

Journal of Biomedical and Clinical Research

Vol. 16, No. 1, Suppl. 1, 2023

EDITOR-IN-CHIEF

Dobromir D. Dimitrov
Pleven, Bulgaria

DEPUTY EDITOR-IN-CHIEF

Slavcho T. Tomov
Pleven, Bulgaria

EDITORIAL BOARD

Silviya Aleksandrova-Yankulovska, Pleven, Bulgaria
Margarita Alexandrova, Pleven, Bulgaria
George Altankov, Pleven, Bulgaria
Plamen Bozhinov, Pleven, Bulgaria
Dimitar Gospodinov, Pleven, Bulgaria
Nadezhda Hinkova, Pleven, Bulgaria
Sergey Iliev, Pleven, Bulgaria
Yavor Ivanov, Pleven, Bulgaria
Milena Karcheva, Pleven, Bulgaria
Hristina Lebanova, Pleven, Bulgaria
Desislava Lefterova, Pleven, Bulgaria
Asparuh Nikolov, Pleven, Bulgaria
Savelina Popovska, Pleven, Bulgaria
Boyko Shentov, Pleven, Bulgaria
Mariya Simeonova, Pleven, Bulgaria
Mariya Sredkova, Pleven, Bulgaria
Dimitar Stoykov, Pleven, Bulgaria
Stefan Trifonov, Pleven, Bulgaria

ASSOCIATED EDITORS

EDITORIAL OFFICE

Assistant Editor
Statistical Editor
Language Editor
Electronic Publishing Editor
Production Editor

PUBLISHER

HONORARY EDITOR

Grigor A. Gorchev
Pleven, Bulgaria

EXECUTIVE EDITOR

Galya Ts. Stavreva
Pleven, Bulgaria

ADVISORY BOARD

Bogdan Petrunov, Sofia, Bulgaria
Julian Ananiev, Stara Zagora, Bulgaria
Ilko Getov, Sofia, Bulgaria
Robert Holloway, Orlando, USA
Raimund Jakesz, Vienna, Austria
Jorg Jerosh, Neuss, Germany
Aneliya Klisarova, Varna, Bulgaria
Tsvetomir Lukanov, Heidelberg, Germany
Pier Mariani, Rome, Italy
Blagoy Marinov, Plovdiv, Bulgaria
Milka Marinova, Bonn, Germany
Stewart Mennin, New Mexico, USA
Penka Perenovska, Sofia, Bulgaria
Alexey Savov, Sofia, Bulgaria
Peter Schlag, Berlin, Deutschland
Phillip Shaddock, Durham, United States
Kun Zhou, Chongqing, China
Hans Zenner, Tubingen, Germany

Milena Atanasova, Pleven, Bulgaria
Ivelina Yordanova, Pleven, Bulgaria
Nadia Veleva, Pleven, Bulgaria
Angel Yordanov, Pleven, Bulgaria

Asya Staneva
Petkana A. Christova
Yanka I. Tzvetanova
Pencho Tonchev
Silviya Emileva

Publishing center MU - Pleven

Journal of Biomedical and Clinical Research

ABSTRACTING & INDEXING

Baidu Scholar
CABI (over 50 subsections)
Case
CNKI Scholar (China National Knowledge Infrastructure)
CNPIEC - cnpLINKer
Dimensions
EBSCO (relevant databases)
EBSCO Discovery Service
Google Scholar
Japan Science and Technology Agency (JST)
J-Gate
JournalTOCs
KESLI-NDSL (Korean National Discovery for Science Leaders)
Microsoft Academic
MyScienceWork
Naver Academic
Naviga (Softweco)
Primo Central (ExLibris)
ProQuest (relevant databases)
Publons
QOAM (Quality Open Access Market)
ReadCube
Semantic Scholar
Summon (ProQuest)
TDNet
Ulrich's Periodicals Directory/ulrichsweb
WanFang Data
WorldCat (OCLC)

PUBLISHING SERVICES

Sciendo /De Gruyter

JBCR (p-ISSN 1313-6917) is a multidisciplinary peer-reviewed, open access scientific journal of Medical University-Pleven, published two times per year.

JBCR Online (e-ISSN 1313-9053) offers free access to all articles at jbc.r.mu-pleven.bg

Editorial Office: Journal of Biomedical and Clinical Research, Medical University-Pleven, 1 Kliment Ohridski str., 5800 Pleven, Bulgaria; Phone: +359 64 884 110; e-mail: jbc.r@mu-pleven.bg

Copyright© 2008 by the Journal of Biomedical and Clinical Research, Medical University-Pleven. All rights reserved.

Journal of Biomedical and Clinical Research

Vol. 16, No. 1, Suppl. 1, 2023

MEDICAL UNIVERSITY – PLEVEN, BULGARIA

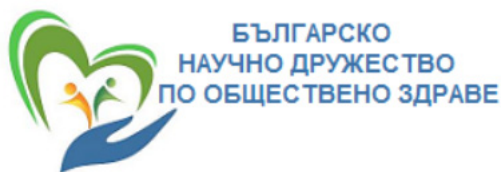


PUBLIC HEALTH: CHALLENGES FOR THE HEALTH SYSTEM

**VI NATIONAL CONFERENCE
OF THE BULGARIAN SCIENTIFIC SOCIETY
OF PUBLIC HEALTH**

26 – 27 MAY 2023

PROGRAM AND ABSTRACTS



Journal of Biomedical and Clinical Research

Vol. 16, No. 1, Suppl. 1, 2023

ORGANIZING COMMITTEE

CHAIR OF HONOUR:

Prof. Dobromir Dimitrov, MD, PhD – Rector of Medical University – Pleven

PRESIDENT OF BSSPH:

Prof. Hristo Bozov, MD, PhD – Rector of University “Prof. Dr. Assen Zlatarov” – Burgas

CHAIR:

Assoc. Prof. Mariela Kamburova, DM, PhD, DSc
Vice-Dean of Faculty of Public Health

SCIENTIFIC COMMITTEE:

CHAIR:

Prof. Angelica Velkova, MD, PhD, DSc
Scientific Secretary of BSSPH

MEMBERS

Prof. Makreta Draganova, PhD
Assoc. Prof. Vanja Birdanova, MD, PhD
Assoc. Prof. Stela Georgieva, MD, PhD
Assoc. Prof. Nina Mihailova, PhD
Assoc. Prof. Tzvetelina Valentinova MD, PhD
Assoc. Prof. Nadia Veleva, PhD
Assoc. Prof. Hristina Lebanova, PhD
Assoc. Prof. Desislava Vankova, MD, PhD, DSc
Assoc. Prof. Borjana Parashkevova, MD, PhD

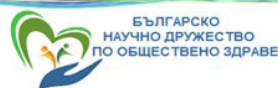
ORGANIZING COMMITTEE:

MEMBERS

Prof. Maria Semerdjieva, MD, PhD
Prof. Rumen Stefanov, MD, PhD, DSc
Prof. Juliana Marinova, MD, PhD
Prof. Vladimir Gonchev, MD, PhD
Prof. Evdokia Sotirova, PhD
Prof. Antonia Yanakieva, PhD
Assoc. Prof. Nataliya Usheva, MD, PhD
Assoc. Prof. Dima Tsanova, DM, PhD
Ass. Prof. Eleonora Mineva-Dimitrova, PhD
Ass. Prof. Borislava Ivanova

SECRETARY:

Nadia Gachevska



SCIENTIFIC PROGRAM

MAY 26 th , 2023 - FRIDAY					
REGISTRATION OF PARTICIPANTS: TELECOMMUNICATION ENDOSCOPIC CENTER (TELEC) MU-PLEVEN					
AMBROAZ PARE HALL – TELEC, MU-PLEVEN					
09.30 – 10.00	OPENING CEREMONY AND WELCOME ADDRESSES				
10.00 – 10.30	Plenary lecture 1: Faculty of Public Health, MU-Sofia: Prof. Tsekomir Vodenicharov, MD, PhD, DSc.				
10.30 – 10.50	Plenary lecture 2: Faculty of Public Health, MU-Pleven: Paulina Kirova, PhD				
10.50 – 11.10	Plenary lecture 3: Faculty of Public Health and Health Care: University „Prof. Dr. As. Zlatarov“ - Burgas: Prof. Hristo Bozov, MD, PhD				
11.10 – 11.30	Plenary lecture 4: Faculty of Public Health, MU-Varna: Petya Boncheva, PhD				
LUNCH: TELECOMMUNICATION ENDOSCOPY CENTER					
HALL	AMBROISE PARE TELEC	GALEN TELEC	LOUIS PASTEUR “PHARMACY”	AL. FLEMING „PHARMACY“	MEETING HALL „PHARMACY“
12.30 – 14.30	Section 1: SOCIAL MEDICINE AND HEALTH PROMOTION - 1	Section 2: HEALTH CARE - 1			
14.45 – 16.00	Section 3: PRIMARY HEALTH CARE	Section 4: NUTRITION AND DIETETICS, MARINE MEDICINE, MENTAL HEALTH	Section 5: KINESITHERAPY, REHABILITATION AND ERGOTHERAPY	Section 6: HEALTH TECHNOLOGY ASSESSMENT, DIGITAL HEALTH AND TELEMEDICINE, E-HEALTH	Section 7: STUDENT
CAFE BREAK: TELECOMMUNICATION ENDOSCOPY CENTER					
16.30 – 18.30	Section 8: SOCIAL MEDICINE AND HEALTH PROMOTION - 2	Section 9: HEALTH CARE - 2	Section 10: DISASTER MEDICINE, ENVIRONMENT AND HEALTH	Section 11: HEALTH POLICY AND MANAGEMENT	Section 12: STUDENT
18.30 – 20.00	COCKTAIL - GARDEN OF MU-PLEVEN				
MAY 27 th , 2023 - SATURDAY					
AMBROAZ PARE HALL – TELEC, MU-PLEVEN					
09.30 – 10.00	CLOSING CEREMONY				
10.00 – 11.00	GENERAL MEETING OF BSSPH				

Content

Vol. 16, No. 1, Suppl. 1, 2023

Content

SOCIAL MEDICINE AND HEALTH PROMOTION	
ORAL PRESENTATIONS	
17	INCREASING THE SCIENTIFIC POTENTIAL OF THE MEDICAL UNIVERSITY - PLEVEN THROUGH THE IMPLEMENTATION OF A STRATEGIC RESEARCH AND INNOVATION PROGRAM FOR DEVELOPMENT Kamburova M., D. Tsanova, H. Dochev
17	THE "ONE HEALTH" PARADIGM - UNIFIED CARE FOR THE HEALTH OF PEOPLE, ANIMALS AND PLANTS. SUCCESSFUL PROFESSIONAL PRACTICES AND ACADEMIC UPGRADING Ivanov D., D. Vankova, P. Boncheva, Ts. Paunov
18	COMPARATIVE ANALYSIS OF INFANT MORTALITY IN THE EUROPEAN UNION AND BULGARIA Chifligarska A., E. Mineva-Dimitrova, M. Kamburova
19	EVIDENCE-BASED POLICIES FOR IMPROVED HEALTH LITERACY Petrova-Geretto E., A. Yanakieva, A. Vodenicharova
19	DISPENSARY MONITORING IN PRIMARY HEALTH CARE Dimitrov D.
20	SPECIALIST OUTPATIENT CARE SITUATION ANALYSIS Pavlova G.
20	ANALYSIS OF THE HEALTH CONDITION OF THE EMPLOYEES IN THE MIA OF NORTH MACEDONIA Yanev G.1, A. Agovska2
21	QUATERNARY PREVENTION OF ORAL DISEASES - CHALLENGES AND INTERNATIONAL EXPERIENCE Bakhova A., N. Usheva
22	INFLUENCE OF SOME FACTORS ON ADOLESCENT SLEEP HYGIENE Ivanov I., A. Velkova
22	AN INTEGRATED MODEL OF MANAGEMENT OF SEXUALLY TRANSMITTED INFECTIONS – A DESCRIPTIVE REVIEW Gardeva R., J. Marinova, G. Chamova, B. Parashkevova, P. Atanasov
23	DETERMINANTS OF THE INDIVIDUAL DECISION TO VACCINATE AGAINST COVID-19 Tomova-Angelova I., A. Velkova
23	MEDICO-SOCIAL ASPECTS OF AGING IN THE PLEVEN REGION FOR THE PERIOD 2011-2021 Dyulgerova S., M. Kamburova, E. Mineva-Dimitrova
24	STRUCTURE AND PROBLEMS OF MEDICAL AND SOCIAL REHABILITATION OF PATIENTS WITH ACUTE CORONARY SYNDROMES OR AFTER HEART SURGERY IN BULGARIA Mateev H., D. Sidjimova
25	SMOKING PREVALENCE AMONG STUDENTS OF HEALTH SPECIALTIES IN BULGARIA Boncheva P.
25	MANAGEMENT OF SEXUALLY TRANSMITTED INFECTIONS - CHALLENGES AND PERSPECTIVE. LESSONS FROM THREE CASE STUDIES. Gardeva R., J. Marinova, G. Chamova, B. Parashkevova, A. Boteva
26	THE IMPACT OF ORGANISATIONAL FACTORS ON JOB SATISFACTION OF PUBLIC HEALTH INSPECTORS Tosheva Y., T. Tarpomanova
26	DISEASE PREVENTION IN WOMEN OF POST-REPRODUCTIVE AGE Dimitrov Y., A. Velkova

27	REJECTION OF PARENTING AFTER CHILDBIRTH, ETHICAL PROBLEMS. CLINICAL CASE. Kucun F., S. Radeva
POSTERS	
28	BULGARIA AMONG THE TOP 10 EU COUNTRIES CONDUCTING COVID-19 CLINICAL TRIALS Benisheva – Dimitrova T., N. Dzhafer, D. Milkov, D. Dimitrov, V. Todorova
28	HUMAN RESOURCE MANAGEMENT IN PUBLIC HEALTH - PARADIGMS AND COMPONENTS Atanasov P., D. Gospodinov, R. Peycheva, B. Parashkevova
29	SPECIFIC REQUIREMENTS AND CHARACTERISTICS OF CLINICAL TRIALS WITH MEDICAL DEVICES Petkova P., E. Grigorov, V. Belcheva, I. Getov
29	DIAGNOSIS AND TREATMENT OF PATIENTS WITH ONCOLOGICAL DISEASES. RESEARCH AND ANALYSIS. Bozov H., E. Sotirova, P. Dobrev, Y. Marincheva Petrova, D. Dinev, E. Stoyanova, I. Kazmukov
30	A SURVEY OF MEDICAL STUDENTS' VIEWS ON HEALTH PROMOTION AND PUBLIC HEALTH ISSUES Milcheva H., R. Yordanova ¹
30	SEXUAL HEALTH IN TRANSHUMANISTIC PARADIGM Bostandjiev R., J. Marinova, B. Parashkevova
HEALTH CARE	
ORAL PRESENTATIONS	
31	MOTIVATION OF MIDWIVES FOR CONTINUING EDUCATION, ASSOCIATED WITH CLIMACTERIUM IN WOMEN Dimitrova A., I. Sokolova, M. Stanoeva
31	MOTIVATION OF HEALTH CARE PROFESSIONALS FOR CHOOSING DEVELOPMENT IN INTENSIVE STRUCTURES Milikina D.
32	ENHANCING THE PROFESSIONAL COMPETENCE OF EDUCATIONAL SPECIALISTS THROUGH TRAINING ON THE HEALTH RISKS OF UNREGULATED NUTRITIONAL SUPPLEMENTS Petkova-Gueorguieva E., A. Serbezova, R. Zlatanova, S. Georgiev, H. Lebanova, V. Getova-Kolarova, A. Mihaylova
33	THE READINESS OF THE MIDWIVES FROM THE TOWN OF PLEVEN FOR INDEPENDENT ACTIVITIES IN THE PREVENTION OF HPV-ASSOCIATED DISEASES Stoyanova E., M. Kamburova
33	IMPROVING THE QUALITY OF HEALTHCARE THROUGH MANAGEMENT IN THE HOSPITAL INFORMATION SYSTEM Bogdanova K., D. Milikina, I. Sokolova
34	HEALTH CARE STAFF RETENTION OPPORTUNITIES Draganova M., M. Saleva
34	LEVEL OF AWARENESS OF MOTHERS ABOUT THE BENEFITS AND ATTITUDES IN THE PROCESS OF BREASTFEEDING Traycheva B., T. Veselinova, A. Dimitrova
35	HEALTH CARE FOR PATIENTS WITH CHRONIC KIDNEY FAILURE – A HISTORICAL REVIEW Vasileva V., S. Georgieva
35	QUALITY OF LIFE IN PATIENTS WITH BREAST CANCER Sokolova I., D. Hadjideleva, D. Gavrailova, G. Zayakova
36	COMPASSIONATE TREATMENT. REGULATORY FRAMEWORK IN BULGARIA. THE ROLE OF MEDICAL PERSONNEL IN ACCESS TO COMPASSIONATE USE MEDICINES Zlatanov A., E. Grigorov, I. Mutafova

37	CONDITIONS AND PROCEDURE FOR DETERMINING DEATH AND PERFORMING A PATHOLOGICAL AUTOPSY OF A PATIENT IN A MEDICAL INSTITUTION-HOSPICE Hristozova M., M. Mavrov
37	AN EXEMPLARY MODEL OF SUCCESSFUL APPROACHES AND GOOD PRACTICES IN THE FIELD OF DENTAL EDUCATION AT THE CITY DENT CLINIC, CITY OF PAZARDZIK Gulemetova M.
38	CHALLENGES FOR THE ORGANIZATION OF HEALTH CARE IN PATIENTS SURVIVING ISCHEMIC STROKE IN THE EUROPEAN UNION Balaburova M., M. Kamburova
38	CYTOLOGICAL DIAGNOSIS OF HPV - ASSOCIATED DISEASE Hinkova N., E. Stoyanova, T. Semova, D. Dimitrov
39	COMPARATIVE ANALYSIS OF STUDENTS', NURSES' AND EXPERTS' OPINION ON THE NECESSITY OF CONTINUING EDUCATION IN ONCOLOGY CARE Gergova P., S. Georgieva, E. Mineva-Dimitrova
39	ENSURING THE SAFETY OF OBSTETRIC ACTIVITIES THROUGH AUDIT Radeva S.
40	DIGITAL TRANSFORMATION OF OBSTETRIC CARE - A NEW MODEL OF ORGANIZATION OF ACTIVITIES IN THE MODERN HOSPITAL Radeva S.
41	HEALTH COMPETENCE OF THE PATIENT WITH "DIABETIC FOOT" Slavkova T., R. Eredanska, G. Georgieva
41	COMPETENCES OF THE MIDWIFE IN INTENSIVE CARE FOR PREMATURE CHILDREN Kucun F., S. Radeva
42	ROLE OF THE NURSE IN EDUCATING HOSPITALIZED PATIENTS WITH COPD ON THE SELF-MANAGEMENT OF THE DISEASE Petkova T., E. Dimitrova
POSTERS	
42	OPPORTUNITIES FOR THE USE OF VIRTUAL AND AUGMENTED REALITY IN THE EDUCATION OF MEDICAL AND HEALTHCARE STUDENTS Bozov H., E. Sotirova, V. Gonchev
43	CAUSES OF OCCUPATIONAL STRESS IN PUBLIC HEALTH INSPECTORS Kadir B., S. Harizanova, D. Bakova
44	SATISFACTION OF MEDICAL PROFESSIONALS WITH A COMMUNICATION AND INFORMATION SYSTEM IN AN EMERGENCY DEPARTMENT Atliev K., M. Semerdjieva, D. Bakova
PRIMARY HEALTH CARE	
ORAL PRESENTATIONS	
44	HUMANE RESOURCES IN GENERAL MEDICAL PRACTICE – CONDITION, TRENDS, RISKS Hristova M., T. Valentinova
45	BEST PRACTICES OF INTERACTION BETWEEN THE UNITS IN PRIMARY HEALTH CARE AND EMERGENCY MEDICAL CARE Hristova M., T. Valentinova
45	DEPRESSIVE EPISODE - FREQUENCY, SIGNIFICANCE AND PROBLEMS IN ITS DIAGNOSIS IN GENERAL MEDICAL PRACTICE Tumbeva E., T. Valentinova
46	RESEARCH OF PROBLEMS AND BARRIERS IN THE CARE OF PATIENTS WITH A DEPRESSIVE EPISODE IN GENERAL MEDICAL PRACTICE Tumbeva E., T. Valentinova
47	CHILDREN BORN AFTER ASSISTED REPRODUCTIVE TECHNIQUES IN SPEECH THERAPEUTIC PRACTICE - ANALYSIS OF AN ANAMNESTIC DATA BASE Kartunova-Tomova Sv., M. Simonska, P. Andreeva

47	REGULATION OF HEART RATE VARIABILITY (HRV) IN A PERSON WHO STUTTERS BY BIOFEEDBACK: CASE STUDY Goranova E.
48	REAL OR VIRTUAL AUTISM - DIFFERENTIAL SYMPTOMATOLOGY. A SYSTEMATIC REVIEW AND META-ANALYSIS Goranova E.
48	WHAT WE KNOW ABOUT ZIKA VIRUS AS OF MARCH 2023 Iwata H., Sh. Iwata, M. Kolarova-Dimitrova, Ts. Paunov
NUTRITION AND DIETETICS, MARINE MEDICINE, MENTAL HEALTH	
ORAL PRESENTATIONS	
49	DIETARY RECOMMENDATIONS FOR THE HYPERANDROGENIC CLINICAL PHENOTYPE OF POLYCYSTIC OVARY SYNDROME Ruseva Iv., V. Birdanova, Dzh. Isuf, Tsv. Vitkova, Z. Radionova
50	IS DELIVERY BY CESAREAN SECTION A RISK FACTOR FOR ALLERGY AND ATOPIC DERMATITIS? Nedkova-Milanova V.
50	PERCENTAGE OF LIPIDS IN THE BODY COMPOSITION OF DIFFERENT COURSES OF CADETS AT NVNA Tachev T., Y. Kolev
51	ECG EXAMINATION OF A SHIP CREW DURING TRANSOCEANIC AND TRANSEQUATORIAL VOYAGE Kirova K., R. Yordanova, M. Moskova, D. Stavrev
51	THE INFLUENCE OF STRESSORY FACTORS (COOLING) ON STUDENTS FROM MEDICAL UNIVERSITY-VARNA AND NIKOLA VAPTSAROV NAVAL ACADEMY Negozova M., D. Iliev, D. Stavrev
52	STUDY OF THE INFLUENCE OF EXTERNAL FACTORS ON THE PERCEIVED OCCUPATIONAL STRESS IN HEALTHCARE STAFF WORKING IN AN INTENSIVE CARE HOSPITAL ENVIRONMENT Yulieva D., S. Tsvetkova, M. Kamburova, P. Stefanova
52	THE SIGNIFICANCE OF USING SCALES AND QUESTIONNAIRES IN THE EVALUATION OF A PSYCHIATRIC PATIENT IN CASE OF EMERGENCY Todorov A., P. Chumpalova-Tumbeva, E. Dimitrova-Ilieva, M. Stoimenova-Popova
53	INITIAL MEASUREMENT OF STRESS PROFILE WITH THE BIOFEEDBACK METHOD. COMPARISON OF THE RESULTS OF PERSONS FROM PROFESSIONS RELATED TO THE PERFORMANCE OF HIGH-RISK TASKS AND PERSONS FROM PROFESSIONS WITH LOW LEVELS OF RISK Nedeva R., D. Stavrev
POSTER	
54	THE INFLUENCE OF COVID-19 ON THE MENTAL HEALTH OF STUDENTS FROM MU – VARNA
KINESITHERAPY, REHABILITATION AND OCCUPATIONAL THERAPY	
ORAL PRESENTATIONS	
54	DIGITALIZATION OF EDUCATIONAL MATERIALS AND SWOT ANALYSIS OF ONLINE EDUCATION IN THE REHABILITATION FIELD AFTER THE END OF THE COVID-PANDEMIC (INCLUDING ANALYSIS OF THE LEARNERS' OPINIONS) Koleva I., R. Yoshinov, B. Yoshinov
55	THE POTENTIAL OF THE TECHNOLOGY EXIMIA FOR IMPROVEMENT OF THE QUALITY OF LIFE IN PATIENTS WITH OVERWEIGHT AND OBESITY Eneva V., I. Koleva

56	NEUROREHABILITATION IN NEUROSURGERY: ALGORITHMS AND BIOETHICAL ISSUES Koleva I., R. Yoshinov, B. Yoshinov
56	SHROTH THERAPY IN ADULTS WITH IDIOPATHIC SCOLIOSIS AND KYPHOSIS Madzharova R., M. Krastanova, I. Stoilova
POSTERS	
57	REHABILITATION PROGRAM FOR ANKLE JOINT CONTRACTURE COMPLICATED WITH COMPLEX REGIONAL PAIN SYNDROME (Clinical case) Drumev A., S. Gigov, D. Vacheva, E. Vasilev
58	MEDICOSOCIAL REHABILITATION – A FACTOR FOR IMPROVING THE QUALITY OF LIFE IN PATIENTS WITH DISORDERED LOCOMOTION Drumev A., D. Vacheva, I. Petkova, R. Petrov
HEALTH TECHNOLOGY ASSESSMENT, DIGITAL HEALTH AND TELEMEDICINE, e-HEALTH	
ORAL PRESENTATIONS	
59	HEALTH TECHNOLOGY ASSESSMENT OF DIGITAL HEALTH TOOLS - CHARACTERISTICS AND CHALLENGES IN BULGARIA Veleva N.
59	KEY DIGITAL HEALTH COMPETENCES FOR PHARMACISTS IN BULGARIA Veleva N., H. Lebanova, Sv. Stoev
60	APPLICATIONS OF COST ANALYSIS IN ECONOMIC EVALUATIONS OF HEALTH CARE TECHNOLOGIES Petkova-Georgieva S., S. Bogoslovov
60	ONLINE NETWORKS FOR MEDICAL PROFESSIONALS - ANALYSIS OF BENEFITS AND OPPORTUNITIES Jekova V., A. Vodenicharova
61	PATIENT ENGAGEMENT WITH THE HEALTH ESTABLISHMENT BRAND AS AN EMOTIONALLY BASED RELATIONSHIP Jekova V.
61	LEGAL FRAMEWORK, MODERN STRATEGIES FOR THE PREVENTION AND TREATMENT OF THE DISEASE MALARIA AND PROBLEMS RELATED TO THE PROVISION OF DRUG PRODUCTS FOR THE DISEASE IN BULGARIA A. Zlatanov, Yanakieva A., Mutafova I.
DISASTER MEDICINE, ENVIRONMENT AND HEALTH (INCL. OCCUPATIONAL MEDICINE, HIGEEEN OF YOUTH)	
ORAL PRESENTATIONS	
62	HEALTHCARE FACILITIES' VULNERABILITY DURING EARTHQUAKES Georgiev Y., N. Radeva, H. Romanova
63	TRAUMATIC INJURIES AND LONG-TERM HEALTH EFFECTS OF EARTHQUAKES AND MEASURES TO REDUCE NEGATIVE IMPACTS ON HUMAN HEALTH Romanova H., G. Edzhabi, N. Radeva
63	ASSESSMENT OF GROUND WATER SOURCES FOR SMALL SETTLEMENTS IN THE PLEVEN REGION WITH A VIEW TO ENSURING STANDARD DRINKING WATER ACCORDING TO THE NITRATE INDICATOR Bankova E., K. Vasilev, V. Birdanova, Tsv. Vitkova, D. Zlatanova, I. Traykov
64	PREVALENCE OF MUSCULOSKELETAL DISORDERS AMONG HEALTHCARE WORKERS Hristova L., Y. Prodanova, T. Kundurzhiev
65	PSYCHOSOCIAL FACTORS AND WORK MOTIVATION AMONG EMERGENCY MEDICAL WORKERS Samuneva-Zhelyabova M., R. Markova
65	COMPARISON OF WORKING CONDITIONS IN HYBRID AND PRESENT FORM Markova R., M. Samuneva-Zhelyabova

66	AWARENESS OF DENTAL MEDICINE STUDENTS FROM MU-VARNA REGARDING HAND DISINFECTION Kirilova M., E. Ivanova, M. Kolarova, D. Zhekova, Ts. Paunov
66	MOTIVATION FOR VACCINATION AGAINST COVID-19 IN BULGARIA Rohova M., N. Mihaylov, R. Pancheva, Ts. Paunov, N. Radeva, S. Hadzhieva, R. Chamova, E. Ivanova, M. Kolarova
POSTERS	
67	THE ROLE OF OCCUPATIONAL HEALTH SERVICES IN THE COMPREHENSIVE CARE OF HEALTH OF WORKING POPULATION Tyutyundzhiev S., K. Stoinova, S. Georgieva
68	THERAPEUTIC APPROACHES FOR OCCUPATIONAL INJURIES OF THE PERIPHERAL NERVOUS SYSTEM IN MODERN FORMS OF WORK Stoilova I., G. Dimitrov, R. Madzharova, M. Krastanova
68	CURRENT HEALTH PROBLEMS OF WORKERS IN THE PRODUCTION OF BUILDING MATERIALS AND PRODUCTS Stoilova I., P. Kostadinova, M. Krastanova
69	THE INFLUENCE OF COVID-19 ON THE MENTAL HEALTH OF STUDENTS FROM MU – VARNA Panteleeva M., E. Ivanova, R. Chamova
69	EARTHQUAKE – CHARACTERISTICS OF THE GENERAL AND MEDICAL CONDITION Slavova V., E. Birnikova, V. Ivanov
HEALTH POLICY AND MANAGEMENT	
ORAL PRESENTATIONS	
70	BULGARIAN CITIZENS' SATISFACTION WITH THE QUALITY OF HEALTH CARE Nikolova V.
71	EVALUATION OF THE EFFICIENCY INDICATORS OF THE BULGARIAN HEALTH SYSTEM Koeva-Dimitrova L., E. Atanasova
71	FORMS OF RECREATION IN THE CONTEXT OF PUBLIC HEALTH Karadzhova Z.
72	PERCEPTIONS OF BULGARIAN PATIENTS ABOUT THE RESPONSIVENESS OF THE HEALTHCARE SYSTEM Mihaylov N.
72	UNIFICATION OF THE PUBLIC HEALTH INSTITUTIONS IN THE SOUTH-EAST REGION OF THE REPUBLIC OF NORTH MACEDONIA IN ONE LEGAL ENTITY AND INTRODUCTION OF A PUBLIC-PRIVATE PARTNERSHIP AS A MANAGEMENT MODEL OF THE NEW HEALTH INSTITUTION Janev G., M. Miceva
73	THE RIGHT TO CHOOSE SOCIAL HEALTH INSURANCE FUND. EUROPEAN STATE EXPERIENCE Kaludov K., A. Dimova
74	REDUCED VAT RATES ON MEDICINAL PRODUCTS - POTENTIAL EFFECTS OF THEIR IMPLEMENTATION IN BULGARIA Koeva-Dimitrova L., M. Minev
74	MATERIALS BALANCE MANAGEMENT OF THE INPATIENT CARE PROVIDERS Atanasov N.
75	OUTPATIENT HEALTH SERVICES UTILIZATION IN BULGARIA Panayotova S.

POSTERS	
76	IS BULGARIAN HEALTH CARE IN SMALL TOWNS AFFORDABLE AND HIGH-QUALITY? Ivanova A.
76	THE MIDWIFERY PROFESSION IN BULGARIA – CONTEMPORARY TENDENCIES Gospodinova P., G. Chamova, Sv. Dimitrova, P. Vracheva, B. Parashkevova
STUDENT’S SECTION	
ORAL PRESENTATIONS	
77	HEALTH EFFECTS OF GLOBALIZATION Georgieva S.1, B. Asenova ² , L. Filipova ³
78	BURDEN OF CANCER IN BULGARIA AND THE EUROPEAN UNION – A COMPARATIVE ANALYSIS Georgieva R., A. Georgieva, M. Kamburova
78	AIR POLLUTION IMPACT ON MORTALITY IN ROMANIA Fragkiski-Ioanna S., A. Velkova
79	ATTITUDE TOWARDS THE EDUCATIONAL PROCESS OF STUDENTS FROM THE PROFESSIONAL FIELDS OF “PUBLIC HEALTH” AND “HEALTH CARE” Radionova Z., V. Birdanova, P. Bakardzhiev
80	EXERCISE REHABILITATION TRAINING IN PATIENTS WITH FIRST-DEGREE ARTERIAL HYPERTENSION Magova G., T. Megova
80	KINESITHERAPY IN PATIENTS WITH VARICOSE VEINS Magova G., T. Megova
81	MEDICAL REHABILITATION AND OCCUPATIONAL THERAPY FOR INJURIES AND DISEASES OF THE LOWER LIMBS Getova V., N. Mihailova
81	MEDICAL REHABILITATION AND OCCUPATIONAL THERAPY FOR CONGENITAL ANOMALIES OF THE UPPER LIMB - POLYDACTYLY AND SYNDACTYLY Getova V., N. Mihailova
82	POSSIBILITIES OF HOME REHABILITATION IN A PATIENT WITH POLYTRAUMA - EVALUATION OF EFFECTIVENESS Hristov G., L. Toteva
82	ANALYSIS OF THE KNOWLEDGE OF THE STUDENTS OF THE MIDWIFE SPECIALTY OF MEDICAL UNIVERSITY PLEVEN REGARDING HPV AND ITS ASSOCIATED DISEASES Stoyanova E., M. Kamburova, E. Mitkova, V. Rangelova
83	ADVANCED BREAST CANCER - CHALLENGES FOR NURSING HEALTH CARE. CASE SERIES Georgieva I., P. Gergova, S. Lishkovska, S. Chabrakova, D. Dimitrov, M. Karamanliev, I. Petrova
POSTERS	
83	REGIONAL HEALTH INEQUALITIES IN BULGARIA AND COVID-19 Ivanova B., D. Tsanova, E. Mineva-Dimitrova
84	ANTENATAL CARE AMONG AT-RISK POPULATIONS Ivanova V.1, E. Biserova ¹ , M. Milanova ² , R. Vasileva ³ , A. Georgiev
85	ANALYTICAL MEASUREMENTS FOR THE PURPOSES OF APPLIED DIETETICS Ivanova A., Tsv. Vitkova, V. Birdanova, I. Zhivkova, Ts. Kunova
85	DOES TELEPHARMACY HAVE A PLACE IN BULGARIA? Shopov A., A. Mihaylova, A. Kashaykova, A. Armenkova–Todorova, M. Semerdzhieva
86	ON VOLUNTEERING AS AN INTERNAL NEED: SHARING ONE’S OWN EXPERIENCE Atanasov E.

PLENARY LECTURES





STRATEGIC MANAGEMENT OF THE COMPLEX ONCOLOGY CENTER - BURGAS IN THE NATIONAL AND REGIONAL ONCOLOGY CARE

Hristo Bozov^{1,2}

¹ *Medical Faculty, Prof. Assen Zlatarov University - Burgas*

² *Complex Oncology Center - Burgas*

Corresponding author:

Hristo Bozov

hr_bozov@yahoo.com

Introduction

The strategic management of Complex Oncology Center-Burgas (COC-Burgas) is related to making strategic decisions and requires planning, organizing, leading and controlling strategic actions to achieve strategic goals. In the conditions of a market mechanism, it is important to determine the place of the medical institution in the market of hospital services at the regional and national level.

Aim

The purpose of the study is to analyze the qualified hospital oncology care provided at COC-Burgas and to compare it with the oncology treatment in the country.

Material and methods

A global analysis of all medical institutions in the country for the active treatment of patients with oncological diseases and of the activity of COC-Burgas for the period 2017 - 2022 was carried out.

Results

Through a SWOT analysis, strengths and weaknesses, opportunities, threats and risks for COC-Burgas have been outlined. The main determinants of the strategic management of the hospital are presented - medical, educational, public, preventive activities, new activities and perspectives. Basic parameters regarding the activity of oncology treatment facilities in the country and of COC-Burgas are summarized, analyzed and visualized. The educational activity, the accreditation of the medical facility received on 27.04.2023 and the strategic goals are presented.

Conclusions

The aspiration for highly competent and principled management of COC-Burgas, optimization of the structure of the medical facility, introduction of new specialties and equipment, new building fund and the increase of the qualification of the staff with the application of constant control and evaluation of the diverse activity has been proven.

Key words: *Strategic management, Complex Oncology Center-Burgas, SWOT analysis, Oncological treatment, Trends*



MUNICIPALITIES' POLICIES FOR IMPROVING THE HEALTH AND WELL-BEING OF CITIZENS

Paulina Kirova

Municipality Pleven, Secretary

Corresponding author:
Paulina Kirova
p.kirova@pleven.bg

Introduction

The municipality is the main administrative-territorial unit in which local self-government is carried out. Citizens participate in the management of the municipality both through their elected bodies and directly through a referendum and a general meeting of the population.

Aim

The purpose of the study is to present a good municipal practices and projects for improving the health of the population in them.

Material and methods

The National Association of Municipalities in the Republic of Bulgaria conducted a survey among the municipalities - owners of municipal medical facilities, on the basis of which an analysis was prepared. Data on the financial status, disclosed structures and personnel were obtained from 72 municipalities for a total of 93 municipal medical facilities for hospital care (out of a total of 122). Analysis of child and school health care in the Republic of Bulgaria was made.

Results

The analysis formulates several important priorities for the long-term vision for the development of municipal healthcare. The largest number of crèches and crèche groups is functioning on the territory of the South-Western region in Bulgaria, with places in them being 35% of the total number for the whole country. The area is leading, as Sofia-city is located in it.

The largest number of health offices were created in social services - 200 units, 36 units. were revealed in integrated residential care health and social services for more than 20 consumers and only three were in sheltered services.

Conclusions

A discussing the necessity and possibility of reorienting the municipal health system towards the prevention and prevention of socially significant diseases, as well as providing long-term treatment for vulnerable population groups is required.

Key words: *health care, well-being, municipality, social services*



HEALTH PROMOTING UNIVERSITIES - DEVELOPMENT OF THE INITIATIVE AND POTENTIAL FOR ITS IMPLEMENTATION IN BULGARIA

Petya Boncheva¹

¹*Medical University “Prof. dr. Paraskev Stoyanov” – Varna*

Corresponding author:
Petya Boncheva
boncheva.petia@gmail.com

Introduction

Health promoting universities (HPU) are recognized as effective settings for improving health. The initiative is spread globally through networks of HPUs. It is grounded in the health promotion theory but has developed its own strategic documents as The Okanagan Charter, 2015.

Aim

To popularize the HPU initiative and to stimulate its official acceptance in the Bulgarian higher education institutions, through a self-assessment process of a concrete Bulgarian university.

Methods

A review of the scientific literature on the development of the HPU initiative, its strategic documents and tools for HPU evaluation was carried out. An internationally accepted HPU Self-Review Tool (SRT) was found and culturally adapted in Bulgarian language through a standardized methodology. The Bulgarian version of the SRT was applied in an initial assessment process with a cross-sectional design at the MU-Varna.

Results

A total of 673 respondents participated in the cross-sectional survey: 570 students, 77 lecturers, 21 staff, 2 representatives of the academic management and 3 from the student council. Four of the five groups of the HPU criteria were met to a substantial degree - above 80% with the exception of the area of institutional commitment and nutrition - achieved to a moderate degree of 67%. The evaluation defined the university as an “emerging” HPU - without official adoption of the initiative, but with activities that meet the HPU criteria.

Conclusions

The Bulgarian universities could initiate the self-assessment process of HP activities which can stimulate the construction of a Bulgarian HPU network.

Key words: *Health promoting universities & colleges, Self-Review Tool, health promotion, healthy settings*

SOCIAL MEDICINE AND HEALTH PROMOTION

ORAL PRESENTATIONS

INCREASING THE SCIENTIFIC POTENTIAL OF THE MEDICAL UNIVERSITY - PLEVEN THROUGH THE IMPLEMENTATION OF A STRATEGIC RESEARCH AND INNOVATION PROGRAM FOR DEVELOPMENT

Kamburova M.¹, D. Tsanova¹, H. Dochev²

¹*Medical University - Pleven, Faculty of Public Health, Department of Social Medicine and Health Management*

²*Medical University - Pleven, College of Medicine, Department of Social and Pharmaceutical Activities*

Corresponding author:

Mariela Kamburova
mariela_kamburova@mu-pleven.bg

Introduction

In 2022, the Ministry of Education and Science in Bulgaria initiated a call for projects for establishment of the Strategic Research and Innovation Program for Development (SRIPD), which should be implemented in the period 2023-2026.

The aim is, by piloting a new model, to increase the scientific potential of the Medical University-Pleven as a research university by: 1. Achieving a high level of scientific and applied research focused on innovation; 2. Implements a policy to ensure high qualification and effective career development of young scientists; 3. Integrate research results into business.

Material and methods

Electronic brachytherapy; translational oncology; Digital tools for rational medical use in vulnerable patients; Innovative bioengineering approaches using stem cell technology and blood proteome analysis; Artificial Intelligence in Gynaecology; Incorporating pharmacogenomics into clinical practice.

Results and discussion

About 1,200 patients will be included in SRIPD for the period of 3.5 years. The quality of life of affected by different types of cancer, leading causes of preventable mortality, will be assessed. A prototype as a digital tool for rational medicinal use will be created. New technologies based on stem cells and extracellular matrix will be developed for use in regenerative medicine with potential for innovation. The feasibility of an AI-based algorithm for analysing colposcopy images of precancerous changes in the cervix uteri will be determined.

Conclusion

The establishment of SRIPD in Medical University-Pleven support sustainable development of a modern infrastructure for scientific excellence with practical applications and technology transfer improving population health.

Key words: *strategic research and innovation development program, scientific potential, research university, innovation*

THE “ONE HEALTH” PARADIGM - UNIFIED CARE FOR THE HEALTH OF PEOPLE, ANIMALS AND PLANTS. SUCCESSFUL PROFESSIONAL PRACTICES AND ACADEMIC UPGRADING

Ivanov D., D. Vankova, P. Boncheva, Ts. Paunov

Medical University - Varna, Faculty of Public Health, Department of Social Medicine and Health Care Organization

Corresponding author:

Dragomir Ivanov
dr.ivanov@healthpoint.bg

Introduction

One Health (OH) is a planetary initiative bringing together the health of humans, domestic and wild animals, plants and the environment (including ecosystems). OH offers integrated approaches aiming at a sustainable balance and optimizing the health of all living organisms.

OH is a little-known concept in our country, and

more effective coordination between the various institutions is needed.

The purpose of the exhibition is to present the first research steps of a doctoral project on the topic of Infection Prevention and Control (IPC) - public health challenges and priority solutions through the One Health approach”, launched at the Medical University - Varna. The knowledge, attitudes and practices of veterinary and humane health professionals will be explored and the humane and veterinary health systems and their coordination in the EC context will be explored to identify vulnerabilities and propose sustainable strategies.

Material and methods

A mixed-method design was followed through quantitative-surveys and qualitative semi-structured interviews.

Successful professional practices for academic upgrading:

At this stage, the team’s experience in the field of Public Health and IPC is shared. The Bulgarian Public Health is based on stable traditions, but the challenges of the century require more and more comprehensive solutions, such as those of the OH.

Conclusions

The looming danger of an avalanche increase in AMR with a horizon of 2050 inevitably exceeds the need for good clinical care alone. The OH initiative offers sustainable strategies.

Key words: *Infection prevention and control (IPC), One Health (HE), health literacy, AMR, holistic model*

COMPARATIVE ANALYSIS OF INFANT MORTALITY IN THE EUROPEAN UNION AND BULGARIA

Chifligarska A.¹, E. Mineva-Dimitrova², M. Kamburova²

¹*Medical University - Pleven, Faculty of Health Care, Department of Surgical Nursing*

²*Medical University - Pleven, Faculty of Public Health, Department of Social Medicine and Health Management*

Corresponding author:

Anelija Chifligarska
anelijach@mail.bg

Introduction

Infant mortality is an informative indicator for assessing public health, reflecting the socio-economic and cultural level of the population, the organization of maternal and child health care in a given country.

The purpose of the report is a comparative analysis of infant mortality in Bulgaria and the member states of the European Union (EU) for a ten-year period (2012-2021).

Material and methods

Secondary data from national and international sources were used: Eurostat, UNICEF, National Center for Public Health and Analysis, National Statistical Institute.

Results and discussion

For the period 2012-2021. there is a decrease in the infant mortality rate in EU member states from 3.8‰ per 1000 live births in 2012 to 3.3‰ in 2020.

Among EU countries, Bulgaria ranks first in terms of infant mortality rate (5.6‰ per 1,000 live births) for 2021. High levels of the indicator were registered in Romania (5.2‰), Slovakia (4.9‰), Malta and Poland with coefficients of 3.9‰ respectively. The lowest level was registered in Slovenia, Finland and Sweden with a coefficient of 1.8‰.

For the considered period in Bulgaria, the downward trend in child mortality continues, and in 2020, the lowest level in demographic statistics was recorded - 5.1‰.

Leading causes of child mortality in Bulgaria are: some conditions in the perinatal period; congenital anomalies and diseases of the respiratory system.

Conclusion

A reduction in child mortality rates in Bulgaria can be achieved by improving the care of pregnant women and children in outpatient care, increasing the level of awareness of parents about raising children and timely seeking health care.

Key words: *child mortality, European Union, Bulgaria*

EVIDENCE-BASED POLICIES FOR IMPROVED HEALTH LITERACY

Petrova-Geretto E., A. Yanakieva, A. Vodenicharova

Medical University - Sofia, Faculty of Public Health "Prof. Dr. Tzekomir Vodenicharov, DSc"

Corresponding author:

Elisaveta Petrova-Geretto
e.geretto@foz.mu-sofia.bg

Background

The Health Literacy Survey-2019 (HLS19) Consortium conducted an extensive comparative survey in 17 European countries, revealing that while health literacy levels have increased in comparison to the 2011 survey among nine participating countries, there remains significant room for improvement. In Bulgaria, 36% of the population has poor or unsatisfactory health literacy, resulting in significant barriers to addressing health-related issues and impacting quality of life. Health literacy is closely associated with social determinants of health, underscoring the importance of addressing this issue from a broad policy perspective.

The purpose of the project is to analyse available literature, draft and test questionnaires, analyse results in order to gain better understanding of the health literacy needs of Bulgarian population and to better inform public health policies and implement targeted evidence based interventions. Improved health literacy will lead to more effective and efficient healthcare utilization contributing to better patient outcomes and optimal use of health and medical resources.

Methods

The first phase of the survey is focused on literature review of previous HL surveys and recommendations, drafting and testing questionnaires and defining respondents target groups. Sample of 1000 respondents in Bulgaria were stratified by age, gender, and residency according to data of 2010 Bulgarian census.

Conclusion

Health literacy is essential for building a healthy, equitable society and promoting social justice. It should be prioritized at the national level, and adequate funding should be allocated for

developing and implementing evidence-based health literacy strategies and designing targeted interventions for improving health literacy at the individual, societal, and organizational levels.

Key words: health literacy, knowledge gap, human flourishing, evidence-based policies, HLS19 survey

DISPENSARY MONITORING IN PRIMARY HEALTH CARE

Dimitrov D.

Medical University - Pleven, Faculty of Public Health, Department of Social Medicine and Health Management

Corresponding author:

Dimitar Dimitrov
drdimpdim@yahoo.com

Introduction

Dispensary monitoring in primary health care is the follow-up of chronic diseases, some of which are socially significant. The following ICD diagnoses are included in the list of the dispensary report: I10, I11.0, I11.9 for hypertension, E10 and E11- respectively DM with/without complications, I69 consequences of cerebrovascular disease, most often I69.3 and I69.8, E03.8, I80.0. Preventive examinations and dispensary surveillance are voluntary and are regulated in Regulation No. 8/3.11.2016.

The study aims to analyze and differentiate the problems in the application of ICD I10 - Essential hypertension and I11.9 - Hypertensive heart disease without congestive heart failure in the dispensation of hypertension.

Results

For each ICD diagnosis there is a recommended model for the periodicity of examinations, necessary examinations and consultations with a specialist. Clinical and extra-clinical indicators of a seventy-year-old female patient and the socio-economic factors associated with the clinical condition, diagnostic and consultative problems and the role of the doctor-patient relationship were analysed. There was found to be a difference in reimbursement of some medications, limitation of consultations and investigations in the two diagnoses compared.

The final outcome was refusal of dispensary observation under ICD I11.9 and agreement to dispensary observation under ICD I10 due to full coverage of the cost of one medication by the NHS.

Conclusion

Refusal of observation will lead to worsening clinical condition, reduced quality of life in the future and possible premature death.

Key words: *dispensary monitoring, hypertension, International Classification of Diseases*

SPECIALIST OUTPATIENT CARE SITUATION ANALYSIS

Pavlova G.^{1,2}

¹*Medical University - Sofia, Faculty of Public Health "Prof. Dr. Tzekomir Vodenicharov, DSc"*

²*Medical Centre V "St. Ekaterina", Varna*

Corresponding author:

Galinka Pavlova
doc.gpavlova@gmail.com

Introduction

The activity of the specialist outpatient care facilities is a function of a number of factors, the underlying determinants being the regulatory framework, the organizational functionality, the staffing, and the financial resources. The development of this stage of healthcare will reduce the number of inpatient admissions and the expenditure on inpatient treatment respectively, and will ensure better access to a timely quality outpatient care for the population.

The purpose of this paper is to study the situation of the specialist outpatient care, to make analysis of the causes and to frame recommendations for promoting positive changes.

Material and methods

Documentary and sociological methods were used. Analysis was made of a spot survey among 63 managers of specialist outpatient care facilities conducted within the period December 2022 – January 2023.

Results

The regulatory and financial deficits that provide for the activity of the specialist outpatient care facilities are the main reason for the challenges

they face – the outdated equipment being used, the poor infrastructure, the insufficient staffing and the irregular allocation of human resources, as well as the rates of pay that are inconsistent with the qualification and responsibility of the medical profession. Working under conditions of restrictive regulatory standards and underestimated funding of the activities slows down the growth of the specialist outpatient care. Conclusion: The progress toward a more effective and better-quality healthcare is slow and unsatisfactory. The rate of inpatient admissions remains continuously high, which is partly driven by the underdevelopment and insufficient funding of the prevention and the overall specialist outpatient care activity.

Conclusion

The efforts towards reconstruction of the model geared towards inpatient care for provision of health services, require that the activities performed in the specialist outpatient care facilities are given priority through changes in the regulatory framework and significant increase in public funds.

Key words: *specialist outpatient care, effectiveness*

ANALYSIS OF THE HEALTH CONDITION OF THE EMPLOYEES IN THE MIA OF NORTH MACEDONIA

Yanev G.¹, **A. Agovska**²

¹*Polyclinic Eli-Medica, Strumica, North Macedonia*

²*Medical University-Sofia, Faculty of Public Health "Prof. Dr. Ts. Vodenicharov, DSc", Department of Hygiene, Medical Ecology and Nutrition,*

Corresponding author:

Georgi Janev
dr.gjorgi.janev@poliklinikaelimedika.mk

The purpose of the present study is to analyze and assess the health status of employees in the Ministry of Internal Affairs in the Republic of North Macedonia.

Material and Methods

Periodic medical examinations were carried out (in the period 01/2019 - 02/2023) employees of

the Ministry of Internal Affairs in the Republic of North Macedonia, according to the current legislation of the RSM - Law on Health and Safety at Work (2007) and Ordinance on the types, manner and volume of periodic medical examinations of workers (2013).

Results

The preventive medical examinations carried out include: history of current and past diseases; family burden for cardiovascular and endocrine diseases; internal examination, ECG, BMI, laboratory tests: PKK, blood sugar, lipid profile; functional studies: spirometry, audiometry.

The analysis of the health status of the examined workers was carried out according to Regulation 3 on the activity of STM in the Republic of Belarus (2008), according to the following indicators: 1) total number of workers subject to preventive medical examinations and number of workers covered by such; 2) chronic diseases among workers - in general and by ontologies; 3) number of newly discovered diseases during preventive examinations - in general and by neologies.

Conclusion

The results of the conducted medical examinations and the analysis of the health status of the examined persons are a basis for developing recommendations to the employer and taking preventive measures to protect the health and working capacity of the employees of the Ministry of Internal Affairs of the Republic of North Macedonia.

Key words: *health status, preventive medical examinations, workers*

QUATERNARY PREVENTION OF ORAL DISEASES - CHALLENGES AND INTERNATIONAL EXPERIENCE

Bakhova A., N. Usheva

Medical University - Varna, Faculty of Public Health, Department of Social Medicine and Health Care Organisation

Corresponding author:

Natalya Usheva
nataly_usheva@hotmail.com

Introduction

Originating from the late 20th century, the concept of quaternary prevention has been derived from the traditional perception of prophylactic activities at different levels and its aim is to prevent excessive curative interventions in dental treatment for various reasons.

Aim

To identify the types, causes and approaches to prevent overtreatment in dentistry as part of quaternary prevention.

Material and Methods

A systematic review of 30 scientific publications in international journals and internet resources was conducted for the period 2000-2023 on the types, causes and approaches to prevent overtreatment in dental practice.

Results

Aesthetic dentistry is most affected by overtreatment in dentistry, including non-urgent placement of veneers, denture constructions on natural teeth, whitening and others. The pressure from dentists is mainly due to financial motivation, reputational costs, development of technology and CAD/CAM systems perceived by dentists as minimally invasive methods without being such. The desire for overtreatment by patients is driven by appearance concerns (including body dysmorphic disorder, the impact of social media, targeted advertising, and celebrity appearance.

Prevention of overtreatment includes education about aesthetic norms, training (regular and postgraduate) of dentists for better communication when discussing patient concerns and expectations about dental treatment related to aesthetics, and informing the population about critical perception of information from the Internet.

Conclusion. There is a need to find a balance in the treatment of oral diseases in favor of better oral health as an integral part of overall health.

Key words: *quaternary prophylaxis, overtreatment, aesthetic dentistry, oral health.*

INFLUENCE OF SOME FACTORS ON ADOLESCENT SLEEP HYGIENE

Ivanov I., A. Velkova

Medical University-Sofia, Faculty of Public Health "Prof. Dr. Ts. Vodenicharov, DSc", Department of Social Medicine

Corresponding author:

Angelika Velkova
avelkova@abv.bg

Introduction

Sleep is among the important factors for the health and development of adolescents. Insufficient sleep negatively affects children's physical and mental health and impairs academic performance.

Aim

To determine the frequency of factors affecting sleep hygiene in students between 11 and 20 years old.

Materials and methods

In the period December 2022 - January 2023, 565 students aged 12-19 were interviewed by means of an online survey. A questionnaire with original and adapted to the Bulgarian teenage population scales and questions from international studies was used.

Results

The largest part of adolescents (40.8%) go to bed between 11 pm and midnight when they are at school the next day. Going to bed late is the result of using the phone/Internet before going to bed (32.7%) and less often because of watching TV shows (15.5%). Only 4% of students follow their parents' bedtime instructions. More than half (58.8%) reported that they had difficulty waking up and were not rested in the morning, and had difficulty staying awake during classes. Due to the later bedtime and the time spent on social media, one of four prefers to start classes later - between 10 am and 1 pm.

Conclusion

The use of mobile phones and other electronic devices just before sleep is a major cause of teenagers falling asleep late and negatively affects their performance at school. It is recommended that the formation of lasting behavioral habits for sleep hygiene should be included in the programs for a healthy lifestyle already in the elementary

grades, and that parents insist on sufficient sleep duration for children in the teenage years as well.

Key words: *adolescents, sleep, healthy lifestyle*

AN INTEGRATED MODEL OF MANAGEMENT OF SEXUALLY TRANSMITTED INFECTIONS – A DESCRIPTIVE REVIEW

Gardeva R., J. Marinova, G. Chamova, B. Parashkevova, P. Atanasov

Trakia University - Stara Zagora, Medical Faculty, Department of Social Medicine, Health Management and Disaster medicine

Corresponding author:

Rayna Gardeva
rayna.gardeva@trakia-uni.bg

Introduction

Sexually transmitted infections (STIs) continue to be a significant public health problem with multiple health, socio-ethical and economic dimensions. Access to prevention, diagnosis and treatment of sexually transmitted diseases is a definite prerequisite for the management of these diseases and an indicator of developed public health care. The integrated governance model conceptually brings this access together in the context of existing funding models of modern health systems.

Objective

To present the management models of sexually transmitted infections and outline guidelines adequate for implementing an integrated approach in Bulgarian conditions.

Material and Methods

Descriptive review of scientific literature on the problem.

Results

The overall complex approach to STI patients is based on three main pillars: prevention, therapy and monitoring, which essentially find expression in social commitment to the problem. Challenges to STI management models are: limiting access or refusing to use specialized medical care, necessary to ensure adequacy, continuity and consistency of monitoring

and treatment; aspects of disturb trust in the doctor-patient-family relationship; territorial restrictions; increase in financial costs.

Conclusion

The integrated management model has its vision and application regarding STI prevention, therapy and surveillance. The balance of the health, ethical and financial dimensions of the care of these patients is an important prerequisite for the effective management of these infections.

Key words: *integrated model, management, sexually transmitted infections, review*

DETERMINANTS OF THE INDIVIDUAL DECISION TO VACCINATE AGAINST COVID-19

Tomova-Angelova I., A. Velkova

Medical University - Sofia, Faculty of Public Health „Prof. Dr. Ts. Vodenicharov, DSc“, Department of Social Medicine

Corresponding author:

Angelika Velkova
avelkova@abv.bg

Introduction

WHO identifies vaccine hesitancy as one of the 10 threats to global health (1). In 2021 Bulgaria ranks last in terms of vaccination coverage against COVID-19 (28.9%), among countries with fully secured supplies. These negative statistics requires an examination of the factors influencing the decision to vaccinate and driving the drastic difference between confidence in mandatory and COVID-19 vaccines.

Objective

To analyze the determinants of the individual behavior towards vaccines against COVID-19 by assessing the influence of: information sources, trust in health institutions, complacency related to the SARS-COV-2 virus, as well as attitudes towards other vaccines.

Materials and methods

With a questionnaire of 47 questions, specially developed for the study, a total of 1,738 persons were surveyed, 1,318 of which electronically and 420 - on paper. The data was collected during the peak period of the COVID-19 epidemic (15/11/2021 - 15/01/2022).

Results

Twice higher vaccination coverage against COVID-19 was observed among individuals with prior influenza vaccination, though not influenced by the vaccination status and attitude toward mandatory vaccines. The factor “trust in the scientific community” has a similar positive impact on vaccination against COVID-19. Amid the socio-demographic characteristics, only ethnic origin has an effect on vaccination behavior against COVID-19 – from 20% among Roma to 56% among respondents of “Other ethnic group” (other than Bulgarians, Turks and Roma). Respondents under the age of 20 also have slightly higher vaccination rates - 56%.

Conclusion

Increasing the vaccination coverage in future campaigns for optional vaccination requires knowledge and positive change of the contextual and individual and social group determinants of vaccine hesitancy among the Bulgarian population.

Key words: *determinants, vaccination, COVID-19, Bulgaria*

MEDICO-SOCIAL ASPECTS OF AGING IN THE PLEVEN REGION FOR THE PERIOD 2011-2021

Dyulgerova S.¹, M. Kamburova², E. Mineva-Dimitrova²

¹ *Medical University - Pleven, Faculty of Health Care, Department of Surgical Nursing*

² *Medical University - Pleven, Faculty of Public Health, Department of Social Medicine and Health Management*

Corresponding author:

Stela Dyulgerova
steladyulgerova@abv.bg

Introduction

All over the world, the relative and absolute number of elderly and old people is increasing rapidly. According to rates of depopulation and aging, Bulgaria is among the ten nations most threatened by rapid depopulation in the world. In the present analysis, we compare the aging of the population in the Pleven region with the average

values for the country.

Aim

To outline and analyze the general medico-social aspects of the population aging in the region of Pleven for the period 2011-2021.

Material and methods

Secondary data from the following sources were used: National Statistical Reference (2022); Population Reference Bureau (2020); UNFPA (2020). World Population Ageing 2019; National Strategy for Demographic Development of the Republic of Bulgaria (2006-2020); Eurostat.

Results and discussion

The population in region of Pleven is aging and decreasing annually. According to data from the demographic statistics, the population of the Pleven region at the end of 2021 is 228,300 people. Compared to the previous year, the population decreased by 5,138 people. The age structure of the population for the entire region is of a regressive type (4, 5). During the observed ten-year period, Pleven region lost 16.2% of its population. In the analysed period 2011-2021, the negative trends in the change in the age structure of the population in the described region are deepening. The aging of the population in the Pleven region is happening faster compared to the aging of the country as a whole.

Conclusion

The aging of the population and the forecasts for its development pose important and unavoidable problems of a different nature to the society, among which the medical and social ones are in the first place.

Key words: *aging, depopulation, medico-social aspects, public health*

STRUCTURE AND PROBLEMS OF MEDICAL AND SOCIAL REHABILITATION OF PATIENTS WITH ACUTE CORONARY SYNDROMES OR AFTER HEART SURGERY IN BULGARIA

Mateev H.^{1,2}, D. Sidjimova²

¹ *National Heart Hospital, Sofia*

² *Medical University - Sofia, Faculty of*

Public Health “Prof. Dr. Ts. Vodenicharov, DSc”, Department of Health Policy and Management

Corresponding author:

Hristo Mateev

hristo.mateev@gmail.com

Introduction

Ischemic heart disease is a major cause of morbidity and mortality worldwide, as well as one of the main causes of disability and reduced quality of life.

The purpose of this article is to analyze the current state of medical and social rehabilitation in patients with acute coronary syndrome and after heart surgery in Bulgaria.

Material and methods

On the basis of the available limited public data (documentary method), an attempt was made to describe the organizational activity for social-medical rehabilitation in relation to cardiovascular diseases in Bulgaria, as well as the sample volumes of the activity.

To assess the current state of the problem in the country, data for 2019 can be presented - the last year with available information and before the COVID pandemic, which brings significant changes to all medical and social activities.

The study included data from the National Health Insurance Fund, obtained after an official request from the authors.

Results

With a total number of interventionally treated patients with acute coronary syndromes, about 32,045 new cases and 5,885 operated patients, highly specialized rehabilitation activity was carried out in 890 (2.78%), respectively 245 (4.16%) cases. Rehabilitation activity in sanatoriums was carried out to no more than 1,836 out of 44,885 patients – 4.09%.

Conclusion: The volume and organization of activities for medical and social rehabilitation of cardiovascular diseases in Bulgaria are insufficient to compensate for the burden and consequences of the disease on individuals and society.

Key words: *medical and social rehabilitation, cardiovascular diseases, disability, quality of life*

SMOKING PREVALENCE AMONG STUDENTS OF HEALTH SPECIALTIES IN BULGARIA

Boncheva P.

*Medical University - Varna, Faculty
of Public Health, Department of Social
Medicine and Health Care Organisation*

Corresponding author:

Petya Boncheva
Petya.Boncheva@mu-varna.bg

Background

Smoking has long been a serious, but neglected public health problem in Bulgaria. It is widespread among students globally. As students from health specialties will be the future health professionals with key responsibilities for smoking prevention, it is important to know their attitudes and behaviors related to smoking.

Aim

To determine the smoking prevalence and smoking related behavior among students of health specialties in Bulgaria.

Materials and Methods

A cross-sectional online survey was conducted among Bulgarian-speaking students from 17 health specialties at the Medical University-Varna. Data for smoking status, age of onset, average number of cigarettes smoked per day, attitudes towards quitting, health awareness, mean academic achievements, etc. was collected and analysed. The association between smoking behavior and other variables was tested with ORs or chi-square test at the 0.05 level of significance.

Results

The 10% sample of Bulgarian-speaking students included 570 students from 17 specialties at the university. A third (35.5%) of students were smokers, regardless of gender ($p=0.420$). Smoking prevalence was lowest among medical students ($p=0.002$). Smoking was associated with alcohol use ($p=0.033$), unhealthy eating habits ($p=0.026$) and lower academic achievements ($p=0.028$).

Conclusions

The prevalence of smoking among students from health specialties in Bulgaria continues to be much higher than levels reported in international studies. Clustering of adverse aspects of health-

related behavior is persistent. There is an urgent need for university policies focused on building health conducive environments, building smoke-free universities actively engaged in health promotion activities.

Key words: tobacco smoking, Bulgarian students, health promotion

MANAGEMENT OF SEXUALLY TRANSMITTED INFECTIONS - CHALLENGES AND PERSPECTIVE. LESSONS FROM THREE CASE STUDIES

**Gardeva R.^{1,2}, J. Marinova¹, G.
Chamova¹, B. Parashkevova¹, A.
Boteva³**

¹ *Trakia University - Stara Zagora,
Medical Faculty, Department of Social
Medicine, Health Management and
Disaster Medicine*

² *Medical Center "Derma Guard", Stara
Zagora*

³ *Hospital "Trakia", Stara Zagora*

Corresponding author:

Rayna Gardeva
rayna.gardeva@trakia-uni.bg

Introduction

According to the World Health Organization, every day 1 million people become infected with sexually transmitted infections, having dramatic effects on health, economic growth and lifestyles worldwide. The overall complex approach to patients with sexually transmitted infections is based on three main pillars: prevention, therapy and monitoring, which essentially find expression in social commitment to the problem.

Goal

Through the presented cases from practice, to discuss the management of sexually transmitted infections in the conditions of the Bulgarian reality and to outline the main challenges in their management.

Material and Methods

1) Review of the literature focusing on STI management; 2) working with the patients documents according to previously prepared questionnaire, from three case studies from

clinical practice—two cases with syphilis and one with chlamydia infection.

Results

The presented case-studies characterize the challenges of managing these diseases in a national perspective: fragmentation of the health network; insufficient coordination of diagnostic, treatment and monitoring activities; STI control at all levels of organization in Bulgarian healthcare. It seems that we forget about the existence and spread of STI in the Bulgarian reality.

Conclusions

The presented material is part of a deep study on the problem, which outlines a definite need for management decisions regarding STI, which allow to achieve the Sustainable Development Goals of the Millennium and the Global health sector strategy on sexually transmitted infections.

Key words: *management, STI, challenges, perspective, case studies*

THE IMPACT OF ORGANISATIONAL FACTORS ON JOB SATISFACTION OF PUBLIC HEALTH INSPECTORS

Tosheva Y., T. Tarpomanova

Medical University – Varna, Medical College, Training sector “Public Health Inspector”

Corresponding author:

Yana Tosheva
qna.tosheva@gmail.com

Background

Public health inspectors (PHI) are civil servants whose activity involves implementing the state health requirements for control of facilities for public use. Organisational factors along with the nature of the job and professional relationships are directly linked to the motivation and job satisfaction.

The aim of this study is to establish the influence of organisational factors on job satisfaction of public health inspectors.

Materials and methods

The study was conducted in 2020-2021 through an anonymous questionnaire among 116 health inspectors working in the Regional Health

Inspectorates in Varna, Russe, Silistra and Yambol. We used descriptive statistical analysis, hypothesis testing methods, correlation analysis and regression analysis. The data were processed with SPSS for Windows 13.0.

Results

A primary factor for high job satisfaction, as defined by PHIs, was the opportunity to have a good work-life balance (64.4%). The other factors associated with high levels of job satisfaction were the working conditions in the organisation (49.5%) and job security (46.7%). Inspectors were not satisfied with the level of pay (48.5%), career growth prospects (47.2%) and training opportunities (45.5%). For almost all indicators, statistically significant differences were observed between inspectors working in mid-size regions and those working in small-size and big-size regional centres.

Conclusion

Studying the impact of some organisational factors on job satisfaction enables forecasting and taking specific steps to increase the motivation and hence the labour efficiency of health inspectors.

Key words: *organisational factors, job satisfaction, public health inspectors*

DISEASE PREVENTION IN WOMEN OF POST-REPRODUCTIVE AGE

Dimitrov Y., A. Velkova

Medical University – Sofia, Faculty of Public Health “Prof. Dr. Ts. Vodenicharov, DSc”, Department of Social Medicine

Corresponding author:

Angelika Velkova
avelkova@abv.bg

Introduction

The post-reproductive age in women is a period of significant health problems such as osteoporosis, cancer, increased risk of cardiovascular diseases, age-related weight gain, high-stress levels, cognitive disorders, etc. Many of those diseases can be identified early and averted through age-appropriate preventive activities.

Objective

To analyze the participation of women of post-

reproductive age in age-specific preventive activities.

Material and methods

A survey was conducted among 445 women over 45 years of age in the territory of the Republic of Bulgaria in the period March 2021 - December 2022. Self-administered questionnaire was applied during a visit to the general practitioner. Questions were asked about the timing of the last examination or screening test for 16 preventive activities.

Results

The average age of the women was 56.63 years, 51.6% had a higher education, and 49.1% rated their health as good. Most of the women (56%) have not consulted a doctor about menopausal changes. Half of the respondents had a mammographic examination in the last two years, and 45% reported an ultrasound examination of the mammary glands. One-third of the women had a Pap smear in the past year, and a similar number underwent a uterine and ovarian ultrasound examination in the same period. The lowest coverage was reported for a fecal occult blood test - 3.2%, HPV test -11%, colonoscopy - 14%, and osteodensitometry - 24.5%.

Conclusions

The results of the study show that despite the increased risk of a number of diseases in the post-reproductive period, women have inadequate participation in preventive activities. Immediate organizational measures are needed to increase coverage with screening programs and regular monitoring of women's health.

Key words: *post-reproductive age, women, prevention, mammography, Pap smear*

REJECTION OF PARENTING AFTER CHILDBIRTH, ETHICAL PROBLEMS. CLINICAL CASE

Kucun F., S. Radeva

Medical University - Varna, Department of Health Care; Hospital "Prof. Dr. D. Stamatov", Neonatal Intensive Care Unit, Varna

Corresponding author:

Fanya Kucun
fani_plami@abv.bg

Introduction

Parenting is a serious problem worldwide. For our country, this process burdens the social system with responsibility for children even at the level of a medical institution. Healthcare professionals play a leading role in recognizing the risk of abandonment.

The study aims to highlight the role of the medical institution in identifying the risk of abandonment and the follow-up measures for referral of such children to special institutions.

Material and Methods

The documents of 56 cases of abandonment in hospital for the period January 2020 - September 2022 were analyzed.

Result and discussion

The Specialists from the medical institution are the first to identify the risk of abandonment and promptly inform the protection authorities to take measures against the newborn and his family. The factors why women are forced to leave a newborn in the hospital are: financial difficulties, serious health problems of the baby, another reason that made the mothers decide to abandon, temporarily or permanently due to the fact that the child was conceived by another mother's relationship, the current cohabitant expressed doubts about paternity or that the father is unknown.

Conclusion

An important part is the identification of the risk, its prevention activities and follow-up measures to ensure the well-being of the child, regardless of the age and development of the child, in consideration of the best interests of the child have both the social workers from the Child Protection Department and the medical staff involved in the care of the mother and the baby.

Keywords: *abandonment, newborn, communication, prevention, responsibility*

POSTERS

BULGARIA AMONG THE TOP 10 EU COUNTRIES CONDUCTING COVID-19 CLINICAL TRIALS

**Benisheva – Dimitrova T., N.
Dzhafer, D. Milkov, D. Dimitrov, V.
Todorova**

Medical University - Sofia, Faculty of Public Health „Prof. Dr. Ts. Vodenicharov, DSc“, Department of Health Policy and Management

Corresponding author:

Veselina Todorova
veselina.todorova@badibg.org

Introduction

The European Union maintains a database of clinical trials that are conducted on the territory of the member states, including information on COVID-19 trials.

Purpose

The current development aims to analyse the EU countries where COVID-19 clinical trials have been conducted for the period 2020 – March 2023.

Material and methods

Numerous COVID-19 clinical trials are being conducted in order to prove the safety and effectiveness of investigational therapies/vaccines before they are approved for use in the EU.

An empirical study in the period 01.12.2019-17.03.2023 in the EU member states is planned, in order to establish the total number of clinical trials performed during the period and how many of them are with the indication of COVID-19.

Results and conclusions

The total number of clinical trials in all EU countries during this time period is (n= 25,180), with only 1% of them (260) being for COVID-19. Bulgaria is among the first 10 countries with 14 (0.055%) COVID-19 clinical trials conducted, completed and ongoing. Leading countries in the field of COVID-19 clinical trials are Spain [n=43), Germany (n=31), France (n=25), Italy (n=24), while for the countries Croatia, Slovenia, Estonia, Cyprus, Luxembourg and Malta there are no reports to have conducted similar tests for

COVID-19. The conduct of similar clinical trials in Bulgaria is proof that there are trained teams that work according to all modern standards of the GCP and can successfully recruit patients.

Key words: *clinical trials, COVID-19, European Union, therapies/vaccines*

HUMAN RESOURCE MANAGEMENT IN PUBLIC HEALTH - PARADIGMS AND COMPONENTS

**Atanasov P., D. Gospodinov, R.
Peycheva, B. Parashkevova**

Trakia University - Stara Zagora, Medical Faculty, Department of Social Medicine, Health Management and Disaster Medicine

Corresponding author:

Boryana Parashkevova
boryana.parashkevova@gmail.com

Health reforms that began in the 1990s were characterized by a focus on structural change, the introduction of market mechanisms and consumer choice, and almost no attempts at change in the field of human resources. They reflect on the management of human resources. dynamic demographic changes. the demographic problem has its visible and invisible measurability. While the visible measurability – physical data, qualification While the visible measurability is clear, the invisible measurability refers to the psyche of the individual, moral, ethical and religious principles.

The protection of individual and public health is a process of continuous updating of knowledge. This is the reason for the great importance of the training of health personnel. On the other hand, it underpins the satisfaction and motivation of health professionals, and among younger people the importance of continuing education and developing skills is increasing. Compared to the accumulated information on the issues of financial and structural changes, that on their impact on human resources and their management is very limited.

Key words: *human resources, continuous education, demographic problems*

SPECIFIC REQUIREMENTS AND CHARACTERISTICS OF CLINICAL TRIALS WITH MEDICAL DEVICES

Petkova P.¹, E. Grigorov², V. Belcheva³, I. Getov⁴

¹ National Centre of Public Health and Analyses, Sofia

² Medical University – Varna, Faculty of Pharmacy

³ Trakia University - Stara Zagora, Medical College

⁴ Medical University – Sofia, Faculty of Pharmacy

Corresponding author:

Evgeni Grigorov
evgeni.grigorov@mu-varna.bg

Aim

The study aims to establish a comprehensive understanding of the specific requirements and characteristics of Clinical Trials with Medical Devices. Medical devices are increasingly being developed and used to diagnose, treat, and prevent diseases and injuries. Conducting clinical trials for medical devices, however, presents unique challenges compared to those for pharmaceuticals.

Materials and methods

The study contains thorough examination of good clinical practice for the design, conduct, recording and reporting of clinical investigations carried out in human subjects to assess the clinical performance or effectiveness and safety of medical devices described in the international standard ISO14155.

Results

Medical device trials go through three phases: pilot/feasibility, which determine preliminary safety and performance data with a small number of subjects with disease or condition (10-30) for several months; pivotal, which determine effectiveness and safety with a larger number of subjects with disease or condition (150-1000) for 1-5 years; and post-approval studies, which collect long-term data and safety for real-world experience and registries. Medical device studies are often more expensive due to the higher cost of the device, insurance, and additional procedure expenses. The most significant

differences between drug and device studies are in the following categories: the application requirements for medical device trials, including risk and class designation, adverse event/side effect (AE/SAE) definitions, reporting, and timelines and device accountability, the concomitant medication requirements and the need for long-term follow-up, which can last more than five years.

Conclusion

Understanding the unique challenges and specific requirements of conducting clinical trials with medical devices is crucial for advancing health technology and improving patient care.

Key words: Clinical Trials, Medical Devices, effectiveness and safety

DIAGNOSIS AND TREATMENT OF PATIENTS WITH ONCOLOGICAL DISEASES. RESEARCH AND ANALYSIS

Bozov H.^{1,2}, E. Sotirova^{3,4}, P. Dobrev^{2,3}, Y. Marincheva Petrova^{1,2}, D. Dinev^{2,3}, E. Stoyanova^{2,3}, I. Kazmukov^{2,3}

¹ Faculty of public health and health care, Prof. Assen Zlatarov University - Burgas

² Oncology Complex Center - Burgas

³ Faculty of public health and health care, Prof. Assen Zlatarov University - Burgas

⁴ University hospital for active treatment - Burgas

Corresponding author:

Evdokia Sotirova
ensotirova@gmail.com

Introduction

The number of newly diagnosed cases of cancer patients in Bulgaria is about 36,000 per year. Currently, the diagnosis of cancer patients is part of the general diagnostic process and is carried out in all medical facilities in our country. Operative treatment is performed in the operative structures of over 200 hospitals for active treatment, including complex oncology centers and private medical facilities.

Aim

The purpose of the present study is to analyze

data related to the movement of patients with oncological diseases in the country and in the Complex Oncology Center-Burgas.

Material and methods

The research was carried out in two directions - a global analysis of all medical facilities in the country for the active treatment of patients with oncological diseases on the one hand and an analysis of the activities of the Complex Oncology Center Burgas. We discussed the main four indicators of "complex treatment" - chemotherapy, targeted therapy, radiation therapy and immunotherapy.

Results

As a result, the main parameters regarding the activity of medical facilities for oncology treatment in the country, the number of medical facilities and patients receiving chemotherapy, radiation treatment, dispensary examinations, patients with palliative care, patients with targeted therapy and immunotherapy. A study was made and these parameters were analyzed for the Comprehensive Oncology Center Burgas.

Conclusions

As a result of the analyses, statistical conclusions and trends regarding the activity of medical institutions for oncological diseases are presented.

The analyzes made provide an opportunity to make forecasts and support management decisions.

Key words: *Oncological diseases, Treatment, Analysis, Trends.*

A SURVEY OF MEDICAL STUDENTS' VIEWS ON HEALTH PROMOTION AND PUBLIC HEALTH ISSUES

Milcheva H., R. Yordanova¹

Trakia University - Stara Zagora, Faculty of Medicine

¹*Trakia University - Stara Zagora, Medical College*

Corresponding author:

Hristina Milcheva
hristina.milcheva@trakia-uni.bg

Introduction

The main promotional activity of medical

specialists in multifunctional teams is raising awareness of health issues and promoting a healthy lifestyle. The development of health programs that increase people's commitment requires the implementation of a complex strategy and a high professional competence.

Aim:

To study the opinion of medical students on some issues of public health and health promotion that closely relate to their future professional activity.

Material and methods

An anonymous online survey, statistical and graphic methods.

Results and discussion

The majority of respondents – 2/3, or 75% (n=60) – show that they care about and are aware of public health. According to the respondents, the main risk factors of modern times are: environmental (91.2%, n=73); stress in everyday life (78.7, n=63); climate change (50%, n=40); negative news (53.7% n=43), harmful habits (6.2%, n=5). They indicated health-enhancing factors: living environment and social contacts (58.7% n=47), favorable climatic conditions (33.7% n=27), strengthening procedures (8.7% n=7). A high proportion of respondents (96.2%) would recommend a healthy lifestyle to patients. Respondents define their role in public health and health promotion as: important – 58.3% n=47; key – (33.7% n=); and 27 leading – 12.5% n=10).

Conclusion

Behavioural risk factors have the greatest impact on health, and the level of social support is the key predictor variable for overall health promotion activities. Because public health is socially determined, its essence and nature require a systemic global approach.

Key words: *public health, risk factors, healthy lifestyle, role*

SEXUAL HEALTH IN TRANSHUMANISTIC PARADIGM

Bostandjiev R., J. Marinova, B. Parashkevova

Trakia University – Stara Zagora, Medical faculty, Department of Social Medicine, Health Management and Disaster Medicine

Corresponding author:

Boryana Parashkevova
boryana.parashkevova@gmail.com

The concept of Sexual health and sexual education is analysed in context of contemporary values and priorities of neoliberal localistic doctrine. Recent provocations of Gender ideology escalate expressions of traditionalistic religious extremism. We are trying to find in our work balance between these two polarities, following principles of humanistic psychology.

Key words: *Sexual health, principles of humanistic psychology*

HEALTH CARE

ORAL PRESENTATION

MOTIVATION OF MIDWIVES FOR CONTINUING EDUCATION, ASSOCIATED WITH CLIMACTERIUM IN WOMEN

Dimitrova A., I. Sokolova, M. Stanoeva

Medical University - Sofia, Faculty of Public Health "Prof. Dr. Ts. Vodenicharov, DSc", Department of Health Care

Corresponding author:

Antoaneta Dimitrova
a.dimitrova@foz.mu-sofia.bg

Summary

The climacteric is a biological stage in the life of women, accompanied by a number of symptomatic manifestations and changes - hormonal, physical, emotional and social, which adversely affect their health in the short and long term. Preserving and optimizing the overall health of women during this period requires serious training in the knowledge of midwives, as part of an interdisciplinary team of different specialists.

The aim of the present study was to investigate the motivation of midwives to participate in additional continuing education related with the climacteric period of women.

Material and methods

Through a direct anonymous survey containing 13 questions, an empirical sociological survey of 212 midwives from the country, working in medical facilities for outpatient and hospital care, was conducted. Statistical methods were used to analyze and present the results.

The results show that in basic education there is insufficient training of midwives for care in the management of the climacteric, they show interest in searching for additional scientific information and motivation for continuing education.

In conclusion, it can be said that continuous improvement of midwives increases the acquisition of experience and professional competences for quality assistance in providing midwifery care in the climacteric transition of women's lives.

Key words: *motivation, midwives, women, climacterium*

MOTIVATION OF HEALTH CARE PROFESSIONALS FOR CHOOSING DEVELOPMENT IN INTENSIVE STRUCTURES

Milikina D.

Medical University - Sofia, Faculty of Public Health „Prof. Dr. Ts. Vodenicharov, DSc“, Department of Health Care

Corresponding author:

Dimitrina Milikina
d.milikina@foz.mu-sofia.bg

Introduction

Demographic changes in our country, as well as in many European countries, cause a shortage of human resources and skills, which makes it difficult to implement efficient and effective health care. Physicians and health care professionals, as well as hospital managers, are the main driving force for ensuring and improving quality in the health care system.

The aim of the report is to study the organization of work in intensive care units, as well as to examine the motivation of nurses regarding their choice to work and develop in them.

Material and method

In this report, a documentary method was used to collect, summarize and analyze information about the work in the intensive structures. Health care professionals were surveyed, and their motivation for development as specialists in these structures was analyzed.

Results

The motivation of health care professionals for choosing a workplace in intensive care is consistent with the philosophy of the nursing profession in its emotional and historical essence, which emphasizes the moral and professional image of the nurse.

Conclusion

The effectiveness and quality of health care are directly dependent on the motivation of the staff, both for work and for increasing their qualifications and developing their competencies in the relevant field.

Key words: *motivation, intensive care structures, nurses,*

ENHANCING THE PROFESSIONAL COMPETENCE OF EDUCATIONAL SPECIALISTS THROUGH TRAINING ON THE HEALTH RISKS OF UNREGULATED NUTRITIONAL SUPPLEMENTS

Petkova-Gueorguieva E.¹, A. Serbezova¹, R. Zlatanova¹, S. Georgiev², H. Lebanova³, V. Getova-Kolarova⁴, A. Mihaylova⁵

¹*Medical University – Sofia, Faculty of public health “Prof. Dr. Ts. Vodenicharov, DSc”, Department of Health policy and management*

²*Medical University – Plovdiv, Faculty of pharmacy, Department of Pharmaceutical Sciences*

³*Medical University – Pleven, Faculty of Pharmacy, Department of Pharmaceutical Sciences and Social Pharmacy*

⁴*Medical University – Sofia, Faculty of Pharmacy, Department Organization and Economics of pharmacy*

⁵*Medical University – Plovdiv, Faculty of Public Health, Department of Health Care Management*

Corresponding author:

Hristina Lebanova
hristina.lebanova@gmail.com

Introduction

In recent years, there has been an increased interest in food supplements (FS). Qualitative and quantitative control by external bodies are not mandatory, unlike the supervision of medicinal products. This is the main reason for the presence of undeclared ingredients found in FS content.

Objective

Training pedagogical specialists about FS and the health risks of their intake among adolescents. Building and developing skills to create/maintain a healthy lifestyle and to adapt to health-promoting behaviour.

Means and methods

Design a brochure “Food Supplements: Truths and Facts”. Its distribution through pedagogical specialists in order to familiarize them with the studies and evaluation of the use of FS, as well as the possible risks of the presence of undeclared ingredients. The information brochure is a joint initiative of the Ministry of Health, the Ministry of Education and Science and the Bulgarian Drug Agency.

Results

A program with UIN: 576600278 was conducted on the topic “Food supplements with undeclared ingredients. Risks.” in schools in the country. Pedagogical specialists were familiarized with the main categories of FS, their effects, goals and results. The risks of buying FS from the Internet and social networks, the effects of taking undeclared ingredients, as well as their impact on a growing organism are discussed.

Conclusion

By participating in the program, teaching staff increase their competence regarding FS, their indications, requirements for them, as well as the risk of containing undeclared ingredients. Trained staff can distribute the online information leaflet to the students and their parents to demonstrate the risks of unregulated FS, available ‘one click away’, what to look out for before taking FS and what are the reliable sources of information.

Key words: *food supplements, training, risk of undeclared ingredients in food supplements*

THE READINESS OF THE MIDWIVES FROM THE TOWN OF PLEVEN FOR INDEPENDENT ACTIVITIES IN THE PREVENTION OF HPV-ASSOCIATED DISEASES

Stoyanova E.¹, M. Kamburova²

¹Medical University - Pleven, Faculty of Health Care, Department of Midwifery

²Medical University - Pleven, Faculty of Public Health, Department of Social Medicine and Health Management

Corresponding author:

Elitsa Stoyanova
evil_eli@abv.bg

Introduction

The midwife is a health care specialist who can perform individual activities arranged in Ordinance No. 1 of February 8, 2011, of the Ministry of Health. According to the Ordinance the midwife can organise structures for health promotion, health prevention, health education etc.

The aim of the following research is to analyze the readiness of the midwives who work in medical institutions for hospital and outpatient obstetric and gynecological care in Pleven, to perform individually activities related to prevention of HPV-associated diseases.

Material and method

A research was conducted during the period February 2020 - May 2022 among 50 midwives who work in a hospital or in outpatient medical facilities for obstetric and gynecological care in Pleven. The direct individual questionnaire was used.

Data processing was performed with the software program product MS Office Excel 2019 and SPSS v.28.

Results

A significant part of the respondents (38,0%) declare that they are theoretically prepared for independent activities in the prevention of the examined group of diseases. 36,0% of the surveyed midwives are practically prepared for independent activities in prevention. The data shows that midwives with work experience of 1 to 10 years (20,0%) are practically more prepared for independent activities in the prevention of

HPV-associated diseases, followed by those with work experience of 11 to 20 years (15,0%). Among the surveyed, 90,0% expressed interest in postgraduate training courses related to midwifery activities in the prevention of HPV-associated diseases.

Conclusion

There is a need to develop and implement a postgraduate training program related to the midwife's independent activities in the prevention of HPV - associated diseases.

Key words: HPV-associated diseases, midwife, prevention

IMPROVING THE QUALITY OF HEALTHCARE THROUGH MANAGEMENT IN THE HOSPITAL INFORMATION SYSTEM

Bogdanova K., D. Milikina, I. Sokolova

Medical University - Sofia, Faculty of Public Health "Prof. Dr. Ts. Vodenicharov, DSc", Department of Health Care

Corresponding author:

Dimitrina Milikina
d.milikina@foz.mu-sofia.bg

Introduction

The primary purpose of health care is to maintain and improve the health of the nation by ensuring the health of every member of society, preventing, treating and limiting the spread of disease and alleviating the suffering of patients. For the achievement of this goal, in all its directions, significant support can be provided by modern information tools and software products. Health care management is a complex and multifaceted activity that includes all human potential considered at a certain level in a self-contained system.

The purpose of this report is to explore the views of healthcare managers on improving the quality of care through the digitization of healthcare management activities.

Material and method

A documentary method was used, and sources of scientific literature were studied, and 30 health care managers working in the "Tsaritsa Ioana -

ISUL” UMBAL, Sofia, were interviewed.

Results

In order to make full use of e-Health services, healthcare professionals must have skills to work in an electronic environment.

Conclusion

The digitization of activities in modern healthcare reflects the development of information technologies and helps to increase the quality and accessibility of medical services.

Key words: *managers, hospital information system, health care*

HEALTH CARE STAFF RETENTION OPPORTUNITIES

Draganova M., M. Saleva

Medical University – Pleven, Faculty of Public Health, Department of Health care management, Medical ethics and Information technologies

Corresponding author:

Makreta Draganova
makreta_99@yahoo.com

Introduction

Human resource management is a serious challenge for today’s healthcare managers. A key factor in the success of an organization is the involvement of the right people, their retention and effective management. PRIDE is a system that contains five rules for staff retention: P (performance) – to create a positive working atmosphere; R (research) – to discover, reward and support the right behavior; I (include) – to involve the people in the company’s activities and to get closer to them; D (development) – to develop the potential skills of the employees; E (evaluation) – to evaluate and measure. The universal nature of the system makes its application also possible in the field of health care.

The **aim** of this study is to analyze adequate opportunities and approaches for staff retention as a key aspect in human resource management according to healthcare professionals.

Material and methods

A content analysis of the coursework of 16 Masters in Health Care Management, developed

during a pre-graduate internship in June 2022, was made. The Excel 2010 program was used for statistical processing and graphical layout of the data.

Results and Discussion

Staff training and development opportunities are a major factor in staff retention according to 81,0%. In the second place, the masters indicated optimization of personnel selection approaches (63,0%).

In the conditions of shortage of staff, the opinion of the existing health care professionals is especially valuable and significant both to deal with the problems and to increase the motivation of the staff.

Key words: *human resources management, staff retention, PRIDE - the system, health care.*

LEVEL OF AWARENESS OF MOTHERS ABOUT THE BENEFITS AND ATTITUDES IN THE PROCESS OF BREASTFEEDING

Traycheva B., T. Veselinova, A. Dimitrova

Medical University - Sofia, Faculty of Public Health “Prof. Dr. Ts. Vodenicharov, DSc”, Department of Health Care

Corresponding author:

Boryana Traycheva
b.simeonova@foz.mu-sofia.bg

Background

Breastfeeding is essential for children’s health. Breast milk is an ideal food for newborns and infants. It provides them with all the necessary energy and nutrients in the first months of life. Breast milk contains antibodies that help protect against common childhood diseases such as diarrhoea and respiratory diseases. The World Health Organisation, the European Commission, the European Society of Paediatric Gastroenterology, Hepatology and Nutrition, the European Food Safety Authority and UNICEF have a single opinion on breastfeeding: starting breastfeeding one hour after birth and exclusively breastfeeding during the first 6 months of life [3,4]. Breastfeeding is part of motherhood and is one of the most natural functions of a woman

after childbirth and requires prior preparation and support to be effective [5].

The aim of this study is to establish the level of awareness of mothers about their benefits and attitudes in the process of breastfeeding.

Material and methods

An anonymous random survey was conducted in 180 mothers in obstetrics and gynecology hospitals on the territory of the town of Plovdiv, Sofia, for the period January-March 2023. Statistical methods for analysis and presentation of the results are used.

The results show unsatisfactory women's health awareness of breastfeeding, as well as insufficient support from medical professionals in overcoming the challenges associated with this process.

In conclusion, it can be said that it is crucial to provide counselling assistance by qualified health professionals to mothers regarding the natural nutrition of their newborns, which will lead to an increase in their knowledge, support and confidence in dealing with breastfeeding.

Key words: *mothers; newborns; lactation; health; support;*

HEALTH CARE FOR PATIENTS WITH CHRONIC KIDNEY FAILURE – A HISTORICAL REVIEW

Vasileva V.¹, S. Georgieva²

¹. *Medical University - Pleven, Faculty of Health care*

². *Medical University - Pleven, Faculty of Public health*

Corresponding author:

Stela Georgieva
georgieva_sl@yahoo.com

Introduction

Social significance of chronic diseases of the excretory system and particularly chronic kidney failure (CKF) have been increasing. Global Burden of Disease Survey over the last three decades shows they have moved from 14th to 8th place, with a trend to become the 5th most common cause of DALYs by the year 2040. This raises the question of optimizing health care for the growing number of CKF patients.

The **aim** of this paper is to provide a historical overview of the development of treatment methods and health care for patients with CKF.

Material and methods

A review and comparative analysis of literary sources on the problem was made.

Results

The treatment and health care of patients with CKF can be considered in two main stages - before and after the implementation of haemodialysis. The question how to clean blood of toxic substances in case of limited functionality of the excretory system in the antiquity. Record of the treatment of renal diseases was found in the Ebers' Papyrus, compiled at about 1550 BC. Patients' condition was alleviated by taking tea and medical plants infusion, hot baths, sweating procedures, diet, forced diuresis and clysters. With the implementation of dialysis, the treatment and care of patients with CKF moved to a new level and placed increasing demands on the health professional duties to implement complex care with specific responsibilities and roles.

Conclusion

Treatment and health care methods of patients with CKF have undergone revolutionary development from antiquity to the present day and continue to be improved.

Keywords: *chronic kidney failure, haemodialysis, health care*

QUALITY OF LIFE IN PATIENTS WITH BREAST CANCER

Sokolova I., D. Hadjideleva, D. Gavrailova, G. Zayakova

Medical University - Sofia, Faculty of Public health "Prof. Dr. Ts. Vodenicharov, DSc", Department of Health Care

Corresponding author:

Iliana Sokolova
i.sokolova@foz.mu-sofia.bg

Introduction

Quality of life is a broad concept that is influenced by people's physical health, their psychological state, their degree of independence, their social relationships and their

relationship with the significant characteristics of the environment. Health-related quality of life is a multidimensional concept that includes the subjective evaluation of the physical, emotional and social functional well-being of the subjects.

The aim of the present study is to identify and analyze problems and priorities of the quality of life in women with breast cancer.

Material and methods

An empirical sociological study was conducted through an anonymous survey containing 10 questions. 75 women who underwent treatment in the mammary gland surgery department - PSAGBAL "St. Sofia" city of Sofia, USBAL on oncology - city of Sofia. MicrosoftOfficeExcel and Windows 10 were used to process the data, as well as graphical analysis to sort them.

Results

Particularly problematic for breast cancer patients are premature menopause, sexual functioning and perception of one's own body. Another problematic aspect that the study found was social adaptation in the recovery period, while at the same time a positive change was observed in female patients in terms of spiritual well-being.

Conclusion

Women with breast cancer face a variety of physical, economic, spiritual and psychosocial problems as a result of their diagnosis and treatment - receiving emotional and social support, building health habits, changing their spiritual and philosophical outlook on life, concerns when perceiving changes in one's own body and sexuality, uncertainty in the future.

Key words: *quality, breast cancer, problems, support*

COMPASSIONATE TREATMENT. REGULATORY FRAMEWORK IN BULGARIA. THE ROLE OF MEDICAL PERSONNEL IN ACCESS TO COMPASSIONATE USE MEDICINES

Zlatanov A.¹, E. Grigorov², I. Mutafova^{3,4}

¹*Medical University - Sofia, Faculty of Public Health, "Prof. Dr. Ts. Vodenicharov, DSc"*

²*Medical University - Varna, Faculty of*

Pharmacy

³*Medical University - Varna, Faculty of Pharmacy*

⁴*Medical University - Sofia, Faculty of Medicine*

Corresponding author:

Evgeni Grigorov

evgeni.grigorov@mu-varna.bg

Introduction

According to a European regulation, patients with serious and life-threatening diseases, for which there are no suitable authorized drugs, can gain access to the so-called compassionate treatment use with an unlicensed product for which the clinical trial has been completed but is not yet approved for sale or is still in the research phase. In Bulgaria, compassionate use is regulated by the changes to the Law on Medicinal Products in Human Medicine adopted in October 2018 and changes to Ordinance No.10. This provides patients with options for treatment that can be life-saving or life-prolonging. This treatment is organized and financed by the pharmaceutical companies and is conducted if only there is sufficient data on efficacy and safety. Patients can be informed by their treating physician about compassionate use programs in Bulgaria that are suitable for their condition. For this purpose, the Bulgarian Drug Agency publishes on its website information on the activities of treatment with medicinal products for compassionate use, for which it has a positive opinion (5).

Aim

To present the legal framework in Bulgaria and to present to the medical personnel another opportunity for access of new medications for patients with serious diseases

Material and methods

Review of the available regulatory framework in Bulgarian legislation and the role of the medical staff in the process of obtaining medicines for compassionate use.

Results and conclusions

Despite the changes in the legislative framework, at the moment there are only two medicines approved for compassionate use in the field of neurology in Bulgaria. Further clarification is needed among healthcare professionals about the options for patients with serious and life-threatening illnesses to access compassionate

use programs.

Key words: *compassionate use, regulations*

CONDITIONS AND PROCEDURE FOR DETERMINING DEATH AND PERFORMING A PATHOLOGICAL AUTOPSY OF A PATIENT IN A MEDICAL INSTITUTION-HOSPICE

Hristozova M., M. Mavrov

Medical University - Plovdiv, Faculty of Medicine, Department of Health Care Management

Corresponding author:

Mariya Hristozova
mariahr11@abv.bg

Introduction

The need to provide palliative care for patients has increased significantly in recent decades globally due to the aging of the population and the increasing percentage of individuals suffering from chronic diseases. The indicated negative trend will continue in the future, which is why the international community, the EU and the member states should focus their attention on ensuring adequate conditions for the provision of palliative care by the various entities in the national health care systems: contractors and providers of medical aid, health care and social services.

Aim

The purpose of the report is to analyze the regulations that regulate the conditions and procedures for establishing the death of a person and performing a patho-anatomical autopsy in a medical facility-hospice.

Materials and methods

The current analysis examines the Bulgarian health legislation regulating the legal status of hospices, and more specifically the conditions and procedure for establishing the death of a person and performing a patho-anatomical autopsy in this type of medical facility. A literature review of the scientific publications was carried out, in which various issues related to the specific subject of the hospices' activity were discussed, including relevant gaps in the legal regulations applicable to them.

Results

After the analysis, significant gaps were found in the Bulgarian health legislation, which regulates the conditions and procedure for establishing the death of a patient that occurred in a hospice, and the performance of a patho-anatomical autopsy in this type of medical facility.

Conclusions

Currently, there are a number of gaps in the current health legislation regulating the activities of hospices, where the patient most often receives palliative care. The established conclusions justify the need to take timely actions to improve the regulatory framework, through which to ensure that hospices in the Republic of Bulgaria are medical institutions that meet modern standards for providing quality medical assistance and palliative care to patients.

Key words: *hospice, pathological autopsy, health law, patient, law*

AN EXEMPLARY MODEL OF SUCCESSFUL APPROACHES AND GOOD PRACTICES IN THE FIELD OF DENTAL EDUCATION AT THE CITY DENT CLINIC, CITY OF PAZARDZIK

Gulemetova M.

New Bulgarian University – Sofia, Department „Natural Sciences“

Corresponding author:

Maria Gulemetova
meri.gulemetova@abv.bg

Dentistry as a field of health care studies the diagnosis, treatment and prevention of diseases and deformities of teeth and gums. At the modern stage of development, it increasingly proves its relevance and importance.

The purpose of a report is, after a survey of public opinion, including citizens, teachers and parents of preschool and primary school children regarding the educational goals of City Dent Clinic, to share successful approaches and good practices in the field of dentistry.

Key words: *dental medicine, model of successful approaches and good practices*

CHALLENGES FOR THE ORGANIZATION OF HEALTH CARE IN PATIENTS SURVIVING ISCHEMIC STROKE IN THE EUROPEAN UNION

Balaburova M.¹, M. Kamburova²

¹*Medical University – Pleven, Faculty of Health Care, Department of Nursing Therapeutic Care*

²*Medical University - Pleven, Faculty of Public Health, Department of Social Medicine and Health Management*

Corresponding author:

Meglana Balaburova
meglena_balaburov@abv.bg

Introduction

According to the World Health Organization, cerebrovascular disease is the most significant single cause of burden of diseases in the world. According to the Global Burden of Disease studies (2017), stroke is among the three leading causes of “years of life lost due to premature death and disability-adjusted years lived” (DALY).

Objective

Analysis of the morbidity and organization of care in patients, surviving an acute phase of ischemic stroke in European Union (EU) countries.

Material and methods

A documentary method was used to collect retrospective information about the organization of health care in patients, surviving an acute phase of ischemic stroke. Data processing was performed with SPSS 25.0 and Microsoft Excel 2010.

Results

Projections from the Burden of Stroke in Europe Report (2017) show that between 2015 and 2035, the total number of ischemic stroke incidents in the EU will increase by 34% (from 613,148 in 2015 to 819,771 in 2035). During the same period, the number of chronic ischemic stroke will increase from 3,718,785 in 2015 to 4,631,050, which increases the importance of the organization and quality of care for patients. Individual monitoring and recording of the expectations of patients and their families in the

EU is ensured.

There is a lack of a unified plan of care in hospital and outpatient settings for patients who have survived ischemic stroke in the EU member states.

Conclusion

Organizing care for patients, surviving stroke, is a challenge for EU member states.

Key words: *health care, stroke, patients, outpatient care, cerebrovascular disease*

CYTOLOGICAL DIAGNOSIS OF HPV - ASSOCIATED DISEASE

Hinkova N.^{1,2,3}, E. Stoyanova^{1,2,3}, T. Semova^{2,3}, D. Dimitrov^{2,3}

¹ *Medical University - Pleven, Department of Midwifery*

² *Medical center “HINKOMED” - Pleven*

³ *University Hospital “Saint Marina” - Pleven*

Corresponding author:

Elitsa Stoyanova
evil_eli@abv.bg

Introduction

Conventional cytodiagnosis has been used since the 1950s as a method for prevention of cervical cancer. Through the PAP test, the presence of persistent HPV can be proven, which cytopathologists describe as the presence of koilocyte changes, a consequence of the destruction of the nuclear membrane.

The aim of the present study is to demonstrate the relationship between the PAP result and the presence of HPV.

Materials and methods

A retrospective study was conducted covering the period 2019 - 2021. 128 patients from Medical center “Hinkomed” and University hospital “Saint Marina” - Pleven were included. The obtained data was processed with the MS Office Excel 2019 software program.

Results

The covered group of patients was divided into three, according to the obtained results of the PAP test.

The first group are the patients with PAP I - II results, which are 57.8% of those covered. In

31.1% of patients, HPV infection was proven, and in one of them, cervical cancer was diagnosed.

The second group are the women with a PAP IIIa result and they are 28.1% of the patients. All individuals had an abnormal colposcopic findings and proven HPV. Four women were diagnosed with cervical cancer and another four with carcinoma in situ of the cervix.

Patients with a cytological result from PAP IIIb to PAP V were assigned to the third group. It is composed of 14.1 % of the covered persons. 15 of them had abnormal colposcopic findings and 3 - carcinomatous epithelium.

Conclusion

Properly applied screening and timely diagnosis of HPV-associated diseases would lead to a reduction in the incidence of cervical cancer.

Key words: *screening, PAP, HPV*

COMPARATIVE ANALYSIS OF STUDENTS', NURSES' AND EXPERTS' OPINION ON THE NECESSITY OF CONTINUING EDUCATION IN ONCOLOGY CARE

Gergova P.¹, S. Georgieva², E. Mineva-Dimitrova²

¹. *Medical University - Pleven, Faculty of Health Care, Department of Nursing Surgical Care*

². *Medical University - Pleven, Faculty of Public Health, Department of Public Health Sciences*

Corresponding author:

Polya Gergova
poliakomitska@abv.bg

Introduction

During the last two decades the role of the oncology nurse has been fast transforming from leading comfort and hygiene care, to advanced practice oncology nurse with more responsibilities and roles.

The **aim** of the study is to investigate nursing students', nurses' and experts' opinion on the complex role of oncology nurse and the necessity of updating her competencies.

Material and methods

The idea about the need of professional growth was examined from a view point of three groups: nursing students, nurses in oncology departments and experts. Data were collected by direct individual self-administered questionnaire among 199 students, 49 nurses and 19 experts in the field of oncology care. Data processing was with Microsoft Office Excel 2016 и SPSS v.25.

Results

Proportion of nurses with acquired specialty "oncology care" is low (12,2%). In this relation, 59,2% respond affirmatively to the need of actualization competencies through continuing education. For improvement of their knowledge and skills 28,6% prefer to participate to scientific conferences. Almost the same proportion interested in involvement in qualification courses. One of 10 nurses want to start specialization in oncology nursing care. Regular participation to a hospital collegium is an important source of professional information for 6,1% of oncology nurses. On the other hand, self-assessment of nurse students on their specific competencies in oncology care is very good and excellent for less than a half of them (47,2%). Another part assesses their knowledge and skills as good or satisfactory (49,8%) and for 3% they are insufficient. Majority, 97,0% of students, assess the necessity of continuing education after graduation. Need of actualization of oncology competencies is confirmed by all (100%) experts.

Conclusion

Comparative analysis of the opinion of students, nurses and experts about the importance of continuing education shows a significant similarity.

Key words: *student nurses, oncology nursing, nurse competency, personal growth*

ENSURING THE SAFETY OF OBSTETRIC ACTIVITIES THROUGH AUDIT

Radeva S.

Medical University - Varna, Faculty of Public Health, Department of Health Care

Corresponding author:

Svetlana Radeva
Svetlana.Radeva@mu-varna.bg

Introduction

The definition of risks in the provision of hospital obstetric care is related to a number of factors of the external and internal environment for the organization. The important activities of managing processes, structure, resources, users and different types of counterparties require broad knowledge and flexible solutions.

The purpose of this development is to define the risks associated with the service in order to minimize the risk and ensure the safety of the activities and patients.

Material and Methods

A survey was conducted among 232 medical specialists from the hospital obstetrics and gynecological care in Varna from 3 medical institutions.

Results

The respondents identified as extremely high (85.34%) the workload in the workplace. A large part (80.63%) served patients with pregnancy pathology, and 81.46% of the health personnel served during their working time a pregnant or pregnant woman with an infectious disease. The main problems in the workplace related to increased epidemiological situation are discussed: lack of clear rules and guidelines for dealing with the epidemiological crisis, the system of pay, conflicts and tense situation. Protocols and rules have been implemented to support decision-making in specific conditions, ensuring the proper running of the processes.

Conclusion

The provision of obstetric care requires continuous audit of activities, application of written rules for all possible and risky situations. All activities must comply with the established guidelines and rules of conduct of the leading organizations in the field, in accordance with the legal framework defining medical practice.

Key words: *risk, safety, audit, obstetrics, quality*

DIGITAL TRANSFORMATION OF OBSTETRIC CARE - A NEW MODEL OF ORGANIZATION OF ACTIVITIES IN THE MODERN HOSPITAL

Radeva S.

Medical University - Varna, Faculty of Public Health, Department of Health Care

Corresponding author:

Svetlana Radeva
Svetlana.Radeva@mu-varna.bg

Introduction

In 2022 the National Health Information System was launched in Bulgaria. It covered all participants and main flows of information in the health sector. More and more healthcare professionals are using digital services to track patients health indicators.

The digitalization of the health sector enables access to health services to the population and in remote areas of the country.

The aim is to study the opinion of healthcare professionals about working with the electronic Hospital System.

Material and methods

Were interviewed 98 medical specialists working in intensive sectors of specialized obstetric Hospital Varna for the period October-November 2022.

Results

More than half of the respondents prefer primary hospitalization to scheduled patients, 66.7% prefer the electronic drug plate. More than half of the respondents prefer primary hospitalization to scheduled patients, 66.7% prefer the electronic drug plate. In emergency obstetric-gynecological pathology, a delay in hospitalizations is found with the electronic examination. There are also difficulties in relation to the electronic examination of newborns in a depressive state and emergency conditions.

Emergencies related to the factors of the working environment (lack of communications, electricity, etc.) are serious obstacles affecting the operation of hospital structures.

According to 57.5% of the respondents, the work process is facilitated by the capabilities of the electronic database compared to the paper media.

In conclusion, new digital technologies are the basis of the most successful economic, administrative, health activities that support the processes of diagnosis, treatment in hospital structures. They save time, resources, ensure patient safety and improve the quality of Service.

Key words: *electronic file, database, obstetric activities, safety, quality of medical care*

HEALTH COMPETENCE OF THE PATIENT WITH “DIABETIC FOOT”

Slavkova T., R. Eredanska, G. Georgieva

Medical University - Sofia, Department of Health Care, branch, “Prof. Dr. Ivan Mitev” - Vratsa

Corresponding author:

Tatyana Slavkova
t.slavkova@filialvratsa.mu-sofia.bg

Introduction

Diabetic foot is one of the most common, expensive and severe complications of diabetes mellitus. Amputation in people with diabetes is 25 times more common than in people without diabetes, and it is estimated that every 30 seconds someone loses a lower limb or part of a limb somewhere in the world as a result of diabetes. The disease has serious economic, social and health significance. The diabetic foot and its consequences can be prevented with adequate treatment, knowledge of risk factors and recommended lifestyle changes. Many people with diabetes can delay the onset of the complication “diabetic foot” with early diagnosis, education, lifestyle changes - rational nutrition, more movement and control of blood sugar levels. **Purpose**

To investigate the health competence of patients with “diabetic foot” and to identify the need for health education.

Materials and methods

The survey was conducted among a total of 60 patients diagnosed with “diabetic foot” and admitted for treatment at “Dr. Stamen Iliev” General Hospital, Montana, “City Clinic - St. George” General Hospital, Montana, “Hristo”

General Hospital Botev” - town of Vratsa, “MBAL-Byala Slatina” town of Byala Slatina. The main research method is sociological, based on direct individual survey and conversation.

Results and discussion

Diabetic lesions of the lower extremities lead to more hospitalizations than all other complications of diabetes mellitus combined. The questionnaire survey conducted showed unsatisfactory competence of the patients regarding their illness. It is necessary for them to gain more knowledge regarding the essence of their disease, prevention and timely treatment, which are an important prerequisite for preventing complications and their disability.

Key words: *diabetes mellitus, diabetic foot, prevention, education, health competence.*

COMPETENCES OF THE MIDWIFE IN INTENSIVE CARE FOR PREMATURE CHILDREN

Kucun F., S. Radeva

Medical University - Varna, Faculty of Public Health, Department of Health Care Hospital “Prof. Dr. D. Stamatov” – Varna, Neonatal intensive care unit

Corresponding author:

Fanya Kucun
fani_plami@abv.bg

Introduction

Various factors and conditions related to the mother and fetus lead to premature birth before 37 weeks of pregnancy. Premature babies have difficulty adapting due to immaturity of organs and systems.

Material and Methods

Our own study was conducted in the neonatal intensive care unit for the period January 2019 – December 2022. The aim of this development is to bring out the competencies of healthcare professionals in the provision of intensive care.

Result and discussion

The medical records of 8,541 newborn babies were analyzed, of which 1,160 were premature or for the period 14.36% (compared to the national average of 10-11%) of the survivors needed intensive care. During the pandemic,

it was found that the percentage of preterm births was increased by about 5%. Many factors influence the adaptation process of low-weight or difficult adaptation newborns, with timely intensive care improving the prognosis for their physical and mental development and lasting for a long time. An important role in the provision of intensive care is played by working healthcare professionals who provide quality and timely medical care.

In conclusion, providing adequate and quality intensive care for newborns is of utmost importance in terms of their growth and development, protecting them from possible future complications. Providing a controlled, appropriate environment for them (for several days, weeks or even months) supports the activities of healthcare professionals in ensuring quality and timeliness of care.

Key words: incubation, adaptation, intensive care, premature babies, preterm birth

ROLE OF THE NURSE IN EDUCATING HOSPITALIZED PATIENTS WITH COPD ON THE SELF-MANAGEMENT OF THE DISEASE

Petkova T., E. Dimitrova

Medical University - Pleven, Faculty of Health Care, Department of "Nursing Therapeutic Care"

Corresponding author:

Tsvetina Petkova
cvetina_petkova@abv.bg

Introduction

Chronic obstructive pulmonary disease (COPD) is preventable and treatable and is characterized by airflow limitation in the airways. At the initial diagnosis of the disease, patients undergo training, including a recommended hygiene and dietary regime, correct inhaler technique, handling crisis situations, etc. Its purpose is to enable them to self-manage their disease and, through strict adherence to medical therapy and lifestyle and lifestyle changes, to maintain an acceptably good level of their quality of life.

Aim

To establish the effectiveness of training for patients with COPD and the place of the nurse in this process.

Materials and methods

Sociological methods: Documentary method – the available literature on the problem was studied; Survey method - an anonymous survey was conducted covering 47 hospitalized patients with COPD in 2 medical facilities in the city of Pleven; Statistical methods: The obtained data were processed with program products MS Office Excel, SPSS Statistics Version 20.

Results

The anonymous survey was conducted in the period from November 2022 to March 2023 at University Multidisciplinary Hospital for Active Treatment- Pleven and Multidisciplinary Hospital for Active Treatment at Military Medical Academy - Pleven.

The proportion of patients who reported having received initial education was high at 31 (65.9%), but only 14 (29.8%) reported that it was provided by the nurse working with the pulmonologist who treated them.

Conclusion

The nurse is part of the team caring for patients with COPD, but there are opportunities to expand her involvement in their education process. It will thus provide them with the necessary knowledge and skills to manage their illness and achieve a better level of quality of life.

Key words: nurse, training, patients, COPD

POSTERS

OPPORTUNITIES FOR THE USE OF VIRTUAL AND AUGMENTED REALITY IN THE EDUCATION OF MEDICAL AND HEALTHCARE STUDENTS

Bozov H.^{1,2}, E. Sotirova^{1,3}, V. Gonchev^{1,3}

¹ *Prof. Assen Zlatarov University - Burgas, Faculty of public health and health care*

² *Oncology Complex Center - Burgas,*

³ *University hospital for active treatment*

Corresponding author:

Evdokia Sotirova
ensotirova@gmail.com

Introduction

Augmented and virtual reality technologies are increasingly used in the learning process, including in the field of medicine and healthcare. The use of virtual and augmented reality in healthcare and in student education provides new opportunities for information and healthcare delivery.

Aim

The aim of the present research is to investigate existing applications for virtual and augmented reality and the possibilities of application in health care and in student education.

The functioning educational environment for virtual and augmented reality at the University „Prof. Dr. Asen Zlatarov“ Burgas is presented.

Material and methods

The object of the current study are existing applications of virtual and augmented reality, through a survey of scientific publications, mainly in the world databases Scopus and Web of Science, as well as the latest report of the European Commission from September-October 2022 „Extended reality: opportunities, success stories and challenges (health, education), Final report “.

Data from the training carried out in the virtual and augmented reality environment functioning at the University “Prof. Dr. Asen Zlatarov” Burgas were used.

Results

The virtual and augmented reality platform EON-XR has been implemented at Prof. Dr. Asen Zlatarov University - Burgas since the beginning of 2021. o far 914 lecturers and students have been trained to work with it. More than 100 3D and 360° images related to the training of medical and health care students have been created.

Conclusions

Training using augmented and virtual reality leads to higher achievements in the development of soft skills compared to traditional training methods, provides a faster learning process, higher confidence of learners in acquired skills and deeper focus on learning.

Key words: *Medicine, Augmented Reality, Virtual Reality, Education, Trends.*

CAUSES OF OCCUPATIONAL STRESS IN PUBLIC HEALTH INSPECTORS

Kadir B.¹, S. Harizanova², D. Bakova¹

¹*Medical University – Plovdiv, Faculty of Public Health, Department of Health care Management*

²*Medical University – Plovdiv, Faculty of Public Health, Department of Hygiene*

Corresponding author:

Desislava Bakova
desislava.bakova@mu-plovdiv.bg

Introduction

Occupational stress is among the biggest challenges to occupational safety and health. It has a significant impact on the health of individual employees, relationships between team members, work organization, etc.

Aim

This article describes some of the most common causes of occupational stress in public health inspectors.

Results

Given the specifics of the professional activity of public health inspectors, the most frequently recurring causes of occupational stress are: psychological harassment and aggressive behavior by a third party; excessive workload related to processing official documentation; ineffective communication; lack of support from management or colleagues; conflicting requirements and unclear role; lack of participation in decision-making that affects operational staff; insufficiently well managed organizational changes; job insecurity, etc. Having high levels of occupational stress can potentially lead to negative psychological, physical, and social consequences, as well as cardiovascular diseases, exhaustion, burnout, or depression.

Conclusion

Therefore, occupational stress can and should be effectively managed like any other organizational issue related to occupational safety and health. In addition, it is necessary to create conditions for the formation of resilience in employees through effective training and motivation, which will significantly support the fulfillment of their

profession-al duties and responsibilities.

Key words: *occupational stress, public health inspectors, healthy work environment*

SATISFACTION OF MEDICAL PROFESSIONALS WITH A COMMUNICATION AND INFORMATION SYSTEM IN AN EMERGENCY DEPARTMENT

Atliev K.¹, M. Semerdjieva², D. Bakova²

¹*Medical University – Plovdiv, Faculty of Medicine, Department of Urology and General Medicine*

²*Medical University – Plovdiv, Faculty of Public Health, Department of Health care management*

Corresponding author:

Desislava Bakova
desislava.bakova@mu-plovdiv.bg

Introduction

The nature of the activities carried out in emergency departments differs significantly due to the highly limited time interval for making decisions and putting them into action. For this reason, a reliable communication and information system is of immense importance.

Aim

The present survey is related to the study of the satisfaction of medical specialists with the functioning information and communication system in the Emergency Medicine Department at Sveti Georgi University Multiprofile Hospital for Active Treatment EAD in the City of Plovdiv.

Material and methods

An anonymous survey was conducted among 78 medical specialists from the Emergency Department at Sveti Georgi University Multiprofile Hospital for Active Treatment EAD in Plovdiv, of which 37.2% were men and 62.8% were women. Of all participants, 46.2% were masters of medicine and 53.8% health care specialists with an average age of 38.33±1.26 years.

Results

We established a high degree of satisfaction (80.08%) of the medical specialists. This fact is proof that the department has created a very good organization of work and an established communication system with all units (departments of the hospital, the Emergency Medical Assistance Center, the Police, fire safety departments, etc.) and information provision for patients in emergency situations.

Key words: *emergency care, satisfaction, communication, information system*

PRIMARY HEALTH CARE

ORAL PRESENTATIONS

HUMANE RESOURCES IN GENERAL MEDICAL PRACTICE – CONDITION, TRENDS, RISKS

Hristova M., T. Valentinova

Medical University – Pleven, Faculty of Public health, Department of General Medicine

Corresponding author:

Miroslava Hristova
mir_h@abv.bg

Introduction

The composition of Humane Resources is extremely important factor for the correct functioning of every health system. The lack of enough number of General Practitioners in the country and the fact of getting older is eroding the primary care and in the future will make difficult the access of the patients to all due Primary Health Care. To be researched and analyzed the securing of personnel to Primary Health Care in our country.

Aim

To be researched and analyzed the securing of personnel to Primary Health Care in our country.

Material and methods

As material were used and analyzed wide range of documents and studies, which included statistical data regarding Humane Resources working in General medical practice in our

country and also in European community.

Results

The number of General Practitioners in Bulgaria is 15% of all practicing physicians. For the period: 2010 – 2020 the number of their reduction is average 1.6%, 2019 – 2020 respectively – 2.52%. The general aging of physicians, which is typical for Europe, is being observed also in Bulgaria, affecting seriously staff working in Primary Health Care. Age structure of physicians for entire 2020 shows high proportions of work force after 65 years in Belgium – 19.9%, Bulgaria – 17.8%, Czech Republic – 16.7%, France – 15.1 %.

Conclusion

Problems regarding Humane Resources in the Health Care System exist in many countries, but they appear to be more acute in those with lesser financial resource like in Bulgaria. This unfavorable trend is expressed much more distinctly by those physicians which work in General medical practice.

Key words: General Practitioners, Primary Health Care

BEST PRACTICES OF INTERACTION BETWEEN THE UNITS IN PRIMARY HEALTH CARE AND EMERGENCY MEDICAL CARE

Hristova M., T. Valentinova

Medical University – Pleven, Faculty of Public health, Department of General Medicine

Corresponding author:

Miroslava Hristova
mir_h@abv.bg

Introduction

The composition of Humane Resources is extremely important factor for the correct functioning of every health system. The lack of enough number of General Practitioners in the country and the fact of getting older is eroding the primary care and in the future will make difficult the access of the patients to all due Primary Health Care.

Target

To be researched and analyzed the securing of

personnel to Primary Health Care in our country.

Material and methods

As material were used and analyzed wide range of documents and studies, which included statistical data regarding Humane Resources working in General medical practice in our country and also in European community.

Results

The number of General Practitioners in Bulgaria is 15% of all practicing physicians. For the period: 2010 – 2020 the number of their reduction is average 1.6%, 2019 – 2020 respectively – 2.52%. The general aging of physicians, which is typical for Europe, is being observed also in Bulgaria, affecting seriously staff working in Primary Health Care. Age structure of physicians for entire 2020 shows high proportions of work force after 65 years in Belgium – 19.9%, Bulgaria – 17.8%, Czech Republic – 16.7%, France – 15.1%.

Conclusion

Problems regarding Humane Resources in the Health Care System exist in many countries, but they appear to be more acute in those with lesser financial resource like in Bulgaria. This unfavorable trend is expressed much more distinctly by those physicians which work in General medical practice.

Key words: General Practitioners, Primary Health Care

DEPRESSIVE EPISODE - FREQUENCY, SIGNIFICANCE AND PROBLEMS IN ITS DIAGNOSIS IN GENERAL MEDICAL PRACTICE

Tumbeva E., T. Valentinova

Medical University – Pleven, Faculty of Public health, Department of General Medicine

Corresponding author:

Elka Tumbeva
e.tumbeva@abv.bg

Introduction

Depression is a disease with a high incidence and social significance, and its diagnosis is a complex, difficult and responsible process. The World Health Organization places depression

first among diseases, causing disability and loss of working capacity. The general practitioner makes the patient's first contact with the country's health system, and for this reason their behaviour in relation to patients with mental health problems is of great importance.

Objective

To explore the experience of countries with traditions in the field of good medical practice in dealing with patients with a depressive episode - features of its course, behaviour in general medical practice, problems in its diagnosis.

Material and methods

As material, a wide range of studies available in the medical database were used and analyzed.

Results

Depression is the most common mental disorder affecting the patient's daily life and their quality of life. The frequency varies in different countries - 8-20%, with an average value of about 6%. The lifetime risk of developing a depressive disorder is three times higher - 15-18%. In general medical practice it often happens that these diseases are not diagnosed or their individual symptoms are treated. The main reasons for this are: patients come with leading somatic complaints, a somatic illness is accompanied by a depressive episode, or patients think they can handle the problem alone and do not share.

Conclusion

The general practitioner should have knowledge, skills and attitudes related to the problem of a depressive episode, because he makes the first medical decision whether to refer the patient to a psychiatrist or to commit to solving the problem. If depression is not recognized and not treated properly, it leads to serious consequences for the patient, including suicide.

Key words: depressive episode, general practitioner, primary medical care

RESEARCH OF PROBLEMS AND BARRIERS IN THE CARE OF PATIENTS WITH A DEPRESSIVE EPISODE IN GENERAL MEDICAL PRACTICE

Tumbeva E., T. Valentinova

Medical University – Pleven, Faculty of

Public health, Department of General Medicine

Corresponding author:

Elka Tumbeva
e.tumbeva@abv.bg

Introduction

Depressive disorders are one of the most common mental health disorders worldwide, affecting more than 300 million people around the world. In this context, depression represents a major public health challenge. The general practitioner is the first point of contact for patients with depressive and anxiety disorders with the health system and has an important role in recognizing and managing the problem.

Aim

To study the barriers affecting general practitioners when working with patients with a depressive episode.

Material and methods

An anonymous individual survey was conducted among 300 general practitioners from 8 regions of the country.

Results

The surveyed doctors indicated the lack of time, the inappropriate environment in the doctor's office, the presence of other staff as the main barriers in working with patients with a depressive episode. A serious obstacle is also the patient's refusal to comment on issues related to their mental health - in 25% of cases. The free access, the general practitioner's position and skills, as well as the closer and long-term relationships built, can encourage patients to share more about their mental health problems. Almost all of the doctors surveyed reported that they would participate in an organized training for dealing with difficult and depressed patients with clinical case studies.

Conclusions

Family physicians recognize themselves as the specialists who can actively seek out and diagnose depressive episodes. Various factors act as barriers to doctors and patients when sharing mental health issues. Doctors report that the "stigma of the psychiatrist" continues to dominate the society.

Key words: General practitioner, depressive episodes, barriers

CHILDREN BORN AFTER ASSISTED REPRODUCTIVE TECHNIQUES IN SPEECH THERAPEUTIC PRACTICE - ANALYSIS OF AN ANAMNESTIC DATA BASE

**Kartunova-Tomova Sv., M.
Simonska, P. Andreeva**

*South-West University “Neofit Rilski” -
Blagoevgrad*

Corresponding author:

Svetlana Kartunova
sv.kartunova@swu.bg

Background

For more than fifty years, the development of assisted reproductive technology has brought life to millions of babies. The pace of advances in medical science is outpacing research into the impact of assisted reproductive techniques on child development. In speech therapy practice, there is a lively interest in researching the causes and characteristics of speech and language pathology in children born after assisted reproductive techniques.

Aim

To study of a digitally organized database of anamnestic information for children whose families have sought consultation with child development specialists – psychologists, speech therapists and related professions. The aim is to extract and analyze dependencies for determining specifics in the development of children born with assisted reproductive techniques.

Material and methods

For more than five years, anamnestic data have been collected and stored with informed consent and have been anonymized in accordance with the law on the protection of personal data. 2017 number of completed questionnaires were processed with the application of a filter to determine a target group for analysis and comparison. The methods of descriptive statistics were used.

Results

The obtained information was systematized and compared according to several main research indicators - age, gender, type of assistive technology, peculiarities in birth and early development, characteristics of regulation,

sensorimotor and psychomotor development.

Conclusion

Sufficient data and correlations are available to raise questions for research on the regulation, communicative development, and parenting styles of children born after assisted reproductive techniques.

Key words: *assisted reproduction, risk factors, early development*

REGULATION OF HEART RATE VARIABILITY (HRV) IN A PERSON WHO STUTTERS BY BIOFEEDBACK: CASE STUDY

Goranova E.

*South-West University “Neofit Rilski” -
Blagoevgrad, Faculty of Public health,
health care and sport*

Corresponding author:

Elka Goranova
elkalogo@swu.bg

Introduction

In the scientific literature, higher heart rate variability is an indicator of better general health and daily exercise enhances the ability to cope with anticipatory anxiety in persons with stuttering.

Aim

To investigate the relationship between changes in heart rate variability using a Bluetooth iFeel sensor and the severity of stuttering.

Material and Methods

The contingent was a male with severe stuttering. The diagnostic assessment was performed with the Stuttering Severity Instrument - SSI-4. The heart rate variability was monitored using “iFeel Bluetooth sensor -Somatic Vision under the supervision of a therapist.

Results

The therapy goes through 6 stages. The overall percentage of speech fluency disorders was 25% before therapy, manifested by prolongations and blockages. After therapy, the severity rate decreased to 8%.

Conclusion

The heart rate variability parameter is most sensitive to the struggle, avoidance and

expectation of stuttering on the part of the stutterer and causes an imbalance in autonomic nervous processes. The least heart rate variability is seen in emotional storytelling and dialogue, where repetitions and blockages are most pronounced. Relatedly, the highest variability scores are observed in reading, where the person has the least pronounced speech fluency. The training of VHR is a scientifically proven method and is a prerequisite for achieving a balance of the autonomic nervous system, reducing social anxiety, and transforming stress and anxiety into fluent speech.

Key words: *heart rate variability (HRV), biofeedback, stuttering therapy, technological innovation*

REAL OR VIRTUAL AUTISM - DIFFERENTIAL SYMPTOMATOLOGY. A SYSTEMATIC REVIEW AND META-ANALYSIS

Goranova E.

*South-West University "Neofit Rilski" -
Blagoevgrad, Faculty of Public health,
health care and sport*

Corresponding author:

Elka Goranova
elkalogo@swu.bg

Introduction

New clinical research shows that children who spend long periods of time in front of phone, computer, TV or tablet screens may develop a new type of disorder - virtual autism. Because the effects of 'screen time' are complex and varied, they have been summarised as Electronic Screen Syndrome (ESS). It is almost impossible to make a differential diagnosis between "virtual" and "real" autism because of the too young age and almost perfectly identical symptomatology.

Aim

The aim of this study was to report research articles, systematic interviews and meta-analyses published in refereed databases and to provide information on differential symptoms between autism and virtual autism.

Material and Methods

A review of research articles, meta-analyses, and systematic reviews that provide information on the language, speech, and psychosomatic development of children with real autism and children with virtual autism.

Results

From the empirical evidence examined over the last 10 years – 2013-2023 in PubMed, EBSCO, SCOPUS, Clarivate Analytics, ERIC, there is a causal relationship between intense early screen exposure and subsequent symptoms of autism spectrum disorders.

Conclusion

Intense early screen exposure is associated with detrimental effects on all domains of early childhood development, including attention, language, emotion regulation, and socialization.

Keywords: *virtual autism, autism spectrum disorders, language development, systematic review, and meta-analysis*

WHAT WE KNOW ABOUT ZIKA VIRUS AS OF MARCH 2023

**Iwata H.¹, Sh. Iwata², M. Kolarova-
Dimitrova³, Ts. Paunov⁴**

¹*Medical University – Varna*

²*University of Sofia, Faculty of Medicine*

³*Medical University – Varna*

⁴*Medical University – Varna*

Corresponding author:

Miglina Kolarova-Dimitrova
megank@abv.bg

Introduction

Zika virus, ZIKV, was first discovered in 1947 in the Zika Forest of Uganda. Since its emergence, ZIKV has caused an outbreak in different parts of the world, eventually spreading across the continents and around the world. The largest ZIKV outbreak occurred in 2015-2016 in the Americas, with Brazil being the most severely affected country. Prior to this major outbreak, ZIKV was poorly studied. A lot has been recorded since then.

Purpose

To familiarize ourselves with the latest findings of ZIKV infection, and to become better prepared

for its emergence in our countries.

Material and Methods

A literature search was conducted using electronic databases including Elicit, Scopus, and Google Scholar. The search used a combination of keywords and subject headings related to ZIKV infections and its long-term effects published in recent years. Articles were screened for relevance based on their abstract.

Results

Prior to the 2015-2016 outbreak, ZIKV infection was considered typically self-solving and mild, but it caused a spike in babies being born with microcephaly during this outbreak. Since then, sexual transmission has been observed and Guillan-Barre syndrome was confirmed in relation to the infection.

Conclusions

ZIKV took over 60 years to be recognized as Public Health Emergency of International Concern. It was followed a few years later by the pandemic of SARS-CoV-2, which partly explains the lack of focus and funding for ZIKV vaccination research, but with the Northward widening of the distribution of mosquitoes, ZIKV might not stay as exotic as it once was for long.

Key words: Zika virus, epidemiology, outbreak, arthropod-borne

NUTRITION AND DIETETICS, MARINE MEDICINE, MENTAL HEALTH

ORAL PRESENTATIONS

DIETARY RECOMMENDATIONS FOR THE HYPERANDROGENIC CLINICAL PHENOTYPE OF POLYCYSTIC OVARY SYNDROME

**Ruseva Iv.¹, V. Birdanova¹, Dzh. Isuf²,
Tsv. Vitkova¹, Z. Radionova³**

¹Medical University-Pleven, Faculty of Public Health, Department of Hygiene, Medical Ecology, Occupational Diseases and Disaster Medicine

²Medical University- Pleven Specialty:

„Medicine”, Student 3rd course
³Medical University-Pleven, Faculty of Public Health, Department of Social Medicine and Health Management

Corresponding author:

Ivelina Ruseva
ivelina.drambozova@mu-pleven.bg

Introduction

Polycystic ovary syndrome (PCOS) is a commonly encountered endocrinometabolic condition. It affects 5% to 20% of all females in the reproductive age with more frequency of spreading in Eastern-European women.

Aim

To define and propose dietary recommendations for hyperandrogenic clinical phenotype of PCOS.

Materials and Methods

A systematic review and meta-analysis were conducted in the library databases – PubMed, Scopus and Embase. The search was conducted from January 2023 until April 2023. The data was analyzed and selected from the studies, which validate nutritional approaches in clinical phenotype of PCOS. It demonstrated a genomic model of cardiometabolic disorders, in close relation to metabolic syndrome.

Results

A total of 126 studies meet the inclusion criteria. Difficulties are encountered by the dietician in identifying nutritional and weight status, hypoenergetic intake – 25 E% from proteins, reduced consumption of fats (mainly MUFA, Omega 3 PUFA) and in carbohydrates with low glycemic index, ingestion of vitamins from groups B and D, minerals: calcium, zinc, magnesium and chromium, biologically active substances and probiotics, changes in the diet, consumption of herbal teas and supplements.

Conclusion

Dietary recommendations for hyper androgenic clinical phenotype of PCOS are aimed at restricting the cardiometabolic risk and the improvement of reproductive functions.

Ke ywords: hyperandrogenic polycystic ovarian syndrome, nutrition

IS DELIVERY BY CESAREAN SECTION A RISK FACTOR FOR ALLERGY AND ATOPIC DERMATITIS?

Nedkova-Milanova V.

Medical University – Pleven, Faculty of Public Health, Department of General Medicine

Corresponding author:

Vania Nedkova-Milanova
vania_milanova@yahoo.com

Background

The frequency of delivery by Cesarean Section is increasing in recent years. In Bulgaria in 2017 45% of women gave birth operative, and in 2021 – 49.95%. The WHO recommends that 10-15% of births should be operative. However, in most countries the actual percentage rate exceeds this recommendation.

The **aim** of our study was to determine the connection between cesarean section delivery and diagnosed food allergy and/or atopic dermatitis during the first three years of life.

Material and methods

We studied children from birth up until three years of age, consulted by a pediatrician at the University Hospital Consulting Center in Pleven. The diagnosis of food allergy and atopic dermatitis was confirmed based on well-defined criteria.

Results

Food allergy was diagnosed in 82 children, while atopic dermatitis - in 12 children. More than half of the children with a proven food allergy - 58.53% (n=48) were born by Cesarean section, and 41.46% (n=34) - by a normal mechanism ($p<0.001$). In both types of delivery (normal delivery and cesarean section), the examined children without manifestations of allergy were breastfed over 7 months of age, and the allergic children – up to 1-2-months of age. Among the children with allergy monitored by us, elevated values of IgE and eosinophils were found, about 40% had an anemic syndrome. Presence of allergy in the family (bronchial asthma, atopic dermatitis, allergic rhinitis) was present in 29% (n=28) of the parents of the allergic children ($p<0.001$).

Conclusion

Birth by Cesarean section predisposes to the development of food allergy but has no effect on atopic dermatitis. Children with at least one allergic parent born surgically are with a higher chance of developing a food allergy (5).

Key words: *Cesarean section, food allergy, atopic dermatitis, children*

PERCENTAGE OF LIPIDS IN THE BODY COMPOSITION OF DIFFERENT COURSES OF CADETS AT NVNA

Tachev T., Y. Kolev

*Medical University “Prof. Dr. Paraskev Stoyanov” - Varna
Naval Academy “N.Y. Vaptsarov” - Varna*

Corresponding author:

Todor Tachev
todor.m.tachev@gmail.com

Summary

The lipid content in the body is particularly important for maritime professions and it can be a key factor when it comes down to incidents and individual survival at sea. Lipid content directly affects the body heat exchange, floating, etc. Lipid content of 20% is considered to be the norm for men, while for women it is 18.5%.

The aim of the study was to determine the differences in the index figures among cadets. The materials and methods of the research are based on standardised interviews, test with scales and data processing.

113 cadets were tested in the period 2021-2023 from different specialisations at the Military Naval Academy. The results were analysed by gender and age.

Key words: *lipid content, maritime professions*

ECG EXAMINATION OF A SHIP CREW DURING TRANSOCEANIC AND TRANSEQUATORIAL VOYAGE

Kirova K., R. Yordanova, M. Moskova, D. Stavrev

Medical University “Prof. Dr. Paraskev Stoyanov” – Varna, Faculty of Public Health, Department of Disaster Medicine and Maritime Medicine

Corresponding author:

Katerina Kirova
kpkirova777@gmail.com

Background

Maritime specialists in their profession are daily exposed to the continuous influence of the marine environment and risk factors associated with an increased risk of water induced trauma and various critical situations that threaten their physical condition on a daily basis.

The **aim** of this study is to determine the influence of the extreme marine environment, low temperatures and variable climatic factors on the cardiovascular system of the NIK-421 crew during the first Bulgarian transatlantic, trans-equatorial voyage. The objectives of the study are to determine the changes that can occur in the architectonics of the heart in an extreme marine environment. The initial results obtained and the follow-up that we will do after the return of the crew are important for a subsequent assessment of the changes that have occurred in specifically loaded sea situations.

A total of 23 military sailors of different ages, different job descriptions and different seafaring experience between the ages of 19 and 50 took part in the study. The analyzed results of the electrocardiograms taken before the voyage of the research vessel showed no changes in the cardiac activity of the crew. The crew will be re-examined after their return and changes will be identified.

Key words: *ECG, cardiovascular system, transatlantic voyage, marine risk factors*

THE INFLUENCE OF STRESSORY FACTORS (COOLING) ON STUDENTS FROM MEDICAL UNIVERSITY-VARNA AND NIKOLA VAPTSAROV NAVAL ACADEMY

Negozova M.¹, D. Iliev¹, D. Stavrev^{1,2}

¹*Naval Academy “N.Y. Vaptsarov” – Varna*

²*Medical University “Prof. Dr. Paraskev Stoyanov” – Varna, Faculty of Public Health, Department of Disaster Medicine and Maritime Medicine*

Corresponding author:

Maria Negozova
maria_negozova@abv.bg

Introduction

The present experiment was conducted on 6.01, Epiphany, when a ritual throwing of a cross into a body of water takes place and men jump into the icy waters to retrieve it. Entering and staying in cold waters puts the human in a specific stressful environment to which it must adapt. The stress to which the body is subjected leads to changes in heart rate, blood circulation, oxygen exchange and other mechanisms stressing the heart.

Objective

Tracking the physiological changes in the body of two separate cases of a student from MU-Varna and a cadet from Nikola Vaptsarov Naval Academy, under different types of stressors.

Material and methods

Participants familiarized themselves with the experiment and signed informed consent. The Garmin Vivosport bracelets, worn by the participants before and during the experiment, tracked their heart rate for 24 hours. Changes that occurred were recorded by the meters, the digital information was visualized and analyzed. Water temperature (9.4°C) and air temperature (11°C) were monitored.

Results

The cadet had a higher heart rate during exercise than during cold water immersion. The student had almost identical heart rate during the experiment and the exam. This wasn't his first encounter with icy waters. The cadet who had not entered cold water before had a lower heart rate than the student. The explanation is sought

in the higher level of physical preparation and training.

Conclusion

This is a pilot study aimed at developing a methodology and playing out the different moments of the experiment. On this basis, a follow-up study of a larger number of subjects is planned.

Key words: *cold water, cadet, student, heart rate, physiological changes*

STUDY OF THE INFLUENCE OF EXTERNAL FACTORS ON THE PERCEIVED OCCUPATIONAL STRESS IN HEALTHCARE STAFF WORKING IN AN INTENSIVE CARE HOSPITAL ENVIRONMENT

Yulieva D.¹, S. Tsvetkova², M. Kamburova³, P. Stefanova³

¹*University Hospital "Dr. Georgi Stranski" – Pleven*

²*Medical University - Pleven, Faculty of Pharmacy, Department „Physics, Biophysics, Pre-clinical and Clinical sciences” Sector „Pre-clinical Sciences”,*

³*Medical University - Pleven, Faculty of Public Health, Department of Social Medicine and Health Management*

Corresponding author:

Daniela Yulieva
daniela_iulieva@abv.bg

Introduction

In modern life, associated with dynamic rates of development of society, the introduction of new technologies, frequent reorganizations, information overload and the emergence of acute conflicts of a different nature, the frequency of stressful conditions is increasing and covers more and more professions. In the European Union, stress at work is the second most common health problem and affects 28% of workers.

The purpose of the study is to determine the influence of external factors on the perceived stress of individuals working in an intensive hospital environment.

Materials and methods

The material discusses part of the results of a

survey conducted among 70 health professionals working in Anesthesiology and Intensive Care Clinics of two UMBAL-Pleven.

In the analyses, the results of three groups of external factors were commented on: working conditions, work organization and risk environmental factors, some demographic indicators and a scale for perceived stress, while respecting anonymity and voluntariness.

Results

The average age of the interviewed persons is 45.5 years. 86% of healthcare professionals rated the level of occupational stress as high. It was found that the levels of occupational risk positively correlate with work organization ($r=0.5059$; $p=0.000$) and with working conditions ($r=0.4950$; $p=0.000$). The study found that if better working conditions are created and the organization of the work process is optimized, the level of occupational stress perceived by health workers will decrease ($r=-0.3584$; $p=0.002$).

Conclusion

Establishing the risk factors influencing the work of health care professionals in the intensive care and resuscitation units is a prerequisite for discussing specific measures for the prevention of occupational stress related to the control of environmental risk factors by means of optimizing the work organization.

Key words: *occupational stress, health care professionals, risk factors*

THE SIGNIFICANCE OF USING SCALES AND QUESTIONNAIRES IN THE EVALUATION OF A PSYCHIATRIC PATIENT IN CASE OF EMERGENCY

Todorov A., P. Chumpalova-Tumbeva, E. Dimitrova-Ilieva, M. Stoimenova-Popova

Medical University - Pleven, Faculty of Public Health, Department of Psychiatry and Medical Psychology

Corresponding author:

Aleksandar Todorov
alex_9020@abv.bg

Introduction

Emergency psychiatry is the middle ground between psychiatry and emergency medicine as it includes various multidisciplinary conditions which represent the hidden and unintelligible sides of psychiatry that require exact and short algorithms for preserving the life and health of both the individuals, as well as the society.

Purpose

Analysing the role of practicing/ using different testing methods in primary psychiatric evaluation in cases of emergency.

Methods

We formed two groups of individuals, consisting of respectively 27 and 28 patients who had been admitted in cases of emergency to UMBAL Dr. Georgi Stranski – Pleven, which is the only psychiatric structure on the territory of Pleven municipality that provides psychiatric help and care. The first group of people were examined and monitored through traditional psychiatric interview while the second were examined and monitored through interview in addition to the following scales – Montgomery-Asberg Depression Rating Scale (MARDS), Columbia-Suicide Severity Rating Scale (C-SSRS), Brief Aggression Questionnaire (BAQ) и Personal and Social Performance Scale (PSP).

Results

The patients with/in which scales were used show as a result a more exact primary evaluation and a more accurate prognosis on the questions of the course of treatment and its efficiency.

Conclusions

Practicing evaluations through scales in addition to the traditional examining methods allows clinicians to accurately and quantitatively determine different factors in relation to a patient's behavior, its dynamics and changes, which has its predictive meaning/value in both primary risk evaluation as well as during the course of treatment, providing a more expeditious adaptation in people with psychiatric disorders who have been hospitalized in cases of emergency.

Key words: *psychiatry, risk evaluation, factors*

INITIAL MEASUREMENT OF STRESS PROFILE WITH THE BIOFEEDBACK METHOD. COMPARISON OF THE RESULTS OF PERSONS FROM PROFESSIONS RELATED TO THE PERFORMANCE OF HIGH-RISK TASKS AND PERSONS FROM PROFESSIONS WITH LOW LEVELS OF RISK

Nedeva R.¹, D. Stavrev²

¹ Naval Academy "N.Y. Vaptsarov" – Varna

² Medical University "Prof. Dr. P. Stoyanov" – Varna

Corresponding author:

Rositsa Nedeva
rmladenova@mail.bg

Biological feedback is a relatively new research method that visualizes in real time the impact of stressors on the physiological state of the person (Khazan, The clinical handbook of Biofeedback, 2013); (Schwartz, Andrasik, Biofeedback, 2003). The research carried out with the apparatus Mind Reflection methodology allows to track the influence of different groups of stressors on the personality (Anzova, Nedeva, The role of biological feedback for improving the psychological and physiological state. Algorithm for working with Mind Reflection when studying the level of stress in volunteers, 2022). Through the methodology used, it is possible to determine the abilities of the person under investigation to control the level of stress (Khazan, Psychophysiological Stress Assessment Using Biofeedback, 2009). The study was carried out with two groups of volunteers: the first group is persons from high-risk professions (policeman, divers, military personnel), the second group is persons performing professions with a low level of professional risk (salesman-consultants, waiters, etc. The purpose of the conducted research is to the impact of the professional environment on the level of stress and stress control skills was established (Stavrev et al. Marine medicine, 2018). The Mind Reflection apparatus methodology makes it possible to establish the possibilities of recovery of the personality after stopping the impact of the

given stressogen. The results of the conducted studies show that those performing high-risk occupations have noticeably lower levels of stress during the study compared to the control group. An interesting phenomenon was found in terms of stress control that was followed during the study. A group of study subjects was identified whose ability to unload after the applied stressor undergoes dynamic change from the beginning to the end of the conducted research, after each subsequent stressor the ability to recover the person under investigation decreases.

Key words: *biofeedback, stress profile, professional requirement*

POSTERS

THE INFLUENCE OF COVID-19 ON THE MENTAL HEALTH OF STUDENTS FROM MU – VARNA

Panteleeva M.¹, E. Ivanova², R. Chamova²

¹*Medical University - Varna, Faculty of Public Health, Department of Disaster Medicine and Maritime Medicine*

²*Medical University - Varna, Faculty of Public Health, Department of "Hygiene and Epidemiology"*

Corresponding author:

Rositsa Chamova
rchamova72@gmail.com

Introduction

The emerging COVID-19 pandemic in China at the end of 2019 has forced various forms of adaptations in many sectors of public life, including the education system. The introduced anti-epidemic measures – physical and social isolation, remote learning, working from home – had a huge impact on global mental health.

The purpose of the study is to determine how the COVID-19 pandemic has affected mental health among students at the MU – Varna.

Methods

At the end of the COVID-19 pandemic, a sociological survey was conducted among Bulgarian and foreign students at the MU – Varna. A standardized questionnaire for anxiety research - the Coronavirus anxiety scale (CAS)

- is used.

The collected data were processed with Jamovi software package, ver. 2.3.

Results

Of the 135 students surveyed, 15.6% reported a feeling of dizziness when reading or listening to news about COVID – 19, with a significantly higher incidence among foreign students ($\chi^2=11.8$; $p=0.019$). For the majority of respondents - 78.5%, the thoughts of COVID-19 did not affect sleep. We found a statistically significant difference in terms of manifestations of nausea and stomach problems when listening to news about the corona virus infection between the two groups - Bulgarian and foreign students: 0% vs. 1.4%, respectively ($\chi^2=10.3$; $p=0.016$).

Conclusion

The results of the study show that the manifestations of anxiety are more pronounced among foreign students.

Key words: *COVID-19, students, anxiety, mental health*

KINESITHERAPY, REHABILITATION AND OCCUPATIONAL THERAPY

ORAL PRESENTATIONS

DIGITALIZATION OF EDUCATIONAL MATERIALS AND SWOT ANALYSIS OF ONLINE EDUCATION IN THE REHABILITATION FIELD AFTER THE END OF THE COVID-PANDEMIC (INCLUDING ANALYSIS OF THE LEARNERS' OPINIONS)

Koleva I.^{1,2,3}, R. Yoshinov⁴, B. Yoshinov⁵

¹*Medical University - Sofia, Physiotherapy Department - Sofia, Bulgaria*

²*National Heart Hospital, Cardiorehabilitation Department - Sofia, Bulgaria*

³*Multi-profile Hospital for Long-term care and Rehabilitation "Serdika" with Robotic Neurorehabilitation Center "ReGo" - Sofia, Bulgaria*

⁴*University of Library Studies and*

Information Technologies “UNIBIT” -
Sofia, Bulgaria
⁵ Medical Faculty of Sofia University,
Sofia, Bulgaria

Corresponding author:

Yvette Koleva
yvette@cc.bas.bg

Background

Ultimately, we perceive a gradual increase in the application of information and communication technologies (ICT) in all fields, including higher education.

During the COVID-pandemic and the outbreak, we were obliged to use online education and digitalized educational materials.

Aim

Our goal was to prepare and introduce digitalized educational materials on different rehabilitation educational disciplines, and to test the learner’s opinions on this topic.

Materials and Methods

Ultimately, we edited electronic books on different educational disciplines in the field of rehabilitation, neurorehabilitation, orthopedic rehabilitation, manual therapy, etc. We emphasize the potential of contemporaneous methods and modern technologies. We included clinical case presentations with photos and videos.

We prepared PC-based tests and we assessed the opinions of different types of learners: students in Bachelor’s degree (specialties “Kinesitherapy”, “Nursing”; „Medical Rehabilitation and Ergotherapy“), in Master’s degree („Medical Rehabilitation and Balneology“); medical doctors (during the specialization in „Physical and Rehabilitation Medicine“).

Results and Discussion

Our students and trainees expressed a significant level of satisfaction of the digitalization of the educational materials. We realized a SWOT-analysis of online education in the field of rehabilitation.

Conclusion

Physical medicine is one of the most rapidly changing areas of science and practice. We observe an acceleration of the introduction of modern methods in different areas of our rehabilitation practice. Therefore, we perceived an increased risk to harm the Bulgarian scientific

traditions in the rehabilitation field and a risk to disremember the heritage of our teachers.

Key words: Rehabilitation, Education, Electronic Learning, e-Archive, SWOT-analysis.

THE POTENTIAL OF THE TECHNOLOGY EXIMIA FOR IMPROVEMENT OF THE QUALITY OF LIFE IN PATIENTS WITH OVERWEIGHT AND OBESITY

Eneva V.¹, I. Koleva²

¹ Medical University of Sofia, Faculty of Public Health “Prof. Dr. Ts. Vodenicharov, DSc”, Physiotherapy Department, PhD student

² Medical University of Sofia, Physiotherapy Department

Corresponding author:

Yvette Koleva
yvette@cc.bas.bg

Introduction

Obesity is a socially significant problem with many adverse consequences. Reduced physical activity has a negative impact on the quality of life. Contemporary physical modalities play an important role in the prevention of overweight. Many conditions accompany obesity: slowing of lympho-venous microcirculation, chronic inflammation, reduction of dermo-epidermal temperature, fluid retention; enlarged adipocytes, local hypoxia, and formation of edematous fibrosclerotic panniculopathy.

The **objective** of the present study is to realize a qualitative and quantitative evaluation of the efficacy of the technology Eximia on the overweight.

Material and methods

The study included 34 women with overweight and obesity, reduced physical activity, chronic fatigue, and depressive symptoms. We applied a complex rehabilitation program (of 5 weeks) with Eximia (2 procedures weekly), increased mobility, a balanced diet, and increased water intake. Eximia is a platform with two programs of applications - ultrasound and electroporation (ultra-poration) for the reduction of fat deposits, and an endodermal vacuum for lymphatic

drainage.

Results and Discussion

At the end of the therapeutic course, we observed beneficial effects on some health consequences of obesity: a reduction of waist and hip circumferences, skinfold thickness, body mass index (BMI), and an amelioration of the psycho-emotional state.

Conclusion

The present study confirms the efficacy of the technology Eximia, as a part of the complex physiotherapeutic program for the prevention of the consequences of overweight and obesity.

Key words: *obesity, fibrosclerotic edematous panniculotaphia, physical therapy, Eximia, quality of life*

NEUROREHABILITATION IN NEUROSURGERY: ALGORITHMS AND BIOETHICAL ISSUES

Koleva I.^{1,2,3}, R. Yoshinov⁴, B. Yoshinov⁵

¹ *Medical University of Sofia, Faculty of Public Health, Physiotherapy Department*

² *Multi-profile Hospital for Long-term care and Rehabilitation "Serdika" with Robotic Neurorehabilitation Center "ReGo" – Sofia*

³ *National Heart Hospital, Cardiorehabilitation Department – Sofia*

⁴ *Medical Faculty of Sofia University, Sofia*

⁵ *University of Library Studies and Information Technologies "UNIBIT" – Sofia*

Corresponding author:

Yvette Koleva
yvette@cc.bas.bg

Rehabilitation is a functional therapy, based on a correct functional analysis. Neurorehabilitation (NR) is an inter-discipline between neurology, neurosurgery, physical medicine, and rehabilitation. In clinical NR practice, we apply a holistic and patient-centered approach.

NR algorithm includes a detailed functional assessment, based on the International Classification of Functioning and a synergic combination of physical modalities (movement, activities, mineral waters, electric currents, etc.). Bioethics is the development of the basic idea

of the Hippocratic Oath "Primum non nocere" ("First Do Not Harm").

NR is strongly connected to some principles, included in the Universal Declaration on Bioethics and Human rights (UNESCO), especially: Human Dignity and Human Rights; Autonomy and individual responsibility; Informed consent; Equality, justice and equity; Non-discrimination and non-stigmatization; Social responsibility.

Patients in NR-clinical practice have reduced autonomy and disability; requiring assistive technologies, home adaptations, and complex pain management. In terminal cases, we have problems with informed consent and the right to euthanasia.

Important bioethical aspects are the connections between the patient and the NR team; and the interactions between different members of the multi-professional multi-disciplinary NR team.

Actually, in NR we apply largely Information and Communication Technologies (ICT): robotic rehabilitation with virtual reality; grasp and gait training with Exoskeletons, systems Tyromotion and Lokomat, etc. Computer-based NR is very expensive, and this poses the problem of equal access of all patients to contemporaneous methods for diagnostics and treatment.

We present neurosurgical clinical cases, during NR.

Bioethics is an important link between neurorehabilitation and human values.

Key words: *neurorehabilitation, neurosurgery, bioethics, human rights*

SHROTH THERAPY IN ADULTS WITH IDIOPATHIC SCOLIOSIS AND KYPHOSIS

Madzharova R.¹, M. Krastanova¹, I. Stoilova²

¹ *Medical University – Pleven, Faculty of Public Health, Department of Physical Medicine, Rehabilitation, Ergotherapy and Sport*

² *Medical University – Pleven, Faculty of Public Health, Department of Hygiene, medical ecology, occupational diseases and disaster medicine*

Corresponding author:

Radostina Madzharova
madgarova2002@yahoo.com

Introduction

Schroth therapy is a new method in Bulgaria for physical therapy of patients with adolescent idiopathic scoliosis and kyphosis. The method is a combination of specific physiotherapy exercises with breathing and manual techniques and is part of the recommendations of SOSORT (The International Scientific on Scoliosis Orthopaedics and Rehabilitation Treatment) for the treatment of scoliosis and kyphosis. Not effectively treated spinal curvatures in childhood, persist as a pathology in adult patients. They are one of the reasons for the more severe degenerative changes in the intervertebral discs and the cause of pain and disability of such patients in adulthood.

Objective

The aim of the study was to compare the effect between standard physiotherapy and added Schroth therapy on adult patients with idiopathic scoliosis and kyphosis. We followed the effect of the treatment on posture, back pain and spine mobility of adult patients with idiopathic scoliosis and kyphosis.

Material and method

The study participants were 30 adults with diagnosed adolescent idiopathic scoliosis and kyphosis, divided into 2 groups. Half have standard physical therapy, the other half have added Schroth therapy to standard physical therapy. Clinical, kinesiological methods and visual-analog scale have been used to evaluate treatment. Patients were followed for a period of 6 months.

Results

All patients from both groups had pain reduction and increased mobility in the spine. Only patients in the group with added Schroth therapy had improved posture.

Conclusion

There are short-term benefits in improving the subjective and objective complaints of elderly patients with scoliosis and kyphosis. Schroth therapy added to the physiotherapy program of these patients provide additional benefits in improving the condition of these patients.

Key words: *adults, idiopathic scoliosis and kyphosis, Schroth therapy, physiotherapy, back pain*

POSTERS

REHABILITATION PROGRAM FOR ANKLE JOINT CONTRACTURE COMPLICATED WITH COMPLEX REGIONAL PAIN SYNDROME (Clinical case)

Drumev A.¹, S. Gigov², D. Vacheva¹, E. Vasilev¹

¹*Medical University – Pleven, Faculty of Public Health, Department of Physical Medicine, Rehabilitation, Ergotherapy and Sport*

²*Medical University – Pleven, Faculty of Medicine, Department of Orthopaedics and Traumatology*

Corresponding author:

Danelina Vacheva
danelina@abv.bg

Summary

The M. Sudeck complication (CRPS) is a term that covers a wide clinical spectrum and is closely related to post-traumatic reflex dystrophy, algoneurodystrophy and osteoneurodystrophy. In the ankle-foot complex the structures are located and functionally connected in a way that it makes it impossible to develop isolated functional pathologies only in a separate segment. Kinesiological deviations in this area with the presence of a complication are diverse and difficult to influence.

The **objective** of this study is to follow and report the recovery of locomotor functions in a patient with a fracture in the ankle joint and the presence of a complication.

Material and methods

It's about 43-year-old man with fractura luxatio art. talocruralis sin. Osteosynthesis metallica. Contractura art. talocruralis sin. Morbus Sudeck. A complex rehabilitation program was carried out, which included: kinesitherapy, cryotherapy with an ice block, therapeutic massage and electroprocedures (low-frequency pulsed electromagnetic field, interferential current therapy and ultrasound with nonsteroidal anti-inflammatory medication). Appropriate drug therapy that stimulates callus formation was prescribed.

The following methods are used to evaluate recovery of locomotor activity:

clinical methods – goniometry and centimeter measurements of the lower limb were performed
functional methods – “Locomotor activity” test and “Activities of daily life”(ADL) test;

Results

3 rehabilitation courses were conducted during 3 months, after which walking without aids is possible.

Conclusion

The analysis of the obtained results proves that in the presence of a complication after trauma in the ankle joint, the recovery of locomotor activity requires a longer period and an appropriate complex rehabilitation program, as well as drug therapy.

Key words: *contracture, ankle joint, M. Sudeck, medical rehabilitation*

MEDICOSOCIAL REHABILITATION – A FACTOR FOR IMPROVING THE QUALITY OF LIFE IN PATIENTS WITH DISORDERED LOCOMOTION

**Drumev A.¹, D. Vacheva¹, I. Petkova²,
R. Petrov¹**

¹*Medical University – Pleven, Faculty of Public Health, Department of Physical Medicine, Rehabilitation, Ergotherapy and Sport*

²*Medical University – Pleven, Medical College, Department of Social and Pharmaceutical Activities*

Corresponding author:

Danelina Vacheva
danelina@abv.bg

Introduction

Medicosocial rehabilitation is aimed at creating conditions for equal participation in the daily life of people with permanent disabilities, by actively influencing their motor, speech, mental and educational skills. It takes place in the family, household, work and social environment.

Purpose

Considering the medico-social needs of patients with impaired locomotion to improve the quality of life.

Material and methods

The object of the study were 63 patients with impaired locomotor activity as a result of trauma in the lower limb or neurological disease of a central/peripheral motor neuron.

Research methods

An author’s questionnaire was developed to study the needs of medico-social and rehabilitation activities to improve the social functioning of the person. The survey is structured in three groups of questions related to: physical activity; performing daily activities; social skills. The assessment of the needs is reflected in a three-point scale.

Results

In the group of questions related to physical activity, the obtained results for the greatest degree of difficulty (grade 1) show that 49.21% cannot walk on flat terrain; 76.19% cannot climb stairs and 82.54% do not leave home. For the second group of questions related to performing daily activities, 50.79% indicated difficulties in visiting service premises and maintaining personal hygiene, and 71.43% could not maintain hygiene in their home. In the third group of questions, related to social activity, respondents encounter the greatest difficulties (82.54%) when visiting cultural events and public institutions.

Conclusion

In patients with impaired locomotion, regardless of the causes of this condition, significant medico-social problems associated with worsening of their quality of life are observed.

Key words: *medico-social rehabilitation, locomotion, quality of life*

HEALTH TECHNOLOGY ASSESSMENT, DIGITAL HEALTH AND TELEMEDICINE, e-HEALTH

ORAL PRESENTATIONS

HEALTH TECHNOLOGY ASSESSMENT OF DIGITAL HEALTH TOOLS - CHARACTERISTICS AND CHALLENGES IN BULGARIA

Veleva N.

*Medical University – Pleven, Faculty of
Pharmacy, Department of Pharmaceutical
Sciences and Social Pharmacy*

Corresponding author:

Nadia Veleva
veleva_nadia@yahoo.com

Introduction

As a result of the technological progress and digitalization of health care in the last decade, innovative health technologies, including digital health tools (DHTs) are becoming increasingly important in healthcare delivery. New technologies are among the main reasons for the ever-increasing healthcare costs and the unprecedented challenges for the governments related to meeting the population's health needs. Hence, exploring health technology assessment (HTA) of DHTs, which currently is not implemented in Bulgaria, becomes extremely relevant.

Aim

To analyze the specifics of health technology assessment of digital health tools and discuss important issues related to current assessment methods and future implementation in Bulgaria.

Material and Methods

Analytic study based on literature review and content analysis of HTA guidelines and Bulgarian HTA legislation were performed. Specifics of HTA of DHTs were analyzed through determining the characteristics of the subject of analysis.

Results

Various types of digital health tools were

identified. Specific features of HTA of DHTs, as well as the challenges for its future implementation in Bulgaria, were discussed. The issues of variety and rapid development associated with DHTs was highlighted.

Conclusion

There are important methodological issues of HTA of DHTs determined by the object of analysis that should be taken into consideration both in the process of assessment and appraisal of DHTs. Good European practices and methodology should be followed for future implementation of HTA of DHTs in Bulgaria (4).

Key words: *health technology assessment, digital health tools, methodology, Bulgaria*

KEY DIGITAL HEALTH COMPETENCES FOR PHARMACISTS IN BULGARIA

Veleva N., H. Lebanova, Sv. Stoev

*Medical University – Pleven, Faculty of
Pharmacy, Department of Pharmaceutical
Sciences and Social Pharmacy*

Corresponding author:

Nadia Veleva
veleva_nadia@yahoo.com

Introduction

The digital revolution has changed the requirements for the competencies of the healthcare personnel, including pharmacists. One of the mandatory conditions for the digital transformation of the Bulgarian health care is related to the health care professionals' qualification, namely the knowledge and skills to use digital health instruments (DHI). Hence, the study of the key competencies for pharmacists to work with DHI becomes extremely relevant. The **aim** of the study is to identify the key competences for pharmacists to work with digital health instruments and effective ways for acquiring them.

Material and Methods

Analytic study based on literature review and content analysis of relevant publications, pharmacists' qualification characteristics and pharmacy curricula (Bulgarian and foreign)

were performed.

Results

The key competencies for working with DHI have been identified. The requirements and challenges for modern pharmacists were analyzed, and a comparative analysis was made of the key competencies for pharmacists in the past and in the future. Effective ways to increase the qualification for working with DHT were indicated.

Conclusion

There is an objective need for pharmacists to acquire new competencies for working with DHI. This can be achieved through up-to-date pharmacy education, participation in postgraduate qualification courses and on-the-job training. The acquisition of key digital competencies not only by pharmacists, but also by all health professionals is a mandatory condition for the implementation of the digital transformation strategy of the Bulgarian health care.

Key words: *competencies, digital health instruments, pharmacists, Bulgaria*

APPLICATIONS OF COST ANALYSIS IN ECONOMIC EVALUATIONS OF HEALTH CARE TECHNOLOGIES

Petkova-Georgieva S., S. Bogoslovov

University “Prof. Assen Zlatarov” – Burgas, Faculty of Public Health and Health Care, Department of Organization and Management of Health Care,

Corresponding author:

Sotir Bogoslovov
s.bogoslovov@gmail.com

Conducting a cost analysis in health care is a basic prerequisite for making economically sound management decisions. This article examines some aspects of cost analysis that should be considered in health technology evaluations. The purpose of the study is to emphasize the application of cost analysis by justifying its importance in the process of evaluating alternative technologies in health care. Incorrectly interpreting or not taking into account any of the elements of the cost analysis

can lead to inaccuracies or even to a complete distortion of the expected results. One of the problems in public health care in Bulgaria is that the analysis of costs in the evaluation of health technologies does not cover all aspects of the affected parties - the state-payer, patients-payers, medical facilities, qualified medical personnel, pharmaceutical infrastructure, etc.

Key words: *cost analysis, evaluation, health care technologies, public health care*

ONLINE NETWORKS FOR MEDICAL PROFESSIONALS - ANALYSIS OF BENEFITS AND OPPORTUNITIES

Jekova V., A. Vodenicharova

Medical University – Sofia, Faculty of Public Health “Prof. Dr. Ts. Vodenicharov, DSc”

Corresponding author:

Viktoria Jekova
viktoria_jekova@yahoo.com

Introduction

The rapid growth of the Internet in the last decade has led to the creation of new online business opportunities, in particular, to the development of online professional communities. Sites as Twitter and Facebook are actively used to present the business, to make business connections and more and more often – as a tool for direct advertising. Anyone looking for business-oriented contacts can find on sites like linked in people they work with or want to work with. This is how the culture of social networking for business (SNB) came to life. SNB gathers in one place the employees of the organization and what they share - their knowledge. The field of the health care [245] is no exception, where multinational online networks for doctors and other medical specialties with a variety of orientations have appeared and are undergoing rapid development.

The **purpose** of this study is to make a detailed analysis of the development of online professional networks for doctors and other medical specialties, their scope and content, the opportunities they provide for their users, their benefits for professionals, for health managers

and educators in the field of clinical sciences and public health, as well as opportunities for the positive influence of global health networks on national health systems.

Material and methods

Documentary method, comparative analysis and empirical method were used in the study.

Results and conclusion

The author identified and researched in detail the world's largest online networks covering healthcare professionals - Semo, Doximity, Medicaldirectorsforum, QuantiaMD, Doctors' Hangout, Doc2Doc, Student Doctor Network, ASHPConnect ANANurseSpace, NursingLink, SocialRN, Healthcare Executives Network Medical Professionals, Society of Physician Entrepreneurs, Society of Physicians with Nonclinical careers. The article presents an analysis of each of them, covering the structure and possibilities for users, benefits and opportunities for future development. In conclusion, a global benefit of using online networks for medical professionals in the era of universal globalization and evidence-based medicine is noted.

Key words: *on-line networks, social networks, business profiles, doctor, medical professions*

PATIENT ENGAGEMENT WITH THE HEALTH ESTABLISHMENT BRAND AS AN EMOTIONALLY BASED RELATIONSHIP

Jekova V.

Medical University – Sofia, Faculty of Public Health „Prof. Dr. Ts. Vodenicharov, DSc“

Corresponding author:

Viktoria Jekova
viktoria_jekova@yahoo.com

Introduction and the aim of the research

Brands can imbue unique meaning to consumers, and such meaning and personal experience with a brand can create an emotional connection and relationship between the consumer and the brand. Just as many service providers have adopted branding strategies, marketers are branding the health care service experience.

Health care is an intimate service experience and emotions play an integral role in health care decision making. The **purpose** of this paper is to examine how emotional or affect-based consumer brand relationships are developed for health care organizations.

Material and methods

Documentary method, comparative analysis and empirical method were used in the conducted research.

Results and conclusion

In the course of this research, the existence of an emotional connection between the patient and the medical facility and the loyalty, commitment and advocacy on the part of the patient based on it has been conclusively proven. The article describes practical scales for measuring patient engagement with the healthcare facility that will be useful for healthcare managers.

Key words: *health establishment, emotional engagement, brand, branding, loyalty*

LEGAL FRAMEWORK, MODERN STRATEGIES FOR THE PREVENTION AND TREATMENT OF THE DISEASE MALARIA AND PROBLEMS RELATED TO THE PROVISION OF DRUG PRODUCTS FOR THE DISEASE IN BULGARIA

A. Zlatanov¹, Yanakieva A.², Mutafova I.³

¹ *Medical University – Sofia, Faculty of Public Health “Prof. Dr. Ts. Vodenicharov, DSc”, PhD student*

² *Medical University – Sofia, Faculty of Public Health “Prof. Dr. Ts. Vodenicharov, DSc”*

³ *Medical University – Sofia, Faculty of Medicine, Department of Pharmacology and Toxicology*

Corresponding author:

Alexander Zlatanov
al.zlatanov@gmail.com

Aim

To summarize and analyze the different pharmacotherapeutic options for the disease malaria and to analyze the problems in the

provision of medicinal products for the disease in Bulgaria.

Materials and methods

A review of the normative base, literature data regarding the international recommendations for the prevention and treatment of malaria was made. Different types of drug therapies were analyzed. Presented algorithm for therapeutic behavior in the prevention and treatment of malaria in Bulgaria.

Results

The various methods of prevention and treatment of malaria disease have been reviewed and analyzed. A comprehensive analysis of the legal framework was made and the legal framework regarding the disease was determined. The various types of medicinal products recommended for conducting chemoprophylaxis before, during the stay and after returning to Bulgaria from countries with malaria-active regions are presented. The problems in securing medicinal products for the disease in our country have been analyzed.

Conclusion

The provision of drugs for the prevention and treatment of malaria in Bulgaria (1) is very complicated. In reality, in 95% of cases, it is not possible to be carried out by the ordinary citizen, since the medicines for its implementation are available in the pharmacy network and there is no legal framework for their order and delivery from other countries. Practice has shown that it is necessary to have a medicinal reserve for such products, and this is perhaps the only solution for the immediate supply of medical facilities in Sofia and the country with medicines for emergency treatment of hospitalized cases with the above-mentioned parasitic diseases.

Key words: *malaria, prophylaxis of malaria, treatment of malaria*

DISASTER MEDICINE, ENVIRONMENT AND HEALTH (INCL. OCCUPATIONAL MEDICINE, HIGIENE OF YOUTH)

ORAL PRESENTATIONS

HEALTHCARE FACILITIES' VULNERABILITY DURING EARTHQUAKES

Georgiev Y., N. Radeva, H. Romanova

Medical University – Varna

Corresponding author:

Yasen Georgiev

yasengeorgiev.mu@gmail.com

Introduction

Earthquakes can have a significant impact on the healthcare system, with healthcare facilities such as the hospitals being at highest risk. They have a critical role in disaster response, providing emergency care and treatment to the injured. Understanding the vulnerability of healthcare facilities and their response to earthquakes is critical to healthcare system resilience.

Purpose

To examine the impact of earthquakes on healthcare facilities and propose measurements to implement to reduce their vulnerability.

Material and Methods

A literature search was conducted using electronic databases including Scopus and Web of Science. The search used a combination of keywords and subject headings related to hospital vulnerability to earthquakes published in English from 1990 to 2023. Articles were screened for relevance based on their title and abstract.

Results

A number of authors identified several factors that make healthcare facilities vulnerable during earthquakes, most notably building structure and age, location, and available human and material resources. Staff shortages, equipment failures, and lack of communication can further increase vulnerability, potentially putting patients and healthcare delivery at risk.

Conclusions

Reducing their vulnerability to earthquake risk requires detailed study and specific measures related to improving the preparedness and response of healthcare facilities. A multifaceted approach is needed that includes planning, training, investment in resilient infrastructure, and joint cooperation between unified rescue systems.

Key words: earthquakes, health facilities, disaster, vulnerability

TRAUMATIC INJURIES AND LONG-TERM HEALTH EFFECTS OF EARTHQUAKES AND MEASURES TO REDUCE NEGATIVE IMPACTS ON HUMAN HEALTH

Romanova H., G. Edzhabi, N. Radeva

Medical University – Varna, Faculty of Public Health, Department of Disaster Medicine and Marine Medicine

Corresponding author:

Giurdzan Edzhabi
giurdzhan1992@gmail.com

Introduction

Earthquakes are natural hazards causing mass casualties and human losses in modern society. They cause 58% of all disaster deaths. In addition to the loss of human lives, their impact is also associated with a significant number of traumatic injuries and long-term health-related consequences for injured individuals.

Purpose

To research and summarize the traumatic injuries and other health effects of earthquake casualties and to propose protective measures related to the civil protection and medical professionals' preparedness.

Material and Methods

Scientific databases as Web of Science, Scopus, PubMed and disaster database EM-DAT are used. The research covers the period from 1900 to 2023, with keywords earthquakes, trauma, injury, risk factors in combination with the Boolean operators OR and AND are used.

Results

Studies show that about 10% of earthquake-

related injuries are severe or life-threatening and the remaining 90% are mild or moderate. The most common traumatic injuries are head traumas, crush syndrome, limb fractures and soft tissue injuries. Other long term health related consequences are cardiovascular diseases and post-traumatic stress disorder. Injury and mortality rates can vary considerably depending on the risk factors.

Conclusion

Research highlights the significant negative impact that earthquakes can cause on individuals and communities, particularly in terms of traumatic injuries. Effective protection measures implementation is critical to morbidity and mortality reduction.

Key words: injuries, earthquakes, risk factors, measures

ASSESSMENT OF GROUND WATER SOURCES FOR SMALL SETTLEMENTS IN THE PLEVEN REGION WITH A VIEW TO ENSURING STANDARD DRINKING WATER ACCORDING TO THE NITRATE INDICATOR

Bankova E.¹, K. Vasilev¹, V. Birdanova¹, Tsv. Vitkova¹, D. Zlatanova², I. Traykov³

¹ Medical University - Pleven, Faculty of Public Health, Department of Hygiene, Medical Ecology, Occupational Diseases and disaster medicine

² Sofia University "St. Kliment Ohridski", Faculty of Biology, Department of Zoology and Anthropology

³ Sofia University "St. Kliment Ohridski", Faculty of Biology, Department of Ecology and Environmental Protection

Corresponding author:

Emilia Bankova
emilia_zlat@yahoo.com

Introduction

There are 123 settlements in the Pleven region with a population ranging from a few tens of inhabitants in the small villages to 12-13 thousand inhabitants in the cities, and only in the

regional town of Pleven the population numbers about 100 thousand inhabitants.

In recent decades, due to increased migration, the population in all settlements is decreasing, which actually slows down investments in infrastructure. Public water supply is realized by building independent water supply systems for almost every settlement, including water sources located in the lands outside the urbanized territories. Long plumbing is an exception for the district. Mostly groundwater is captured.

Pleven region is a typical region with developed agriculture, with the predominant cultivation of cereals (wheat, barley, oats, corn, sunflower, rapeseed, soy) associated with the need for nitrogen fertilization.

Goal

Assessment of water sources for small settlements in the Pleven region with a view to ensuring quality drinking water for public use, extracted from the ground water bodies.

Material and methods

An analysis of the public water supply of the settlements in the district was carried out.

Specific factors (geographical, soil, geological, topographical, climatic, administrative and agricultural practices) and the relative contribution of each of them to the increase of nitrate content in groundwater were analyzed.

An attempt has been made to analyze available data in Geographic Information Systems from various sources.

Results and Conclusions

Based on the conclusions about the relative contribution of the mentioned factors in the separate ground water bodies from the first aquifer, it will be possible to argue for more effective measures to limit the pollution of groundwater with nitrates from agricultural sources. This would contribute to achieving the main goal - providing safe drinking water for the population.

Key words: *nitrates, ground water sources, nitrogen fertilizers*

PREVALENCE OF MUSCULOSKELETAL DISORDERS AMONG HEALTHCARE WORKERS

Hristova L., Y. Prodanova, T. Kundurzhiev

Medical University – Sofia, Faculty of Public Health “Prof. Dr. Ts. Vodenicharov, DSc”, Department of Occupational Medicine

Corresponding author:

Lidiya Hristova

l.hristova@foz.mu-sofia.bg

Introduction

Healthcare workers are exposed to many risk factors in the hospital setting, and musculoskeletal disorders are a common problem among work-related disabilities and injuries. Manual handling and awkward postures can cause them cumulative disorders of the musculoskeletal system.

The purpose of the study is to investigate the prevalence of musculoskeletal disorders among hospital workers.

Material and methods

In the cross-sectional study, 99 subjects willing to participate were selected. The study was conducted in a general hospital for active treatment in December 2022. Data related to musculoskeletal symptoms and work absences were recorded using a modified Nordic Musculoskeletal Questionnaire, which serves to assess problems with the musculoskeletal system, evaluates severity of symptoms and contains two sections. The original questionnaire is a sensitive screening and monitoring tool and assesses symptom severity. Statistical analysis was done using SPSS version 20.

The results show: the overall prevalence of musculoskeletal disorders is 72.7%, and 88.9% have problems in two or more areas of the body. Pain/discomfort in the low back (72.2%), and back (43%) was the most common localization of musculoskeletal disorders in the last 12 months. These results are in line with data from the European Working Conditions Survey, which also shows a high rate of musculoskeletal disorders among healthcare workers.

Conclusion

Musculoskeletal disorders among healthcare

workers show a high prevalence. The findings may guide prevention efforts in the health sector and have important public health implications.

Key words: *musculoskeletal disorders, healthcare workers, Scandinavian questionnaire*

Funding: *The study is part of the project “Management of the health risk of the development of musculoskeletal diseases in modern forms of work”, financed by the Medical Science Council of the Medical University-Sofia, under the GRANT 2022 program, Contract No. D-164/14.06.2022.*

PSYCHOSOCIAL FACTORS AND WORK MOTIVATION AMONG EMERGENCY MEDICAL WORKERS

Samuneva–Zhelyabova M., R. Markova

Medical University – Sofia, Faculty of Public Health “Prof. Dr. Ts. Vodenicharov, DSc”, Department of Occupational Medicine

Corresponding author:
Marina Samuneva-Zhelyabova
m.samuneva@foz.mu-sofia.bg

Introduction

The workload of emergency medical workers varies on a daily basis and psychosocial risks affect health. Studies show a balance between intrinsic motivation and difficult working conditions.

Objective

To find a relationship between psychosocial factors and work motivation among emergency medical workers.

Material and methods

The study was conducted among 468 workers in two regional centers for emergency medical care in Bulgaria. 58.3% of the participants were female, and 41.7% were male. The mean age of the participants was 50.65 +/- 9.45. A sociological method was used - survey. The results of the study are shown using descriptive statistics and Chi-square test.

Results

Respondents who claim that psycho-social risk factors such as: shift work, incl. night, violence, stress, interpersonal conflicts affect their health are 70.3%. The distribution by position shows that 78.8% of paramedics, 73.8% of doctors, 71.7% of nurses gave a positive answer to the question, 67.8% of ambulance drivers, 44.4% of medical orderlies. The largest share of the surveyed paramedics is 30.8%, who claim that they are sufficiently stimulated to work. Workers who believe that psycho-social factors negatively affect their health, but nevertheless have enough incentives and motivation to work, are 21.9%.

Conclusions

Psychosocial risk factors influence the health and work-organizational process of workers in the field of emergency medical care. Motivation as an incentive to work is a key element for the vital performance of daily work activities.

Key words: *emergency medical workers, psycho-social factors and work motivation, occupational health and safety*

COMPARISON OF WORKING CONDITIONS IN HYBRID AND PRESENT FORM

Markova R., M. Samuneva-Zhelyabova

Medical University – Sofia, Faculty of Public Health “Prof. Dr. Ts. Vodenicharov, DSc”, Department of Occupational Medicine

Corresponding author:
Rositca Markova
r.markova@foz.mu-sofia.bg

Background

In the context of COVID-19, remote work allows workers to communicate and complete tasks from almost anywhere. There are different predictions about the development of digital technologies and the resulting changes in the place, time and way of working. There is a continuous increase in digital work in the European Union (EU).

Aim

The material aims to compare the working

conditions in hybrid and present form of persons in active working age.

Materials and Methods

The study was conducted among 112 people of active working age. The participants are distributed as follows: 38% male and 62% female. The studied groups work in administration sector, in the following ways: onsite, home office or hybrid. Sociological method - survey and statistical method - descriptive statistics were used.

Results

The respondents work as it follows: onsite: 52%, home office: 4%, hybrid: 44%. The workers who believe that they achieved a better work-life balance with the changed way of working are 48%. Also, 44% of them do not think that it is necessary to spend more time at their workplace in order to be promoted.

Conclusions

Digital work should not mean dismissing the importance of physical workplaces. It is important to analyze the risks and opportunities arising from the diverse range of existing remote workplaces and this topic should become a central theme for future research.

Key words: *Working life, labor force, working conditions, hybrid work, present work, home office*

AWARENESS OF DENTAL MEDICINE STUDENTS FROM MU-VARNA REGARDING HAND DISINFECTION

Kirilova M., E. Ivanova, M. Kolarova, D. Zhekova, Ts. Paunov

Medical University - Varna, Faculty of Public Health, Department of Hygiene and Epidemiology

Corresponding author:

Mihaela Kirilova
mihaelaa.kirilova@gmail.com

Introduction

Hygienic hand disinfection in dental practice is one of the most important components for the prevention of infections related to medical care. Knowledge of the basic rules in hand

disinfection and principles of application is built up during the theoretical and practical training of dental students.

Aim

To study the awareness of dental medicine students from MU-Varna regarding hygienic hand disinfection.

Materials and methods

An anonymous survey was conducted among 80 students of Dental Medicine from MU - Varna. The questionnaire card contains 13 closed queries related to hand disinfection in the dental practice. Sociological and statistical-mathematical methods were used.

Conclusion

Dental students' awareness of hygienic hand disinfection is relatively good. Major gaps are reported in their knowledge regarding hand sanitizer types and exposure time.

Key words: *dentistry, hand disinfection, infection control*

MOTIVATION FOR VACCINATION AGAINST COVID-19 IN BULGARIA

Rohova M.¹, N. Mihaylov¹, R. Pancheva², Ts. Paunov², N. Radeva³, S. Hadzhieva², R. Chamova², E. Ivanova², M. Kolarova²

¹*Medical University - Varna, Faculty of Public Health, Department of Health Economics and Management*

²*Medical University - Varna, Faculty of Public Health, Department of Hygiene and Epidemiology*

³*Medical University - Varna, Faculty of Public Health, Department of Disaster Medicine and Maritime Medicine*

Corresponding author:

Nikolina Radeva
rnikolina@gmail.com

Introduction

Vaccination against SARS-CoV-2 is the main strategy against COVID-19 pandemic worldwide. It creates a protection against severe pathology, hospitalization and death, and reduces the human-to-human risk transmission.

Purpose

To identify the motivation of Bulgarian adults to get vaccinated against COVID-19 upon the vaccination campaign beginning in Bulgaria.

Material and Methods

During the period April-May 2022, a cross-sectional study of 1,200 Bulgarian adults was conducted using a self-administered online survey disseminated via social media and e-mail. The questionnaire assessed the vaccination decision. Jamovi 2.2.2 software was used to summarize the collected data on sociodemographic characteristics and motivation for vaccination.

Results

712 of all respondents received at least one vaccine dose. The motivation for vaccination against COVID-19 is related to prevention of relatives' infection (92%), disease prevention (90.2%), social responsibility (89.4%) and serious illness or death of relatives (77.5%). Other statistically significant motives are the presence of chronic diseases, employer requirements and vaccination messages in the media.

Conclusion

The motivation for vaccination against COVID-19 is mainly related to disease prevention, relatives' infection risk reduction and social responsibility. To increase vaccination coverage in Bulgaria and to overcome negative public attitudes towards future vaccination campaigns a stronger engagement and close collaboration with the media and employers' organizations are needed.

Key words: *COVID-19, motivation for vaccination*

POSTERS

THE ROLE OF OCCUPATIONAL HEALTH SERVICES IN THE COMPREHENSIVE CARE OF HEALTH OF WORKING POPULATION

Tyutyundzhiev S.¹, K. Stoinova¹, S. Georgieva²

¹Occupational Health Service "Medico"

²Medical University – Pleven, Faculty of Public Health, Department of Social Medicine and Health Management

Corresponding author:

Stela Georgieva
georgieva_sl@yahoo.com

Background

Protecting the health of working population is a priority area in public health combining efforts of employers, workers and society to improve it's physical, mental and social well-being. It implies improving the work organization and the working environment, active participation of all stakeholders and promotion of personal development. Each country creates regulations and organizational units for the implementation of occupational health and safety activities.

The **purpose** of this paper is to present the scope of complex care activities for the working population health in Bulgaria.

Material and methods

An analysis of the current legislation in the field of occupational medicine and health and safety at work, and the scope of activity of the occupational health services was made.

Results

The right of health and healthy and safe working conditions were regulated in a number of documents of the Bulgarian legislation. Occupational health services are the main unit in the implementation of the regulated activities, in accordance with certain standards. The scope of activity and their main functions are related to providing assistance to employers to create an organization for safety and health at work, assessment of occupational risks and offering measures to eliminate and reduce them, analysis and monitoring of the health status of workers, training of workers and officials under the rules of health and safety at work.

Conclusion

Occupational health services are structures with polyvalent functions and occupy an essential place in protecting the health of the working population and guaranteeing healthy and safe working conditions for workers.

Key words: *health and safety at work, occupational medicine, workplace health promotion*

THERAPEUTIC APPROACHES FOR OCCUPATIONAL INJURIES OF THE PERIPHERAL NERVOUS SYSTEM IN MODERN FORMS OF WORK

Stoilova I.¹, G. Dimitrov², R. Madzharova³, M. Krastanova³

¹ *Medical University – Pleven, Faculty of Public Health, Department of Hygiene, medical ecology, occupational diseases and disaster medicine*

² *Medical University – Pleven, Faculty of Medicine*

³ *Medical University – Pleven, Faculty of Public Health, Department of Physical Medicine, Rehabilitation, Ergotherapy and Sport*

Corresponding author:

Irena Stoilova
irena.stoilova444@abv.bg

Introduction

Modern forms of work are characterized by the use of information technology, automation and remote control of production. The relative share of physical labor decreases and the load on the nervous system increases. Occupational injuries of the peripheral nervous system include radiculopathies, compression neuropathies and autonomic polyneuropathy. The treatment is medicinal, physical and operative.

The aim of the study is to improve the diagnosis, treatment and prevention of occupation-related injuries of the peripheral nervous system.

Material and methods

The object of the study are 65 cases of damage to the peripheral nervous system in persons with occupational risk. Clinical, laboratory, functional, imaging and statistical research methods were used.

Results

92% of patients showed improvement in clinical syndromes and performance of activities of daily living. 6% of the examined persons required surgical treatment.

Conclusion

Damage to the peripheral nervous system is an actual health problem for workers in modern production. Combined treatment (functional rest, medication and physical therapy) is an

appropriate approach in their therapy.

Key words: *occupational risk, peripheral nervous system, treatment*

CURRENT HEALTH PROBLEMS OF WORKERS IN THE PRODUCTION OF BUILDING MATERIALS AND PRODUCTS

Stoilova I., P. Kostadinova², M. Krastanova³

¹ *Medical University – Pleven, Faculty of Public Health, Department of Hygiene, medical ecology, occupational diseases and disaster medicine*

² *Medical University – Pleven, Faculty of Public Health, Department of Social Medicine and Health Management*

³ *Medical University – Pleven, Faculty of Public Health, Department of Physical Medicine, Rehabilitation, Ergotherapy and Sport*

Corresponding author:

Irena Stoilova
irena.stoilova444@abv.bg

Introduction

The production includes the preparation of construction materials and products such as sand, gravel, lime, cement, bricks, tiles, glass, ceramic tiles, sanitary ware, marble, reinforced concrete, metal structures, etc.

Leading harmful factors of production are the unfavorable microclimate, noise, vibrations, dust, chemical hazards, ergonomic factors and production traumatism.

Purpose of the study

Prevention and early diagnosis of health impairments among workers in the production of construction materials and products by clarifying the influence of harmful production factors and the available morbidity.

Material and methods

The object are 184 persons employed in the industry. Statistical methods were used to analyze and evaluate the incidence of temporary incapacity and current morbidity.

Results

The persons studied are structured by gender,

age, profession, risk factors. The indicators of temporary incapacity and momentary sickness for a two-year period were examined.

Conclusions

The leading place in morbidity is occupied by acute respiratory infections, diseases of peripheral nervous, musculoskeletal, respiratory and digestive systems.

Recommendations are given for the prevention of occupational diseases and promotion of health.

Key words: *production of building materials, morbidity, prevention*

THE INFLUENCE OF COVID-19 ON THE MENTAL HEALTH OF STUDENTS FROM MU – VARNA

Panteleeva M.¹, E. Ivanova², R. Chamova²

¹ *Medical University – Varna, Faculty of Public Health, Department “Disaster Medicine and Maritime Medicine”*

² *Medical University – Varna, Faculty of Public Health, Department “Hygiene and Epidemiology”*

Corresponding author:

Eliyana Ivanova
elyiva@gmail.com

Introduction

The emerging COVID-19 pandemic in China at the end of 2019 has forced various forms of adaptations in many sectors of public life, including the education system. The introduced anti-epidemic measures – physical and social isolation, remote learning, working from home – had a huge impact on global mental health.

The purpose of the study is to determine how the COVID-19 pandemic has affected mental health among students at the MU – Varna.

Methods

At the end of the COVID-19 pandemic, a sociological survey was conducted among Bulgarian and foreign students at the MU – Varna. A standardized questionnaire for anxiety research - the Coronavirus anxiety scale (CAS) - is used.

The collected data were processed with Jamovi

software package, ver. 2.3.

Results

Of the 135 students surveyed, 15.6% reported a feeling of dizziness when reading or listening to news about COVID – 19, with a significantly higher incidence among foreign students ($\chi^2 = 11.8$; $p = 0.019$). For the majority of respondents - 78.5%, the thoughts of COVID-19 did not affect sleep. We found a statistically significant difference in terms of manifestations of nausea and stomach problems when listening to news about the corona virus infection between the two groups - Bulgarian and foreign students: 0% vs. 1.4%, respectively ($\chi^2 = 10.3$; $p = 0.016$).

Conclusion

The results of the study show that the manifestations of anxiety are more pronounced among foreign students.

Key words: *COVID-19, students, anxiety, mental health*

EARTHQUAKE – CHARACTERISTICS OF THE GENERAL AND MEDICAL CONDITION

Slavova V., E. Birnikova, V. Ivanov

Trakia University - Stara Zagora, Faculty of Medicine, Department “Social Medicine, Health Care Management and Disaster Medicine”

Corresponding author:

Vanya Slavova
vslavova71@yahoo.com

Background

Earthquakes are unpredictable events. They are one of the most severe natural disasters that can cause calamitous consequences. The territory of Bulgaria is characterized by high seismic activity and is classified as “second-rank earthquake-dangerous areas” on Earth. The risk assessment suggests the occurrence of earthquakes with an expected magnitude of up to 8 on the Richter scale and intensity of the 9th and higher degree on the Medvedev-Sponhoer-Karnik scale.

Aim

Survey of the general and medical conditions in the earthquake affected area and identification of

key aspects in the overall activity on the protection and medical provision of the population.

Materials and Methods

Descriptive analysis of scientific publications and legal regulations regarding the main types of destruction causing factors, the quantitative and qualitative characteristics of medical losses and the environmental consequences of an earthquake.

Results

When an earthquake occurs, an extremely severe general condition is created, characterized by the impact of extensive territories with mass destruction of residential, administrative, industrial buildings and health facilities. The water supply, energy supply and road and rail traffic are disrupted. Breakdowns occur in communication systems. Medical losses are characterized by multiplicity, simultaneous occurrence and uneven distribution. The predominant action of the mechanical striking factor causes primarily traumatic injuries. The high risk of impact and other striking factors suggests the occurrence of life-threatening combined injuries.

Conclusion

Acquiring the necessary knowledge and skills to behave in the event of an earthquake is critical to survival and saving human lives.

Key words: *earthquake, disaster, general condition, medical condition*

HEALTH POLICY AND MANAGEMENT

ORAL PRESENTATIONS

BULGARIAN CITIZENS' SATISFACTION WITH THE QUALITY OF HEALTH CARE

Nikolova V.

Medical University – Varna, Faculty of Public Health, Department of Health Care Economics and Management

Corresponding author:

Valeriya Nikolova
valeriya.v.nikolova@gmail.com

Introduction

Patient satisfaction measure provides information on the degree of correspondence between the level of quality of medical care expected and actually received. Citizens' satisfaction with the quality of health services can be studied in several aspects: by medical activity, by medical facility, or at the level of a health system.

Aim

The study's goal is to investigate Bulgarian citizens' attitudes toward healthcare system quality and to identify the components of consumer healthcare quality.

Material and Methods

A national sociological study was conducted in November 2021 through an online survey to investigate citizens' perceptions of Bulgaria's health-care system and their need for information on its measurement and evaluation. Data on questions examining citizens' assessments of the quality of the health care system and the components of consumer quality of health care are presented. Data from 1114 survey cards were analyzed.

Results

45% of those polled are satisfied with the country's healthcare system. The proportion of respondents living in Sofia and a regional city who rate the quality as very bad is lower (9.7% and 9.3%, respectively) than the proportion of those living in a small town and a village who give the same rating (16.6% and 13.2%, respectively). Citizens support the safety of medical care and the use of modern diagnostic and treatment tools as leading components of consumer quality, with 81.9% and 80.6%, respectively.

Conclusion

Bulgarian citizens are dissatisfied with the quality of the healthcare system and lack understanding of the most important components of healthcare quality.

Key words: *satisfaction, assessment, quality of healthcare, components*

EVALUATION OF THE EFFICIENCY INDICATORS OF THE BULGARIAN HEALTH SYSTEM

Koeva-Dimitrova L., E. Atanasova

Medical University – Varna, Faculty of Public Health, Department of Economics and Health Care Management

Corresponding author:

Liubomira Koeva-Dimitrova
liubomira.koeva@mu-varna.bg

Introduction

This study is part of the research project “Health system evaluation in Bulgaria: efficiency, equity, sustainability”. Efficiency allows us to assess the performance at the output, relative to the conditions created at the input of the system. It is efficiency that proves to be the biggest challenge in health system evaluation in many countries.

The aim of the report is to research, select and evaluate indicators of efficiency of the Bulgarian healthcare system.

Material and Methods

Eurostat, OECD, NSI, NCPHA, EC International Reports.

Content analysis, comparison, ratio analysis, horizontal and vertical analysis.

The research of the necessary information for the evaluation of the different types of efficiency is based on a set of indicators selected by investigating the most used of them, which are extracted from the national conceptual frameworks for assessing health system performance and versions in 12 countries, and Reports of international organisations.

Results

Bulgaria’s per capita expenditure on health (PPP) stood at EUR 1273 in 2019 – the lowest in the EU. Nevertheless, expenditure on health per capita has increased significantly over the past decade, increasing by 83% between 2009 and 2019 compared to just 28% across the EU as a whole. When measured as a share of GDP, Bulgaria’s spending on health stood at 7.1%, below the EU average of 9.9% but higher than 11 other EU countries with comparable levels of health spending per capita.

Conclusion

There is a: lack of data, necessary for the

evaluation of efficiency indicators; Discrepancy in the data value; Need to synchronise data calculation methodologies across national and international databases.

Key words: *Efficiency, efficiency indicators, health system*

FORMS OF RECREATION IN THE CONTEXT OF PUBLIC HEALTH

Karadzhova Z.

University “Prof. Assen Zlatarov” – Burgas, Faculty of Public Health and Health Care, Department of Organization and Management of Health Care

Corresponding author:

Zlatina Karadzhova
zlatina_karadjova@abv.bg

Containment of the COVID-19 pandemic through the lockdown of entire countries and the subsequent launch of a global vaccination campaign against the virus has led to an easing of the most severe measures and a return to normality of people-to-people communication, travel and gatherings not only of outdoors, but also indoors. According to the latest EC data update of 02/02/2022, according to information from the European Center for Disease Prevention (ECDC), 81.4% of the adult population of Europe is fully vaccinated. This shows that the fear that leads people massively to the outflow of tourist services is already being overcome, and we can say that this is one of the factors for the recovery of tourist trips.

One of the main features of post-COVID-19 tourism is the requirement for health safety, i.e. the possible minimization of the danger of infection with coronavirus. This requirement implies, again, the observance of social distancing and a guarantee of the highest standards of hygiene in the catering and accommodation establishments. At the same time, the requirements of the new tourist for uniqueness and satisfaction when visiting a given destination remain unchanged. Combined, these requirements are driving the ever-growing popularity of self-drive travel. In this way, the gathering of unknown people in

public transport is avoided, time flexibility and mobility are increased, and also the possibility of visiting different from traditional tourist destinations. This, in turn, leads to the rise of little-known or non-existent pre-pandemic new tourist destinations that offer unique experiences and relative safety due to the lack of overcrowding (i.e. over-tourism).

Key words: *health safety, recreation, ecologically clean environment*

PERCEPTIONS OF BULGARIAN PATIENTS ABOUT THE RESPONSIVENESS OF THE HEALTHCARE SYSTEM

Mihaylov N.

Medical University – Varna, Faculty of Public Health, Department of Healthcare Economics and Management

Corresponding author:

Nikolay Mihaylov
Nikolay.Mihaylov@mu-varna.bg

Introduction

Responsiveness to patient expectations is one of the key dimensions in assessing the performance of a healthcare system. Research identifies eight core elements of responsiveness: dignity, autonomy, confidentiality, clarity of health communication, choice, prompt attention, social support, and quality of basic amenities. Responsiveness is a multi-component concept, and its assessment should encompass all its aspects.

Aim

This study aims to establish patients' perceptions of the healthcare system's responsiveness in Bulgaria, to determine the relative importance of its elements and the potential for their improvement.

Materials and methods

A 32-question instrument was developed and validated to investigate patients' attitudes and experiences regarding the responsiveness of the healthcare system in Bulgaria. Data were collected in a nationally representative survey of 800 respondents conducted in November 2021 via online survey, and processed with methods

from responsiveness research for aggregation and analysis and identification of potential for improvement.

Results

Patients gave the highest scores to confidentiality, followed by respect for patient dignity; the lowest scores were given to autonomy, opportunities for social support, and the quality of basic amenities. Patients considered prompt attention and respect for dignity as most important. Confidentiality and opportunities for social support had the lowest value. The most significant potential for improvement is in prompt attention and respect for autonomy, and the least for confidentiality.

Conclusion

The study of responsiveness provides guidance for improving the health system so that it contributes more to patients' well-being and creates greater trust in the system.

Key words: *responsiveness, health system, assessment, patient satisfaction*

UNIFICATION OF THE PUBLIC HEALTH INSTITUTIONS IN THE SOUTH-EAST REGION OF THE REPUBLIC OF NORTH MACEDONIA IN ONE LEGAL ENTITY AND INTRODUCTION OF A PUBLIC-PRIVATE PARTNERSHIP AS A MANAGEMENT MODEL OF THE NEW HEALTH INSTITUTION

Janev G., M. Miceva

*Polyclinic Eli-Medica Strumica, North Macedonia
General Hospital, Strumica, North Macedonia*

Corresponding author:

Gjorgji Janev
dr.gjorgji.janev@poliklinikaelimedika.mk

The time in which we live and act in itself has serious consequences for the health of the population, the number of health problems among the working population is increasing, the needs for diagnosis and treatment are increasing day by day, and hence the need for the modernization of the health institutions from the health system in the RSM is forthcoming.

Being aware of the current situation in our government health facilities, outdated equipment, poor spatial conditions, bad personnel policy, party influence, bad choice of the top management of the health facility, poor and incompetent management of the health facility for the last 25 years.

The need to change the management model of public health institutions, that is, to introduce a public-private partnership in public health institutions, is becoming more and more relevant. With the introduction of the new model, it is also necessary to consolidate smaller public health institutions with larger ones in order to provide a wide range of services to the health services labor market.

Healthcare consumers in the healthcare system have higher expectations of their healthcare providers, medical guidelines have become more detailed and demanding, and economic models around the world have shifted to a more profit-oriented framework. Many researchers in this field point to the growing inequality of regulatory and institutional frameworks in health care, which is exacerbated by each country's underlying conditions.

Key words: *public health institutions, privatization, health care, public-private partnership*

THE RIGHT TO CHOOSE SOCIAL HEALTH INSURANCE FUND. EUROPEAN STATE EXPERIENCE

Kaludov K., A. Dimova

Medical University – Varna, Faculty of Public Health, Department of Healthcare Economics and Management

Corresponding author:

Kristian Kaludov
k.a.kaludov@gmail.com

Introduction

The Bulgarian health system faces multiple challenges – unsatisfactory results regarding the health status of the population, a high percentage of out-of-pocket costs uninsured population, regional imbalances, ineffective or missing prevention. The monopoly status of the National

Health Insurance Fund (NHIF) in Bulgaria is a frequent occasion for debates in the public space, as both among citizens and specialists it is considered to be a major flaw of the healthcare system in the country. Demonopolisation of the NHIF is perceived as a way to solve a large part of the problems of the Bulgarian healthcare system and the proposal is present in the National Health Strategy for the period 2021 – 2030. The present study poses the question whether the lack of free choice of a social health insurance fund can be by itself a shortcoming of the healthcare system.

Material and methods

All EU countries were examined in terms of the type of their health system. On this basis, those of them with functioning health insurance systems were selected. Each of these countries was further examined in relation to whether health insured persons can choose their compulsory health insurance fund or whether such a right is absent. On this basis, the countries were divided into two groups: group one – countries where there is no right to choose a fund and group two – countries where citizens have a free choice. For the systematization of the countries in these two groups, information from the European Observatory on Health Systems and Policies was used. Countries in each group are compared on key indicators that are relevant to the functioning of the health system according to the latest data from Eurostat, WHO Global Health Expenditure, OECD Health Statistics and Health Consumer Powerhouse.

Results

Sixteen countries in the EU have a health insurance system. In eleven of them, citizens do not have the right to choose a compulsory health insurance fund. In general, countries where citizens cannot choose a fund are small in population. In 2019, total healthcare expenditure per capita varied widely: in the first group, between 1,317 PPP in Bulgaria (the lowest of the two groups) and 4,078 PPP in Austria, and in the second group – between 1,565 PPP in Slovakia and 4,659 PPP in Germany (highest). In general, countries in the first group have the lowest costs as a share of GDP. Public expenditure as a share of total health expenditure also varies significantly in both groups from 66% in Lithuania (first group) to 85% in Germany (second group) and Luxembourg (first group), with Bulgaria being

the exception of all the low its share of the public out of the total expenses – 60.6%. Citizens' overall assessment of health systems (according to the European Health Consumer Index 2018) in the countries studied varies widely in both groups. Bulgaria is in one of the lower places in the ranking with 591 points.

Conclusion

The analyzed data shows that the choice of a health insurance fund cannot be related either to the magnitude and structure of health care costs, or directly to consumer evaluations of the health care system. This gives reason to assume that the monopoly position of the NHIF in Bulgaria is not an immediate and fundamental problem of the health system by itself and rather, a complex approach should be adopted in solving the problems in the functioning of the health system in Bulgaria.

Key words: *health insurance, choice of insurer, EU, Bulgaria*

REDUCED VAT RATES ON MEDICINAL PRODUCTS - POTENTIAL EFFECTS OF THEIR IMPLEMENTATION IN BULGARIA

Koeva-Dimitrova L., M. Minev

Medical University – Varna, Faculty of Public Health, Department of Healthcare Economics and Management

Corresponding author:

Liubomira Koeva-Dimitrova
Liubomira.koeva@mu-varna.bg

Introduction

The specifics of Value Added Tax (VAT), including applying a unified tax rate, make it an economical and effective form of raising tax revenue. The applicable legislation allows for different tax rates for specific goods and services, including pharmaceutical products.

Aim

This study aims to analyze the international experience and current regulatory frameworks regarding the application of differentiated VAT rates on pharmaceutical products and to outline the potential effects of their introduction in Bulgaria.

Material and methods

A content analysis of the applicable legislation and available literature on the topic was conducted. Various reports, statistical data, and analyses were used to identify the potential effects. The fiscal effect of introducing differentiated VAT rates on pharmaceutical products in Bulgaria is assessed through mathematical modelling.

Results

Bulgaria is among the few EU countries that do not apply a reduced VAT rate on pharmaceutical products. Among the countries that apply reduced VAT rates on medicines, there are various tax rates and the scope of their application. The reduced VAT rate on medicines is expected to reduce their final price and limit the financial barriers to accessing pharmaceutical products, especially among low-income groups. The fiscal effect will depend on the size of the tax rate and the scope of its application.

Conclusions

Implementing such a measure should follow the assessment of all positive and negative effects to protect all stakeholders' interests.

Key words: *VAT; different tax rates; reduced tax rates; pharmaceutical products; effects*

MATERIALS BALANCE MANAGEMENT OF THE INPATIENT CARE PROVIDERS

Atanasov N.

Medical University - Plovdiv, Faculty of Public Health, Department of Health Management and Health Economics

Corresponding author:

Nikolay Atanasov
Nikolay.Atanasov@mu-plovdiv.bg

Introduction

Materials management play an important role from the point of view of the continuity and rhythm of the process of creating medical services in hospitals and health care organizations. The assess the needs of maintaining a certain inventory, as well as the costs or price for materials delivery and storage are components of the financial management in health care.

Aim

The purpose of the paper is to study the role of materials balance management from the point of view of its effects on the inpatient care providers financial condition.

Material and methods

Document analysis is used. Sources regarding the need, role and methods of inventory management in health care providers were studied. Normative documents of Ministry of Health, which impose a certain control over the financial and accounting policy are also considered.

Results

The materials management objectives and methods in the studied literary sources are strongly defined. They are related to meeting the needs of patients, the temporal rhythm and continuity of the processes of creating medical services. In this regard, the main factors or criteria for optimization the inventory are also suggested [3]. A characteristic feature of the materials balance management in hospitals is the consideration of demand uncertainty.

Conclusion

Optimal volume of inventory is a component of the irreducible balance of working capital, affecting the liquidity and assets utilization. Maintaining optimal materials balance is one of the main issues in the management of assets turnover, which is related to the health care providers overall financial sustainability.

Key words: *hospitals, working capital, current assets, inventory, assets turnover*

OUTPATIENT HEALTH SERVICES UTILIZATION IN BULGARIA

Panayotova S.

Medical University – Varna, Faculty of Public Health, Department of Health Economics and Management

Corresponding author:

Svetlana Panayotova
svetlana.panayotova@mu-varna.bg

Introduction

Conceptual models have been developed in various fields of the social sciences to analyze the utilization of health services and to study and predict the behavior of individuals when using these services. Andersen's behavioral model is one of the most comprehensive and widely applied. It includes three main groups of factors influencing the use of health services: predisposing, enabling, and need characteristics. **The aim** of the study is to analyze the utilization of health services in outpatient care in Bulgaria.

Material and methods

An online survey was conducted in January–February 2023 concerning the use of medical care. Descriptive statistical analyses were performed on the use of different types of health services - general practitioner and physician specialist (with referral and without referral). The presence of statistically significant differences between population groups was checked using the χ^2 -test of independence.

Results

The total number of respondents is 1292. The share of those who visited a general practitioner is highest among women, persons who have defined their health status as satisfactory, and those with a chronic illness. Sex, age, place of residence, health insurance status, household income, self-rated health, and a chronic disease were associated with differences in the use of specialist services with referral. Statistical differences in the use of non-referral specialist services were found in terms of gender, age, education, household income, self-reported health status, and the presence of a chronic disease.

Conclusion

The initial results show an increase in the utilization of health services compared to previous studies in the country. The results will serve to explore the relationships and influence of behavioral model factors on utilization.

Key words: *outpatient health services, utilization, factors, Andersen's behavioral model*

POSTERS

IS BULGARIAN HEALTH CARE IN SMALL TOWNS AFFORDABLE AND HIGH-QUALITY?

Ivanova A.

Medical University – Pleven, Endoscopy Center

Corresponding author:

Ana Ivanova
abivanova@abv.bg

Introduction

Healthcare in a global context is a challenge due to its social importance and dependence on funding. Every country in the world faces different types and volumes of health-related problems. Their solution is a combination of managerial and political actions. The specifics of healthcare financing are different for each country, but one basic aspect remains – healthcare must be accessible to every single citizen of the world. In our country, the main emphasis on accessibility is small settlements and remote regions. To date, there are still areas without any medical help. The main question concerning healthcare in our country at this moment is: can the population who live in remote regions have access to quality healthcare? Do they have the necessary funds to visit the major cities? Does the amount of healthcare offered in large cities (some of them with 5.6 or more hospitals and countless practices from pre-hospital activity) correspond to the quality of medical services offered?

Aim

To make a comparison by region/number of population and their access to healthcare.

Materials and methods

Through an analysis of official data of the NSI (National Statistic Institute), as well as through a literature review, a comparison was made of the saturation of different regions/regions/cities with inpatient and outpatient care.

Results

In our country as of 31.12.2021 (NSI, MEDICAL AND HEALTH FACILITIES AS OF 31.12.2021 BY STATISTICAL REGIONS, 2022) there are 341 medical facilities (with nearly 55 thousand

open hospital beds) for hospital activity; over 2,130 outpatient treatment facilities (with over 1,200 open hospital beds); other medical and health facilities (over 150, with over 1900 open beds). However, they are mainly distributed in large cities, in most small municipalities. The ratio in different areas and regions varies. Conclusion In conclusion, it can be argued that equal access to health services in Bulgaria is limited. In regions with a low standard of living, there is access to a small number of medical facilities and practices.

Conclusion

In conclusion, it can be argued that equal access to health services in Bulgaria is limited. In regions with a low standard of living, there is access to a small number of medical facilities and practices.

Key words: funding, healthcare management, public health, healthcare quality

THE MIDWIFERY PROFESSION IN BULGARIA – CONTEMPORARY TENDENCIES

Gospodinova P.¹, G. Chamova¹, Sv. Dimitrova¹, P. Vracheva², B. Parashkevova¹

¹ *Trakia University – Stara Zagora, Medical Faculty, Department of Social Medicine, Health Care Management and Disaster Medicine*

² *Trakia University – Stara Zagora, Medical Faculty, Department of Health Care*

Corresponding author:

Penka Gospodinova
p_gospodinova76@abv.bg

Introduction

The essential role of midwives in all aspects of the protection of sexual and reproductive health and of maternal and child healthcare gives rise to the need to look for ways to attract and retain them in the profession. For this, first of all, the characteristics of the human resource in the midwifery profession must be explored.

Aim

The tendencies in personnel provision and the

factors leading to an outflow from the midwifery profession in the Republic of Bulgaria to be studied and analyzed.

Methods

analysis of normative documents, scientific reports and data bases of different institutions (National Statistical Institute, Bulgarian Association of the Professionals in Health Care and Regional Health Inspection) selected according to the aim of this study.

Results

After the introduction of the organizational changes in the Bulgarian health care system, including the health insurance funding model in 1999, a trend towards a significant decrease in the number of working midwives was observed. Their average age is increasing. Job satisfaction decreases. Low pay, long 12-hour shifts, night work, emotional and physical exhaustion and stress are some of the discussed factors for reducing the number of midwifery practitioners. Fewer and fewer young people are choosing this profession, and at the same time the number of emigrating health professionals is significant.

Conclusions

Negative demographic trends among practicing midwives in the Republic of Bulgaria are established. There is an outflow from the “Midwife” profession. The low level of job satisfaction due to certain factors is discussed as the reason for this. This research can serve the senior health management to deal with the human resource crisis.

Key words: “Midwife” profession, tendencies, decreased number, increased average age, low job satisfaction, factors

STUDENT'S SECTION

ORAL PRESENTATIONS

HEALTH EFFECTS OF GLOBALIZATION

Georgieva S.¹, B. Asenova², L. Filipova³

¹ Medical University – Pleven, Faculty of Public Health, Department of Social Medicine and Health Management

² Medical University – Pleven, Medical College, student

³ Medical University – Pleven, Faculty of Pharmacy, student

Corresponding author:

Stela Georgieva
georgieva_sl@yahoo.com

Background

Globalization is a process of increasing economic, social, technical, political and cultural interconnections and relations between countries, organizations and people. Depending on the sphere it affects, globalization can be economic, social, cultural, technological.

The aim of this paper is to analyse the effects of globalization on health and the health systems performance.

Material and methods

Content analysis of literary sources, databases, strategies, documents from international scientific events and meetings.

Results

Globalization implies an overexploitation of natural resources and a dilution of responsibility and control on their protection. As a result, global environmental problems arise (global warming, pollution, reduction of water resources) with a negative impact on the health of large groups of people. Free trade and the rapid movement of people over long distances and beyond national borders creates conditions for epidemic and pandemic spread of diseases and risk exposures. The globalization of labour market creates conditions for unemployment and the exploitation of cheap labour, which leads to economic and social inequality, and to deepening of health inequalities. Subjecting national health systems to the triple burden of infectious, chronic non-infectious diseases and health problems associated with globalization (pandemics, medical tourism), leads to their excessive burden and an increase in health costs. On the other hand, globalization creates an opportunity to unite the efforts of countries to achieve global health security.

Conclusion

The process of globalization has a pronounced effect on health, which gives reason to talk about global public health problems and global health.

Key words: globalization, global health, health

expenditure, health system, triple burden of diseases

BURDEN OF CANCER IN BULGARIA AND THE EUROPEAN UNION – A COMPARATIVE ANALYSIS

Georgieva R.¹, A. Georgieva², M. Kamburova³

¹ *Medical University - Pleven, Faculty of Medicine, student*

² *Medical University - Pleven, Faculty of Public Health, student*

³ *Medical University - Pleven, Faculty of Public Health, Department of Social Medicine and Health Management*

Corresponding author:

Mariela Kamburova
mariela_kamburova@yahoo.com

Introduction

The Global Burden of Disease studies analyse data on premature death and disability from diseases and injuries. The profile of Bulgaria in studies on the Global Burden of Diseases contains comparative data for 2007 and 2019.

The aim of the study is a comparative analysis of the burden of the leading risk factors for/and oncological diseases in Bulgaria and the EU.

Material and methods

Secondary data from national and international sources were used: National Centre for Public Health and Analysis, Country Cancer Profile 2023, Eurostat.

Results and discussion

A higher prevalence of cancer risk factors such as smoking, alcohol consumption, overweight and obesity in Bulgaria, compared to the other EU member states, is found.

Bulgaria is among the EU countries with the lowest coverage of screening programs for breast, cervical and colorectal cancer. The high differences in the participation levels of different socio-economic groups of the population being established.

Bulgaria has the lowest age-standardized incidence of oncological diseases in the EU – 458 per 100,000 people, and the death rate from

oncological diseases is slightly below the EU average.

Bulgaria is the only EU country to report an increase in cancer mortality from 229/100,000 people in 2011 to 242/100,000 in 2019. The increase is higher for men (+8%) than for women (+5 %).

Conclusion

An urgent priority for the country is the adoption of a national cancer strategy, revealing existing trends and inequalities, and offering a comprehensive and sustainable approach to monitoring the quality of care.

Ke ywords: *global burden of disease, cancer, strategy*

AIR POLLUTION IMPACT ON MORTALITY IN ROMANIA

Fragkiski-Ioanna S., A. Velkova

Medical University – Sofia, Faculty of Public Health “Prof. Dr. Ts. Vodenicharov, DSc”, Department of Social Medicine,

Corresponding author:

Angelika Velkova
avelkova@abv.bg

Introduction

Climate change and human health are directly influenced by air pollution and the different atmospheric compounds. Particulate matters have the most detrimental effect on health. Populations in Balkan countries breathe the most polluted air in Europe which causes similar health problems and similar rates of premature mortality.

Objective

To analyse the impact of air pollution on the death rates in Romania.

Material and methods

We extracted data on death rates due to air pollution by cause, age group, sex, and type of air pollutant from the database of the Global Burden of Disease Study 2019 for the period 1990-2019.

Results

There was a steady decline in the death rates from air pollution from 1990 to

2019, yet infants and people at age over 50 years continue to be the most affected by particulate matter. Although the death rate in infants attributable to air pollution dropped 7,5 times and in the group over 70 years decreased 2,6 times since 1990, in 2019 the death rates for both groups remain respectively 1,85 times and 51,87 times higher than the death rates in ages 20-49 years. Mortality due to several chronic non-communicable diseases was associated with air pollution. The particulate matter caused most of these deaths, except for COPD mortality which resulted mainly from ambient ozone pollution.

Conclusion

Reduction of air pollutants in Romania has a positive impact on human health, but the emissions of particulate matter are increased over the last 30 years, causing cardiovascular diseases, cancers, and metabolic disorders. A systematic approach is required to improve air quality and limit the mortality attributable to air pollution.

Keywords: *air pollution, mortality, particulate matter*

ATTITUDE TOWARDS THE EDUCATIONAL PROCESS OF STUDENTS FROM THE PROFESSIONAL FIELDS OF “PUBLIC HEALTH” AND “HEALTH CARE”

Radionova Z.¹, V. Birdanova², P. Bakardzhiev³

¹ *Medical University – Pleven, Faculty of Public Health, Department of Social Medicine and Health Management,*

² *Medical University – Pleven, Faculty of Public Health, Department of Hygiene, Medical Ecology, Occupational Diseases and Disaster Medicine*

³ *Medical University – Pleven, Faculty of Public Health, Student, 3rd year, Specialty: “Protection and Control of Public Health”,*

Corresponding author:

Zdravka Radionova
zradion@yahoo.com

Background

Academic achievements of university students depend on their attitude towards the learning process. Crucial factors are engagement and motivation to learn, which determine the discipline and the amount of time and effort students put into their studies.

Aim

To determine university students' engagement and motivation to learn and to propose approaches to improve them.

Materials and Methods

A direct group standardized survey was conducted with 134 undergraduate students (79% female), 2nd year, from the professional fields of “Public Health” and “Health Care”.

Results

More than half of students attend classes willingly (68%), have lecture attendance above 80% (55%) and systematically prepare for practicums during the semester (55%), but only ¼ report learning the material in advance. Learning difficulties are encountered by 42%. Most students (35%) reported that they could not remember a large amount of information. Half (51%) of the respondents put away their mobile phones during lectures. Over 1/3 (38%) of the students cheat (copy) during an exam, with 1/3 saying the conditions of the exam allow it and because everyone does. During the semester, 54%, and during the session, 48% of the respondents spend up to 5 hours per week, respectively per day, for self-studying. 36% of students work, and during a session the share of those who regularly go to work increases. More than half of students (55%) have poor exam grades.

Conclusion

Recommendations to students are aimed at rearranging priorities, improving academic discipline, and spending more time on self-study to increase academic success.

Key words: *learning process, learning motivation, academic achievement*

EXERCISE REHABILITATION TRAINING IN PATIENTS WITH FIRST-DEGREE ARTERIAL HYPERTENSION

Magova G., T. Megova

Medical University – Pleven, Faculty of Public Health, Department of Medical Rehabilitation, Occupational Therapy and Sports

Corresponding author:

Tanya Megova
tmegova@abv.bg

Introduction

Arterial hypertension is characterized by a prolonged increase in arterial pressure due to a violation of its regulating mechanisms. Most often, people with persistently elevated arterial blood pressure, over 40-50 years of age, suffer from arterial hypertension.

Aims

Presentation of a sample rehabilitation program for patients with arterial hypertension.

Material and methods

This rehabilitation program was implemented in 2 patients with first-degree arterial hypertension. It includes the goal, tasks, and means of rehabilitation, as well as dosage, methodical instructions and contraindicated exercises. Each rehabilitation procedure includes: a preparatory, main, final part and a recovery period. Exercise dosing criteria are arterial blood pressure, heart rate, and Borg scale for fatigue and dyspnoea.

Results

In patients who completed the rehabilitation program three times a week, for three months, there was a decrease in arterial blood pressure of 3-5mm/Hg for systolic arterial pressure and 5-8mm/Hg for diastolic arterial pressure, as well as a reduction of subjective complaints.

Conclusion

The applied rehabilitation program is well tolerated by the patients.

Key words: *Arterial hypertension, rehabilitation program, heart rate*

KINESITHERAPY IN PATIENTS WITH VARICOSE VEINS

Magova G., T. Megova

Medical University – Pleven, Faculty of Public Health, Department of Medical Rehabilitation, Occupational Therapy and Sports

Corresponding author:

Tanya Megova
tmegova@abv.bg

Introduction

Venous stasis of the lower limbs may be due to circulatory, gravitational, mechanical causes or to pathological inflammatory changes in the venous walls.

Aim

Presentation of a sample rehabilitation program for patients with varicose veins.

Material and methods

This rehabilitation program was implemented in 3 patients with varicose veins. It includes the goal, tasks, and means of rehabilitation, as well as dosage, methodical instructions, and contraindicated exercises. Each rehabilitation procedure includes: a preparatory, main, and final part. Exercise dosing criteria are Borg scale for fatigue and dyspnea and the presence of other subjective complaints (pain in the lower limbs).

Results

In the patients who completed the rehabilitation program three times a week, for two months, there was a decrease in subjective discomfort when performing activities of daily living.

Conclusion

The applied rehabilitation program is well tolerated by the patients. No complications were observed during its application.

Key words: *varicose veins, rehabilitation program, exercises*

MEDICAL REHABILITATION AND OCCUPATIONAL THERAPY FOR INJURIES AND DISEASES OF THE LOWER LIMBS

Getova V., N. Mihailova

Medical University – Pleven, Faculty of Public Health, Department of Medical Rehabilitation, Occupational Therapy and Sports

Corresponding author:

Nina Mihailova
mihailova.nina@abv.bg

Introduction

There are a certain number of opportunities for the application of work activities involving the lower limb. The lower extremity is used in work primarily as a source of power, and when modifying labor processes and activities, it can be used for regulation and direction of production process.

Aim

To present the methodology of ergotherapy in the recovery of the lower limbs in case of injuries and diseases, since there is a feature - in the upper limb, the flexors are mainly involved in work, and in the lower limb, this applies mainly to the extensor muscles.

Material and methods

A literature review of Bulgarian and foreign sources was made, as well as the need along with kinesitherapeutic means, to select motor activities suitable for the lower limb, which can be used to guide individual processes of a relevant work activity.

Results

Through occupational therapy, the functions of the lower limb are restored, the psycho-emotional state of the patient is improved, and habits for daily activities are formed.

Conclusion

Isolated exercise of the joints of the lower limb with occupational therapy is difficult. The movements almost always involve the ankle, knee, and hip joints. They can be trained with types of work using mostly the knee joint as far as flexion and extension are concerned. In this case the improvement of mobility takes place in a limited volume.

Key words: injuries, occupational therapy, work activities

MEDICAL REHABILITATION AND OCCUPATIONAL THERAPY FOR CONGENITAL ANOMALIES OF THE UPPER LIMB - POLYDACTYLY AND SYNDACTYLY

Getova V., N. Mihailova

Medical University - Pleven, Faculty of Public Health, Department of Physical Medicine, Medical Rehabilitation, Ergotherapy and Sports

Corresponding author:

Nina Mihailova
mihailova.nina@abv.bg

Introduction

The majority of isolated congenital musculoskeletal anomalies and developmental disorders are associated with gene mutations. Various methods are used to prove heredity and the mode of transmission, such as family tree analysis, familial prevalence, studies on fraternal and identical twins, and others.

Aim

To present the kinesitherapy and ergotherapy methodology in the treatment of children with syndactyly and polydactyly who are surgically treated.

Material and methods

A literature review of Bulgarian and foreign sources and other scientific literature on the subject was made. Selection of motor activities suitable for children, to which they have preferences.

Results

The study finds that the operative corrections allow for the normal motor development and fine motility of the child's upper limbs through adequately directed rehabilitation and occupational therapy.

Conclusion

Depending on the clinical course of recovery of the child's motor capabilities, increasing the load and expanding the range of kinesitherapy and ergotherapy means should be carried out strictly individually and gradually.

Key words: *rehabilitation, kinesitherapy, ergotherapy, congenital anomalies*

POSSIBILITIES OF HOME REHABILITATION IN A PATIENT WITH POLYTRAUMA - EVALUATION OF EFFECTIVENESS

Hristov G., L. Toteva

Medical University – Pleven, Faculty of Public Health, Department of Physical medicine, rehabilitation, occupational therapy and sports

Corresponding author:

Lyubomira Toteva
lestioianova@abv.bg

Abstract

Rehabilitation of a polytrauma patient is challenging for both the rehabilitator and the patient. The combination of different types and severity of damage significantly complicates the healing process. The recovery period for the patients is long and after their discharge from the hospital, in the absence of other alternatives, rehabilitation takes place at home.

Aim

Evaluate the possibilities of home rehabilitation in a patient with polytrauma after a car accident and evaluation of its effectiveness.

Material and methods

A four-and-a-half-month home rehabilitation program was implemented in a polytrauma patient, including a tibial plateau fracture, a distal radius fracture; head wound and soft tissue trauma in the chest area. The rehabilitation program includes passive and active exercises, manual muscle tissue techniques, resistance exercises, bicycling. Evaluation of the patient condition and results was done by manual muscle testing, goniometry, centimetry, visual-analog pain scale.

Results

Analysis of knee range of motion shows an improvement up to 105° in flexion and fully restored extension. In the wrist joint, an improvement up to 45° is evident in flexion, 40° in extension, 50° in supination, 60° in pronation. Manual muscle testing values showed

improvement in all movements tested. The pain during movement has decreased from 6 to 3 for the wrist joint and from 7 to 2 for the knee joint.

Conclusion

Home rehabilitation for patients with polytrauma has its place in the recovery process and is a good alternative in the absence of the possibility of long-term rehabilitation in an outpatient facility.

Key words: *polytrauma, home rehabilitation*

ANALYSIS OF THE KNOWLEDGE OF THE STUDENTS OF THE MIDWIFE SPECIALTY OF MEDICAL UNIVERSITY PLEVEN REGARDING HPV AND ITS ASSOCIATED DISEASES

Stoyanova E.¹, M. Kamburova², E. Mitkova³, V. Rangelova⁴

¹*Medical University - Pleven, Faculty of Health Care, Department of Midwifery*

²*Medical University - Pleven, Faculty of Public Health, Department of Social Medicine and Health Management*

³*Medical University - Pleven, Faculty of Health Care, Student in the specialty "Nursing"*

⁴*Medical University - Pleven, Faculty of Pharmacy, Student in the specialty "Pharmacy"*

Corresponding author:

Elitsa Stoyanova
evil_eli@abv.bg

Introduction

Good health literacy and prevention are the main methods to reduce the spread of human papillomavirus (HPV) and the development of HPV associated diseases. Knowledge of persons at a young age about risk factors and ways to prevent infection, is the basis of primary prevention.

The aim of the research is to analyse the knowledge acquired during the training of the students of the "Midwife" specialty in Medical university Pleven regarding the HPV and HPV associated diseases.

Materials and methods

A survey among university students of the first

year of Bulgarian language education at the MU Pleven, through a direct group questionnaire was conducted. The number of the students covered is 445. 284 (63.8%) responded, of which 12 were from the “Midwifery” specialty. The same survey was conducted among fourth year students in November 2022. The respondents were 12 (75%) out of 16 invited.

Data processing was done with software program product MS Office Excel 2019 and SPSS v.28.

Results

More than half (58.3%) of the first-year midwifery students are aware of HPV infection. Among them, a quarter (25%) are familiar with the risk factors for HPV and its associated diseases, and in the fourth year, all respondents declared knowledge of the studied problem. The majority of those covered: 66.7% of freshmen and 100% of fourth-year students are aware of the existence of the HPV vaccine.

Conclusion

During the training, the students of the specialty “Midwifery” of MU-Pleven acquire sufficient knowledge about the risk factors and vaccine prevention of HPV-associated diseases.

Key words: HPV, midwife, health literacy

ADVANCED BREAST CANCER - CHALLENGES FOR NURSING HEALTH CARE. CASE SERIES

Georgieva I.¹, P. Gergova², S. Lishkovska², S. Chabrakova², D. Dimitrov¹, M. Karamanliev¹, I. Petrova¹

¹ University Hospital “Dr. G. Stranski” – Pleven, Clinic of Oncological Surgery

² Medical University - Pleven, Faculty of Health Care, Department of Nursing Surgical Care

Corresponding author:

Polia Gergova
poliakomitska@abv.bg

Introduction

Breast cancer (BR) is the most common malignant cancer in women in our country and in most countries. In the 20th century, the successful inclusion of radiation therapy,

chemo- and hormone therapy, corresponding to the development of treatment strategies leads to obtaining the best treatment results and maintaining a good quality of life for patients. Despite advances in medicine, diagnostics, technology and modern methods, some women with breast cancer seek help and treatment in the final stage of the disease.

Objective

To present a clinical case series of patients with advanced breast cancer and the specifics of nursing care in these patients.

Material and methods

Documentary, analysis, interview

Results and Discussion

We retrospectively and prospectively studied four representative cases - causes of the disease, stages, diagnosis and treatment options. We monitored their condition after discharge. We analyzed the reasons for the late treatment decision and the relationship with age, social status and place of residence. We compiled and followed individual plans depending on the needs of the respective patients together with a team of surgeons, oncologist and psychologist.

Conclusion

Treatment options for advanced breast cancer are narrowing and the prognosis is poor. Health care specialists, as part of the multidisciplinary team, have a significant role and occupy an important place in the initial examination, diagnosis and complex treatment of patients with advanced breast cancer.

Key words: health care professionals, advanced breast cancer, duties, responsibilities, challenges

POSTERS

REGIONAL HEALTH INEQUALITIES IN BULGARIA AND COVID-19

Ivanova B., D. Tsanova, E. Mineva-Dimitrova

Medical University – Pleven, Faculty of Public Health, Department “Social Medicine and Health Management”

Corresponding author:

Dima Tsanova
d_krumova@abv.bg

Background

The districts of Bulgaria differ significantly in socio-economic development, but also in a number of demographic and health indicators. The pandemic caused by SARS-CoV-2 put the health system to the test and made health inequalities even more visible. **The study aims** to analyse the relationship between the death rate due to COVID-19 in various districts with the ageing of the population, availability of doctors and hospital beds for active treatment.

Material and methods

An ecological epidemiological study was conducted. NSI data were used, which are statistically processed with SPSS. The Pearson coefficient was used to establish a correlation.

Results

The analysis showed that the regions with the highest death rate due to COVID-19 are Kyustendil (642.44‰), Vidin (591.15‰), Montana (533.98‰), Gabrovo (533.48‰) and Vratsa (531.90‰). These are one of the districts with the highest level of ageing of the population (%65+) - respectively - 27.77%, 29.69%, 26.23%, 29.11% and 24.47%, as well as among the regions with low availability of doctors - 36.6‰, 35.5‰, 34.9‰, 37.6‰ and 38.1‰. As for the availability of hospital beds for active treatment - Vidin, Kyustendil and Vratsa are with lower availability than the average for the country of 60.8‰.

A moderate correlation between the death rate due to COVID-19 and the ageing of the population has been established - coefficient $r=0.503$ and the availability of doctors - $r=0.611$ ($p<0.05$). In the case of the availability of hospital beds - no correlation has been detected.

Conclusion

Regional health inequalities create the need for a long-term health policy that will improve the population's health status and the effective functioning of the healthcare system.

Key words: *COVID-19, ageing of the population, availability, mortality*

ANTENATAL CARE AMONG AT-RISK POPULATIONS

Ivanova V.¹, E. Biserova¹, M. Milanova², R. Vasileva³, A. Georgiev⁴

¹ *Medical University- Pleven, Faculty of Medicine, Fourth year student*

² *Medical University- Pleven, Faculty of Medicine, Fifth year student*

³ *Medical University- Pleven, Faculty of Public Health, Department of Hygiene, Medical Ecology, Occupational Diseases and Disaster Medicine*

⁴ *Medical University- Pleven, Faculty of Medicine, Department of Obstetrics and Gynecology*

Corresponding author:

Anton Georgiev
antongeorgiev@abv.bg

Introduction

Antenatal care is the follow-up of the pregnancy from the moment the condition is established until delivery, including 40 days after it. The main commitment of the women's consultation is the early detection of complications, screening for congenital malformations of the fetus and hereditary diseases. The World Health Organization recommends prenatal visits at least eight times during pregnancy and starting prenatal care in the first trimester. In our country, those with health insurance are guaranteed a minimum of 10 visits, while for the uninsured, until recently, the Ministry of Health paid for only one visit to an obstetrician-gynecologist. The **aim** of the study was to identify the factors leading to inadequate antenatal care among pregnant women from risk groups.

Material and methods

A questionnaire survey was conducted by direct questioning on a standardized questionnaire after obtaining informed consent.

Results

Our study found low attendance due to lack of health insurance (28%), distance from a specialist (58%) and lack of awareness. Refusal of antenatal care is associated with age (very young and elderly). High parity, cultural, ethnic and religious practices and educational attainment influence the motivation to attend

antenatal care.

Conclusion

The results show disinterest and refusal to attend antenatal care among pregnant women from marginalized groups. Targeted outreach is needed to motivate women.

Keywords: prenatal care, pregnant women, newborns, women's consultation

ANALYTICAL MEASUREMENTS FOR THE PURPOSES OF APPLIED DIETETICS

Ivanova A.¹, Tsv. Vitkova², V. Birdanova², I. Zhivkova³, Ts. Kunova³

¹ Medical University-Pleven, Student Specialty "Medicine",

² Medical University- Pleven, Faculty of Public Health, Department of Hygiene, Medical Ecology, Occupational Diseases and Disaster Medicine

³ Medical University-Pleven, Faculty of Public Health, Student, Specialty "Protection and Control of Public Health"

Corresponding author:

Vanya Birdanova
Vania.Boicheva@mu-pleven.bg

Introduction

The increase of portion size is an important reason for the increase in caloric intake and the associated changes in body weight, respectively overweight and obesity. The use of measuring utensils in the preparation and serving of food is considered an effective method of portion control and helps the consumer to visualize his individual nutritional energy intake.

Goal

To update the standard kitchen measurements and quantities of the most frequently used Bulgarian food products for the needs of practical dietetics.

Material and methods

We measured the weights of 20 of the most frequently used in modern Bulgarian households' assortments of tea cups, tablespoons and teaspoons, selected at random. Based on the measurement, 1 standard teacup, 1 standard tablespoon and 1 standard teaspoon are determined. The weights of the main food

products have been updated, equated to the updated standard kitchen measurements. The measurement was made with a professional technical electronic balance EMV 1000-2, with a weight range of 1000 g, the ability to read 0.01 g, reproducibility 0.01 g, linearity ± 0.03 g in the "Physical Factors" laboratory of the "Hygiene and medical ecology", Medical University - Pleven.

Results

The average measured amount per 1 modern teacup is 269 ± 36.86 g (Me -267.5); per 1 tablespoon - 9.01 ± 1.16 g (Me-9 g); per 1 teaspoon - 4.47 ± 0.49 g (Me - 4.3). The weights of 20 basic food products have been determined, based on the updated standard quantities.

Conclusion

The obtained results, based on precise analytical measurements, would facilitate the work of medical specialists in the prevention and diet therapy of obesity.

Key words: kitchen measurements, applied dietetics, obesity

DOES TELEPHARMACY HAVE A PLACE IN BULGARIA?

Shopov A.¹, A. Mihaylova², A. Kashaykova¹, A. Armenkova-Todorova¹, M. Semerdzhieva²

¹ Medical University – Plovdiv, Faculty of Public Health, Student specialty

"Pharmaceutical Business Management"

² Medical University – Plovdiv, Faculty of Public Health, Department of Health Care Management

Corresponding author:

Atanas Shopov
atanasshopov1992@gmail.com

Introduction

Telemedicine provides us innovative opportunities to improve the quality of health care through the use of telecommunication services. Telemedicine and telepharmacy are related in their main goal of providing access to pharmaceutical and health care,

rational drug use for the health and well-being of the patient.

Aim

The purpose of the study is to present the advantages and disadvantages of the application of telepharmacy and to compare the practices in different countries regarding the current application and the possibilities for this in Bulgaria.

Material and methods

A systematic literature review was made, by keywords in various databases, such as: Google Scholar, Elsevier, Scopus, Research Gate. Methods for improvement in various sectors of application of telepharmacy and telemedicine are analyzed.

Results

The reviewed data from different fields of application of telemedicine and telepharmacy were compared. Practices for the application of training programs related to telephone pharmacy in the training of pharmacists were examined. The problem of the lack of pharmacists in small settlements is covered. The application of new technology can also improve the shortage of health care professionals. Incorporating telepharmaceutical services for the needs of oncology patients and providing pharmaceutical care is an advantage.

Conclusion

Information communication technologies provide advantages for the implementation of telepharmaceutical services, both for remote settlements and the care of specific groups of patients, as well as for addressing the lack of pharmacists and pharmacies in sparsely populated areas. But telepharmacy is still a big challenge for the pharmaceutical sector in Bulgaria, as the main difficulty is the legislative framework in the sector and the incomplete electronicization in healthcare.

Key words: *telepharmacy, regulation, information technology, pharmaceutical care, opportunities*

ON VOLUNTEERING AS AN INTERNAL NEED: SHARING ONE'S OWN EXPERIENCE

Atanasov E.

Trakia University – Stara Zagora, Medical Faculty, Student speciality “Physician assistant”

Corresponding author:

Emanuil Atanasov
emma_nuel@abv.bg

Introduction

Volunteering has accompanied the development of humanity from the deepest antiquity. Its manifestations are different in different areas of social life. The term itself contains perhaps the most important distinguishing feature of this type of activity as an internal need of the person, an expression of free will to support vulnerable people and their communities.

Aim

To present one's own experience of volunteering in the community: content of the activities, motivating factors and challenges for the volunteer in critical situations such as the Covid-19 pandemic.

Material and methods

Documents related to one's own volunteering activity were used as a positive role model, as well as official documents of various organizations related to volunteering.

Results and discussion

The activities, own experiences in the process of their implementation, motivating factors and challenges are described, especially during the Covid-19 pandemic situation. Emphasis is also placed on important features of voluntary work in a team and from the point of view of organizational and logistical aspects of volunteering.

Conclusion

Volunteering is much more than concrete activities it is an inner need and satisfaction, the result of the influence from the earliest childhood of the family environment, upbringing in philanthropy and Christian values.

Key words: *Volunteering, Covid-19 pandemic, humanity*

GUIDE FOR AUTHORS

Journal of Biomedical and Clinical Research (JBCR) is a peer reviewed, multidisciplinary scientific journal of Medical University - Pleven, open to scientists from all fields of medicine and related areas.

JBCR publishes reviews, original articles and communications in the field of biomedical, clinical, public health and health care research, medical education, case reports, written in English. ***JBCR*** is published two times per year.

JBCR follows uniform requirements for manuscripts submitted to biomedical journals, developed by the International Committee of Medical Journal Editors (www.ICMJE.org).

All human and animal studies reported should have been approved by the Institutional Ethical Committee in accordance with the ethical criteria concerning experiments involving human beings or animals.

Submission of an article implies that the work has not been published previously (except in the form of an abstract or as part of a published lecture or academic thesis), that it is not under consideration for publication elsewhere, that its publication is approved by all authors, and tacitly or explicitly - by the responsible authorities where the work was carried out. Authors should take responsibility for the integrity of the work as a whole, from inception to published article.

Authors are requested to disclose any possible conflicts of interest. Affiliation of authors submitting manuscripts in their role as members of industrial or government organizations may constitute sufficient disclosure. Academic, nonprofit, consulting, advocacy, and all other authors are asked to disclose in a footnote all sources of financial and material support for the studies and manuscripts submitted.

Each manuscript must be accompanied by a submission form, signed by each author. This should include the name and mailing address, telephone and fax numbers of the corresponding author, who is responsible for communications with the other authors about revisions and final approval of the proof.

1. Submission of papers

Two copies of the manuscripts (on one side of the paper only), written in English, accompanied by a CD (labeled with the file name) should be submitted to:

Asya Staneva

Editorial Office of *Journal of Biomedical and Clinical Research*

Medical University

1, St. Kliment Ohridski, Str.

5800 Pleven, Bulgaria

Tel. 064/884 291

e-mail: jbcr@mu-pleven.bg

2. Presentation of manuscript

Manuscripts should be submitted as a text file saved in Microsoft Word 2003. The entire text should be typed, using font Times New Roman, 12 points; double spaced and wide (2.5 cm) margins on standard A4; left aligned. Please avoid full justification, i.e., do not use a constant right-hand margin). Headings should be bold; only the first letter of the first word should be capitalized, left aligned. Divide your article into clearly defined sections. Do not use bullets for subsections. They should be numbered 1.1 (then 1.1.1, 1.1.2, ...), 1.2, etc. Any subsection may be given a brief heading. Each heading should appear on its own separate line. Ensure that each new paragraph is clearly indicated (use "Enter" only at the end of paragraphs). There should be no blank lines between paragraphs. Do not use tabs or spaces to create indents. Use the Symbol font for symbols and special characters. Use decimal points, not commas (e.g. 5.06); use a space for thousands (10 000 and above). Present tables and figure captions on separate pages at the end of the manuscript. Number all pages consecutively with Arabic numerals on the right time reports - 6.

Each manuscript should follow the following sequence: title page; summary; text (Introduction, Materials/Patients and Methods, Results, Discussion, Conclusions); references; tables (table complete with title and footnotes on a separate page); figure legends.

Nonconforming manuscripts (e.g., improper format, excessive length) may be returned for technical revision prior to undergoing peer review.

Title (first) page

The title should be concise and informative.

Names of author(s). Full first name and last name, and middle-name initials of all authors.

Affiliations. State the author's (authors') affiliation addresses (where the actual work was done) below the names. Indicate all affiliations with a lower-case superscript digit (number) immediately after the author's name and in front of the appropriate address. The name and institution of the first author (and other authors of the same institution) should not bear any number.

Corresponding Author. Phone, address, e-mail.

Acknowledgements. Authors should identify financial support for research, including information on grants received. Technical help, critical reviews of the manuscript and financial or other sponsorship should be acknowledged.

Second page

Summary. A concise and factual summary is required (not more than 200 words). The abstract should briefly state the purpose of research, principal results and major conclusions. References should therefore be avoided, but if essential, they are to be cited in full. Abbreviations should be avoided, but if essential they must be defined at their first mention in the abstract itself.

Key words. Immediately after the abstract, provide a maximum of 5 keywords, strictly referring to the Medical Subject Headings list of the Index Medicus (<http://www.nlm.nih.gov/mesh/MBrowser.html>).

Third page

Title, names of authors and summary in Bulgarian should be given for online version of the journal.

Next pages

Text should carry the following obligatory sections:

Introduction.

Materials/Patients and Methods. Provide sufficient detail to allow the work to be reproduced. Methods already published should be indicated by a reference: only relevant modifications should be described.

Results. Results should be described clearly and concisely. All measurements should be reported in International System of Units (SI). Statistical significances should be shown along with the data in the text, as well as in tables and figures. Provide exact p-values, with three decimal places.

Discussion. This should explore validity and significance of the results from the work, and results considered in the context of results in other trials reported in the literature.

Conclusions.

References. JBCR follows the International Committee of Medical Journal Editors Uniform Requirements for Manuscripts Submitted to Biomedical Journals

(http://www.nlm.nih.gov/bsd/uniform_requirements.html). References should be numbered sequentially [in square brackets] in the text and listed in the same numerical order in the reference section. Do not put a period after the reference number. Separate reference number and (last) name of the first author by one space only. All references should be complete and accurate. Unpublished results and personal communications are not recommended in the reference list but may be mentioned in the text. Citation of a reference as "in press" implies that the item has been accepted for publication. Journal titles should conform to the present Index Medicus abbreviations

(<http://www.ncbi.nlm.nih.gov/sites/entrez?db=journals>)

Examples from http://www.nlm.nih.gov/bsd/uniform_requirements.html

Standard journal article Provide names of all authors when there are six or fewer, if more - list the first six authors followed by et al.

Halpern SD, Ubel PA, Caplan AL. Solid-organ transplantation in HIV-infected patients. *N Engl J Med.* 2002;347(4):284-7.

Issue with supplement

Glauser TA. Integrating clinical trial data into clinical practice. *Neurology.* 2002;58(12 Suppl 7):S6-12.

Issue with no volume

Banit DM, Kaufer H, Hartford JM. Intraoperative frozen section analysis in revision total joint arthroplasty. *Clin Orthop.* 2002;(401):230-8.

Author(s) and editor(s)

Breedlove GK, Schorfheide AM. Adolescent pregnancy. 2nd ed. Wieczorek RR, editor. White Plains (NY): March of Dimes Education Services; 2001.

Chapter in a book

Meltzer PS, Kallioniemi A, Trent JM. Chromosome alterations in human solid tumors. In: Vogelstein B, Kinzler KW, editors. *The genetic basis of human cancer.* New York: McGraw-Hill; 2002. p. 93-113.

Journal article on the Internet

Aboud S. Quality improvement initiative in nursing homes: the ANA acts in an advisory role. *Am J Nurs* [serial on the Internet]. 2002 Jun [cited 2002 Aug 12];102(6):[about 3 p.]. Available from:

<http://www.nursingworld.org/AJN/2002/june/Wawatch.htm>

Tables and Figures should be given on separate sheets with indications on the left hand margin to the text, as to the appropriate placement (highlighted in yellow - Table 1.). Tables and figures should be numbered consecutively in order of their citation in the body of the text, with Arabic numerals. Supply the word “Table” or “Figure”, followed by its respective number and a brief title. The footnotes should contain all the necessary explanations of symbols and findings, and statistics. For the footnotes use the following symbols: *, †, ‡, §, ††, ‡‡,...

Data Tables should be submitted in Microsoft Word table format. Tables should not contain vertical lines. Give each column a short heading. Be sparing in the use of tables and ensure that the data presented in tables do not duplicate results described elsewhere in the article.

Figures. Diagrams, charts, line drawings, chemical formulas and photographs should be referred to as figures. Figures should be drawn professionally. Do not put the title of the figure in the figure! Each axis of charts should be labeled with a description of variable it represents. Only the first letter of the first word should be capitalized, and size for letters should be 10 points. Charts should be in gray scale.

Photographs, chemical formulas and diagrams should be saved as separate, stand-alone files and not embedded as part(s) of the text file. The files containing photographs, chemical formulas, etc. should be named with the number of the figure in the text (e.g. Figure 5). It is preferable to submit images, created at 100% image size. File formats in order of preference are JPEG, TIFF, BMP; always use a minimum of 300 dpi. The title and the legend of figures should be given in the text file after tables and graphs.

Optional suggestions for the referees (excluding co-authors or collaborators for the last three years) of the paper, with the complete mailing address, e-mail address, phone and fax numbers.

Manuscripts are not returned to authors.

All correspondence, including notification of the Editor’s decision and requests for revisions, will be sent to you by e-mail.

ETHICAL GUIDELINES

Based on Uniform Requirements for Manuscripts Submitted to Biomedical Journals; International Committee of Medical Journal Editors www.ICMJE.org

Authorship

An author is a physical person, whose creative activity has resulted in a work. The authorship of a work, created by two or more persons, is owned by them, irrespective of the fact that the work constitutes one whole or is comprised of independent parts, and the creators are considered co-authors.

Authorship constitutes the basis for evaluation of responsibility and credit for intellectual work. Authorship is important for the reputation, academic promotion, and granting support to the individuals involved, as well as for the strength and reputation of their institution. Authorship practices should reflect actual contribution to the creation of a final product.

Authorship credit is granted if the author has made a considerable contribution to conception and design, data collection, or analysis and interpretation of information, important contents has been found after critical revision and it has been finally approved for publication.

The final version of the manuscript should be approved by all co-authors, and their consent to submission for publication is to be stated by completing the SUBMISSION FORM.

All contributors who do not meet authorship criteria should be mentioned in an acknowledgments section, for example persons who have provided technical or writing assistance by collecting data, or a unit's chairperson who has solely been generally supportive. Acknowledgment(s) for financial and material support should also be included.

Editorship

The editor-in-chief of Journal of Biomedical & Clinical Research has full authority over the contents of the journal and the timing of publication of that contents. The concept of editorial freedom should be resolutely defended by editors.

An independent editorial advisory board helps the editor establish and maintain editorial policy. The validation of the work in question and its importance to researchers and readers must always drive the editor's decisions. The editor is guided by the policies of the journal's editorial board and constrained by such legal requirements as shall then be in force regarding libel, copyright infringement and plagiarism. The editor may confer with the members of editorial board or reviewers in making this decision.

Peer Review

Journal of Biomedical & Clinical Research aims at publishing quality research while maintaining rigorous peer review process. Manuscripts that meet quality and technical requirements of the journal will be peer-reviewed by two or more experts in the relevant fields, and a statement will be sent authors in about two months. They will be notified by e-mail, if the review process take more time. Manuscripts with noteworthy results will be reviewed and published at the highest priority. Possible decisions regarding a manuscript are acceptance, acceptance after minor revision, acceptance after major revision or rejection. If minor revision is necessary, authors should send back their revised version as soon as possible but not later than 15 days. If major revision is required, authors are expected to return a corrected manuscript within 30 days.

Conflicts of Interest

All authors should disclose any financial or other significant conflict of interest that might affect the results or interpretation of their manuscript. They can provide additional details, if necessary, in a separate attachment, accompanying the manuscript. All sources of financial support for the project should be disclosed. Potential conflicts of interest which should be disclosed include employment, consultancies, stock ownership, honoraria, patent applications/registrations, and grants or other funding. Potential conflicts of interest should be disclosed at the earliest stage possible.

Editors are expected to avoid selecting peer reviewers should there be doubts about potential conflicts of interest. Reviewers should inform the editors about any conflicts of interest that could bias their evaluation of the manuscript, and they should refuse to review a manuscript in case of potential bias.

Editors who finally decide about manuscripts are to avoid personal, professional, or financial implications in any of the issues they might arbitrate.

Privacy and Confidentiality

Authors' confidentiality should be protected during the process of reviewing a manuscript. By submitting a manuscript for review, authors entrust editors with results of their scientific research and creative effort. Breaking confidentiality while reviewing is in process may violate the author's rights and might be unfavourable to their reputation and career. Reviewers' confidentiality should be also respected by the editor. Confidentiality must be honored except in cases of alleged dishonesty or fraud.

Editors should not share information about manuscripts regarding receipt, content, status in the reviewing process, criticism by reviewers, or final decisions on publishing, with anyone other than the corresponding author, reviewers, potential reviewers, other editorial advisers, and the publisher, as appropriate, including requests for using the materials in legal proceedings.

Reviewers should also be notified of the editor's decision on acceptance or rejection of a manuscript.

Protection of Human Subjects and Animals in Research

When reporting experiments on humans, authors are expected to indicate whether the procedures followed were in accordance with ethical standards of institutional and national committees responsible for human experimentation and in accordance with the Helsinki Declaration of 1975, as revised in 2008. If doubt exists whether the research was carried out in accordance with the Helsinki Declaration, authors should provide explanations about the rationale for their approach and demonstrate explicit approval by the institutional review body of doubtful aspects of the study. In reports on experiments on animals, authors should indicate compliance with institutional and national guide for care and use of laboratory animals.

Duplicate publication

Manuscripts submitted for publication in Journal of Biomedical & Clinical Research must not have been published or submitted for publication elsewhere. Authors who have submitted manuscripts for consideration or in press elsewhere should explicitly present any relevant current information in a cover letter to the attention of the editor. If part of a contribution submitted to Journal of Biomedical & Clinical Research has appeared or is expected to appear elsewhere, the details must be specified by the author in a cover letter.

Authors are responsible for obtaining permission from a publisher or copyright holder for reproduction of figures or tables previously published elsewhere.

The editors consider all material in good faith that the journal has full permission to publish every part of the submitted material, including illustrations.

Plagiarism

Plagiarism implies using language and ideas of another author or their close imitation and presenting them as one's own original work. Duplicate publication, sometimes called self-plagiarism, occurs when an author uses substantial parts of his or her own published work without appropriate referencing. This includes submitting a paper published in other journals, to which authors have added small amounts of new data or a previously published paper.

Plagiarism is considered evident in case when large chunks of text have been cut and pasted. Such manuscripts would not be considered for publication in Journal of Biomedical & Clinical Research. However, examples of minor plagiarism without dishonest intent are relatively frequent, as us the case of reusing parts of materials and methods or an introduction from an earlier paper. Any such will be judged by the editors on its own merits.

In case plagiarism is found, the journal will contact the author's institute. The paper containing the plagiarism will also be obviously marked or, depending on the extent of the plagiarism, the paper may also be formally withdrawn.

SUBMISSION FORM

TITLE:

A signature below Certifies Compliance with the Following Statements

Copyright Transfer. In consideration of the acceptance of the above work for publication, I do hereby assign and transfer to Journal of Biomedical and Clinical Research all rights, title, and interest in and to the copyright in the above-titled work. This includes preliminary display/posting of the abstract of the accepted article in electronic form before publication.

Authorship Responsibilities. I attest:

1. The manuscript is not published previously and under consideration for publication elsewhere.
2. The manuscript is truthful original work/review without fabrication or plagiarism.
3. I have made an important scientific contribution to the study and I am absolutely familiar with the primary data.
4. I have read the complete manuscript and take responsibility for the content and completeness of the manuscript.

Conflict of Interest Disclosure. All funding sources supporting the work and all institutional affiliations of mine are acknowledged. Except as disclosed on a separate attachment, I certify that I have no commercial associations (e.g. consultancies, ownership, equity interests, patient-licensing arrangements) that might pose a conflict of interest in connection with the submitted article (letter attached).

Signature from author required in the same order as on the manuscript title page

Signature (1)	Name	Date
Signature (2)	Name	Date
Signature (3)	Name	Date
Signature (4)	Name	Date
Signature (5)	Name	Date
Signature (6)	Name	Date
Signature (7)	Name	Date
Signature (8)	Name	Date
Signature (9)	Name	Date

Corresponding Author

Phone

Address

e-mail