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Some Aspects of the Health-Care Institutions Management in Slovenia

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Not much has research has so far been done into the peculiarities of health-care organization management. The motivation was to explore the possible perspectives of the health-organization management system in comparison to other business forms. The hypotheses were tested through a questionnaire that was mailed to managers in health-care institutions. It has been confirmed to a certain degree that managers with a medical training background have different managerial scopes, oriented more to their own profession, including economics of their organization, need for enhanced knowledge and, their managerial style. The implications of the study are at two levels. The future design of training programs for top and middle management institutions will be influenced by the results and findings. At the other level, the implications are expected to arouse interest in the field of multidisciplinary education course design as well as some providing possible background for development of business consulting services in the field.

Key words: Health-care, management, leadership, education and training, consulting

1 Introduction

Management as a professional discipline has achieved an extremely high level of development in the last fifty years. Regarding the high market pressure upon company efficiency, many effective management approaches and tools have been developed, mainly in management of profit-oriented organizations. The best practices from the management in for-profit organizations have been transferred, also into the non-profit sector, mostly in the fields of social activities, education, health-care, culture and arts and other traditional non-profit, above all, service activities. Consequently, research into management and leadership practices has been very intensively shifted from the profit sector into management styles and practices of non-profit organizations.

Growing aged populations in developed west countries are increasing, while though the development of medical science and health-care is becoming a more relevant and popular sphere of interest for research and investigating. Health-care management is becoming also a scientific discipline. More and more high-profile managers are being hired for top management in health-care organizations (Swayne et al., 2006).

Within this particular study, management and leadership in the Slovenian health care organization have been investigated, being one of the first research attempts in this field, while previous efforts were more focused on the public health-care system reform (Markota et al., 1999) and privatization of the (Švab et al., 2001). Mainly, public health-care organizations, hospitals and community health centres were involved in this particular study. Managers' relationship to the mission and goals and their relation to health-care organization development were investigated. The possible high level of differences in management style and behaviour between medical doctors and managers of other professions were tested while recognising the unavoidable need for both types of profiles engaged in the health care processes to demonstrate improved patient outcomes (Grumbach and Bodenheimer, 2004). The demand for new knowledge and skills, education and, training programmes and the demand for consultancy were tested as well.

The health-care system has been predominantly kept public, both in the respect of state-level organization and financing as a legacy of the previous socialist political system in which broad public availability of basic health-care services was recognized as one of the main pillars of the social welfare state. The public health-care system has been organized on three levels, having more than 60 'health-homes' in every town, 12 smaller regional hospitals and 2 large clinical hospitals. Privatisation entered the system back in 1992, however, up-to-date it still accounts for only a minor proportion of health services delivered. It has been only in the last decade when, due to demographic and social changes, the questions of efficiency have been raised and preliminary needs for changes in managerial approaches, both at system and micro level, have evolved. Traditionally, medical doctors were

preferably appointed to perform both types of positions, in policy-making role and as managers of health-care institutions. Professional expertise seemed to be perceived as more important, compared to managerial skills and competences. However, with the evolving needs for diminishing inefficiencies, the traditional barrier to employing non-medical managers into the health-care system has started to be lowered. In the present study, the aim was to investigate the possible differences in views of the doctors-managers versus managers of other professional and educational backgrounds.

After the introduction chapter, some research literature is reviewed in order to set a conceptual framework and to derive research propositions. Data collection with sampling procedure and demographic data is discussed in the third chapter. Results from the survey are analyzed in the fourth chapter, followed by conclusions and implications in the find one.

2 Literature preview and propositions

The review of European health management research was undertaken over a 10-year period (1995 to 2005), to produce an account of the state of research, including its quality, range and any gaps; and to assess the implications of the research, its potential for uptake by policy bodies and the need for future research and the direction it might take. To identify relevant research studies and bodies of work, two methods were employed: (1) a standard database search and (2) special request to members of the European Health Management Association. The results from the database search yielded a modest flow of relevant material (at least in terms of the definition of health management employed). Only 63 relevant journal articles were finally selected out of 1047 identified. Very few have focused explicitly on mainstream management issues in health care. Two main conclusions emerged: (1) there exists only limited original research in the area of health management, and (2) health management appears to be an underdeveloped research area throughout Europe (Hunter and Brown, 2007).

Pettersen and Hofoss (2000) argue that recent developments in health services in the local arena have challenged the theoretical and applied scientific basis for both public health medicine and management. During the 1990s, although public health physicians in Norway increased in number, they worked less with public health, as well as public health management. The effects of these developments on public health management are largely unknown. Public health physicians' involvement in management was studied, and also their self-reported managerial competence. Physicians reduced their administrative tasks and evaluated their own managerial competence rather conservatively. Many had supplementary training in management in addition to their medical education and specialty training. This need may be most intensively expressed in the field of finance and accounting, which is similarly also reported by Magnus et al. (2000) and Lindrooth et al. (2006). Public health physicians may be fading out of management. To address this, there is a need for development of both public health management training programmes and provision of adequate resources for managerial activities (Pettersen and Hofoss, 2007).

Customer capital is a value generated and an asset developed from customer relationships. Successfully managing these relationships is enhanced by the knowledge management infrastructure that captures and transfers customer-related knowledge. The execution of such a system relies on the vision and determination of the top management team (Ammenwerth et al., 2003). The health care industry in today's knowledge economy encounters similar challenges of consumerism as its those of business sector. Developing customer capital is critical for hospitals to remain competitive in the market (Groene et al., 2005). The top management team incorporated the knowledge process of conceptualization and transformation in their organizational mission (Desmidt and Heene, 2007). The market-oriented learning approach promoted by the top management team helps with the accumulation and sharing of knowledge that prepares the hospital for the dynamics in the marketplace. Their key knowledge advancement relies on both the professional arena and the feedback of customers (Liu and Lin, 2007).

Most health care organizations are operating under an "old paradigm", wherein the needs of physicians and third party players drive the organization. In the current competitive health care markets, executives need to focus more directly on their increasingly assertive and knowledgeable patient customers. Practices of the best guest-services organizations may be transferable to health services organizations. If climates that facilitate such practice are related to improved patient safety and employee satisfaction, proactive, patient-oriented management of the work environment can result in improved patient, employee, and organizational outcomes (Ford and Fottler, 2000). In the years ahead, health care organizations will continue to face numerous challenges from longstanding and currently unresolved issues and new and emerging trends (Carrigan and Kujawa, 2006).

There has been much innovation in primary care in the past few decades. Today's preoccupation with cost shifting and cost reduction undermines physicians and patients. Instead of this, health care reform must focus on improving health and health care value for patients (Porter and Olmsted Teisberg, 2007). Improved quality indicators are not correlated with higher cost, as often perceived by managers, but actually bring higher value to patients (Fireman et al., 2004).

Although external and systemic constraints for health care organizations are relevant for their managerial evolution, there is also evidence that organizations operating under the same external pressures reach different levels of maturity. The main drivers for managerial development are characteristics of the actors involved: their motivation, leadership, and commitment; the quality of relationships among the main actors; and how the resources dedicated to managing change are used (Hoff, 1999), which brings an inevitable uncertainty that might be the hardest lesson

to learn (Berg, 2001). Additional characteristics appear to be communication skills, desire for self-development, self-knowledge and coping (Hyrkäs et al., 2005). Given these criteria, any organizational strategy and goal seems to be achievable. Managers have to consider the management of the relationship with professionals as the key success factor for implementing change (Tsasis and Harber, 2008). Managerial leadership has to be diffused in the organization, both in the vertical and horizontal dimensions, and become part of its culture targeting three important groups: senior leaders, team leaders, and front line staff and facilitating change management (Pronovost et al., 2006). However, employees prefer managers with more clearly expressed leadership behaviour than the managers themselves prefer and demonstrate (Sellgren et al., 2006). Innovations need a medium or long-term perspective to become widely applied, and this requires a strong commitment which is related to managerial stability. Resources for innovation are to be considered a critical driver for fostering the relationship between managers and professionals (Longo, 2007).

Shifts in the environment can compel health care organizations to change their strategies. However strategic change frequently fails, because individuals do not adopt the behaviours necessary to successfully implement the new strategy. Successfully implementing a strategic change often requires getting individuals to change their behaviours. Leaders can enhance the results of the change by working to develop general norms, such as teamwork and tolerance for mistakes, thus increasing general readiness for change within the group (Caldwell et al., 2008).

According to the findings reported in the literature and according to authors' knowledge of the characteristics of managers of health-care institutions, the following four propositions were postulated about the differences between medical and non-medical background managers from the perspective of management and leadership style and their organizations' development, which is the main research paradigm of the present study:

P1: Medical doctors develop different, more employee - oriented managerial and leadership styles than managers in other professions (Carrigan and Kujawa, 2006; Sellgren et al., 2006).

P2: Other managers value higher the economic and financial achievements of their institutions (Fireman et al., 2004; Lavis et al., 2005).

P3: Medical doctors generally the feel higher degree of lack of expertise in different fields than do general managers (Grumbach and Bodenheimer, 2004; Magnus et al., 2000).

P4: Medical doctors and other managers demand different levels of outside expertise and other forms of assistance, particularly education and training (Lindrooth et al., 2006; Marquis and Huston, 2008).

3 Data and methodology

The database of 210 Slovene health-care organisations was established by the GEA College sales department in the period 2007-2008 for the purpose marketing training programs targeted on managers of health-care institutions. A compilation of sources was used: publicly available data was complemented with some opportunistic sampling. Not only institutions, but also the names of key personnel together with their affiliations were included in the data base. University medical centres, hospitals, community health centres, institutions of public health, institutions and rehabilitation centres, private firms from health-care sector were included, so both the public and private the health-care sectors were involved. In the first stage, the propositions were tested through a questionnaire that was mailed to top and middle managers of these institutions. There could have been more than one targeted person from the same institution and all mail was personalized to a particular respondent. The envelope with the questionnaire was supplemented by a stamped return envelope with printed sender's address, which has been evidenced in some previous research to be a potential measure for increasing the possible response-rate (Pettersen and Hofoss, 2007) in this particular target group. The questionnaire was sent out in April 2008, allowing respondents two weeks' time for responses. The responses were collected by the administrative office at the institution which is authors' affiliation and was at the same time the sponsor of the research. Before being sent out, the questionnaire was tested by a group of participants (12 people) at a short two days' management seminar on public procurement rules for health-care institutions. Only some minor changes were made after the testing.

The anonymity, both confidentiality of records and non-disclosure of identities, was ensured in the covering letter, explaining that the research interest was in the aggregate opinion of the targeted population, rather the individuals' opinions. Thus, no follow-up was possible. An invitation to provide the respondent's contact details was provided for those who wished to receive a copy of the research report. The intent about research was publicly explained to the training courses participants, and an open invitation was put forward to include more respondents if they had wished. The intention to present the methods and findings at conferences and publish them in scientific journals was clearly revealed. Thus, it is believed that main ethical directions in social science research, according to SRA (2003), were respected in this particular study.

Altogether 47 responses were received out of 210 questionnaires sent out, which is 22 % and, this represents the analyzed sample in the research. The response rate is somehow expected from some literature sources, such as Floyd et al. (2005), who reported a 21 % response rate in a semi-comparable study among physicians. The sample size may by no means be interpreted as significant for the whole population, however, it can be argued that it provides a satisfactory quantity of data to explore into the main research question which does recognize the possible profession-based differences in managerial approaches of the respondents. The possible non-response bias on professional background of the respondents was not tested, due to the lack of data about professional background in

the sample database. This variable was introduced in the questionnaire.

The questionnaire was divided into four parts: (1) questions about managers and organisations (15 questions; (2) mission and goals in organizations (9 questions); (3) leadership styles (27 questions) and (4) organisation development (60 questions). The questionnaire included 111 questions. It was printed on two double-sided sheets of paper to increase the perception of a short questionnaire. In the first, second and, third part of the questionnaire the level of agreement with statements on the 5-level scale (1-strongly agree, 2-agree, 3-neither agree nor disagree, 4-disagree, 5-strongly disagree) was tested. The fourth part asked about the level of importance of several issues on 5-point scale (1-very important, 2-fairly important, 3-important, 4-less important, 5-not important).

Managerial style of leadership was tested by Likert methodology. In the first step, managerial styles and leadership approaches were tested for the whole sample. Further, possible differences in management style and behaviour between medical doctors and managers of other professions were investigated. For testing statistical differences between medical background managers and managers of other professions, classical statistical methods and standardised statistical tools (t-test for means of parametric variables, χ^2-test of contingency tables for distributions of non-parametric variables) were used (Hussey and Hussey, 2006).

4 Results

4.1 Survey demographics

Within the requested time period, which was two working weeks, 47 questionnaires were mailed back. A brief look at the positions which the respondents hold in their health-care organizations shows that a vast majority of them are general managers (52 %), followed by deputy general managers (19 %) and medical directors (10 %). The chief nursing officer respondents account for 7 %, thus making the top management of the organizations to be represented by 88 % of the analyzed sample, and therefore indicating that the study is limited to top management in the health-care sector. Interestingly, middle managers were represented by 25 % in the whole sample, while being only 12 % among respondents, which may hint at a certain non-response bias within this group of managers. There were more women (62 %) compared to men (38 %) among respondents, although the sample was highly balanced with even more men (51.4 %) which may be explained by the possibility of a non-response bias among men participants in the study. Because this was not a purpose of the study, the demographics of the affiliating institutions of the respondents are not discussed at this point.

On average, managers were 48 years old (SD=7.67). Generally, it was expected that we would be dealing with a highly educated population, 93 % of them holding at least university degrees, while 17 % even hold postgraduate degrees. From the sample it is evident that a medical background is still a preferred educational qualification when appointing directors of health-care institutions. Apparently, 60 % of participants took medical training at the university level (i.e. medical doctors), followed by people with a business studies background (26 %), and lawyers (7 %). The remaining participant held an engineering degree. On average, they have 23 years of working experience (SD=7.77), out of this they spent 11.6 (SD=7.90) years in managerial positions. More than one third of respondents (38 %) directly supervised more than 100 employees, while the second most numerous group was the one supervising less than 10 employees (24 %), which may point to a possible different level of delegation of control among participating organizations. This may be further confirmed by comparing the distributions of number employees in the organization and directly subordinated employees to respondents ($\chi^2 = 35.66$; DF = 4; $\alpha = 0.05$), where no statistical match was evidenced. The respondents in the study seem to be hard-working people, because 55 % of them spend more than 50 hours

Table 1: Differences in opinions regarding mission and goals

	Medical background	Other professions	P
Economic and financial success is important for the organisation.	1.36	1.18*	0.09
Rewards on the basis of jointly defined goals are a predominant means of motivation in the organization.	2.44*	2.82	0.10
All employees are in the function of supervision and control.	3.16	2.59**	0.02
There is a high level of competiveness among employees at work.	3.40	2.94**	0.04
There is no management team in the organization.	4.36	3.06**	0.00

Notes: Likert scale: (1)–strongly agree, (5)–strongly disagree; statistical significance (*) $p < 0.1$; (**) $p < 0.05$

Source: Own research and calculations, 2008

per week in their institution (the standard working week in Slovenia is 40 hours).

The propositions were tested through two blocks of questions covering (1) organizational mission and goals (Grumbach and Bodenheimer, 2004; Fireman et al., 2004; Desmidt and Heene, 2007), (2) managerial styles and organizational learning development (Carrigan and Kujawa, 2006; Lindrooth et al., 2006; Marquis and Huston, 2008).

4.2 Organizational mission and goals

Missions and goals of managers and their organizations were tested through a series of 36 questions. There was no predominant pattern revealed in the answers, although, managers with a medical background showed a lower level of agreement in 22 out of 36 questions. This is further confirmed by the overall mean value of level of agreement, which is higher in the "medical" group of managers.

In table 1, only the issues where statistically significant differences in means evolved are presented. Most interestingly, the non-medical managers value higher the economic and financial success of their organizations and assign a statistically higher level of significance to this issue. The lower level of importance in the physicians' group may be interpreted to be in accordance with the traditional aspiration of incompatibility between medical ethics on one side and cost efficiency on the other. They also tend to involve all the employees in the self-controlling system, which may be interpreted as a sign of better delegation capabilities and responsibility sharing. Moreover, they regard the competitiveness among employees to be sound for the organizations' efficiency. On the other hand, it seems that managers with a medical background favour more soft approaches towards management (rewards issues). The somewhat cynical statement that there is no management team in the organization which was quite highly supported by medical managers may the result of a certain frustration regarding their own managerial competencies.

4.3 Managerial styles and organizational learning and development

There were not many differences found regarding the perceived importance of new knowledge and skills. As shown in table 2 there were only two issues where statistical significance occurred. Medical doctors value higher new knowledge in their own medical science, which is reasonable because of the rapid changes and developments in the area.

Managers with a medical background express significantly higher interest in four areas of education and training, which is explained in table 3. Again, there is higher demand for new knowledge in medical science and medical care technology. Additionally, medical doctors express higher (and absolutely very high) demand for different training aspects of legislation and, surprisingly, also for the education and training on marketing of their services, which may be explained as an up-coming increased level of awareness that the health-care market is growing more and more competitive and influenced by a higher level of consumerism. These new market conditions should be addressed more thoroughly in the future.

The results in table 4 are in a way surprising and contradictory to the ones in the table 3. There are six statistically different views regarding the interest in outside expert assistance: (1) different aspects of law, (2) economics, public procurement and finance, (3) general management skills, (4) marketing of services, (5) leadership and

Table 2: Importance of new knowledge and skills

	Medical background	Other professions	P
New expert knowledge from medical science	1.40**	1.94	0.05
New sources of funding – EU projects	1.92**	2.53	0.05

Notes: Likert scale: (1)–strongly agree, (5)–strongly disagree; statistical significance (*) $p < 0.1$; (**) $p < 0.05$
Source: Own research and calculations, 2008

Table 3: Interest in education in different fields

	Medical background	Other professions	P
New expert knowledge from medical science	1.36**	2.24	0.02
Different aspects of law	1.88**	2.35	0.04
Know-how in medical technology	2.28*	2.71	0.10
Marketing of services	1.92**	2.59	0.02

Notes: Likert scale: (1)–strongly agree, (5)–strongly disagree; statistical significance (*) $p < 0.1$; (**) $p < 0.05$
Source: Own research and calculations, 2008

Table 4: Interest for outside expert assistance

	Medical background	Other professions	p
Different aspects of law	3.16	2.18**	0.02
Economics, public procurement and finance	3.08	2.29**	0.04
General management skills (planning, organizing)	3.24	2.12**	0.01
Marketing of services	2,68	1.82**	0.02
Leadership and directing of employees – HRM	2.96	1.88**	0.00
New sources of funding – EU projects	2.75	2.00**	0.02

Notes: Likert scale: (1)–very important, (5)–not important; statistical significance (*) $p < 0.1$; (**) $p < 0.05$
Source: Own research and calculations, 2008

directing of employees, and (6) new sources of funding – EU projects. In all cases, managers of other professions express much higher interest in those services. Generally, medical doctors appear to be much more reluctant to take outside assistance to cope with their business challenges.

These differences in attitudes towards outside assistance may be interpreted through a traditionally different approach to work. While managers (mostly of other professions) are trained to seek for outside assistance in the fields where they feel lack of competences, doctors typically divide their work dichotomously at two levels: generalist and specialist; both having backup services available from separated departments (e.g. blood testing, x-raying etc.). Thus, medical doctors work in a pre-defined working system and may be more rigid in considering outside assistance.

5 Conclusions and implications

There is very low support which would offer the chance to confirm proposition P1, suggesting that medical doctors develop different, more employee-oriented managerial and leadership styles than managers of other professions. Although there are certain trends regarding difference, the level of statistical difference is not satisfactory for further elaboration to be legitimized. P2, indicating that other managers value higher the economic and financial achievements of their institutions, can definitely be confirmed. This can be partly said also for P3 (medical doctors generally feel a higher degree of lack of expertise in different fields than do general managers), interpreting several achieved statistically significant differences. Also P4, suggesting that medical doctors and other managers demand different levels of outside expertise and other forms of assistance, particularly education and training, can be partly confirmed, thus indicating that physicians as managers express a statistically higher level of interest in education and training while they are significantly less inclined to use outside expertise in the form of advice.

The practical implication of the study may be, on the first hand, in the possible interpretation that there exists a certain demand for specialized trainings and education in various managerial disciplines. This training should be carefully designed and accurately focused on medical doctors who hold senior managerial positions in their health-care institutions. In their daily work they obviously come to conclusions that medical expertise does not do enough for competent facing up to their daily and also long-term business and professional challenges. Among those, the most important seems to be confronting new, market conditioned reality also in this traditionally highly regulated industry.

Among the authors, there is a high level of awareness about the possible limitations of the study. Admittedly, this is a relatively small sample, which is due to the relatively limited size of the researched population. Since the response rate was rather high (22 %), the possible increase could only be achieved by implementing methods of follow-up, which would decrease the sense of anonymity of the study. However, even with this major weakness of the study, it is believed that it may represent an important nucleus for forthcoming research in the field in the future.

The main research question of whether there are significant differences in the managerial styles and behaviour cannot be answered with a simplified 'yes and no'. Some significant differences were revealed only in the least surprising field, i.e. the dilemma of cost efficiency and consequently cost shifting, which is too often still understood to have a negative impact on patients' benefits and their value. This may point out that modern and relevant managerial issues, which all focus on the search for best return in the invested resources, are still linked to a certain level of traditional prejudices which advise that savings on humanitarian issues are not an eligible approach. This mental shift, which can also be stimulated by focused training, will probably become essential for creating a new paradigm of the health-care organization management.

6 Literature

Ammenwerth, E., Gräber, S., Herrmann, G., Bürkle, T. & König, J. (2003). Evaluation of health information systems – problems and challenges, *International Journal of Medical Informatics*, 2003 (71): 125-135. DOI: 10.1016/S1386-5056(03)00131-X.

Berg, M. (2001). Implementing information systems in health care organizations: myths and challenges, *International Journal of Medical Informatics,* 64 (2): 143-156.

Caldwell, D. F., Chatman, J., O'Reilly, C. A. III, Ormiston, M. & Lapiz, M. (2008). *Implementing strategic change in a health care system: The importance of leadership and change readiness, Health Care Management Review,* 33 (2): 124-133. DOI: 10.1097/01.HMR.0000304501.82061.e0.

Desmidt, S.& Heene, A. (2007). Mission statement perception: Are we all on the same wavelength? A case study in a Flemish hospital, *Health Care Management Review*, 32 (1): 77-87.

Carrigan, M. & Kujawa, D. (2006). Six sigma in health care management and strategy, *The Health Care Manager*, 25 (2): 133-141.

Fireman, B., Bartlett, J. & Selby, J. (2004). Can disease management reduce health care costs by improving quality? *Health Affairs – The Policy Journal of the Health Sphere*, 23 (6): 63-75.

Ford, R. C. & Fottler, M. D. (2000). Creating Customer-Focused Health Care Organizations, *Health Care Management Review,* 25 (4): 18-33.

Floyd, S. W., Kramer, J. A & Born, P. H. (2005): Institutional forces in the acceptance of managed care practices by physicians, *Health Care Management Review*, 30 (3): 237-250

Groene, O., Jorgensen, S. J., Fugleholm, A. M., Muller, L. & Garcia-Barbero, M. (2005). Standards of health promotion in hospitals – development and pilot test in nine European countries, *International Journal of Health Care Quality Assurance*, 18 (4): 300-307.

Grumbach, K. & Bodenheimer, T. (2004). Can health care teams improve primary care practise? *The Journal of the American Medical Association*, 291 (10): 1246-1251.

Hunter, D. J. & Brown J. (2007). A review of health management research, *The European Journal of Public Health*, 17 (1): 33-37.

Hussey, J. & Hussey, R. 2006. *Business Research: A Practical Guide for Undergraduate and Postgraduate Students*. Macmillan Publishers Limited, New York.

Hyrkäs, K., Appelqvist-Schmidlechner, K. & Kivimäki, K. (2005). First-line managers' views of the long-term effects of clinical supervision: how does clinical supervision support and develop leadership in health care? *Journal of Nursing Management*, 13 (3): 209-220. DOI: 10.1111/j.1365-2834.2004.00522.x.

Hoff, T. J. (1999). The paradox of legitimacy: Physician Executives and the Practice of Medicine, *Health Care Management Review*, 24 (4): 54-64.

Lavis, J., Davies, H., Oxman, A., Denis, J., Golden-Biddle, K. & Ferlie, E. (2005). Towards systematic reviews that inform health care management and policy-making, *Journal of Health Services Research and Policy*, 10 (1): 35-48.

Lindrooth, R. C., Bazzoli, G. J., Needleman, J. & Hasnain-Wynia, R. (2006). The Effect of Changes in Hospital Reimbursement on Nurse Staffing Decisions at Safety Net and Nonsafety Net Hospitals, *Health Services Research,* 41 (3): 701-720.

Liu, S. S. & Yuh-Yun, C. (2007). Building customer capital through knowledge management processes in the health care context, *Health Care Management Review*, 32 (2): 92-101. DOI: 10.1097/01.HMR.0000267786.94437.57.

Longo, F. (2007). Implementing managerial innovations in primary care: Can we rank change drivers in complex adaptive organizations? *Health Care Management Review*, 32 (3): 213-225. DOI: 10.1097/01.HMR.0000281620.13116.ce.

Markota, M., Švab, I., Saražin Klemenčič, K. & Albreht, T. (1999). Slovenian experience on health care reform, *Croatian Medical Journal*, 40 (2): 34-37.

Magnus, S. A. & Smith, D. G. (2000). Better Medicare Cost Report Data are Needed to Help Hospitals Benchmark Costs and Performance, *Health Care Management Review*, 25 (4): 65-76.

Marquis, B. L. & Huston, C. J. (2008). *Leadership Roles and Management Functions in Nursing*. Lippincott, Williams and Wilkins, Philadelphia.

Pettersen, B. J. & Hofoss, D. (2007). Are public health physicians fading out of management? *The European Journal of Public Health*, 17 (6):642-645. DOI: 10.1093/eurpub/ckm031.

Porter, M. E. & Olmsted Teisberg E. (2007). How physicians can change the future of health care, *The Journal of the American Medical Association*, 297 (10): 1103-1111.

Pronovost, P. J., Barenholtz, S. M., Goeschel, C. A., Needham, D. M., Sexton, J. B., Thompson, D. A., Lubomski, L. H., Marsteller, J. A., Makary, M. A. & Hunt, E. (2006). Creating high reliability in health care organizations, *Health Services Research*, 41 (4): 1599-1617. DOI: 10.1111/j.1475-6773.2006.00567.x.

Sellgren, S., Ekvall, G. & Tomson, G. (2006). Leadership styles in nursing management: preferred and perceived, *Journal of Nursing Management*, 14 (5): 348-355.

Social Research Association – SRA (2003). *Ethical guidelines*. http://www.the-sra.org.uk/documents/pdfs/ethics03.pdf. Accessed on 15.12.2008.

Swayne, L. E., Duncan, W. J. & Ginter P. M. (2006). *Strategic management of health care organizations*. Wiley-Blackwell, New York.

Švab, I., Vatovec Progar, I. & Vegnuti, M. (2001). Private practice in Slovenia after the health care reform, *European Journal of Public Health*, 11 (4): 407-412. DOI: 10.1093/eurpub/11.4.407.

Tsasis, P. & Harber, B. (2008). Using the balanced scorecard to mobilize human resources in organizational transformation, *Health Service Management Research*, 2008 (21): 71-80. DOI: 10.1258/hsmr.2007.007008.

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