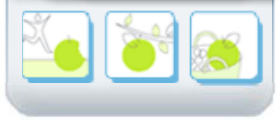

Funded projects 2004
Strand 1
Strand 2
Strand 3

Project funded in 2004 - Strand 2: Health Threats

IPSE - Improving Patient Safety in Europe

Description - Financing - Outcomes - More info

Description

Action
Enhancing the capability of responding rapidly and in a co-ordinated fashion to health threats

Area of activity
Surveillance

Summary
The IPSE proposal "Improving Patient Safety in Europe" has been inspired by DG SANCO's Work Plan for 2004. A group of international and national institutions have endeavoured to work within existing networks to improve quality and comparability of data and extend their scope and coverage. The resultant synergy should also help to make these networks more manageable. Our major goal is then to reduce the burden of healthcare associated infection (HAIs) and their related threats of Antimicrobial resistance (AMR). We will interact in all we do with ECDC and the related networks/groups of WHO, ESCMID, EARSS, ESAC and EHART-NET when awarded. IPSE will
(a) establish a consensus Infection Control Professional core curriculum and inventory of courses,
(b) produce deliverables that will provide managers and health services staff with timely and periodic information and indicators of the morbidity of HAI,
(c) make available evidence-based guidelines and educational tools to better and effectively manage the risk of HAI and AMR.
Early detection and response to nosocomial outbreaks of known or new pathogens, including multiple resistant organisms will be progressed (2002/77/EC). We will foster the containment of the emergence and spread of multiple resistant organisms in the ICU through an integrated surveillance programme and provide educational support to new HAI surveillance networks. Finally we will establish a consensus on surveillance of healthcare-associated infections in EU nursing homes.

More info...

Description - Financing - Outcomes - More info

Financing

Leader organisation
UNIVERSITE CLAUDE BERNARD LYON 1
Laboratoire d'Epidémiologie et Santé Publique
8, Avenue Rockefeller
69373 LYON Cedex 08
FRANCE
Tel: +33/04-78.77.70.00
Fax: +33/04-78.77.71.58
E-mail: www@univ-lyon1.fr
Web site: http://www.univ-lyon1.fr

Contact Person
Jacques FABRY
Tel: +33/4-78.77.75.99
Fax: +33/4-78.00.93.86
E-mail: helics@adm.univ-lyon1.fr

Associated beneficiaries
- World Health Organization (Communicable Diseases Surveillance and Response) (SWITZERLAND)
- Rijksinstituut Voor Volksgezondheid En Milieu (National Institute for Public Health and the Environment)
established in Bilthoven (THE NETHERLANDS)
- L'Institut scientifique de Santé publique
established in Brussels (BELGIUM)
- Smittskyddsinstitutet (Swedish Institute from Infectious Disease Control)
established in Solna (SWEDEN)
- Universitätsklinikum Freiburg
established in Freiburg (GERMANY)
- Regione Emilia-Romagna Agenzia Sanitaria Regionale
established in Bologna (ITALY)
- The European Society of Clinical Microbiology and Infectious Diseases
established in Taufkirchen (GERMANY)
- Health Protection Agency
established in London (UNITED KINGDOM)

- Higienos Institutas (Institute of Hygiene)
established in Vilnius (LITHUANIA)
- Institut za varovanje zdravja Republike Slovenije (Institute of Public Health of the Republic Slovenia)
established in Ljubljana (SLOVENIA)
- Υπουργείο Υγείας της Κυπριακής Δημοκρατίας - Ιατρικές Υπηρεσίες και Υπηρεσίες Δημόσιας Υγείας (Ministry of Health of the Republic of Cyprus Medical and Public Health Services)
established in Nicosia (CYPRUS)
- Státní Zdravotní Ústav (National Institute of Public Health)
established in Trenčín (SLOVAKIA)
- Fundacio Institut de Recerca Hospital Universitari Vall Hebron
established in Barcelona (SPAIN)
- Centre hospitalier de Luxembourg
established in Luxembourg (LUXEMBOURG)
- Charité - Universitätsmedizin Berlin
established in Berlin (GERMANY)
- Medizinische Universität Wien
established in Vienna (AUSTRIA)
- Velindre Nhs Trust
established in Cardiff (UNITED KINGDOM)

Starting date and duration of project	**Total cost**
- 01/01/2005	1.702.422,03 €
	Subsidy from the Commission
- 36 months	1.006.916,40 €

Description - Financing - Outcomes - More info

Outcomes

Results to be achieved
Work package 1: European training for infection control doctors & nurses in connection with ESCMID
Training of IC physicians and nurses in the EU does not meet common standards. The professional status of the IC staff is well defined in some countries (e.g. by law, with specific governmental funding) but remains unclear in other MS. These differences result in very heterogeneous capacities of the healthcare institutions to deal with prevention and control of HAI.
This work package will document existing differences between member states with regard to the professional status of IC staff and define a common core curriculum for the training of IC staff in Europe.

Work package 2: European standards & indicators for Public Health surveillance and technical guidelines for the control of HAI & AMR
The general outline of the Work Package is to review existing guidelines, standards and indicators from Infection Control programs in the European Union and provide a manual of international standards for both HAI and AMR including the following specific results:
(a) develop and disseminate indicators for national and international measurement of occurrence and control capabilities of HAI and AMR.
(b) develop guidelines for including precautions for specific pathogens (e.g. MRSA, multi-resistant TB, SARS) or routes of transmission in hospitals.
(c) develop baseline standard (routine) precautions for healthcare settings outside hospitals.§
(d) define of a set of related (resources/processes/outcome) indicators and inclusion on a WHO internet-based information system including a geographical interface (Global Atlas of Diseases, http://globalatlas.who.int/). The implementation of these methods and indicators in countries outside the EU will thus be promoted.
The guidelines on infection control practices will be distributed (see also WP8) and will be designed so that they can serve as useful tools for the ECDC to tackle IC-control related problems in healthcare institutions. Educational material (slide show, case studies) on these recommendations will also be produced in order to facilitate their integration in educational seminars, organised regionally and also co-organised with ESCMID (see WP4).

Work package 3: Event warning and rapid exchange on NI & AMR
r dynamics that would remain undetected at the national level. This will be of particular interest to the ECDC, which would eventually be the most appropriate hosting institute for such a system and can interact more directly with DG SANCO. The Internet-based information system will be made available to all hospitals and interested parties. In any case, events submitted to the system will first be treated as confidential and only be further transmitted after validation. See also the announcement of EARSS-ibis on the EARSS website at http://www.earss.rivm.nl.

Work package 4: Technical support for sustaining and extending of HELICS surveillance of nosocomial infections and control of HAI & AMR
A training programme set up in collaboration with HELICS, WHO, ESCMID (ESCGNI and ESGARS), ESICM (Infection section), EARSS and other work packages (WP5,WP1,WP2) will respond to the needs of the numerous countries organising hospital networks for surveillance and control of nosocomial infections, antibiotic resistance or prevalence surveys. The first sessions focus on surveillance of nosocomial infections according to HELICS methodology (surgical site infections [SSI] and ICU-acquired infections), as well as on the methodology for surveillance of AMR in the ICU as developed under WP5. For the latter, consistency will be sought will EARSS definitions of AMR. Training on HELICS case definitions of nosocomial infections and surveillance methodology will use training material previously developed by HELICS (coordinated by HPA-Colindale) and will involve invited experts from the ESGNI and ESGARS workgroups of ESCMID as well

as from the Infection Section of the European Society of Intensive Care Medicine (ESICM).
The second sessions will focus on the organisation of infection control, including topics such as minimal standards (output of WP2), continuing education of infection control staff (output of WP1) and indicators of process, structures and resources.
In order to sustain the development and implementation of nosocomial infection surveillance, the HELICS data analysis centre (IPH Brussels) will provide continuing technical assistance to countries implementing NI surveillance, collect yearly data from EU member states according to HELICS-defined procedures and ensure the continuation of the data analysis at the EU level of the minimal data set of nosocomial infections defined in the HELICS protocols. A yearly report will be produced by HELICS on SSI en ICU surveillance. The technical assistance will also include further support of the HELICSwin application for data entering at the hospital level as well as the data analysis tools for coordinating centres of national/regional surveillance networks.
2x1 regional seminars will be organised and will primarily target EU countries requiring technical support. 2x1 seminars will be co-organised with ESCMID study groups ESGNI and ESGARS, e.g. as standalone or pre-ECCMID postgraduate educational course.
The regional seminars will take place in Vienna, hosted by the Austrian Federal Ministry of Health and Women. The project will pay for the attendance of one person at the regional seminars from each of the countries identified as requiring technical support.
The seminars (e.g. postgraduate educational courses) co-organised with ESCMID (ESGNI/ESGARS) will be sustained by 2x5 attendance grants from ESCMID. They will benefit from the ESCMID communication channels (e.g. ECCMID announcements, website).
The educational material used at the courses as well as the report including minutes of the 4 seminars, an overview of the course content, and an assessment of the impact of the courses in terms of progress of national IC programmes will be made available on the IPSE website.
The annual reports on the surveillance of ICU-acquired infections and surgical site infections including standard analysis of the minimal data set and reference tables for inter-hospital comparisons of stratified or risk-adjusted rates, will be published on the HELICS website which will be accessible through the IPSE website (link).
WHO and EARSS may also contribute in the organisation of these courses through their large network of contacts and experts in the field, in the promotion of the courses, and in the distribution of the educational material.

Work package 5: Improving surveillance and controlling AB resistance in ICU
- Implementation of a web-based program, developed by ICU-STRAMA (http://www4.smittskyddsinstitutet.se /IvaStrama) , for the coordinated collection of information on ICU-structure, IC-practices, AB-policies, AB-use, AB-resistance (AB-R), in participating ICUs.
- Understanding the value systems that govern decisions of antimicrobial therapy in the ICUs in different countries in the European Union and Candidate Countries. (seminars)
- Reviewing guidelines for antibiotic use and IC for prevention of AB-R in the ICUs. (Additional questionnaires should be developed).
- Establishing of the best practice as regards to AB-policy and hygiene interventions which may vary between and within ICUs and will certainly vary over time, but as this is a long-term project, it will allow continuous revision in the struggle to control AB-R. (seminars).
- Defining more appropriate use of AB and improved quality of hospital hygiene aiming to decreased occurrence of AB-R bacteria in ICUs.
The standard protocol for web-based data collection on AB-R and related indicators in the ICU will be included in the course program of WP4 and taught to the attendants of the seminars.
The EU database on AB-R surveillance in the ICU will be available on the web for analysis and feedback using the tool.
The report on antimicrobial resistance in the ICU (descriptive data analysis) will be published on the website and distributed widely as defined above.
Results including best practices guidelines (developed in collaboration with WP2) will also be presented at scientific meetings and in Medical Journals.
The strategy for development will be through the EARSS and ICU HELICS contacts. Country representatives will be invited to participate in the development process to ensure that a representative coverage of ICUs are involved and that the work is fit for the purpose in each of the countries. The use of the EARSS and ICU HELICS contacts will ensure that coverage of the greatest number of hospitals in each member state is achieved.

Work package 6: Providing complementary tools for the study and control of AMR in ICUs
The endemic/hyperendemic situation in particular ICU's with resistance problems (>75% percentile of ICU's from each country) will be described. The major objective will be the definition of resistant micro organisms /resistant genes constantly present at a high incidence and/or prevalence rate affecting all admitted patients of a specific hospital ward a constant resistance equilibrium.
- To describe the epidemiological relationship between bacterial resistance in ICUs and the community.
- To estimate the extent of the import and export of resistant bacteria from and to the community (e.g. nursing homes).
- The project will focus on the subset of outlier ICU's with high resistance rates for selected pathogens (>75% percentile of ICU's from member states).
- To provide a presumptive reasoning for increased resistance rates by analysing the ICU-based genodiversity of the respective resistant pathogen and the antimicrobial consumption rates.
- Feedback of the relevant information to the participating ICUs and the national surveillance centres.
In this work package, additional tools will be developed for a more in-depth diagnosis of the AMR problem in outlier ICUs.
- Protocol for patient data collection and genotyping for the control of AMR in ICUs.
- Creation of EU database on patient characteristics for selected resistant bacteria in the ICU including results of genotyping.
- Report on cross-transmission, import and export of AMR in ICUs.
Many countries are already capable of providing their own genotyping data via national reference centres, but this work wackage will attempt to achieve added value from analysis of comparable genotyping results via a standardised molecular protocol.

The strategy for development will be through the EARSS and ICU HELICS contacts. Country representatives will be invited to participate in the development process to ensure that a representative coverage of ICUs are involved and that the work is fit for the purpose in each of the countries. The use of the EARSS and ICU HELICS contacts in this way will ensure that a complete EU coverage is achieved.
The development of the results will be through the EARRS and ICU HELICS contacts, and beyond to scientific, professional societies and academic institutions.

Work package 7: Feasibility study of surveillance of HAI in European nursing homes of European member states
To improve infection surveillance and control activities in European nursing homes.
The growing importance of nursing homes in EC and their role in the international spread of healthcare associated - often multiresistant - pathogens, highlights the need of enhancing IC efforts in this setting. Surveillance of HAI in European NH is not widespread; moreover, no agreement exists at the European level regarding preferred methods for the surveillance of infections in this setting as well as the criteria to be used for defining infections. In the last few years, some European countries have gained experience in this field by carrying out repeated prevalence surveys (Norway; Emilia Romagna region, Italy) or audit programs of IC activities (England), but no European network covering member states, aimed at exchanging experiences and comparing results achieved, exists.
One of the main results of this work package will be to set up for the first time a network in the EU of experts and other contact persons concerned with the problem of IC and hygiene at the EU level. Therefore, it will be a first step in what will certainly be a long and difficult process towards the improvement of IC in nursing homes. The main reason for this being that most national PH authorities have failed to invest sufficiently in assuring that the structures needed for the appropriate control of HAI and AMR in nursing homes are in place. The report summarising the systems of care and IC activities in European nursing homes, the existing experiences for the surveillance of HAI in NH and their characteristics and the proposal for an harmonised protocol for the surveillance of HAI in European nursing homes will be widely distributed. In addition, the report will be widely distributed to the nursing home community by the national contact persons and results will be presented at specialised meetings and conferences.

Work package 8: Dissemination
The Dissemination work package is provided as a support to all other work packages to ensure that the objectives of the proposed project are met. Linking the communication of results to the ECCMID conferences will ensure a wide publicity for the project through ESCMID communication channels (conference announcements etc.).

Work package 9: Project Management
This work package is linked to all objectives of this proposal. The Project Management function is provided as a support to all other work packages to ensure that the objectives of the project are met.

Description - **Financing** - **Outcomes** - **More info**

More info

Statement of project aim(s) and objectives
Specific Objectives
Oo. Identifying a pool of surveillance methods and IC measures which are considered the minimum standard to be achieved in each country, regardless of its level of development.
This is the basis for developing evidence-based recommendations, establishing a core curriculum for training and identifying indicators for monitoring IC.

O1. Improving professional capabilities and monitoring achievement & impact.
Evidence-based recommendations and educational materials are required for extending the control of HAI and AMR, as is the establishment of a core curriculum for the training of IC practitioners in Europe. A set of EU-WHO indicators (on morbidity and mortality, resources, process & impact) will allow the monitoring of IC efforts at hospital, national and European levels. Information will be provided on web based platforms, including Geographical Information Systems (GIS), and contribute to the advocacy and public information on HAI.

O2. Fostering early warning and rapid exchanges of information.
Even in countries with a national NI surveillance network, important nosocomial epidemics may remain undetected at the regional/national level due to the lack of a system for the rapid dissemination of information of unusual and/or potentially important nosocomial events. In close collaboration with EARSS-ibis, a standardized internet-based nosocomial event information system that can be implemented at the national/regional level will be developed. This system will provide national/regional professionals with timely information and allow them to respond adequately to threats regarding infectious diseases and control in hospitals and facilitate information exchange with the Commission and the ECDC (EWRS). In addition, the centralisation of nosocomial events at the EU-level (RIVM/EARSS-ibis) may identify cross-border dynamics that would remain undetected at the national level.

O3. Supporting the development of IC in countries which require technical support.
the EU and beyond.

O4. Improving surveillance and controlling AB resistance in ICU.
The important challenge of integrating the surveillance of infections, bacterial isolates and AB prescriptions will be addressed via a collaboration of STRAMA, SARI, HELICS, EARSS. It aims to achieve a parallel improvement in the use of AB and in hygienic precautions in the ICU setting.

More specifically, the objectives are:

- To understand the value systems that govern decisions of antimicrobial therapy in the ICUs in different EU Member States.
- To review guidelines for antibiotic use and IC for prevention of AB-R in the ICUs.
- To establish the best practice as regards to AB policy and hygiene interventions which may vary between and within ICUs and will certainly vary over time
- To foster more appropriate use of AB and improved quality of hospital hygiene leading to decreased occurrence of AB-R bacteria in ICUs.

O5. To evaluate the development of IC in nursing homes
With the increasing life expectancy in EU, a growing number of its inhabitants are living in nursing homes where they are exposed to potential cross-transmission of increasingly resistant micro-organisms. The frail health status of the elderly makes them more vulnerable to infections, that are more likely to be caused by multiresistant micro-organisms if the patients were previously colonized by cross-contamination and antibiotic use. Moreover, nursing home residents are also frequently hospitalised which more and more results in the import of multiresistant pathogens in hospitals. The inverse is also true (export of hospital strains to nursing homes), and may sometimes result in refusal by the nursing home to readmit a patient known to be colonized by e.g. MRSA. Nursing homes along the border are also important in the cross-border spread of nosocomial pathogens, for instance because foreign nursing homes may be financially more affordable (e.g. French residents in Belgian nursing homes) or provide other advantages to the residents.
Notwithstanding these obvious problems, there has been up to date only few coordinated actions for the improvement of IC and hygiene in this setting, although the need of enhancing IC efforts have become evident. Surveillance of HAI in European NH is rare; no agreement exists at European level regarding the methods preferred for the surveillance of infections in NH as well as the criteria to be used for defining infections. In the last few years, some European countries have gained experience in this field by carrying out repeated prevalence surveys (Norway; Emilia Romagna region-Italy) or audit programs of IC activities (England), but no European network, aimed at exchanging experiences and comparing results achieved, exists.
As a first step towards the improvement of IC and hygiene standards in NH, the objectives of the project are to study the systems of care and IC activities in European nursing homes, the existing experiences for the surveillance of HAI in NH and their characteristics and to propose an harmonised protocol for the surveillance of HAI in European nursing homes.

Methods
Considerable efforts have been made to date in harmonising data on NI and AR in Europe. As a result, large variability in preventive practices and outcomes across countries has become evident. Based on this experience, this project aims at resolving these persisting differences through the following approaches:
- Providing health services with timely information, evidence-based guidelines and educational tools to manage effectively the risk of NI and AR,
- Strengthening the status of professionals involved in IC activities,
- Fostering the control of the emergence and spread of multiple resistant organisms in the ICU through an integrated surveillance programme,
- Monitoring the level of achievement of the NI & AR control programmes.
To achieve these aims, an extended partnership will be created, including EU, WHO, ESCMID, some major public health institutes and EU-supported networks. The project will also address challenges facing the EU at this moment, such as the creation of the ECDC, development and production of health indicators and emerging concerns regarding patient mobility and quality/safety of healthcare.