MIH of both the work organisation and characteristics and of the factors of working environment.
 - Beneficial potential for disease prevention and WHP at the powerful setting workplace, for influence positively lifestyle risk factors of CVD and MIH development.
9. There are a lot of possibilities to ameliorate the problematic situation with CVD and MIH in discussed group of ACC:
- Better medical care: early detection and effective therapy of that diseases, their predisposing pathological states, and their complications.
 - Diseases prevention by screening procedures and work with individuals at risk to decrease the levels of individual risk factors to the reference intervals.
 - At population level the benchmark should be EU-15 mean levels. The national parameters now are all above the benchmark.
 - The same aim could be achieved as a long term goal in a national strategy by comprehensive health promotion (through ecological and setting approaches, especially at schools and workplaces) to gain “healthy lifestyle of all”.
10. All five ACC are aware of their above mentioned problems and have their national activities. All countries are evaluating the present activity as too restricted to change the situation and are pleading for state support for overall implementation of health promotion at workplaces, schools and other settings.

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