

SOCIAL MEDICINE AND MEDICAL ETHICS

ORAL PRESENTATIONS

SOCIALLY ASSISTIVE ROBOTS IN ELDERLY CARE

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Summary

Population ageing poses many challenges to health systems. Among them is the shortage of human resources for care for the elderly. In many western developed countries, socially assistive robots (SAR) have already been introduced as caregivers in nursing homes. The aim of this report is to clarify the content of the term “socially assistive robots”, to study their applications in elderly care and to submit it to an ethical discussion. Material and methods: Systematic review and ethical reflection through principlism, utilitarianism, deontology, ethics of care and patients’ rights. SAR are technologies with assistive functions and a certain level of independence, and social capacity ranging from intentional movements to communication. They can assist in daily routines and increase patients’ quality of life. Through principlism, ethical risks include endangered autonomy, objectification, harm, and social justice. If respected, the right to information about a robot’s abilities and its role in care plans can enhance dignity and autonomy. However, the ethics of care underlines that robots cannot engage in a meaningful relationship with care receivers. Internal care goods are challenged. Novel approaches to deal with the consequences of ageing are needed. SARs can be successfully applied in elderly care, but extensive research is necessary towards achieving beneficence while respecting human dignity. Informed consent shall be strengthened through constant feedback of care receivers.

Key words: Socially Assistive Robots, elderly care, ethical reflection

MORAL CASE DELIBERATION IN CASE OF SEVERE CONGENITAL DISEASE

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Summary

The members of the Bulgarian association of bioethics and clinical ethics (BABCE) discussed as a case of a newborn with a severe congenital disease of intestines. The parents did not accept the diagnosis, and a referral to another treatment institution was required. The physician faced the dilemma of whether to grant the request of the parents (option B) or to decline it (option A). We present the development of moral deliberation within a homogenous group of ethics experts over a severe case of congenital disease. The dilemma method of moral case deliberation (MCD) in 10 steps was applied. Several values were distinguished. Two of them, good death and life, led to preference to option A. Parents’ love and right to life justified option B. From the perspective of the case owner the main values were: professionalism, patient’s protection, relatives’ autonomy, physician’s autonomy, dignity, trust in colleagues, and patient’s trust. Within the discussion, the third option of action was suggested, i.e. withdrawal from the case. One of the participants wished to leave the discussion because she felt too much affected by the case. Surprisingly, this was the participant who was most sceptical about the effectiveness of the methodology. There is a high potential of MCD application in a clinical setting within the Bulgarian healthcare system, and the members of BABCE must be further trained to facilitate sessions. In parallel, more efforts should be placed to popularize the methodology within the potential beneficiaries.

Key words: moral case deliberation, newborn, congenital disease, values

CASE REPORT: POST-MORTEM SPERM RETRIEVAL AND THE PROBLEM OF PRESUMED INTENT”

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Summary

This report aims to analyze the case of Peter Zhu, to emphasize on the following problems: who has rights over a dead person reproductive material; presumed intent; whose interest we should protect; what the future of the child would be? The case is analyzed by applying a 4-step model for ethical case analysis, developed in Medical University – Pleven. On 23 February Peter Zhu, U.S. Military cadet at West Point, died in a ski accident. His parents wanted frozen sperm from him to produce a grandchild with a surrogate. This case presents a conflict between the principles of respect for autonomy and justice. Peter Zhu doesn't have a living will clearly stating that he wanted to be a parent. His “presumed intent” is based on statements he made that he wanted to be a father and on his devotion to a family, but should we consider this as an expression of Peter's will? This conflict with justice: we can do something with a dead body when we have a living will. Should we continue with this procedure without knowing what the person really wants? Kant's imperative is severely violated: the parents use the child as a means for getting over their loss. It is unknown how the child would feel about this procedure later in his life. Peter Zhu's case is an example of that presumed intent should not be viewed as an expression of someone's will, especially when other people's lives are involved.

Key words: post-mortem sperm retrieval,

presumed intent, Peter Zhu, living will, ethical case analysis

ASSOCIATION BETWEEN STILLBIRTHS AND MATERNAL HEALTH CARE IN BULGARIA

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Summary

Stillbirths are an important public health problem. Even in Europe, the decreasing of this indicator is slow – from 8.5‰ in 1980 to 6.0‰ for 2015. For Bulgaria, this indicator is 6.3‰ /2017/. There are significant variations between different regions in the country. One of the factors that can increase the risk for stillbirth is the availability of health care. This report aims to analyse the relationship between stillbirth and availability of health care in Bulgaria for 15 years. The descriptive epidemiologic study design was used to analyse the stillbirth rate in Bulgaria, using the data from the National Statistical Institute. The correlation coefficient of Pearson was used to establish the relationship between stillbirths and availability of health care - the number of midwives and obstetricians per 100 000 population. The level of stillbirths in Bulgaria remains almost unchanged – 8.2 ‰ for 2003 and 6.3‰ for 2017. Regional variations in 2017 ranged from 10.8‰ in Montana, 10.6‰ in Yambol, 10.2‰ in Sofia district to 3.0‰ in Ruse and 2.2‰ in Pernik. The rates correlate

with access to maternal healthcare. The districts with higher stillbirth rate are in the group of lower availability of health care, below the average country level. Regardless of many confounding factors, a weak negative correlation was determined between the stillbirth rate and availability of health care. Stillbirth rate and availability of health care in Bulgaria seem to be related. There are persisting geographical variations in stillbirth rates, and one potential explanation includes social inequalities and welfare differences.

Key words: stillbirth rate, availability of health care, Bulgaria

AIR POLLUTION AND HEALTH STATUS OF THE RESIDENTS IN SOFIA CITY

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Summary

The pollution of atmospheric air in Sofia city is mainly from total dust and particulate matters (PM10, PM2.5), which poses the risk of respiratory system diseases predominantly. The purpose of the study was to establish the pollution with total dust and particulate matters in Sofia and respiratory system diseases of the population as per the ICD–10. The Sofia Regional Health Inspectorate provided the ambient air quality data for the period 2015-2017, and the data about the disease rate of the respiratory system diseases were obtained from the Sofia Health Insurance Fund provided by the general practitioners. During the three-year period, the

measured average daily concentrations of total dust and particulate matters were the highest in 2016 – 0.11%, compared with 2015 – 0.06% and 2017 – 0.4%. The incidence of upper respiratory tract infections, influenza and cases of pneumonia were significantly higher in children, as compared to individuals over 18 years of age. This morbidity was the highest in 2016. Despite the measures taken by Sofia Municipality to improve the quality of the ambient air, during the heating season the pollution with total dust and particulate matters in Sofia city shows average daily concentrations exceeding the maximum allowable concentration levels (MAC), which mainly affects the health of children as a risk group of the population. Integrated measures need to be undertaken by the institutions concerned to improve the quality of the ambient air in Sofia city.

Key words: air pollution, total dust and particulate matters, respiratory diseases.

THEORETICAL MODELS FOR ASSESSMENT AND FAMILY HEALTH CARE

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Summary

Family health care is an art and a science of thinking about, and working with families when a member experiences a health problem. Family care comprises a philosophy and a way of interacting with clients that is related to ways of collecting information, advocating for

and intervening with patients and families. The aim of this paper is to present the theories for assessment of family health. A review of the literature and detailed analysis of theories used for assessment and health care for families was made. Family health is a dynamic changing state of wellbeing, which includes the biological, psychological, spiritual, sociological, and culture factors of individual members and the whole family system: a) The *Family Systems Theory* is an approach that allows understanding and assessing families as an organized whole and/or as individuals within family units who form an interactive and interdependent system.; b) The *Developmental Theory* provides a framework to understand family changes and experiences over the members' lifetimes. c) The *Bioecological System* is the combination of a family's biological disposition and environmental factors to understanding individual and family growth. d) The *Family Cycle of Health and Illness Model* describes common family stressors, reactions, and adaptations that families experience when members become ill. e) The *Family Assessment and Intervention Model* presents families as a dynamic, open system in interaction with their environment. No one theoretical perspective stands out as representing the best way of care for families. By using different methods to view family care problems, different solutions and options for interventions are available.

Key words: family health, health care

DRUG POLICY IN THE CONTROL OF CARDIOVASCULAR DISEASES IN BULGARIA

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Summary

The study aimed to identify the impact of the Bulgarian drug policy on a possible change in disease and mortality from cardiovascular diseases. Data from NHIF, NCPHA and NCHI was used. A descriptive approach was used to analyze the cost of drug treatment, the medication used, the number of patients receiving therapies and their impact on those who died of arterial hypertension, ischemic heart disease, heart failure and cerebrovascular disease. It was established that drug policy in Bulgaria causes a slight decrease in public funding for the treatment of these diseases with a significantly decreasing number of patients receiving such treatment. Furthermore, it was concluded that there was no significant dynamics in the number of deceased during the period under review. Our findings were confirmed by standardized coefficients. The correlations made reveal a lack of positive tendency of a decrease of cardiovascular diseases in Bulgaria, despite the high public expenditure on treatment. Our results determine the need for a change in drug policy to respond more effectively to these diseases.

Key words: drug policy, cardiovascular diseases, control

DATA FROM EPIDEMIOLOGICAL SURVEY OF COMMON MENTAL DISORDERS EPIBUL 2-2017

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Summary

A second representative epidemiological study of common mental disorders in Bulgaria was conducted to establish the link between the lifestyle, the associated level of stress and the prevalence of mental disorders in the country. The computerized version of the CIDI (Composite International Diagnostic Interview CAPI-CIDI) questionnaire was used to allow an in-depth study of the psychiatric complaints of the population by non-medical interviewers

by gathering information on the prevalence of common mental illnesses through face-to-face interviews at the respondents' homes. A random national sample was used, stratified by statistical planning regions, district and type of settlement. There were interviews with 1509 people from all over the country, from a representative sample of 2616 households. The response rate was 61%. A wealth of information on the illness of frequent mental illnesses, socio-demographic risk and protective factors was collected.

Keywords: epidemiology, psychiatry, common mental disorders, national representative survey, prevalence

POSTERS

BURNOUT PREVALENCE AND DISTRIBUTION IN PEDAGOGIC PROFESSIONALS IN BULGARIA

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Summary

Burnout has been regarded as a negative affective state resulting from unresolvable job stress. The high level of burnout among high-risk professions is recognized worldwide. However, the prevalence of this syndrome in the Bulgarian population remains insufficiently documented. In the present study, a total of 345 individuals with pedagogic occupational profile from different socio-economic regions in Bulgaria were included (86% females, mean

age 47.1 years, SD=9.1). Burnout was assessed with the three subscales of the Maslach Burnout Inventory-Human Services Survey, including emotional exhaustion (EE), depersonalization (DP), and personal achievement (PA). Environmental stress load was measured using the Social Readjustment Rating Scale, and the penetration of latent depression was assessed with the Major Depression Inventory. Additional demographic and generic factors were evaluated. Correlation, regression and analyses of variance were conducted. More than 80% of participants did not manifest high burnout levels on DP and PA scales. The highest rate of high scores (41%) was revealed for EE, which also correlated most strongly with penetrating latent depression. For all burnout scales, environmental events affecting stress resistance had the strongest predictive value for burnout manifestation. While gender, age, and religion did not contribute reliably to burnout expression, dissatisfaction with monthly financial income was an independent predictor of high burnout scores. The manifestation of the burnout syndrome is relatively low in pedagogic professionals in Bulgaria. However, the emotional state is most vulnerable, and major sources involve environmental stress factors. These observations can guide preventive and protective strategies.

Key words: burnout, stress, depression, socio-demographic factors

CONTEMPORARY THREATS TO GLOBAL HEALTH AND THEIR INFLUENCE ON PUBLIC HEALTH IN BULGARIA

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Summary

World Health Organization (WHO) ranks ten severe harms of human health for the year 2019, observes their worldwide influence and draws a Strategic Plan to cope with them. This report aims to analyze the influence of the most critical threats to global health on Public Health in Bulgaria. We made a comparative and content analysis of national and international sources and databases – “Health for all”, “Eurostat”, National Statistical Institute of Bulgaria etc. According to WHO, ten the most critical threats for global health nowadays are air pollution and climate change, noncommunicable diseases, global influenza pandemic, fragile and vulnerable settings, antimicrobial resistance, Ebola and other high-threat pathogens, ineffective primary health care, vaccine hesitancy, dengue fever, and HIV. Excluding Ebola and dengue fever, all other conditions can be considered as essential for public health in Bulgaria. Risk factors of noncommunicable diseases are widely distributed. Immunization range with influenza vaccines for the last five years is low, at 2.4% (2.17- 2.61%). Bulgaria is among countries with the lowest number of general practitioners (55.9 per 100 000 inhabitants) in the EU where the range is between 42 and 253 per 100 000. The incidence rate of HIV in Bulgaria (2.8/100 000) is twice as low as the level of the EU (5.8/100 000), but there is a big iceberg of morbidity of HIV infection. Respectively, a lot of actual HIV positive people are not covered with antiretroviral therapy. Bulgaria is affected by most of the global health threats, which requires adaptation of National Health Policy to contemporary health issues.

Key words: Bulgaria, immunization coverage, primary health care, threats to global health

POPULATION AGEING IN THE REGION OF PLEVEN

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Summary

Population ageing, the increasing share of older persons in the population, is poised to become one of the most significant social transformations of the twenty-first century. For the European Union, the proportion of people aged 65 and over was 19.7% in 2018. Bulgaria is one of eight countries with an indicator of over 20.0%. This report aims to analyse ageing and trends in the region of Pleven for 18 years and prognosis for the next 10 years. Data of National Statistical Institute Bulgaria were used to calculate the proportion of people over 65 years 2001-2018. The descriptive epidemiologic study design was used to analyse the trends for the period 2001-2018. Modelling of the development trend was made by using the methods for smoothing of temporary rows with the corresponding regression equations, the selection of the most suitable function being made based on relevant criteria. By the end of 2018, persons aged 65 and over in Bulgaria were 1 493 119 (21.33%) of the population/. In the region of Pleven, the proportion of people over 65 shows a negative trend from 20.01% for the 2001 year to 26.03% for 2018. The prognosis for 2028 is more pessimistic – 27.90%. Population ageing underscores the urgency of eliminating age-related discrimination, promoting and protecting the rights and dignity of older persons and facilitating their full participation in society. As life expectancies increase, it is more important to enact policies that promote lifelong health and emphasize preventive care.

Key words: population ageing, Pleven, Bulgaria