

Report on the evaluation of
IPSE WP4 (HELICS):

**A surveillance network for surgical site infections
and nosocomial infections in intensive care units**

&

IPSE WP3:

**Event warning and rapid exchange on
nosocomial infections and antimicrobial
resistance**

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Summary description of the diseases/special health issues covered by the surveillance network

Table 1. Created 01 / 06 2007

<p>Diseases/special health issues¹ covered by the network: WP4: Surgical site infections; Nosocomial infections in intensive care units WP3: Unusual and/or potentially important nosocomial events</p>	<p>Network HELICS (core surveillance of IPSE, WP4) NEWS (nosocomial event warning system in EARSS-ibis, IPSE WP3)</p>	<p>Established year <u>1994 (WP4 as HELICS)</u> <u>2005 (WP3)</u></p>
<p>Scientific coordinator Jacques Fabry</p>	<p>No. of years of surveillance for the disease(s)/special health issue WP4: 6 years WP3: 0 years</p>	
<p>Project leader WP4: Jacques Fabry / Carl Suetens WP3: Hajo Grundmann</p>	<p>Hosting institute WP4: Universite Claude Bernard Lyon I / L'Institut scientifique de Sante Public, Bruxelles WP3: The National Institute for Public Health and the Environment, Bilthoven</p>	<p>Country WP4: France / Belgium WP3: The Netherlands</p>
<p>Mission statement of the network (from SOP) The HELICS network is an international network aiming at the collection, analysis and dissemination of valid data on the risks of nosocomial infections in European hospitals. The NEWS system should provide national/regional professionals with timely information, allow them to respond adequately to threats regarding infectious diseases and control in hospitals and facilitate the information exchange with EU-DG SANCO (EWRS).</p>		
<p>Responses of the surveys in 2007 (year), mainly relevant to IPSE WP4 (HELICS):</p>		
<p>Responses of the state epidemiologist:</p>	<p>10 / 10 = 100 %</p>	
<p>Responses of the national epidemiology contact points:</p>	<p>42 / 69 = 61 %</p>	
<p>Responses of the national laboratory contact points:</p>	<p>/ = %</p>	

¹ Based on Commission Decision 2003/542/EC

Please, fill in the table below for each disease separately. Copy and paste the table if needed.

Table 2 A. Created 01 / 06 2007

Disease/special health issue: Surgical site infections (IPSE WP4)			
No. of participating countries Total <input type="text" value="22"/>	Member States	19	
	EEA/EFTA countries ²	1	
	Accession/candidate countries ³	2	
	Other countries		
Number of countries with a. only sentinel surveillance system b. only statutory surveillance system c. both sentinel and statutory systems d. other surveillance system e. not relevant for the network <input type="checkbox"/>	Member States	EEA/EFTA countries	Accession/candidate countries
Number of countries reporting data	10	1	
Number of countries providing a. only individual data b. only aggregated data c. both types of data			
Number of countries providing minimum agreed data set:	10	1	
Published guidelines, standard procedures etc. HELICS Operating Manual 2003 (Version 12) Surveillance of Surgical Site Infections - Protocol (Version 9.1, Sept 2004) Tutorial Guide for HELICSval and encrypting/decrypting your surveillance data (Nov 2005) The documents are available on http://ipse.univ-lyon1.fr/			

² Iceland, Norway, Liechtenstein and Switzerland

³ ²Bulgaria, Croatia, Romania, Former Yugoslav Republic of Macedonia and Turkey (as of 28.4.2006)

Table 2 B. Created 01 / 06 2007

Disease/special health issue: Nosocomial infections in intensive care units (IPSE WP4)				
No. of participating countries Total <input type="text" value="25"/>	Member States		20	
	EEA/EFTA countries ⁴		1	
	Accession/candidate countries ⁵		4	
	Other countries			
Number of countries with	a. only sentinel surveillance system	Member States	EEA/EFTA countries	Accession/candidate countries
	b. only statutory surveillance system			
	c. both sentinel and statutory systems			
	d. other surveillance system			
	e. not relevant for the network <input checked="" type="checkbox"/>			
Number of countries reporting data		9	1	
Number of countries providing	a. only individual data			
	b. only aggregated data	1		
	c. both types of data	8	1	
Number of countries providing minimum agreed data set:		9	1	
Published guidelines, standard procedures etc. HELICS Operating Manual 2003 (Version 12) Surveillance of Nosocomial Infections in Intensive Care Units - Protocol (Version 6.1, Sept 2004) Tutorial Guide for HELICSval and encrypting/decrypting your surveillance data (Nov 2005) The documents are available on http://ipse.univ-lyon1.fr/				

⁴ Iceland, Norway, Liechtenstein and Switzerland

⁵ ²Bulgaria, Croatia, Romania, Former Yugoslav Republic of Macedonia and Turkey (as of 28.4.2006)

Usefulness of IPSE WP4 (HELICS network) & WP3 (event warning)

*Please, fill in the summary table and specify the major/minor strengths and major/minor weaknesses regarding the indicators, which are 1) actions and outputs useful, 2) access to the database, 3) website useful, 4) improvements at national level, 5) actions taken at national and international level, 6) information dissemination, and 7) addressing international surveillance objectives. **Please, add any other findings, which you consider relevant and important for the surveillance at the EU level.***

Major strengths in usefulness:

The network has maintained and strengthened the surveillance of surgical site infections (SSI) and intensive care unit (ICU)-acquired infections at international level, furthermore assisted countries in developing their own national surveillance networks.

Consensus protocols have been developed on surveillance of surgical site infections and nosocomial infections (NI) in intensive care units, creating basis for a common surveillance methodology. The network provides platform for the national representatives and infection control practitioners to share information and best practices.

An IT secured tool for rapid exchange of standardized information on NI and antimicrobial resistance (AMR) events that may diffuse widely and represent a threat to public health was developed in collaboration with EARSS (EARSS-ibis) in WP3. Such a tool may facilitate early warning, communication on threats and foster appropriate public health response.

Minor strengths in usefulness:

Seminars were organised in the frame of WP4 to further train the network participants in practical aspects of the common surveillance methodology (including the IT tool for data entry and analysis) and in organising national infection control programmes.

Major weaknesses in usefulness:

The achievements of the network lack visibility. The IPSE annual reports in 2005 and 2006 contain only summary results of HELICS. Few scientific publications were done so far, the hub being mostly overloaded with data management and analysis. Access to the data is limited to the HELICS management team members, no interactive database is available for the public.

Because of the lack of visibility and also of a limited interaction with European and national public health authorities, the information created by the network may have not been used enough for policy planning and evaluation. This is

particularly noticeable if one compares with EARSS and ESAC surveillance projects.

Although an IT tool was developed in collaboration with EARSS (EARSS-ibis) for early warning of NI and/or AMR events that may diffuse rapidly in Europe, this tool has not been promoted and used in surveillance and public health practice.

Minor weaknesses in usefulness:

Some countries have difficulties in using the complex IT tool in HELICS. Both work packages on antimicrobial resistance surveillance in intensive care units are not integrated into the HELICS ICU database. No collaboration was sought with European surgical/ intensivists societies.

Other findings:

The current surveillance activity is targeted to SSI and ICU-acquired infections, thus cannot measure the overall burden of health-care associated infections. HELICS, during a prior phase, has developed a common European protocol for hospital-wide prevalence surveys. However, this common protocol does not appear to have been used or promoted.

Technical performance of IPSE WP4 (HELICS network) & WP3 (event warning)

*Please, fill in the summary table and specify the major/minor strengths and major/minor weaknesses regarding the indicators, which are 1) representativeness, 2) timeliness, 3) completeness of reporting, 4) validity of data, 5) quality assurance, and 6) workload. **Please, add any other findings, which you consider relevant and important for the surveillance at the EU level.***

Major strengths in technical performance:

Important IT development has been achieved. Software has been developed to facilitate the creation of hospital and national datasets, data validation and transmission. The free IT tools had been real assets to countries where the surveillance network was about to be set up.

In each participating European country (including MS, EEA/EFTA countr., Accession/candidate countr.), a national contact point has been identified.

Regarding the number of participating countries and hospitals, the representativeness of the network has gradually strengthened. Currently only two MS have no plans to participate in any of the surveillance activities (SSI or

ICU-acquired infections).

Minor strengths in technical performance:

A European validation project is under development in order to assess the sensitivity and specificity of the HELICS surveillance.

Providing the communication structure for the rapid identification, recognition and early warning of NI event of particular public health importance in collaboration with EARSS (EARSS-ibis). Unfortunately, this system is not being used by the national networks members at the moment..

Major weaknesses in technical performance:

The methods of data collection on nosocomial infections (e.g. electronic / systematic medical journal review / laboratory sentinel based, performed by ward personnel / infection control personnel etc.) have not been prescribed in a standardised way. It is acknowledged that hospital organisations vary across Europe, but promoting a standard method would be pivotal regarding the overall quality, validity and comparability of data.

Although efforts were done to harmonise existing national protocols with the HELICS protocols, completeness of data varies fairly between countries and the comparability of results is still an issue.

Minor weaknesses in technical performance:

Timeliness of data has been problematic both at national and international level: different timing and length of data collection in the participating countries; delay in feeding back results to the participating countries.

In 2006, some countries have temporarily suspended the surveillance activity.

Other findings:

A common EU protocol for HCAI prevalence survey had been developed in a prior phase of HELICS. The current HELICS part of IPSE did not include works on this issue and apparently there was no follow up. This protocol, apparently, has not been used by members states when doing national prevalence surveys.

Fulfilment of the surveillance objectives and outputs (as defined in the grant agreement)

Please, comment on the summary results of achieved outputs. What are the strengths and weaknesses of outputs? (Consider e.g. timeliness, content etc.) Please, identify and assess how the objectives provide added value for the EU-wide surveillance. What are the strengths of the surveillance from the

European point of view? Please, add any other findings, which you consider relevant and important for the surveillance at the EU level.

The anticipated output of WP4 as defined in the grant agreement was "two regional seminars and two joint IPSE/ESCMID modules on the HELICS surveillance methodology of nosocomial infections and organisation of infection control". The four seminars were delivered and one additional module has been organized based on request from the countries. The programme of the seminars reflects the objectives, however minutes are only available for one seminar. The assessment of the impact of the courses in terms of progress of national infection control programmes is not yet delivered (delivery date: 01/01/2008).

The anticipated deliverables for WP3 were:

- An internet-based early warning tool for nosocomial events integrated in EARSS-ibis (NEWS). Based on the hub visit and demonstration done this has been achieved.
- Report on early warning of nosocomial events. As for EARSS, the tool has not been used for the reporting of such events.

Surveillance objectives providing added EU value:

The surveillance objectives are defined in the SOPs:

The HELICS programme targets the establishment of a European reference data set on the incidence and risks of SSI and ICU-acquired infections over time to guide preventive activities and stimulate comparative-evaluative approaches.

The IPSE WP4 actively supports the use of common HELICS surveillance methodology in European hospitals, thus fosters the comparability and interpretation of reported national rates of SSI and ICU-acquired infections.

Other findings:

The NEWS software of WP3 is functional but it is not used to report events. Even if countries would report, there is not yet a specific European response capacity behind.

Conclusions

*Please, describe what surveillance activities of the surveillance network are well established and are functioning well. Please, describe what activities are in the active development phase. **Please, add any other conclusions, which you consider relevant and important for the surveillance at the EU level.***

Well established and well functioning surveillance activities:

The most frequently included type of surgical intervention in the national surveillance systems for surgical site infections is prosthetic hip replacement. All participating countries in the HELICS SSI surveillance send data on this surgical procedure.

Surveillance activities that are in the development phase:

IPSE WP4 has supported the development of national surveillance of nosocomial infections in several countries. This is particularly important in the new MS and Accession/candidate countries, where pilot studies are ongoing or planned. To enhance future surveillance, the network should focus on hospital discharge information, the recommended data for risk stratification, more detailed ICD-9 or comparable procedure codes, and microbiological results.

A project has been initiated to validate in a standard way the data collected in HELICS-participant countries.

Other conclusions:

The IPSE WP4 (HELICS network) has a potential role to contribute to the monitoring of the quality of health care in the EU. As a prerequisite, the participating countries have to be able to provide complete and valid data to the network.

In WP3, the established IT tool available to all hospitals and interested parties for reporting unusual and/or potentially important nosocomial events has high relevance in patient safety. However, a clear implementation strategy is still warranted to engage the member states to use the system and relate it to national and/or European response authorities.