

# From Magnet-Hospital to the Hospital of the Future

André Heitmann<sup>1,\*</sup>, Rosana Svetić Čišić<sup>2</sup>, Iris Meyenburg-Altwarz<sup>1</sup>

<sup>1</sup>Medical School (MHH), Department of Nursing, Carl-Neuberg-Str.1, 30625 Hannover, Germany

<sup>2</sup>St Catherine specialist hospital, Bracak 8a, 49210 Zabok, Croatia

\*Corresponding Author: [andreheitmann78@gmail.com](mailto:andreheitmann78@gmail.com)

Copyright © 2013 Horizon Research Publishing All rights reserved.

**Abstract** In the United States the Magnet Recognition Program® is an established nursing-oriented organizational model. Accredited Magnet hospitals succeeded in attract and retention of qualified nurses. This demonstrated the future potential of this model. However, a direct transfer of the model to European conditions seemed to be limited. It raised the question concerning a European model that could give hints to organize the hospital of the future. This exploratory and descriptive study attempted to create a European framework in order to made recommendations for the hospital of the future. Following recommendations were made: 1. Designation of nursing as connecting health profession, 2. In-depth structural integration of nursing into the hospital organization, 3. Lived professionalism and quality.

**Keywords** Magnet Hospital, Exploratory Study, European Framework, Hospital of the Future, Croatia, Germany

which were set in relationship to US and European Conditions.

To achieve this subject a Literature review and analysis of empirical studies concerning Magnet hospitals were conducted. In a further literature search the US context conditions were identified and sketched to an US framework model. The findings were interpreted with the extra-organizational US context conditions and combined to a conceptional framework. It was applied on two European countries (Croatia, Germany) to create a basis for further interpretations aiming to create a matched model. Data concerning the exemplary (extra-organizational) European health care systems were also collected via literature search according the US framework. In a next step the results were matched to form a European conceptional framework “Characteristics Hospital of the Future”. This framework was applied on the Hannover Medical School (MHH) (Germany) and the St Catherine Hospital (Croatia) as exploratory examples. In conclusion some recommendations for nurse managers were given.

## 1. Introduction

During essential changes in the US health care system in the eighties of the last century [1] some hospitals mastered this change despite the financial pressure through the implementation of DRGs [1]. They were successful in attracting and retaining nurses [2] despite the shifted focus from a goal-driven concept in direction of a resource-driven model [1], which affected the resource situation of the hospitals. Since then the Magnet Model became an exceptional framework to promote this change to build an agile and dynamic nursing work force [3]. These characteristics referred to the fact that the self-image and image of the US nursing staff differed significantly from those in Europe. A direct copy of the so-called concept of success was therefore limited and reasonable. On this background the Magnet model was the subject of this explorative study. Questions aroused concerning the transferability and adaptability of this Model which affected the efforts of nurse managers to create a Hospital of the future. This study tried to identify elements of this Model

## 2. Methods

Following methods were used in this exploratory and descriptive study: literature research and analysis of relevant literature, interpretation of the findings and creation of conceptional models.

1<sup>st</sup> Step: Literature search, analysis and clustered categories: A literature search was conducted in several data bases: PubMed-NCBI, MEDPILOT and Scopus. The search strategy in PubMed and Scopus included the use of following combinations of keywords corresponding to specific search operators: “magnet hospitals” AND USA, Nursing AND Magnet AND USA, retention AND strategies AND hospitals AND USA, “Nursing magnet” AND USA, “nursing staff retention” AND USA, “retentions strategies hospitals” AND USA, magnet hospitals AND USA, “retention nursing hospitals” AND USA, nursing AND staff AND retention AND USA. In MEDPILOT a parallel unspecific literature search was conducted (keywords: “Magnetkrankenhaus”, “Magnet-hospitals. Empirical studies (quantitative and qualitative studies) and

retrospective studies as also systematic reviews were included into the analysis: 12 relevant papers were able to be used in the literature analysis. Clustered categories were interpreted on the basis of the findings.

2<sup>nd</sup> Step: Literature analysis and interpretation with clustered categories: A second literature search in PubMed, Scopus, MEDPILOT and the university library of the Hannover Medical School was conducted to describe relevant issues of the US health care system. The search strategy comprised the keywords “health care system comparison” AND United States and “health care delivery” AND United States, and “US Health Care” AND system. The results were set in relationship to the clustered categories of the first literature analysis. This step aimed to create comprised characteristics of the US system as a base for further interpretations.

3<sup>rd</sup> Step: Literature search and analysis on the base of the US conceptional framework model: To adapt the US conceptional framework a third literature search in PubMed, Scopus, MEDPILOT and local resources was conducted. The search strategy comprised the keywords “health care system comparison” AND Croatia (resp. Germany) and “health care delivery” AND Croatia (resp. Germany), and “Croatia/ German Health Care” AND system. It aimed to draw a sketched view on both European health care systems.

4<sup>th</sup> Step Creation of a matched model called “European conceptional framework”: In this step the results were matched into a conceptional framework regarding the European context.

5<sup>th</sup> Step: In this step the European conceptional framework was applied in an exploratory manner on two European hospitals (St Catherine Hospital, Hannover Medical School). The objective was to prove the applicability of the framework aspects. Lead by this framework both organizations were reviewed and set in an interpretative relationship to the frameworks’ aspects.

6<sup>th</sup> Step: In this step recommendations concerning the hospital of the future were formulated.

Following pre-categories were identified from the analyzed literature (see table 1). These pre-categories gave an impression about the implementation of the Magnetism in American hospitals. They were compared with the ANCC Magnet Recognition Program® Model. The results showed the relativistic character of the Magnet concept:

- **Progressive structure-supported quality-oriented financially-backed leadership style:** The Magnet concept had a meaning about leadership and organization. A progressive leadership style was strong connected with an organizational structure committed to transformation. This included outcome-orientation and an idea of quality, also continuity on the management level and financial security.
- **Relative degree of autonomy and improved working conditions:** The Magnet concept aimed to ensure structural empowerment framed by progressive leadership and organized transformational processes. A relative degree of autonomy and relative improved working conditions constituted an objective.
- **Quality comes first:** Quality Improvement was a very important model component. It needed the existence of a so called “quality comes first” – mentality.
- **Primary focus nursing:** Professional practice in Magnet hospitals was noticeable by a relative degree of Nurses’ autonomy. The focus lied primary on the Nursing profession.
- **Selective quality:** The Magnet concept should ensure overall high quality, but the implementation resulted in higher quality in selective fields of nursing practice compared to Non-Magnet-Hospitals.
- **Selection bias of Magnet studies:** The studies which examined Magnet and Non-Magnet hospitals showed selection bias. No possible Magnet effects on other professions were investigated.
- **Fragility of Magnet status:** Studies results indicated that the Magnet status was fragile: Structural inconsistencies which affected working conditions remained after Magnet recognition.

### 3. Results

#### a) Results of the First Literature Analysis

**Table 1.** Results of the literature analysis

Pre-categories	Characteristics	Reference
Pre-category I – Facilitators	outcome-orientation, quality comes first, commitment of proactive leadership, structural support	[4], [5]
Pre-category II – Barriers	personnel discontinuity in management, financial restrictions	[4]
Pre-category III - Relative Autonomy	visible organizational structures, self control, qualification levels	[6], [7], [8], [9]
Pre-category IV - Working conditions	relative differences with non-magnet hospitals, dependence of working conditions on composition of qualification	[10], [11]
Pre-category V - Selective high quality of health care	selective high quality in elements of nursing, intra-professional better communication and cooperation, probably higher patient safety	[12], [13]
Category VI - Limitations to Magnet Characteristics	selection bias on magnet studies, fragile state of magnet hospitals, structural differences within magnet hospitals affect magnet outcomes, Organization produces outcomes	[14], [15]

## b) Results of the Second Literature Analysis

Following the literature analysis concerning the US context some categories were able to set out the extra-organizational conditions which affected hospitals: variability of the health care system, possibilities for health care providers, reform in health care systems.

Variability of the health care system [16], [17], [18]:

There was only a partial coherent public health care system, which was primarily focused on special population groups. The public influence on the design of supply and financing of health care settings differed significant between the states. There were also differences in the amount of pay depended on the financiers (e.g. Health Maintenance Organizations, Medicaid program). Employers acted partly as self-insurer of their employees. Also insurances (e.g. Health Maintenance Organizations) were a social benefit from the employers.

Possibilities for health care providers [19], [20]:

The health care providers had many ways to create their offer on the U.S. health care market. This included the connection with the gatekeeper by purchasing general practitioner practices or the provision of hospital equipment for them in the hospitals' owned health care centers. They reduced costs by creation of new professional groups as substitutes for established professions (e.g. license Anesthesia Assistants vs. Anesthesia Nurses). In individual segments there was a high attractiveness for students in established professional groups.

Reform in health care system [20], [21]:

The shortcomings of the system were modified by the reforms in context of "Obama Care." This included the elimination of maladministration that a large number of the US-citizens have no health insurance coverage. By the reforms supply gaps should be filled, spending on government programs should be reduced and the quality of care should be improved. For the health care providers the reforms caused a requirement for action.

## c) Creation and Interpretation of a Conceptual Framework USA

The used framework (see fig. 1) divided the conditions in conditions outside the hospital organization (= extra-organizational conditions) and within the organization (= hospital). The extra-organizational conditions were the categories identified in the second literature analysis.. In this model they produced an innovative pressure, caused by the variability of the health system. This VARIABILITY initiated an increased need for reform(s) in order to cancel problems caused by this VARIABILITY. The variability was related to the allocation of monetary resources to the hospitals. Especially against the background of different accounting systems to allocate resources the VARIABILITY triggered in this way the innovative pressure. Also POSSIBILITIES which were affected by the condition REFORM contributed the innovative pressure. POSSIBILITIES existed for hospitals, e.g. in the construction or expansion of hospital buildings or in buying

facilities downtown commercial areas. In the same direction POSSIBILITIES potentially exacerbated the VARIABILITY in this model.

The organization HOSPITAL had to make a respond on this innovative pressure. A HOSPITAL could focus on the nursing profession (i.e. mono-disciplinary focus) or it could focus the entire organization (i.e. multidisciplinary focus). The results of the literature review indicated that either little difference between the magnet- and non-hospitals exist (see [3], [10]) or accredited magnet hospitals had also internal organizational differences that affected the magnet status. It could therefore assume that there are existing different manifestations of the response to the innovative pressure with respect to the chosen focus. This fact was illustrated by the reciprocal overlap of the two foci. Reciprocally because structural changes in a department affected other organizational structures. A reciprocal interface in this case related to be a mixed response to the innovative pressure.

The reflection on the basis of the clustered categories and the comparison with the Magnet Recognition Program® Model illustrated the dependence on structural (legal, policy and intra-organizational) aspects. With this viewpoint a framework model was designed as an exploratory approach. It visualized on the one side extra-organizational conditions and on the other side the intra-organizational foci. The first one comprised the terms "Variability", "Possibilities" and "Reform"; the last one was designed according the components of the Magnet Recognition Program® Model. This exploratory framework was used in further reflections as an interpretation basis on the Croatian and German framework conditions. The results of these interpretations were part of the matching of the country-specific frameworks.

## d) Results of the Matching of the Conceptual Framework USA on European Examples

Matching of extra-organizational conditions (see table 2)

The frameworks in both European countries showed a distinctive consistency. This consistency was in straight opposition to the variability of the US-Health care system. Certainly the conditions in the European Union would also lead to the impression of a great range of variability concerning each health care system of the member states, because of country specific driving forces [44]. But all systems shared similarities like the universal or near-universal coverage of health care costs e.g. for hospital care [45]. For the European matching model we could assume that the term "Consistency" visualized a very important condition which influenced the nursing service in hospitals. Seen through the lens of this framework all hospitals including the nursing profession had to face the same innovative pressure. This pressure emerged from the "trinity" "Consistency, Reform and Possibilities". Consistency was the key element regarding the regulation of resources on the basis of the health care insurance system. It influenced the term "reform" which included the actions to accommodate the "consistency" to the respective circumstances.

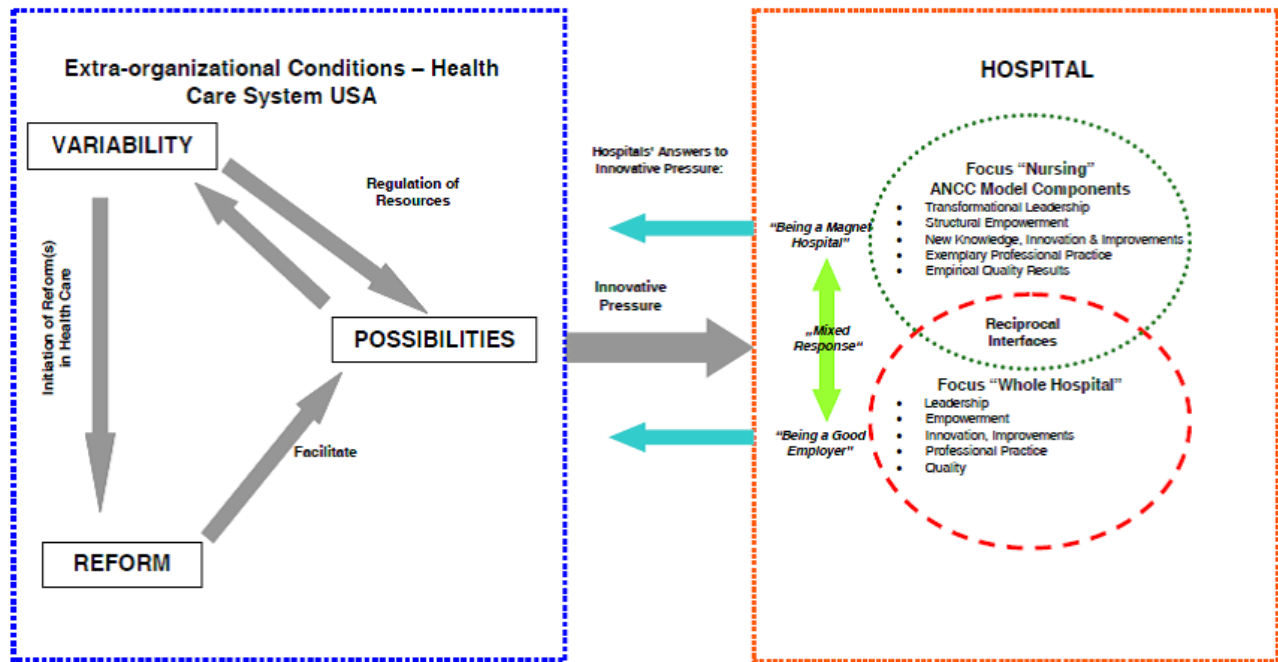


Figure 1. Conceptual Framework USA

Table 2. Matching of extra-organizational conditions

USA	Croatia	Germany	European Matching Model
<b>Variability</b> <ul style="list-style-type: none"> <li>Partial public financed health system</li> <li>Different payment systems</li> </ul>	<b>Consistency</b> [22],[23],[24],[25]: <ul style="list-style-type: none"> <li>Single public funded health system + insurance</li> <li>Domination of Ministry of Health</li> </ul>	<b>Consistency</b> [30],[31],[32],[33],[34],[35]: <ul style="list-style-type: none"> <li>Uniform legal framework, income based statutory health insurance, indirect ruling through government</li> <li>Interpretation through system actors</li> </ul>	<b>Consistency</b> Consistent conditions concerning the Health Care system (legal framework, social insurance (income or tax paid)).
<b>Reform</b> <ul style="list-style-type: none"> <li>Elimination of maladministration</li> <li>Enhancement of health care insurance coverage</li> </ul>	<b>Reform</b> [26],[27],[28],[29]: <ul style="list-style-type: none"> <li>Cost containment</li> <li>Improvement of efficiency</li> </ul>	<b>Reform</b> [35],[36],[37],[38]: <ul style="list-style-type: none"> <li>Improvement efficiency, quality</li> <li>Reduction of Costs</li> </ul>	<b>Reform</b> Reduction of costs and increase of quality and efficiency.
<b>Possibilities</b> <ul style="list-style-type: none"> <li>Enhancement of health service offers by health care provider</li> <li>Creation of Substitutes</li> </ul>	<b>Possibilities</b> [22]: <ul style="list-style-type: none"> <li>Shortage of Health Professionals</li> <li>Self-Government of Health Professionals</li> </ul>	<b>Possibilities</b> [36],[39],[42],[43]: <ul style="list-style-type: none"> <li>Cross-sectional enhancement hospital facilities</li> </ul>	<b>Possibilities</b> Pressure to invest in job opportunities with high professional standard and enhancement of clinic facilities.
		<b>Dominance</b> [40],[41],[42]: <ul style="list-style-type: none"> <li>Physicians are the key Health Professionals</li> </ul>	

“Reform” became a common condition as a result of the analysis of the circumstances of the three exemplary countries. In opposition to the US reform which focused on the elimination of the maladministration in form of an expansion of the population coverage [46], Europe’s direction focused on cost reduction, cost containment and improvement of quality and efficiency. Hospitals in Europe dealt with a need for investments in their provision of health care services (quality + efficiency) and paradoxically to cut their costs.

Concerning the condition “Possibilities” to match the innovative pressure and focusing on European conditions Hospitals had to invest in job opportunities due to the shortage of Health professionals (especially nurses) connected with the fulfillment of high professional standards and the enhancement of clinic facilities. These actions should be done instead of the above mentioned paradoxical direction of the innovative pressure.

The dominance of the medical profession in Germany was not part of the matched model because the independence of

the medical profession as a requirement for this dominance eroded gradually [36].

Matching of intra-organizational conditions (see table 3)

Many sub segments of the intra-organizational conditions which effects nursing were related to the Magnet model concept. In the matched model “Mutual Respect” was a component of the magnetic force “Management Style” and the Model component “Transformational Leadership” which was represented by the term “Nursing centered Management”. This could be justified because mutual respect should be set as an organizational norm to provide structure and direction in patient care as also in organizational functions [47]. The Magnet model component “Structural Empowerment” was related via the magnetic force “Personnel policies and programs” with efforts for “Increasing the number of nurses”, the “Involvement in organizational changes” and the “Provision of work-home-balance”. These sub segments importance was justifiable because some studies (although some limited on the German context) gave hints: As an example the introduction of the DRG in Germany possible worsened adequate staffing and supportive management [48]. As well Management should address the work-home interface which influences leaving intentions [49]. Also the magnetic force “Professional Development” was similarly to the sub segment “Research and professional development”. In conclusion the best term to summarize this sub segments was “Nursing integrating structure” which included Personnel Policies and Programs with emphasis on increasing the Number of Nurses, competence development, research as also significant involvement in organizational changes and

provision of Work-home Balance. Quality improvement as a magnetic force was interpreted as a result of the other sub segments which also characterized the European matched model. But to take emphasize into the nursing focus it should be noted as “Improvement of Quality in Nursing”. An approach could be the enhancement of working conditions which maintains the work force, able to ensure a high level of quality [49]. The Magnet model component “Exemplary Professional Practice” contained the magnetic force “Professional Models of Care” which was related to the (European) sub segment “Fulfillment of professional standards and Quality of Care”. This point had for example in Germany a great Importance corresponding to the increased valuation of the evidence based nursing principle through the jurisprudence [50]. Especially service provider should integrate professional standards in their processes to prevent liability cases [51]. Also the magnetic force “Interdisciplinary Relationships” was related to “Mutual respect”. Concerning “Mutual respect” a longstanding emotion work should be addressed to enable nurses for collaboration with other professionals [52], although of the existence of a fragmented and transient collaboration in practice [53]. In the matched model the term “Lived professional practice” denoted both sub segments in the best manner. The magnetic force “Quality of Care” respectively the Magnet model component “Empirical Quality Results” were also related with the “Fulfillment of professional standards”. This relationship was justified because “lived” professional standards ensured empirical quality results. In consequence this aspect was integrated into the segment “Lived Professional Standards”

**Table 3.** Matching of intra-organizational conditions

USA	Croatia	Germany	European Matching Model
<b>Transformational Leadership</b> - Quality of Nursing Leadership - Management Style		Mutual Respect	Nursing Centered Management: Management Style with emphasis on mutual respect.
<b>Structural Empowerment</b> - Organizational Structure - Personnel Policies and Programs - Community and the Healthcare Organization - Image of Nursing - Professional Development	Increase Number of Nurses  Development of Nursing competence  Investment in Nursing research and PhD-Programs	Increase Number of Nurses  Involvement in Extension of Health Care Service Provision  Work-Home-Balance	Nursing Integrating Structure: Personnel Policies and Programs with emphasis on Increasing Number of Nurses, competence development, research as also significant involvement in organizational changes and provision of Work-home Balance.
<b>New Knowledge, Innovation and Improvements</b> - Quality Improvement	Cross sectional character: Quality improvement is part of each model component. With emphasis on Nursing it should be noted as Improvement of Quality in Nursing.		
<b>Exemplary Professional Practice</b> - Professional Models of Care - Consultation and Resources - Autonomy - Nurses as Teachers - Interdisciplinary Relationships	Fulfillment Professional Standards	Mutual Respect	Lived Professional Standards and Quality of Care: Professional Models of Care with emphasis on fulfillment of nursing's own professional standards.
<b>Empirical Quality Results</b> - Quality of Care	Fulfillment Professional Standards		Interdisciplinary Relationships on the basis of mutual respect.

### e) European Conceptual Framework Characteristics “Hospital of the Future”

At first this conceptional framework focused on intra-organizational aspects. This approach could be reasonable because extra-organizational conditions could not be influenced by a single hospital. Regarding this aspect the extra-organizational conditions were concluded into the keyword of “Innovative Pressure” which visualized the influence of these conditions without dominating the framework: consistency (= all hospitals have country-specific same starting positions), reform (= rationalization as target) and possibilities (= requirement for self-investment). These facts needed innovative measures to cope it and to gave the nursing profession a responsible role as a “Connecting Health Profession” including effective self-competences. That was the reason why this framework should be an integrative part of the Nursing management as also on the general hospital management level. It gave an impression concerning quality in nursing in the hospital of the future – derived from current understandings and requirements. Nursing should be part of a holistic strategy referring to the multi-professional character of hospitals. They should emphasize improved nursing quality in the context of a multi-professional institution. From our view this approach was justified referring to the “interface character” of nursing. Nursing should be considered as a “connecting health profession” because Nurses act on a field with many reciprocal interfaces (e.g. Nurses and Physicians or Nurses and Physiotherapists). The accentuation of Quality improvement in Nursing seemed to be a promising approach to address the innovative pressure and to correspond with the sub segments in relation to the magnetic forces. As a consequence investments in Nursing could support to meet other demands and pressures in the future.

This framework was constructed by these aspects: Nursing centered management, nursing integrating structure, lived professional standards and lived quality. Aspect 1 “Nursing Centered Management” meant a culture of mutual respect between the nursing management level and nurse

professionals at the bedside. Also it meant a culture of mutual respect on the management level of the different professions which affected the cooperation between health professionals on the lower hierarchical levels [6], [7]. From our view this was a very essential issue, because it gave nurse managers a wide radius of action to establish and maintain the following aspects of the conceptual framework. Another essential reason was that institutional mutual respect support high quality patient care [54]. From our view mission statements indicated the scope and profoundness of mutual respect.

Aspect 2 “Nursing Integrating Structure” meant a strong institutional emphasis on efforts for increasing personnel resources. In this direction professional competences should be developed to gain benefits from a sound and empowered staff. The provision of competences with a sound staffing made it easier to conduct organizational changes in a multi-professional expert organization [55]. As a possible result e.g. business processes could be defined from a bedside perspective. Another issue of this structure was a main focus on staff retention – the provision of work-home-balance. It reflected the coming requirements concerning the demographic change which could affect the workforce structure [56], [57], [58].

Aspect 3 “Lived Professional Standards and Quality of Care” could be defined as a commitment for fulfillment of the own professional standards and quality of care. This meant e.g. a stronger appreciation of the specific role accountability as a nurse [59]. Also a professional model could affect the patient safety more favorable than a functional model [60]. The professional model was characterized by managers who recognized nursing as a profession exercised by skilled professionals [60]. A functional model which regarded nursing as a broad resp. unspecific set of tasks [60] should be removed by nurse managers. In case of this aspect respectful interdisciplinary relationships would be essential [44]. Also this aspect focused on the operational level regarding working groups, structures and proceedings.

**Table 4.** Efforts in direction of the Conceptional Framework Europe – Characteristics “Hospital of the Future”

Medical School Hannover (MHH)	St Caterine Hospital
<b>Nursing Centered Management:</b> Mission Statements (= Mutual Respect)	<b>Nursing Centered Management:</b> Mission Statement (= Mutual Respect)
<b>Nursing Integrating Structure:</b> Re-entry and trainee programs (= Increasing Number of Nurses) Advanced Professional Training/ Future Oriented Development Program ZEP (= Development of Nursing Competencies) Research Office (= Investment in Nursing Research) Participation in Corporate Development Programs (= Significant Involvement in Organizational Changes) Service Agreements/ Reconciliation Family/Work (= Provision of Work-Home-Balance)	<b>Nursing Integrating Structure:</b> Coping of Nursing Shortage (= Increasing Number of Nurses) Education measures in a new established institution (= Development of Nursing Competencies) Publications on nursing management research (= Investment in Nursing Research) Planning and organization of equipment and services (= Significant Involvement in Organizational Changes)
<b>Lived Professional Standards and Quality of Care:</b> Commitment in Mission Statements/ Quality Management System/ Working Group on Nursing Standards	<b>Lived Professional Standards and Quality of Care:</b> Commitment in Mission Statements/ Certification ISO 9001:2008/ Working Group on Nursing Standards

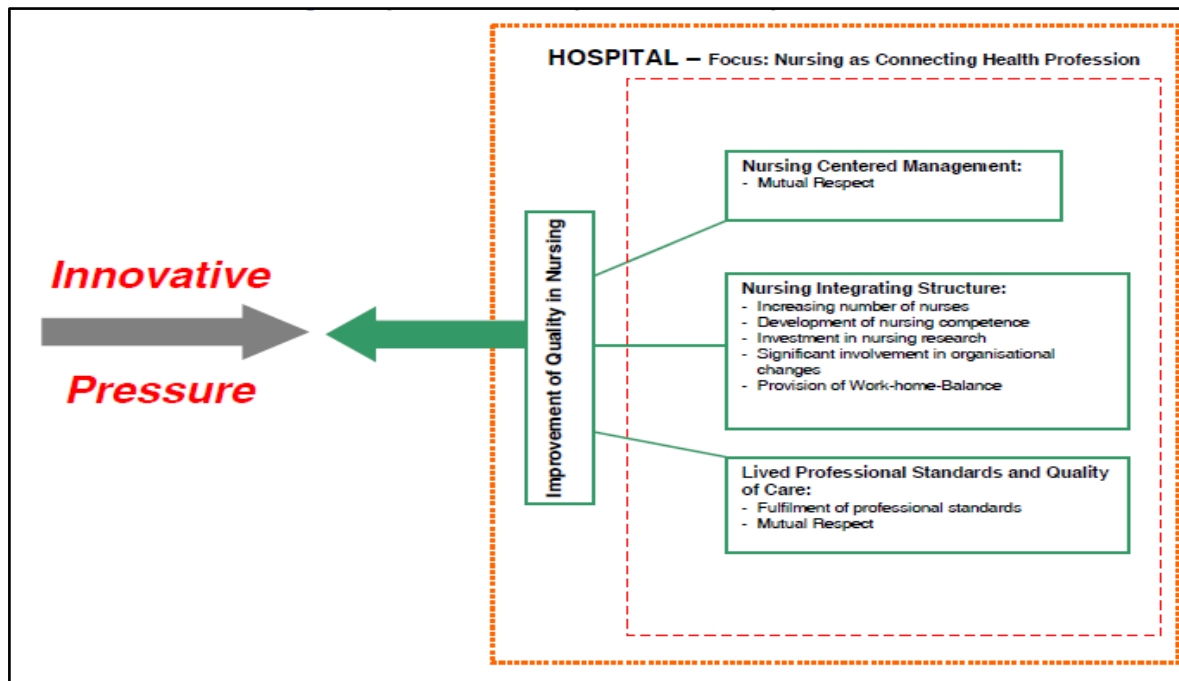


Figure 2. Conceptual Framework Europe – Characteristics ‘Hospital of the Future’

#### f) Application of the European Conceptual Framework Hannover Medical School (GER) Sveta Katarina (HR)

In this chapter the European conceptual framework was applied in an exploratory manner. The objective was to prove the applicability of the framework aspects. Lead by this framework both organizations were reviewed and set in an interpretative relationship to the frameworks' aspects.

Regarding the MHH the application of the matched model led so some suggestions about the congruence of institutional efforts with the matched model: Concerning the sub-segment ‘Mutual respect’ this sub-segment was stated as a core value of all nursing relevant mission statements. The ‘Nursing Integrating Structure’ comprised the sub-segment ‘Increasing number of Nurses’ which was embodied by the re-entry and trainee programs. Especially the re-entry program was an effort to increase nursing staff with a strong reference to the gender topic, because it was targeted on the empowerment of women to enhance their career chances. Concerning the next sub-segment ‘Development of nursing competence’ the MHH applied a micro- and macro-level approach. Possibilities for advanced professional training focused on the point of care on the micro-level; the future oriented development program (ZEP) faced the macro-level to enable coming nurse managers. The sub-segment ‘Investment in nursing research’ was embodied by the institution of a research office of the nursing department. This indicated efforts to establish and maintain applied nursing research activities. ‘Significant involvement in organizational changes’ was represented by the participation of the nursing department in corporate development projects. Referring the sub-segment ‘Provision of work-home balance’ the context of the MHH as a governmental institution was

evident, because efforts for reconciling family and work and the service agreement were fostered by this institutional status. The sub-segment ‘Fulfillment of professional standards’ in the segment ‘Lived Professional Standards and Quality of Care’ and ‘Mutual respect’ were embodied by the mission statements. It was also (focused on quality of care) embodied by the certified quality management system and the working group on nursing standards wherein nurses combined evidence based knowledge with practice requirements. This indicated that the fulfillment of professional standards in the nursing department was a key objective which was pursued by the management. All these efforts indicated a growing consciousness about the importance and responsibility of nursing in a maximum care setting. This could reflect the future requirements concerning hospitals to integrate nursing into a general management strategy.

The Croatian example showed that the establishment of a new hospital enabled the nursing profession to make significant contributions in direction of institutional structuring and development. Compared with the MHH St Catherine Hospital was a small hospital in a specific therapeutic field. But it was interesting that this ‘small’ institution reflected many aspects of the theoretical framework like the MHH as a ‘bigger’ institution. In the first segment ‘Nursing Centered Management’ Mutual Respect was also addressed in the mission statement. The ‘Nursing Integrating Structure’ comprised the sub-segments ‘Increasing number of nurses’ and the ‘Development of nursing competences’ as imperative conditions of a new hospital within a countrywide shortage of skilled health professionals. Noticeable were the efforts in the sub-segment ‘Investment in nursing research’. Similar to the MHH the St

Catherine Hospital invested in research activities which resulted in two papers. From our view the involvement in the institutional building as part of the establishment process was strong connected with the “Significant involvement in organizational changes”. The sub-segment “Provision of Work-home-Balance” was not addressed. We found possible reasons were in the situation of a newly established hospital and in the employment law, which did reflect the shortage of skilled health professionals. The segments “Lived Professional Standards and Quality of Care” were also addressed by the St Catherine Hospital in the same manner like the MHH.

#### **g).Recommendations for the Hospital of the Future**

This exploratory study showed the meaning of structural aspects which determined the efforts of nurse managers to keep and attract nurses (in the sense of Magnet Hospitals) as also the efforts to address a paradoxical systemic pressure on hospitals.

From this view we could formulate three recommendations which should be considered as key points for the hospital of the future by nurse managers and the hospitals’ executive committees:

- Designation of nursing as connecting health profession
- In-depth structural integration of nursing into the hospital organization
- Lived professionalism and quality

#### **Designation of nursing as connecting health profession:**

Nurses and their profession should be designated as connectors in the multidisciplinary hospital setting. The term connecting health profession implied that the focus should be placed on the interfaces between other health professions. Nurse Managers should advocate and promote mission statements which take emphasis on mutual respect as a pre-requisite to act in interface areas. This could create a climate which attract and retain nurse employees. We think that a lot of innovation impeding gaps could be filled with the engagement by these interface professionals.

#### **In-depth structural integration of nursing into the hospital organization:**

From our view in-depth structural integration was an aspect which will gain more and more importance for the nursing profession. This finding meant that in term of a nursing integrating structure and with consideration of the site-specific situation nurse managers should amplify conditions for a sound staffing situation. This could include measures which deal with the staffing shortage in the best way. In either situation some points could be the development of nursing competences (e.g. strengthening the core and interface competences) and the investment in research actions on practical issues (e.g. quality research). Significant involvement in organizational changes should be advocated by nursing managers but needed a broad institutional commitment of each hospital’s executive

committee. Measures to provide a work-home balance should be installed in accordance with the hospitals’ economic situation. As a possible consequence nurses could act as active colleagues with their counterpart from other professions.

#### **Lived Professionalism and Quality:**

To foster a nurse attracting and retaining hospital structure a culture of lived professionalism and quality should be promoted by nurse managers. The third segment of the European framework (“Lived Professional Standards and Quality of Care) addressed this issue: Standards were an embodiment of professionalism. They based on developed competences and results of research projects from an integrated nursing profession. This also included the reference on mutual respect, because it was not sufficient that nurses believed in their own professionalism alone. Nurse professionalism needed to be acknowledged by other professions (e.g. physicians). Also the fulfillment of standards indicated Quality of Care.

This exceeded the level of professional standards in direction of a general thinking about quality in the hospital. A concrete measure to promote both aspects could be the generation of experience- and research-based nursing databases. Other measures could be sharing and spreading of professional knowledge (visualized by professional standards) with other institutions.

## **4. Limitations**

This study did not claim completeness on the topics magnetism and future requirements for hospitals. As an exploratory study it aimed to sketch and visualize possible aspects with meaning for the future which should be considered by nursing managers. Also the framework was sketched in a comprised way. The application of the framework could include some bias because the authors explored their own institutions. As a consequence further empirical research could be needed to fill this framework with evidence for refinement of its’ theoretical approach. From the authors view this framework should be a basis for further discussions concerning the hospital of the future.

## **5. Discussion**

Both examples show that nurse managers undertook activities according the European framework for hospitals of the future. In opposition to the Magnet Recognition Program® Model as a nursing centered staff attracting and retaining approach, this concept focused on the coping of the external innovative pressure which needed a more integrated nursing profession into the hospitals’ structures. As a possible by-product the implementation of this framework could attract and retain nurses because their meaning as interface-experts resp. connectors in high-complex settings



increased.

---

## REFERENCES

- [1] M. Kramer, C. Schmalenberg: Magnet Hospitals: Part I Institutions of Excellence, in: *Journal of Nursing Administration*, Vol. 18, No. 1 – January 1988
- [2] M. Kramer, C. Schmalenberg: Magnet Hospitals talk about the impact of DRGs on Nursing care – Part II, in: *Nursing Management*, October 1987, pp. 33-40
- [3] B. Grant, S. Colello, M. Riehle, D. Dende: An evaluation of the nursing practice environment and successful change management using the new generation Magnet Model, in: *Journal of Nursing Management* 18, 2010, 326-331
- [4] M. L. Parsons, P. A. Cornett: Sustaining the pivotal organizational outcome: magnet recognition, in: *J Nurs Manag.* 2011 Mar; 19 (2):277-86
- [5] S. D. Caldwell, C. Roby-Williams, K. Rush, T. Ricke-Kiely T: Influences of context, process and individual differences on nurses' readiness for change to Magnet status, in: *J Adv Nurs.* 2009 Jul; 65(7):1412-22
- [6] L. H. Aiken, D. S. Havens, D. M. Sloane DM: The Magnet Nursing Services Recognition Program: a comparison of two groups of magnet hospitals, in: *American Journal of Nursing*, Volume 100(3), March 2000, pp 26-36
- [7] M. Kramer, C. Schmalenberg: Magnet hospital staff nurses describe clinical autonomy, in: *Nurs Outlook.* 2003 Jan-Feb; 51(1):13-9
- [8] Kramer M, Schmalenberg CE (2003): Magnet hospital nurses describe control over nursing practice: *Western journal of nursing research*, 2003 Band 25, Heft 4, 434–452
- [9] V. V. Upenieks: Assessing differences in job satisfaction of nurses in magnet and nonmagnet hospitals, in: *J Nurs Adm.* 2002 Nov; 32 (11):564-76
- [10] M. Kramer, P. Maguire, B. B. Brewer BB: Clinical nurses in Magnet hospitals confirm productive, healthy unit work environments, in: *J Nurs Manag.* 2011 Jan; 19 (1):5-17
- [11] A. M. Trinkoff, M. Johantgen, C. L. Storr, K. Han, Y. Liang, A. P. Gurses, S. Hopkinson S: A comparison of working conditions among nurses in Magnet and non-Magnet hospitals, in: *J Nurs Adm.* 2010 Jul-Aug; 40(7-8):309-15
- [12] Kalisch BJ, Lee KH (2012): Missed nursing care: Magnet versus non-Magnet hospitals, in: *Nursing outlook*, 2012 Band 60, Heft 5, e32–9
- [13] E. T. Lake, J. Shang, S. Klaus, N. E. Dunton: Patient falls: Association with hospital Magnet status and nursing unit staffing, in: *Res Nurs Health.* 2010 Oct; 33(5): 413-25.
- [14] J. G. Scott, J. Sochalski, L. Aiken: Review of magnet hospital research: findings and implications for professional nursing practice, in: *J Nurs Adm.* 1999 Jan; 29(1):9-19.
- [15] A. Buffington, J. Zwink, R. Fink, D. Devine, C. Sanders: Factors affecting nurse retention at an academic Magnet® hospital, in: *J Nurs Adm.* 2012 May; 42(5):273-81
- [16] B. J. Krohmal, E. J. Emanuel EJ: Tiers without tears: the ethics of a two-tier health care system, in: B. Steinbock: *The Oxford Handbook of Bioethics*, New York, 2007
- [17] V. E. Amelung, H. Schumacher: *Managed Care - Neue Wege im Gesundheitsmanagement*, 3rd Edition, Gabler-Verlag Wiesbaden
- [18] A. Gerber, M. Lungen, St. Stock St: USA, in: K. Lauterbach, St. Stock, H. Brunner (Ed.): *Gesundheitsökonomie - Lehrbuch für Mediziner und andere Gesundheitsberufe*, Verlag Hans Huber, Bern, 2nd Edition, 2009
- [19] A. Wertheimer, A. Rastogi: Development and Experience with Diagnosis Related Groups (DRGs) in USA, in: *Gesundheitsökonomie Qualitätsmanagement* 2002; 7:289-291
- [20] C. McLaughlin, C. McLaughlin: *Health Policy Analysis - an interdisciplinary approach*, Jones and Bartlett Publishers Boston/ Toronto/ London/ Singapur, 2008
- [21] A. R. Bennett: Accountable care organizations: principles and implications for hospital administrators, in: *Journal of Healthcare Management*, July-August 2012, Volume 57, Issue 4
- [22] National health care strategy 2012-2020, Ministry Of Health Of The Republic Croatia, September 2012
- [23] A. Hebrang, N. Henigsberg, V. Erdeljic, V. Vidjak, A. Grga, T. Maček: Privatization in the health care system of Croatia: effects on general practice accessibility, *Health Policy* (2003) 18(4): 421–428
- [24] D. Mihaljek: Health care policy and reform in Croatia: how to see the forest for the trees, Bank for International Settlements Basel, 2006
- [25] M. Mastilica, S. Kusec: Croatian healthcare system in transition, from the perspective of users *BMJ* (2005) 331
- [26] L. Kovacic, Z. Sosic: Organization of Health Care in Croatia: Needs and Priorities *Croatian Medical Journal* (1998) 39:3
- [27] S. Turek: Reform of Health Insurance in Croatia, *Croatian Medical Journal* (1999) 40: 2
- [28] L. Voncina, A. Dzakula, M. Mastilica: Health care funding reforms in Croatia: A case of mistaken priorities, *Health Policy* (2007) 144–157
- [29] L. Voncina, T. Strizrep, M. Bagat, D. Pezelj-Duliba, N. Pavic, O. Polašek: Croatian 2008-2010 health insurance reform: hard choices toward financial sustainability and efficiency *Croatian Medical Journal* (2012); 53:66-76
- [30] D. Sauerland: The legal framework for health care quality assurance in Germany, in: *Health Economics, Policy and Law*, Volume 4, Issue 01 January 2009, pp 79-98
- [31] C. F. Dietrich, P. Riemer-Hommel: Challenges for the German Health Care System, in: *Zeitschrift für Gastroenterologie* 2012; 50: 557-572
- [32] P. Sawicki, H. Bastian: German health care: a bit of Bismarck plus more science, in: *BMJ* 15 November 2008 Volume 337
- [33] M. Lauerer, M. Emmert, O. Schöffski: Die Qualität des deutschen Gesundheitswesens im internationalen Vergleich, in: *Gesundheitswesen* 2013 (Article in press)

- [34] M. Lisac, L. Reimers, K. D. Henke, S. Schlette: Access and choice - competition under the roof of solidarity in German health care: an analysis of health policy reforms since 2004, in: *Health Economics, Policy and Law*, Volume 5 Issue 01 January 2010, pp 31-52
- [35] C. Thielscher, M. Möllenbeck: Krankenhausmarketing an Unikliniken - eine empirische Untersuchung, in *Gesundheitsökonomie Qualitätsmanagement* 2012; 17: 246-250
- [36] M. E. Porter, C. Guth: *Redefining German Health Care*, Springer Verlag, Berlin, 2012
- [37] E. Plamper, D. Schwartz: Die stationäre Versorgung, in: K. Lauterbach, St. Stock, H. Brunner (Ed.): *Gesundheitsökonomie - Lehrbuch für Mediziner und andere Gesundheitsberufe*, Verlag Hans Huber, Bern, 2nd Edition, 2009
- [38] W. Böcking, U. Ahrens, W. Kirch, M. Milakovic: First results of the introduction of DRGs in Germany and overview of experience from other DRG countries, in: *J Public Health* (2005) 13:128-137
- [39] S. M. Freys, A. Strube, A. Friedemann, A. Franke: Zentrenbildung in der Allgemein- und Viszeralchirurgie - Notwendigkeit oder Trend?, in *Zentralblatt für Chirurgie* 2013 (Article in press)
- [40] G. di Luzio: Medical dominance and strategic action: the fields of nursing and psychotherapy in the German health care system, in: *Sociology of Health & Illness* 2008 Nov;30(7):1022-38
- [41] D. Friedrich, Ch. Poigné: Mitarbeiterbindung – Konzept der Magnethospitäler, in: P. Bechtel, I. Smerdka-Arheger I (Ed.): *Pflege im Wandel gestalten - Eine Führungsaufgabe*, Springer-Verlag Berlin/ Heiderberg, 2012
- [42] J. Li, M. Galatsch, J. Siegrist, B. H. Müller, H. M. Hasselhorn HM: Reward frustration at work and intention to leave the nursing profession - Prospective results from the European longitudinal NEXT study, in: *International Journal of Nursing Studies* 48 (2011) 628-635
- [43] M. Simon, B. H. Müller, H. M. Hasselhorn: Leaving the organization or the profession - a multilevel analysis of nurses' intentions, in: *Journal of Advanced Nursing* 66(3), 616-626 March 2010
- [44] D. Havens, J. Vasey, J. H. Gittel, L. Wei-Ting: Relational coordination among nurses and other providers: impact on the quality of patient care, in: *Journal of Nursing Management* 18, 926-937, 2010
- [45] S. Rankinen, T. Suominen, L. Kuokkanen, M. L. Kukkurainen, D. Doran: Work empowerment in multidisciplinary teams during organizational changes, in: *International Journal of Nursing Practice* 2009; 15: 403-416
- [46] J. Andrews, J. Manthorpe, R. Watson: Employment transitions for older nurses: a qualitative study, in: *Journal of Advanced Nursing*, 51(3), 298-306, 2005
- [47] P. Yoder-Wise: *Leading and Managing in Nursing*, Elsevier Health Sciences, 3rd edition, 2002
- [48] B. Zander, L. Dobler, R. Busse: The introduction of DRG funding and hospital nurses' changing perceptions of their practice environment, quality of care and satisfaction: Comparison of cross-sectional surveys over a 10-year period, in: *International Journal of Nursing Studies* 50 (2013) 219-229
- [49] M. Simon, B. H. Müller, H. M. Hasselhorn: Leaving the organization or the profession – a multilevel analysis for nurses' intentions, in: *Journal of Advanced Nursing* 2010, 66(3), 616-626
- [50] M. Gaßner, J. M. Strömer: Im Dickicht der Standards verfangen – Haftungsrechtliche Sorgfaltspflichten in der Pflege, in *MedR* (2012) 30:487-495
- [51] K. Theuerkauf: Zivilrechtliche Verbindlichkeit von Expertenstandards in der Pflege, in: *MedR* (2011) 29:72-77
- [52] K. L. Miller, S. Reeves, M. Zwarenstein, J. D. Beales, Ch. Kenaszchuk, L. Gotlib Conn: Nursing emotion work and interprofessional collaboration in general internal medicine wards: a qualitative study, in: *Journal of Advanced Nursing* 2008 64(4), 332-343
- [53] S. Reeves, S. Lewin: Interprofessional collaboration in the hospital: strategies and meanings, in: *Journal of Health Service Research & Policy* Vol 9 No 4, 2004: 218-225
- [54] D. Havens, J. Vasey, J. H. Gittel, L. Wei-Ting: Relational coordination among nurses and other providers: impact on the quality of patient care, in: *Journal of Nursing Management* 18, 926-937, 2010
- [55] S. Rankinen, T. Suominen, L. Kuokkanen, M. L. Kukkurainen, D. Doran: Work empowerment in multidisciplinary teams during organizational changes, in: *International Journal of Nursing Practice* 2009; 15: 403-416
- [56] J. Andrews, J. Manthorpe, R. Watson: Employment transitions for older nurses: a qualitative study, in: *Journal of Advanced Nursing*, 51(3), 298-306, 2005
- [57] J. G. Nooney, L. Unruh, M. Yore: Should I stay or should I go? Career change and labor force separation among registered nurses in the U.S., in: *Social Science & Medicine* 70 (2010) p. 1874-1881, 2010
- [58] ICHRN International Centre for Human Resources in Nursing: *Das Personalmanagement in der Pflege vor dem Hintergrund der Generationenvielfalt Implikationen für Politik und Management*, Editor German Nurses Association (DBfK), Association suisse des infirmières et infirmiers (SBK ASI), 2009
- [59] M. Williams O'Rourke: Beyond Rhetoric to Role Accountability – A Practical and Professional Model of Practice, in: *Nurse Leader* June 2006
- [60] C. A. Dubois, D. D'Amour, E. Tchouaket, S. Clarke, M. Rivard, R. Blais: Associations of patient safety outcomes with models of nursing care organization at unit level in hospitals, in: *International Journal for Quality in Health Care* 2013, Volume 25, Number 2:pp. 110-117