

# **Devising and Implementing a Common Framework for WWW Based Standards of Effective Medical Care for Use in Managed Care**

Task Force of the National Board for Medical Standards of the Czech Republic  
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## **What are the results of our effort:**

A standard procedure for the development of the Standards of Effective Medical Care (SEMC) has been structured by the Task Force of the National Board for Medical Standards (NBMS) of the Czech Republic. The process is roughly described in one of the following paragraphs.

In 1998 we have gone through the process of producing and refining a complete structure (form, general outline) acceptable for doctors in the six main medical specialties (internal medicine, surgery, general practice, gynecology and obstetrics, pediatrics and intensive care) for generating formally unified SEMC. We have identified two categories of SEMC (1.. Standard of clinical intervention (e.g. dialysis when certain biochemical parameters are reached), 2. standard of therapeutic plan (e.g. tuberculosis of adults). SEMC outline proposed by our workgroup contains the following main obligatory blocks:

1. Identification data
2. Material, technical and personal epidemiological and legal framework for a standard (this part is necessary, as different frameworks in different countries prohibit the use of the same medical algorithm to arrive at comparable medical outcomes)
3. Input for the process of care
4. The process of care
5. Outcomes (Key performance indicators KPI)
6. Literature

Any materials generated outside of NBMS do not have the authority of the Czech Medical Chamber and Czech Medical Association behind them and cannot be generally accepted by Czech healthcare providers and payers. At the same time guidelines produced in the above mentioned manner assure standard (in our sense of the word meaning effective) medical care, not minimal necessary care, as some of the payers and some governmental authorities have envisaged. As the SEMC is a multi-layer document (best seen in the HTML version), it can be used by care providers as well as management of health facilities, health care payers and state officials, each time as a tool for a different purpose. It is easily accessible through the use of current information technologies and each SEMC can be periodically upgraded to reflect current state of knowledge. Given the strict structure and defining the framework of the process, input criteria and outcomes, we hope that SEMCs will form a key tool in the process of implementing managed care in our country.

## **Mission in the health care sector:**

The National Board for Medical Standards (NBMS) of the Czech Republic is an independent non-governmental joint activity of the Czech Medical Chamber and the Czech Medical Association founded to assist the development, dissemination and implementation of its core product - "Standards of Effective Medical Care" (SEMC). It closely collaborates with the Division of Methodology and Organisation of Health Care of the Czech Ministry of Health.

The SEMC is formed of several parts (input - process - output). The "process" part of the standard is perceived as a evidence-based guideline (consensus-based in the event when no evidence is available, the consensus must be minimally of regional - European scope). Guidelines are developed as annotated algorithms publishable in printed and electronic form. The SEMC introduces defined quantifiers used for estimating the quality of provided health care. When available, the system of SEMC should form the backbone of managed health care in the Czech Republic. The structure of SEMC is fully compatible with ISO 9000 norms of quality assurance used by countries of the European Union and can be used for cross-linking with technical and other norms applicable in health care. At the same time this ongoing effort is aimed to integrate the Czech doctors and health personnel into the framework of European health care providers. The Czech Medical Chamber (CMC) was founded by Act No. 220/1991 of the Czech National Assembly on 8 May, 1991 as a professional apolitical self-governing organization with obligatory membership for all doctors practicing in the Czech Republic. According to the Act the CMC guarantees the professional and ethical conduct of its members in compliance with the law. The Czech Medical Association of J.E.Purkyne is a voluntary

medical organization (member of the World Medical Association) consisting of over 150 individual medical societies.

## **Overview of guideline development, dissemination and implementation at the Czech national level**

In 1994 the now in many parts of the medical profession mainly private providers realized the need for evidence-based auto-regulation as opposed to the inherited central directive model from the socialist times. First steps directed towards the evaluation of the current state of art of the medical guidelines in other countries of the World were made. Realizing the potential of information technologies we attended the SSHC in Prague 1992 (Use of hypertext for medical data management) and Barcelona 1996 (Role of the Czech Medical Chamber in Czech health care). We have always perceived medical guidelines as a part of the process of implementation of managed care. Starting from 1996 the CMC constantly sought collaboration with the Ministry of Health of the Czech Republic. Until early 1998, although we had a reasonable support of the Parliament and Senate, we were unsuccessful. Mainly because of the quick successive changes of the Minister of Health (7 in the span of the last 9 years). The process of standardization in the health care system was finally started by the former Ministress of Health and some of her co-workers. With fear that the development of guidelines may be blocked again with new changes at the MOH, the NBMS was founded, opted and received grant funding and with the inherited know-how of the CMC and human resources of the CMC and CMS JEP now is involved in developing guidelines and SEMCs. We are also collaborating with interested people and organizations in the Poland, Hungary, Germany and Moldavia. At present we have streamlined the process of guidelines development. The NBMS is converting 20 medical guidelines into a SEMCs and other 150 guidelines into a standard form of an annotated algorithm. The subcommittees of the NBMS allocate each standard-to-be to a task group. Members of this group are selected according to their theoretical knowledge (medical publications in the respective field), practical skills (evaluated by the frequency of treating respective disorders) and computer literacy (need for quick and effective communication). Each set of authors chooses reviewers and collaborates with them on their respective task from the beginning of each guideline. Emphasis is made on selecting reviewers from medical fields which longitudinally traverse the worked problem (e.g. when the guideline for laryngitis and epiglottitis is structured by family doctors, ORL doctors are selected as reviewers and the group works together). We are aiming to melt down a guideline into 10 sheets of A4 format including one or a maximum of two A4 pages of a flow-chart algorithm of standard symbols and pages including annotations with respect to this algorithm and citations of relevant literature or WWW sources used). This raw work is reviewed by the NBMS and if this finds a reason for a broader internal review a new group of reviewers is named. When this is finished, the preliminary (beta) version of the guideline or SEMC is "cleared" and published on the WWW pages of the CMC (currently <http://www.mediquali.cz> and several mirror sites <http://www.Mednet.cz>) for a public (only medical professionals) evaluation and critique. When relevant views of reviewing doctors are worked into the guideline, the NBMS processes the guideline into a consistent publishable form and will disseminate the product in form of a hypertext document on it's WWW page and as printed sheets and CD-ROM's for doctors not having access to the Web yet.

The funding we had available (Grant from the Internal Grant Agency of the Czech Republic 50661/98 until Dec. 31, 1998) prohibits us at present into finishing more than the methodology of the process of constructing SEMCs, the mentioned 20 SEMCs and 150 guidelines. At the same time we are not able to continue systemic work on the human-computer interface and detailed work on continuous revision and upgrading of existing Standards. At present the NBMS may declare a limit of usability of a standard in the interval of 1 to a maximum of 3 years. The guidelines will also form a part of continuous medical education of Czech doctors. The ultimate goal of the electronic Standards of Effective Medical Care is the implementation of standards on the level of the individual patient. This would mean the use of the flowchart of the Standard tied to the health insurance number of individual patient. Filing some of the data about the patient in this way and keeping the data in a central register would save the need for repetitive taking of the medical history of the patient and at the same time a database of health indicators would be generated in a practically effortless way enabling health care planning and managing.

Further materials of the CMC, NBMS: may be found mostly in Czech language at <http://www.mediquali.cz>

## ***Benefits and problems of compliance with guidelines are perceived by physicians:***

### **Benefits:**

Guidelines present a boiled down essence of the current state of the art of the respective medical problem prepared by knowledgeable professionals. As the basis is formed by a thorough review of evidence based literature, guidelines relieve the doctor from the task of constant surveillance of general literature in the whole breadth of medicine. He can (if he chooses) focus only on things of special interest to him. At the same time guidelines represent convenient means of continuing medical education requiring minimal effort from the doctor.

### **Problems:**

Main problems come from the fact, that in some instances SEMCs tend to restrict the frequency or even some forms of service provided by some doctors (usually overtreatment), done for financial reasons or out of pure habit. Many of these will declare guidelines as restriction of their liberty to practice the art of medicine. It is usually hard to explain that by showing an effective way of treating more usual situations, the doctor will eventually have more time to care for the uncommon ones - thus really bringing in his expertise and wisdom or skills.

## ***To make SEMCs useful tools in health care delivery several potential areas should be targeted***

1. International joint effort on development, dissemination and continuous upgrading of the general "structure" (outline) of SEMCs, once a consensus about the general structure and content of a SEMC for each medical specialty is reached.
2. The use of existing guidelines for devising "Standards of effective medical care" for each respective country or region. Assure the possibility of using these in real time when working with the patient (online access). Development and use of a secure medical network for data access, dissemination and data warehousing.
3. Approach governmental bodies and/or international organizations and medical care payers (insurance companies). Lobby to allocate a part of the available health care budget of each country (e.g. 1 to 3%) for medical informatics and explain, that if used properly, this will lead to greater availability, higher quality and lower cost of the health care as such.