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EVALUATION MODELS OF EFFICIENCY AND QUALITY OF BED CARE IN HOSPITALS

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Preface

This monograph aims to address the most important aspects of economics in relation to public sector organizations, which include economy, efficiency and effectiveness. Furthermore, as trends in management have shown that organizational performance cannot be evaluated without considering its relationship to quality and equity, especially in the case of public services, the monograph takes account of these areas and their mutual relationships. The content of this monograph deals with chosen processes, tools and methods related to the efficiency and quality of acute bed care providers in the Czech Republic.

This research was one of the goals of the SGS project (SP2014/74, Models of Evaluation of Efficiency and Quality of In-patient Care in Hospitals) undertaken at the Faculty of Economics, VŠB-Technical University of Ostrava and was supported by the Operational Programme Education for Competitiveness – Project No. CZ.1.07/2.3.00/20.0296.

This monograph is intended for masters and PhD students in economically oriented fields and provides a general theoretical context for this topic. It is also intended for professionals involved in health care and aims to address in particular the management of health care facilities (especially at the hospital level), health insurance companies, central state authorities and local government.

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List of Symbols and Abbreviations

AP-DRG	All Patient Diagnosis Related Group
BCC	Banker, Charnes and Cooper
CBA	Cost Benefit Analysis
CC	Complication & Comorbidity
CCR	Charnes, Cooper and Rhodes
CRS	Constant Returns to Scale
CEA	Cost-Effectiveness Analysis
CMA	Cost Minimisation Analysis
CR	Czech Republic
CUA	Cost Utility Analysis
CZK	Czech crown
CZSO	Czech Statistical Office
DALY	Disability-Adjusted Life Year
DEA	Data Envelopment Analysis
DRG	Diagnosis Related Group
EFQM	The European Foundation for Quality Management
FDH	Free Disposable Hull
GHIC CR	General Health Insurance Company of the Czech Republic
GIS	Geographic Information System
GP	General practitioner
HeaLY	Healthy Life Year
HRG	Heathcare Resource Group
HTA	Health Technology Assessment
ICD	International Statistical Classification of Diseases and Related Health Problems
ICT	Information and Communication Technologies
INAHTA	International Network of Agencies for Health Technology Assessment
IR-DRG	International Refined Diagnosis Related Group
IHIS CR	Institute of Health Information and Statistics ofthe Czech Republic
ISO	International Organization for Standardization

JCI	Joint Commission International
MDC	Major Diagnostic Categories
MFL	Master Facility List
MH	Ministry of Health of the Czech Republic
MI	Malmquist Productivity Index
mill.	million
M2SFCA	Modified Two-step Floating Catchment Area
NIAHO^{SM}	National Integrated Acreditacion for Healthcare Organisation
NICHSR	National Information Center on Health Services Research and Health Care Technology
NRC	National Reference Center
OECD	The Organisation for Economic Co-operation and Development
OOP	Out-of-pocket (payments)
o. w.	of which
PDCA	Plan, Do, Check, Action
PSP	Chamber of Deputies Parliament of the Czech Republic
QALY	Quality-Adjusted Life Year
QPPV	The Quality from the Patients´Point of View
SARA	Service Accessibility and Readiness Assessment
SHI	Social Health Insurance
TQM	Total Quality Management
TwiST	Time Without Symptoms or Toxicity
USA	United State of America
VRS	Variable Returns to Scale
VZP ČR	General Health Insurnace Company of the Czech Republic
WHO	World Health Organization

Chapter 1

Introduction

The quality of health of public is conditioned by many determinants, including advanced and efficient health system set from different forms of healthcare. Acute bed care is one of these forms, which is realized in the conditions of the Czech Republic by legitimate providers of different types of legal status. Economical results and efficiency especially and productivity of providers of acute bed care are usual professional political topics. One of the main questions is still optimizing of the number of beds, availability of bed care, necessary period of patients' hospitalization, quality and safety of healthcare, professionalism of staff, technological and technical equipment of providers, financing of demanding curing processes and capital investments and so forth.

The subject of closer research were providers of acute bed care, who, besides other domains, provide in their facilities also acute bed care in basic medicine branches – internal, surgery, gynaecology and paediatrics. The monograph gives a special attention to the modelling of efficiency and productivity of providers of acute bed care on the basis of chosen input and output variables. Models of efficiency are set on possibilities of non-parametrical approaches using analysis of envelopment of data such as Data Envelopment Analysis model and Free Disposable Hull model. And models of productivity come from the possibilities of Malmquist Productivity Index.

Accessibility, which is considered as the basic parameter of quality public service, was modelled besides efficiency and productivity of hereinbefore mentioned providers. Map models of spatial accessibility of providers of acute bed care, in the meaning of accessibility time in traffic, on the principals of net analysis with an ESRI ArcGIS 10.0 software are presented in this monograph.

The aim of the monograph is construction and evaluation of benefits and limits of models of efficiency, productivity and accessibility of providers of acute bed care in the conditions of the Czech Republic.

Models of efficiency, productivity and accessibility are constructed with the use of possibility of hereinbefore mentioned methods of multi-criteria decision making and also based on proven data obtained from the IHIS CR database, which are valid for the year 2012 and in the case of productivity also for 2011.

To secure a context of modelled problematic in the sense of set goal, a part of monograph is given to the chosen theoretical problematic, which resides in (i) the description of institutional economical conditions and state of the hospital bed care in the Czech Republic; (ii) synthesis of methods and concepts of evaluation of performance and quality of public services with the aim on health services; (iii) determination of vice-criteria methods of evaluation of efficiency of production units.

The monograph is structured into ten chapters, which are completed with functional appendixes. Processing of sole topics reflects former and present pieces of knowledge published in domestic and foreign literature, especially in the form of scientific articles.

Chapter 2

Introduction to the Domain of Hospital Health Care

Healthcare and health systems respond to inhabitants' health levels, a basic need met not only at the national level, but also crucially at the international level. A person's health and the health of society are fundamental determinants in the field of health services. The system of health services provides a picture of state health policy and consequently regional health policy. Health policy in the Czech Republic, as in other democratic countries, has been determined by historical developments, the long-running formation of the population's way of life and also current socio-economic conditions.

The aim of a country's health policy is, above all, to promote activities which will lead to an improvement in inhabitants' health; the tools aimed at achieving this goal – the actual content of health policy – are intended to have an influence on the determinants of health, i.e. the causes and conditions influencing the state of health of the population, creating a particular picture of inhabitants' health and illnesses. The fundamental tool of health policy is legislation, which defines the principles, conditions and requirements of health care, including acute hospital care.

Hospitals are among several significant institutions providing health services. Hospitals have specific characteristics and in addition to their main objective of healthcare provision, they fulfil other functions, such as health education and promotion activities and the like. The institutional structure of hospital bed care in the Czech Republic has been the subject of organizational, legal changes, which can be designated a consequence of reforms in public administration and health services in the years 2003–2012. From the perspective of hospitals and their legal forms, changes occurred in the legal rules and duties of organizations and also the organizations as a whole, affecting their financing and foundations and sometimes resulting in the dissolution of organizations.

Concerning the number of the acute care beds, a significant change occurred during the years monitored (2003–2012). Not only was there a decrease in the number of acute care beds, but also a decrease in the proportion of the total number

of beds in hospitals taking place over a long time. At the same time, since 2003, there has been an increase in bed occupancy in hospitals for all healthcare providers.

2.1 Basic Legislative Framework of Healthcare Provision

The basic legislative framework, which specifies the rules for providing health care and also guarantees the patients' and other people's rights and duties in healthcare provision in the Czech Republic, is illustrated in Figure 2–1. This figure presents the constitutional laws, international conventions, specific laws concerning healthcare provision and selected general legal regulations related to the performance of the medical profession; it does not comprise a complete enumeration of the laws, but refers especially to the legal status of healthcare provision in the Czech Republic.

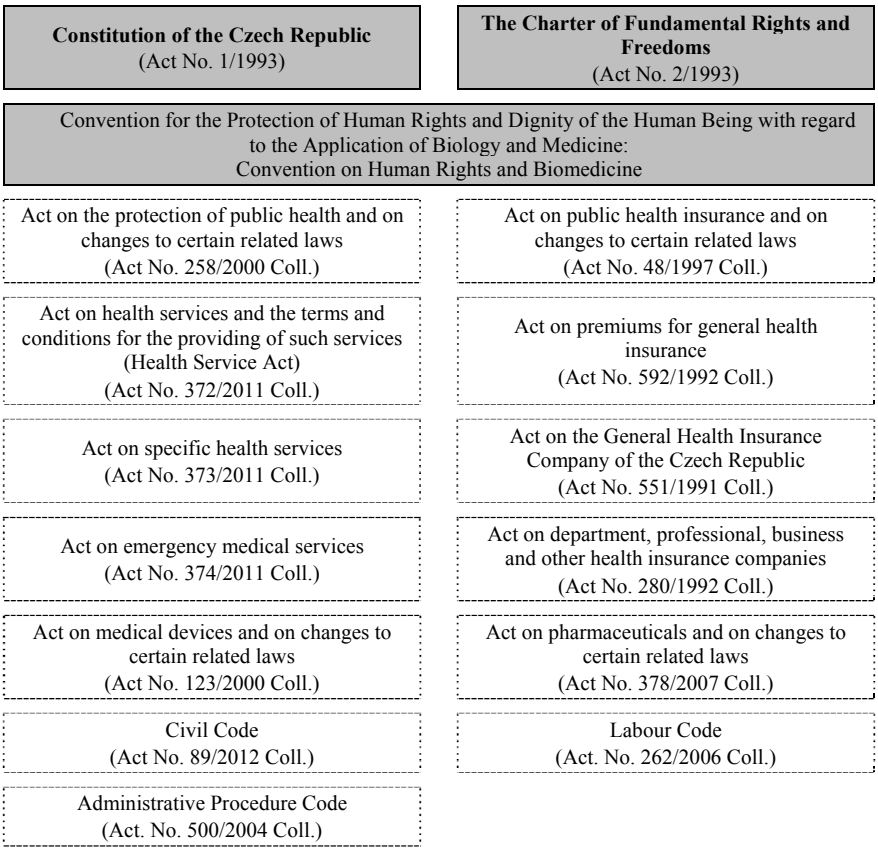

Figure 2–1 An overview of the system of basic legal regulations in health services effective to 31 August 2014

2.2 Definition and Principles of Health Care

The most frequently quoted definition of health is that provided by the World Health Organization (WHO) in the *Preamble to the Constitution*, signed on 22 July 1946 by 61 states and entering into force on 7 April 1948: *Health is a state of complete physical, mental and social well-being and not merely the absence of disease or infirmity*. However, there has been frequent comment on this definition because it rather suggests that health is a certain ideal, one that can be approached but only rarely accomplished (Barták, 2010). The definition of health was subsequently supplemented and made more precise. In the WHO's *Health for All by the Year 2000* programme, a supplementary characteristic of health appeared, namely that: *all people in all countries should have a level of health that will permit them to lead a socially and economically productive life*. The next notable WHO document, called *Health 21* (Health for All in the 21st Century), provides another specification of the meaning of the original definition of health: *the reduction in mortality, morbidity and disability due to detectable disease or disorder, and an increase in the perceived level of health*.

The definition of health contains three basic aspects: mental, physical and social. Mental health, in other words psychological health, also comprises emotional health, referring to intellectual capabilities and the subjective evaluation of actual health (Holčík, 2010). Physical health reflects the absence of illness or disability. Social health concerns the implementation of social roles in society, the development and fulfilment of interpersonal relations and the like. The WHO Health 2020 *European Policy Framework* states: *Good health benefits all sectors and the whole of society – making it a valuable resource. Good health is essential for economic and social development and a vital concern to the lives of every single person, all families and communities. Poor health wastes potential, causes despair and drains resources across all sectors. Enabling people to have control over their health and its determinants strengthens communities and improves lives. Without people's active involvement, many opportunities to promote and protect their health and increase their well-being are lost.* Further to this document, which provides a strategic framework for approaches to improving health, *Health 2020 – the National Strategy for the Protection and Support of Health and Prevention of Disease* was published in the Czech Republic. This document was approved by the Government and the Chamber of Deputies in March 2014. The objective of the National Strategy is the development of effective and long-term sustainable measures for improving the health status of the population.

Council Conclusions on Common Values and Principles in European Union Health Systems state that: *Health is a value in itself. It is also a precondition for economic prosperity. People's health influences economic outcomes in terms of productivity, labour supply, human capital and public spending*. Health also entails significant individual and social values, which enable individuals to develop their human potential and realize primary and secondary needs. Health is

a state concerning the quality of the individual's physical and psychological functions, affected by a whole range of factors.

The basic determinants of health can be defined as personal, social and economical factors and environmental factors; these are variables that influence each other and at the same time significantly affect and determine the state of health of an individual, groups of people and society. The determinants of health are factors that affect an individual's health positively or negatively (Dahlgren and Whitehead, 2007; Barták, 2010; Holčík, 2010; Marková, 2012). Individual determinants of health can be influenced by individual, political or economic decisions. Dahlgren and Whitehead (2007) divide the determinants of health into positive factors (contributing to the maintenance and improvement of the state of health), preventive factors (measures inhibiting the occurrence or persistence of illness or disability) and risk factors (determining the causes of illness).

Holčík (2010) states that the basic determinants of health include genetic factors (dependent, for example on differences between the health of individual sexes, predisposition to illness, inborn developmental defects, etc.), lifestyle (care for one's own health, way of life, individual standard of living, level of physical activity, eating habits, etc.) and the efficiency and quality of health care (standard of health services, availability of health care, development of medicines, etc.). The influence of these determinants on mortality rates and their causes have been measured and quantified by WHO in terms of their contribution to the population's state of health as follows: genetic factors approximately 10%; lifestyle factors approximately 40%; environmental factors approximately 35%; health services approximately 15%. The Commission on Social Determinants of Health was established in 2005 with the aim of drawing attention to the social determinants of health, which are the main cause of poor health and result in unjust differences in the state of health within the framework of individual countries. Such determinants are, for example, unemployment, working conditions and the availability or unavailability of health services. The Commission deals with indicators measuring health inequality and evaluates them both at the level of individual countries and globally. Kebza (2005) adds that real inequalities related to health are mainly the result of differences in living conditions (social, economic, behavioural, psychological), which are not the choice of individuals and which they have little or no opportunities to affect currently at their disposal. Figure 2–2 illustrates the main determinants of health and their mutual relationships.

Turning to illness, rather than health, illness is defined as a detectable health disorder, having its causes, process and consequences, which can be specified and classified in the context of the fact that illness is perceived by most people as a problem (Holčík et al., 2007).

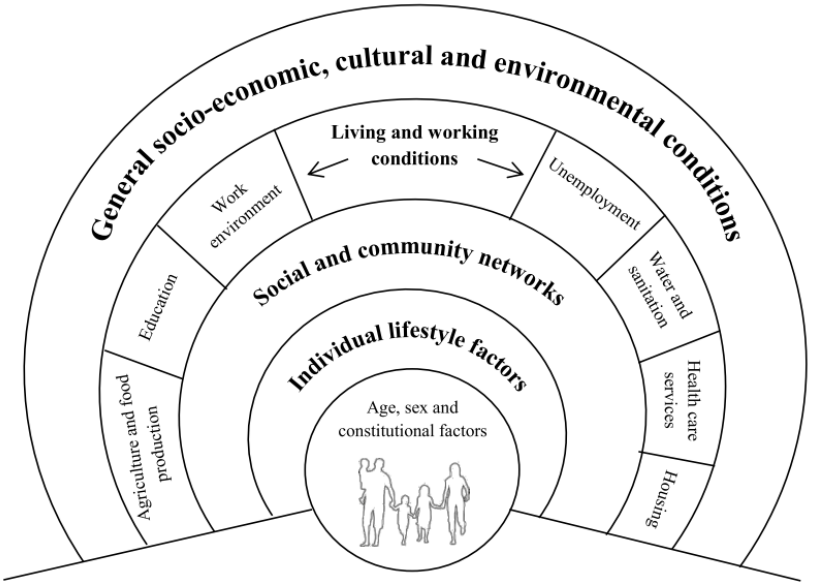

Figure 2–2 Main determinants of health
Source: Dahlgren and Whitehead (1991)

2.3 Definition and Forms of Health Care

According to Act No. 372/2011 Coll. on health services and the terms and conditions for the provision of such services, as last amended, the term health care refers to a set of activities and interrelated measures carried out with physical entities. Such measures are aimed at:

- the prevention, detection and removal of the illness or disability affecting the state of health;
- the maintenance, regeneration or improvement of the state of health and functionality;
- the maintenance and prolongation of human life and the alleviation of suffering;
- assistance during the process of reproduction and delivery;
- consideration of the state of health.

Health care thus means the preventive, diagnostic, therapeutic, therapeutic rehabilitation, nursing and other health measures carried out by health workers. The aforementioned Act distinguishes between the kinds and forms of health care. The kinds of health care are divided according to two criteria, namely according to the temporal level of urgency in the provision of health care and the purpose, as illustrated in Figure 2–3.

The various forms of health care are outpatient care, one-day care, inpatient care and health care provided in the patient's own social setting. Outpatient health

care does not require the patient's hospitalization with bed-care provision and can be provided by primary care physicians and various types of medical specialists. Outpatient care can provided as primary care, specialized care and stationary care, as follows:

- Primary outpatient care includes visits (usually to a doctor's office) for assessment and preventive, diagnostic or therapeutic treatment. It also includes the coordination of the continuity of healthcare services by other providers (specialists, medical facilities). Primary outpatient care also includes any necessary home visits to a patient.
- Specialized outpatient care requires the services of a medical specialist (for example an internist, neurologist, orthopaedist).
- Stationary care is provided to patients whose medical condition requires repeated daily outpatient-type treatments.

Health care which requires the patient's stay in bed for a period shorter than 24 hours, always with regard to the nature and length of health measures provided, is considered to be one-day care.

Inpatient care (i.e. bed care) cannot be provided in an outpatient department and requires the patient's hospitalization in bed within the framework of a continuous shift system. In the Czech Republic there are four types of bed care:

- acute intensive bed care,
- acute standard bed care,
- follow-up bed care,
- long-term bed care.

Acute intensive bed care is a level of bed care provided to patients in situations in which there is a sudden bodily malfunction or a sudden threat to basic bodily functions, or situations in which such a malfunction can reasonably be expected to occur. Acute standard bed care is provided to patients with a sudden deterioration in a chronic condition, which seriously threatens their health, but does not lead directly to a failure of vital bodily functions (Ministry of Health; MH 2014a). Within the framework of this bed care, intensive after-care can also be provided to patients following a medical procedure that cannot be done on an outpatient basis or to provide an early start for some type of medical rehabilitation programme.

Follow-up bed care is a level of bed care provided to patients who have been given a baseline diagnosis and whose health condition has been stabilized and requires follow-up care or some type of therapeutic rehabilitative care. The bed care provided to patients can include subsequent intensive care which partially or totally relates to the support of vital bodily functions.

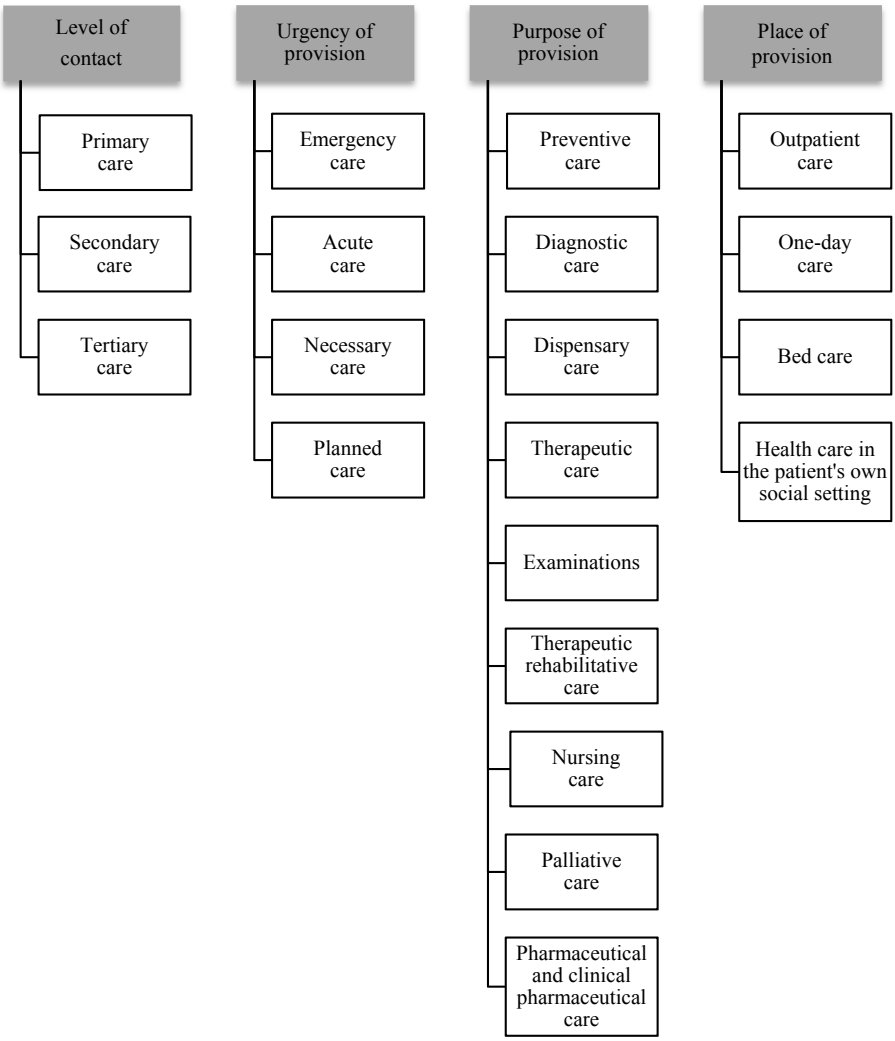

Figure 2–3 Typology of healthcare delivery services
Source: Authors' own compilation based on information available in the Health Service Act.

Long-term bed care is provided to patients whose medical condition cannot significantly be improved by medical treatment or intervention. This care is also provided to patients with some type of impaired basic bodily function (MH, 2014a).

Within the framework of health care provided in the patient's own setting, only those health measures not dependent on technical or particular facilities (also establishments) essentially undertaken in a health institution can be provided. This

form of health care includes domiciliary visits and home care, comprising nursing care, therapeutic rehabilitation and palliative care.

Health care can also be divided into primary, secondary and tertiary care. Primary care is usually defined as the coordinated, complex health and social care provided in particular by health service staff, both on the citizen's first contact with the health service system and on the basis of a long-running continual approach to the individual. Primary care is a package of measures oriented to the prevention of ill health and the provision of health support, examinations, treatment, rehabilitation and nursing care. Primary health care became a core policy for the WHO with Declaration of Alma-Ata in 1978 and the *Health for All by the Year 2000* programme. Article VI of the Declaration of Alma-Ata states: *Primary health care is essential health care based on practical, scientifically sound and socially acceptable methods and technology made universally accessible to individuals and families in the community through their full participation and at a cost that the community and country can afford to maintain at every stage of their development in the spirit of selfreliance and self-determination. It forms an integral part both of the country's health system, of which it is the central function and main focus, and of the overall social and economic development of the community. It is the first level of contact of individuals, the family and community with the national health system bringing health care as close as possible to where people live and work, and constitutes the first element of a continuing health care process*.

Primary care in the Czech Republic is ensured by providers in the fields of general practice (for children, adolescents and adults), stomatology and gynaecology and obstetrics. Physicians providing primary care ensure the long-term and continuous monitoring of the patient's state of health and their relationship is therefore very important and based especially on mutual confidence.

Secondary care is offered by practice specialists, hospitals and specialized inpatient establishments. Practice specialists usually work in solo or group practices, health centres or polyclinics.

Tertiary care is highly specialized, provided particularly by university hospitals and centres designated to such care. Although tertiary care is used by a low percentage of the population, it is very expensive. University hospitals, which are directly subordinate to the Ministry of Health of the Czech Republic, have special status. University hospitals perform educational and research functions in addition to their role as healthcare providers. The management of university hospitals is organized in a twofold hierarchy, with directives and funding coming both from the Ministry of Education of the Czech Republic and the Ministry of Health of the Czech Republic, each of which may have competing demands and authority (Bryndová et al., 2009).

At the end of 2012, according to the Institute of Health Information and Statistics of the Czech Republic (IHIS CR, 2014a), there were 28,753 registered

health establishments, including detached units in the Czech Republic, 11,877 of which offered services in secondary and tertiary care.

2.4 Characteristics and Classification of Hospitals

The hospital is a health institution which provides continual bed care to hospitalized patients during treatment ensured by qualified staff (physicians, nurses). The network bed care in the Czech Republic is divided into the kinds of care provided:

- University hospitals,
- Acute care hospitals,
- Hospitals for after care,
- Institutes for long-term patients,
- Rehabilitation institutes,
- Other specialized therapeutic institutes,
- Convalescent homes,
- Hospices,
- Other health establishments for bed care (IHIS CR, 2014a).

Gladkij (2003) defines hospitals as inpatient institutions which have a licence to provide health care, a certain number of beds and an organized health-care team with the requisite qualifications and capabilities to provide continual medical and nursing care services. The basic function of hospitals is to provide currative care to patients to whom health care cannot be provided in an outpatient department. Health services provided to these patients comprise secondary and tertiary care. Some hospitals also fulfil an educational function as centres of pregraduate and postgradute education of physicians and other health staff. They also carry out more widespread educational activities as well as clinical research. They are significant customers of various industrial enterprises and what is more, they are significant employers. Hanušová (2004) adds that the presence of a hospital in a region contributes to regional development. Hospitals play an important role in drawing inhabitants, investors, industries and trade to the region and in this way they have a positive impact on the economic development of the region, but they also have an influence on the maintenance of social unity.

In the last few decades there have been changes in the internal and external factors which affect the hospital system in a significant way. The factors on the side of demand involve demographic changes in particular, such as the aging of the population (the average length of the human life, birth rate, migration of the population and the like), changes in the structure of illnesses, changes in risk factors (for instance harmful habits), nutrition and also changes related to the expectations of the public. The patients in the hospital care system expect a higher quality of health services, more possibilities to be informed about the process of treatment, increased knowledge on the part of the health care staff, etc. On the supply side, in other words on the side of health service providers two factors in particular play a role: technological development in the area of therapeutic and

diagnostic procedures and changes in the qualification structure of the health staff. Furthermore, the national system is not isolated within the framework of national conditions; international cooperation and support in research and education are also significant factors.

Hospitals can be classified according to various perspectives, one of which is the type of ownership of the establishments. Accordingly, there are the following types:

- Hospitals of which the state is the owner. The legal form of these hospitals is the state allowance organization and as a rule they are managed directly by central organs of the state administration (e.g. university hospitals).
- Hospitals established and founded by regions, towns and municipalities. The legal form of such hospitals is an allowance organization founded by territorial self-governing units, or a commercial company founded by territorial self-governing units,
- Private hospitals owned by churches, charitable organizations, etc. Such hospitals are non-profit organizations.
- Private hospitals reminiscent of commercial companies, based on the entrepreneurial principle.

The next classification is based on the average length of stay (in days), with a distinction between those hospitals providing acute care, in which the average length of stay of one hospitalized patient is generally within 30 days. The average length of stay in hospitals providing after-care is more than 30 days.

According to the prevailing kind of care provided, hospitals are divided into universal hospitals and specialized hospitals. Universal hospitals usually provide care in basic medical branches (internal medicine, surgery, gynaecology and paediatrics) and others. Specialized hospitals provide care in selected medical fields, such as oncology, neurology, dermatology and psychiatry.

The classification of hospitals according to the fund of beds is very frequent, but it is considered a very rough and inaccurate measure when it comes to analytical purposes. According to the organizational/legal framework, hospital establishments in the Czech Republic are classified into the following categories:

- allowance organizations;
- public commercial companies (commercial companies founded by a region, municipality);
- private limited companies;
- limited liability companies, etc.

The division of hospitals according to the founder, as published by IHIS CR, is as follows:

- hospitals established by organs of the state administration;
- hospitals established by organs of the territorial administration;
- hospitals established by private physical entities, other legal entities and churches.

It is also possible to divide hospitals from an economic perspective into non-profit-making hospitals, i.e. hospitals for which any profit generated has to be reinvested into the specified subject of hospital activity, and profit-making hospitals, the economy of which is based on the Commercial Code. Managing the finances of these hospitals has to be in accordance with the principles and rules specified by legislative rules and regulations.

2.5 Network of Hospital Establishments and Trend in the Years 2003–2012

The network of health institutions consists of outpatient and inpatient establishments. It is hospitals that constitute the considerable part of inpatient establishments. As at 31 December 2012, 188 hospitals were recorded in the Czech Republic, with a total of 58,832 beds, as shown in Tables 2–1 and Table 2–2, respectively.

The backbone of hospital establishments is formed especially by hospitals providing acute care, but in recent years the number of hospitals providing aftercare has also increased; aftercare focuses on institutional nursing care, long-term intensive nursing care and rehabilitation. In the period 2003–2012, there was a reduction in the number of beds in hospitals, expressed in absolute values representing a reduction of 7,660 beds. During this period, there was a reduction of 12.7% in the fund of beds in hospitals providing acute care, which means a loss of 8,191 beds. In contrast, for hospitals providing aftercare, there was an increase from 2,039 beds as at 31 December 2003 to 2,570 beds as at 31 December 2012 (see Figure 2–4).

The number of beds in hospitals fell by almost 12% between 2003 and 2012, as is evident from Appendix 1. The highest loss was in internal medicine departments, namely 2,607 beds, with a further one third (1,987 beds) represented by those in surgery. Beds in these key branches were reduced in all regions. The highest loss of beds was found in the Moravian-Silesian Region and in the capital city of Prague; the relatively lowest loss was recorded in the regions of Pilsen and Olomouc. The steepest falls in the number of beds in the last decade were recorded in the eye diseases and dermatology departments. The hospital beds in some medical branches were entirely disposed of, e.g. in the Region of Vysočina, where all measures involving bed care were transfered to psychiatric institutes. The attempt to reduce the number of acute beds reflects not only the high economic requirements of bed care, but also takes into consideration the rapid rise of modern therapeutic methods (which make the patients' stay in hospital shorter) and a developing network of home care establishments (IHIS CR, 2014b).

Table 2–1 Trend in the number of hospital establishments in the Czech Republic in the period 2003–2012

	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
UH*	11	11	11	11	11	11	11	11	11	10
H*	166	162	158	153	154	153	152	148	147	146
HAC*	24	24	26	27	27	28	28	30	31	32
Total	201	197	195	191	192	192	191	189	189	188

*Note: UH – University hospitals, H – Hospitals, HAC – Hospitals of after care.
Source: IHIS CR (2014b)

Table 2–2 Trend in the total number of beds in health care and the number of beds in hospitals in the Czech Republic in the period 2003–2012

Year	Beds (number)		Beds (per 10,000 inhabitants)	
	Total	Hospital beds	Total	Hospital beds
2003	114,585	66,492	112.2	65.1
2004	113,826	65,488	111.4	64.1
2005	113,131	65,022	110.4	63.4
2006	112,659	64,174	109.5	62.4
2007	111,590	63,662	107.5	61.3
2008	110,758	63,263	105.8	60.4
2009	111,201	62,992	105.8	59.9
2010	110,415	62,219	104.8	59.1
2011	108,843	60,336	103.6	57.4
2012	106,498	58,832	101.3	55.9

Source: IHIS CR (2014b)

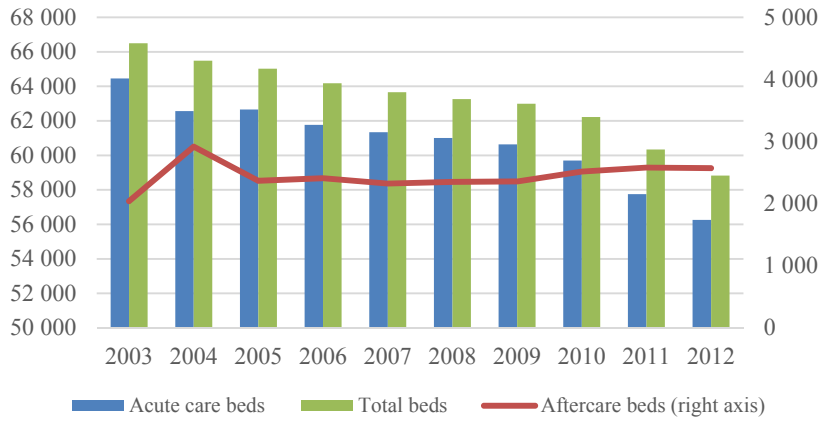

Figure 2–4 Trend in the number of acute, total and aftercare beds in the Czech Republic
Source: IHIS CR (2014a)

An increase in the number of beds was recorded in nursing care departments (a total of 1,154 beds in the Czech Republic); the capacity of beds in rehabilitation and physical medicine departments increased by almost one third. Systematic steps aimed at optimizing the fund of beds were embodied in the Memorandum related to the restructuralization of the fund of beds, which was signed by representatives of the Ministry of Health of the Czech Republic and health insurance companies in June 2012. The Memorandum defines the specialized criteria for restructuralization and these are established for individual medical branches. The criteria take into consideration demographic and geographic influences. However, they respect the principle of the accessibility of health care (see Chapter 9). The criteria should lead to a decrease in the number of acute beds of approximately 10% according to health insurance companies (VZP).

2.6 Legal Form of Hospital Establishments and Trend in the Years 2003–2012

There were significant institutional changes in the hospital network after 2000 in connection with the change in founders. These changes did not concern those hospitals established by central organs of the state administration, i.e. university hospitals and military and prison hospitals. In connection with the reform of the public administration (especially the second stage of public administration reform), considerable changes occurred in this sphere with regard to the organizational and legal positions of hospitals in the Czech Republic.

On 31 December 2002, with the abolition of institutions of the public administration in district authorities, 82 hospitals with 32,021 beds were transferred to regions or municipalities. For hospitals, this implied two types of change: first, the original owner of the property – the state – was substituted by the new owner – the region. Similarly, the original founder – the district authority – was substituted by the new founder – the region, or municipality. As a result, on 1 January 2003, state allowance organizations, the founders of which were district authorities, became allowance organizations of the regions or minicipalities. As of 31 December 2003, of the 201 hospitals in the Czech Republic, 81 were administered by regions, representing 50% of total bed capacity. In the state sector (hospitals managed directly by central organs of the state government), 30% of total hospital capacity remained. Under § 59 of Act No. 129/2000 Coll., on regions, as last amended, the Regional Council, as an executive organ of regions independent competence, was permitted to carry out the function of the founder in relation to legal entities and organizational bodies, either established or founded by the region or transferred to the region. The principles of the financing of allowance organizations of regions are specified by Act No. 250/2000 Coll., as last amended, on the budgetary rules of territorial budgets. § 23 of this Act states the possibility of territorial self-governing units founding commercial companies, namely joint-stock companies and limited liability companies or institutes. Owing to hospitals' indebtedness, regional self-governing bodies started the transformation of these establishments.

As Janeček (2014) notes, express modification of the transformation of allowance organizations to commercial companies is not implemented by legal order of the Czech Republic. He later states that transformation means a package of gradually realized steps leading to the abolition of the allowance organization and the foundation of the commercial company. This newly-founded company has to continue with ensuring the tasks which were previously carried out by the abolished company. Such commercial companies, as a rule, involve 100% participation of the region in the property. The transfer of allowance organizations owned by the region to commercial companies implied an increase in the number of private hospitals at the expense of the group of regional establishments from 1 January 2004 (IHIS CR, 2014b).

On 31 December 2004, regions realized the function of the founder for 63 hospital allowance organizations. On this date, the regions of Pilsen, Karlovy Vary and Hradec Králové then had no hospitals with the legal form of allowance organization. The transformation of the legal form of hospitals became the subject of discussion by individual participants in the field of hospital care, attempting to create models for the organizational/legal status of hospitals. The transfer of regional hospitals to commercial companies was legistatively suspended in the second half of 2004, but all regions accepted the decision stating that it would be possible to continue with the transfer from January 2006 at the latest.

In 2007 the legal form of many regional bed establishments changed. On 31 December 2012, only 23 hospitals (of which 18 hospitals provided acute care and 5 hospitals provided aftercare) remained unchanged, i.e. they had the legal form of regional allowance organizations. Hospital establishments with the form of regional allowance organizations are located only in the Moravian-Silesian Region, the South Moravian Region, the Region of Vysočina, the Region of Usti, the capital city of Prague and the Region of Pardubice (see Figure 2–5 and Appendix 2). The main focus of interest is particularly the issue of the ownership of hospital establishments. However, Hanušová (2004) states that the ownership of hospitals does not play a primary role when deciding on economic efficiency. There is no clear evidence that private ownership and a profit-making regime will lead to higher economic efficiency. The mixture of various kinds of ownership can be seen worldwide (McKee and Healy, 2002).

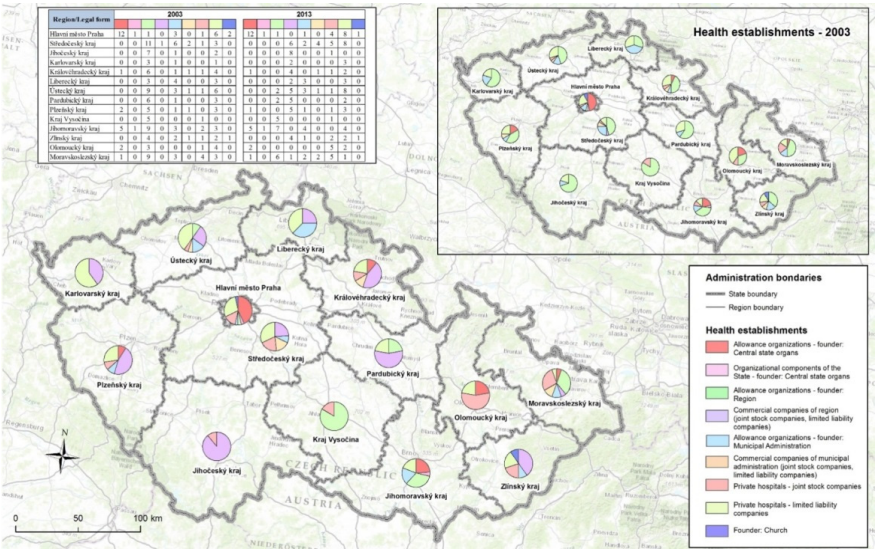

Figure 2–5 Map of the hospital network according to individual legal forms in the years 2003 and 2013
Source: IHIS CR (2014c)

2.7 Summary

The main objective of the health policy of developed countries is to support the health of the population, an aim that has economic and social potential. The health of the population is influenced by many factors and those determining influences that cannot be affected by the individual are estimated at only 20–25%. Exerting a positive influence on the health of the population can bring benefits for both individuals and the whole of society.

The trend in the sytem of health services after 1989 was strongly affected by political aims, demographic developments, developments in the sickness rate, new technological advances and also patients' expectations as health service recipients. Hospitals are significant institutions, which fulfil especially the role of acute care and aftercare providers, but also play a part in education and research, as well as being employers and customers of technologies and materials. The ownership of hospitals is an issue that is frequently discussed at the national and international levels. The current trend is to attempt to increase the autonomy of hospitals, a move that is supported by the World Bank, WHO, producers of medicines, suppliers of health technologies, etc. However, the increased autonomy of hospitals requires regulation to maintain the availability of health services and the quality of the health care provided. The status of subjects providing hospital care changed with the transformation of the framework of the health services and the reform of the public administration in the Czech Republic. These changes occurred as a consequence of changes in the legal forms of hospitals, i.e. changes to founders and the property ownership of hospitals.