ASPECTS OF THE IMPACT OF POPULATION AGEING ON HOSPITALS

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The demographic ageing is present in the great majority of the European countries and has substantial consequences for both the economic and social life. The demographic changes force the hospital management to elaborate new medical care concepts adapted to the needs of the older patients. Hospital processes, organizational structure and personnel qualifications are only some of the aspects that have to be revisited and adjusted to the specific problems and needs of this target group – the seniors. The establishment of low-care wards can be a successful solution to starting the organizational implementation of the age appropriate measures meeting the medical and nursing care needs of the older patients.

Key words: demographic impact, medicine for the elderly, low-care wards.

1. Demographic trends in countries of the European Union

The population of Europe has undergone major changes in the last centuries. During more than two centuries, the life expectancy at birth has increased substantially, the health status has improved considerably and mortality rates have diminished, accounting at present for very low values. If at the beginning of the 20th century the life expectancy at birth accounted for approximately 30 years, one can notice the substantial increase in the number of the population aged 80 and over during these last decades. Beside these demographic evolutions, the European societies have been also facing economic, social and cultural changes. During the process of demographic transition, all the European countries have exhibited positive population growth rates. At present, the demographic changes affecting Europe are without precedent: the number of the population of many countries is declining, the percentage of the population at higher ages is increasing, and the low fertility rates are not able to ensure the substitution of generations in time. While the birth rates are very low, the life expectancy at birth and at higher ages continues to increase, amplifying the population ageing by allowing generations to reach very high ages.

The most recent demographic projections of the Statistical Office of the European Communities show that the number of the population of the European Union will decrease in the first half of this century; meanwhile the percentage and number of the population aged 65 and over will increase substantially in the entire European Union (Lanzieri 2006). The analysis of the population data provided by the online population database of the Statistical Office of the European Communities (EUROSTAT 2008) shows that during the last ten years, in fourteen countries of the European Union (in its present composition) the percentage of the population aged 65 and over in the total population exceeded the percentage of the young population aged under 15; meanwhile, it can be noticed a clear ascending trend with regard to the evolution of the number and the percentage of the population at higher ages (65 and over) in the last ten years in the great majority of the countries of the European Union. The results of the demographic projections of the Statistical Office of the European Committees show that only very few countries of the European Union will not encounter for losses in the number and percentage of the young population (under 15) till 2050. With regard to the future evolution of the population aged 65 and over, both the recent and projected evolutions exhibit substantial increases, in both absolute and percentaged figures, of the population at higher ages. Another demographic trend which is going to amplify in the first half of this century in the countries of the European Union is the increase of the population at very high ages, aged 80 and over.

Although the future demographic trends are approximately identical with regard to the changes of the age structure of the population in the countries of the European Union, the amplitude of these demographic changes will differ from country to country, some of these having to face a strong process of population ageing, while others will be only in the first stages of it. In consequence, in some countries the effects and the impact of the demographic ageing will be multiple and will reach unexpected dimensions. The age and the older population will affect all the

social systems and processes of a society; the demographic decline and the population ageing will also have major effects on the economic and social life. The substantial deterioration of the population age structure will determine a more substantial deterioration of the age structure of the hospitalized patients; this effect could be noticed in the last years in Germany. In the future, the health systems of the European countries will be confronted more often with the problems of older patients, generating considerable increases in the health care expenditure. It remains to be seen to which extent the health systems of the European countries will be able to keep up with these changes and ensure the optimal health care for the older patients. Germany will serve as example in the analysis of the consequences of the demographic ageing on hospitals in the following chapters.

2. Aspects of the health care needs and problems of the older patients

The older persons are more often ill and they need more time to recover; they also need often, at least temporary, help and support in order to be able to move and take care of themselves. Considering this and knowing that the ageing process will further affect many European societies, one can assume that the market for medical and health care services will grow with the ageing of the societies. Although people at higher ages are often more capable and powerful as assumed, they need a more intensive health care than the younger people and also geriatric medicine. Although there is no doubt about the demographic changes and their impact on the medicine and health care, the reactions of the players in the health care market to these changes are still of diminished amplitude or even unnoticeable. The medical process and contact with older people already shapes and affects the everyday hospital life and this aspect will gain even more importance in the future as the ageing process is not going to stop in the first half of this century in many European countries, so that hospitals will have to adapt to the changing structure of their patients.

The disproportionately high amplitude of the population ageing and the so-called medicine for the elderly are nowadays routine, everyday life in many hospitals. In some German hospitals such as Klinikum Ingolstadt, patients aged 65 and older account for 56% of the total number of hospitalized patients, while the patients aged 75 and over account for 40%. The consequences for the hospitals are substantial, as older patients have in average longer hospital length-of-stay and need also a larger amount of health care services. Older patients are very often characterized by multimorbidity, a larger numbers of secondary diagnoses that also have to be treated during the hospitalization and that also affect the healing process, thus having direct impact on the hospital length-of-stay (Schwing 2005). Many patients have also functional constraints and need help and support with the activities of daily living, such as eating or washing. The patients coming directly from nursing homes into the hospitals present higher degrees of health care intensity and make high demands on the health care personnel. Not only the medical process has to be adapted according to the specific needs of the older people, but also the bed occupancy policy and strategy and personnel resource planning in hospitals should take into consideration the impact of an increased number of older hospitalized patients. For example, double rooms that should offer more comfort and private space to the patients could become a problem when housing older patients, as the nurses will spend relatively much time with patients requiring high levels of individual care in these hospital rooms without being able to notice what happens meanwhile in the ward. The higher number of secondary diagnoses requires not only a higher, additional effort from the physicians and the nursing personnel, but it also influences the treatment of the disease, for which the patient has been admitted into the hospital. The multimorbidity, the higher number of secondary diagnoses underlines the increasing importance of pharmacology in the case of older patients. There are not few cases in which the need for hospitalization of older people was generated by an inappropriate consumption of pharmaceuticals or due to adverse effects of pharmaceuticals. The pharmaceuticals anamnesis is also more complicated in the case of older patients; the increased number of pharmaceuticals the older people often have to take can also limit the spectrum of additional pharmaceuticals needed in order for them to recover during the hospital stay.

The ageing process changes also the disease spectrum: the international practice shows that some of the health problems of the older patients are for example cardiac insufficiency, coronary heart diseases, dementia, collapse and mobility problems, malnutrition, hearing limitations, arthrosis, chronic airway diseases, cerebrovascular diseases, hypertension, diabetes, depressions, arthritis and, chronic bronchitis (Walter / Schneider / Bisson 2006, pp. 539.; Kruse et. al 2002, pp.14). The statistic figures for 2004 for Germany show with regard to the health expenditures for prevention, medical care, rehabilitation and nursing services that four medical disease categories accounted for approximately 52% of the total costs in 2004: cardiovascular diseases, diseases of the alimentary system, diseases of the muscular and skeletal diseases and psychical and behavioural disorders. The analysis shows also that the per capita disease costs increase disproportionately with increasing age: the costs for the patients aged 65 to 84 are 2.2 times higher than the average disease costs and in the case of the patients over 84 5.4

times higher (Statistisches Bundesmat 2006). A German study analyzing the hospital utilization degree till 2010 predicts major diagnosis- and age-related changes. The number of young patients is expected to decrease due to the medical services shifted from the inpatients into the outpatient health care sector. The number of the patients aged 80 and over is predicted to rise at 15%, so that in 2010 approximately 50% of all hospitalized patients would be older than 60. The analysis of the number of hospitalized cases at diagnosis level presents disproportionately high increases for example in the number of the impatient cases of diabetes, chronic diseases of airways and of the respiratory system and of ischemic heart diseases for the population aged 80 and over (Offermanns / Müller 2006). The multimorbidity and the secondary diagnoses also underline the increased need for interdisciplinary medical care and –planning in the cases of older patients.

3. Some consequences of the ageing process on hospitals

While the hospitals perceive the consequences of the ageing society, the health financing system does not consider and integrate them appropriately: the data from Klinikum Ingolstadt points out that the older patients exceed regularly and often considerably the middle length-of-stay given by the DRG-system. This middle given value comprises the medical care costs of a specific disease and how long should a patient benefit in average from inpatient medical care for this specific disease. Very often, hospitals have to cover all the costs above this fixed value and each additional day above the middle length-of-stay at their own expenses. The great majority of the patients with high substantial length-of-stay overshoot are the older ones, especially those at very high ages. In the last years many medical services have been shifted from the inpatient hospital sector into the outpatient medical sector. Especially young patients are receiving a large amount of outpatient medical services. The objective and assumption of decreasing costs due to the reduction of the medical services in the hospitals by thus is and will be shadowed by the impact of the increased number of hospitalized older patients, as the free capacities are being allocated in meeting the rising needs of these patients.

Although the DRGs, the values for the middle length-of-stay and other measures are being regularly reviewed, the adjustment takes place with a temporal delay of about 2 years, so that meanwhile the hospitals have to provide services in advance from a financial point of view; but at the same time they are forced to work efficiently with the planned budget. Under these circumstances, the hospitals must search for solutions to this problem by implementing innovative and efficient medical care models for older patients by influencing positively their hospital length-of-stay. Since long time physicians specialized in the medicine for the elderly, in the geriatric medicine, are present in hospitals and take part at the planning of the inpatient hospitalization from the very beginning; they also play a very important role in the recovery of older patients during their hospital stays. The rehabilitative medicine has also become a part of the every day medical care in hospitals: it is already started at patients with fragile condition that cannot take care of themselves temporarily soon after medical treatment of the main disease.

Some hospitals, such as Klinikum Ingolstadt, are planning the establishment of new hospital wards in accordance to the patients' individual needs for medical, nursing care. These are the so-called low-care wards; these are wards with a new nursing care standard that are to substitute some of the existent "normal-care wards". The low-care-wards are considered as an additional nursing care level beside the intensive-care and intermediate-care wards with highest degrees of medical safety and the normal-care wards with high degrees of medical care. Although in the literature and in many examples of hospital practice, the concept of low-care has the meaning of lower levels and diminished intensity of nursing care, low-care means in the concept of Klinikum Ingolstadt a *changed* nursing care: the patients that are occupying low-care beds in these wards will not need high-tech medicine in the background; much more the focus lies in the additional medical and nursing care services that can be provided to these patients for example in order to help and support them at their rehabilitation already during the hospitalization period. Rooms for group therapy or shared eating premises can make for better conditions and pleasant atmosphere in these wards especially for those patients that have the highest length-of-stay in the hospital. The calculation data showed for Klinikum Ingolstadt the need for eight low-care wards, accounting for more than 200 low-care hospital beds. The restructuring of the normal-care wards and their conversion into low-care wards also create larger premises for the older patients that have to stay longer in the hospital. Thus the medical personnel can work better with these patients at their recovery and rehabilitation. Such concepts have to be elaborated and implemented very quickly, as the topics of the demographic evolution, its impact and of the so-called medicine for the elderly are more than ever present in the everyday hospital life.

The ageing societies generate not only problems and challenges, but also chances of great importance for the society. Many industries have so far understood the substantial opportunities of the demographic evolution and have adjusted or created offers for this growing customer target group, which has also a substantial purchasing

power – the seniors. One can find a great number of examples in the travel industry, pharmaceutical industry, insurance sector, advertising industry etc. More and more printed and TV ads have seniors acting in the main roles. Grandparents have always played an important role for families and for the society due to their voluntary engagement. The medicine, like other industries, is discovering the older patients and will adapt increasingly to their specific needs and problems. Hospitals that will not consider the impact of the population ageing will very probably not be able to survive in the market.

Other aspects the hospitals will have to take into consideration when elaborating and implementing medical, integrated care concepts for the older patients refer also to:

- the internal organization of the medical specialty departments in order to ensure the necessary degree of interdisciplinary medical care for the older patients;
- the appropriate structure and qualifications of the medical personnel involved in the medical care of the older patients;
- the necessity of changing and adapting the hospital admittance and discharge structures and processes in order to guarantee an optimal inpatient medical care and prepare the eventual appropriate aftercare or living arrangements on time for the older patients; the admittance and discharge of older patients from emergency centers are also important issues that must not be neglected;
- the data exchange with the cooperation partners in order to be able to access the necessary information about the older patients at any moment of time;
- the appropriate infrastructure and the building / design elements, food and beverages meeting the needs of the older patients;
- the role and the need for early rehabilitation and acute geriatric medicine services;
- establishing age appropriate structures, processes and standards;
- the opportunities for cooperation with nursing homes, networks of physicians in private practice, institutions for rehabilitation and geriatric medicine, social institutions and community networks in order to guarantee high quality health care for the older patients.

For hospitals, the success will depend on their ability to identify the demographic-related changes and problems and on the punctual, appropriate adjustment of the hospital processes, organizational medical structure and spectrum of the provided medical care services in accordance to the identified needs.

4. Conclusions

The demographic data shows similar trends in all the countries of the European Union with regard to the process of demographic ageing, which is also amplified by the increasing life expectancy both at birth and at higher ages. The ageing process cannot be stopped in many countries in the first half of this century. The number and the percentage of the population at higher ages will therefore increase continuously in the next decades. Not only the population age structure will suffer substantial changes, but also the age structure of the hospitalized patients: the hospital sector will be more and more confronted with the needs and problems of the older people. In the same manner as many other industries have recognized the problems of ageing societies and searched for solutions to meet the needs of this target group in order to maintain and improve their profitability, the hospital sector has to consider the multiple consequences deriving from the increasing number of older hospitalized patients. Their specific needs will affect all the present major hospital organizational structures and medical processes. The hospitals open to change that will come up with innovative, age appropriate concepts to ensure the quality and the continuity of the health care for the older patients beyond the limitations of the health sectors will be the ones that have understood the consequences of the demographic changes and have also identified and benefited from the chances of an ageing society.

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