### THE DEMOGRAPHIC CHALLENGE FOR HOSPITAL PERSONNEL MANAGEMENT

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The demographic "double- ageing" of the population is expected to aggravate the situation on the German health care labor market by decreasing the workforce potential and changing the age structure of the workforce potential. A high number of German hospitals have already been facing problems in occupying their vacant physician positions. The competition for highly-skilled hospital personnel and the shortage of young qualified employees should determine hospitals to focus on adopting and implementing demographic-oriented personnel management strategies. Raising employee awareness and retention, securing and developing personnel skills and competence, promoting positive employee motivation and preserving their performance are central objectives for managing the demographic challenge. A project started in a German acute hospital also underlines the importance of such strategies.

Keywords: demographic impact, hospital labor market, demographic-oriented personnel management.

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#### 1 Introduction

The German health care market has been undergoing major changes. The medical and technical progress, the demographic change, the health behaviors of the population, the complexity, social mega trends, the individualization and globalization, the definition of health and disease, political factors of influence (regulation degree, health care funding, role of prevention) and the financial situation have been fundamental factors of change. The medical and technical progress has increased the number of diseases that can be cured or controlled; the population has a higher life expectancy and better health for a longer time, so that the population disease spectrum shifts towards chronic diseases. In this context, it seems necessary for the heath care service providers to take into consideration these substantial changes and adjust their behaviors and activities in accordance to them.<sup>36</sup>

More than before, health becomes of central interest next to disease. The boom of the health care sector is predicted to be an important growth promoter in Europe. In Germany, the rising health care costs have determined a large number of health care reforms that have increased both the public and the personal interest for health care. The health care sector does not only consume a significant share of the GDP, but it is one of the most important employers at national and regional level. At the end of the year 2007, each 10<sup>th</sup> German employee was working in the German health care sector, amounting at national level to a total of about 4.4 million employees; in the time interval 2006-2007, the total number of persons employed in the German health care sector increased with 1.5% and of full time positions with 1.1% (almost 97% of the increase in the number of employees being generated by the increase in part time positions).<sup>37</sup> With regard to the age structure of the health care personnel in 2007, about 24% of it was aged 50 and over, the

<sup>36</sup> Schmidt, C.; Möller, J.: Katalysatoren des Wandels, in: Klauber, J.; Robra, B.-P.; Schellschmidt, H. (Ed.), Krankenhausreport 2006. Schwerpunkt: Krankenhausmarkt im Umbruch, Schattauer, Stuttgart, 2007, pp. 3.

<sup>37</sup> Statistisches Bundesamt Deutschland, Pressemitteilung Nr.490 vom 17.12.2008, Wiesbaden, 2008b.

largest peer group (43.9%) being represented by the employees aged 35 to 50.38 The demographic evolution together with other factors will have a considerable impact on the labor market situation and thus on the recruiting strategy and policy of health care service providers. Analyzing in this context the situation of the German hospitals, the demographic impact will lead to new approaches and focus in the hospital personnel management. Aspects referring to the situation of the hospital labor market and to the concept of demographic-oriented hospital personnel management will be presented and analyzed in the following chapters.

# 2 Hospital personnel: facts and trends

At the end of the year 2007, the German hospital personnel (about 1.07 million employees occupying 0.79 million full time positions) accounted for about 24% of the health care sector personnel; from 1991 to 2007, the total number of hospital employees and full time positions diminished solely at the expense of non-physician staff. In the last years, the number of part-time positions increased considerably.<sup>39</sup> Klinikum Ingolstadt has been repeatedly facing problems in finding and retaining long-term qualified personnel at this stage in spite of the cyclical tense economic situation. The case of Klinikum Ingolstadt is not singular, on the contrary: data shows a considerable increase in the percentage of German hospitals facing problems in occupying vacant physician positions, from 28.4% (55.8% in East Germany, 23.5% in West Germany) in 2006 to 67.3% in 2008 (80.9% in East Germany, 65.2% in West Germany); the aggravated physician shortage was extrapolated for 2008 to 4000 vacant positions (considering the German general hospitals with 50 beds and more).<sup>40</sup>

The reasons why many hospitals in Germany are facing such problems are multiple. The number of young people applying nowadays for hospital jobs or learning apprenticed occupations in this segment has been decreasing due to reduced attractiveness. Statistical data shows the unfavorable evolution of the number of human medicine students and graduates in Germany: from 1993 to 2006 the number of students studying human medicine decreased with almost 14% (showing a small increase from 2005 to 2006) and the number of human medicine graduates with about 24%. At the same time, only 58.4% of the students, who started studying human medicine in 1997, occupied physician positions in 2003 in German hospitals.<sup>41</sup>

The personnel situation is exacerbated by the fact that skilled personnel and graduates change into other professions for reasons like lack of any future perspectives or fear of not coping in the long run with the physical and mental burden or with the increasing pressure caused by staffing or working hours. Labor market data reveals that in 2005 about 23% of the total number of physicians did not occupy any positions as physicians. Analyzing the vacant positions for physicians reported at the end of the years 2006 at the German Employment Office, one can notice that the specialists in internal medicine occupied the first place with 15.2%, being followed by the anesthesiologists (with 10.8%), general practitioners and gynecologists (both 10.1%) etc. In the meantime, skilled employees are being poached by market partners from hospital chains and industry. Nowadays, the number of the personnel trained and educated by

<sup>38</sup> Statistisches Bundesamt, Zweigstelle Bonn, Gesundheitspersonalberechnung, in: www.gbe-bund.de, Beschäftigte im Gesundheitswesen in 1.000 Gliederungsmerkmale: Jahre, Deutschland, Alter, Geschlecht, Art der Beschäftigung, Berufe, 2009, table document.

<sup>39</sup> Statistisches Bundesamt Deutschland, Krankenhauslandschaft im Umbruch - Begleitmaterial zur Presse-konferenz am 10. Dezember 2008 in Berlin, Wiesbaden, 2008a, pp. 11-12.

<sup>40</sup> Blum, K.; Offermanns, M.; Perner, P., Krankenhaus Barometer kompakt - Umfrage 2008, Deutsches Krankenhausinstitut e.V., Düsseldorf, 2008, p. 6.

<sup>41</sup> Based on data from Bundesärztekammer, Statistisches Bundesamt in: Kopetsch, Th., Studie zur Altersstruktur- und Artzahlenentwicklung: Daten, Fakten, Trends, 4.aktualisierte und überarbeitete Auflage, Kassenärztliche Bundesvereinigung, 2007, pp. 7-10.

<sup>42</sup> Rang, M.; Bausch, M.; Rühl, O., Arbeitsmarktinformation für Fach- und Führungskräfte - Mediziner dringend gesucht, Zentralstelle für Arbeitsvermittlung der Bundesagentur für Arbeit, Bonn, 2007, pp. 10, 28.

hospitals themselves is often not enough to meet their own demand. The facts mentioned above underline the fact that a considerable increase in the number of human medicine students and graduates is not to be expected in the future, causing thereby a shortage of qualified personnel. At the same time, regaining redundant employees might be very hard. This situation will be further exacerbated by the demographic change. The present, difficult economic situation also increases the pressure upon the hospital personnel situation because of the change in the hospital length-of-stay and the shift of an increasing number of hospital services into the (pre-, post-inpatient) outpatient care.

The changes noticed in the hospital sector comply with the national and European demographic trends. The results of the population projections of different research institutions and statistical Bureaus indicate a significant population decrease in Germany till 2050. The "double-ageing" of the German population is caused by the increase in life expectancy and the fall in fertility rate. Its impact upon the ratio between the younger and older population is considerable. Due to different assumptions with regard to the future evolution of the fertility rate, life expectancy and population migration in Germany, the exact results of the various population projections till 2050 vary a lot, but the predicted trends are the same: not even a significant increase in the fertility rate will be able to stop the demographic population ageing till 2050. The demographic impact upon the labor market is substantial: population ageing causes a decrease in the percentage of the workforce potential in the total population and the fall in fertility rate changes the age structure of the workforce potential. The results of the different workforce potential projections for Germany till 2050 reveal all a similar trend: the total number of the workforce potential is expected to decrease substantially, the highest loss being suffered by the peer group 30 to 44 years, the smallest one by the employee group aged 45 to 59. With regard to the evolution of the age structure, the percentage of the workforce potential aged 30 to 44 years (in the total workforce potential) is expected to decrease (from 43.1% in 2000 to for e.g. 35.6% in 2050) and the percentage of the population aged 45 to 59 years (in the total workforce potential) is expected to have a positive evolution with a considerable growth till 2050 (from 30.1% in 2000 to for e.g. 37.3% in 2050). The results also reveal an increase in the percentage of the workforce potential aged 60 to 74 years (from 5.3% in 2000 to for e.g. 7.6% in 2050) without taking into consideration the effects of the planned increase of the retirement age.43

Regarding the personnel situation of the clinics in Klinikum Ingolstadt in 2008, more than 40% of the physicians were at least 50 years old. In most of the clinics, the highest percentage of the physicians was aged 30 to 39 years (when regarding 10-year age groups). Referring to the nursing staff, the highest percentage of them belonged to the age group 40 to 49 years, followed by the employee group aged 30 to 39. In the undertakings of Klinikum Ingolstadt, more than 60% of the employees were aged 40 years and over (a high percentage of them being aged at least 50). Data shows that the average number of hours the nurses and physicians of Klinikum Ingolstadt spent on further education is smaller in the higher age groups. Another important operating figure is the percentage loss of the gross work time due to illness; this is larger in the higher age groups. In the last years, the physician annual turnover rate was higher than 13% and the nursing staff annual turnover rate was less than 5.5%. The analyzed data reflects the main priorities of the personnel management in Klinikum Ingolstadt: the preservation of the personnel employability and performance, the necessity to make the hospital attractive for applicants and employees by creating career and development opportunities and also the improvement in employees' health condition. Health management programs, disease prevention, health check-up, fitness, ergonomically designed, age-based workplaces and activities supporting a reasonable work-life

<sup>43</sup> Schäfer, H.; Seyda, S., Arbeitsmärkte, in: Institut der deutschen Wirtschaft Köln (Ed.), Perspektive 2050 – Ökonomik des demographischen Wandels, Köln, 2005, pp. 98 et seq.

balance have been planned and/or implemented to ensure employee health promotion and preservation in Klinikum Ingolstadt.

Analyzing the information referring to the age structure of all employed physicians at national level, one can notice that the age groups 35 to 59 years represented the largest peer groups in the last years. The situation is the same for hospital physicians. At the end of the year 2008, they were aged about 41.06 years on average; 64.1% of the hospital physicians were aged 35 to 59 years. These evolutions have already affected the merely commercial hospital divisions (for e.g. aseptic cleaning, undertaking and public utilities). This trend will be exacerbated by the planned rise of the retirement age and thus the prolongation of the working duration, so that hospitals will face great difficulties in finding appropriate junior and skilled personnel. This fact will increase the importance of older employees for maintaining the long-term business success. As consequence, the personnel work will require greater efforts to maintain the future performance and innovative ability of hospital employees.

# 3 The impact of demographic change on hospital personnel management: main focus of operational approaches

Most of the objectives of a demographic-oriented personnel management, that have been mentioned in the technical literature, refer to raising employee awareness and retention, securing and developing personnel skills and competence, promoting positive employee motivation and preserving their performance. Because of the responsibility companies generally have with regard to the culture, education and formation, relation and integration of their employees, hospital personal management should also focus on knowledge (know-how) transfer to the new employees and between the generations of employees (as part of the knowledge management concept), on personnel marketing, employee development, training and further education. 46

The demographic-oriented personnel management project in Klinikum Ingolstadt started with a personnel development program initiated to facilitate the acquisition of qualified junior and specialized personnel. The competition for highly-skilled employees on the health care labor market had a significant impact on the recruiting policy and strategy of hospitals: major changes have been noticed in Klinikum Ingolstadt for e.g. in the personnel marketing, - recruiting, development, - qualification, workplace and work time arrangements. Due to the labor market situation in this segment, hospitals must qualify their own employees to ensure the necessary knowledge transfer and commit their personnel as long as possible by means of workplace arrangements, the establishment of incentive schemes and personnel development programs designed even for the second career half in compliance with employees' individual needs. The DRG-system has forced hospitals to optimize their internal structures and operational processes in order to increase service quality, to comply with the middle DRG-length-of-stay values (considered as break-even-point) and thus be competitive (be able to attract new patient groups or enter new business segments, such as integrated or alternative care) and efficient. The process orientation and optimization approaches in hospitals generate new hospital organizational structures with focus on the patient process, disease spectrum, case complexity and needs; more and more hospitals are trying to shift the organizational focus from the divisional organization (characterized for e.g. by individual medical departments) towards multi- and interdisciplinary organizational structures; experience has shown that engaging the older employees in process

<sup>44</sup> Bundesärztekammer, Ärztestatistik der Bundesärztekammer zum 31.12.2008 - Auswertung der statistischen Zahlen, 2009.

<sup>45</sup> Packebusch, L.; Weber, B., Demographie – Initiative – Betriebliche Strategien einer alternsgerechten Arbeits- und Personalpolitik – Schwerpunkte, Lösungsansätze, Ergebnisse, Zentralverband Sanitär Heizung Klima, Stuttgart, 2003, pp. 13 et seq.

<sup>46</sup> Deller, J.; Kern, S.; Hausmann, E.; Diederichs, Y., Personalmanagement im demografischen Wandel: Ein Handbuch für den Veränderungsprozess, Springer, Berlin, 2008.

optimization and restructuring projects can be very benefic for hospitals. As already mentioned, personnel recruitment plays an important role in the context of a demographic-oriented personnel management. Some of the activities mentioned in the economics literature and implemented in the practice with regard to activities in favor of external personnel recruitment are for e.g. the establishment of partnerships with universities and schools (having as target group the young professionals and trainees) and collaborations with expert pools/networks and employment agencies (having as target group the older, experienced employees); at the same time, activities appropriate to internal personnel recruitment include the establishment of internal job centers or the initiation of alumni networks, 47 In Klinikum Ingolstadt, activities have also been performed with regard to the employee remuneration, consisting in the establishment of a company pension plan and performance-related remuneration (with incentive schemes based on the achievement of certain objectives) and the implementation of time management (with work-time-, overtime or life long work-time accounts). The high need for efficiency amplified by the implementation of the DRG-system makes necessary for hospitals to synchronize the employee remuneration and performance with realistic parameters. In such a context, hospitals might consider factors referring to patient management, writing of discharge letters, DRG- documentation, process management, medical care services for private patients, employee satisfaction, arrangements regarding vacation replacement, contribution to the success of the company, compliance with prescribed medical material usage/expenses and with the performance planning.

In the context of a structured personnel development program designed to increase and preserve personnel retention, motivation and identification with the company, the employees must be able to recognize and perceive the value of the personnel development activities (for e.g. of alternative, flexible, diversified career models). Referring to employee development (and satisfaction) and to their involvement in the decision processes, tools like performance review discussions, staff assessments, peer reviews, team meetings and career advancement discussions have become standards in the practice; many of the task examples for older employees in the context of different career models refer to coaching tasks, project work, quality circles or even tasks specially designed for them. 48 Usually, older employees attend less further education courses than younger ones. In practice, there are enough examples that show the benefit for both companies (positive effect on the operational success) and employees from the further education of older employees and personnel lifelong learning. 49 Referring to young personnel development, the medical training of the hospital physicians is a very important topic for hospitals. Besides the costs caused by the medical training (for e.g. time spent for learning, teaching and peer tutoring or material and follow-up costs due to excessive therapies) other problematic aspects might refer to the missing or low identification with the institution, no interest for standards or process structure or the "nomad effect" of the physicians-in-training. In order to be effective, medical training should be structured and well organized. As part of the (medical) process, it should take place in special sections, centers and at defined training locations. The approach of Klinikum Ingolstadt with regard to junior (young) employee acquisition, retention and further formation consists in the initiation of the "Business-Angel" program, which offers the physicians-intraining (parallel to or before incipient employment) the chance to gain further qualification in the managerial area of responsibility. In this program, the medical students also get to know better the qualified job environment during their medical training year or internship and can also qualify further in the managerial area of responsibility. The "Business-Angel" program guides the medical staff into and during their medical training period and leads them to qualified, long-

<sup>47</sup> Deller, J.; Kern, S.; Hausmann, E.; Diederichs, Y., Personalmanagement im demografischen Wandel: Ein Handbuch für den Veränderungsprozess, Springer, Berlin, 2008.
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<sup>49</sup> Adenauer, S., Die Älteren und ihre Stärken – Unternehmen handeln, in: Angewandte Arbeitswissenschaft – Zeitschrift für die Unternehmenspraxis, Nr. 174, Dec. 2002.

term jobs in the hospital with many opportunities to specialize. The acquired basic qualification in the medical field ends with the qualification as specialist and parallel to this, with the MBA-degree in health economy. Another focus of the demographic-oriented personnel management project in Klinikum Ingolstadt has been the improvement of the work organization and organizational structure by means of job delegation, introduction of work-time/life long working-time accounts and reduced, structured shift plans, age-based workplaces, flexible work time, part-time work models and building nursery schools and kindergartens on the premises of the hospital (for work-family enrichment).

## **4 Conclusions**

The demographic-oriented personnel management project started in Klinikum Ingolstadt has provided our company with important incentives for future work and personnel management. Long-term strategies referring to personnel recruitment, retention and development, optimization of work-time and organizational structure and leadership have been so far developed or even implemented. The success of this project and of the future work implies that all the findings should be communicated to the entire company and its corporate divisions so that everybody can realize the impact of the demographic change and prepare appropriately for it. Nevertheless, the corporate culture will have to promote communication and willingness to help and understand the employees. Companies that are authentic, trustworthy, and transparent and act promptly will be able to manage effectively the demographic challenge. The example of Klinikum Ingolstadt shows that the existence of efficient internal structures and rules, the optimization of work conditions and organization, the promotion of employee expertise and the establishment of opportunities for employee participation and development are important prerequisites for competitiveness and stable corporate development.

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