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PROGRESS REPORT ON THE NETWORK FOR THE EPIDEMIOLOGICAL SURVEILLANCE AND CONTROL OF COMMUNICABLE DISEASES IN THE COMMUNITY

(Presented by the Commission)

EXECUTIVE SUMMARY

The Community Network for the epidemiological surveillance and control of communicable diseases, established by the European Parliament and Council Decision 2119/98/EC, has completed its first year of operation. It has been shown to be an effective network for health protection in the Community. Its future development and sustainability, however, requires a substantial resource commitment from the Commission and Member States in order that the momentum is not lost.

Several systems on communicable disease surveillance (e.g. legionellosis, salmonellosis, tuberculosis) are already functioning in the Community. The progressive expansion of comparable systems to other priority communicable diseases is now underway.

The Early Warning and Response System has been established and is now capable of addressing disease outbreaks from whatever source, although its relative immaturity means that its development requires nurturing.

The Commission has also identified the need for a rapid response capacity at Community level to assist in outbreaks of disease within and without the frontiers of the European Community.

The next period will see the Community Network's extension on the international stage through European Union co-operation with applicant countries, the Mediterranean partner countries, under the Northern Dimension, and through the European Union – third country co-operation arrangements (e.g. Canada, US).

This communication outlines how the Commission has implemented this Decision in its first year, and puts forward its proposals for future action in this area.

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NETWORK FOR THE EPIDEMIOLOGICAL SURVEILLANCE AND CONTROL OF COMMUNICABLE DISEASES IN THE COMMUNITY

1. INTRODUCTION

Most, if not all people in the European Community have suffered from a communicable disease at some point in their lives. Communicable diseases still represent a serious risk to human health although the advent of interventions such as antibiotics and vaccines has reduced the threat.

Communicable diseases do not respect national frontiers and can spread rapidly if actions are not taken to combat them. They impact on individuals regardless of age, lifestyle, or socioeconomic status. Not only do they cause illness and impose a heavy financial burden on society, they also contribute to about one third of all deaths occurring globally. While mortality is highest in developing countries, ill health is a considerable cost to the industrialised world, where health care and socio-economic costs are high.

Population mobility and migration, increased trade in food as a result of the internal market and globalisation, and environmental changes favour the rapid spread of disease hitherto not prevalent in the European Community. New diseases such as AIDS are continuing to emerge and others are developing drug-resistant forms such as multi-drug resistant tuberculosis (MDRTB), and methicillin resistant staphylococcus aureus (MRSA). In addition, new scientific developments on the role of infectious agents in chronic conditions such as cancer, heart diseases or allergies are under investigation.

The identification, monitoring and control of communicable disease outbreaks are greatly facilitated through well-functioning surveillance systems. Not only do such systems provide information for early detection and rapid response to outbreaks or potential outbreaks, they also help in identifying disease trends, risk factors, and the need for interventions. They also provide information for priority setting, planning, implementation and resource allocation for preventive programmes and for evaluating preventive programmes and control measures.

In responding to these various issues, the Council by its Resolution in 1992[1] and its Conclusions in 1993[2] emphasized the need for the setting up of an epidemiological surveillance and control network in the Community.

The Commission then put forward its proposal, which was adopted in 1998 as a Decision of the European Parliament and Council (2119/98/EC)[3] setting up a Community Network for the epidemiological surveillance and control of communicable diseases in the Community. The Decision confers on the Commission the responsibility for developing this Network and facilitating and co-ordinating its various activities. The systems existing at national level are now part of this

[1] OJ C326, 1.12.1992, p. 1.
[2] OJ C15, 18.01.1994, p. 6.
[3] OJ L268, 3.10.1998, p. 1.

Network. The overall aim of the Community Network is the prevention and control of communicable diseases in the Community, having regard to the need to integrate this objective into international endeavours to reduce these diseases.

The development of the Community Network, its budgeting and priorities are an integral component of the action programme proposed in the "Communication from the Commission to the Council, the European Parliament, the Economic and Social Committee and the Committee of the Regions on the health strategy of the European Community" and the associated "Proposal for a Decision of the European Parliament and of the Council adopting a programme of Community action in the field of public health (2001-2006) [COM (2000) 285 final]

This report outlines how the Commission has implemented the Decision in its first year, and outlines its strategy for consolidating and strengthening Community action in this field.

2. LEGAL FRAMEWORK

2.1. European Parliament and Council Decision setting up the Network

The European Parliament and Council Decision 2119/98/EC, which entered into force on 3 January 1999, requires that the Community Network on communicable diseases should promote co-operation and co-ordination between Member States, assisted by the Commission, in relation to early warning and control, as well as epidemiological surveillance.

In addition it

- delegates responsibility for its progressive technical implementation to the Commission, assisted by a committee comprised of Member States' representatives;
- places obligations on the Member States to communicate to the Network relevant information that would assist in the Community's policy on prevention;
- provides for the Commission to make information available to Member States;
- presents opportunity for co-ordinated action between Member States, and with non-Member States and international organisations, in liaison with the Commission.

2.2. Commission Decisions

In order to implement the Early Warning and Response System covering the widest range of infectious diseases, and to set priorities for epidemiological surveillance, the Commission adopted two Decisions during its first year of managing the Network:

- Decision 2000/57/EC[4] on the early warning and response system for the prevention and control of communicable diseases which specifies the types of

[4] OJ L21, 26.01.2000, p.32.

events to be reported, and the procedures for information exchange and reporting by Member States.

- Decision 2000/96/EC[5] which specifies the list of communicable diseases to be placed progressively under Community surveillance and the criteria for their selection.

3. THE COMMUNITY NETWORK

The setting up of the Network yields added value in a number of ways:

– it puts in place a system of continuous, well-structured, reliable and effective communication at Community level between national communicable disease surveillance authorities and the European Commission;

– it facilitates the rapid, reliable and commonly agreed identification of cases of communicable diseases occurring inside the Community, or outside and imported or likely to be imported;

– it gives the competent authorities the opportunity and the means to consult together on the preventive measures to be taken and helps them in the co-ordinated introduction of such measures and the evaluation of their effectiveness;

– it gives the authorities support for analysing and interpreting data and for developing the necessary measures to stop communicable diseases from spreading.

These objectives are being achieved in the first place by putting into practice the two main components of the Network – the Early Warning and Response System and a system of epidemiological surveillance. In addition, the Network provides a framework for a spectrum of other activities (see also 3.3 - 3.5) that contribute to the timely exchange of information and response for health protection.

Routine exchanges use a variety of communication tools. However, the principle information exchange within the Network is taking place via the Internet (see Annex 4). The communication link used within the network is the "Health Surveillance System for Communicable Diseases" (HSSCD) within the "European Public Health Information Network" (EUPHIN), which is part of the electronic "interchange of data between administrations" (IDA – Decision N° 1719/1999/EC of the EP and of the Council of 12 July 1999 on a series of guidelines, including the identification of projects of common interest, for trans-European networks).

According to Decision 2119/98/EC, Member States should consult each other, in liaison with the Commission, with a view to co-ordinating their efforts for the prevention and control of communicable diseases, in particular when they intend to adopt specific measures for their control. Member States may, if they wish, act together. These efforts will become more important as the Network develops and as its activities take on wider international implications.

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[5] OJ L28, 03.02.2000, p.50.

3.1. The Early Warning and Response System (EWRS)

The EWRS provides the competent public health authorities of the Member States and the Commission with an efficient and rapid exchange of information on outbreaks or potential outbreaks of communicable diseases and on preventive measures (see Annex 2 for the designated contact points).

This system is not intended to, nor does it react to isolated incidents in a Member State that do not have wider implications.

Decision 2000/57/EC makes it clear that all events which could lead to outbreaks of Community significance should be reported under the EWRS irrespective of whether or not a disease-specific network at Community level has been set up. Such events are defined according to their level of increasing concern, namely:

- *Level 1* - Information Exchange

  Information collected by recognised sources suggests that an event is likely.

- *Level 2* - Potential threat

  Information on an event or indicators for such an event point to a potential health threat.

- *Level 3* - Definite threat

  An event results in a public health threat.

Depending on the degree of concern, the Commission and Member States agree on appropriate action that might be taken individually or together.

An average of about three events has been reported per month on outbreaks of Community significance (TABLE 1).

***TABLE 1* - Events reported in the Network Early Warning and Response System**
July 1999 – May 2000

Disease acquired within the Community

Legionnaire's diseases; follow up of a report by the European Working group for legionnaire's disease (EWGLI) (France)
Outbreak of Legionnaire's diseases associated with whirlpools (Belgium)
Case of variant Creutzfeldt-Jakob Disease (France)
Outbreak of listeriosis; follow up of an alert by the EU Rapid Alert System for Food (RASFF) (France)
Outbreak of Legionnaire's diseases (Spain)
Cluster of fatal meningococcal infection (Italy)
Tick-borne rickettsioses; follow up of press rumours (Italy)
Outbreak of listeriosis (France)
Cases of meningococcal infection (UK)
Cluster of Salmonella typhi murium DT 104 (Spain)
Cluster of Legionnaire's diseases (UK)
Cluster of Legionnaire's diseases (Spain)
Unidentified severe illness occurring in heroin users (UK, Ireland)

Disease acquired outside the Community

Case of suspected viral haemorrhagic fever, confirmed as Yellow fever (Côte D'Ivoire)
Outbreak of *Salmonella paratyphi B* involving several Member States; (Turkey)
Meningitis due to enterovirus; follow up of RASFF alert (Romania)
Food poisoning (Venezuela)
Cholera (India)
Diphtheria (Eastern Europe)
Malaria; resurgence of malaria in Dominican Republic
Case of Lassa fever; (Ghana)
Case of severe invasive diphtheria (Hungary)
Case of Lassa fever; (Sierra Leone)
Case of Lassa fever; (Nigeria)
Case of tuberculosis (The Gambia)
Cases of meningococcal infection associated with pilgrimage (Saudi Arabia)

The Communicable Diseases Network is set up to detect and control communicable disease in people regardless of the cause and manner of transmission. Its principal aim is to prevent further transmission of the disease to other persons; by epidemiological surveillance and investigation of the outbreak to try to identify its cause; and through investigation of cases of human disease to identify control measures. It provides the necessary information to take preventive action and is particularly concerned with a situation which may develop at Community level.

Therefore, although the main target of the Network and particularly the EWRS component is not to detect an unsafe product or contaminated food, on occasions a part of the information could contribute to the identification of food or products as the source of infection, e.g. a recent outbreak of listeriosis in France or the outbreak of legionnaires disease associated with "spa pools". On these occasions the information will continue to be transmitted to the EU Rapid Alert System for Food (RASFF) or the EU Rapid Alert System for Product Safety (RAPEX). Conversely information from the RASFF or the RAPEX on contaminated food or a defective product provide the information necessary for the epidemiologist to ascertain the cause of illness in a Member State which in its absence would have appeared sporadic or disconnected.

For these reasons the various authorities involved in the EWRS, RASFF and the RAPEX share relevant information. This co-operation at Community level provides a synergy of action that is necessary to ensure that the health of people in Europe can be adequately protected.

3.1.1. Response to early warnings

The EWRS has already proved its worth in both detecting sources of infection giving rise to outbreaks of disease and in providing for co-operation between Member States. For example:

- The outbreak of paratyphoid fever affecting tourists returning from a Turkish holiday resort in 1999 affected more than 300 travellers. An international team was set up to perform an outbreak investigation. With the assistance of the Turkish authorities, an epidemiological study with an environmental investigation identified certain food items as the probable source of the outbreak. The EWRS ensured the rapid availability of information. The results of the investigation have been shared with the Turkish authorities to prevent future outbreaks.

- Following a message through the EWRS on an outbreak of Legionnaire's disease at a trade show in Belgium and an earlier outbreak at a flower show in Netherlands, an early warning and response meeting was held to review these outbreaks and the need for future preventive activities. Work in this area is currently ongoing in order to assess the need for any further Community activity.

- Several messages through the EWRS on viral haemorrhagic fevers in travellers returning from endemic countries have been transmitted in 1999 and in 2000 from different Member States. This has allowed rapid exchange of information on the cases and action to be taken regarding their contacts in the Community.

- Information was transmitted by several Member States through the EWRS on the recent outbreak of meningococcal meningitis in people returning to Member States from the annual pilgrimage (Haj) to Saudi Arabia. This raised awareness of the potential occurrence of cases in pilgrims and their contacts. Information on the preventive and control measures taken in Member States was also shared through the EWRS.

3.1.2. Lessons learned

The responsibility of the designated authorities is to communicate to the Network information on an event that could be of Community significance. There is therefore a certain amount of discretion on the part of the authority on the point at which its responsibilities have to be put into effect. Similarly, the responsible authority may not have immediately at hand all the information it requires to make an informed report and could create unnecessary alarm in other Member States if it prematurely declares an alert.

One of the most difficult problems still to be overcome is determining at which point the potential outbreak should be notified. When does speculation become a likely risk? These questions are discussed routinely within the Network Committee and the annual reports drawn up by the Commission, as required by Decision 2000/57/EC, will greatly facilitate drawing conclusions based on the lessons learned from

particular incidents. This will be the case from 31 March 2001 when Member States' competent authorities will for the first time provide the Commission with the information relevant to establish such reports. A more in-depth analysis will then be undertaken.

The experience gained so far has also highlighted the fact that, in order to ensure a well-functioning EWRS, close links must be maintained between the national authorities competent for the EWRS and the routine surveillance structures in their Member State.

3.2. Epidemiological surveillance

The Communicable Disease Network is being developed as a "network of networks" on specific diseases or groups of diseases.

Since 1992, the Commission has provided support to several communicable disease specific surveillance projects (networks) in particular, under the AIDS and Communicable Diseases programme, HIV/AIDS, legionellosis, salmonellosis, tuberculosis, training programmes for field epidemiology, together with publications on the subject of surveillance. The programme has also funded specific inventories of resources for communicable disease surveillance, prevention and control.

A number of these networks have been and are still supported in their pilot phase through the Fifth Framework R&D Programme; helping to establish and validate i.a. diagnostic systems and epidemiological methods. This is reflected by the inclusion of surveillance in the work programme of the activities linked to infectious diseases in the Quality of Life programme and the INCO programme.

The existing networks have already proven to be efficient in both detecting sources of infection giving rise to outbreaks of disease and in providing information for prevention.

- The concerted action of the surveillance centres involved in the European Working group for Legionnaire's disease (EWGLI) has demonstrated the effectiveness of 'pooling' information from several Member States to confirm an outbreak and source of infection attributable to one place, such as a hotel in one country. This information is then transmitted to that country allowing for the introduction of specific control measures to end the 'outbreak' and prevent future cases.

- 'Enter-net' (previously Salm-net) was able, through surveillance of a few human cases in each country, to trace the cause of cases of salmonella to food items originating from a single producer and distributed throughout Europe, again allowing control measures to be taken by the competent authorities.

- The projects dealing with HIV/AIDS and tuberculosis have contributed significantly to understanding the epidemiology of these diseases in the Community and the sharing of information on the risk factors for contracting them in different Member States. This has helped the development of Community-wide prevention strategies.

The model for each of the existing disease specific networks is of one co-ordinating Institute supported by the national institutes in other Member States. New disease specific networks will be based on the same principle of a central co-ordinating institute or 'hub'.

Information provided to the Commission from these networks is also used to provide the necessary synergy of action at EU level by making the information available to other EU systems related to public health surveillance.

In order to take the epidemiological surveillance system further, activities are planned comprising five separate components (TABLE 2). These are described below:

TABLE 2

Components of Epidemiological Surveillance Activity

- Disease specific networks – dedicated to one or several diseases or special health issues of importance to the Community;
- Routine surveillance network – collating national routinely collected and available communicable disease surveillance data from Member States;
- Inventories – describing current systems of surveillance, prevention and control;
- Zoonoses – reporting information on human zoonoses data;
- Information sharing - an exchange area via Internet where relevant information can be shared between national authorities.

3.2.1. Disease specific networks

Disease specific networks will, through their 'hubs' and national structures, process and analyse, in a comparable way, incoming data from national surveillance organisations. Commission Decision 2000/96/EC identifies which specific communicable disease networks or ones covering special health issues of Community importance and common to several agents such as antimicrobial resistance (i.e. the ability of micro-organisms to become resistant to antibiotics) and nosocomial infections (i.e. infections acquired in hospitals) should be developed as a priority.

It is envisaged that the co-ordinating centre (hub) for each disease network will be responsible for the ongoing systematic collection, interpretation, analysis, and dissemination of data and information on the diseases under surveillance. These 'hubs' will be identified mainly from national surveillance centres responsible for the collection and analysis of this data at national level and nominated for epidemiological surveillance by the Member States (Annex 3 lists national surveillance structures nominated and notified by Member States). In most cases, the national surveillance structures also have responsibility for investigating outbreaks and for providing national expertise on control and prevention of communicable diseases.

So as to ensure reliable and comparable data, the networks, and in particular the co-ordinating hubs, must meet certain minimum standards, such as specific epidemiological competence and experience, timeliness in reporting and accuracy in analysing of data etc.. The Commission, in co-operation with the Member States representatives in the Network Committee, is currently developing a series of such standards.

To ensure comparability of data, it would be desirable if standard operating procedures could be developed in the area of surveillance. Decision 2119/98/EC requires for each disease-specific network:

- case definitions,
- determination of the nature and type of data and information to be collected and transmitted
- epidemiological and microbiological surveillance methods.

These case definitions and surveillance methods have to be developed having regard to those used for the purpose of collecting data at national level to ensure that surveillance is performed in the most cost-effective way and with specific emphasis on the Community added value of the information.

In addition, areas where further research or validation of methods is needed, will be identified.

Surveillance network projects currently funded by the Commission in the Community Network are listed in TABLE 3.

TABLE 3

Disease specific networks

Area covered	Acronym	Operating hub
Operational:		
Legionellosis	EWGLI	PHLS, Communicable Disease Surveillance Centre (CDSC), London
Salmonellosis, infection with *E. coli* O157	Enter-net	PHLS, Communicable Disease Surveillance Centre (CDSC), London
Tuberculosis	EuroTB	Institut de la Veille Sanitaire (InVS), Paris
HIV/AIDS	Euro HIV	Institut de la Veille Sanitaire (InVS), Paris
Influenza	EISS	Nederlands instituut onderzoek van de gezondheidszorg (NIVEL)
Viral haemorrhagic fevers	ENIVD	Robert Koch Institut (RKI), Berlin
Antimicrobial resistance	EARSS	Rijksinstituut voor Volksgezondheid en Milieu (RIVM)
Nosocomial infections	Helics	Université Claude Bernard – Lyon I
Pilot phase:		
Hepatitis C		Smittskyddsinstitutet (SMI), Stockholm
Campylobacteriosis		Robert Koch Institut (RKI), Berlin
Meningococcal disease		PHLS, Communicable Disease Surveillance Centre (CDSC), London
Measles, pertussis, Infection with *H.* influenzae		Statens Seruminstitut (SSI), Copenhagen / Istituto Superiore di Sanità, Rome
Brucellosis, rabies		National Centre for Surveillance and Intervention, Athens
Basic surveillance network		Smittskyddsinstitutet (SMI), Stockholm

Disease specific networks will identify events that require a response either through the EWRS, if it meets the required criteria, or less rapidly through other means of epidemiological surveillance in the Network. The challenge for the Network, therefore, is to react quickly and effectively for rapid events and to improve public health over a longer term by using information from epidemiological surveillance at a European level complemented by news and reports from many sources outside the Community, for example through information exchange with third countries or the World Health Organization.

Seventeen of the 41 diseases and special health areas defined in Annex 1 of Commission Decision 2000/96/EC now have specific surveillance networks in place or starting in 2000 as either performing networks or feasibility studies (see Table 3).

The existing surveillance networks remain a priority for funding in 2001 and future years within the Community Network. Those which are feasibility studies are also a priority but the definition of a future surveillance network structure and operation will depend on the results of these studies which are awaited through 2000 and early 2001.

The setting up of new disease specific networks, pilot networks or feasibility projects for future networks is one of the major priorities for the Community Network for 2001 and beyond (see Table 4). These include diseases which are priorities for disease specific networks and other diseases for which both routinely collected information and information on significant outbreaks is required at a Community level but which may be considered not cost-effective or a priority for individual separate disease specific network. Information on these diseases can be collected in the future through the routine surveillance network or as an addition to other disease specific networks.

Table 4 – Priorities for 2001 and beyond

Priority disease/ special area for disease specific networks
Listeriosis
TSEs variant CJD
Cryptosporidiosis
Malaria
Pneumococcal Dis
Hepatitis B
Polio
Rubella
Diphtheria
Mumps
Gonococcal Disease
Syphillis
Chlamydial disease

Required information on these diseases may be part of a routine surveillance network or other networks:
Botulism
Hepatitis A
Shigellosis
Leptospirosis
Cholera
Plague
Giardiasis

Required under the Zoonoses Directive and may be part of a routine surveillance network or other networks:
Echinococcosis
Yersiniosis
Trichinosis
Toxoplasmosis

The speed with which these priorities can be achieved is dependent on both the available resources at a Community level to support technically these networks and the ability of Member States to build the capacity to undertake progressive Community surveillance that requires additional national resources.

3.2.2. Routine surveillance network

As has been shown by the "Inventory of the Means of Controlling Communicable Diseases in the European Union, Norway and Switzerland" by the ISS (Istituto Superiore di Sanità, Italy), several important communicable diseases are already under some form of national surveillance in some or all Member States. However, the surveillance methods may vary with respect to case definitions and other epidemiological and microbiological methods used. As some Member States do not collect information on the same list of communicable diseases nor use the same surveillance methods, in the presentation of the data this needs to be carefully interpreted and explicitly stated. Nevertheless, a comparison of data compiled from these existing sources would be of value at the Community level for prevention and control of communicable diseases where a dedicated disease specific network does not yet exist or may not be justified on the grounds of cost-effectiveness.

The Commission has already funded a pilot project for the development of a network which could collate available and routinely collected surveillance data. The results of this project should be available at the end of 2001.

3.2.3. Inventories

Reliable information is also needed on current systems of communicable disease surveillance and control in the Member States. The Commission is supporting a number of projects of this kind (TABLE 5).

TABLE 5
Inventories for the Community Network

- Inventory on resources for communicable diseases in Europe including applicant countries.
- EUVAX, Scientific and technical evaluation of vaccination programmes in the European Union.
- Resources for communicable diseases related to tourism and travel.
- Arrangements for dealing with zoonoses.
- Scientific evaluation of the arrangements for managing an epidemiological emergency involving more than one Member State.

For such inventories, regular updating is important if they are to be used as sources of information for the Network and other organisations. This is a priority for 2001 and arrangements will be made by the Commission to ensure updating of these inventories and their link to the EUPHIN-HSSCD Internet interface for both professional and public access to this information. Resources will be provided through the new Public Health Programme.

3.2.4. Zoonoses

At present the Commission, in accordance with Directive 92/117/EEC[6] compiles a report on trends and sources of eleven zoonotic agents in animals, animal feedstuffs, food and humans based on annual data obtained from Member States. The data supplied on human zoonoses from Member States are those collected by national surveillance. Within the Community Network under Decision 2119/98/EC, surveillance of human cases of zoonoses is a large and important area and already there are networks in place that collect national information on salmonellosis and verocytotoxic *E.coli* and feasibility projects are supported for 2000 on campylobacter, brucellosis and rabies. Bovine tuberculosis could be incorporated into the existing network on human Tuberculosis. For the remaining human diseases caused by listeria, echinococcus, trichinella, yersinia and toxoplasma, it is envisaged that either a disease specific network will progressively be put in place for this purpose for some, or in others the information will be collected within the routine surveillance network. This will provide the substantial part of the information on human cases in the annual zoonosis report. The ongoing redrafting of Directive 92/117/EC is in line with this approach to avoid unnecessary duplication of work in Member States and the Commission.

3.2.5. Information sharing

The Commission believes it is also important to encourage contacts between authorities in a timely way. Therefore, a special information exchange service via the Internet is to be installed for the sharing between authorities/structures and the Commission of relevant information. This applies especially to epidemiological information concerning diseases on the priority list where specific networks have not yet been put in place but also to any relevant information, for the Community, concerning other communicable diseases including information on unusual epidemic phenomena and new (communicable) diseases of unknown origin.

3.3. Making information available to the public

Transparency leads to public acceptance, and this is essential to the endorsement of the Network by the public. Data on routine surveillance and information on outbreaks and responses needs to be disseminated in different ways depending on the underlying cases and the audience, be it policy makers, professionals or the public. Some data will be restricted to European experts and public health authorities. Other data will be accessible to the public. However, at all times personal medical data must be protected.

The e-Europe Action Plan, endorsed at the EU-Summit in June, foresees as a priority action for public health that, via digital technology across Europe, the public has access to key health data. A precise measure to complement this action will be the setting up of a specific information network for citizens on communicable diseases into which the publicly accessible data from the Network for the epidemiological surveillance and control of communicable diseases will be fed. Some parts of the

[6] OJ L62, 15.03.1993, p.38.

Health Surveillance System for Communicable Diseases (HSSCD) are already publicly accessible[7]

In addition, the Commission is expecting, with the help of Member States, to build on its existing initiatives in this area such as 'Eurosurveillance' and 'Eurosurveillance Weekly', which are co-ordinated by national institutes. 'Eurosurveillance', the monthly publication that has been running for several years, and 'Eurosurveillance weekly', the electronic version[8], currently provide fairly rapid information on current communicable disease issues in the Community to those in the field and in policy areas. Their continued funding for potential integration into the Network is being addressed, and their relation to the various network components and to the Commission will be strengthened.

3.4. Incident Investigation Team

Although the Community, Member States and European Institutions already play a significant role in global outbreak investigations by sending expert teams, their role could be enhanced through the Community Network. A pilot project on promoting the co-operation of epidemiological experts in Member States within a world wide effort to assess and manage major infectious diseases threats on the spot is being funded by the Commission. The pilot project will take into account the experience gained through previous investigations in putting European investigating teams together for missions outside the Community and will examine the feasibility of setting up an investigation force in certain outbreaks especially when the affected States request specialist, technical and medical assistance. Such a force could also provide assistance to outbreaks of serious disease in countries within the Community.

The goal of this project is to improve co-ordination between Member States in responding effectively to calls for assistance. This is particularly relevant at this time as WHO is proposing the creation of a global strategy for response to outbreaks.

Thus the question of financing of such teams needs to be addressed. A common format for financing needs to be established. Member States could bear the expenses for their experts whilst the Commission covers the costs for co-ordinated action. This joint action will demonstrate European added value in a cost-effective way.

3.5. Training in communicable disease epidemiology

Epidemiology training has been provided by various academic institutions throughout Europe but the standard varies considerably and few training programmes have focused mainly on infectious diseases and interventions. There is a particular need in the European Union for a continuous vocational programme in communicable disease epidemiology including field investigations.

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[7] HSSCD : http://hsscd.euphin.org/.

[8] 'Eurosurveillance' (monthly publ.): http://www.ceses.org/eurosurv – 'Eurosurveillance' (weekly publ.): http://www.eurosurv.org .

The Commission has subsidised, since 1994, a programme for epidemiological training with the aims of strengthening the surveillance and control of communicable diseases [European Programme for Intervention Epidemiology Training (EPIET)].

This programme has been acclaimed by the Member States, and it now needs to be put on a sustainable basis.

4. THIRD COUNTRIES AND INTERNATIONAL ORGANISATIONS

Communicable diseases do not respect frontiers, and cases of serious disease have been imported from other parts of the world, as stated earlier. Furthermore, tuberculosis, syphilis, viral hepatitis and diphtheria have re-appeared in regions bordering the Union. The emergence of drug resistant forms of communicable diseases also poses a significant threat to public health.

In this context, Article 152 (3) of the EC Treaty requires that the Community and the Member States foster co-operation with third countries and the competent international organisations in the sphere of public health. This has already been taken up by the European Parliament and Council Decision (2119/98/EC) which requires the Commission to foster co-operation in this sense with international organisations (e.g. WHO) and third countries. In this way the Community will be prepared for disease outbreaks occurring beyond its frontiers and will be able to assist other countries in their endeavours to control an outbreak of disease with implications for the Community.

The Commission priority, with its existing resources, is to assist applicant countries in their efforts to implement the Network as part of the process to approximate to the Community "acquis".

The Commission also recognises that it must contribute as well to wider efforts towards the global control ofcommunicable diseases within the limit of its available resources and expertise on communicable diseases, and any relevant data protection legislation.

A significant contribution to facilitate co-operation in surveillance and enable third countries to co-operate with EU networks is coming from projects funded by INCO (5th R&D Framework Programme) such as those on malaria and tuberculosis drug resistance, Lassa and other haemorrhage fevers and diphteria in Eastern Europe. Further activities are now to be funded in the Mediterranean area, in line with the recommendations of the Montpellier Conference.

4.1. Applicant countries

With regard to the applicant countries, the Commission is monitoring their progress in developing the institutional basis for the implementation of the Community Network Decisions as part of the "acquis". The following steps a²re being taken:

- Extending invitations to representatives of the applicant countries to preparatory meetings of the Network Committee and its working groups;
- Requesting applicant countries to nominate the participating structures / authorities who would in due course participate in the Network according to Article 9 of Decision 2119/98/EC;
- Proposing that applicant countries join the Early Warning and Response System, as soon as the necessary legal requirements for their participation have been fulfilled; and

- Encouraging applicant countries to use the funding opportunities resulting from their participation in Community programmes for joining disease specific surveillance networks. To date, an increase in applications for participation in individual disease-specific networks has been made by applicant countries.

4.2. European Economic Area / European Free Trade Association (EEA-EFTA) countries

The EEA-EFTA countries (Iceland, Liechtenstein, Norway) already take part in the activities of some of the existing projects and activities of the Community Network. The formal extension of the Network Decision to these countries is a priority for the development of the Network and will lead to their more active participation.

4.3. Euro-Mediterranean and Northern Dimension countries

International co-operation is being fostered through the Community's commitment to work with the Euro- Mediterranean (EUROMED) initiative[9] and to this end a Declaration was adopted at the Euro-Mediterranean Ministerial Conference on Health in Montpellier, 3 December 1999 (see Table 6).

TABLE 6
Extract from the Declaration of the Euro-Mediterranean Ministerial Conference on Health MONTPELLIER, 3 December 1999 :

"The setting up of a European Community Network for the surveillance and control of communicable diseases represents an opportunity for further developing co-operation among Partners, where possible. The Conference suggests that, in the course of establishing this European Community Network, the possibilities of co-operation with Mediterranean Partners will be examined, particularly with regard to data collection methods, the use of common or compatible case definitions and exchange of information. The Partners will take the necessary steps to promote this co-operation."

Co-operation with countries on the Community's northern borders is also being encouraged with the 'Northern Dimension' countries (Estonia, Iceland, Latvia, Lithuania, Norway, Poland, and the Russian Federation) (Figure 1). The Commission Action Plan for the Northern Dimension in the external and cross-border policies of the European Union 2000-2003 foresees close co-operation with the Network in view of the combat of communicable diseases (see Table 7).

[9] Partners participating in the Euro-Mediterranean initiative : the Council of the European Union, the European Commission, EU-Member States, Algeria, Cyprus, Egypt, Israel, Jordan, Lebanon, Malta, Morocco, Syria, Tunisia, Turkey, Palestinian Authority.

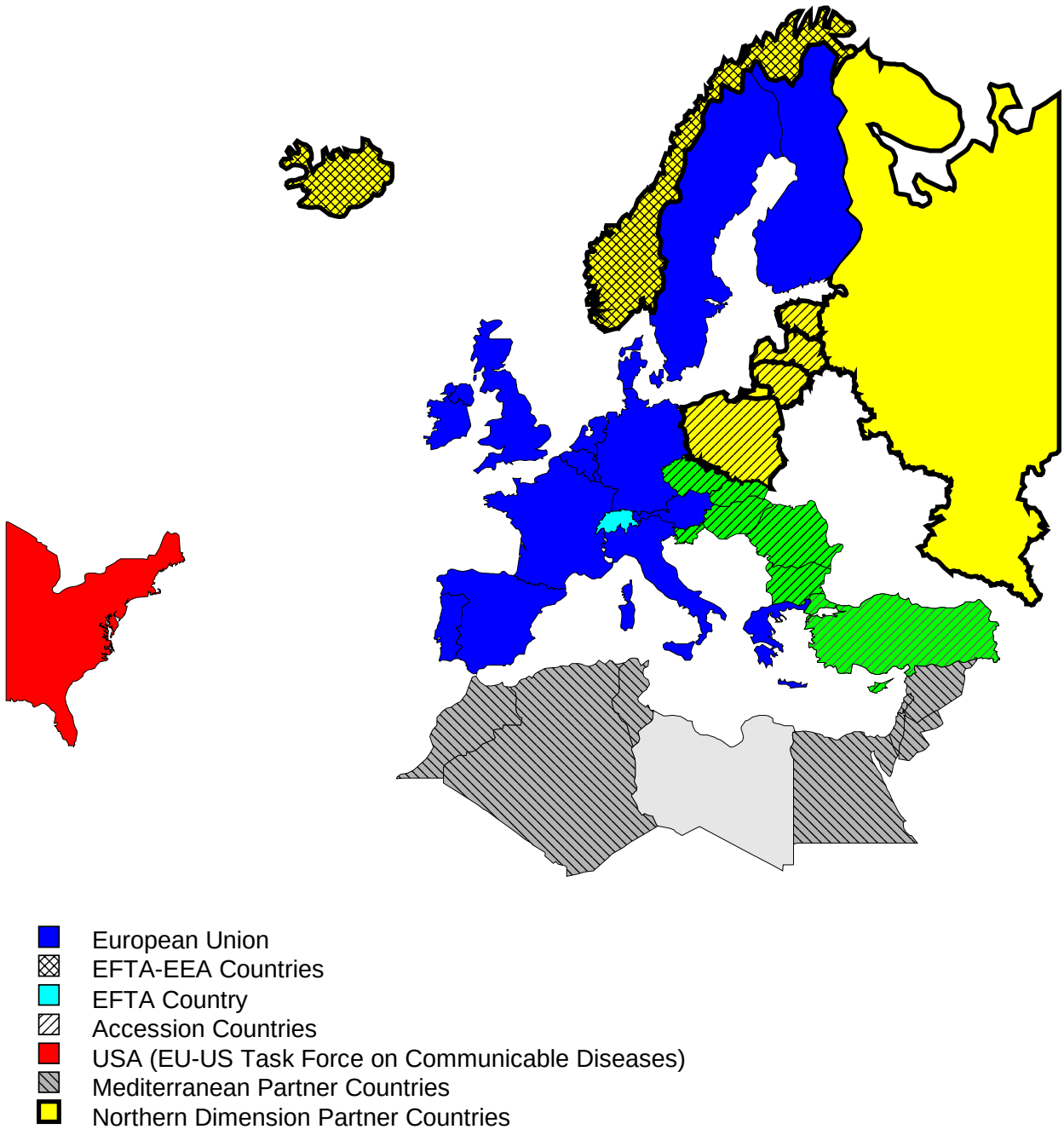
TABLE 7

Extract from the Action Plan for the Northern Dimension in the external and cross-border policies of the European Union 2000-2003, adopted by the Commission :

"Activities relating to surveillance and the control of communicable diseases should be implemented in close co-operation with the Community Network for Epidemiological surveillance, Control of communicable diseases, with the EU-US Task Force on Communicable Diseases, as well as the task force set up by the Baltic Sea States Summit in Kolding to elaborate a joint plan to enhance disease control in the region."

Fig. 1: The Community Network on Communicable Diseases:

Co-operation with third countries



4.4. European Union – North America

4.4.1. EU – United States Task Force (EU-US Task Force)

Co-operation with the United States towards the setting up of a global early warning surveillance and response system has already begun. This is taking place within the framework of the EU-US task force on communicable diseases. It is taking place in the light of the conclusions of the Health Council of 12 November 1998. These state that the activities of the Task Force should be focused on the scope of activities conducted in the framework of the Community Network for the epidemiological surveillance and control of communicable diseases. The Commission is therefore reflecting on how to integrate the EU side of the Task Force into the Community Network.

The EU side has recently informed the US about the need for a revision of the mandate and structure of the Task Force and is awaiting reaction from US side.

4.4.2. EU – Canada

In the framework of the EU-Canada Action Plan and on the basis of the scientific and technical co-operation agreement between the EU and Canada, the Commission has launched a multi annual project to encourage EU-Canada collaboration in the field of research and development in health telematics, and is working in other areas of mutual interest.

4.5. Communicable diseases in developing countries

Within developing countries a limited number of communicable diseases contribute disproportionately to the continued high levels of ill health of the population and continue to hold back national development efforts. In these countries, the strategy of confronting major communicable diseases must be clearly linked with the efforts for reducing poverty. HIV/AIDS, Malaria and Tuberculosis together contribute a major proportion of the disease burden of poverty across the globe. In this domain, innovative and additional initiatives are being taken by the Commission in the context of the Community development policy.

4.6. World Health Organization

The WHO has identified communicable diseases as a priority issue. It has a crucial role to play in developing the capacity of its members, in particular the 51 countries of the European region, to deal with communicable diseases. Its contributions will be particularly helpful in the framework of the accession process of the Central and Eastern European Countries.

Mutual exchange of information already exists with WHO regarding outbreaks of communicable diseases that may have international implications. The WHO Outbreak Verification List, compiled by its outbreak team on the basis of reports received from a multitude of sources, is sent to the Network, and reciprocally relevant information from Network sources is fed to the WHO services. The Commission endorses the efforts by WHO to create a global strategy to detect outbreaks of disease and to set out the structure for an international response to such outbreaks.

Case definitions used in the Community Network will be co-ordinated with WHO in order to ensure that there is no duplication of effort made by the Member States under the different reporting systems, and to ensure that through compatible data more effective and responsible prevention strategies will result.

The Commission and Member States will need to ensure that the future International Health Regulations being developed by WHO are compatible with the Community Network requirements, and their application will be carefully monitored, given the close links of this Regulation with issues covered by the World Trade Organisation (WTO).

WHO will be invited to strengthen its participation in all the mentioned existing activities related to the Community Network.

5. RESOURCES FOR THE NETWORK

5.1. Financing the Network

The Communicable Disease Network is now a permanent part of the "acquis". Its future viability depends on the availability of adequate funding, both from the Member States and at Community level. The latter is being addressed, inter alia, within the framework of the new public health programme [COM (2000) 285 final]. In addition, important research projects are underway under the 5th Framework Programme of Research and other sources of Community funding are available for specific projects (e.g. IDA, MEDA).

The financial commitment of the Member States will also be considerable since costs associated with the routine national network operations will have to be sustained.

5.2. Making the Network work

It has already been shown that the preferred structure is a "network of networks" with central "hubs" for each disease or group of diseases. Each "hub" collects, collates and transmits information on epidemiological surveillance for each of the topics provided by link Institutes in other Member States. They provide the Community with ready access to all the up to date information needed to contribute to prevention. This structure of networks harnesses the specific knowledge and expertise that already exist at national level and is the optimal way to operate the Network economically and in a technically sound way. The additional resources needed in the current structure are less then would be required otherwise, and encourage synergy of action both within departments of an Institute, and between Institutes. The Commission also benefits in that it can immediately locate the most likely source of authoritative advice. This has proved invaluable in its attempt to propose actions for example relating to Legionella in spas in fairs, and in dealing with technical or medical questions on specific diseases which require specialist knowledge.

The Decision requires that the Commission manages and co-ordinates the activities of the Network (including the disease specific Networks set up in this framework). This obligation involves management of the politically sensitive EWRS and

technical co-ordination of the epidemiological surveillance components. This latter includes:

- medical assessment of data/information transmitted to the Commission;
- monitoring the new medical information on emerging and re-emerging diseases, within and outside the European Community, in collaboration with Member States surveillance institutes in order to identify new areas for routine surveillance and to keep abreast of developments on control measures and prevention strategies employed by Member States and third countries;
- scientific assessment of the effectiveness (quality control) of disease specific networks and surveillance structures;
- ensuring the provision of telematics expertise in order to manage the databases needed for the Network;
- up dating of interconnected databases.

The Commission is providing the necessary resources for these functions and is of the opinion that these important tasks should continue, and expand in an appropriate structure under its authority.

6. CONCLUSIONS

The Community Network for the epidemiological surveillance and control of communicable diseases, established by the European Parliament and Council Decision 2119/98/EC, has completed its first year of operation. It has been shown to contribute effectively to health protection in the Community.

Several systems on communicable disease surveillance (e.g. legionellosis, salmonellosis, tuberculosis) are already functioning in the Community. The progressive expansion of comparable systems to other priority communicable diseases is now underway.

The Early Warning and Response System (EWRS) has been established and is now capable of addressing disease outbreaks from whatever source, although its relative immaturity means that its development requires nurturing.

The Commission has also identified the need for a rapid response capacity at Community level to assist in outbreaks of disease within and without the frontiers of the European Community.

The next period will see the Community Network's extension on the international stage through EU co-operation with applicant countries, the Mediterranean partner countries, under the Northern Dimension, and through the EU/US Task Force.

The future development and sustainability of the Network require a substantial resource commitment from the Commission and Member States in order that the momentum is not lost.

An indicative list of actions and their priority is given in Table 8 :

Table 8:
Indicative list of actions:
(Level of priority: S (short term), M (medium term) and L (long term) perspective)

Early warning and response	
– Evaluation of the Health Surveillance System for Communicable Diseases (EUPHIN-HSSCD)	S,M,L
– In depth analysis of the EWRS based on the annual reports by the Member States' competent authorities	S,M,L
– Exploring possibilities for expanding the Early Warning and Response System to non-communicable disease threats	M
– Assessment of possibilities for setting up European incident investigation teams	S
– Continuation of epidemiological training schemes.	S,M,L
Epidemiological surveillance	
– Establishment of case definitions, criteria for nature and type of data and information to be collected and transmitted, and epidemiological and microbiological surveillance methods for further disease specific networks	S,M,L
– Setting up a routine surveillance network with surveillance data currently available from national surveillance	S,M
– Developing further inventories describing current systems of surveillance	S,M,L
– Implementation of zoonoses surveillance under the Network	S,M
– Creation of an exchange area within EUPHIN-HSSCD where relevant information could be shared	S
Information and publicity	
– Restricted surveillance data bases will be displayed within the HSSCD for the various disease specific networks mainly for the use of staff responsible for running those networks;	S,M,L
– Communicable disease information on surveillance and prevention will be displayed for public information on HSSCD;	S,M,L
– Surveillance data, outbreaks, and other epidemiological information will be presented frequently electronically and in publications and press releases.	S,M,L
Third countries and international organisations	S
– Guidance to applicant countries to their efforts to implement the Network Decision as part of the Community *acquis*	S
– Extension of the Network Decision to the European Economic Area and the European Free Trade Association	M,L
– Promotion of co-operation with partners of the Euro-Mediterranean initiative	M,L
– Fostering co-operation with countries participating in the "Northern Dimension" activities	S,M
– Further development of the co-operation with the US in the framework of the EU-US task force on communicable diseases	S,M,L
– Enhancing co-operation with international organisations, in particular WHO	

Annex 1

List of Acronyms

EEA	European Economic Area
EFTA	European Free Trade Association
ENTER-NET	International surveillance network for the enteric infections – Salmonella and VTEC 0157 (Previously Salm-net for Salmonellosis)
EPIET	European Programme for Intervention Epidemiology Training
EUPHIN-HSSCD	European Public Health Information Network - Health surveillance system for communicable diseases
EUROMED	Initiative for co-operation by the European Union and countries bordering the Mediterranean Sea
EWGLI	European Working Group for Legionnaire's Disease
IDA	Interchange of data between administrations
RAPEX	Rapid Alert System for Product Safety
RASFF	Rapid Alert System for Food
VTEC	Verocytotoxic *E. Coli*
WHO	World Health Organization
WTO	World Trade Organisation

Annex 2

Designated authorities of the EWRS of the Network for the epidemiological surveillance and control of communicable diseases in the Community:

Belgie / Belgique	Ministère de la Communauté française Direction Générale de la Santé Vlaamse Gemeenschap Administratie Gezondheidszorg Commission communautaire commune Service de la Santé et de l'Aide aux personnes Institut Scientifique de la Santé Publique – Louis Pasteur
Danmark	Statens Serum Institut Sundhedsstyrelsen (National Board of Health)
Deutschland	Robert Koch-Institut
España	Centro Nacional de Epidemiología del Instituto de Salud Carlos III
France	Ministère de l'Emploi et de la Solidarité Direction Générale de la Santé Bureau des maladies transmissibles Institut de la Veille Sanitaire Département des maladies infectieuses
Greece	Ministry of Health and Welfare
Ireland	Department of Health and Children National Disease Surveillance Centre
Italia	Ministero della Sanità Dipartimento della Prevenzione
Luxembourg	Direction de la Santé Division de l'Inspection Sanitaire
Nederland	Ministerie van Volksgezondheid Inspectie voor de Gezondheidszorg Rijksinstituut voor Volksgezondheid en Milieu (RIVM) Centrum voor infectieziekten
Österreich	Bundesministerium für Arbeit, Gesundheit und Soziales (BMAGS)
Portugal	Direcção-Geral da Saúde Instituto Nacional de Saúde
Suomi/Finland	Ministry of Social Affairs and Health Department for Promotion and Prevention Kansanterveyslaitos (KTL) (National Public Health Institute)
Sverige	Socialstyrelsen (National Board of Health and Welfare)
United Kingdom	The Department of Health Communicable Disease Branch
European Community	European Commission Health and Consumer protection DG Public Health Directorate Communicable, rare and emerging diseases Unit

Annex 3

Designated epidemiological surveillance structures within the Network for the epidemiological surveillance and control of communicable diseases in the Community

Belgie / Belgique	Institut Scientifique de la Santé Publique – Louis Pasteur
Danmark	Statens Serum Institut
Deutschland	Robert Koch-Institut
España	Centro Nacional de Epidemiología del Instituto de Salud Carlos III
France	Institut de la Veille Sanitaire Unité des maladies infectieuses
Greece	National Centre for Epidemiological Surveillance and Intervention
Ireland	National Disease Surveillance Unit
Italia	Istituto Superiore di Sanità (ISS)
Luxembourg	Direction de la Santé, Division de l'Inspection Sanitaire
Nederland	Inspectie voor de Gezondheidszorg Rijksinstituut voor Volksgezondheid en Milieu (RIVM) Centrum voor infectieziekten
Osterreich	Bundesministerium für Arbeit, Gesundheit und Soziales (BMAGS)
Portugal	Instituto Nacional de Saúde
Sverige	Smittskyddsinstitutet (Swedish Institute for Infectious Disease Control)
Suomi / Finland	Kansanterveyslaitos (KTL) (National Public Health Institute)
United Kingdom	Public Health Laboratory Service Communicable Disease Surveillance Centre
European Community	European Commission Health and Consumer protection DG Public Health Directorate Communicable, rare and emerging diseases Unit

Annex 4

Communications link for the Network

The principal communication link used within the Network is the "Health Surveillance System for Communicable Diseases" (HSSCD) which forms part of the "European Public Health Information Network" (EUPHIN). EUPHIN is designed to be a system for sharing, exchanging and disseminating information on public health within the Community. The system is an integral part of the electronic "interchange of data between administrations" (IDA – Decision N° 1719/1999/EC of the EP and of the Council of 12 July 1999 on a series of guidelines, including the identification of projects of common interest, for trans-European networks which are operated via the Internet).

The HSSCD allows sharing and exchange of information on early warning and response and the surveillance of communicable diseases. It currently provides a general purpose telematic services including electronic mail, posting articles for access by discussion groups, search capacity, and downloading of documents from other hosts on the network. Some HSSCD databases are restricted to European experts and public health authorities (e.g. if they contain personal medical data); others will continue to be accessible to the public.

EUPHIN has the capacity to cover various areas of health related data. At present, the Health Indicators Exchange Monitoring System (HIEMS) is already included. EUPHIN will gradually be expanded to cover injury data, rare diseases, blood, organs and data in other fields.