WORLD HEALTH ORGANIZATION
EUROPE

European strategy for child and adolescent health and development

Information tool

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Working document

Acknowledgement
This tool was developed by the WHO Regional Office for Europe in a consultative process. Professor Michael Rigby, Professor of Health Information Strategy in the Centre for Health Planning and Management, Keele University, United Kingdom was main author.

Introduction and Rationale

Any health policy, not least a Child and Adolescent Health Strategy, needs to be evidence-based. This requires the bringing together of two types of analytic information:

- Internal, or descriptive, information on the local situation, and
- External, or reference, information as to achievable goals.

This tool is designed for two purposes, which complement one another in the task of moving towards rational and evidence-based policy, service delivery, and monitoring in Child and Adolescent Health.

Information system review

Information is an expensive resource. Focused systems are necessary to gather the right data and turn them into relevant and timely information. The traditional collection of routine statistics needs regular review in order to ensure relevance to modern needs, including policy development; needs analysis; service targeting, delivery and monitoring; and outcome analysis. Modern technology, as appropriate for a country's level of development, can do much to capture relevant data from routine business processes. This use of the this tool will enable information staff and policy makers to review the adequacy of their current information systems, and to make any appropriate recommendations for change

Policy and service development

Only by knowing the successes, problems, resource deployment and unmet needs of their population can politicians and policy makers develop the right route forward to promote the health of their child and adolescent populations. As indicated in the strategy document, this must be a proactive and anticipatory process, addressing challenges to health before they cause damage and death. Thus the necessary information systems must monitor health and its upstream determinants and challenges, rather as an aircraft's cockpit instrument array ascertains the appropriate route, and monitors the functioning of the technology, to ensure a safe journey not the recording of an adverse event (though that is covered to as an adjunct). Policy makers should therefore use this tool to assess how much they know about their young generation's health in the widest sense, and its determinants, so to initiate appropriate action. This tool should both categorise what is known, and catalogue what should be but is not known.

This tool is closely linked to the Child and Adolescent Health Strategy, and to its partner tools in the WHO Child and Adolescent Health Toolkit. It is structured to support the life course approach promoted in the strategy, and also to address the generic priorities within it.

This document seeks to assist countries in the process of assembling and analysing the information needed to produce an objective and evidence-based strategy, based on

identified need and relative priority, and reviewing strengths and weaknesses of current data and information processes.

It comprises six sections:

1. An equitable population-based approach
2. Indicators of specific health determinants along the life course
3. Child health data from other sectors
4. Health systems availability, access, and quality
5. Health information adequacy
6. Child health policy priorities and influences

COUNTRY: ……

1. An equitable population-based approach

Matrix 1.1: Resident Child and Adolescent Population

Is good information available about the demographics of the child and adolescent population of the country?

Age-Groups (and sub-groups)	**National Totals available?**	**Latest available Year**	**Accuracy** (Estimated % accuracy)	**Sex breakdown available?**	**Regional breakdown available?**	**Comments** (Particularly coverage, regularity and accuracy of sources)
0-7 days inclusive	**yes**	2012	100	**yes**	**Yes**	Beginning in 2012, when Russia has completely passed to registration of live births according to WHO criteria
8-28 days inclusive	**yes**	2012	100	**yes**	**yes**	
29 days -12 months inclusive	**yes**	2012	100	**yes**	**yes**	
Sub-total under 1 year	**yes**	2012	100	**yes**	**yes**	
1-4 years inclusive	**yes**	2012	100	**yes**	**yes**	
Total 0- 4 years	**yes**	2012	100	**yes**	**yes**	
5-9 years inclusive	**yes**	2012	100	**yes**	**yes**	
10-14 years inclusive	**yes**	2012	100	**yes**	**yes**	
15-19 years inclusive	**yes**	2012	100	**yes**	**yes**	
of which 15-17 years	**yes**	2012	100	**yes**	**yes**	
Total 0-17 years	**yes**	2012	100	**yes**	**yes**	
Total 0-19 years	**yes**	2012	100	**yes**	**yes**	

Matrix 1.2: Equity for special population groups

Is the information defined in Matrix 1.1 available for special population groups?

Special Group	National totals available by age-group?	Latest available Year	Accuracy (Estimated % accuracy)	Percentage of Child Population	Sex breakdown available?	Regional breakdown available?	Comments
Asylum seeking							We do not have this data
Immigrant within last 5 Years	yes	2013	90		yes	yes*	*in total for men and women
Illegal immigrant	no						
Refugee	yes	2014	100	0.005%	yes	yes	0-5 and 6-15 yeas old
Homeless (refugee and indigenous)	yes				yes	yes	Who was in medical institutions only
Culturally itinerant lifestyle (e.g. Roma)							We do not have this data
Orphaned	yes	2012	100	1.2%	no	yes	
Children resident in institutions *	yes	2012	100	0.006%	no	no	
Children in care **	yes	2012	99	0.67%	no	no	Who is registered in Interior Ministry
Other groups determined nationally? ***							

* Includes residential children's homes, orphanages, hospital as permanent residence, prisons and other penal institutions
** Children under the supervision of statutory authorities, including children with foster parents, and with natural parents but under statutory supervision.
*** If there are any other groups counted locally (other than ethnic and socio-economic groups as per Matrix 1.3 below); if so, please give description.

Matrix 1.3: Social and ethnic groups

Is the information defined in Matrix 1.1 available by population group breakdown?

Breakdown	**National totals available by age-group?**	**Latest available year**	**Accuracy** (Estimated % accuracy)	**Percentage of child population**	**Sex breakdown available?**	**Regional breakdown available?**	**Comments**
Socio-economic group	yes	2010	95	100	yes	yes	data of population census
Ethnic Group	yes	2010	95	100	yes	yes	data of population census

Matrix 1.4 Absolute and relative poverty

Elimination of poverty is a Millennium Development Goal, as well as an important health policy issue. Is adequate information available to prioritise and target this key issue of Absolute and Relative poverty, by the age-groups of Matrix 1.1?

Breakdown	**National totals available by age-group?**	**Latest available year**	**Accuracy** (Estimated % accuracy)	**Percentage of child population**	**Sex breakdown available?**	**Regional breakdown available?**	**Breakdown by other population groups available?**	**Comments**
Absolute poverty *	no							
Relative poverty **	yes	2012	99	17.9***	no	yes	no	**below the subsistence level ***restating through percentages

* Living on under US $ 2 per day (definition used by WHO Regional Office for Europe in 2001 – see www.euro.who.int/mediacentre/PressBackgrounders/2001/20011002_4).

** Household income below 50% of the national median (UNICEF definition, 2005).

2. Indicators of specific health determinants along the life course

Matrix 2.1 The first year of life

Health Topic	National data available?	If not, what is principal impediment to compilation	Sex breakdown available?	Regional breakdown available?	Population group breakdowns available?	Comments
Rates of mother-child HIV transmission	yes		no	yes	no	
% of mothers who smoked during the pregnancy	no					
in infant's first year of life	no					
% children exclusively breastfed at hospital discharge or immediately after birth (home births)	no					
% children exclusively breastfed at 6 months	yes		no	yes	no	
% children receiving breastfeeding at 12 months	yes		no	yes	no	

Matrix 2.2 Early childhood (prior to school entry)

Health Topic	National data available?	If not, what is principal impediment to compilation	Sex breakdown available?	Regional breakdown available?	Population group breakdowns available?	Comments
% of Children 0-4 years inclusive exposed to household environmental tobacco smoke	no					
Childhood immunisation rates – measles (MCV1)	yes		no	yes	no	
Childhood immunisation rates – tetanus	yes		no	yes	no	
Children overweight at school entry	no					

Matrix 2.3 Late childhood

Health Topic	National data available?	If not, what is principal impediment to compilation	Sex breakdown available	Regional breakdown	Population group breakd	Comments
Dental morbidity – dmft* index for 5 year old children	no	It is not included in the statistical reporting form				
Dental morbidity – dmft* index for 10 year old children	no					
Early school leavers % leaving (voluntarily or by exclusion) during compulsory school age.	no					

***** Standard definition of decayed, missing, filled (deciduous) teeth

Matrix 2.4 Adolescence

Health Topic	National data available?	If not, what is principal impediment to compilation	Sex breakdown available?	Regional breakdown available?	Population group breakdowns available?	Comments
Alcohol abuse – % of 15 year old children reporting having been drunk from alcohol on 2 occasions	no	Questions with this formulation are absent in national research programs				irregular regional data only
Substance misuse - % of 15 year old children reporting regular use of cannabis, or ever using heroin or ecstasy	no					

Matrix 2.5 Throughout the childhood life course

Some health outcomes occur at all childhood ages. Are indicators compiled so as to be able to identify key issues?

Health Topic	National data available?	If not, what is principal impediment to compilation	Sex breakdown available?	Regional breakdown available?	Population group breakdowns available?	Comments
Cancer incidence	yes		yes	yes	no	0-4; 5-9; 10-14 and 15-19 years old
Diabetes incidence	yes		no	yes	no	</= 14 and 15-17 years old
Asthma prevalence	no	No register of patients				There are data on incidence for <= 14 and 15-17 years old
Measles incidence	yes		no	yes	no	</= 14 and 15-17 years old
Burns	yes		no	yes	no	</= 14
Poisoning	yes		no	yes	no	</= 14
Fractures of the longbone	yes		no	yes	no	</= 14
Suicide	no*					*Only mortality
Attempted suicide	no					

Matrix 2.6 Special child and adolescent health issues

For a number of key child health issues, measurement methods have not yet been standardised sufficiently to support the definition of an international indicator, yet local measurement of need is fundamentally important. Does your country have sound means of measuring to following topics?

Health Topic	National data collection and need assessment	If not Good, what is principal impediment to compilation	Sex breakdown available?	Regional breakdown available?	Population group breakdowns available?	Comments
Intentional injury / abuse of children	supportable	not full trust of children to social assistance institutes	no	yes	provide social services for families and children	the number of crimes against children only
Handicap and disability	good		yes	yes	no	
Incidence of learning disorders /intellectual disability	good		yes*	yes	no	* mild mental retardation (F70 in ICD-10)
Health-related educational needs	good		no	yes	no	*number of children with disabilities according to Ministry of Education
Childhood behaviour disorders	good		no	yes	no	
Child mental health	good		no	yes	no	
Pregnancy of girls under 16 years	good*		yes	yes	no	up to 14 years old
Unplanned pregnancy of girls aged 16 – 17	supportable	misreporting data from commercial hospitals	-	no	no	15-17 years old

Matrix 2.7 Mortality

Whilst tackling adverse determinants of health should be the strategic priority, child mortality is an important measure of key issues, and of progress made.

Mortality measure	National data available?	If not, what is principal impediment to compilation	Sex breakdown available?	Regional breakdown available?	Population group breakdowns available?	Comments
Perinatal mortality rate	yes		yes	yes	no	
Neonatal mortality rate	yes		yes	yes	no	
Infant mortality rate (under 1 year)	yes		yes	yes	no	
Under 5 mortality rate (0-4 inclusive)	yes		yes	yes	no	
Total under 20 mortality rate	yes		yes	yes	no	
Mortality rates for infectious diseases	yes		yes	yes	no	
Mortality rates for congenital malformations	yes		yes	yes	no	
Mortality rates for malignant neoplasms (cancers)	yes		yes	yes	no	
Mortality rates for burns	yes		yes	yes	no	

Mortality rates for poisoning	yes		yes	yes	no	
Mortality rates for transport accidents	yes		yes	yes	no	
Mortality rates for drowning	yes		yes	yes	no	
Mortality rates for suicide	yes		yes	yes	no	
Mortality rates for assault and homicide	yes		yes	yes	no	

3. Child health data from other sectors

The health sector, and ministry of health, has responsibility for health issues, but several other sectors and ministries have an important inter-relationship with child health, and the needs of children for health-related services. In the process of compiling the Child and Adolescent Health Strategy, and more generally in the planning of health support to children, the adequacy of information from other sectors is crucial.

Matrix 3.1 Data from other sectors

Ministry / Sector	Health Issues(s)	Shared Data Availability	Sex breakdown available?	Regional breakdown available?	Population Group breakdowns Available?	Comments
Immigration	Health of child immigrants	unsatisfactory	no	no	no	
Planning	Anticipated major relocations of population	unsatisfactory	no	no	no	
	Overall changes to demography	good	yes	yes	no	
	Likely changes to workforce availability	good	yes	yes	no	

Housing	Housing lacking adequate water supply and/or sanitation	good	no	yes	no	
	Housing not meeting national standards against damp or overcrowded dwellings	supportable	no	yes	no	
	Areas of housing shortage / overcrowding	supportable	no	yes	no	
Fire Department Data	Distribution of house fires	supportable	no	yes	no	
Environmental Health	Inadequate / polluted drinking water supplies	supportable	no	yes	no	Data refer to centralized water supply sources only
	Environmental pollution	supportable	no	yes	no	
	Noise pollution	unsatisfactory	no	no	no	There are data regarding the level of noise in workplaces only
Education	Significant School absences for health reasons	unsatisfactory	no	no	no	
	Health issues of concern to schools	good	no	yes	no	

	Children with special needs	supportable	no	no	no	
	Provision of vocational education services for children (within and outside school)	supportable	no	no	no	
	Provision and uptake of Youth services, such as sexual health counselling	unsatisfactory	no	no	no	
	Proportion of schools categorised as health promoting schools	supportable	no	yes	no	
Social Welfare	Children under formal care or protection	supportable	no	no	no	
	Children in residential institutions	supportable	no	no	no	
Social/ Financial Welfare	Provision and uptake of diet and nutrition support, eg. food supplements, coupons or financial support'	good	no	yes	no	
	Tax benefits or allowances for children	supportable	no	yes	no	

Pre-School Play/ Education	Distribution of approved provision	supportable	no	no	no	
	Assisted attendance for children with special needs	supportable	no	no	no	
Criminal Justice / Law Enforcement	Child abuse	supportable	yes	no	no	who applied to institutions that provide social services for families and children
	Other child victims of Crime	supportable	no	yes	no	
	Child offenders	supportable	no	no	no	
	Children in penal institutions	supportable	no	no	no	
	Road traffic accident data by location and cause	good	no	yes	no	
Finance	Planning framework for future service planning	unsatisfactory				

4. Health systems availability, access and quality

Whilst the health of children is the main focus of the Child and Adolescent Health strategy, health needs are addressed in large part by health services and systems. These need to be set in the context of a country's approach to public service provision, the economy, and other factors. Nevertheless, some information issues are important in assessing problems, or their absence, within the health system itself.

Matrix 4.1 Health systems

Topic	Adequacy of Information	Regional breakdown available?	Population group breakdowns available?	Comments
% of Children with access / eligibility for primary health care*	good	yes	no	
% of children with access / eligibility for secondary health care*	good	yes	no	
% of baby friendly hospitals	unsatisfactory	no	no	
% of primary care staff with child health training	good	yes	no	
% of hospital paediatric department staff with paediatric training	good	yes	no	
% posts unfilled in primary care	good	yes	no	
% posts unfilled in secondary paediatric care	good	yes	no	

3 year trends in human resources in health	good	yes	no	
Health workforce planning	supportable	yes	no	
% hospitals allowing parental overnight accompaniment for children admitted	unsatisfactory			
Leukaemia 5 year survival rate	good	yes	no	

* E.g. eligible for public health service, covered by statutory or other insurance provision, etc..

5. Health information adequacy

Good health information at the population level is essential for service management and development, and for the development of policies and strategies. This section invites review of current strengths and weaknesses, and action in hand.

Matrix 5.1 Health Information

Information Topic	Adequacy of Information	Action in Hand / Planned regarding information flows
Baseline resident population	good	the number of sociological studies is growing
Child health data from primary care	good	the number of medical examinations is growing
Child health data from secondary care	good	
Inter-sectoral statistical data sharing	unsatisfactory	the question is discussed on all levels
Health surveys regarding children – regular provision	supportable	the number of medical examinations is growing
Longitudinal studies of birth cohorts	unsatisfactory	the question is discussed
Disease registers	supportable	they are for some diseases only
Compilation of comparative indicators*		*the question is not clear
Treatment outcomes compilation	supportable	for some diseases only
Reference evidence knowledge bases	good for demography, population health and wellbeing /supportable for rest	the question is discussed
Reference policy guidelines	unsatisfactory	WHO guidelines are used but they are not adapted to Russian reality

6. Child health policy priorities and influences

Health policies and service plans for children and child health need to be based on an amalgam of scientific information, needs assessment data, and public policy contextual information. Please give a broad indication of the relative weight of different information available to enable policy makers to determine the priorities for the country's child health strategy and policies.

Matrix 6.1 Relative priorities of need to improve internal equity

Priorities identified by analysis of within-country data.

What are the topics with greatest spread within country by geographic location?

Topic*	Location with greatest needs	Range from mean	Comment
1. Blood diseases (anemia)	Republic of Chechnya	4.2	*The conclusion is made on the basis of the incidence of children under the age of 15
2. Digestive diseases	Sakhalin	2.4	
3. Mental disorders	Altai region	2.4	
4. Diseases of musculoskeletal system	Ingushetia	2.0	

What are the topics with greatest spread by sex?

Topic*	Disadvantaged sex	Range from mean	Comment
1. Injury and poisoning	boys	by 12.3%	*The conclusion is made on the basis of mortality of children under the age of 15
2. Symptoms, signs and abnormal	boys	by 16.7%	
3. Blood diseases	boys	by 15.6%	
4. Diseases of the circulatory system	boys	by 12.7%	

What are the topics with greatest spread by ethnic group?

Topic	Ethnic group	Range from mean	Comment
1.			* no data
2.			
3.			
4.			

What are the topics with greatest spread by special population group?

Topic	Special group*	Range from mean	Comment
1. Diseases of the genitourinary system	rural children	by 50.0%	* in the context of urban - rural population
2. Respiratory diseases	rural children	by 50.0%	
3. Injury and poisoning	rural children	by 41.3%	
4. Infectious diseases	rural children	by 30.8%	

Matrix 6.2 Relative national priorities identified by benchmarking

International comparisons, or benchmarking, can show strengths, and weaknesses demanding priority action. Benchmarking sources for child and adolescent health can include the WHO Europe Health For All database, WHO Headquarters Reports, UNICEF world indicators, Health Behaviour of School Aged Children (HBSC) reports, European Home and Leisure Accident Surveillance System (EHLASS), UNICEF Innocenti Report Cards, Millennium Development Goal monitoring, specialist agencies' reports, and (intended from December 2005) the WHO Europe CHILD health indicators database for 2000. The comparators can be selected by geographic proximity, Human Development Group (HDI) similarity, health system similarity, or other rational basis.

What are the topics with greatest spread variance from comparative countries?

Topic	Source of benchmark	Compara-tor basis*	Range from peers	Com-ment
1. The highest mortality of adolescents in Russia	European Detailed Mortality Database		On average, for former Soviet republics mortality is 24.7 on 100000 population in age group 10-14 and 51.5 in age group 15-19 among boys versus 35.8 and 110.8 in Russia; 20.3 and 30.1 vs. 23.6 and 50.2 among girls correspondingly.	* content is not clear
2. The growth of chronic diseases among teenagers	Report on the health of children in the Russian Federation (on the basis of clinical examination of the All-Russia 2002) / MoH. http://www.kislitsyna.ru/data/files/CH1Childrens%20health.pdf		The first place in Europe for digestive diseases and cancer mortality among adolescent. About 70% of adolescents suffer from chronic pathologies in Russia.	
3. High incidence of children at birth	as above		The proportion of healthy children at birth is only 33%	
4. Mental health of adolescent	as above		The first place in the world for patients with mental diseases	
5. Increase in alcoholism, drug addiction, toxic depending teenagers	Site of "The union of pediatricians of Russia", http://www.pediatr-russia.ru/node/136		The first place in the world for children's alcoholism	
6. A large number of orphaned children	Russia ranked the first in the world in terms of population decline and homicides. Statistics by Google. site NEWS.BCM http://news.bcm.ru/society/2012/2/22/369196/1		The first place in the world for orphaned children	
7. Weak system of social rehabilitation of disabled	Review: Rights of Persons with Disabilities. And as abroad? site МИОПАТИЯ.BY http://mioby.ru/novosti/obzor-prava-invalidov-a-kak-za-granicej/			
8. A large number of smoking children and adolescents	Russia's population. Statistics, facts, comments and forecasts. http://www.rf-agency.ru/acn/stat_ru		The first place in the world for smoking children and adolescents	

Matrix 6.3 Child health policy determinants

Health policies and service plans for children and child health need to be based on an amalgam of scientific information, needs assessment data, and public policy contextual information. Please give a broad indication of the relative weight of different information available to enable policy makers to determine the priorities for the country's child health strategy and policies:

Determinant	**Weight**
Assessed Need from Empirical Data	25
Scientific Reference Knowledge	3
Expert Views of Health Sector Officials	6
Non-health Public Officials	20
Health Insurance Bodies	10
Politicians	20
Religious and Ethnic Leaders	0
Public, Consumer and Health Interest Groups	3
Children and Adolescents' Consultative Groups	0
Aid and Technical Assistance Donors	3
Others (specify) WHO recommendations; examples from other	10
TOTAL	**100%**

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