## Project funded in 2003 - Strand 1: Health Information

Unified Central and Eastern European surveillance/monitoring system for healthcare quality and efficiency indicators CEEQNET (Central and Eastern Europe Quality Network)

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**Description**

**Action**

Improving information and knowledge for the development of public health

**Area of activity**

Performance measurement and monitoring of the healthcare quality and efficiency in Central and Eastern Europe (Slovakia, Czech Rep., Poland, Hungary)

**Summary**

Relevant improvement of quality and efficiency of healthcare in selected institutions, acceptance and development of principles of quality management and Excellence

## Financing

**Leader organisation**

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**Associated beneficiaries**

- National Centre for Quality Assessment in Health Care - established in Poland
- Institute for Health Care System Research, University of Linz – established in Austria
- Center of Public Affairs Studies Foundation, Budapest University of Economic Sciences and Public Administration – established in Hungary
- National Institute of Public Health, Czech Republic – established in Czech Republic
- Semmelweis University, Budapest – established in Hungary

**Starting date and duration of project**

- 01/05/2004
- 26 months

**Total cost**

636,500,00 €

**Subsidy from the Commission**

500,000,00 €

## Outcomes

- Methods of data source standardization enabling the implementation of performance measurement systems.
  This will be disseminated in the form of data standards in printed and electronic form and in the form of application software.
- Design of a multidimensional reference database needed for data management.
  The deliverable will be implemented in the form of technical documentation and in the form of distributed software.
- Design of reporting system based on standardized PQI's (Performance Quality Indicators).
  The deliverable will be distributed in the form of documentation and distributed software.
- Protocol informing about the results of evaluation methods of measurement in the framework of use in collaborating institutions in the pilot phase.
### Statement of project aim(s) and objectives

1. **Starting points:**
   Field of healthcare quality and efficiency improvement is continuously being addressed by all countries. And it's a problem of countries in Central and Eastern Europe as well. One certain aspect is that each country is at a different evolution phase and is searching for appropriate solution. The proposed project offers a unification method for the efforts of four Central European countries in the quest for standardization and harmonization of the measurement methods used for evaluation of healthcare quality and efficiency. All of the collaborating countries have at their own disposal certain volume of data collected for various reasons (but similar in many ways) in the process of providing health care. The project is focused on the proper use of these relevant data sources.

2. **The main aim of the project:**
   Assure - through the proposal realisation and practical evaluation of an information system - conditions for the standardised unified performance measurement of quality and efficiency of healthcare as one of the tools of quality management.

3. **The main project objectives:**
   3.1. Analysis of the conditions of data sources in the collaborating countries and their evaluation for use of performance measurement. Detailed analysis of all measurable facts, their dimensions and their hierarchical levels useful for analytical evaluation of information contained in the data used.

   3.2. Design of an information system assuring:
       - collection and standardization of data and their import into a relational database (ETL process - extraction, transforming, loading procedure)
       - proposal of an efficient relational and multidimensional database
       - proposal of algorithms and computation for obtaining KPIs (Key Performance Indicators)
       - proposal of reporting based on use of standardised key performance indicators
       - proposal of the technological implementation of an information system

   3.3. Design of an information system:
       - import modules
       - relational and multidimensional database
       - software application of a relational multidimensional analysis enabling visualization of the results
       - reporting application focused on key indicators

   3.4. Implementation of information systems in:
       - health institutions participating in the pilot study
       - data and reference centre

   3.5. Full-time system maintenance

   3.6. Evaluation of the usefulness of the proposed solution for quality management according to the principles of the Excellence Model

   3.7. Instrumented framework of institutions from various countries focused on a problem of standardization and unification of performance measurement of the quest towards healthcare quality and efficiency improvement.

### Methods

The method for arriving at the described causes the implementation and practical verification of measurement methods for quality and efficiency of care targeted in the first phase predominantly on acute hospital care. In the participating countries' healthcare systems there is a relatively wide variety of data now usable for this goal. The project will be initially targeted on the analysis of data sources and evaluation of their usability for the above-described end point. We will further devise a method for the data sources standardization, computational algorithms of indicators, and a report system containing standardized and structured indicators.

One of modules of the used method is implementation of a real information system capable of:

   - import and parameterization of data in the framework of the devised dataset
   - crunch the data in relational database fulfilling criteria of JCAHO for performance measurement system in the accreditation process
   - compute and in the form of tables and graphs present values of the computed indicators in a multidimensional system
• evaluate the use of the system in selected pilot institutions bearing in mind that the results of implementation of this method will be a management support according to the principles of the Excellence Model of the European Foundation for Quality Management (EFQM) or the Common assessment framework.
• formation of the central reference database enabling institutions benchmarking in the various national frameworks.
• one of the goals is also formation of standardized information environment (systems) for benchmarking and inclusion of the benchmarking method into the tool box of management instruments for institutions.