DESIGN FOR A SET OF EUROPEAN COMMUNITY HEALTH INDICATORS

DRAFT REPORT BY THE ECHI PROJECT

RIVM, Draft of November 20, 2000
DESIGN FOR A SET OF COMMUNITY HEALTH INDICATORS
DESIGN FOR A SET OF EUROPEAN COMMUNITY HEALTH INDICATORS

Main sections of the report:

- **PREFACE**
  4

- **EXECUTIVE SUMMARY**
  5

- **PART I:**
  HEALTH INDICATORS FOR THE EUROPEAN COMMUNITY
  ABRIDGED VERSION
  7-19

- **PART II:**
  HEALTH INDICATORS FOR THE EUROPEAN COMMUNITY
  EXTENDED VERSION
  21-47
  WITH ANNOTATED INDICATOR LIST
  1-28

- **PART III:**
  ANNEXES
  1-23
PREFACE

To the draft version of November 20, 2000

This report has been arranged in several sections, for different readership. First, the Executive Summary gives a concise view on the project and its results. Those who want to spend some more time can read the Abridged Version (Part I). This part will be printed on different color paper. Finally, the Extended Version (Part II), together with the Annexes, provide the full details of the proposed indicator list and all the considerations involved in its design.

This draft version has been adapted after the fifth and last meeting of the ECHI project group, October 19-20 in Athens. It is being distributed among several interested circles within the Commission, a.o. the Committee of the Health Monitoring Programme and the HMP project coordinators, as well as within Member States and other international organisations. Based on comments in this circulation round the final report will be drafted for February 1, 2001.
This report presents a proposal for a set of European Community Health Indicators (ECHI). It is produced by a project financed by the Commission under the Health Monitoring Programme. In this project, experts participated from all EU Member States, Norway and Hungary, and from international organisations, i.e. WHO Europe and OECD. The Commission was represented by experts from DG Sanco and Eurostat.

By proposing a comprehensive list of health indicators, the report focuses on the core of the European Commission’s Health Monitoring Programme: ‘to contribute to the establishment of a Community health monitoring system’, in order to:
1. Measure health status, its determinants and the trends therein throughout the Community;
2. Facilitate the planning, monitoring and evaluation of Community Programmes and actions, and
3. Provide Member States with appropriate health information to make comparisons and support their national health policies.

In the design of the indicator set, a set of explicit criteria was used. These included:
- Be comprehensive and coherent, i.e. cover all domains of the public health field;
- Take account of earlier work, especially that by WHO-Europe, OECD and Eurostat;
- Cover the priority areas which Member State’s and Community Health Policies currently pursue.

Flexibility is an important characteristic of the present proposal. This implies that the interest in specific indicators may change with changing policy interests and scientific developments, but also that modern database technology allows a flexible entry to a system of indicators and data according to one’s personal interest. In our project, this flexibility was emphasised by the definition of indicator ‘user windows’. These are subsets from the overall indicator list, each of which should reflect a specific user’s requirement or interest. Moreover, this approach can be used to underpin current priorities of the European Community, or to prioritise efforts in improving data collection and harmonisation, and thus to formulate a set of ‘core indicators’.

The proposed indicators are, in most cases, defined as generic indicators, i.e., their actual operational definitions have not yet been attempted. This work has to be carried out in a follow-up process, e.g. involving other projects financed under the HMP which cover specific areas of public health or areas of data collection. In fact we have been able to refer to some of the early results of these HMP projects. Also, apart from indicators covered by regularly available data, we have proposed indicators (or areas) for which data are currently difficult to collect but which from policy point of view would be needed. Actually, all this points to the fact that establishing an indicator list which is actually used by Member States is a constantly developing enterprise.

In fact, this situation asks for the continued interest and commitment of the Member States, as well as the maintenance of an expert facility linked to the Commission, which can co-ordinate and guide this developmental process. As the Health Monitoring Programme is limited in time and resources, the ECHI project group hopes that its results, as presented in this report, will help to shape the future Community activities regarding information in the field of public health. The intentions laid down in the newly proposed Programme of Community Action in the Field of Public Health are promising in this respect.
PART I

HEALTH INDICATORS FOR THE EUROPEAN COMMUNITY

Abridged version

I-1. Why European Community Health Indicators?
I-2. The ECHI project
I-3. Which health indicators?
I-4. Applying the criteria
I-5. A flexible approach to indicators: user-windows
I-6. Future use and maintenance of EC health indicators
I-7. The proposed list of EC health indicators
I-8. Examples of user-windows
I-1. Why EC health indicators?

_The European Commission’s Health Monitoring Programme_

The European Commission’s Health Monitoring Programme (hereafter called HMP) was established in 1997 to take forward the enhanced public health responsibilities of the EU in the public health field. It has as its objective ‘to contribute to the establishment of a Community health monitoring system’, in order to:

1. Measure health status, its determinants and the trends therein throughout the Community;
2. Facilitate the planning, monitoring and evaluation of Community Programmes and actions; and
3. Provide Member States with appropriate health information to make comparisons and support their national health policies.

The activities under the HMP have been set out under three headings, or ‘Pillars’:
- Pillar A: Establishment of Community health indicators;
- Pillar B: Development of a Community-wide network for sharing health data;
- Pillar C: Analyses and reporting.

Under these pillars, projects are funded in specific areas to realise HMP’s goals (Annex 6).

I-2. The ECHI project

_European Community Health Indicators_

This report presents the results of a project under the HMP called ‘Integrated approach to establishing European Community Health Indicators’ (ECHI). As indicated by the title, the ECHI project was designed to address the core business of Pillar A. Its objective was formulated as:

‘To propose a coherent set of European Community Health Indicators, meant to serve the three purposes formulated for the HMP, selected on the basis of explicit criteria, and supported by all Member States’.

The ECHI project group consisted of representatives from all MS, various international organisations and the Commission (Annex 1). It has defined the scope of the project as follows:
- First, to define the areas of data and indicators to be included in the system, following a set of explicit criteria;
- Next, to define generic indicators in these areas, again following these criteria;
- As a novel element, to imply a high degree of flexibility in the indicator set, by defining subsets of indicators, or ‘user-windows’, tuned to specific user groups; examples are strategic planners, people involved in local health promotion actions, etc.

As to the use of the indicator list, the following was envisaged:
To provide a guiding structure for the production of public health reports at (inter)-
national or regional levels;
To provide the contents structure for the development of the EUPHIN-HIEMS
(Health Information and Exchange between Member States) electronic data
exchange system being developed under the HMP, Pillar B;
To identify data gaps and thereby help to indicate priorities for data collection and
harmonisation, also for other projects under the HMP;
To consider the best follow-up and use of the indicator list. Building an indicator
list is a continuous effort. This could be taken up by the Commission’s new Public
Health Action Programme.

I-3. Which health indicators?
Prerequisites, criteria, backgrounds

Three general objectives of a European health indicator set have been defined by
the HMP, i.e., monitor trends throughout the EU, evaluate EU policies, and enable
international comparisons.

This calls for the explicit definition of a set of criteria. It implies that proper scientific
and methodological standards and experiences are taken into account. Thus, the
indicator set should:

- Be comprehensive, i.e. the multi-purpose nature of the monitoring objectives
  require the coverage of all domains which are normally included in the public
  health field; in addition, the indicator set should be coherent, in the sense of
caseconsistency within and between the different domains of
indicators.
- Take account of earlier work in the area of indicator selection and definition,
especially that by WHO-Europe, OECD and Eurostat (avoiding duplication of
efforts, promoting cooperation between international organisations);
- Cover the areas in the Public Health field, including the focal points of interest,
which Member States want to pursue (MS policy priorities); in addition, it should
meet the needs of Community Policies (Community policy priorities);

In terms of the actual selection of indicators at the detailed level, the following
prerequisites are formulated in addition:

- The actual selection and definition of indicators within a specific public health
  area should be guided by scientific and quantitative principles.
- Indicators (and underlying data) should meet a number of methodological and
  quality criteria concerning e.g. validity, sensitivity, timeliness, etc. (quality, validity,
sensitivity and comparability);
- The likeliness of changing policy interests call for a high degree of flexibility,
  made possible by current electronic database systems.
- Selection of indicators should be based, to start with, on existing and comparable
data sets for which regular monitoring is feasible, but the end result should also
point at data needs or development areas, which again requires flexibility of the
system.
I-4. Applying the criteria

*Comprehensiveness and conceptual consistency*

Health is a broad issue and the eventual health indicator set should constitute a balanced collection, covering all major areas within the field of public health. Based on the HMP’s Annex 2 and many other sources and considerations, the main categories of indicators were proposed as in the box below:

<table>
<thead>
<tr>
<th>Main categories for the ECHI health indicator set</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>1 Demographic and socio-economic factors</strong></td>
</tr>
<tr>
<td>1.1 Population</td>
</tr>
<tr>
<td>1.2 Socio-economic factors</td>
</tr>
<tr>
<td><strong>2 Health status</strong></td>
</tr>
<tr>
<td>2.1 Mortality</td>
</tr>
<tr>
<td>2.2 Morbidity, disease-specific</td>
</tr>
<tr>
<td>2.3 Generic health status</td>
</tr>
<tr>
<td>2.4 Composite health status measures</td>
</tr>
<tr>
<td><strong>3 Determinants of health</strong></td>
</tr>
<tr>
<td>3.1 Personal and biological factors</td>
</tr>
<tr>
<td>3.2 Health behaviours</td>
</tr>
<tr>
<td>3.3 Living and working conditions</td>
</tr>
<tr>
<td><strong>4 Health systems</strong></td>
</tr>
<tr>
<td>4.1 Prevention, health protection and health promotion</td>
</tr>
<tr>
<td>4.2 Health care resources</td>
</tr>
<tr>
<td>4.3 Health care utilisation</td>
</tr>
<tr>
<td>4.4 Health expenditures and financing</td>
</tr>
<tr>
<td>4.5 Health care quality/performance</td>
</tr>
</tbody>
</table>

*Taking account of earlier work*

As a precursor of the HMP, a study was carried out by the 'Working Party on Community Health Data and Indicators', chaired by the Danish Ministry of Health. In this study, an inventory was made of data available at WHO-Europe, Eurostat and OECD. In addition, the current updating of WHO’s HFA 21 indicators, the 1999 version of OECD health indicators and the developments in Eurostat’s data collection have been closely taken into account.

*Coverage of Member States and Community focus of interests*

*Member States’ health policy priorities*

Increasingly, EU Member States, or regions within MS, have formulated priority areas or targets for their health policies. From these sources, a short list of items appears to occur very frequently:

- Increase the number of healthy years lived, by tackling the main causes of death, ill-health and functional limitations (including physical and mental health aspects);
- Reduce health inequalities, by means of health policies but also by social policies
• Improve effective health promotion and disease prevention especially aiming at lifestyle and on young people;
• Improve the quality and accessibility of care, including community care;
• Improve the quality of life and participation of the elderly.

Meeting the needs of Community Policies
In the first EU ‘Framework for action in the field of Public Health’ (1993), eight action programmes were proposed (AIDS and other communicable diseases, cancer, drug dependence, pollution-related diseases, injuries, rare diseases, the Health Promotion Programme and the Health Monitoring Programme). Recently, a new Programme of Community Action in the Field of Public Health has been proposed. Basically, three ‘strands’ of action have been addressed:
• Improving health information and knowledge;
• Responding rapidly to health threats;
• Addressing health determinants.

Another source is the publication ‘Priorities for public health action in the European Union’, which states the following Community priorities: Social gradients, alcohol, illicit drugs, tobacco, health surveillance, quality of health care, mental health, environment and food/nutrition.

Scientific principles and quality aspects
In working out the indicator selection, quantitative principles such as the size of a health problem, its total costs, or the degree of preventability of the problem have served as criteria. This particularly applies to the selection of cause-specific mortality, of disease-specific morbidity, and to the selection of indicators in the area of health determinants.

It is evident that in the actual operational definitions of the indicators, we should meet certain quality criteria. In the Danish Ministry of Health Study, nine such criteria were formulated. In short, an indicator should measure what we think it measures (validity), be sensitive to changes over time or by place, be comparable between countries or regions, to mention only three of the most important aspects.

Flexibility and the continuous improvement of indicators and data collection
Basically, flexibility means that a system of data and indicators should never be fixed, and is never final. Policy interests change, scientific views develop, with associated shifts in data collection activities.

Many indicators currently in use reflect the availability of more or less comparable data sources. In some areas, however, data are not readily available in many Member States, while the need for fully comparable information is strongly felt. These areas deserve extra efforts in R&D. They include, a.o.:
• Disease-specific morbidity at population level.
• Integrated measurement of generic health status (functional limitations, health-related quality of life, also composite health measures).
• Determinants of mental health, social determinants of health.

Applying the above criteria has resulted in a quite extensive indicator list. Yet, it is limited for each of the areas covered. It is anticipated that the system will be used by many different users, for many different purposes. This may require specific subsets of the total array of indicators. These subsets are therefore named ‘user-windows’. Technically, a modern database systems (like HIEMS) should allow this sort of use. Such specific user perspectives could be: (i) specific areas of health policy interest; (ii) specific thematic entries such as age groups, (iii) specific disease groups with their determinants and costs, etc. Examples are:

- **Cockpit information;** to have a quick view on the major trends in public health, including recent relevant signals, for medium or long-term policy strategies;
- **EU priority list;** to follow developments for specific EU policy areas or targets, programmes or projects; this user-window can be shaped as a carrier for EU action;
- **Health and services for mother and child;** to focus on reproductive health, health of children and family structure.

These examples have been implemented, by way of illustration, in Section I-8. More examples have been worked out in Chapter II-5 and Annex 7. The user-window concept is a more flexible approach of the original idea of ‘core indicators’. Yet, the development of an indicator/data system needs priorities. We may well choose a user-window like the ‘EU-priority list’ as a core, and guidance for further development work.

I-6. Future use and maintenance of EC health indicators

Thinking of the logical follow-up for this project, we may quote as a proxy for the ‘ultimate goal’ of the Health Monitoring Programme: ‘To create a medium for the exchange of data and information between Member States, covering the areas of Public Health considered important for policy purposes by the Commission and the Member States, and efficiently interlinking with other international organisations working with the same information.’ Following up on this, the newly proposed Public Health Action Programme now under discussion states (version of May 15, 2000, page 11, also on page 33): ‘......... a comprehensive health information system will be developed, targeted at ... many stakeholders .... , based on the establishment of agreed Community-wide indicators for health status .... health determinants ..... interventions .... costs ....’
These quotations provide sufficient grounds for the further development and future use of the indicator list proposed in this report. As a follow-up of our work, we envisage that projects under the HMP and related initiatives are stimulated to work together on the operationalisation and harmonisation of selected indicators and underlying data development. All this work should be co-ordinated closely with Eurostat, WHO/Europe and OECD.

For the longer term, the implementation of a system of agreed indicators and connected database on health as a continuous and operational infrastructure is a matter of concern. The new Public Health Action Programme mentions the ‘development of a Community network to undertake analysis and reporting’ (page 33). This idea is more recently endorsed by the European Parliament. In fact, it seems mandatory to think of a centralised, or at any rate coordinated body or facility with responsibility on the overall field of data collection prioritisation, data evaluation, analysis and reporting. This facility should have professional expertise and authority, but at the same time be a light and flexible structure. It should develop an agenda determined by the needs of the Commission and the Member States.

I-7. The proposed list of EC health indicators;
the generic indicators, with examples of User-windows

This list gives the generic descriptions of the indicators. Part II of this report gives more details such as comments on age/gender/SES/etc. stratifications, on similarities with existing indicators, possible data sources, or specific problems. It also addresses possible operationalisations.

A few general notions should be addressed here. In some cases an indicator could be entered under more than one heading. E.g., ‘Avoidable mortality’ fits under ‘mortality’ as well as under ‘quality of care’; ‘accidents at work’ could come under morbidity as well as under ‘working conditions’. Under ‘population’, several items are included which could as well be arranged under social determinants, and which serve as indicators for socio-economic status (SES). For the calculation of indicators of inequality, these data have to be linked to data on mortality, disease, health behaviours etc. In these cases the most logical solution was followed. Other options can be realised by proper selection of user-windows. For all other details and comments, see Part II of this report.
Class 1. **Demography and Socio-economic situation**

These indicators provide a general picture of the situation in a country or region, and a frame of reference for many of the other health indicators. Moreover, the population data provide e.g. the denominator for calculating many other indicators.

### 1.1 Population
- Total population
- Median age of population
- % of population under 15 of age
- Same over 65 of age
- Live births
- Aged mothers, teenage mothers
- Crude birth rate
- Total deaths
- Crude death rate
- Net migration
- Total fertility rate
- Annual in(de-)crease %
- Population by region
- Population by urbanisation level
- Population projections

### 1.2 Socio-economic factors
- Education attainment
- Education enrolment
- Literacy rate
- Population by employment type
- Population by occupational class
- Total labour force
- Total employment
- Total unemployment
- Population by ethnic group/citizenship
- Population by household situation
- Population by income level/income distribution
- Gross Domestic Product
- GDP Purchasing power parity

Class 2. **Health Status**

This section contains indicators on various aspects of the actual health situation of the population. Disease groups have been selected because of their substantial share in the total burden of ill-health or because of their reference to known risk factors or to identified activities in prevention and health care (e.g. avoidable mortality). In this context we have not used the term ‘Health outcomes’. We prefer to reserve this term for situations where a clear link can be made to an intervention.

### 2.1 Mortality

#### 2.1.1 Life expectancy & related indicators
- Life expectancy
- Chance of dying in age intervals

#### 2.1.2 General mortality
- Crude death rates
- Standardised death rate
- Infant mortality
- Neonatal mortality
- Postneonatal mortality
- Perinatal mortality
- Inequality in deaths

#### 2.1.3 Cause-specific mortality
- Numbers of deaths
- Crude death rates
- Standardised death rate
- Years of life lost (PYLL)
- PYLL fraction

Which causes of death (COD) to include? We propose (a) the ‘main causes of death’, in terms of size, using the European shortlist of 65 causes; and (b) a limited set of COD selected as relevant for certain risk factors or issues of prevention or health care.

### 2.2 Morbidity, disease-specific

- Incidence/prevalence of selected diseases/disorders

Which diseases/disorders should be selected for the indicator list? Getting comparable data on population incidence or prevalence of diseases/disorders is an important development area. Analogous to ‘mortality’, we propose (a) diseases that are responsible for a large share of the burden of ill health (large impact) in the population (based on
Burden of Disease studies and WHO HFA list), and (2) a limited set of diseases selected as relevant for certain risk factors or issues of prevention and health care. Disease definitions should coincide with the causes of death, were applicable.

(a) Diseases/disorders of large impact
- HIV/AIDS
- Tuberculosis
- All cancers
- Lung etc. cancer
- Breast cancer
- Cervix uteri cancer
- Colorectal cancer
- Prostate cancer
- Melanoma and skin cancer
- Diabetes
- Dementia/Alzheimer
- Depression
- Generalised anxiety disorder
- Alcohol-related disorders
- Ischaemic heart disease
- Acute myocardial infarction
- Heart failure
- Cerebrovascular accident
- COPD
- Asthma
- Decayed etc. teeth: DMF-12

(b) Diseases selected for other reasons
- List of communicable diseases in vaccination schemes
- Water- and foodborne diseases
- Alcohol-related traffic accidents
- Occupational disease
- Creutzfeld-Jacob disease

2.3 Generic health status
- Perceived health
- Chronic disease general
- Functional limitations
- Activity limitations
- Global activity limitations indicator
- Short-term activity restrictions
- General mental health
- General quality of life
- Absenteeism from work
- Appropriate inequality measure

2.4 Composite measures of health status
- Disability free life expectancy
- Other health expectancies

Class 3. Determinants of health

This group contains all factors determining health, outside the health care system. It includes (i) the ‘personal and biological factors’, as covering personal characteristics that may determine degrees of sensitivity for development of disease or ill health, but which are not by themselves a disease; (ii) health behaviours (lifestyle factors), which are generally subject to people’s own choices and (iii) living and working conditions, more to be viewed as the wider environment (physical, chemical, biological, social). For all these categories of determinants, selection criteria have been their importance in determining a substantial share of (ill-)health, the degree to which they can be influenced, and the cost-effectiveness of the interventions involved.

3.1 Personal and biological factors

3.1.1 Biological (risk) factors
- Body mass index
- Low birth weight
- Blood pressure
- Serum cholesterol
- Nutritional status indicators
- Musculoskeletal disorders
- Congenital anomalies
- Down’s syndrome
- Road traffic injuries
- Occupational injuries
- Home/leisure injuries
- Coping ability
- Sense of mastery
- Optimism
- Knowledge/attitudes on health issues

3.2 Health behaviours

3.2.1 Substance use
- Regular smoking
- Smoking in pregnant women
**3.2.2 Nutrition**
- Energy from food
- % energy from fat
- % energy from protein
- % energy from sat. fatty acids
- Consumption of bread/cereals
- Consumption of fruit excl. juice
- Consumption of vegetables excl. potatoes
- Consumption of fish
- Consumption of micronutrients
- Breastfeeding
- Contaminants

**3.2.3 Other health-related behaviours**
- Physical activity
- Sexual behaviour

**3.3 Living and Working conditions**

**3.3.1 Physical environment**
- Outdoor air
- Housing
- Drinking water supply
- Sewage system
- Ionising radiation
- Noise

**3.3.2 Working conditions**
- Physical workplace exposures
- Mental workplace exposures
- Accidents related to work
- Occupational diseases

**3.3.3 Social & cultural environment**
- Social support
- Social isolation/networks
- Life events
- Violence

**Class 4. Health systems**

This group includes indicators on the health services system, as well as on prevention and health promotion. In some areas indicator definition is tentative only.

**4.1 Prevention, health protection and health promotion**

**4.1.1 Disease prevention**
- Vaccination coverage
- Screening for breast cancer
- Screening for uterus/cervix cancer
- Screening for blood pressure/cholesterol levels
- Prenatal screening
- Neonatal screening
- General preventive examination
- Integrated children's health monitoring

**4.1.2 Health promotion**
- Campaigns on health behaviours

**4.1.3 Health protection**
- Regulations on public smoking
- Advertising restrictions
- Average price of cigarettes
- Regulations on alcohol and driving

- Induced abortions
- Traffic behaviour
- Other health promotion behaviours?

**4.2 Health care resources**

**4.2.1 Facilities**
- Hospital beds total
- Hospital beds acute care
- Hospital beds private in-patient
- Psychiatric care beds
- Nursing/elderly home care beds

**4.2.2 Manpower**
- Health services employment
- Physicians employed
- Nurses employed
- Midwives employed
- Dentists employed
- Pharmacists
- Paramedical professions
• Hospital staff ratio: acute care
• Nurses staff ratio: acute care

4.2.3 Education
• Number of physicians graduated
• Number of nurses and midwives graduated
• Number of pharmacists graduated
• Number of dentists graduated

4.2.3 Technology
• No. of units of specified equipment

4.3 Health care utilisation
4.3.1 In-patient care utilisation
• Beddays: in-patient/acute care
• Occupancy rate: in-patient/acute care
• Average length of stay: in-patient/acute care
• Discharges

4.3.2 Out-patient care utilisation
• Out-patient contacts

4.3.3 Surgical operations
• CABG
• PTCA
• Hip replacement
• Knee replacement
• Cataract operation
• Caesarean section
• Others?

4.3.4 Medicine use/medical aids?
• Medicine use total
• Use of specific groups of medicines
  • Peptic ulcer drugs
  • Diabetes drugs
  • Cholesterol/triglyceride reducers
  • Cardiac glycosides
  • Anti-arrhythmics
  • Antihypertensives
  • Diuretics
  • Beta blocking agents
  • Systemic antibacterials
  • Analgesics
  • Benzodiazepine derivatives
  • Psychoanalytcs
  • Antiasthmatics
• Use of medical aids

4.4 Health expenditures/financing
4.4.1 Health care system

• Key indicators for the structure/financing of the national health care system
• Insurance coverage
• Distribution of household expenditures on health

4.4.2 National expenditure on health
• Total/public expenditure on health
• Public expenditure on prevention and public health

4.4.3 Expenditure on medical services
• Expenditure on in-patient care (total, public)
• Expenditure on out-patient care (total, public)

4.4.4 Medical goods dispensed to out-patients
• Expenditure on pharmaceutical goods and other medical non-durables

4.4.5 Total health expenditure by age group
• Expenditure (%) 0-64 (m/f)
• Expenditure (%) 65-74 (m/f)
• Expenditure (%) 75+ (m/f)

4.5 Health care quality/performance
4.5.1 Subjective indicators
• Perception of the health system
• Complaints

4.5.2 Health care process indicators
• Autopsy rate
• Waiting lists/times
• Number of surgeries/interventions considered inappropriate
• Variations in numbers of specific surgeries/interventions
• Quality of blood products; amount of blood transfused

4.5.3 Health outcomes
• Avoidable Deaths
• Iatrogenic disease/death
• 30-days in-hospital mortality
• 28-day readmission rate
• Surgical wound infection
• Incidence of end-stage renal failure per 1000 diabetics
• Nosocomial Infections
• Antibiotic Resistance
• Cancer survival rates
### Example: ‘Cockpit information’

The major purpose of this user-window would be the ability to get a *quick glance* of the overall situation in the Community and the MS, with reference to medium- and long-term policy strategies. It could include alerts for issues likely to influence these strategies. This user-window requires a limited though comprehensive set of general indicators, covering all aspects of public health. It might also present a basic set for comparison with countries outside the EU (accession countries, other OECD countries, etc.). A proposal is presented below:

<table>
<thead>
<tr>
<th>Indicators</th>
</tr>
</thead>
<tbody>
<tr>
<td>Population distribution</td>
</tr>
<tr>
<td>Education attainment</td>
</tr>
<tr>
<td>Unemployment</td>
</tr>
<tr>
<td>Income variation</td>
</tr>
<tr>
<td>Life expectancy at birth and age 65</td>
</tr>
<tr>
<td>Infant mortality</td>
</tr>
<tr>
<td>Cardiovascular mortality</td>
</tr>
<tr>
<td>Mortality by external causes</td>
</tr>
<tr>
<td>Perceived health, by SES</td>
</tr>
<tr>
<td>General quality of life measure, by SES</td>
</tr>
<tr>
<td>Selected health expectancy</td>
</tr>
<tr>
<td>Body Mass Index, by SES</td>
</tr>
<tr>
<td>Smoking prevalence</td>
</tr>
<tr>
<td>Consumption of fruit/vegetables</td>
</tr>
<tr>
<td>Housing</td>
</tr>
<tr>
<td>Vaccination coverage</td>
</tr>
<tr>
<td>Physicians per inhabitant</td>
</tr>
<tr>
<td>Health expenditures as % of GDP</td>
</tr>
<tr>
<td>Use of pharmaceuticals</td>
</tr>
</tbody>
</table>

### Example: ‘EU priority list’

This user-window wants to follow developments for specific EU policy areas or targets. As it arises from the new EU policy, priority areas include: better information; reaction to threats; relevant determinants; health impact assessment (agriculture, transport, SES). Based on this, the present subset could be a mix of examples 2, and 4, with a few additions on communicable diseases. We propose:

<table>
<thead>
<tr>
<th>Indicators</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fertility rate</td>
</tr>
<tr>
<td>Population by urbanisation</td>
</tr>
<tr>
<td>Education: attainment</td>
</tr>
<tr>
<td>Unemployment</td>
</tr>
<tr>
<td>Employment by ISCO class</td>
</tr>
<tr>
<td>Income disparity</td>
</tr>
<tr>
<td>GDP PPP</td>
</tr>
<tr>
<td>Life expectancy</td>
</tr>
<tr>
<td>Inequality in deaths, by a few main causes</td>
</tr>
<tr>
<td>Injuries/deaths from road traffic accidents</td>
</tr>
<tr>
<td>Occupational injuries/deaths</td>
</tr>
<tr>
<td>Home/leisure injuries/deaths</td>
</tr>
<tr>
<td>Perceived health by SES</td>
</tr>
<tr>
<td>Absenteeism from work</td>
</tr>
<tr>
<td>Body Mass Index</td>
</tr>
<tr>
<td>Smoking prevalence</td>
</tr>
<tr>
<td>Alcohol use</td>
</tr>
<tr>
<td>Drug use</td>
</tr>
<tr>
<td>Nutrition: energy from fat/protein</td>
</tr>
<tr>
<td>Nutrition: consumption of bread/cereals; vegetables/fruit</td>
</tr>
<tr>
<td>Physical exercise</td>
</tr>
<tr>
<td>Housing</td>
</tr>
<tr>
<td>Drinking water supply</td>
</tr>
<tr>
<td>Sewage system</td>
</tr>
<tr>
<td>Outdoor air quality</td>
</tr>
<tr>
<td>Noise</td>
</tr>
<tr>
<td>Emotional support</td>
</tr>
<tr>
<td>Violence</td>
</tr>
<tr>
<td>Occupational diseases</td>
</tr>
<tr>
<td>Vaccination coverage</td>
</tr>
<tr>
<td>Screening programmes</td>
</tr>
<tr>
<td>Medicine use</td>
</tr>
<tr>
<td>Health insurance coverage</td>
</tr>
</tbody>
</table>
**Example: 'Health and Services for Mother and child'**

This subset, presented below, would serve the purpose of focusing on reproductive health, health of children, on the family situation, and on activities that relate to prevention and health services for children. Again we have not looked at the availability or operationalisation for these indicators.

- Median age op population
- % Population under 5, 18
- Aged mothers/teenage pregnancies
- Mean age at delivery (from live births by age of mother)
- Crude birth rate
- Total fertility rate
- Education enrolment
- Female employment (from total)
- Population by household situation
- Infant/neonatal/postneonatal mortality
- Perinatal mortality
- Chance of death in ages 0-5-14
- Selected commun. Diseases (incidence, mortality)
- Congenital disorders, incl. mental handicap (incidence, mortality)
- Incidence of asthma in children (other?)
- Low birth weight
- Smoking in pregnant women
- Breastfeeding
- Sexual behaviour
- Induced abortions
- Social support/networks
- Life events
- Housing
- Vaccination coverage
- Perinatal/neonatal screening
- Integral children's health monitoring
- No. of midwives/specialised nurses
- Caesarean sections
- 30-days in-hospital mortality below 1 year of age
PART II

HEALTH INDICATORS FOR THE EUROPEAN COMMUNITY

Extended version with annotated indicator list

II-1. Why European Community Health Indicators?

The Health Monitoring Programme

II-2. The ECHI project

European Community Health Indicators

II-3. Which health indicators?

Prerequisites, criteria, backgrounds

3.1 Prerequisites and criteria for European Community Health Indicators
3.2 Comprehensiveness and conceptual consistency
3.3 Taking account of related and earlier work
3.4 Coverage of Member States and Community focus of interests
3.5 Objective principles and quality aspects in the selection and definition of indicators
3.6 Continuous development and flexibility of the indicator set; user-windows

II-4. Applying the criteria

A proposed list of health indicators for the EU

4.1 Establishing the main indicator classes
4.2 A proposed list of generic health indicators for the EU
4.3 Remarks to the selection of indicators, by class and main group

II-5. A flexible approach to health indicators

Subsets of indicators, or ‘user-windows’: examples

II-6. Follow-up, implementation and further work

Indicators should be clearly defined and should be used

6.1 A perspective on the goals of HMP
6.2 Direct follow up of the ECHI project
6.3 Challenges for the longer run

II-7. References
II-1. Why European Community Health Indicators?

*The European Commission Health Monitoring Programme*

The European Commission’s Health Monitoring Programme (hereafter called HMP: see European Commission, 1997) was established in 1997 to take forward the enhanced public health responsibilities of the EU in the Public health field. It has as its objective ‘to contribute to the establishment of a Community health monitoring system’, in order to:

1. Measure health status, its determinants and the trends therein throughout the Community;
2. Facilitate the planning, monitoring and evaluation of Community Programmes and actions; and
3. Provide Member States with appropriate health information to make comparisons and support their national health policies.

The activities under the HMP have been set out under three headings, or ‘Pillars’:

- Pillar A: Establishment of Community health indicators;
- Pillar B: Development of a Community-wide network for sharing health data;
- Pillar C: Analyses and reporting.

These three Pillars serve different functions. Pillar A asks the question *which* data and indicators should be included in a Community health data exchange system. Pillar B addresses the question *how* this system should, technically, be made to operate. Pillar C refers to the use of the data afterwards, e.g. in terms of making the data and their analysis readily available for policy makers.

The actual work is arranged in projects funded from the Programme. Under Pillar A, a number of projects covering data and indicators in many areas of public health are now in progress. Under Pillar B the EUPHIN-HIEMS (Health Information and Exchange between Member States) project is the predominating one, under which the electronic data exchange network is being built. Under Pillar C, projects are set out to prepare annual reports on aspects of health in the EU.

This report presents the results of a project under Pillar A, named ‘Integrated approach to establishing European Community Health Indicators’. The project has used the acronym ‘ECHI’ (European Community Health Indicators). As indicated by its title, the ECHI project was designed to address the core business of Pillar A.
II-2. The ECHI project

European Community Health Indicators

The objective of the ECHI project was formulated as:

‘To propose a coherent set of European Community Health Indicators, meant to serve the three purposes formulated for the HMP, selected on the basis of explicit criteria, and supported by all Member States’.

Pillar A of the HMP in fact refers to two basic questions, i.e. (1): for which public health areas do we want data and indicators included in the system? and (2): for which areas do we have usable and comparable data or indicators available from the various Member States? The ECHI project has addressed question (1), but has also taken question (2) into account. Most other projects under Pillar A address question (2) for a specific area. Results from other projects have been taken on board by the ECHI project as much as possible. For many projects the results were not yet available at the drafting of this report, and these may be incorporated in the follow-up procedure.

Before going ahead we want to address the important question: ‘What is an ‘indicator’?’ One answer is: ‘A concise definition of a concept, meant to provide maximal information on an area of interest’. The German health information system (GBE, Gesundheits Bericht Erstattung) states that the purpose of an indicator is giving quantitative information about an ‘indicandum’, which is the topic that is to be addressed by the indicator (Federal Statistical Office, 2000). An indicator can be defined at the generic level, e.g. ‘smoking behaviour’, or in an operational manner, e.g. ‘% of women in age group x smoking between y and z cigarettes per day’. Operational indicators are always in terms of a number, calculated from primary data in a more or less complex manner. An example of a more complex calculation is ‘life expectancy at birth’, as calculated from a large set of age-specific mortality data (cf. ICHI, WHO/EC, 2000). Health indicators have been used for years by e.g. WHO-Europe (WHO, 1999, 2000) and by national statistical agencies.

Indicators are often linked to a purpose. This is especially obvious when indicators are connected to health ‘targets’. Targets are concrete policy objectives, stated often in quantitative terms. The report ‘Health policies on target’ (van de Water and van Herten, 1998) discriminates between ‘goals’ described in general terms (e.g. a longer and healthier life), ‘objectives’, being more concrete (e.g. remove specific causes of ill health), and precisely defined ‘targets’ (e.g. reduce the percentage of smokers below 20 years of age by 25% within 5 years). In this context, indicators are formulated for following the progress towards targets (see for instance the UK health strategy ‘Our Healthier Nation’: Stationary Office, 1998). In many cases, indicators serve a dual function of both monitoring targets and the more general assessment of trends (e.g. WHO, 1999, 2000). These ideas about indicators and their purpose have also set the stage for the scope and approach of the ECHI project.

The ECHI project group, which consisted of representatives from all MS, various international organisations and the Commission (see Annex 1), has defined its approach as follows:
As a first step, to *define the areas* of data and indicators to be included in the system, following a set of explicit *criteria*.

As the next step, to define *generic indicators* within these areas, again following these criteria.

Where appropriate, to come close to the actual *definition of the indicators*. For these, reference could often be made to existing sources, such as available indicator definitions from international organisations, i.e. WHO (WHO, 1999, 2000), OECD (OECD, 1999) and Eurostat (Eurostat, 2000), from results of various HMP projects (under Pillar A), or from other relevant projects or activities.

As a novel element, to imply a *high degree of flexibility* in the indicator set, by defining subsets of indicators, or ‘user-windows’, tuned to specific user groups; examples of such groups are strategic planners, people involved in local health promotion actions, etc. This should be easy to implement into the practical possibilities of modern database technology (e.g. HIEMS; Health Information and Exchange between Member States).

As areas for the use of the resulting indicator list, the ECHI project group has considered the following:

- To provide a *guiding structure* for the production of public health reports at the level of international agencies, Member States as well as subnational authorities.
- To provide the contents structure for the development of the EUPHIN-HIEMS electronic data exchange system being developed under the HMP, Pillar B.
- To *identify data gaps* and thereby help to indicate priorities for data harmonisation and collection; specifically, to give *guidance* in this respect to other projects under Pillar A, and to indicate areas for further research and development.
- To serve as a guiding framework for *follow-up*. The result of the project clearly is not a final stage and needs continuous elaboration and update. A mechanism is needed to take care of this. This is closely linked to the intentions and views of the Commission’s new Public Health Action Programme on handling public health information in the EU in the future.

The above points explain the expected added value of the ECHI exercise and its contribution to the process of improving the coherence of health monitoring and reporting within the European Union, in close alliance with WHO-Europe, OECD and Eurostat. However, it is important to stress that the development and use of the system is to be of the MS, by the MS and for the MS.
II-3. Which health indicators?

Prerequisites, criteria, backgrounds

II-3.1 Prerequisites and criteria for European Community Health Indicators

Three general objectives of a European health indicator set have been defined by the HMP, i.e., monitor trends throughout the EU, evaluate EU policies, and enable international comparisons (cf. Chapter II-1).

This calls for the explicit definition of a set of prerequisites and criteria for the design of the full indicator set. It implies that proper scientific and methodological standards and experiences therein are taken into account. Therefore, the indicator set should:

- Be comprehensive, i.e. the multi-purpose nature of the monitoring objectives require the coverage of all domains which are normally included in the public health field; in addition, the indicator set should be coherent, in the sense of conceptual and practical consistency within and between the different domains of indicators.
- Take account of earlier work in the area of indicator selection and definition, especially that by WHO-Europe, OECD and Eurostat (avoiding duplication of efforts, promoting cooperation between international organisations);
- Cover the areas in the Public Health field, including the focal points of interest, which Member States want to pursue (MS policy priorities); in addition, it should meet the needs of Community Policies (Community policy priorities);

In terms of the actual selection of indicators at the detailed level, the following prerequisites are formulated in addition:

- The actual selection and definition of indicators within a specific public health area should be guided by scientific principles, i.e. their relevance for public health as derived from research and monitoring results. This includes quantitative considerations, such as the size of a health problem (e.g. number of cases, degree of lethality, amount of disability associated), the degree of preventability of a health problem or its total costs.
- Indicators (and underlying data) should meet a number of methodological and quality criteria concerning e.g. validity, sensitivity, timeliness, etc. (quality, validity, sensitivity and comparability);
- The likeliness of changing policy interests call for a high degree of flexibility, made possible by current electronic database systems.
- Selection of indicators should be based, to start with, on existing and comparable data sets for which regular monitoring is feasible, but the end result should also point at data needs or development areas, which again requires flexibility of the system.

The sections below will address these issues subsequently.

II-3.2 Comprehensiveness and conceptual consistency

Health is a broad issue and the eventual health indicator set should constitute a balanced collection, covering all major areas within the field of public health. Such a comprehensive indicator set will include information about the health status of a population, as well as about
the complex range of factors which determine health (determinants of health). It should also contain information about the complex of activities that are aimed at maintaining or improving health (including prevention, health protection and health and social services), and information about the consequences of ill-health in terms of both functioning and quality of life and in terms of the utilisation and costs of health care.

This comprehensiveness has already been indicated in Annex 2 of the Health Monitoring Programme (HMP; see European Commission, 1997), which has given the following list of main areas in which health indicators should be established:

- health status
- life style and health habits
- living and working conditions
- health protection (meant to include health services)
- demographic and social factors, and
- miscellaneous.

This HMP list was indicated as having a ‘preliminary’ character, but has been taken as the starting point for our work. In working out the classes in the ECHI context, we have considered that such classification categories always reflect a structure of logical and causal interrelationships between issues. These relationships are often represented in so-called conceptual models, shown in many public health reports and publications. Some examples of such conceptual models for health are given in Annex 2.

II-3.3 Taking account of related and earlier work

Much work had already been done previously in the area of selecting, defining and grouping health indicators for European countries. In the 1980’s, WHO/Europe formulated its HFA strategy, involving 38 targets and associated indicators. On this basis it operates the HFA database. In the new HFA21 strategy, the number of targets was reduced to 21 and the indicator list is being finalised according to the new set of targets (WHO, 1999, 2000). Presently, The WHO European region includes 51 Member States.

OECD has since the end of the 1980’s presented its own list of indicators and underlying database, for its now 29 Member States. It has been updated in 1999 (OECD, 1999). Finally, Eurostat is collecting large amounts of data in the social and economic fields, including health-related data, from the 15 EU Member States (Eurostat, 2000).

As a precursor of the HMP, a comprehensive study was carried out out by the 'Working Party on Community Health Data and Indicators', chaired by the Danish Ministry of Health (Ministry of Health, Denmark, 1994). In this study, an inventory was made of data and indicators available at WHO-Europe, Eurostat and OECD. A first proposal was made for a set of indicators based on readily available data. Following up on this work, WHO-Europe issued the ‘International Compendium of Health Indicators’ (ICHI, WHO/European Commission, 1999). This project, supported by the EC, produced a detailed inventory of health indicators and their definitions as listed by the three international organisations, but not including recent updates by these organisations.

All of these international operations defined their health data and indicators more or less covering the same general field as indicated by Annex 2 of the HMP. They all implicitly or
explicitly used the kind of conceptual view discussed above. The main classifications used by the different international organisations and by ICHI are given in Annex 3. Clearly, these listings, as well as the HMP Annex 2 list, are all different, but most of the differences reflect a different order, the use of different hierarchical levels for the same entities, or slight differences in definitions. In fact, the similarities are greater than they appear from Annex 3.

All of these developments have been taken closely into account in the present proposal, both in defining the indicator categories and in the selection and definition of the indicators themselves.

II-3.4 Coverage of Member States and Community focus of interests

Coverage of the policy priorities of both the Member States and the Commission are two of the major objectives of the future EC indicator set. It has been attempted to implement this into our choices of indicators.

Member States health policy priorities

Increasingly, EU Member States, or regions within MS, have formulated priority areas, objectives, or even targets for their health policies. Often this has coincided with the publication of national public health reports. Priority areas are usually triggered by a combination of evidence of current trends and political considerations, in any kind of mix, and are sometimes inspired by supranational targets (e.g. WHO-HFA). The report ‘Health policies on target’ (van de Water and van Herten, 1998) has analysed the use of (HFA) objectives and targets by 18 European countries, i.e. 12 EU Member States (excl. Luxembourg, Belgium and Greece) plus Czech Republic, Hungary, Romania, Norway, Poland and Switzerland. Of these 18 countries, 4 had not, by 1998, formulated targets (Czech republic, Denmark, The Netherlands and Poland).

In Annex 4, we have compiled current priority areas and objectives of Member States, taken from policy documents and public health reports. It should be noted that these are brought together by the participants of the ECHI project from authorised sources. However, the collected information may, at the time of appearance of this report, deviate in details from official positions of Member States. In fact, it was hoped in ECHI to include a comprehensive overview of Member States’ health policy priorities. This objective could not be fully realised within the available time frame. The information presently collected in Annex 4 can serve as a first step, which may be followed up by further inventories, either focused on public health reports or on actual health policy priorities. From the TNO report mentioned above (van de Water and van Herten, 1998) and the information summarised in Annex 4, the following areas emerge as dominant ones that are present in many countries’ priority lists:

- Increase the number of healthy years lived, by tackling the main causes of death, ill-health and functional limitations (including physical and mental health aspects).
- Reduce health inequalities, by health policies but also by social policies.
- Improve effective health promotion and disease prevention especially aiming on lifestyle and on young people.
- Improve the quality and accessibility of care, including community care.
- Improve the quality of life and participation of the elderly.

Mostly, these areas cover only a part of the full public health field and would require only part of the full indicator set. The related policy priorities have been taken on board to shape
the choice of indicators in the present proposal. More specifically, indicators specified by the Member States have been taken in close consideration in formulating the final indicator set, although not all have been included.

Meeting the needs of Community Policies

After the Public Health mandate of the European Community was expanded by the Maastricht Treaty, Community priorities in the health area were laid down in the ‘Framework for action in the field of Public Health’ (European Commission, 1993). Within this framework, eight action programmes were proposed: (1) AIDS and other communicable diseases, (2) cancer, (3) drug dependence, (4) Health Promotion Programme, (5) the Health Monitoring Programme (HMP), (6) pollution-related diseases, (7) the prevention of injuries and (8) rare diseases.

In the meantime, a follow-up to the first ‘Framework for action' has recently been proposed, the Programme of Community Action in the Field of Public Health (2001-2006) (European Commission, 2000). In this proposal, basically three priority areas of action have been defined:
1. Improving health information and knowledge;
2. Responding rapidly to health threats;
3. Addressing health determinants.

More specific objectives were mentioned under these headings as (abbreviated):

*Under ‘Improving ... knowledge’*:
- Establish Community indicators for health etc., methods for monitoring and analysis, corresponding databases.
- Improve the system for data transfer and sharing.
- Develop mechanisms for analysis and advice on health issues.
- Report on health issues.
- Consultation … dissemination of reports and recommendations.

*Under ‘Responding to health threats’*:
- Further implement network on surveillance of communicable diseases.
- Enhance safety/quality of human blood.
- Enhance safety/quality of organs/substances of human origin.
- Develop strategies for responding to non-communicable disease health threats.
- Promote guidelines/measures on electromagnetic fields and other physical agents.

*Under ‘Addressing health determinants’*:
- Implement strategies on life-style related health determinants, integrate these in overall health promotion activities (items: tobacco, alcohol, drug dependence, nutrition, physical activity, sexual behaviour, mental health).
- Contribute to strategies/measures on socio-economic determinants.
- Contribute to strategies/measures on health determinants related to the environment.

Besides this, the issues of costs of health systems, health impact of other policies, health technology assessment and cost-effectiveness of interventions have been addressed in the proposed programme.

As another source, we have consulted the publication ‘Priorities for public health action in the European Union' (Weil et al., 1999), which states the following Community priorities:
Social gradients, alcohol, illicit drugs, tobacco, health surveillance, quality of health care, mental health, environment and food/nutrition.

On most of the topics mentioned, data or indicators are more or less readily available. For some, however, special efforts are needed to define suitable indicators and appropriate data collection. Such topics are:

- **Inequality**: to calculate inequality indicators, a database structure along SES gradients is needed as well as specific indicator definitions.
- **Pollution-related diseases**: it is difficult to define indicators for ‘pollution-related diseases’, since most disease caused by pollution is not specific for this pollution. To monitor main causes of pollution itself is the answer. In a few instances, outbreaks can serve as proxies.
- **Rare diseases**: ‘Rare diseases’ are many, and mostly not detected by regular monitoring schemes. They should be detected by directed surveys. Disease registers are important here.
- **Emerging threats**: ‘Emerging threats’ are also not easily covered by indicators, for the simple reason that they may arise as surprises, and one does not know what to look for beforehand. This could be covered by an open category, or in a different programme.
- **Impact of other policies**: ‘Impact of other policies’ is another difficult issue. The most appropriate place is to include items under the category ‘Living and working conditions’.

In short, most of the priority issues formulated in the EU context are specific enough to be a guide for the definition of indicators. Some are so general that rather we have checked whether the area is generally covered.

### II-3.5 Scientific principles and quality aspects in the selection and definition of indicators

#### Quantitative criteria

In working out further indicator selections within specific areas, quantitative principles such as the size of a health problem, its total costs, or the degree of preventability of the problem has served as the objective selection criterion. This particularly applies to the selection of cause-specific mortality, of disease-specific morbidity, and to the selection of indicators in the area of prevention and health services. It has been mentioned specifically in the indicator list if and how such criteria have been applied.

#### Areas of research needs

In our indicator list, we want to use established data/indicators which are readily available. Some areas, however, specifically deserve R&D investments to arrive at reliable and comparable collection of data. Running the risk to forget some, we may list the following:

- Disease-specific morbidity at population level.
- Integrated measurement of generic health status (functional limitations, health-related quality of life).
- Health inequalities.
- Determinants of mental health, social determinants of health.
- Increased comparability of health care data.
- Indicators of the performance of health (care) systems.
Continuity of data collection

The development of an indicator list needs underlying data collection. When the selection of indicators is both to serve policy priorities and to guide data collection development, we should be aware of the fact that the organisation of a reliable data collection infrastructure is a process of longer term than the shifts in policy items. This issue can be taken care of by choosing appropriate user-windows (see section II-3.6 and II-5).

Quality aspects

It is evident that in the actual operational definitions of the indicators, we should meet certain quality criteria. In the Danish Ministry of Health Study (Ministry of Health, Denmark, 1994), nine such criteria were formulated. In short, an indicator should measure what we think it measures (validity), be sensitive to changes over time or in place, be comparable between countries or regions, to mention only three of the most important aspects. In developing the operational definitions of the indicators, these quality aspects addressed by the above study are a very useful checklist. In particular, considerations of statistical significance and minimal sample sizes are to be addressed. These issues become central at the stage of the definition of the operational indicators.

II-3.6 A flexible approach to the indicator set: User-windows

Basically, flexibility means that a system of data and indicators should never be fixed, and is never finished. First of all this derives from the fact that policy interests change, but also from developments in scientific knowledge and associated shifts in data collection activities. Finally, a system of data and indicators may be designed to serve a variety of different purposes.

Flexibility in relation to various users perspectives: the ‘User windows’

This chapter has considered criteria for assessing a comprehensive set of indicators. In the original text of the Health Monitoring Programme, as well as in the Danish Ministry of Health study, a distinction was made between ‘core’ and ‘background’ indicators. The former was intended as a subset including the ‘most crucial’ ones. Actual criteria for this subset selection were not given, however. An example from the U.S.A. is the definition of 10 ‘Leading Health Indicators’, among the total set of a few hundred, designed for the Healthy People 2010 Strategy (Chrvala and Bulger, 1999). These leading indicators, however, more or less depict specific subareas rather than indicators.

In this proposal we have not selected one ‘core set’. Instead, we realised that there may be many different angles or positions from which one may ask questions to a comprehensive database. In other words, different users may have different specific needs, which can be served by looking at specific subsets of the overall indicator collection. These subsets can therefore be named ‘user-windows’. This concept will add flexibility and clarity of purpose to a comprehensive indicator set. Technically, the HIEMS system should allow this sort of use, in terms of predefined ‘queries’.
This novel concept of user-windows has been worked out as follows. As a basis, the overall set of indicators is (1) comprehensive in covering the whole public health field for which we need sustainable data collection, and (2) arranged according to a logical hierarchy: health status, health determinants, etc. (see next section). The user-window approach now enables us to select and define any subset of indicators throughout all the categories of the hierarchical system, at our own wish. Criteria (or the specific user’s perspective) for selecting user-windows could be: (i) specific areas of health policy interest (prevention oriented, services oriented, intersectoral policies); (ii) specific thematic entries such as age groups, (iii) specific disease groups with their determinants and costs, etc.:

**User-windows for stressing EU priorities**

Fundamentally, the number of possible user-windows is countless. However, apart from stressing the flexibility of the system to create personal interest profiles, user-windows can be defined deliberately to underpin *current priorities* of, e.g., the European Community. Here we return to the original idea of the ‘core indicators’, being specifically relevant to EU health policy. The advantage is that selecting a limited number of indicators for a certain period of time can help much in stressing the importance of EU policy issues and, more importantly, to prioritise efforts in improving data collection and harmonisation on these issues.

**Emerging health threats**

Emerging health threats are a priority in the new EU public health action programme. By definition, a monitoring system with predefined indicators and data sources is not the system of choice for alerting the unexpected. Nevertheless, when arriving at the situation that countries are indeed entering data into the system, a special chapter with free format could be created where Member States can enter new items of concern, e.g. challenges for health, prevention and health care, *with* actual data on them where appropriate. If such an item turns out to be of Europe-wide concern, it may be subsequently taken up as a defined indicator. These items can be a disease, a lifestyle or environmental determinant of disease, or a specific problem in prevention or health care. This could be another aspect of the flexibility of a data system.
II-4. Applying the criteria:

*A proposed list of generic health indicators for the EU*

II-4.1 Establishing the main indicator classes

As stated earlier, the list of items mentioned in Annex 2 of the HMP was taken as the starting point. In this ECHI report, we propose a slightly but not basically different set of main categories, based on (i) considerations of conceptual (logical) coherence, (ii) an optimal consensus among the classifications used by other international organisations (see Annex 3), and (iii) new developments in public health monitoring. This proposal is given in the box below. It is followed by the full list of proposed indicators, given in *Table II-4.1*.

<table>
<thead>
<tr>
<th>Main categories for the ECHI health indicator set</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>1</strong> Demographic and socio-economic situation</td>
</tr>
<tr>
<td>1.1 Population</td>
</tr>
<tr>
<td>1.2 Socio-economic factors</td>
</tr>
<tr>
<td><strong>2</strong> Health status</td>
</tr>
<tr>
<td>2.1 Mortality</td>
</tr>
<tr>
<td>2.2 Morbidity, disease-specific</td>
</tr>
<tr>
<td>2.3 Generic health status</td>
</tr>
<tr>
<td>2.4 Composite health status measures</td>
</tr>
<tr>
<td><strong>3</strong> Determinants of health</td>
</tr>
<tr>
<td>3.1 Personal and biological factors</td>
</tr>
<tr>
<td>3.2 Health behaviours</td>
</tr>
<tr>
<td>3.3 Living and working conditions</td>
</tr>
<tr>
<td><strong>4</strong> Health systems</td>
</tr>
<tr>
<td>4.1 Prevention, health protection and health promotion</td>
</tr>
<tr>
<td>4.2 Health care resources</td>
</tr>
<tr>
<td>4.3 Health care utilisation</td>
</tr>
<tr>
<td>4.4 Health expenditures and financing</td>
</tr>
<tr>
<td>4.5 Health care quality/performance</td>
</tr>
</tbody>
</table>

II-4.2 A proposed list of generic health indicators for the EU

*Table II-4.1* gives the proposed list of EU health indicators. The indicators are ordered according to the categories given in *section II-4.1*. It should be stressed again that they have been selected with careful consideration of the criteria discussed in *Chapter II-3*.

Following the table, *section II-4.3* gives some general comments for each group of indicators, on how and why the criteria were applied, and why certain choices were made.

The indicators in the list are described, in most cases, as *generic indicators*. *Operational definitions* should be set up as a follow-up of this project. There is some variation: Sometimes there is hardly more than a statement that an indicator is needed in a particular area. In other cases, elements of operationalisation have been mentioned, usually referring to a specific
source, project or study. Otherwise, it should be remembered that the use of databases as the
basis of the information system, as intended in HIEMS, in principle should allow for the
flexible definition of other calculations than a predefined set of indicators only.

The first column in table II-4.1 gives a rough indication of the type of source from which the
data for the indicator is usually or preferentially derived. A rough discrimination has been
made between regular statistics (‘stat’, e.g. COD = causes of death), registries (‘reg’),
surveys, e.g. more specifically HIS (Health Interview Survey) and HES (Health Examination
survey). This classification is not yet sufficiently consistent and needs improvement. Its
primary aim is to clarify that data taken together in one group do not necessarily derive from
the same source.

Columns 2-4 indicate whether the indicator is mentioned in listings of WHO/HFA, OECD or
the Commission (which is usually Eurostat). It should be realised that the Eurostat list shows
what Eurostat is collecting, whereas the other two rather show what the organisations ask the
Member States to submit to them. As a rule, this would imply that for establishing the
operational definition, it is advisable to follow the existing definitions. There is a problem,
however, that in quite a few instances, operational definitions used by these organisations are
not identical. This is something which has to be sorted out, among others by area-specific
projects under the HMP. In few instances a (+) is used to indicate a limited or shortly planned
coverage of an indicator.

Columns 5-7 refer to stratification by (1) gender and age, (2) region, and (3) socio-economic
status. In general, this has been indicated as ‘+’ in all those cases where this information
seems of interest and reasonably feasible to collect. There are some important issues here:

- **Age**: When data are represented by age groups, it is recommended that this grouping is
  similar for all types of data, unless good reasons suggest otherwise. For some indicators,
  underlying data will be present by 5-year age classes. If not, an age grouping such as:
  birth-5-15-45-65-75 is used quite a lot, and could be used by preference. Sometimes,
  other groupings are suggested (see e.g. section II-3.1). Another crucial issue is age
  standardisation. This is needed to compare meaningfully between countries and represent
trends. For the mortality chapter this is explicitly included by the SDR (Standardised
death rate). But the same applies to comparisons of any item for which the age structure is
relevant. It is recommended in all cases of age standardisation to use the European
Standard Population.

- **Region**: Many data can be arranged to any geographical level desired, but not all of this is
  useful. Some data (mortality) have earlier been presented by NUTS levels (Nomenclature
  of Territorial Units for Statistics). Also, Eurostat has many of its data also available at
  regional levels. In the project on regional use of health indicators (project no. 12, see
  Annex 6) the issue is being addressed as to which particular regional level is relevant from
  a health policy point of view, in each Member State, for the collection and use of health
data. The advice of this project could be followed. In a few cases (not indicated)
  stratification by the degree of urbanisation could be a relevant issue.

- **Socio-economic status**: Such information is sometimes available for mortality statistics,
  and often for health issues collected by population surveys. The project no. 6 on SES
  (Annex 6) has given a series of precise guidelines on how to approach this. Very shortly,
  they advise stratification of data by at least two SES criteria; mortality data preferably by
  educational level and occupational class, and issues of self-reported health (by HIS)
  preferably by educational level and income level. They also give guidelines for the
  preferred classification of educational (4), occupational (6) and income (5) classes. For
details see section 1.2 in Table II-4.1. This is a very useful set of recommendations with respect to harmonisation of indicators related to health inequalities.

Column 8 intends to give a qualitative indication on the degree to which data/indicators are regularly available, or rather subject to a development trajectory. The four used codes are:

- ‘a’, for indicators based on data regularly available from international sources (e.g. causes of death; European Community Household Panel); the indicators are usually conceptually clear, valid and reliable; improving comparability may still be needed.
- ‘b’, for indicators based on data regularly available from national sources (e.g. national health interview surveys, hospital data); also here, the indicators are conceptually clear, valid and reliable; improving comparability between countries is usually a major issue.
- ‘c’, for indicators that have to rely on incidental national sources (e.g. surveys on specific topics or target groups); these indicators may be conceptually clear, valid and reliable, but efforts have to be made to make these regularly available within Member States’ information systems; clarifying definitions and establishing comparability between countries is a major issue.
- ‘d’, for indicators or topics on which data are needed but generally not available; especially here an R&D trajectory is needed, including concept development, data collection logistics, indicator definition, etc. It is advisable to undertake such activities at the EU level.

A sharp distinction is not always possible, and indications in Table II-4.1 may need improvement. Still, these classes represent a gradient from data/indicators which can be considered as reasonably standard, to those for which much development work has to be carried out.

The degree of comparability between countries would over time generally decrease along the same gradient. Clearly, indicators marked ‘c’ or ‘d’ are often included on the basis of changing and new interests of health policies, and would need most development work (e.g., disease-specific morbidity, mental health, health expectancies, personal factors, social determinants of health, quality of health care (health outcomes), health inequalities). Nevertheless, it is also clear that for indicators marked ‘a’or ‘b’, often a lot of work is still needed as to improvement of comparability (e.g., causes of death, disabilities, self-rated health, incidence of communicable diseases and cancers, certain lifestyles, hospital data, health care resources).

Column 9 cites projects funded under the HMP, if present, and occasionally other ongoing activities with closely linked objectives. The projects are given in Annex. 6.

Column 10 finally gives remarks, mostly concerning the operationalisation of the indicator, recommendations by the various HMP projects, etc.

In some cases an indicator could be entered under more than one heading. E.g., ‘Avoidable mortality’ fits under ‘mortality’ as well as under ‘quality of care’; ‘accidents at work’ could come under morbidity as well as under ‘working conditions’. Under ‘population’, several items are included which could as well be arranged under social determinants, and which serve as indicators for socio-economic status (SES). For the calculation of indicators of inequality, these data have to be linked to data on mortality, disease, health behaviours etc. In these cases the most logical solution was followed. Other options can be realised by proper selection of user-windows.
DESIGN FOR A SET OF COMMUNITY HEALTH INDICATORS

 HERE TABLE 4.1
II-4.3 Remarks to the selection of indicators, by class and main group

This section is intended to sequentially explain a range of issues contained in the table, including some issues that could as well have been put in footnotes.

Class 1. Demography and Socio-economic situation

These indicators give a general picture of the situation in a country or region, with respect to issues relevant for health. The population data, apart from their own value, provide the denominator for calculating many other indicators, either as overall numbers or stratified by gender, age, or region.

An area of special attention is the comparison of all age-structured indicators between populations having different age structures. In mortality data, the common practice is to calculate the SDR (standardised death rate), using a standard population structure. Basically, this would apply to all indicators for which age-specific data are available and for which we want to calculate overall rates. It is advised here to use in these cases the European Standard Population.

The selection of socio-economic factors is intended to present a restricted set of the most relevant items, in relation to health, from more extended economic and social listings and databases of Eurostat and OECD. They may be called ‘distal’ determinants of health (cf. Section 3.3 in the table), but have been grouped here as ‘background information’. Some of them are used to stratify other indicators according to socio-economic status (primarily education, occupational class and income).

Class 2. Health Status

This section contains indicators on various aspects of the actual health situation of the population. Within the class, we discriminate (1.1) all indicators derived from mortality data; (1.2) indicators covering morbidity in disease-specific terms; (1.3) indicators addressing morbidity or health status in more generic, subjective or functional terms; and (1.4) the composite indicators which are calculated from mortality as well as morbidity data. In this context we have not used the term ‘Health outcomes’. We prefer to reserve this term for situations where a specific health result can be linked with some certainty to an intervention.

Indicators have been selected largely according to current practice. A special point of interest is in the causes of death and the disease-specific morbidity indicators: which ones to select? Here the first criterion has been their ‘size’, i.e. their share of the total burden of ill-health. Additional causes have been added because of their association with known risk factors (determinants of health) or to identified activities in prevention and health care (e.g. occupational disease, avoidable mortality).

Mortality

With respect to the causes of death, it is proposed to use the European shortlist of 65 causes. This list includes all ICD chapters plus a number of major groups within these. Annex 5 gives the comparison of this shortlist with the the WHO and OECD indicator listings on causes of death.
Morbidity, disease-specific

Also with respect to disease-specific morbidity, the size of the population impact was taken as the primary criterion. As a starting point for this, we took the DALY concept, as presented in the ‘Global Burden of Disease’ study by Murray and Lopez (1996). DALY’s are a composite measure calculated by adding up, for specific diseases/disorders, the mortality in terms of causes of years of life lost (YLL) and the morbidity in terms of Years Lived with Disability (YLD). In the latter, the frequency as well as the severity of the disease has been included. Annex 5 gives a ‘top-70’ list of disease categories, as derived for the ‘Established Market Economies’. For most of these, accurate comparable data on their population occurrence are not available. To be practical, we propose to start with a smaller set (table II-4.1). This selection is taken from Annex 5, and at the same time covers the diseases included in the WHO-HFA21 indicators. It is arranged along ICD chapters. This is done since the disease definitions should coincide with the selected causes of death (see above) as much as possible.

Generic health status

This section includes indicators based on the measurement of health status in a generic, i.e. non-disease-specific way (not to be confused with ‘generic indicator’ which refers to its lack of precise operationalisation). This includes measures of perceived health and of health-related quality of life, often expressed in functional terms. For the latter, the ICIDH (International Classification of Impairments, Disabilities and Handicaps) provides a useful framework for addressing the different domains of health, as well as the ‘consequences of disease’ (the disablement process). A related approach is to categorise functional health in terms of the ‘physical’, ‘mental’ and ‘social’ dimensions. Measurement instruments may address each of these health dimensions separately, or may cover all dimensions. Among these general ‘health-related quality of life’ instruments are the SF-36 and Euroqol-5D questionnaires. Much discussion is presently going on about selecting and harmonising the appropriate instruments, mostly for use in HIS (Health Interview Surveys).

Composite measures of health status

These indicators are constructed as combinations of mortality data, on the one hand, and data on morbidity or generic health status measures, on the other. They are especially helpful in comparing countries or population subgroups, or in comparing the relative impacts of specific diseases in one or more specific areas. Basically, there are two types: (1) Health-expectancies (life-table based), and DALY-type (based on absolute numbers). Historically, HE’s use generic health status measures whereas DALY’s use disease-specific information and weighting factors (see above), but mixed forms have been realized. These are known as ‘Health-adjusted life expectancies’ (HALE), or ‘Disability-adjusted life expectancies (DALE).

It is proposed here to select a few Health expectancy variants, including both the most commonly used ones and a few that need more developmental work. This should be worked out in parallel with work on the generic measures on which the HE’s are based. DALE as used in the World Health Report (WHO, 2000), is one of these tracks of development. When based on occurrences of specific diseases, this particular approach may be too much
hampered nowadays by the inaccuracies in underlying epidemiological data, to enable comparisons within the group of comparatively similar 15 EU countries.

Class 3. Determinants of health

This group of indicators involves basically everything which determines health and disease. It includes ‘personal and biological factors’, ‘health behaviours’, and ‘living and working conditions’. Although activities in prevention and health care are also expected and intended to influence health, these are taken separately under the Class ‘Health systems’.

Analogous to the selection for causes of death and disease-specific morbidity, a quantitative criterion is considered, when possible, in selecting specific indicators, i.e. (1) the importance of a factor in determining a substantial share of (ill-) health, (2) the degree to which it can be influenced, and (3) the cost-effectiveness of the interventions involved.

Personal and biological factors

This category is not present as such in many other indicator listings. It should cover personal characteristics, either hereditary or acquired in the course of life, that are known as ‘risk factors’ or, conversely, as ‘protecting factors’ for developing a disease or disorder. In other words, these factors may determine degrees of sensitivity for development of disease or ill health, without by themselves being a disease. Examples are: body mass index, blood pressure (although the extreme, hypertension, is considered a disorder), immune status, and in the mental health area: coping ability. These factors can be influenced by disease prevention programmes, including screening and subsequent intervention. Although conceptually one can think of a wide range of factors, only a few remain, for which there is good knowledge of their impact on health and a fair availability of data. This is certainly a development area.

Health behaviours

This section, often called ‘lifestyle factors’, should include behavioural factors, which have been proven to be clearly associated with, or causally linked to, specific diseases and health problems. Behavioral factors are to a large extent defined by personal choices, and potentially influenced by health promotion and/or information/education. Most of these choices (e.g. food selection, physical exercise) may have adverse as well as positive effects on health. Intermediary to actual behaviour, knowledge and attitudes towards health are important in developing policies. Indicators on these may be developed. They are grouped under ‘personal factors’.

Living and working conditions

This group is taken to include conditions (exposures) in the physical, chemical, biological and social environment that are known to be associated with or causally related to specific health risks. The distinction is made between the ‘physical environment’ (general living conditions, outside environment), the ‘working conditions’, and the ‘social environment’. Generally speaking, this class of determinants can be influenced by health protection policies and policies in other sectors.

For the physical environment, large lists of indicators have been devised, much of which have only supposed or limited relations with health. In the present selection, it is attempted to
focus on a limited number for which the relation with health is relatively clear and substantial. Much use is made of the ‘Core list of Environment and Health Indicators’, proposed by the WHO European Center for Environment and Health (ECEH).

Under ‘working conditions’ and ‘social conditions’, several items are derived from Eurostat listings and from work done by the European Foundation for the Improvement of Living and Working Conditions in Dublin. They include socio-economic variables such as employment status, social networks, and schooling levels. Again, they are selected as having a clear-cut relation to health.

Some of these factors explicitly serve as indicators for socio-economic status (SES): employment, educational level, possibly family structure and income level. Apart from their value as such, they also serve to stratify a range of other data/indicators by SES. The HMP project on SES has made specific recommendations to stratify by education (4 classes), occupational class (6 classes) and/or income (see otherwise section 1.2 in Table II-4.1). This implies the collection of data on aspects of e.g. health status and health behaviours in connection with those SES data.

Class 4. Health systems

Here we intend to include indicators covering activities in disease prevention and health promotion as well as aspects of the health care system. We have discriminated one group on prevention-related activities, and four groups on the health services system in the broad sense.

The separate category on prevention and health promotion has been included to stress its importance from a public health point of view. In other classifications, indicators of this sort are dispersed under other headings. Generally speaking, this section should include measures for the existence and extent of disease- or risk factor-specific prevention programmes and for the frequency and effectiveness of their uptake.

Within the sections on the health care services, it is especially OECD that collects a multitude of data and indicators which are of interest both from a public health and from a more purely economic perspective. We propose to include a subset from these that focus on the public health aspect, more specifically on the priority areas mentioned elsewhere, i.e. accessibility of services from the equity point of view, effectiveness and efficiency of interventions, quality of care and professional education. In this sense the scope for the selection of indicators is similar to the one taken for the WHO/HFA21 indicators. The recently developed ‘System of Health Accounts’ (OECD, 2000a) is a major guideline here, but has not yet been assimilated in the present report in detail.

Prevention, health protection and health promotion

We subdivide the section in three groups. Under ‘disease prevention’ we include indicators showing specific activities such as vaccination and screening programmes. In the area of ‘health promotion’ we envisage indicators on the existence of programmes covering health attitudes and behaviours. Finally, we see the ‘health protection’ group as including e.g. legislation or regulations aimed at prevention of population exposure to adverse factors. One could think of a host of regulations in the areas of building construction, work environment, food safety, advertisement control, taxes on tobacco, traffic safety, emission control etc. It is
also clear that much of these regulations are already in force at the EU level. Evidently this is a difficult area for identifying workable quantitative indicators, and very much a development area. In further working it out, the evidence for the effectiveness of interventions should be a major criterion. At present, part of the designation of indicators is rather referring to areas of development than to established indicators.

**Health care resources**

For this section, the HFA21 and OECD listings has been followed closely. Precise definitions may differ, however. This has to be sorted out.

**Health care utilisation**

In this section, the WHO/HFA list has been followed (except admissions) with few extensions, derived from OECD: discharges and medicine use. Discharges are taken as the best indicator to cover disease-specific hospital use, rather from the public health point of view than from the health care production point of view. Medicine use (and perhaps feasible: medical aids) is included as a policy-sensitive issue for cost-increase arguments as well as for its possible effect of replacing parts of in-patient health care needs. Also here, WHO and OECD definitions should be closely considered. If discharges by disease group are included, this should be put in line as much as possible with the disease categories taken under mortality and morbidity. Therefore, the ICD entry is probably better than the entry by DRG (disease-related group).

**Health expenditures and financing**

For most of this section, the list of core indicators of OECD is followed (a subset of their total list under this heading). Expectations are that updates are provided by the system of ‘International Classification of Health Accounts’ under development (OECD, 2000a).

**Health care quality indicators**

This section should contain indicators that give information on the performance and/or quality of the medical care system. These may be selected items from the health care process (e.g. accessibility), the availability of specific technology, or ‘health outcome’ items, i.e. specific health incidents which can be related to the adequacy of an intervention.
Exploiting flexibility

Chapter II-4 defines the comprehensive set of indicators and, in doing so, of relevant types of data and of data sources. This entire indicator set, although limited for each of the areas covered, has become quite extended, by meeting all the criteria mentioned. Therefore the concept of the ‘user-windows’ was introduced in Section II-3.6: the idea that from a variety of different user’s perspectives, different smaller subsets - user-windows - of indicators could be defined. This approach would allow for maximal flexibility of use of the indicator system. Basically, a countless number of different specific user needs can be conceived. At the end, it might well be possible within the HIEMS system to define one’s own profile on the spot.

User windows for focusing on priorities

However, as said in section II-3.6, apart from using the flexibility of the system to create personal interest profiles, user-windows can be defined deliberately to underpin current policy priorities. This brings us back to the earlier idea of having a small set of ‘core indicators’. The reason to stress this application is that a broad list of indicators is good for defining the overall field, and to direct long term data collection strategies, but is of little help in defining the most urgent issues for short term action. Such priorities can reflect current issues in EU policies, as illustrated in one of the examples (no. 7) given in the box below.

Examples of user-windows

In the box below, we present several of examples. They should explicitly be seen as illustrations. The examples have been arranged following a few broader categories: ‘Specific policy views’, ‘thematic entries’, ‘disease-oriented groups’, and a typical ‘personal profile’, etc. Also included is a checklist for defining one’s own user-window. Annex 7 gives implementations for several of the user windows given above, by selecting a limited number of indicators from the overall indicator list. These again should only be taken as illustrations of the concept: other selections of indicators may be appropriate. The examples include one (no. 7) which might be selected to implement an ad hoc core list of EU items, and which can be used to focus on short-term priorities for the development of indicators and harmonised data collection.
Examples of user-windows:

By specific policy views

1. **Cockpit information:** to have a quick view on the major trends in public health, including recent relevant signals, for medium- or long-term policy strategies;
2. **Progress in health promotion:** to follow trends of priority issues in health promotion and disease prevention policies;
3. **View on regional gradients:** to focus on issues for which regional differences are relevant;
4. **Health in other policies:** to focus on health impact assessment of intersectoral and other policies;
5. **View to the future:** to focus on population or health projections and issues that show relatively marked trends in the recent past;
6. **WHO-HFA21:** to follow the HFA indicator set for the European Community;
7. **EU priority list:** to follow developments for specific EU policy areas or targets, programmes or projects; this user-window can be shaped as a carrier for EU action;

By thematic cross-sections through the indicator list

8. **Health inequalities:** to specifically monitor the situation with respect to health inequalities;
9. **Health and services for mother and child:** to focus on reproductive health, health of children and family structure;
10. **Health of a specific age group (adolescents, working age, elderly):** to focus on issues specifically relevant for each age group;
11. **Health by gender differences:** to focus on items where gender differences are relatively marked, whether in favour of men or women.
12. **Performance of the health care system:** to focus on the performance of the health care system;
13. **Quality and accessibility of care:** e.g. subjective assessment by consumers; specific outcomes; avoidable deaths; etc.
14. **Elements of health systems:** crucial characteristics; key data on resources, utilisation and financing.
15. **Work-related health:** employment; occupation-related disease and accidents; etc.

By disease groups (including occurrence, determinants, etc.)

16. **E.g.: infectious diseases; cancers cardiovascular disease; mental health:** selected incidence/prevalence; determinants; preventive actions; survival rates; health care issues.

Example of a very personal user-window:

17. **Smoking/drinking in European capitals:** requires the selection of geographical information on health behaviour.

How to build your own user-window?

- Define the precise question or field of interest;
- Check the indicator list, including the stratifications by age, gender, etc., and decide which indicators help you to answer your question.
II-6. Follow-up, implementation and further work

*Indicators should be clearly defined and be used*

II-6.1 A perspective on the goals of HMP

This report presents a proposal for the establishment of a list of European Community Health Indicators (*Chapter II-4*). It also proposes the use of subsets (user-windows) of indicators, to be used for specific purposes or needs (*Chapter II-5*). These proposals have been compiled by representatives from all MS and from WHO (Europe), OECD and Eurostat. The report builds upon much work done earlier by international organisations and incorporates recent priority areas presented by the MS. Yet, the results of this project do not represent a finished enterprise. They rather represent a step in an ongoing development, involving further work on harmonisation of data and indicators, the implementation of indicator definitions, and the stimulation of developmental work in the more difficult areas.

When we think of a logical follow-up for this project, we should consider again, how this would optimally serve the realisation of the ‘ultimate goal’ of the Health Monitoring Programme: To create a medium for the exchange of data and information between Member States, covering the areas of Public Health considered important for policy purposes by the Commission and the Member States, and efficiently interlinking with other international organisations working with the same information. Evidently, this goal is a moving target: policy interests will shift, other types of information will be considered important or interesting and, last but not least, improving or even maintaining quality and comparability of data will require continuing efforts by the Member States and the international organisations. For follow-up actions, we may discriminate between the immediate follow-up and a more long-term strategic approach.

II-6.2 Direct follow up of the ECHI project

For the short term, we envisage that the proposed indicator list can give guidance to the following concrete activities:

1. For the management of the HMP and its successor, to disseminate the result to those involved within Member States and international agencies, and to accomodate and implement received comments.
2. For the management of the HMP and its successor, to support a pathway for the gradual implementation of operational definitions of all indicators/data sets. This includes the establishment of meta-information, data dictionaries, etc., and also the identification of similarities, differences or additions with respect to definitions carried by the other international organisations (WHO-Euro, OECD, Eurostat). Among other things, this can be followed up from the ICHI initiative (International Compendium of Health Indicators), taken up earlier by WHO/Europe. (see *chapter II-3*). This also involves the definition of data sources and even database structure.
3. For the HMP management and users of the indicators, to further develop the idea of the ‘user-windows’, by defining and using (new) examples and implementing these into action programmes.
4. For the Member States, to investigate whether they can use the results for the development of their respective national (regional) systems of monitoring and reporting.
DESIGN FOR A SET OF COMMUNITY HEALTH INDICATORS

on health, more specifically, to recognise data gaps and problems in data harmonisation, and to stimulate developments in data collection accordingly; also to give feedback on improvements of the indicator list, including the use of user-windows.

5. For the various other projects (to be) financed under the HMP, and other activities, to focus their activity on the indicators and data areas given in the list, with emphasis on data gaps and areas where developmental work is most needed.

6. For the EUPHIN-HIEMS project, to implement the proposed indicator structure in the structure of its database system. At any rate, a closer co-ordination between the Pillars A and B, between contents and technique, is recommended.

7. For all partners, to maximise the coordination with and between international organisations, as one of the goals of the HMP is to minimise the burden of reporting by the Member States.

II-6.3 Challenges for the longer run

Beyond the term of immediate follow-up, the newly proposed ‘Programme of Community Action in the Field of Public Health (2001-2006)(European Commission, 2000)’, and notably its first goal: ‘Improving health information and knowledge’, is a source of inspiration. Under this first goal, more specific objectives were mentioned as (abbreviated):

- Establish Community indicators for health etc., methods for monitoring and analysis, corresponding databases.
- Improve the system for data transfer and sharing.
- Develop mechanisms for analysis and advice on health issues.
- Report on health issues.
- Consultation … dissemination of reports and recommendations.

The first two of these items are rather a continuation of the HMP. The last three, however, raise the issue of sustainability: If we want the initiatives launched in the HMP to result in a reliable and stable infrastructure of data collection and dissemination in the EU for the longer term, this would need the establishment of a facility having a certain continuity. Whether this is any form of central or network-type body, this facility should have sufficient expertise and manpower to give guidance to these actions, and to act with authority, but at the same time a light and flexible structure, open to new expertise and input from all MS. Several options for such a facility have been described by a Commission expert group (Aromaa et al., 2000). The idea has recently be endorsed by the European Parliament.

Furthermore, the commitment of the Member States with respect to the regular updating of the HIEMS system should be enhanced and maintained. The most powerful way to achieve this is to realise the actual use of the data by the MS. In this respect the request from DG Sanco for a national data administrator from each MS is an important step. The coordination of the MS role in the process could be taken up by the above-mentioned facility as well. This would include a regular evaluation of the use of the system and its contents, as well as the possibility of defining new indicators or data needs in the future.

For both these issues, the close involvement of WHO-Europe, OECD and Eurostat is essential. If data are to be entered from the Member States into the HIEMS system, the establishment of a ‘clearing-house’ function might be appropriate. In all this, an important objective has always been to reduce instead of increase the burden of data reporting by the
Member States, while at the same time, data collection and health policy issues are subject to natural evolution.

Finally, a system of data and indicator exchange will only work if the Member States feel committed to providing data because they also use these data and feel that this helps them in developing their health policy priority areas and directions. The co-ordinating facilities of the EU and other international organisations should serve to support this process, meeting the interests of MS governments primarily.
II-7 References


