

Health Service and Environment Management System

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Abstract:

In order to respond to market requirements, Slovenian market stopped being locally oriented. This affected many fields of activity including the Health Service. Slovenia's joining the EU brought about many changes in its economy – optimizing and improvements of business processes in healthcare, is one view of changing. The core of modern economy including environment protection. One of the most vital aspects of these modifications is rationalization and optimization of the business activity including environmental management system. A way of controlling environmental impacts is environmental management system in Health Service. Our paper presents the most important facts concerning environmental quality and economic efficacy of pharmacies providing health care.

Key words: public health care management, environmental protection, quality, information system, business processes,

1 Introduction

The economical and political system changed and led to modifications in the business activity of Slovenian Health Services and pharmacies as well as to new market proportions. The modifications took place even though health care and pharmacies are believed to be a stable system with permanent upgrading of expert knowledge and development in the field of providing health services and medicinal products. For an organization to function effectively and efficiently, it has to identify and manage numerous linked activities. An activity using resources, and managed in order to enable the transformation of inputs into outputs, is considered as a process. Often the output from one process directly forms the input to the next. An advantage of the process approach is the ongoing control that provides over the linkage between the individual processes within the system of processes, as well as their combination and interaction. Health service organizations should define all their processes. These processes, which are typically multidisciplinary,

include administrative and other support services, include such examples as:

- a) the organizational development, including quality, environmental, safety and health management system,
- b) the development and delivery of training to educate,
- c) the process,
- d) the preventive and corrective maintenance program for equipment and facilities,
- e) the continued care of patient/client in any setting,
- f) the counseling of a patient/client and family [24].

One of the most vital aspects of these changes is rationalization and optimization of the business activity including operating costs and resources. The Ministry of Health and the National Health Insurance Institution are trying to rationalize operating processes in all health care activities with a specific focus on medicinal products costs. A great number of related attempts have had little or no success in the last ten years, some of them even produced completely opposite effects. A

way of controlling costs is integrated management system, which include three incorporated systems: quality, environmental and health and safety. Health service organizations along with those in the public sector represent a new dimension to the quality and environmental quality of medicinal products supply and service. Health services have an exceptional role in the spheres of preventive medicine and public health promotion, in the sense of keeping a favorable balance between costs and benefits. With this also a forable balance between preventive environmental action and impacts. An efficient and successful system of providing quality and environmental service pertaining to medicinal products/services supply - a system satisfying the needs, wishes and expectations of everybody concerned through an overall activity control, is one of the most suitable mechanisms enabling us to have global supervision and to act globally on the local market – with global characteristics. Simultaneously, such a system offers a possibility of constant growth in business operation [19].

2. Health service in Slovenia

2.1 Legislation

Health service activity in independent Slovenia is defined by the **Health Service Act (Official Gazette of the Republic of Slovenia Nos. 9/92, 13/93 and 38/99)** with details being set by a bylaw on Requirements for performing pharmacy activity (Official Gazette of the RS No. 37/92). Due to a need of reducing medicinal product costs covered by mandatory health insurance, a bylaw on Classification, Prescribing and Dispensing Medicinal Products in Human Medicine (Official Gazette of the RS No. 59/03) allows the pharmacist to substitute a medicinal product prescribed for a cheaper one figuring on the list of mutually interchangeable medicines, without previously consulting the physician.

2.2 Pharmacies Activity

Pharmacies activity is a part of health service activity; it provides general population as well as health institutes and other organizations with medicinal products. The Medicinal Products and Medical Devices Act (Official Gazette of the RS Nos. 101/99, 70/00, 7/02, 13/02 and 67/02) classifies human medicinal products into those that

- Can be dispensed only on prescription and obtained only in pharmacies,

- Can be dispensed over the counter and obtained only in pharmacies,
- can be dispensed over the counter, obtained in pharmacies as well as in specialized shops.

Supplying medicinal products comprises also magistral preparation and galenic products. Their scope of activity can imply also the following: supplying subsidiary medicaments, orthopedic devices, hygiene and beauty products as well as other health preservation products; dispensing veterinary medicinal products; producing medicines, subsidiary medicaments and controlling their quality; giving advice on prescribing and using medicinal products, etc [19].

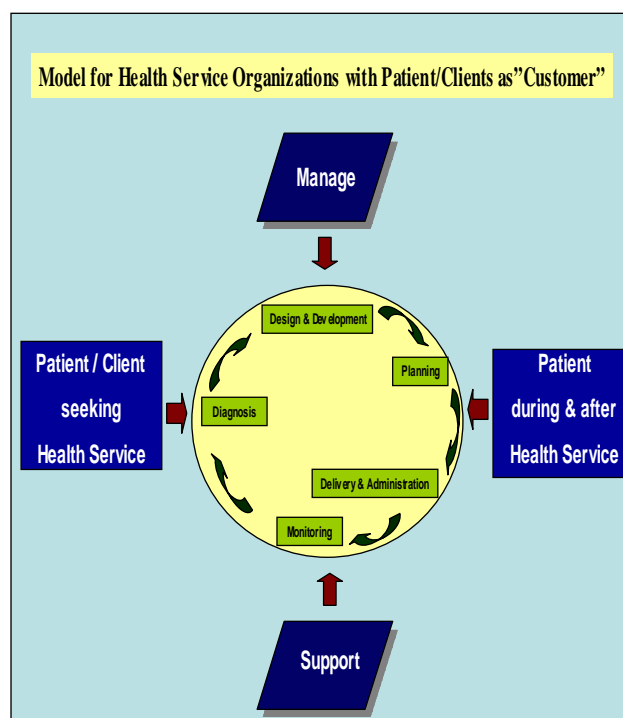


Figure 1: Model for Health Service Organizations [24]

3. Primary health service process

The primary beneficiary of the health service system is the patient/client. Health service design, delivery, management and/or administration should focus ultimately on the patient/client [22]. The basic product of the health service delivery organization is the planning, design, and delivery of patient/client care. The most important is design-responsibility. Design responsibility is either with the customer or the

supplier. If the customer does not provide the design, then the supplier is design responsible, even if they choose to subcontract the design to an outside organization or health professional. The care plan and clinical guidelines are examples of quality system documentation, while the patient/client health record.

4. Quality and environmental management in Health service

ISO 9001:2000 is one of International Standards dealing with quality system requirements that can be used for external quality assurance purposes. ISO 14001:1996 dealing with environment system requirements. Definition of the term 'quality of health service' is a complex procedure. Health service is a public service which differs greatly from other public services due to the following characteristics:

- unlimited demands for health services and limited financial resources,
- sensitive users of health services (clients) with a limited influence on the quality,
- presence of highly trained professionals,
- enormous influence on quality of life, and
- satisfaction of complex needs: expectations and demands of users (patients), demands of payers (health insurance companies, public financial resources), professional standards, and moral (ethical) standards [15].

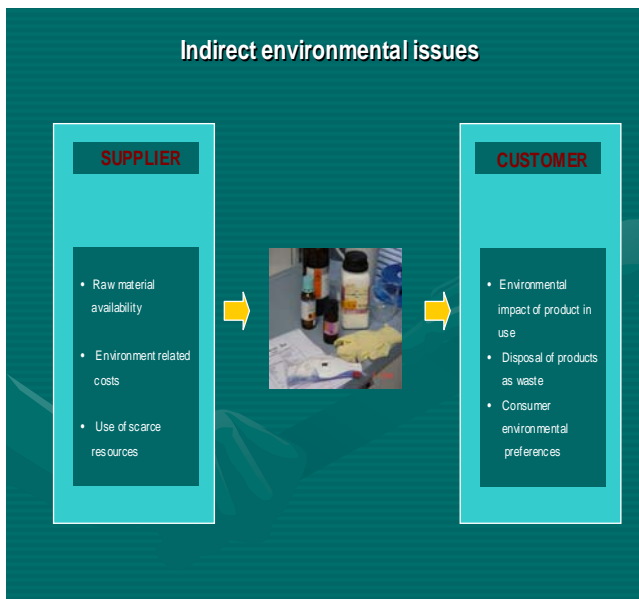


Figure 2: Indirect environmental issues

This definition emphasises three basic dimensions of quality:

- Patient/Client Quality,
- Professional Quality, and
- Management Quality.

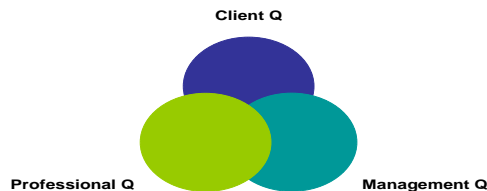


Figure 3: Three basic dimensions of quality

These dimensions of quality are demanded from three interest groups, involved in the health care system: users, professionals (providers of services) and management. A full cooperation between these groups is a fundamental issue for a successful quality improvement of health services [17].

Different definitions of the term 'quality' create a slight problem in the implementation of quality in public and private health care.

Private health service a new constituent element of health activity can significantly affect the development and growth of the latter in Health Service. Simultaneously, they exert influence on resources usage and consequently on costs optimization. Controlling costs and environmental impacts are a very important aspect of differentiation and competitiveness between the two sectors, private and public. Expert work along with permanent education enables us to form a competitive advantage in both spheres of the public audience, expert and non-expert, and to achieve considerably better results than in the past. Creating, maintaining and improving the system of operating quality and environmental management, following the guidelines and requirements of the ISO 9001:2000 and ISO 14001:2005 standards, serves as a rational operation tool giving grounds to systematization and to a comparison between both sectors, private and public. Information support allows a direct comparison. This is the reason for the decision of health service sector to optimize business processes and introduce information support of business operation. With the quality and environmental management system and information

support of the business operation we can achieve the following basic goals:

- Assure and permanently improve the level of health service quality,
- assure constant growth of general population's satisfaction with health service supply,
- optimize the economic aspect of business operation [19].

Reaching the three basic goals leads to the one set nationwide – quality service and rational medicinal products supply, a project which comprises five stages:

1. Current situation analysis.
2. Modeling and optimizing Health Service Organization.
3. Information support plans.
4. Evaluating the quality of the sample model results.
5. Application into business reality.

Three basic aims of the project:

1. Find reasons of ineffectiveness on the level of global HS operation and give suggestions for improvement.
2. Find reasons of ineffectiveness on the level of HS individual business processes and give suggestions for improvement.
3. Find deficiencies in information support structures of the HS and give suggestions for improvement.

5. Modeling and optimizing processes

There is an analysis based necessity for modeling basic, support and external processes. Process modeling uses guidelines of the ISO 9001:2000 standard. Arnica Montana, a private pharmacy, decided to apply a process method in the spheres of operating quality management, environment treatment, safety and health at work precautions – for the entire scope of pharmacy activity. A process method means systematic recognition and management of processes used within the pharmacy and their mutual impact. Picture 4 shows a schematic presentation of the process method sample model.

The model takes into account an important role a customer has in defining input requirements. Customers' satisfaction supervision is essential for evaluating and confirming the fulfillment of customers' requirements. It is equally important for the performers of the process to carry out their work tasks with little or no work risk [19].

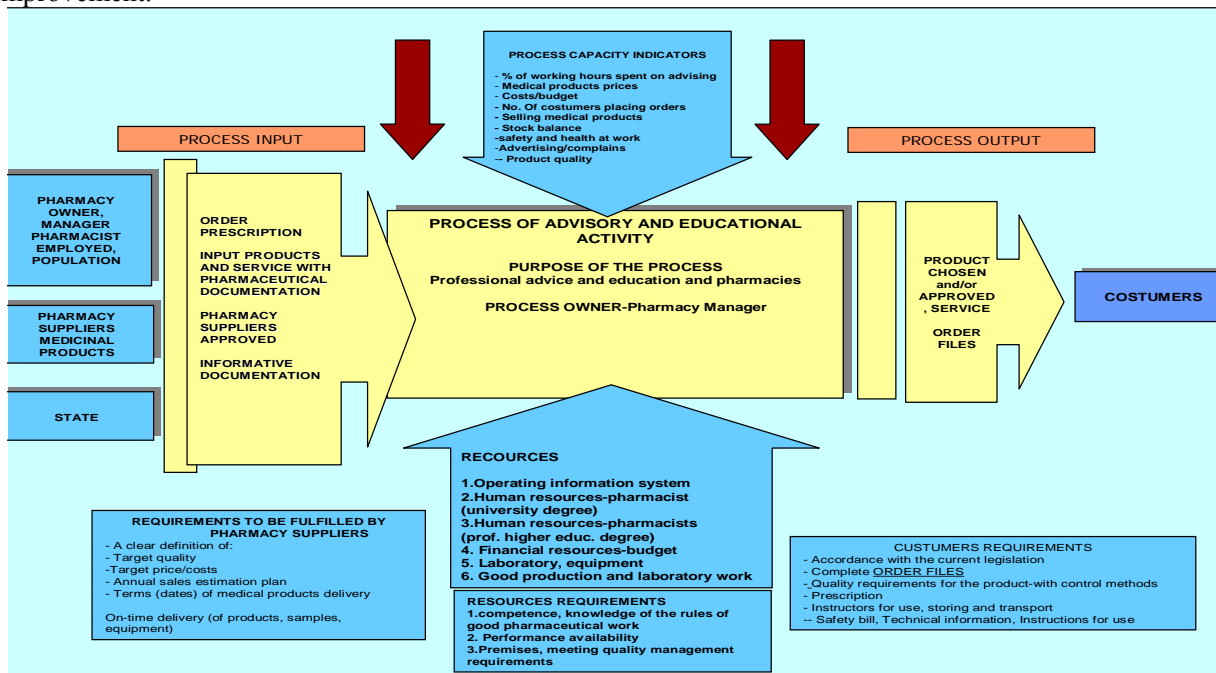


Figure 4: Optimizing processes [19]

6. Conclusion

Optimizing processes in private and public Health services is essential for process costs control and in for contributing to a rational medicinal products/services supply of the population. The use of incremental and breakthrough quality and environmental management techniques to constantly improve processes, products, or services provided to internal and external customer and thus achieve higher levels of customer satisfaction. Privatisation of a public health service may be one possible step in combination with a thorough consideration of all benefits and deficiencies [15]. This is a way to improve the quality of activity contribution to a rational medicinal products supply/services of the population. Private services will thus simultaneously influence those in the public sector, which again leads to a rational medicinal products/services supply and to the satisfaction of the clients [19].

References:

- [1] Mulej M., *System Thinking* UM-EPF, Maribor, (1992)
- [2] Steiner G., *Creativity as Prerequisite for Sustainable Development*, 2004
- [3] Elkington J.: *Cannibals with Forks. The Triple Bottom Line of 21st Century Business*, Capstone Publishing, Oxford, (1997)
- [4] Nonaka I., Toyama R., Konno N.: "SECI, Ba and Leadership: A Unified Model of Dynamic Knowledge Creation", *Long Range Planning*, 33, pp.5-34, (2000)
- [5] Kralj D.: *The Meaning of Systematical Consideration in Enforcement of Managing Innovation in the process of TQM*, Maribor, (1994)
- [6] Wright T.: "A Selected Viewpoint on " Systems Thinking and Climate Change System", Cambridge, (2004)
- [7] Kralj D., Krope J., Goricanec D.: *The Permanent Development as a Consequence of Administration Innovating*, WSEAS Transactions on Business and Economics, Issue, Vol 2, 1.17-23 (2005)
- [8] Peters, T.: *Re-imagine !, Business Excellence in a Disruptive Age*, (2003)
- [9] Mulej M., *System Thinking* UM-EPF, Maribor, (1992)
- [10] Markič, M: *Processes Innovation – A Precondition for Business Excellence*, UM –FOV, Organizacija, Maribor (2003)
- [14] ISO 14001:2004
- [15] Puksic M., Goricanec D.: *Increasing Quality and Economic Efficacy of Health Institutions in Public and Private Sectors in Slovenia*, WSEAS Transactions on Business and Economics, (2005)
- [16] Pfeiffer, N., Coote, A.: *Is Quality Good for You?* Institute for Public Policy Research, London, 1991.
- [17] Harvey, L., Green, D.: *Criteria of Quality*. University of Central England, Birmingham, 1993.
- [18] Puksic M., Goricanec D.: *Implementation of data on Medicinal Products in SQL-Based Relational Database Increasing*, WSEAS Transactions on Business and Economics, (2005)
- [19] Kralj, D., Stamenković, M: *Optimizing Business Processes and Economic Efficacy of Health Institutions in Private Pharmacies in Slovenia*, WSEAS EED "05 / ENVIRONMENT, ECOSYSTEMS and DEVELOPMENT, Venice, (2005)
- [20] <http://europa.eu.int/eur-lex>
- [21] <http://www.simap.eu.in>
- [22] <http://www.ted.publications.eu.int>
- [23] <http://tenders.co.uk>
- [24] IWA 1, 2005