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Rozwój rynku ochrony zdrowia – prognozy przyszłości

Development of the health care market – forecasts for the future

Streszczenie

W dobie rosnącego zapotrzebowania na świadczenia zdrowotne, wynikającego między innymi z postępującego starzenia się społeczeństwa, należy poszukiwać nowych metod postępowania, rozwiązań i narzędzi mogących wspomóc trudne procesy przemian sektora ochrony zdrowia. Szczególnego znaczenia nabiera zastosowanie rozwiązań technologii teleinformatycznych pod nazwą e-Zdrowie, które efektywnie pomagają w zaspokajaniu potrzeb pacjentów, specjalistów medycznych, dostawców usług medycznych oraz decydentów tego sektora. Przykłady narzędzi i rozwiązań e-Zdrowia obejmują sieci informacji medycznej, systemy gromadzenia danych medycznych pacjentów pochodzące z różnych jednostek opieki zdrowotnej, usługi telemedyczne, portale medyczne i wiele innych narzędzi bazujących na technologiach informacyjno-komunikacyjnych wspomagających zapobieganie, diagnozowanie, leczenie, monitorowanie zdrowia oraz prowadzenie odpowiedniego stylu życia. W dobie przemian i trendów do wprowadzania innowacyjnych zmian, wydaje się w pełni uzasadnione i trafne wdrażanie rozwiązań technologii teleinformatycznych, które mogą stać się siłą napędową tego sektora.

Abstract

At the time of the growing demand for health services, resulting inter alia from progressing ageing of society, one should seek novel approaches, solutions and tools to assist difficult processes of transformations of the health care sector with the forthcoming new challenges. Application of solutions of teleinformatic technologies called “e-Health” which effectively help to satisfy the needs of patients, medical specialists, medical service providers and decision-makers of this sector, is gaining here a particular relevance. The examples of tools and solutions of e-Health include networks of medical information, systems of acquisition of patients’ medical data coming from various health care units, telemedical services, medical portals and a lot of other tools based on information-communication technologies assisting prevention, diagnosing, treatment, health monitoring and keeping appropriate lifestyle. In the age of transformations and trends for implementing innovative changes, implementing solutions of teleinformatic technologies that can become the driving force of this sector, is fully justified and accurate.

Słowa kluczowe: rynek usług medycznych, zarządzanie, e-zdrowie.

Key words: health services market, management, e-health.

Considering the activities on future shape of the health care sector, one should keep in mind that developing of systemic solutions referring to health care, has been the function of the development of civilization and historical, social, economic, political, cultural transformations occurring in the world, or finally the function of development of research studies, of epidemiological and demographic transformation, as well as recently the rate of globalization processes of the world. Health system is a distinguished integrity, composed of many diverse and interrelated elements the purpose of which is associated with health.

Moreover, it is possible to define health care as social, complex, dynamic and functional system, used by the society, with a view to creating medical and public funds for the protection as well as improvements in health and constant accumulation and transfer of medical knowledge. This observation clearly emphasizes the appropriateness of its functioning and the character of provided services for the society.

Reflecting on the health care sector, one should emphasize that it is functioning in connection with other sectors, such as social, economic and political ones. These sectors function according to market economy principles, in competitive conditions, where the participants seek to achieve their interests. The health care sector is functioning similarly, although not completely the same, where only some of market mechanisms apply. Changes in functioning of the health care sector were commenced with the reform of the 90s, which made fundamental transformations, introduced rules and mechanisms of its functioning. The process of this reform resulted in the transformation of management methods of public institutions of health care, departing from traditional administration and replacing it with operations resulting in proper management [1].

A number of solutions were introduced which created the bases for development of the market services in the public health care sector, which in particular were based on converting public healthcare centers from budgetary units into independent public healthcare centers. These conditions made managers of the health care units get transformed from passive administrators to active managers in order to cope with the advancing competitiveness. They also made them gain new skills and knowledge and apply more excellent tools in rational decision making and implementing cost calculation in efficient management of the health care units.

Some of health care tasks were transferred to local governments, with a view to increase the supervision and the control over health care institutions. Moreover actions reforming the sector resulted in development of independent healthcare centers, especially in the primary health care, giving the grounds for introducing a family doctor concept and improving its competence and entrusting it with the role of the guardian of the new system, as well as the role of the coordinator of the patient care. A special asset of this reform was introducing of contract opportunities for medical services between the disposer of public means, and public and non-public healthcare centers. It caused a strong competition in the internal market between entities, which in particular, contributed to increasing the availability and increasing the quality of health services for patients, financed from public payer resources.

As the result of introduction of the free market elements into the system, a sector of resilient and modern independent institutions developed. In principle, the introduction of market economy to the health sector can be interpreted as an increase in the importance of this sector and its principles in the allocation, distribution and consumption of health services. It leads to the general conclusion that introducing the market mechanism and the competition into the system of the health care is supposed to serve rational using of all its resources. In consequence, this action aims at more effective functioning of the system and better adaptation of services to the needs and the preferences of patients using them.

The benefits of introducing market mechanisms into health care system, are in particular: resistance to the abuse of services appearing due to lack of the direct relationship between services and their costs, when the state covers the cost after the realization of the service; spending the means that were collected earlier; applying effective technologies and treatment methods; creating procedural standards; reacting to the patients' needs. The restrictions of the effectiveness of market mechanisms in the health care system are the following: relatively low level of knowledge of patients on health care services; uncertainty about actions as regards taken efforts and results; rigid norms and standards of medical procedures.

It is hard in practice to talk about the health care system as about the market, because this system does not fully follow market mechanisms. It is because health care, unlike other fields of economy, doesn't show the tendency of reducing unit prices of the product [2]. It results from the fact that health care develops thanks to modern, costly techniques and technologies, by both applying modern methods of diagnostics and high quality materials. The essential point is that the nature of the product, i.e. health service, requires great wisdom and competence, and the decisions cause significant consequences for the quality of patients' life, and sometimes for its continuation.

The foundation for the effectiveness of health care system is reduction of the morbidity incidence and the premature mortality of the society, by activities aimed at the equality in access to health care services, stimulating the development of this sector and also all preventive and prophylactic actions. These premises were the reasons for launching competitive medical and innovative technical solutions into medical services market. Innovation today is the most important driving force of the economy development. It constitutes a peculiar tool of the entrepreneurship, which uses changes as opportunities for taking up a new economic action or for providing the new type of services. The innovative character of equipment and apparatus means that it has been produced and distributed in the world for less than five years.

Most of the innovative solutions in the health care sector are introduced by private subjects who dynamically invest in it. The reports of Polish Chamber of Insurance from June 2010 show that amongst total expenses for the health care in 2009, there were dominating public expenditures (approx. 61.3 B PLN) and private expenses on medicines (17.8 B PLN) and on medical services (12.7 B PLN). Moreover, public expenditure for the health care at the end of 2009 reached 61 B PLN, whereas private ones – 31 B PLN. It is estimated

that, on average, expenses for health protection from private and public means constitute approx. 6-7 percent of GDP, that is only a little bit less than is the average expenditure of 8 percent for OECD countries.

Statistical data from the 1st half of 2010 show that there are about 700 public hospitals in the system of the health care in Poland which run up a debt to the amount of about 7 B PLN. It is also forecast that by the end of 2010 around 10% of total hospitalization will have been performed by private hospitals that amount to 120 in Poland. At present 95% of dental services, 60% of primary health care services, 50% of dialyses and 33% of all tests in the country, are performed by private market medical subjects. In the opinion of trade experts, published in the last report called "Internal market – Directions of the Development in 2010", national market hasn't been fully formed and divided and it still dynamically develops.

Moreover, because of the bigger and bigger stream of investments and the requirements associated with Poland joining European Union will make the industry of medical services follow consecutive essential transformations. This leads to the general conclusion that the competition between providers of medical services is great, and also it has a tendency to a further dynamic growth. The EU Directive 'Patients without borders' will be one of important challenges of the health care sector which will result in the nearest future in sudden increase of private expenses on the hospital treatment. It will allow every citizen of the EU for treatment in any country and at any clinic. For Polish patients the public payer will return costs to the amount refundable in Poland.

A visible necessity of improving and transforming this sector results from demographic changes, related with the increasing number of population and the structural changes related with ageing society, as well as from the progress of civilization and technology, associated with the accessibility to more advanced and better diagnostic procedures and therapies, allowing for the rise in efficiency and simultaneously in increased costs. Amongst determinants of medical market, one should also point to the current economic realities associated with the limitation of the expenditure on health care, in relation to health needs. The above analysis shows that it is the state that should endeavour to improve functioning of this sector so as to fully achieve and maintain the health safety of citizens.

It is the state that is the chief organizer and a coordinator of the system of health care which should this way organize its activity so that this system could act efficiently and faultless. Activities in this field must be responsible, and decisions should be taken with particular care and caution, because they concern the highest human values such as health and life. In particular, the state should assure safe and stable, as well as efficient and effective system.

Market globalization, information technology development, concentration on the quality and the omnipresent promotion of the innovation, constitute very difficult conditions for functioning of the health care sector units at present. These conditions make the need for innovative change, creating new solutions and quick and skillful exploitation of market opportunities. Amongst challenges facing the health care sector there are: ageing societies, the rise in medical

costs of the procedures and budgetary restrictions. An additional challenge of this sector is adaptation of the health care system for changes to meet the demands of health services and developing of public health, by shaping attitudes and health-promoting behaviours and the institutions of non-government sector, as well as migrations of patients and medical specialists within the EU countries.

A broad spectrum of activities for public health requires transformation of the health care system, in particular: intensive modernization of public institutions; extensive reforms of the system of social insurance; working out the efficient system of the health care; changes in functioning of the educational system; improvements in functioning of research system and system of the transfer of knowledge to the economy; streamlining actions of public institutions. Crucial to the process of the development of this sector is using teleinformatic tools which enable transforming public entities into open institutions, providing public services effectively for citizens. Applying solutions of teleinformatic technologies called "e-Health" is recognized as one of important challenges of the health care sector which effectively helps to satisfy the needs of patients, medical specialists, medical service providers and political decision-makers.

The tools of the e-Health serve the communication between patients and contractors among others from the health care industry, for transmission of data among individual institutions and for direct contacts both between patients, as well as employees of health care. These tools can include information networks about health, electronic files, services of telemedicine and portable devices or other suitable communication media used for assisting patients and monitoring their health condition. Strategy 'e-Health Poland for 2009-2015' is a document, in which main directions of the development of the computerization in health care were determined. This document was developed on the basis on developments: "Strategy of the Information Society in Poland to 2013" and "Strategy of the Computerization of the Republic of Poland – e-Poland" which contains recommendations of the European Community on widely understood e-Health.

Activities in e-Health are aimed at meeting contemporary challenges of the health care system in the accessibility of services, providing with the continuity of care and the safety of the patient, with simultaneous increasing of the quality of health services offered. Projects within e-Health, are fundamentally implementing a more business-like and new look for managing health care and new functionalities of the service, with the tendentially growing standard of patient care and the more effective resource management. The e-Health tools include:

- a system of medical data collection – information pertaining to medical events which will allow registering, collecting and the data processing concerning medical events; fundamentally its functionality will allow for: introducing and storage of the data concerning medical events (e.g. given advice, vaccination, hospitalization); storing primary data about medical events and concerning comprehensive medical data; disclosing details about medical events for the purposes of other systems (e.g. Portal – Internet Patient Account); searching for comprehensive medical data.

- system of medical data collection – prescriptions – the system will be collecting and processing data concerning electronic prescriptions; it will allow for making them out, for the inspection and registration of the purchase of by prescription drugs; it will provide with the functionality of introducing electronic prescriptions by the medical staff and of the storage and making details available about electronic prescriptions; of verification of entitlements of the client and authorized persons to the repurchase of Rx drugs; of making the information of medicines and medical products and their equivalents accessible (support for the doctor and the pharmacist)
- Internet patient account – thanks to which the following, will be possible: communication of the client with contractor – i.e. calling for vaccination and examining and the registration to consultations; the system will guarantee the functionality: monitoring of own medical data of the client, carried out medical services, test results, electronic prescriptions, electronic referrals, electronic sick leaves, planned visits and vaccination; entering additional own medical data; the preview and the edition of own personal details; managing authorisation to own medical data (privacy).

Implementing the e-Health tools will guarantee data collection about the health care and will enable the on-line registration to appointments, as well as will make the details about medical events in an electronic form available. Moreover, it will allow making the electronic history of illness available to clients, of performed services, of referrals, of prescriptions, of sick leaves, of vaccination plan, of recommendations and will enable the electronic realization of prescriptions. It will also contribute to providing medical staff with electronic details about the condition of the patients' health, especially in emergency situations and will provide with the access to the information enabling current monitoring and responding to threats. For efficient managing of the individual health care unit, the e-Health tools will streamline the electronic service of accounting for performing of medical services, refund service of medicines and sick leaves.

Amongst the most important benefits of implementing the e-Health there are: reduction of the time spent by the doctor for analysis of medical documentation by about 30%; reduction of the time spent by the doctor for examining the patient by about 20%; reduction of medical examinations and tests by about 20%; increasing the effectiveness at identifying threats by about 30%; increasing the effectiveness of action by about 50%. There are forecasts that the system of electronic transfer of prescriptions will allow avoiding taking out about 5 million false prescriptions for outpatients annually. Thanks to the computerized system of entering medical orders and clinical decision support systems, it is possible annually to avoid about 100 thousand coincidences of the appearance of side effects in hospitalized patients. It would allow for saving of about 700 thousand beds annually, increase productivity and shortening the waiting time for admitting to hospital which in consequence means savings in this sector.

Moreover, it will also allow for reducing the number of days of the hospitalization by about 9 million annually, thanks to digital medical records which will influence the increase of productivity and shorten the waiting time for ad-

mitting to hospital. Hopes are associated with technologies, not only as for the efficiency improvement of health care systems, but also as for the development of the economy, including the labour market. The significance of the e-Health for the economic development is the creation of modern places of employment; development of small and medium enterprises based on medical, pharmaceutical, computer innovative and para-medical technologies; the increase of the research and development potential of the colleges and entrepreneurs; extending the offer of medical services thanks to implementing of new telemedicine services; cost cutting of the medical service thanks to telemedicine technology; improvement of competitiveness thanks to the reduction of costs of the activity of companies; realizing new research and business projects.

At present, in the health care sector a project was started called the Electronic Platform for Collecting Analysis and Accessing Digital Medical Data [3], developed by the Centre of Information System of Health Care. The huge undertaking under the framework of the union strategy for the computerization of the health care amounts to 800 M PLN. It will be financed from European Union funds. Completing of work on real revolutionizing of the health care sector is planned to come around 2015. This project is aimed at structuring of the electronic platform of the public service in the health care, enabling public agencies of the state administration and self-governments, healthcare centers, analytic laboratories, PHC doctors (primary health care) and citizens, for collecting information and analyzing and making them available, through the planned digital platform.

There will be many projects carried out in the platform, of which the recipients, i.e. ultimate users, will be contractors operating on the market of the health care and the society. The project aims to build a nationwide electronic platform for public services in health, which aims at improving the quality of patients' services; planning of health care; electronic accounting; crisis management; providing with inter-operation access with European electronic platforms within the field of health care; providing with the reliability of the data of medical events.

Achieving those objectives will support the completion of processes connected with planning of health care, realization of health services, monitoring of the realization of health services, with publishing the information from the health care area. The platform assumes to gather information about the planned for implementation and ongoing projects in the area broadly defined as e-Health and informatisation of health care in order to:

- find the interrelationships between entities, in particular those on the level of the region; identify the communication channel between entities in the market for assuring in future objective, reliable, current and of comparable information
- identify possible areas of contact points, lines of compliance assessment for the information transmission.

Implementing the discussed platform will allow for achieving the benefit from a point of view of the health care system, in particular: the reduction of costs of diagnostics and treatments which are of key importance in the light of demographic trends identified and estimates of the pressure

on increase in expenditure of medical services; the reduction in the number of unnecessary examinations, medical consultation and hospitalization; better inspection of benefits and distribution of medicines; minimization of the risk of abuses during settlements and the refund

A broad spectrum of actions of the platform for the health care system will contribute to achieving notable benefits for medical institutions and their founding bodies, such as: return on investment in 2-7 years; better cost control in medical institutions; optimization of internal administrative processes and logistics; possibility of "resource sharing", of personnel sharing in cooperating institutions with a view to the optimum use of resources and guaranteeing the access to specialists. In this process, medical specialists will also achieve benefits, through: improvement in the flow and the access to the information about the patient (e.g. medical record, findings; streamlined processing of documentation; improvement of the quality and effectiveness of diagnostic and treatment processes; reduction in the number of errors; possibility of improving skills, thanks to the access to modern solutions, consultation and cooperation with specialists from other institutions

This conditions will result in achieving by patients, as participants of this market, notable benefits from implementing the above discussed platform with the purpose of: increasing the quality and medical accessibility of services; shortening the waiting time for intervention or the medical service (including, for instance, elimination of abuses when managing queues to benefits); creating possibilities of independent functioning or care at home – limiting the need of making use of service institutions of the inpatient care, and because of that, of improving the comfort of living in the process of therapy or in the period of convalescence.

Poland, like other member states of the European Union, is undertaking activities in structuring the communication common space in the health care sector in Europe. Fundamentally, amongst the most important premises of drawing up a plan in ICT in the health sector of the European Union, one should mention:

- growing demand for health services resulting among others from aging of European societies – predictions for 2051 mention the population of 65+ reaching 40% of the population of the Community
- increasing mobility of citizens, including specialists from the medical industry, observed as a result of the liberalization of other areas of the internal market of Community;
- expecting by citizens improvement in the quality and accessibility to health services with limited resources allocated for the health care;
- developing of new solutions in medical technologies and treatment methods as a result of conducted research works;
- growing amount of medical and administrative information and expectations concerning interoperability of information resources in health care systems to facilitate carrying out if coordinated health care, increasing the flexibility and the speed of the managerial decision making
- the need to implement common methods of counteracting diseases associated with the progress of civilization and monitoring of infection [4].

Undertaking activities focused on transformations in the health care sector is both inevitable and the most necessary in the medical and technical aspect in relation with the occurring processes of globalization and the medical and technical advances. These conditions require permanent activities and efforts, on the part of political decision-makers creating this peculiar market, in order to achieve and maintain the health of society. The use of the computer science achievements in the field of health care is a key to improving medical service qualities, increasing their availability, as well as managing rational health policy.

E-Health applications are tools to assist health care processes, such as diagnosis, treatment or health monitoring, as well as allow for increasing the efficiency of the functioning of the health sector, and thus support the transformation processes taking place there. Nevertheless one should always remember that "the good of the man must always constitute the most important aim of all technological progress" (A. Einstein).

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