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The rediscovery of the social side of medicine: philosophy and value of the International Classification of Functioning, Disability and Health (ICF)

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Abstract

Medicine is at risk of sliding into a sole repair service for the malfunction of organs. But the patients' hope and confidence towards doctors practicing this repair work go far beyond that: after acute medical treatment many patients suffer from chronic impairments due to the natural course of the disease or as a result of medical interventions. Despite resulting handicaps, patients aim at participating in family and social life, retaining a workplace and receiving support to remain a valued member of the family and the community. Doctors should therefore not only concentrate on the natural science and technological part of medicine, but also consider the background of their patients, their involvement in life situations including environmental and personal factors, as these may influence functioning and disability as facilitators or barriers. Health Insurances Companies must organize, finance and control the achievements of the post-acute treatment process with the goal of participation. "Public Health" must combine and assess individual views to prepare reasonable population based social, economic and political decisions. The philosophy and structure of the International Classification of Functioning, Disability and Health (ICF) is supporting this attitude of medicine, to complement the International Classification of Diseases (ICD) as a basis for health reports.

Keywords: Social Medicine, Bio - Medical Disease Model, Participation, Bio-Psycho-Social Disease Model, ICF

Introduction

Medicine is a social science, and politics is nothing else but medicine on a large scale. This dictum and claim is accredited to R. Virchow (1) (1821-1902) and S. Neumann (2) (1819-1908). Both were radical democratic medical doctors of their time supporting revolutionary medical and social changes in Germany, characterized by an increasing awareness for public health and as a primer too, for the highlights and fantastic achievements of diagnostic and curative medicine in the 20th century. Nowadays, patients increasingly complain about their perception of Medicine sliding into a sole repair service for the malfunction of organs only. It is therefore analyzed whether the use of ICF (3) may help to re-establish a multi-level approach, respecting the personal, familial and societal affairs to maintain a self-esteemed life.

The Awareness for Public Health in the 19th Century

Mass unemployment, poverty and appalling working conditions are attributed to the 19th century in European - and other countries. Child labor began between the ages of 4 to 6 years; education was a loanword for workmen living in slum dwellings. Malnutrition coincided with disastrous living and hygiene factors. Age and disease were initiating immediate existential crises. This was the moment for Public Health and socioeconomic initiatives: supplying the population with clean drinking water by installing modern sewage systems, promoting antipoverty programs and

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financial stability for families, raising the level of education for children, improving nutrition, living and sanitary conditions, reducing the exposition against pathogens, improving working conditions, improving life quality of mothers during pregnancy and thereafter, reducing the number of children and promoting self-esteem, more intellectual impulses and wider social nets. This multilevel approach, caring for persons, their families and societal embedding at the same moment, continuously contributed to reduce morbidity and mortality during the 19th century. When the rate of death from infectious diseases in England and Wales is charted over time, and the date of detection of the pathogen and introduction of effective drugs and specific vaccines is marked on a graph, it is immediately obvious that the major decrease of these diseases happened long before the detection of a bacterium, an agent, a chemotherapy or vaccinations (4).

The dawn of Medicine before the turn of the 20th century, and its highlights up to its end

During the second half of the 19th century, many foundations for the highlights of the 20th and the 21st century were established. In the 20th century, we were contemporary witnesses of fantastic achievements of diagnostic and curative, predominantly bio-medically oriented medicine: We have access now to an extensive diagnostic box of highly complex, molecular-biological, genetical, immunological and elaborate imaging procedures. Thus, we have at our disposal surgical, physical, immunological, pharmaceutical and technological tools of highest precision for preventive and therapeutical interventions. Some, perhaps even many of us, evolved a long-lasting impression of omnipotence about diagnostics, etiological and symptomatic therapy, satisfying the well-being that our patients want. But should we go on in the 21st century with the focus on an improvement of medical diagnostics, interventions and biomedical outcome alone?

The changing panorama of life expectancy and diseases in the 20th century and the beginning of the 21st century

At the end of the 19th century, the overall life expectancy amounted to 45 years of life, at the end of the 20th century it averaged at about 80 years. Epidemiologists estimate that only 5 years of life expectancy were gained by the advances of bio-medicine, and 30 years were achieved through public health and other societal activities. This changing in life expectancy is a global development (5). Age structures and functions of various biological systems and their organs are changing with the progression of age (6). The maximum capacity of human organ function is achieved at an age range from 10 to 30 years concerning, for example, the nerve conduction velocity, muscular strength, cardiac output, vital capacity and glomerular filtration rate. Beyond an age of about 30 years, the physiological parameters are individually and differently declining. In cases of upcoming diseases, the ability for compensation becomes increasingly fragile with the progress of age. The panorama of diseases has also changed from acute to chronic diseases, from monomorbidity to multimorbidity and from physical to psychic disturbances. Thus, the second half of the 20th century is characterized by an upcoming new morbidity due to psychosocial, psychomental and psychosomatic diseases and disabilities in conjunction with chronic diseases and multimorbidity (7). An analysis of the frequency of disability and relationships between disability and age in the UK showed that the percentage of light restrictions is declining and that of severe restrictions is increasing with aging (8). The number of chronic diseases is indisputably increasing with age as we can see from statistical analyses. But multimorbidity is not only a feature of old people. Multimorbidity is a fact which we have to face in the treatment of all age groups of our adult patients (9). As we know, multimorbidity is going along with multiple changing of medical consultations, the need for a comprehensive care by different professions with time-consuming and strenuous transitions and communication routes, repeated hospital treatments, polypharmacy with frequently undesired mutual actions of drugs, unnecessary or redundant examinations and conflicting instructions for therapy resulting in accumulating complications unless rationally analyzed. Therapy of multimorbidity is more sensitive for contextual factors, needs multimodal and multidisciplinary support with attention towards the patients' resources and an increasing need for prevention, therapy, rehabilitation and assistive technologies at the place of residence or nearby. An analysis in 2011 (10) showed that only 5 out of 477 guidelines mentioned multimorbidity. Since multimorbid patients are basically exempted from clinical studies, lack of knowledge about multimorbidity is more the rule than exemption in clinical practice (11).

In society, the perception of mankind and disability has changed within the past decades. In Germany for example, the law code for Rehabilitation and Participation of disabled people, values Self-Determination and Participation on Life in Society in increasing and eminent importance. In the past, terms such as "crippled" and "disabled" were used, criteria for the rating matrix of medical findings was the discrepancy from normality, "Disabled" had to adapt to the prevalent society, and help for social care was arranged to help them with integration. Nowadays, triggered by the German Constitution, the Social Security and Statutory Social Insurance Laws and promoted by the UN-

Convention on Rights of Persons with Disabilities, wording has changed to "Persons with disability" which are an inclusive part of the societal diversity, claiming self-determination and equitable participation as a matter of course (12). The Social and Statutory Insurance System is laid-out to achieve a mutual approach and the adjustment of disabled people as an inclusive part of society. In medicine, the attitude increasingly grew that diagnostics and therapy planning needed improvement and integration holistically instead of a narrowed view of repairing single organ-systems only. With an increasingly "industrialized" medicine divided into small professionally circumscribed sections, the complexity and lack of appropriate care for multimorbid patients has become obvious. The traditional sequence model of treatment is, for many patients, obsolete now. It is progressively replaced by an integrated care model, coordinating the course of treatment in reference to the patient`s need, originating from the impairments and interferences of multiple diseases. Traditionally, sub structured care systems are confronted with increasingly complex and less transparent challenges, disrupting their well-kept borderlines. The integration of a holistic course of treatment following first, the needs of the patient and secondly, a given structure, is threatening the accustomed ease and comfort, and is crying for a reassessment of our health care structures and processes.

The Bio-Medical Disease Model and the Bio-Psycho-Social Disease Model

In Acute Medicine, we are following the Bio-Medical Disease Model. We consider diseases and disability as a feature of the person, directly affected by an agent or genetic disease (etiology), provoking the evolution of a disease (pathogenesis) and causing symptoms (manifestation) which require medical care. The Bio-Psycho-Social Disease Model, instead, is indeed running out from the health problem and disturbed functions and structures as well, but proceeds to consider the resulting activities, participation in life situations and contextual factors which are to be assessed. The Bio-Psycho-Social Disease Model is taken as a basis to give support to overcome the aftermath of diseases biomedically, mentally / psychologically and socially, by choosing appropriate medical and social benefits like medico-technical auxiliary means, medical and vocational rehabilitation, training courses for compensation etc. and generate a treatment plan multiprofessionally interdisciplinary, which is sensitive for participation, contextual and personal factors (13).

ICF and its Use in Daily Medical and Social Life

In 2001 the International Classification of Functioning, Disability and Health (ICF) was officially endorsed by all 191 WHO Member States as the international standard to describe and measure health and disability. ICF is based on the Bio-Psycho-Social Disease Model. ICF describes a health problem holistically, by using the components of body structure and function, activities and participation and their interdependencies including environmental and personal factors. The individuals` functioning may thus be demonstrated as an interaction and complex relationship between the health condition and the items / domains and contextual factors as facilitators or barriers. Their interaction with the health condition will thus show and determine the level and extent of the individual`s function. We all know: the individuals' functioning is more than an addition of different diseases and organic and psychic deviations from normality. It is the outstanding professional art of a medical evaluation to compose a holistic view of the functioning of our patients. Our professional understanding is closely linked to the concept of participation as based in the ICF. The exclusive use of the Biomedical Disease Model oftentimes does not sufficiently fulfill this requirement. In Germany, the continuity from acute medical care to holistic therapy planning in post-acute outpatient and / or rehabilitative and / or social care is continuously improving, supported by social law and delegated legislation by order of statutory executive authorities using ICF. Their aim is to place activities for participation in one hand, to consistently use uniform / standardised definitions for terms accepted by different agencies, comprehensively valid over different care institutions like hospitals, rehabilitation clinics, private offices or home care institutions, competently communicated and coordinated in his / her field, by authorized staff. Thus from 2016 on, hospital doctors are obliged to consider and arrange the post-acute medical and social treatment of their patients, following new social legislation advancements. The application of ICF (14) in daily and professional medical life is very simple, e.g. as a tool to describe permanent restrictions of activities and participation relevant for daily life, as a tool to structure team meetings, as a tool to overview and consent multimodal intervention goals covering multiple disciplines, including the patients` goals or as a tool to track functional change, to follow the use of products and technology over the patients` course of time.

Summary and prospects:

Diagnoses, assessments and therapeutic proposals for patients with chronic diseases, multimorbidity and disability should be structured systematically by describing body structures and function, activities and participation as well as environmental and personal factors impacting as facilitators and barriers and their mutual influences. Using ICF is guided by the purpose to choose the most useful medical and social intervention and to enhance the prognosis for

participation. The Bio-Psycho-Social Disease Model is a promising tool for the medical profession to pick up the far-reaching change of societal awareness. Chronic diseased, multimorbid and potentially disabled persons nowadays live in this exiting and dramatic societal break over, and medical doctors must look critically at their own contribution and impact to these changes. To my conviction there is no alternative. We need both: Clinical Medicine and Social Medicine, the Bio-Medical and the Bio-Psycho-Social Disease Model. They represent two sides of the same coin.

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There is no conflict of interest to be declared.

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