

April 2012

Additional information for indicators for which EHIS is preferred (interim) source

This documentation sheet is designed to match the questionnaire of the European Health Interview Survey (EHIS) as it was used in EHIS wave 1. For EHIS wave II, which is envisaged to take place in 2014, the questionnaire is being revised. Therefore, questions underlying ECHI indicators may have changed in wave II compared to wave I, with possible consequences for the adequacy of the current documentation sheet. The ECHIM Core Group recommends that the consequences of this revision, once finalized, will be processed in the documentation sheets for the affected ECHI indicators. Subsequent changes in the documentation sheets will relate to the indicators' definition and calculation.

Most of the ECHI shortlist indicators, for which EHIS data have been appointed as preferred (interim) source, have been placed in the implementation section of the 2012 version of the shortlist. This does not apply to indicators 37. General musculoskeletal pain, 38. Psychological distress and 39. Psychological well-being, however. These indicators are placed in the development section. The reason for this is that in preliminary versions of the revised EHIS questionnaire the questions underlying these indicators were removed. Hence, EHIS wave II will not result in data for these indicators.

The outcomes of the assessment of the results of EHIS wave II may have consequences for assigned status of the ECHI indicators (implementation section, work-in-progress section, development section). This relates for example to the performance of the new instruments applied in wave II for alcohol use, physical activity and mental health; if they do not perform adequately, shifting the related indicators to the work-in-progress section needs to be considered. Like the changes in definitions and calculations due to the revised questionnaire, such changes in indicator status also need to be processed in the relevant documentation sheets.

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<i>ECHIM Indicator name</i>	B) Health status
<i>Relevant policy areas</i>	16. Alcohol-attributable deaths (AADs) <ul style="list-style-type: none">- Health inequalities (including accessibility of care)- Health system performance, Quality of care, Efficiency of care, patient safety- Non-Communicable diseases (NCD), chronic diseases- (Preventable) Burden of Disease (BoD)- Preventable health risks- Life style, health behaviour- Mental health- Child health (including young adults)
<i>Definition</i>	Mortality caused by alcohol consumption. Number of premature deaths that may be attributed to alcohol consumption in the population (Alcohol Attributable Deaths (AAD)) out of the total number of deaths*100)
<i>Calculation</i>	<p>The methodology described below is based on the methodology applied in the European ODHIN project, though the selection of ICD codes is divergent; this is based on the deaths codes used by WHO for the Global Burden of Disease study (for reasons of comparability with other international data on alcohol attributable mortality).</p> <p>Alcohol Attributable Deaths (AAD) are defined as: AAD = AAF*D AADs = Sum AAD (all causes) where D is the number of deaths due to a specific cause or group of causes affected by the risk factor with relative risk, in this case alcohol consumption. The AAF by age groups and gender has to be multiplied by the total number of deaths per cause.</p> <p>Alcohol-attributable fractions (AAFs) are generally defined as the proportion of a disease in a</p>

	<p>population that will disappear if alcohol is removed. AAFs are calculated by using the Alcohol-Attributable Fraction formula: $AAF = \frac{[\sum_{i=1}^k P_i(RR_i - 1)]}{[\sum_{i=0}^k P_i(RR_i - 1) + 1]}$ where i is the category of alcohol usage (i = 1-3) or no alcohol (i=0), RR_i is the relative risk at exposure level i, compared with no alcohol consumption, P_i is the prevalence of the ith category of alcohol consumption, and k is the highest drinking category.</p> <p>Relative Risks of drinking exposure levels are available from several studies and will be used from selected sources (see references 1-3), and the overview of RRs to be used for the calculation of this indicator in annex 1.</p> <p>The drinking categories required for the calculation of this indicator are: <u>category i=1</u>: females=(0.25-19.99 g/day); males=(0.25- 39.99 g/day); <u>category i=2</u>: females=(20-39.99 g/day); males (40-59.99 g/day); <u>category i=3</u>: females=(40+ g/day); males=(60+ g/day).</p> <p>There are diseases wholly attributable to alcohol (group 1 for which AAF=1), meaning that they would not exist without it. Furthermore, alcohol is a contributory cause in a fair number of diseases partially attributable to alcohol (group 2) and unintentional and intentional injuries (group 3). The total number of Alcohol-attributable deaths is equal to AAD(group1)+AAD(group2)+AAD(group3). See annex 2 for an overview of ICD codes to be used in the calculation of this indicator.</p>
<i>Relevant dimensions and subgroups</i>	<p>Country. Gender Age groups: <u>group 1</u> (diseases wholly attributable to alcohol): 15-29, 30-44, 45-59, 60-69, 70+; <u>group 2</u> (diseases partially attributable to alcohol): 30-44, 45-59, 60-69, 70+; <u>group3</u> (unintentional and intentional injuries): 15-29, 30-44, 45-59, 60-69, 70+ (according to reference 1, appendix B pag 1100). SES by ISCED groups (if available)</p>
<i>Preferred data type and data source</i>	<p><u>Mortality data</u>: National population statistics (Death register) or Eurostat database (if it contains the requested data)</p> <p><u>Alcohol consumption prevalence data</u>: 1) EHIS survey 2) National HIS surveys Preferred source: EHIS</p>
<i>Data availability</i>	Alcohol consumption prevalence data can be obtained by EHIS when it will be implemented in MS (second wave planned for 2014).
<i>Data periodicity</i>	The EHIS is currently held every 5 years. Higher frequency is not necessary for this indicator because mortality for alcohol related causes do not change very much year by year.
<i>Rationale</i>	In all of the European regions, alcohol use has been identified as one of the major risk factors for burden of disease and injury with highest levels of alcohol-attributable burden in Russia and surrounding countries (see reference 1). Amenable to interventions.
<i>Remarks</i>	<ul style="list-style-type: none"> - Alcohol consumption can be described in terms of grams of alcohol consumed or in terms of standard drinks. In Europe, a standard drink commonly contains 10-12g of alcohol. Eurostat (EHIS) standard drink (see reference 10) may differ from national estimates due to different assumptions alcohol concentration and volume of drinks. Eurostat data are recommended because the standardization provided by the specific question in the survey questionnaire refers to 1 drink containing 10g of pure alcohol. This will allow a fairly good comparison between countries if the problems related to the conversion from usual national alcoholic beverages to standard drinks of 10g alcohol can be overcome. - The risk relations between alcohol and chronic disease outcomes were taken from meta-analytical studies, which assume transferability of relative risks between countries. Although this assumption is customary for most Comparative Risk Assessments (see reference 4), there

	<p>could be interactions between alcohol and other risk factors such as poverty, malnutrition, or hopelessness, which introduce error (Schmidt LA, Mäkelä P, Rehm J, Room R. Alcohol and social determinants of health).</p> <p>- The above-mentioned prevalence calculations are based on the first version of the EHIS questionnaire, as used in the first EHIS wave (2007/2010). The EHIS questionnaire will be revised; hence, adaptations to the EHIS question underlying this indicator may occur in the second wave (planned for 2014).</p> <p>- The legal basis for EHIS is regulation (EC) No 1338/2008 of the European Parliament and of the Council of 16 December 2008 on Community statistics on public health and health and safety at work. This is an umbrella regulation. Specific implementing acts will define the details of the statistics Member States have to deliver to Eurostat. An implementing act on EHIS is expected to come into force in 2014.</p>
<p><i>References</i></p>	<ol style="list-style-type: none"> 1. M. Ezzati, A. Lopez, et al. Comparative Quantification of Health Risks. Global and regional Burden of Disease Attributable to Selected Major Risk Factors. Vol. 1. 2. G. Danaei, E. L. Ding, et al. -The Preventable Causes of Death in the United States: Comparative Risk Assessment of Dietary, Lifestyle, and Metabolic Risk Factors. 3. WHO - Global Status Report on Alcohol 2004. 4. Rhem et al., -Alcohol and Global Health 1 - Global burden of disease and injury and economic cost attributable to alcohol use and alcohol-use disorders"; Lancet 2009; 373: 2223–33 5. -Alcohol consumption and alcohol-attributable burden of disease in Switzerland, 2002; Int. J Public Health 52 (2007) 383–392. 6. Alcohol accounts for high proportion of premature mortality in central and eastern Europe; International Journal of Epidemiology International Journal of Epidemiology 2007;36:458–467 7. -Determining alcohol-related mortality in Europe" Jürgen Rehm, Urszula Sulkowska; HEM-Closing the Gap-Reducing Premature Mortality. Report to steering committee on calculating alcohol attributable burden 8. -Estimating Chronic Diseases Deaths and hospitalizations due to alcohol use in Canada in 2002; Preventing Chronic Diseases –Public Health Research, Practice, and Policy vol 3 n.4 October 2006 9. -Alcohol-attributable fraction for England. Alcohol-attributable mortality and hospital admissions. http://www.cph.org.uk/showPublication.aspx?pubid=403 10. EHIS standard questionnaire 2007-2010 http://circa.europa.eu/Public/irc/dsis/health/library?l=/methodologiessandsdatasc/healthsinterviewsurvey/2007-2008_methodology&vm=detailed&sb=Title 11. -WHO-Global Information System on Alcohol and Health (GISAH) http://apps.who.int/globalatlas/default.asp 12. 2nd draft of the International guide for monitoring alcohol consumption and related harm (WHO, in press) 13. Rehm, J. and Scafato, E. (2011), Indicators of alcohol consumption and attributable harm for monitoring and surveillance in European Union countries. Addiction, 106: 4–10. doi: 10.1111/j.1360-0443.2010.03323.x 14. ODHIN project (Optimizing delivery of health care interventions): http://www.odhinproject.eu/
<p><i>Work to do</i></p>	<p>- Check with Eurostat WHO and OECD the preferable data sources</p> <p>- There have been some discussions within the ECHIM Core Group about which ICD-codes to use in the calculation of this indicator. The Italian ECHIM partners from the ISS in Rome recommend using the methodology described in this documentation sheet (version 14-05-2012). This documentation sheet/methodology still is to be approved by the ECHIM Core Group (or comparable body, if the ECHIM Core Group will not be maintained after the ending of the Joint Action for ECHIM)</p>

Annex 1. Relative Risks (RR) for Partially attributable chronic conditions and Alcohol-Attributable Fractions (AAFs) for Wholly attributable conditions and Partially attributable acute conditions

		M			
		RR Abstainers	RR [0.25-39.99 g/day]	RR [40-59.99 g/day]	RR [60+ g/day]
DISEASES PARTIALLY ATTRIBUTABLE TO ALCOHOL					
Maternal and perinatal conditions					
Spontaneous abortion	30+				
Low birth weight	30+	1	1,4	1,4	1,4
Malignant neoplasms					
Mouth malignant neoplasms of lip, oral cavity and pharynx	30+	1,00	1,45	1,85	5,39
Esophageal cancer	30+	1,00	1,80	2,38	4,36
Colon and rectal cancers	30+	1,00	1,00	1,16	1,41
Malignant neoplasm of larynx	30+	1,00	1,83	3,90	4,93
Liver cancer	30+	1,00	1,45	3,03	3,60
Other neoplasms	30+	1,00	1,10	1,30	1,70
Diabete mellitus	30+	1,00	1,00	0,57	0,73
Neuropsychiatric conditions					
Epilepsy	30+	1,00	1,23	7,52	6,83
Diseases of the Circulatory System					
Hypertensive heart disease	30+	1,00	1,40	2,00	4,10
	30-44	1,00	0,60	0,62	1,00
	45-59	1,00	0,63	0,65	1,00
Ischemic heart disease	60-69	1,00	0,82	0,83	1,00
	70-79	1,00	0,92	0,93	1,00
	80+	1,00	0,97	0,98	1,00
Cardiac arrhythmias	30+	1,00	1,51	2,23	2,23
Oesophageal varices	30+	1,00	1,26	9,54	9,54
Haemorrhagic stroke	30+	1,00	1,27	2,19	2,38
Ischemic Stroke	30+	1,00	0,94	1,33	1,65
Digestive diseases					
Cirrhosis of the liver	30+	1,00	1,30	9,50	13,00
Cholelithiasis	30+	1,00	0,82	0,68	0,50
Acute and chronic pancreatitis	30+	1,00	1,30	1,80	3,20
Skin diseases					
Psoriasis	30+	1,00	1,58	1,60	2,20

		F			
		RR Abstainers	RR [0.25-19.99 g/day]	RR [20-39.99 g/day]	RR [40+ g/day]
DISEASES PARTIALLY ATTRIBUTABLE TO ALCOHOL					
Maternal and perinatal conditions					
Spontaneous abortion	30+	1	1,2	1,76	1,76
Low birth weight	30+	1	1,4	1,4	1,4

Malignant neoplasms					
Mouth malignant neoplasms of lip, oral cavity and pharynx	30+	1,00	1,45	1,85	5,39
Esophageal cancer	30+	1,00	1,80	2,38	4,36
Colon and rectal cancers	30+	1,00	1,00	1,01	1,41
Malignant neoplasm of larynx	30+	1,00	1,83	3,90	4,93
Liver cancer	30+	1,00	1,45	3,03	3,60
Breast cancer	30-44	1,00	1,15	1,41	1,46
	45+	1,00	1,14	1,38	1,62
Other neoplasms	30+	1,00	1,10	1,30	1,70
Diabete mellitus	30+	1,00	0,92	0,87	1,13
Neuropsychiatric conditions					
Epilepsy	30+	1,00	1,34	7,22	7,52
Diseases of the Circulatory System					
Hypertensive heart disease	30+	1,00	1,40	2,00	2,00
	30-44	1,00	0,60	0,62	1,00
	45-59	1,00	0,63	0,65	1,00
Ischemic heart disease	60-69	1,00	0,82	0,83	1,00
	70-79	1,00	0,92	0,93	1,00
	80+	1,00	0,97	0,98	1,00
Cardiac arrhythmias	30+	1,00	1,51	2,23	2,23
Oesophageal varices	30+	1,00	1,26	9,54	9,54
Haemorrhagic stroke	30+	1,00	0,59	0,65	7,98
Ischemic Stroke	30+	1,00	0,52	0,64	1,06
Digestive diseases					
Cirrhosis of the liver	30+	1,00	1,30	9,50	13,00
Cholelithiasis	30+	1,00	0,82	0,68	0,50
Acute and chronic pancreatitis	30+	1,00	1,30	1,80	1,80
Skin diseases					
Psoriasis	30+	1,00	1,58	1,60	2,20

		15-29	30-44	AAFs 45-59	60-69	70+
FALLS, HOMICIDE AND SUICIDE, AND OTHER INJURY						
Unintentional Injuries						
Road traffic injuries- pedestrian (Motor Vehicle Traffic)	M	0,46	0,50	0,27	0,22	0,22
	F	0,18	0,25	0,21	0,15	0,15
Falls	M	0,30	0,30	0,30	0,24	0,17
	F	0,20	0,20	0,20	0,13	0,06
Accidental drowning and submersion	M	0,35	0,40	0,40	0,33	0,33
	F	0,33	0,39	0,39	0,32	0,32
Exposure to smoke, fire and flames	M	0,00	0,00	0,00	0,00	0,00
	F	0,00	0,00	0,00	0,00	0,00
Accidental poisonings by exposure to noxious substances	M	0,38	0,22	0,22	0,22	0,12
	F	0,31	0,21	0,21	0,21	0,10
Other unintentional Injuries	M	0,38	0,38	0,32	0,32	0,32

	F	0,31	0,31	0,26	0,26	0,26
Intentional Injuries						
Suicide and Self-inflicted Injuries	M	0,21	0,21	0,16	0,16	0,07
	F	0,14	0,14	0,12	0,12	0,07
Homicide	M	0,36	0,36	0,36	0,36	0,36
	F	0,36	0,36	0,36	0,36	0,36
Other Intentional injuries	M	0,27	0,27	0,27	0,27	0,14
	F	0,27	0,27	0,27	0,27	0,14

Annex 2. 46 diseases attributable to alcohol consumption, divided into the 3 type of conditions (orange colour) and the 8 disease categories (grey colour), according to ICD 9-10

Diseases	ICD 10	ICD 9
Diseases wholly attributable to alcohol - Wholly attributable conditions		
Alcohol use Disorders	F10	291, 303
Alcoholic Polyneuropathy	G62.1	357.5
Alcoholic Cardiomyopathy	I42.6	425.5
Alcoholic Gastritis	K29.2	535.3
Alcoholic liver disease	K70	5710-5713
Excessive blood level of alcohol (Finding of alcohol in blood)	R78.0	790.3
Toxic Effect Of Alcohol-Ethanol	T51.0	980.0
Toxic Effect Of Alcohol-Methanol	T51.1	980.1
Toxic Effect Of Alcohol-Alcohol, unspecified	T51.9	980.9
Degeneration of nervous system due to alcohol	G31.2	331.7
Alcohol induced chronic pancreatitis	K86.0	577.1
Fetal alcohol syndrome	Q86.0	760.71
Intentional self poisoning by, and exposure to alcohol	X65	E860
Alcoholic myopathy	G72.1	359.4
Alcohol-induced pseudo-Cushing's syndrome	E24.4	255.0
Fetus and newborn affected by maternal use of alcohol	P04.3, O35.4	760.71
Diseases partially attributable to alcohol - Partially attributable chronic conditions		
Maternal and perinatal conditions		
Spontaneous abortion	O03	634
Low birth weight	P05-P07	656.5, 760, 765
Malignant neoplasms		
Mouth Malignant neoplasms of lip, oral cavity and pharynx	C00-C14	141, 143-146, 148, 149
Esophageal cancer	C15	150
Colon and rectal cancers	C18-C21	153-154
Malignant neoplasm of larynx	C32	161
Liver cancer	C22	155
Breast cancer	C50	174
Other neoplasms	D00-D48	210-239
Diabete mellitus	E10-E14	250
Neuropsychiatric conditions		
Epilepsy	G40-G41	345
Diseases of the Circulatory System		
Hypertensive heart disease	I10-I15	401-405
Ischemic heart disease	I20-I25	410-414
Cardiac arrhythmias	I47-I49	427
Oesophageal varices	I85	456.0-456.2
Haemorrhagic stroke	I60-I62	430-432
Ischemic Stroke	I63	433-437
Digestive diseases		
Cirrhosis of the liver	K74	5715-5719
Cholelithiasis	K80	574
Acute and chronic pancreatitis	K85, K86.1	577.0-577.1
Skin diseases		
Psoriasis	L40 excl. L40.5	696.0-696.2
Falls, homicide and suicide, and other injury - Partially attributable acute conditions		
Unintentional Injuries		
Road traffic injuries- pedestrian (Motor Vehicle Traffic)	V01-V04, V06, V09-V80, V87, V89, V99	E810-E819
Falls	W00-W19	E880-E888, E848
Accidental drowning and submersion	W65-W74	E910
Exposure to smoke, fire and flames	X00-X09	E890-E899
Accidental poisonings by exposure to noxious substances	X40-X49	E850-E858, E861-869
Other unintentional Injuries	V05, V07, V08, V81-V86, V88, V90-V98, W20-W64, W75-W99, X10-X39, X50-X59, Y40-Y86, Y88, Y89	E800-E849, E870-E879, E900-E909, E911-E929
Intentional Injuries		
Suicide and Self-inflicted Injuries	X60-X84, Y87.0	E950-E959
Homicide Assault	X85-Y09, Y87.1	E960-E969
Other Intentional injuries	Y35	E970-E978