

REGIONAL HEALTH MANAGEMENT – ESTABLISHING THE HEALTH REGION OF THE FUTURE

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The demographic challenges are affecting the entire health system in Germany; the amplitude of the demographic impact will increase. Hospitals and other health service providers will have to respond to the demographic challenge in order to survive and perform successfully in the health care market. In order to meet the needs of the increasing number of older patients, a regional health care network, orientated at the medical care process of the patients is emerging in the heart of Bavaria. The new health care network will ensure the outpatient, inpatient and rehabilitative care for the citizens beyond the borders of the health care sectors: a health campus established on the cooperation and linkage of various players with focus on the medicine for the older patients.

Key words: health care services for the elderly, health region, regional health management.

1. Demographic indicators, economic power and sustainability of the health region

The geographical dimensions and limits of the health region Ingolstadt lean on the borders of the Region 10 in Bavaria; the health region comprises from a geographic perspective, in the centre of Bavaria, both the urban district of Ingolstadt and the administrative districts of Eichstätt, Neuburg-Schrobenhausen and Pfaffenhofen, accounting for a total area of about 2.848 square kilometers with 68 communities and approximately 500.000 residents (Bayerisches Landesamt für Statistik und Datenverarbeitung 2008). Between 1996 and 2006, Region 10 exhibited a population increase of 7.7 %, which represents an above-average growth when analyzing the overall situation in Bavaria; not only that, but Ingolstadt is also the boomtown in Germany (Bayerisches Landesamt für Statistik und Datenverarbeitung 2007). The increase of the number of the population of Ingolstadt and of the neighboring administrative districts is also determined by large, above-average, numbers of people moving in (in average about 85 per 100.000 inhabitants) (Statistisches Bundesamt 2008). According to the demographic projections of the Bavarian State Institute for Statistics and Data Processing (Bayerisches Landesamt für Statistik und Datenverarbeitung), the number of the population of the Region 10 will increase by at least 30.000 inhabitants till the end of the year 2025 and will therefore not follow the nationwide decreasing population trend (Bayerisches Landesamt für Statistik und Datenverarbeitung 2008). Although the future population evolution of the Region 10 is predicted to be positive, a critical aspect concerning the hospitals and the health care service providers refers to the future, considerable increase of the average age of the population expected in the next years; at present the average age of the population in Region 10 is 40.6 years. In the Region 10 at the end of the year 2006, the percentage of the population under age 18 accounted for 19.9%, while the population aged 18 to 64 accounted for 62.9% and the population aged 65 and over for 17.2% (Bayerisches Landesamt für Statistik und Datenverarbeitung 2007). The health economy – the players of the health care management - of the health region devoted its activity also to the topic of an aging society and broached therefore the issue of the multiple demographic challenges, such as the steady growing number of patients that need to be treated, the increased health care demand, the necessity for innovation in the health system, using the economic opportunities of the health care and approaching successfully the problem of increasing costs. Due to demographic, economic and legal changes in the health care system, regional management becomes even more important. The following paragraphs present and analyze the economic situation, the characteristics of the health region, the strategic objectives and concepts in order for the health region to fulfill the health care needs of an aging society in an appropriate manner. The economic data and indicators for the Region 10 in the last five years were impressive: the region occupied the second position among 18 regions in Bavaria with a gross domestic product per employee of 66.350 € and the third position with a gross domestic product per capita of 32.038 € in 2005 (Bayerisches Landesamt für Statistik und Datenverarbeitung 2007). The administrative district of Pfaffenhofen and the city of Ingolstadt occupied the 11th and the 12th position in the first scientific regional ranking with regard to

productivities among 435 nationwide regions; in the Region 10, the per employee annual average income is 72.623 € (Initiative Neue Soziale Marktwirtschaft 2006). In the famous Prognos - Future Atlas, the Region of Ingolstadt is situated on the 8th place among 439 nationwide regions, thus certifying the top future opportunities and chances of the region (PROGNOS AG 2007). When analyzing the unemployment rate of the Region 10 in 2006, one can notice that the region had the lowest unemployment rate in Germany (unemployment rates in the region: 7.3% in Ingolstadt, 3.4% in the district of Eichstätt, 4.5% in the district of Neuburg-Schrobenhausen and 4.2% in Pfaffenhofen) (Agentur für Arbeit Ingolstadt 2006, p. 22). With regard to the purchasing power index, in the Region 10 the value of 110.7 for this index placed the region in the best 20 regions nationwide. In the region Ingolstadt the gross income is with 2.800 € over the west-German income (GfK Marktforschung GmbH in Zeitungsgruppe Münchner Merkur/tz 2007, p.12). The share of the industry in the Region 10, accounting for 75.049 employees with social insurance contribution, is high, above the Bavarian and the nationwide average, having accounted for approximately 50 % in 2006. The sustainability study of the Institute for Population and Development Berlin (Berliner Institut für Bevölkerung und Entwicklung), which evaluated all the regions in Germany on the basis of 24 indicators such as economic development, population structure and the value of leisure time etc. confer the Region 10 (Ingolstadt and the neighboring districts) final grades between 2.66 and 3.25. These final grades place all four distinct districts among the best in the nationwide ranking, whereas Eichstätt achieved the best grade nationwide, of 2.66 (Kröhnert / Medicus / Klingholz 2006, p. 5).

2. The main health care services and providers in the health region Ingolstadt

Ten hospitals ensured the health care in the Region 10 in 2006, accounting together for 2.305 hospital beds. Whereas at a national level, there are in average 6.4 beds per 1.000 inhabitants, in the Region 10 there are 5.1 beds per 1.000 inhabitants (Bayerisches Landesamt für Statistik und Datenverarbeitung 2007). In the largest hospital of the region, Klinikum Ingolstadt, with 1.132 hospital beds, the average length-of-stay was 6.0 days in 2006, with 2.6 days under the nationwide average length-of-stay, which shows the excellent performance of the hospital Klinikum Ingolstadt. The hospital has yearly more than 37.000 inpatient medical cases and 49.000 outpatient cases in 20 medical specializations and institutes, with an average bed occupancy degree of more than 91% in the somatic disciplines and more than 117% in the psychiatry department and an average emergency ratio of 54%. At present, about 14.000 inpatient surgeries and 4.000 outpatient surgeries are conducted yearly in Klinikum Ingolstadt. The consequent adoption and implementation of new strategies, especially with regard to networking, partnerships, commitment and to the belief of wanting to offer all health services, but not having to provide them all by itself (innovative concepts and networking structure), have determined the successful development of Klinikum Ingolstadt into a profitable health company with many impulses in the Region 10 (see figure 1).

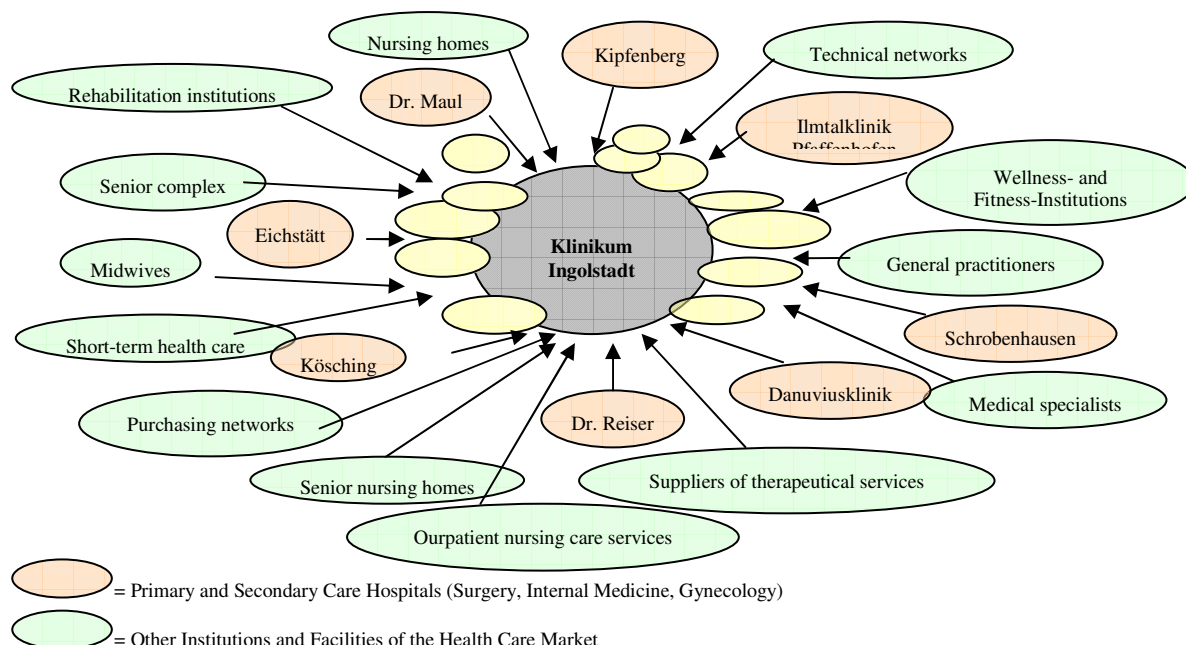


Figure 1: The „Health campus Region Ingolstadt“

The physician network founded in 1999 in the Region 10, GOIN, has so far accounted for 653 general practitioners and medical specialists, being the largest network with regard to the number of medical members nationwide, and 250.000 patients. The main objective of GOIN is to ensure top quality and economically reasonable patient health care in the region through the implementation of innovative processes and services and to interlink adequately with all the health providers in the region. The GOIN emergency private practice situated in Klinikum Ingolstadt is well equipped, both technically and with regard to the medical personnel; it provides the population in the health region with rapid outpatient emergency health care, appropriate to the needs of the patients: in this way the hospital utilization of the patients, that can benefit efficiently from an outpatient health care service, can be avoided. The interlocking with both social care services (outpatient medical care, short-term care wards etc.) and other health service providers at critical hours in the evening and during the weekend increases the health care quality. Moreover, there is a close connection between the emergency private practice and the hospital Klinikum Ingolstadt. The GOIN-emergency private practice for children and teenagers has been operating since July 2006, and it is also located in Klinikum Ingolstadt, as a central unit. This second private practice completes the portfolio of outpatient health care and offers moreover the networked inpatient health care through the proximity to Klinikum Ingolstadt, in a similar manner to the way it has already been functioning for the general practitioners and adults. The rebuilding and restructuring of the emergency centre in Klinikum Ingolstadt will generate clearer structures, efficient processes and more space for the examination and treatment rooms. The constructional structure already allows a separation of the patients in accordance to their health status - whether they are able to go by themselves or are being transported - and to the severity of their health situation. A screening nurse receives the patients in the emergency centre, gives the proper direction for the patients inside the emergency centre in accordance with the severity of each patient's status and takes care of the patients' processes during their stay in the emergency centre. This structure does not only diminishes the waiting time of the patients in the emergency centre, makes all processes more transparent, but it also reduces considerably the amount of superfluous examinations for the outpatient cases due to the partnership with the GOIN emergency physician practice of situated in the hospital, not far away from the emergency centre. In order to avoid patients waiting for their doctors or for diagnostic investigations in the halls of the emergency centre, a holding-area will be built in order to ensure a better patient monitoring in special rooms even during the stage of diagnostic investigations. A ward with 27 beds integrated in the emergency centre shall improve the process-related structure in the admission and health care of the emergency patients. The emergency centre is connected with two on-ground rescue services and with the helicopter rescue centre.

The new physician centre embodies the fulfillment of the vision of Klinikum Ingolstadt of establishing a health care campus for the entire region. The establishment of a physician centre in the direct neighborhood of the hospital completes the health value chain, as it represents the pre-inpatient element of the value chain: a 27 million € investment in a multifunctional health centre for outpatient medical care, dialysis and other services of the health care sector. The building of such a physician centre also enables a more profound cooperation between Klinikum Ingolstadt and the physician network GOIN, as many of its physicians will also be leaser in the new physician centre. This new centre will play an important role also between the outpatient and inpatient medical care, it will enhance the medical and health headquarter Ingolstadt by additional service providers and will also be able to improve significantly the health care of the patients in the Region 10. This will also be the second health centre for non-inpatient hospital care established in the direct neighborhood of the greatest hospital of the Region 10 after the centre for rehabilitation and geriatric medicine, which was founded a few years ago. Its main objectives rely in the improvement of the inpatient aftercare of the patients in the entire region and the health centre also represents one element of the value chain. With regard to the institutions for rehabilitation, there are 172 rehabilitation beds in the Region 10, belonging to two institutions situated in the districts of Eichstätt and Neuburg-Schrobenhausen. In average, one physician treats 465 inhabitants in Ingolstadt, 849 inhabitants in Eichstätt, 760 inhabitants in Neuburg-Schrobenhausen and 804 in Pfaffenhofen, whereas the Bavarian average lies at 541 inhabitants per practicing physician (Bayerisches Landesamt für Statistik und Datenverarbeitung 2007). In 2006, 13 institutions offered 1.243 long-term care beds in Ingolstadt. Moreover, selective institutions provided the region with other 80 short-term care beds (Stadt Ingolstadt 2007, p. 120). Due to the high percentage of the population aged 65 and over in the health region, one should assume that the demand would increase in this health sector of the region, assumption which is also taken into consideration by the State Institute for Statistics and Data Processing in its projections. In the last five years, one could notice major contributions of the major health care players in the region to the optimization of the health care provision by means of process, service and partnership innovations. The ward for palliative medicine opened in 2006 for critically ill patients (cases where no further therapy is

possible) in the largest hospital of the Region 10, has meanwhile established itself in the Region 10 and has enjoyed a very good reputation. The patients are admitted in this ward at the recommendation of the physicians in private practice.

In order to offer special premises at childbirth, Klinikum Ingolstadt redesigned the childbirth department and transformed it into a centre for mothers and their children. The new atmosphere with hotel character and individual family rooms, completed with a generous family suite, pursues in a consequent manner also the orientation at the private patients and privately insured persons. A patient hotel for ill adults is now completed with a patient hotel in the centre dedicated to mothers and their children. The centre redesigned to provide a special atmosphere at childbirth meets, like the comfort-plus ward of Klinikum Ingolstadt, the highest standard level wearing the seal of perinatal centre – level 1. With regard to the electronic health card, 5.600 cards have been issued so far in the region Ingolstadt and others will follow: 30 physicians in 15 private practices as well as 2 hospitals and 16 pharmacies participate in this project, following the objective of transferring the findings and information about the patients in the respective situations to the examiners in a quicker and broader manner. When analyzing the achieved profile of the health region, one can conclude that Ingolstadt is strategically best positioned through its geographical location in the centre of Bavaria and of the Region 10. Ingolstadt has successfully succeeded in bundling all the important functional requirements and necessities of the region and making them easily accessible to all the inhabitants in the region. Ingolstadt – headquarters of the automobile producer Audi and of the consumer electronics provider Media-Saturn – is striving to fulfill at the same time other needs of the population, too. The successful activities of the major players in the health care, the hospital Klinikum Ingolstadt and the largest physician network in Germany, GOIN, could contribute successfully to the development of an important medical location and health care headquarter in Ingolstadt and in its neighboring districts.

3. Strategic objectives and concepts

The greatest future challenges the health region will be confronted with will be those caused by the demographic evolution. The demographic change will generate a substantial increase in the number and in the share of the elderly. The older people are unfortunately the ones being often ill: for example, if they need inpatient medical care in a hospital due to a particular illness, they also bring with them other additional complaints and discomforts, which means that these persons suffer from multimorbidity. At a higher age, these are especially the medical indications for heart, circulation, stroke, diabetes, dementia, cancer etc. The health region follows the objective of meeting the special needs of the older patients in the future development of health care models through a clear commitment to medicine for the elderly. The percentage of the population aged 65 and over in the Region 10 is already disproportionately high compared to the Bavarian and nationwide average share, accounting for 17.2% of the entire population in the region. This fact is already affecting the health region, especially with regard to the inpatient health care. 55 % of the patients hospitalized in the largest hospital of the region are aged 65 and over; this value will surely rise, as already in 2020 the percentage of the population aged 65 and over is expected to increase to approximately 20%. This trend is expected to abate only after 2040. This fact justifies the necessity of positioning the one major inpatient health provider of the health region, in this case the largest hospital of the region, as the nucleus for the future cooperation activities of the health region with regard to the medicine for the elderly. Internally, Klinikum Ingolstadt is aiming at founding and establishing a centre for medicine for the elderly through the integration and cross-linking of the affected specialty departments. The health care levels should be coordinated in an optimal manner through very close cross-linking; there should be a win-win situation in the case of an integral, interdisciplinary medical care for both service provider and service beneficiaries. The establishment of a centre of medicine for the elderly allows the medical care provider to optimize its processes in order to save costs by making use of synergy effects and by optimizing the process planning in such a manner that it improves the hospital length-of-stay, bed policy and finally, the efficiency and effectiveness. At the same time, the patients should perceive a qualitative improvement, as the therapy can start earlier and the patient can hope for very good healing chances in the presence of optimal processes. Externally, the activities should serve the purpose of a thematic and process-related bundling of the strengths of all players in the value chain in the field of the medicine for the elderly, starting with prevention and ending with inpatient aftercare. Already existent and implemented innovative cooperation models in the health region should be further developed through additional players, so that for example the industry and private service providers as well as research and science would be brought together in a new form. Further upcoming projects are to be shortly described:

- Assisted sleeping: the establishment of health institutions where general physicians guarantee the outpatient medical care of the patients and if hospitalization becomes necessary the hospital can initiate an optimal patient process and control by making use of the advance information; the patients

benefit from both the rapid diagnostics and therapy and from the rapid return in their living environment;

- Ambient Assistant Living: aims at transforming the living environment and home living conditions for the elderly in order to ensure them a good health care in their homes;
- Operational health management: the early identification of at-risk-patients and the implementation of adequate prevention measures and special health programs;
- Interlinking of the cooperating players of the health region via a hospital information system and the electronic patient record;
- Project prevention-screening: the identification of at-risk older patients in the region through continuous screening through the integration of the physicians in private practice and by means of electronic assistance systems.

4. Conclusions

The health region Ingolstadt is responding in an active and innovative manner to the demographic challenges. The further development and aimed positioning of the health region Ingolstadt as health region of the future can be achieved through activities meeting the needs of the older patients. The structure and organization of the planned future activities of the partners in the health region will bank on the structures of the existent high professional cooperation management of the major players in the Region 10, Klinikum Ingolstadt and GOIN.

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