

РЕЗЮМЕТА
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ПУБЛИКАЦИИ, СВЪРЗАНИ С ДОКТОРСКАТА ДИСЕРТАЦИЯ

1. **Велева, Н.** *Състояние и тенденции на пазара на труда на медицински сестри в България.* Автореферат на дисертация за научна и образователна степен „Доктор“, ИЦ на МУ – Плевен, 2013.

Анотация. България, също както повечето страни в света, се намира в критичен период за човешките ресурси в здравеопазването. Недостатъчната осигуреност с квалифицирани медицински сестри е една от главните пречки за подобряване на качеството и ефективността на здравните грижи. Предизвикателствата, пред които е изправена сестринската работна сила (СРС) в нашата страна са силно обвързани с проблемите на здравната реформа.

Провеждането на настоящото научно проучване отговаря на необходимостта от събиране на изчерпателни и достоверни данни за състоянието и тенденциите на развитие на пазара на труда на медицински сестри и разкриване на специфичните му проблеми. Наред със значителното намаляване на броя на медицинските сестри у нас като сериозни проблеми се налагат: ниското трудово възнаграждение, емиграцията, неравномерното организационно разпределение, нарушената демографска структура, образователни и квалификационни проблеми, демотивация и отлив от професията.

На основата на извършения социологически и икономически анализ и създадения динамичен симулационен модел се правят изводи и се формулират препоръки и стратегии за справяне с проблемите на пазара на труда на медицински сестри и посрещане на бъдещите потребности от СРС у нас.

Дисертационният труд е опит да се запълни поне отчасти информационният дефицит по отношение на СРС у нас, което може да допринесе за подобряване на планирането на кадрите и усъвършенстване на политиката на човешките ресурси в здравеопазването.

Current situation and trends of nursing workforce market in Bulgaria

Annotation. Today there is a global shortage of nurses. As the market mechanism is unable to solve the problem governments worldwide are becoming increasingly involved in workforce planning.

Until now no scientific forecasts of the needs for nurses were produced in Bulgaria. There are particular evaluations of the professional association (BAHCP), the Ministry of health and other stakeholders which are not based on profound situation analysis and estimation but are rather an expression of the generally held view that there is a shortage of nurses.

The aim of the study is to reveal the actual situation, main problems and trends of the Bulgarian nursing workforce market and to make an evidence-based forecast of the

future needs for nurses in order to suggest relevant nursing workforce development strategies.

In Bulgaria the challenges facing the nursing workforce are interlinked with the challenges of the healthcare reform. We experience severe drop in the number of nurses, low wages, emigration, misbalanced demographic structure of nursing workforce, educational and qualification problems, disparagement of nursing profession and exodus from the profession.

On the supply side Bulgarian health system has got the capacity for providing enough nurses to meet the market needs but the demand side of the market does not provide adequate job opportunities and remuneration for nurses. The shortage of nurses in our country is not a physical deficit of persons with nursing qualification but lack of individuals motivated to practice nursing. Hence the adequate policy to apply human resource strategies aimed at motivation and retention of the highly qualified nurse professionals in Bulgaria.

Key words: nursing workforce market, dynamic simulation model, needs planning

2. Велева, Н. Състояние и тенденции на европейския пазар на труда на медицински сестри. - *Социална медицина*, XIV, 2006, 1-2, 55-57.

European Market for Nurses – Current Situation and Trends

Summary: The world has entered a critical period for human resources for health. The shortage of qualified health personnel, including *nurses*, is being highlighted as one of the biggest obstacles for improving the health and wellbeing of the global population. The present article focuses on one of the basic components of the workforce – nurses. Nurses are the “front line” staff in most health systems, and their contribution is recognized as essential for improving health and delivering safe and effective care. This article aims by analyzing the European market for nurses to outline its current situation, main factors and key trends. The emphasis is on scope of coverage, but specific nursing workforce issues in some European countries are also highlighted.

Key words: workforce market, nurses, shortage

Резюме: Светът е навлязъл в критичен период по отношение на човешките ресурси за здравеопазване. Недостигът на квалифициран здравен персонал се посочва като една от най-големите пречки за подобряване на здравето и благополучието на населението на света. Настоящата статия фокусира вниманието върху един от основните компоненти на работната сила в здравеопазването – *медицинските сестри*. Те са здравните специалисти от „първа линия” в повечето здравеопазни системи в света, а техният принос за подобряване здравето на населението и предоставяне на безопасни и ефективни здравни грижи е ключов. Целта на направеният анализ е да се очертае текущото състояние, основните фактори и водещите тенденции на европейския пазар на труда на медицински сестри.

Ключови думи: пазар на труда, медицински сестри, недостиг

3. Велева, Н., Г. Грънчарова, М. Драганова. Общ пазар на труда на медицински сестри – изтичане на квалифицирани кадри или свободно движение на работна сила. - *Здравен мениджмънт*, том 8, 2008, 3, 21-25.

Single Market for Nurses – Brain-drain or Freedom of Movement

РЕЗЮМЕ. Целта на тази статия е проучване и анализиране на европейската и българската позиция и нагласи по отношение на общия пазар на труда на медицински сестри. Присъединяването на България към ЕС ни прави част от този пазар. От една страна това предоставя големи възможности за реализация на българските медицински сестри на европейския пазар, на който съществува недостиг на кадри, но от друга е реална заплаха за осигуреността с този вид персонал у нас.

Ключови думи: свободно движение на работна сила, медицински сестри, недостиг

ABSTRACT. The purpose of this article is to reveal and analyze the European and Bulgarian views and attitude towards the single European market for nurses.

The joining of Bulgaria to the EU makes us a part of this market. On the one hand it gives the Bulgarian nurses many opportunities to work in the European market because of the shortage of nurses there, but on the other hand that is an actual threat to the supply of nurses for our national market.

Key words: free movement of people, nurses, shortage

4. Велева, Н., Г. Грънчарова, М. Драганова. Единния европейски пазар и българските медицински сестри. - *Trakia Journal of Sciences*, Volume 6, 2008, Number 2, Supplement 4, 68-71.

CURRENT ISSUES OF THE BULGARIAN MARKET FOR NURSES

Abstract: Bulgaria, as many countries in the world has entered a critical period for human resources for health. The shortage of qualified nurses is one of the biggest obstacles for improving the health and wellbeing of the population. In our country the challenges facing the nursing workforce are interlinked with the challenges of the healthcare reform.

Key words: nurses workforce, shortage, healthcare reform

РЕЗЮМЕ. Въведение: България, както и повечето страни в света се намира в критичен период за човешките ресурси в здравеопазването. Недостатъчната осигуреност с квалифицирани медицински сестри е една от главните пречки за подобряване на здравето и благополучието на населението. Предизвикателствата, пред които е изправена сестринската работна сила в нашата страна са силно обвързани с проблемите на здравната реформа.

Цел: Чрез анализ на пазара на труда на медицински сестри да се очертаят главните тенденции, основните проблеми и варианти за преодоляването им. Акцентът е поставен върху осигуреността с персонал, но са посочени и специфичните предизвикателства за сестринската работна сила у нас.

Материал и методи: Докладът е разработен на базата на критичен анализ на статистическите данни за здравния персонал в България за периода 1980-2004 г.

Резултати: След 1990 година е налице отрицателна тенденция в осигуреността с медицински сестри в България. Броят им спада от 45449 (1980г.) на 26769

(2004г.), т.е. с 47%. Наблюдава се също така понижаване на съотношението медицински сестри:население (на 100000 души) от 621 (1990г.) на 384 (2004 г.).

Обсъждане: Основната причина за това намаление е съкращаването на болничните легла по време на първата фаза на здравната реформа. Тази негативна тенденция може да бъде обяснена и с намаляване на интереса към сестринската професия, емиграцията и други социално-икономически фактори.

Заключение: Недостатъчната осигуреност с медицински сестри има негативен ефект върху цялото здравеопазване. Провалът на усилията за справяне с недостига на персонал на национално ниво води до невъзможност за поддържане и подобряване на качеството на здравните грижи.

Ключови думи: медицински сестри, недостиг, здравна реформа

5. Велева, Н., Г. Грънчарова, М. Драганова. Проблеми на пазара на труда на медицински сестри в България. - В: *Сборник доклади от Юбилеен научен форум „Дни на общественото здраве”, Плевен, 5-7 октомври 2006, 329 – 332.*

THE SINGLE EUROPEAN MARKET AND BULGARIAN NURSES

ABSTRACT. Objective: To assess the current situation and trends of the Bulgarian market for nurses under the conditions of Single European Market and to examine nurses' attitude to work opportunities in the EU countries.

Methods: Empirical sociological inquiry with self-administered questionnaire was applied to 63 nurses – students in baccalaureate and master programs in Healthcare management in Medical University of Pleven.

Results: All of the respondents think that the accession will have influence on the Bulgarian market for nurses. The major effects will be: rise in emigration, rise in salaries and increased shortage of nurses.

Key words: Single European Market, nurses, work migration, salaries, shortage

6. Veleva, N. Dynamic Simulation Model for Planning and Projecting Nursing Workforce Needs in Bulgaria. - In: *Abstract book from XIth International Medical Scientific Conference for Students and Young Doctors, 16-19 October, Pleven, 2013, 80.*

Dynamic simulation model for planning and projecting nursing workforce needs in Bulgaria

Abstract. Aim: The aim is to create a supply and demand simulation model for planning and projecting nursing workforce needs in Bulgaria using system dynamics.

Methods: A quantitative simulation model based on the system dynamics method developed by Forrester (1958) was designed and implemented. The creation of the model starts by the construction of the theoretical structure of the nursing workforce market system with its basic elements and causal relationships between its variables. The structure works over time to produce dynamic behaviour patterns of the system's variables. For the implementation of the model specialized software Powersim Studio 7 was used.

Results: The model structure has two components: the submodel of supply and the submodel of demand. The submodel of supply shows the worklife cycle of nurses from training until retirement or death. The controllable parameters are: the number of admitted to nursing school; the mandatory retirement age; the dropout rate. On the

demand side, the model allows the analysis of the degree of sensitivity of the parameters: growth rate for the demand of nurses and remuneration rate. The model estimates the supply of nurses and the deficit or surplus. The main outputs are the number of nurses and their full-time equivalents.

Conclusion: This model is an instrument that allows the planner to change parameters according to the evolution of the real system and its great value is the capacity to respond to hypothetical questions about the future demand and needs of nursing workforce.

Key words: dynamic simulation model, nursing workforce

7. Велева, Н., Г. Грънчарова, М. Драганова. Човешкият капитал в развитието на българското здравеопазване. - В: *Сборник доклади от Заключителна конференция на СУБ – Варна „Човешкият капитал в общественото развитие”, Месец на науката – Варна, 30 октомври 2009.*

Human Capital in the Development of Bulgarian Healthcare

Summary: The world has entered a critical period for human resources for health. Shortage of qualified health professionals is being highlighted as one of the major obstacles for reaching the Millennium Development Goals concerning the improving of health and wellbeing of the global population. Our aim is to assess the current situation of Bulgarian human resources for health and to outline the major trends, main problems and alternatives for their solution. The report is based on comparative analysis of statistical data for health professionals in Bulgaria for the years 1990-2007. Since 1990 we experience a downward trend in health professionals' provision. The main reasons for this situation are found in the ongoing health reform in Bulgaria including radical structural, organizational and educational changes of the system. The decrease is due to a large extent also to exodus from medical professions, emigration and other socio-economic factors. The shortage of health professionals has a major negative impact on health care. Failure to deal with it on national level is likely to lead to failure to maintain or improve health care.

Key words: human capital, healthcare, development

8. Vekov, T., S. Alexandrova – Yankulovska, G. Grancharova, N. Veleva, M. Draganova. Induced Demand for Hospital Services in Bulgaria – Trends and Contributing Factors. - *Management in Health Journal*, vol.XV/4/2011; 8-10.

Abstract. Background. Changing the management and financing in Bulgarian health care system after 2000 led to many new problems in organization and management of medical activities, especially in hospital care, after adoption of the Health Care Establishments Act in 1999. Serious problems in hospital care occurred in relation to the induced demand for hospital services which contribute to over-hospitalization and over-expenditures.

The aim of this paper is to explore the trends of hospitalization and to analyze the main determining factors for over-hospitalization.

Methods. The analysis is based on the Annual financial reports of the National Health Insurance Fund (NHIF) in Bulgaria, the Annuals of Public Health Statistics published by the National Centre of Health Informatics, and corresponding data for

European countries from the European Health for All Database for the period 2000-2009.

Results. For a period of ten years the expenditures for hospital services have increased by 390% while the GDP has grown in real terms only by 47%. The number of hospital admissions from 2004 to 2009 has increased more than twice (from 738 978 to 1 769 230). The critical point of increase was observed between 2005 and 2006 when all the financing of hospital services was totally undertaken by the NHIF.

Conclusion. The main reasons for the enormous increase in hospital admissions have been mainly related to the increased induced demand for hospital services, ineffective referrals and treatment of chronic diseases in hospitals for acute diseases, patients' mistrust to outpatient care, low efficiency of primary health care, inadequate supervision and regulation by the National Health Insurance Fund. Improper and ineffective health policy and hospital management led to consumerist attitudes in health care that contribute more to health care providers than to the patients in need.

Key words: over-hospitalization, induced demand, hospital services cost, hospital management

9. Vekov, T., S. Alexandrova – Yankulovska, G. Grancharova, **N. Veleva**, M. Draganova. Patients' and Physicians' Opinion on Healthcare Reform in Bulgaria. - *Management in Health Journal*, vol.XVI/1/2012; 14-17.

ABSTRACT. BACKGROUND. *Bulgarian health system is undergoing fundamental organizational changes started since 1998 with the adoption of three new fundamental laws – Health Insurance Act (1998), Health Care Establishments Act (1999) and Law for professional organizations of physicians and dentists (1998). The new legislation laid the foundations of radical transformation of financing and delivery of health services to the population with introduction of market mechanisms for resource management.*

The aim of this paper is to analyze the acceptance and critical evaluation of Bulgarian health reform based on patients' and physicians' opinion.

METHODS. *The study was carried out in 2010 in 9 randomly selected urban regional centers. From 18 outpatient medical centers and 11 hospitals the samples of 1863 patients and 718 physicians were chosen by convenience. The data were collected by self-administered questionnaire of 26 close-ended questions encompassing identification data, questions about awareness, expectations, acceptance and satisfaction with different aspects of health reform.*

RESULTS. *Significant differences in responses concerning the information and awareness on main aspects of health reform were found in favor of physicians and low level of knowledge for patients. Both groups demonstrated unrealistic and maximalists over expectations for rapid and large increase in the quality of medical services significantly higher in the group of physicians except for the physicians' wages. Much lower were the expectations about the negative effects that really occurred during the process of reform.*

CONCLUSION. *Significant unawareness on various aspects of reform was demonstrated among respondents more explicit in the group of patients. The phenomenon of information asymmetry is the leading factor for the failure of health reform and serious changes should be undertaken to increase the public and professional acceptance and satisfaction of the health reform.*

Key words: Bulgaria, healthcare reform, patients' opinion, physicians' opinion, information asymmetry

10. Veleva, N., M. Draganova, G. Grancharova. Perspectives on Bulgarian Market for Nurses. - *In: Conference proceedings "Public Health and Health Care in Greece and Bulgaria: the Challenge of the Cross-border Collaboration", Papazissis Publishers, Athens, 2010, 759-766.*

ABSTRACT. The world has entered a critical period for human resources for health. The shortage of qualified health personnel, including *nurses*, is being highlighted as one of the biggest obstacles for improving the health and wellbeing of the global population. In Bulgaria, as in many countries, one of the most problematic current human resource issues is a shortage of nurses. In our country the challenges facing the nursing workforce are interlinked with the challenges of the healthcare reform. We experience severe drop in the number of nurses, low wages, emigration, misbalanced demographic structure of nursing workforce, educational and qualification problems, disparagement of nursing profession and exodus from the profession. A nursing shortage has a major negative impact on health care. Failure to deal with it on national level is likely to lead to failure to maintain or improve health care.

Key words: nursing labor market, current situation, perspectives, shortage

11. Draganova, M., N. Veleva. Nursing process as an Approach of Organization and Management of Nursing Care. - *In: Conference proceedings "Public Health and Health Care in Greece and Bulgaria: the Challenge of the Cross-border Collaboration", Papazissis Publishers, Athens, 2010, 705-711.*

Summary. Introduction: In 1961 Ida Orlando publishes her theory in "The Dynamic Nurse-Patient Relationship: Function, Process, and Principles of professional Nursing". Her theory is the essence of the nursing process. The five-step nursing process – assessment, diagnosis, planning, implementation, and evaluation – serves as the foundation for all client care, that's why its significance to nursing theory is of great importance. It is generally accepted that nursing practice must be theoretically based, especially professional nursing.

Aim: The report aims to study opportunities and attitudes among nurses (nurse-trainers, students and practicing nurses) for clinical application of nursing process.

Materials and methods: Self-administered questionnaire has been applied among 535 nurses to reveal their views about the essence of nursing process and opportunities of its implementation in nursing practice. The study group includes 337 practicing nurses from four University Hospitals of Pleven, Sofia, Varna and Stara Zagora, 34 trainers from four nursing schools of the same places, and 164 students in their last year of training.

Result and discussion: Most of the participants (79%) express their unquestionable interest in nursing process and consciousness of the necessity of its implementation in clinical practice. At the same time 37 per cent of the respondents consider that nowadays in Bulgaria

Conclusions: The results of this study confirm our previous findings from the study at the University Hospital in Pleven that nowadays there are no possibilities for

clinical application of the nursing process in Bulgaria. Both studies prove that the most important factor for the development of nursing in Bulgaria is the profound knowledge of nursing process.

Key words: nursing process, nursing practice, clinical application

12. Гладилев, Ст., Н. Велева. Търсене и предлагане в здравеопазването. Основни понятия и приложението им в условията на реформа на българското здравеопазване. - *Здравен мениджмънт*, том 5, 2005, 1, 32-36.

Demand and Supply in Health Care. Basic Terms and Their Application in Bulgarian Health Care System under the Conditions of a Reform

Summary: Market mechanisms widely penetrate into Bulgarian health care management under the conditions of a reform. These mechanisms have specificity that has an impact on the market forces: demand and supply, which in health care have a specific character of their own.

This report aims by analyzing data from available literature to cast a light on the problem and to provide generally accepted terms for demand and supply in health care.

Terms are interpreted in accordance with Michael Grossman's "human capital theory". Physician and patient role in demand and supply in health care is analyzed, as well as the determinants that have impact on demand and supply in health care.

Key words: demand, supply, health, health care, needs

13. Драганова, М., Н. Велева. Международна класификация на сестринската практика (ICNP). - *Здравен мениджмънт*, том 5, 2005, 3, 58-59.

The International Classification for Nursing Practice (ICNP)

Summary: The history of the International Classification for Nursing Practice (ICNP) dates back to 1989 when the International Council of Nurses decided to supplement existing international classifications of medical diagnoses and procedures by the development of a classification of nursing problems/diagnoses, classification of nursing interventions and classification of nursing outcomes. International Council of Nurses and NANDA share their belief that the nursing information about the patient is the basis for creating a complete electronic record of the patient. Utilization of standard terminology in nursing practice will help taking right decisions and planning of interventions concerning both treatment and prevention.

Резюме. Историческото развитие на Международната класификация на сестринската практика, датира от 1989 година, когато Международния Сестрински съюз решава да допълни съществуващите международни класификации на медицинските диагнози и процедури чрез развитието на една класификация на сестринските феномени/диагнози, класификация на сестринските интервенции и класификация на сестринските резултати. Международния Сестрински Съюз и Северноамериканската асоциация по сестринска диагноза (NANDA) споделят вярата си, че сестринските данни за пациента са основата за един цялостен електронен запис за пациента. Използването на стандартизирана терминология в сестринската практика, би могло да подпомогне вземането на правилно решение, планирането на интервенции, касаещи както лечението, така и превенцията.

14. Грънчарова, Г., **Н. Велева**. Глобалният недостиг и миграцията на здравни кадри. - *Здравен мениджмънт*, том 6, 2006, 4, 52-56.

GLOBAL SHORTAGE AND MIGRATION OF HEALTH WORKERS

Summary: Health workers are inequitably distributed throughout the world, with severe imbalances between developed and developing countries. This global workforce shortage is made even worse by imbalances within countries. These imbalances are precondition for the widespread migration of health workers. The migration has some positive features but its damaging outcomes prevail. That's why urgent actions for tackling migration of health workers are needed. These actions are also steps to handling the global shortage that is a major impediment to improving the health of the world population.

Key words: health workers, shortage, migration

15. Драганова, М., **Н. Велева**, М. Камбунова. Значимост на сестринската документация за осигуряване на качествени здравни грижи. - *Международен годишник по история и обща теория на медицината „Асклепий“*, том XIX, 2006, 70-74.

THE IMPORTANCE OF NURSING DOCUMENTATION FOR PROVIDING HIGH QUALITY HEALTH CARE

Abstract. Introduction: Health care documentation is a written proof of the interaction between health professionals, clients, families, health organizations, laboratories, educational centers and other health institutions. Documents record results as well as the clients' (patients') response to the interaction with those institutions.

Several researches conducted among health care providers during the last few years reveal that a prominent part of those providers have a negative opinion on registering and recording specialized documentation.

Aim: The aim of this report is to stress the importance of documentation in nursing practice for providing high quality health care.

Material and methods: We studied different international and Bulgarian publications concerning nursing documentation, standards for nursing documents and the role nursing documentation plays in providing high quality health care.

Results and discussion: Nursing documentation is a part of the clinical records, created by nurses. It includes complete and comprehensive information about patients' (clients') health condition, his/her needs of nursing care, nursing services provided and the outcome of those services. According to the results of a research conducted recently in Bulgaria half of the interviewed think that current documentation doesn't show the whole scope of nursing practice.

The increasing needs of the population and the ongoing health reform set new demand from nurse-practitioners including personal approach to patients, assuming accountability for one's actions and new opportunities for nursing care assessment.

Key words: nursing documentation, high quality health care

16. Велева, Н., К. Кънчева, Д. Статова, К. Статев. Икономическа оценка на слепотата. - *Здравен мениджмънт*, том 8, 2008, 5, 61-64.

Cost of Blindness

Резюме: Целта на тази статия е да се направи икономическа оценка на слепотата като здравен проблем със социално и медицинско значение и да се определят разходите на обществото свързани с нея. Важно е да се подчертае, че този анализ няма претенциите да представлява изчерпателна икономическа оценка на цената на слепотата. Това са само наши първоначални изчисления, които са ограничени до наличните данни. Тъй като не сме предприемали целенасочено събиране на първична информация за разходите, сме ограничени и по отношение на формата на икономическия анализ, който може да бъде направен. Всички представени изчисления са базирани на преглед на актуалната литература по проблема, както и на публикувани данни от официалната статистика за България.

Ключови думи: икономически анализ, цена на слепотата, обществени разходи

Summary: The purpose of this article is to present some initial estimates of the costs imposed by blindness from a societal point of view. It is important to note that it is not intended as a detailed economic evaluation of the cost of blindness. Our initial estimates are limited by the available data. We have not undertaken any primary data collection, and are thus restricted in the form of analysis that may be undertaken. All estimates provided are based on a review of the current literature as well as statistics publicly available in Bulgaria.

Key words: economic evaluation, cost of blindness, societal costs

17. Minkov, D., V. Rossmanov, T. Minkova, N. Veleva. A combined use of bilateral investigation with quantitative ultrasound and a structured questionnaire in screening for osteoporosis. - *Journal of Biomedical and Clinical Research*, Vol.2, 2009, No.2, 115-118.

Summary. Quantitative ultrasound (QUS) is a device method for non-invasive assessment of skeletal status that estimates bone mineral density (BMD). The absence of ionizing radiation, low investigation costs and availability of devices all make the QUS method preferable for conducting screening population research. Using structured questionnaires (Susan Brown's Osteoporosis Fracture Risk Questionnaire) in screening for osteoporosis is another approach: it is highly efficient and cost-effective to identify women with osteoporosis in the general population of a country. Osteoporosis screening through bilateral quantitative ultrasound osteometry was conducted in October 2007. We investigated 926 women who also filled in Susan Brown's Adult Osteoporosis Risk Assessment Questionnaire right before the ultrasound investigation. T-score ≤ -1.0 was registered in 137 (17%) of the 243 (31%) investigated women from the age group over 45 years of age that were found to be at low risk of osteoporosis according to the questionnaire. The T-score was -0.1 to -2.5 in 192 (24%) women from a total of 432 (55%) at questionable osteoporosis risk, and a T-score ≤ -2.5 was found in 8 (1%) from a total of 112 (14%) patients with a likely osteoporosis risk.

Key words: quantitative ultrasound, T-score, structured questionnaire

18. Драганова, М., Н. Велева, Р. Колева-Коларова, Г. Грънчарова. Нарастващата необходимост от документиране на сестринската дейност. - *Социална медицина*, XVIII/4/2010, 21-23.

INCREASING NECESSITY OF DOCUMENTARY EVIDENCE OF NURSING PRACTICE

Резюме. С публикуването на Наредба №1 от 08.02.2011 г. на министъра на здравеопазването, регламентирането на професионалните компетентности на медицинските сестри в Р България придобива законова основа и е важна предпоставка за подобряване на качеството на сестринските грижи. Във връзка с това регистрирането на дейностите, осъществявани от медицинските сестри, се превръща в реална необходимост за обективен контрол на предоставяните сестрински грижи и възможност за диференцирано заплащане на сестринския труд.

Summary. Since February 2011 a special regulation by the Bulgarian Ministry of Health concerning the professional competences of nurses was released and it became an important legal basis and prerequisite for the quality improvement in nursing care. In this respect, the recording of nurses' activities is a real necessity for an objective quality control of nursing activities and it's a potential for differentiated payment of provided nursing care.

Key words: documentation, health information, nurses

19. Велева, Н., Д. Димитров. Финансово управление на лечебните заведения за болнична помощ в условията на делегирани бюджети. - *Здравна политика и мениджмънт*, том 11, 2011, 3, 73-76.

HOSPITAL FINANCIAL MANAGEMENT UNDER THE CONDITIONS OF DELEGATED BUDGETS

Резюме: Статията разглежда предизвикателствата, пред които е изправено финансовото управление на лечебните заведения за болнична помощ в условията на финансова криза и нов рестриктивен механизъм за финансиране чрез лимитирани делегирани бюджети, разпределяни от Националната здравноосигурителна каса.

Ключови думи: финансово управление, лечебни заведения за болнична помощ, делегирани бюджети

Summary: The article explores the challenges that hospital financial management faces in times of financial crisis and new restrictive mechanism of funding through limited delegated budgets allocated by the National health Insurance Fund.

Key words: hospital financial management, restrictive delegated budgets

20. Велева, Н., М. Драганова, Р. Колева-Коларова, Г. Грънчарова. Медицински спестовни сметки – радикална алтернатива за финансиране на здравеопазването. - *Социална медицина*, XIX/2011/2, 41-43.

MEDICAL SAVINGS ACCOUNTS – A RADICAL ALTERNATIVE FOR FUNDING HEALTH CARE

Резюме Разгледана е същността на медицинските спестовни сметки като радикална алтернатива за финансиране на здравеопазването. Анализирани са

опита и ефекта от въвеждането им в Сингапур и САЩ и е коментирана приложимостта им при различни социално-икономически условия.

Abstract The nature of medical savings accounts as a radical alternative for funding health care is scrutinized. The experience and effects of their introduction in Singapore and the USA is analyzed and their applicability under different socio-economic conditions is discussed.

Key words: medical savings accounts, healthcare, funding

21. Драганова, М., Н.Велева, Р. Колева-Коларова. Австрийски опит в приложението на сестринския процес. - *Scripta Scientifica Medica*, vol. 43, 2011, 7, 261-263.

Summary. In the globalization and harmonization in the international education system the WHO and the ICN enforce, that nursing must be measure. One of the tools of measurement of nursing practice is nursing process. The nursing process serves many purposes. The main purpose is to provide a systematic method for nursing practice: it unifies, standardizes and directs nursing practice. In Austria nurses are working with nursing process and nursing plan, based on a national law.

Key words: International classification of nursing practice, nursing process, nursing care

22. Драганова, М., Т. Веков, Н. Велева, Г. Грънчарова. Здравните професионалисти за времето като ресурс. - *Здраве и наука*, vol. II, 2012, 3, 71-74.

Health professionals' opinion about time resources

Abstract. Background. In times of world financial crisis and shortage of resources the ability to use them efficiently is of extreme importance. Health care system is one of the main consumers of public resources in Bulgaria which turns it into an object of constant reforms in view of efficiency improvement.

The **aim** of the study is to examine the opinion of practicing health care professionals' opinion about the time as a resource.

Material and methods. The opinion of 95 practicing health care professionals was studied. Primary data was collected through direct group sociological inquiry. The self-administered questionnaire was particularly developed for that study and consisted of 84 questions concerning areas of information relevant to our aim.

Results and discussion. Almost all of the respondents "often" and "sometimes" use the expression "there is time". Only 1/3 of the inquired always plan in written their working day. The rest 2/3 do it sporadically. All of the respondents communicate with patients and their relatives. For 2/3 of the respondents the work appointments are done according schedule "often" and "sometimes" which means that there is need for time management training among colleagues. A disturbing fact is that more than 50 per cent of the inquired are engaged in extrinsic tasks and are assigned tasks exceeding their competences. Above 80 percent of the respondents have not been inquired about their time management until present.

Key words: healthcare professionals, time resources, time management

Резюме. Въведение. В условията на световна икономическа криза и недостиг на ресурси, умението да ги използваш пълноценно е от изключителна важност.

Системата на здравеопазването е една от най-ресурсоемките и реформимращи се сфери към настоящия момент у нас.

Цел на настоящето проучване е да се проучи мнението на действащи професионалисти по здравни грижи относно отношението им към ресурса време.

Материал и методи. Проучено бе мнението на 95 действащи медицински професионалисти. Информацията е набрана чрез пряка групова анкета. Въпросникът е изработен специално за целите на проучването и се състои от 84 въпроса, засягащи информационни области, релевантни на целта.

Резултати и обсъждане. Почти всички /95 души/ от запитаните “често” и “понякога” използват фразата “ИМА ВРЕМЕ”. Едва 1/3 от анкетираните винаги планират писмено работния си ден. Останалите го планират епизодично. Всички анкетирани общуват с пациенти и с техните близки. За 2/3 от отговорилите срещите по график се изпълняват често и понякога, което налага обучение по управление на времето и сред колегите. Тревожен е фактът, че повече от половината от анкетираните се занимават с несвойствени задачи и им се поставят задачи извън техните компетенции. Над 80% от запитаните до момента не са анкетирани относно управлението на времето.

Ключови думи: медицински професионалисти, времето като ресурс, управление на времето

23. Кънчева, К., М. Драганова, **Н. Велева**. Възможности за превенция на заболяемостта и травматизма в детска възраст. - *Здраве и наука*, vol. II, 2012, 3, 62 – 65.

OPPORTUNITIES FOR INJURIES PREVENTION IN CHILDHOOD

Резюме. Въведение. Детската възраст е от изключително значение за последващото физическо и психическо развитие на индивида. Превенцията и профилактиката на заболяемостта и травматизма сред децата е приоритет на здравеопазването у нас.

Целта на настоящето изследване е да се анализират причините за възникване на увреждания в детска и юношеска възраст и да се предложат възможности за превенция в ранен етап от живота на човека, търсейки начин за ограничаването им.

Материал и методи. Осъществен е обширен преглед и систематичен анализ на научни публикации в научни сборници и списания.

Резултати и обсъждане. По литературни данни съществуват две основни причини, поради които специалистите се стремят да открият причините за уврежданията в детската възраст: идентифициране на конкретната причина може да помогне за лечение на състоянието на детето; идентифициране на причината за увреждане може да помогне за предотвратяване на появата на увреждания в бъдеще. Увреждането с последваща инвалидност в детската възраст води до редица социални, образователни и икономически последици, отразяващи се не само на детето, а основно на неговото семейство както и в немалка степен за обществото. Целта на превенцията на уврежданията в детската възраст е предотвратяването на причините и съответно на риска от възникване на лични и обществени вреди. Значението на превенцията е доказано чрез изследване на причините и последиците от увреждания, както и чрез проучване на цената на услугите, които се изискват от хората с увреждания и техните семейства.

Summary: Introduction. Childhood is of extreme importance for the further physical and psychological development of the individual. Prevention and prophylaxis of child morbidity and traumatism is a priority of Bulgarian health care system.

The **aim** of this study is to analyze the causes for injuries in childhood and adolescence and to propose opportunities for prevention at the early stages of individual's life in order to restrict them.

Material and methods. Profound literature review and systematic analysis of the scientific publications in conference proceedings and journals concerning the topic were performed.

Results and discussion. According the literature there are two main reasons for the professionals' pursuit of the causes for injuries in childhood: Identification of a certain cause could help for the child's treatment. Identification of the cause for the injury could help for prevention of future injuries. Injury with a subsequent disability in childhood leads to a series of social, educational and economic consequences affecting not only the child itself but mainly its family as well as the society to a considerable extent. The purpose of prevention of injuries due to traumatism in childhood and adolescence is to restrict the causes and respectively the risk of disability and consequent individual and societal harm.

Conclusion. The importance of prevention had been proved through studying the causes and consequences of disability, as well as studying the cost of services demanded by the disabled individuals and their families.

Ключови думи: дете, риск, увреждане, превенция

Key words: child, risk, injury, prevention

24. Велева, Н., С. Александрова-Янкуловска, М. Драганова. Възможности за приложение на метода на симулационното моделиране за прогнозиране на потребностите от здравни кадри в България. - *Социална медицина*, година XXI/3/2013, 17-19.

APPLICABILITY OF THE METHOD OF SIMULATION MODELLING IN PREDICTING NEEDS OF HEALTHCARE MANPOWER IN BULGARIA

Abstract: Simulation modeling is gold standard for planning and projecting the behavior of complex dynamic systems such as workforce markets. Until now no quantitative econometric methods were applied in Bulgaria for health human resources planning and we consider it high time to be done. The better the information base and the technical capacity to use it, the better the diagnosis and selection of interventions will be.

Резюме: Симулационното моделиране е връх в прогнозирането на сложни динамични системи, каквито са пазарите на здравни кадри. Досега в България не са прилагани количествени иконометрични методи за планиране на човешките ресурси в здравеопазването и е крайно време да им се обърне подобаващо внимание. Осигуреността с надеждни и валидни данни и технически капацитет за прилагането на съвременни инструменти за използването им е гаранция за разработването на добри прогнози и избор на адекватни интервенционни стратегии.

Key words: healthcare manpower, simulation modelling, prediction

25. Драганова, М., С. Александрова-Янкуловска, Н. Велева. Ръководителите по здравни грижи в болничната помощ – реалности и перспективи. - *Здравна икономика и мениджмънт*, XIII, 2013, 4 (50), 15-20.

Резюме: Ръководителите по здравни грижи (РЗГ) в болничните лечебни заведения у нас са всички старши и главни медицински сестри, акушерки, рехабилитатори, лаборанти. Те са неизменна част от персонала на всяко лечебно заведение за болнична помощ. Съгласно съществуващата нормативна база те са хората, отговорни за качеството на предоставяните здравни грижи в съответните звена.

Целта на проучването е да установи степента на съответствие между реално извършваните дейности от РЗГ и регламентираните им задължения в нормативната база.

Материал и методи: Обхванати са РЗГ от 14 болнични лечебни заведения на територията на Северна България. В продължение на пет работни дни е извършено самоодитиране на работното им време. Участниците сами дефинират извършваните от тях дейности и ги регистрират в „Дневник за регистриране на дейностите“.

Резултати: Съществува голямо разнообразие на дейностите, извършвани в ежедневната практика на РЗГ според регистрираната информация в дневниците. Едва 50% от реално извършваните дейности от РЗГ са адекватни на нормативната база.

Ключови думи: ръководител по здравни грижи, болнични лечебни заведения, качество на здравните грижи, управление на времето.

Summary: Health care managers in Bulgarian hospitals include head and chief health care staff as nurses, midwives, physical therapists and laboratory technicians. They are an immutable staff for every hospital. According to the hospital regulations they are the ones responsible for the quality of health care

The aim of the study is to determine to what extent the actual activities performed by health care managers comply with their obligations according to the existing regulations.

Material and methods: 175 health care managers from 14 hospitals in the Northern part of Bulgaria were investigated. A 5-days self-audit of the working time was performed. The participants in the study defined their working activities and recorded them in “Working activities diary” along with the respective measured time for their completion.

Results: On the basis of the information acquired through the diaries we have revealed a large variety of activities performed in the health care managers’ daily practice. Only 50% of the reported activities complied with the regulations.

Key words: health care managers, hospitals, health care quality, time management.

26. Драганова, М., С. Александрова-Янкуловска, Н. Велева. Класифициране на дейностите по здравни грижи като подход за оптимизиране управлението на бюджета на работното време. - *Социална медицина*, година XXI/2013/3 (под печат)

Резюме: Класифицирането на дейностите е инструмент за оптимизиране на труда. Значимостта на класификациите е основно по отношение на анализ и изучаване на труда, подобряване на организацията и обективно отразяване на

реално извършваните дейности. Наличието на наш и международен опит в областта, позволява да се анализират възможностите за прилагането на адекватни класификации в областта на здравните грижи. Използването на класификации на дейностите, в съответствие с всяка длъжност, ще даде възможност за регистрирането им в специализирана документация, за контрол, за остойностяване на всяка дейност и диференцирано заплащане на труда на професионалистите по здравни грижи.

Abstract: Classification of activities is a tool to optimize labor. The significance of classification is primarily in terms of analysis and study of labor, improving the organization and objectively reflects the actual activities performed. The presence of our international experience in the field allows you to analyze the possibilities of implementation of adequate classifications in health care. Using the classifications of activities under each post will allow for their registration in a specialized documentation control, valuation of each activity and differential pay for health care professionals.

Ключови думи: класификация на дейностите, управление на времето, професионалисти по здравни грижи

27. Велева, Н. Опит за разработване на симулатор за прогнозиране на потребностите от медицински сестри в България. - *Социална медицина* (под печат)

An attempt to develop a simulator for forecasting future needs for nurses in Bulgaria

Abstract: Assessing future needs for nurses in Bulgaria is a complex logistic problem. The best method for solving it is the simulation modeling. Hence we tried to develop a dynamic simulation model for nursing workforce market. The simulator estimates future demand based on certain entry parameters in four scenarios and provides quantitative information for deficit or surplus of nurses.

Резюме: Определянето на бъдещите потребности от медицински сестри в България е трудна и комплексна логистична задача, която може да бъде решена по най-добър начин чрез метода на симулационното моделиране. Поради това се опитахме да разработим динамичен симулационен модел на пазара на труда на медицински сестри. Симулаторът изчислява бъдещото търсене на базата на определени входящи параметри при четири сценария и дава количествена информация за дефицита или излишъка на медицински сестри.

Key words: simulator, nursing workforce, forecasting

28. Велева, Н., Г. Грънчарова, М. Драганова. Трудова миграция на българските медицински сестри. – В: *Сборник доклади от Юбилеен научен форум „Дни на общественото здраве”, Под ред. на Г. Грънчарова , 5-7 октомври 2006, Плевен, 324 – 329.*

WORK MIGRATION OF BULGARIAN NURSES

Abstract: Nurses are inequitably distributed throughout the world, with severe imbalances between developed and developing countries. This global workforce shortage is made even worse by imbalances within countries. These imbalances are

precondition for the widespread migration on the global and Bulgarian market for nurses.

Key words: nurses, shortage, work migration

29. Драганова, М., Г. Грънчарова, **Н. Велева**. Медицинските сестри за спецификата на сестринската документация. - В: *Сборник доклади от Юбилеен научен форум „Дни на общественото здраве”, Под ред. на Г. Грънчарова, 5-7 октомври 2006, Плевен, 252 – 255.*

NURSES FOR SPECIFICITY OF NURSING DOCUMENTATION

Abstract: There is currently considerable interest throughout the world within health care sector to increase the quality of nursing documentation and nursing terminology. One reason for the emphasis on nursing documentation may be the increasing need for secure and accurate transfer of patient related information between different caregivers. The paper presents Bulgarian nurses' view and opinion about specificity of nursing documentation.

Keywords: nursing documentation, nurses' opinion, medical documentation

30. Драганова, М., Г. Грънчарова, **Н. Велева**. Проблеми на документирането в сестринската практика у нас. – В: *Сборник доклади от Юбилеен научен форум „Дни на общественото здраве”, Под ред. на Г. Грънчарова, 5-7 октомври 2006, Плевен, 256 – 259.*

PROBLEMS OF THE DOCUMENTATION IN THE BULGARIAN NURSES' PRACTICE

Abstract: This paper compares nurses' opinions on documentation from two different studies. There is insignificant distinction about nursing documentation used in daily nursing practice. The number of nurses who realized necessity of the nursing documentation system has increased. One of the main problems for application of nursing documentation in practice is negative attitude among nurses and physicians.

Keywords: nursing documentation, nurses' opinion, nursing practice

31. Драганова, М., Г. Грънчарова, **Н. Велева**. Възможности за приложение на сестринския процес в практиката. - В: *Научни трудове на Съюза на учените в България – Пловдив, Серия Б. Естествени и хуманитарни науки, том XI, Юбилейна научна сесия „60 години СУБ – Пловдив“, 4-5 ноември 2008, 349-352.*

Резюме: Сестринството е професионална дисциплина, която прилага различни форми на познания и умения за критично мислене във всяка конкретна ситуация на пациента/клиента чрез използването на сестрински модели в сестринския процес. Съществуващите модели са различни по степен на специфика, но всеки може да бъде използван в сестринската практика. Една от новите концепции, изучавана в професионалното обучение на медицинските сестри у нас е сестринския процес. В исторически план сестринския процес е познат от 60-те години на миналия век. У нас сестринския процес се изучава от 1996/1997 г. в базовото образование на медицинските сестри и в

бакалавърската програма по „Управление на здравните грижи“, но за приложението му в практиката все още не може да се говори.

Целта на настоящото проучване е установяване и анализиране на проблемните области при изучаване и прилагане на сестринския процес според медицинските сестри, работещи и учещи в гр. Плевен.

32. Велева, Н., Г. Грънчарова, М. Драганова, Р. Колева – Коларова. Реализация на студентите от специалност „Управление на здравните грижи“ за периода 2005-2010 г. - В: *Сборник доклади от Юбилейна научна конференция с международно участие „Здравеопазването през 21 век – реалности и перспективи“*, Под ред. на Г. Грънчарова, 30 септември – 2 октомври 2010, Плевен, том 2, 484-488.

Резюме. Въведение: Реализацията на специалистите придобили съответна образователно-квалификационна степен е най-обективната пазарна оценка за качеството на обучението, предлагано от дадено учебно заведение. Постоянният интерес към специалността „Управление на здравните грижи“ и големият брой кандидат-студенти през последните пет години са доказателство за необходимостта от нейното съществуване и по-нататъшно развитие.

Целта на настоящото проучване е да установи степента на реализация на студентите, придобили образователно-квалификационна степен „бакалавър“ или „магистър“ в МУ – Плевен, основните пречки за реализация, мотивацията и самооценката на дипломираните относно усвоените знания и практически умения.

Материал и методи: През м. май – юни 2010 г. е проведена анкета сред всички завършили специалността в МУ-Плевен и обучаващите се към момента на проучването. Въпросникът включва 31 въпроса: първата част касае оценката на придобитата професионална компетентност по управление на здравните грижи, педагогическите умения и друга подготовка; втората част разкрива професионалния статус при кандидатстване, в момента, професионалните планове и причините, затрудняващи реализацията.

Резултати и обсъждане: До момента са се отзовали 61 анкетирани, въз основа на които са получени следните предварителни резултати. Нараснал е значително делът на заемащите ръководна длъжност, но към 2010 г. над 50% от дипломираните не заемат подходящи ръководни длъжности. Прави впечатление тенденцията за нарастване на броя на реализиращите се в частния сектор. Наблюдават се и случаи на напускане на системата или смяна на предмета на дейност. Основни пречки за реализацията са: липсата на обективни критерии при назначаване, липса на подкрепа от ръководителите на здравните заведения, от съсловната организация и др.

Заклучение: Налице е обективна необходимост от подготвени ръководни кадри в областта на управлението на здравните грижи.

Ключови думи: реализация, специалисти, управление на здравните грижи

33. Веков, Т., Н. Велева, М. Драганова. Анализ на зависимостта между удовлетвореността на пациентите и финансово-икономическите показатели на доброволните здравноосигурителни дружества в България през 2009 г. - В: *Сборник доклади от Юбилейна научна конференция с международно участие „Здравеопазването през 21 век – реалности и перспективи“*, Под ред. на Г. Грънчарова, 30 септември – 2 октомври 2010, Плевен, том 2, 394-398.

Correlation analysis of patients' satisfaction and financial indicators of voluntary health insurance funds in Bulgaria in 2009

Abstract. Introduction: In 2010 the discussions about the health insurance system reform in Bulgaria were re-opened. They were provoked by the latest health insurance bill, which included provisions for premium raise and shifting from two to three-pillar model.

Aim: To determine the correlation between patients' satisfaction and financial indicators of voluntary health insurance funds.

Material and methods: Anonymous self-administered questionnaire was given to 1530 voluntary health insured persons. The questionnaire investigated overall satisfaction, reaction time in case of health problem, decisions adequacy, communication with insurers' staff and quality of the received information. The level of profit and the satisfaction level were measured as well as the indicator – insurers' generosity (costs to premium incomes) and its effect on patients' satisfaction.

Discussion: An inverse correlation exists between the patients' satisfaction and the profitability rates of voluntary health insurance funds. The leading companies according to profitability rates receive some of the lowest appraisals regarding patients' satisfaction and vice versa.

Results: DallBogg – Life and Health with negative financial results received the highest patients' satisfaction rating ($N_{max} = 58.83\%$) while Municipal Health Insurance Fund achieved the highest profit ($M_{max}=1.402$ million lv.). Leading results for insurers' generosity were for DallBogg – Life and Health (0,97).

Conclusion: There is a key health insurance problem – companies' pursuit of profit maximization confronts with patients' interests and satisfaction. In order to achieve balance the bill for additional compulsory health insurance should include provisions for public control over profits, quality, accessibility and risk selection of private health insurance funds.

Key words: patients' satisfaction, voluntary health insurance funds, financial indicators

Резюме. Въведение: В началото на 2010 г. отново придобиха актуалност дискусиите относно реформирането на здравноосигурителната система в България. Повод беше поредният проектозакон за увеличаване на здравноосигурителната вноска и преминаване от двустълбов към тристълбов модел на здравно осигуряване.

Цел: Да се направи анализ на зависимостта между удовлетвореността на пациентите и финансово-икономическите показатели на доброволните здравноосигурителни дружества в България.

Материал и методи: Удовлетвореността на пациентите в проучването беше измерено чрез анонимни анкети на 1530 доброволно здравноосигурени лица, съдържащи въпроси относно обща удовлетвореност, скорост на реакция при

здравословен проблем, адекватност на взетите решения, комуникация със служителите на осигурителите и качество на получената информация. Измерено беше съотношението на печалбата към нивото на удовлетвореност, както и показателя щедрост на осигурителя (разходи отнесени към приходи от премии) и влиянието му върху удовлетвореността на пациентите.

Обсъждане: Анализът установява обратнопропорционална зависимост между нивата на печалба и удовлетвореността на пациентите – лидерите по положителни финансови резултати, получават едни от най-ниските оценки за удовлетвореност на пациентите и обратно.

Резултати: Най-висока оценка на пациентите за удовлетвореност от дейността получава DallBogg – Живот и Здраве ($N_{max} = 58.83\%$), докато Общинска Здравеоосигурителна Каса реализира най-висока печалба от дейността ($M_{max} = 1,402$ млн.лв). Лидерски показатели за размера на извършените здравноосигурителни разходи, отнесени към премийния приход (щедрост на осигурителя) показва отново DallBogg – Живот и Здраве (0,97).

Заключение: Констатираме наличието на основният здравеоосигурителен проблем – стремежа към увеличаване на печалбите се конфронтира с интересите и удовлетворението на пациентите. Перспективно бъдеще очаква тези фондове, които умело управляват и балансират този конфликт на интереси. С цел насърчаване на политиката и управлението към постигане на този баланс при частните здравеоосигурителни дружества в законопроектите за допълнително задължително здравно осигуряване трябва да бъде предвиден публичен контрол върху печалбите, качеството, достъпността и селекцията на риска.

Ключови думи: удовлетвореност на пациентите, доброволни здравноосигурителни дружества, финансови показатели

34. Веков, Т., Р. Колева-Коларова, Н. Велева. Сравнителен анализ на качеството и ефективността при лечение на исхемична болест на сърцето в доболничната помощ в България и Англия. - В: *Сборник доклади от Юбилейна научна конференция с международно участие „Здравеопазването през 21 век – реалности и перспективи”*, Под ред. на Г. Грънчарова, 30 септември – 2 октомври 2010, Плевен, том 2, 321-326.

Comparative analysis of the quality and effectiveness of ischemic disease treatment in out-patient facilities in Bulgaria and England

Abstract. Introduction: This study examines the effectiveness of two primary care payment systems for ischemic disease treatment (IHD) – fee for service (England) and capitation (Bulgaria).

Aim: To analyze the correlation between cost of out-patient treatment and treatment outcomes in order to investigate the factors responsible for the worsened treatment outcomes of the IHD in Bulgaria.

Material and method: Through meta-analysis of previous own researches (2006 – 2009) the therapeutical practices were assessed according to the medical standards for treatment of stenocardia as well as the control of the most common comorbidities – arterial hyperthonia and cholesterolemia. The trends in treatment outcomes and cost-effectiveness were analysed and compared to these from England. Data were obtained from patients' medical records and satisfaction surveys.

Results and discussion: The differences in control of arterial BP and cholesterol levels were insignificant ($P < 0,05$) therefore in spite of the increased treatment costs the main risk factors control was not improved. The cost-effectiveness ratio ($CER = -0,678$) showed inverse correlation between outcomes and costs in Bulgaria. The implementation of fee for service payment in England resulted in many improvements: the overall quality of care, the BP control – with 34,70%, the control of serum cholesterol – with 62,60%, and an increase of 30,80% in the medical standards adherence. If Bulgaria adopts the same payment scheme and achieves similar results, then the CER would be +0,435, which would show direct correlation between treatment results and costs, and increased effectiveness – improvement of clinical results by 2,30 units per each additional cost unit.

Conclusion: The primary care payment system in Bulgaria should be reformed in order to achieve improved quality of treatment and control over chronic diseases, decrease of cardiovascular hospitalization episodes and mortality levels.

Key words: primary care, quality, ischemic disease

Резюме. Въведение: Настоящото изследване представя сравнителен анализ на ефективността на две системи на финансиране на първичната помощ при лечение на исхемична болест на сърцето – заплащане за извършена дейност (Англия) и капитация (България).

Цел: С цел установяване на причините и факторите, които влияят на понижаващите се резултати при лечението на исхемична болест на сърцето в България, авторите изследват зависимостта между вложените разходи за допълнително лечение и постигнатите резултати.

Материал и методи: Чрез мета-анализ на предходни собствени проучвания (2006-2009) е направена оценка на терапевтичната практика с медицинските стандарти за лечението на стенокардия, както и контрола на най-често съпътстващите състояния – артериална хипертония и холестеролемия. Анализирани са тенденциите по отношение на резултатите и разходите и са сравнени с аналогичните данни за Англия.

Резултати и обсъждане: Коефициентът разходи-ефективност ($CER = -0,678$) показва обратнопропорционална зависимост на здравните ефекти от разходите за периода, т.е. в България при увеличаващи се разходи качествените резултати при лечението на исхемична болест на сърцето намаляват. Въвеждането на системата за заплащане за извършени услуги в Англия води до подобряване на: качеството на допълнителната помощ, контролът на кръвното налягане с 34,70%, контролът на серумния холестерол – с 62,60% и нивото на спазване на медицинските стандарти с 30,80%. Ако допуснем, че в България бъде въведена същата система за заплащане и бъдат получени подобни резултати, тогава ефективността на допълнителната помощ би била $CER = +0,435$. Този коефициент показва, както правопрпорционална зависимост на повишаващите се клинични резултати от увеличаващото се финансиране, така и увеличена ефективност на разходите – за всяка вложена единица финансиране се получават 2,30 единици подобряване на клиничните резултати.

Заклучение: Системата за финансиране на допълнителната помощ в България трябва да се реформира по посока на заплащане за клинични резултати и постигнати цели в качеството, за да се постигне подобряване на качеството на лечение и контрола на хроничните заболявания, както и намаляване на свръххоспитализациите и смъртността от сърдечносъдови заболявания.

Ключови думи: допълнителна помощ, качество, исхемична болест на сърцето

35. Костова, Я., М. Драганова, **Н. Велева**. Анализ на трудовата заетост на медицинските сестри в Централен операционен блок на УМБАЛ „Д-р Г. Странски“ – Плевен. – В: *Сборник доклади. Втора национална студентска сесия на ФЗГ, МУ-Плевен, 27-28 март 2014* (под печат)

Workload Time Analysis of Nursing Staff in the Central Surgery Ward at the University Hospital in Pleven

Резюме. Въведение. Оптималното и рационално използване на ресурсите е от изключително значение в условията на икономическа криза. Анализът на трудовата заетост е съществен елемент от организацията и управлението на човешките и времеви ресурси във всяка структура на лечебните заведения за болнична помощ. Периодичното извършване на анализа дава възможност за оптимизиране на организацията на труда и балансиране на натовареността на персонала.

Цел. Да се установи степента на съответствие между обема дейности на медицинските сестри от централен операционен блок на УМБАЛ – Плевен и осигуреността с персонал по време на първа смяна.

Методи. Реализиран е самохронометраж на 17 медицинските сестри в продължение на две седмици по време на първа смяна (от 8,00 до 14,00 часа). За обработка на резултатите е използвана стандартизирана методология от управлението на здравните грижи. Чрез документален метод е направен сравнителен анализ между получените резултати и стандартите, касаещи дейността на Операционен блок.

Резултати. Установено бе, че за реализирането на дейностите, регламентирани за извършване по време на първа смяна са необходими минимум 9 операционни медицински сестри. Най-голям относителен дял (55%) от времето се оползотворява за подготовка, инструментиране и асистирание по време на оперативна интервенция и подготовка на инструментариум и превързочен материал за стерилизация (17%).

Изводи. Съществуващата организация в Операционен блок не е адекватна на стандартите. Обективна е необходимостта от назначаване на още две медицински сестри. При невъзможност е препоръчително да се оптимизира организацията на персонала за първа смяна.

Ключови думи: анализ на трудова заетост, операционни медицински сестри

Summery. Background. Optimal and rational resource management is of critical importance in times of financial crisis. Workload time analysis is a key element of staff and time management in all hospital wards. Recurring workload assessments provide the basis for staff performance optimization and balancing the workload across nurses.

Aim. To assess the degree of compliance of the nursing staff provided for first shift in the Central Surgery Ward at the University Hospital in Pleven against the nursing task performance requirements and the medical standard for surgery.

Methods. Chronometry method was applied with 17 nurses in surgery ward for the first shift (from 8 a.m. to 14 p.m.) within two weeks. Information from task analysis includes a breakdown of all work operations and task performance time (per task, totals for first shift and calculated percent utilization for each task).

Results. We found out that the minimal number of nurses due for performance of all the work tasks during first shift is 9. The largest time share is accounted for preparation, handling instruments and direct assistance to surgeon during operation (55%). Following is the preparation of instruments and dressings for sterilization (17%).

Conclusion. The staff organization observed is not adequate to task performance requirements and the medical standard for surgery. Hence, there is need for hiring of two additional nurses. Another strategy for handling this deficit is balancing the workload across shifts.

Key words: workload time analysis, surgery, nurses

36. Vekov, T., R. Koleva-Kolarova, **N. Veleva.** Necessity of reform in Bulgarian pharmaceutical reimbursement system – prognostic results. 3rd Public Health Conference, 10-13 November 2010, Amsterdam, the Netherlands. - *European Journal of Public Health, Vol. 20, 2010, Suppl. 1, 192; общ IF = 2.267*

Summery. Issue/problem: During the last 10 years of Bulgarian health-care reform an issue of constant discussions is the uncontrolled growth of public expenditures on reimbursing pharmaceuticals from the compulsory health insurance. The current reimbursement system is based on a positive list and a fixed price per pharmaceutical product.

Description of the problem: The aim of this study is to perform a comparative analysis of the expenditures for treating cardiovascular disease of 830 patients, voluntary insured in private health insurance funds, and those of patients with identical diagnoses, compulsory insured in the National Health Insurance Fund.

Results: The results from the analysis show that the average cost in therapeutic reimbursement is 45,07% lower (33,85 BGN) than the average cost in pharmaceutical reimbursement (61,63 BGN) for the treatment of identical diagnoses. Out-of-pocket co-payments by the insured population also decrease in therapeutic reimbursement – from 46,56 to 5,23 BGN. Disadvantage of the current reimbursement system is the tendency to consume the total amount of the monthly limit for a diagnosis irrespective of individuals' diagnostic and treatment needs. The increase of public expenditures on pharmaceuticals could be contained through adequate balancing of the monthly reimbursement limits in different diagnoses.

Lessons: The therapeutic reimbursement mechanism has several advantages: the decrease of pharmaceuticals' prices decreases out-of-pocket spending of patients, not the public expenditures, as it is the current case in pharmaceutical reimbursement, based on the lowest price from referential lists of eight European countries. Therapeutic reimbursement achieves greater social impact. The pharmaceutical expenditures are easily predicted as they are determined by the number of patients and their diagnoses. The mechanism of controlling pharmaceutical prescription and reimbursement is much simplified and with low administrative costs. However, the necessity for an adequate pharmaceutical reimbursement policy requires the development of a programme for cost-effective prescription and usage of drugs.

37. Veleva, N., M. Draganova. Quality of Nursing Care and Nursing Process (Bulgaria, 2008-2009). 3rd Public Health Conference, 10-13 November 2010, Amsterdam, the Netherlands. - *European Journal of Public Health, Vol. 20, 2010, Suppl. 1, 194; общ IF = 2.267*

Abstract. Background: The five-step nursing process – assessment, diagnosis, planning, implementation and evaluation is essential for the delivery of quality nursing care. Nursing process is widely spread in the European nursing practice but in Bulgaria is still not applied. The accession of our country to the EU and the subsequent need for unification of both legislation and practice would lead to inevitable introduction of nursing process in Bulgaria. This study explores the views of Bulgarian nurses about the opportunities for clinical application of nursing process and its effect on the health-care quality.

Methods: Anonymous self-administered questionnaires were distributed to 544 nurses during 2008-2009. The study group included 334 practicing nurses from four University Hospitals in Pleven, Sofia, Varna and Stara Zagora, 32 trainers from four nursing schools in the same places, and 178 last year students.

Results: Most of the participants (79%) express their unquestionable interest in nursing process and consciousness of the necessity of its implementation in clinical practice. Only 37% of the respondents consider that nowadays in Bulgaria there are realistic possibilities for clinical application of the nursing process. Most of the participants (64%) do not perceive nursing process as a tool for improvement of nursing care quality but see it as control and assessment instrument. No significant differences were found between the answers of respondents from different hospitals. There is significant difference between the views of practicing nurses/teachers who are pessimists and students who show more positive attitude.

Conclusions: The results of this study confirm that at the moment there are no possibilities for clinical application of professional methods and tools for quality nursing care in Bulgaria. This study proves that the most important factor for the implementation of nursing process is the acquiring of profound knowledge and understanding of the process.

Key words: nursing process, nursing practice, clinical application, quality nursing care

38. Vekov, T., N. Veleva, R. Koleva-Kolarova, M. Draganova. Dependence of health care accessibility and quality on informal payments by patients (2008-2011) Bulgaria. EUPHA 2011 Annual Conference, 10- 12 November, 2011, Copenhagen, Denmark. - *European Journal of Public Health, Vol. 21, 2011, Suppl. 1, 42; общ IF = 2.728*

Summery. Background: The issue of informal out-of-pocket payments in Bulgaria attains particular importance in 2011 as a result of a couple of changes: 1) new restrictive delegated hospital budgets, decrease in pathway prices and limitation of the amount of the activities; 2) new regulation of out-of-pocket payments for patients' choice of medical team/physician and medical consumables.

Aim: To find out the relationships between: informal payments and clinical pathway prices; informal payments and patients' health insurance status and informal payments and patients' satisfaction.

Methods: In 01.-03.2011 we conducted sociological survey of 2 284 patients' attitude to informal payments through structured in-depth interviews in two focus groups. The questionnaires consist of questions about the reasons for hospitalization, diagnoses, existence and scale of formal and informal payments, timing and patients' attitude. Data for the year 2008 are derived from the Open Society survey of informal payments for health in Bulgaria.

Results: Most of the cases of informal payments refer to major surgery, tumour treatment, delivery and implantations (valves, stents, joints). The scale of the informal payment is inversely proportional to the level of reimbursement. The amount of the informal payments varies between €1000-2000 at average that exceeds the national average work salary between 2-5 times. Huge proportion (82.13%) of compulsory insured patients is affected by informal financial pressure. There are no informal payments reported by patients with additional voluntary health insurance. There is an actual raise in informal payments from 71.74% in 2008 to 88.76% in 2011. We witness prevailing lack of satisfaction with the quality of health services in spite of the informal payments made 74% (1132).

Conclusions: The financial crisis and the normative restrictions directly reflect in raise of informal payments which are totally unacceptable for the patients as this is an actual barrier for the accessibility to timely and quality health care.

Hence political actions are needed in course of specifying the legislation concerning voluntary health insurance which guarantees additional funding of medical services along with substantial decrease of patients' informal payments.

39. Vekov, T., S. Aleksandrova – Yankulovska, I. Maznev, D. Makaveeva, R. Koleva-Kolarova, **N. Veleva**. Programme for treatment of patients with heart failure at home – evaluation of the therapeutic outcomes and effectiveness: a randomized controlled trial. EUPHA 2011 Annual Conference, 10- 12 November, 2011, Copenhagen, Denmark. - *European Journal of Public Health*, Vol. 21, 2011, Suppl.1, 51; **общ IF = 2.728**

Summary. Background: Heart failure (HF) is a serious health problem because of the enormous costs of treatment, home care and the worsened quality of life. The home-based programmes for monitoring of HF patients reduce hospitalization and mortality rates, and improve the treatment effectiveness.

Aim: The aim was to compare the effectiveness and therapeutic results of a home-treatment programme for HF patients regarding quality of life, hospitalization and mortality rates, and costs as compared to the standard care for a 1 year period.

Methods: We performed a 12-month randomized controlled comparative study between December 2008 and March 2010. A total of 300 study HF subjects aged 50>80 years, were included and distributed in two groups of 150 upon discharge from four cardiac hospitals in Bulgaria. The intervention group obtained home treatment and follow-up, monthly interviews and telephone consultancy, home visits and cardiologist examinations. The quality of life was determined through the Minnesota questionnaire and body weight, pulse, body temperature, diuresis, arterial pressure, breathing, six-minute walking distance test were measured. A telephone interview was held with the control group at the end of the 1-year period to specify the current condition and quality of life. The primary comparator indicators were quality of life, hospitalization and mortality rates.

Results: The intervention group showed improvement in the quality of life and patient's satisfaction, positive and consistent heart rate and body temperature control. There was no improvement in the diuresis control; rate of breathing was unaffected either. There was a significant improvement in the control of body weight (decrease of 25,33% to 9,33%) and arterial pressure (decreased from 12,0% to 2,67%). The group registered 165 hospitalization episodes (1,1 per patient) and 7 deaths (4,67%). The control group had 248 hospitalization episodes (1,65 per patient) and 9 deaths (6%).

Conclusions: The comparative analysis of the two groups showed improvement in the quality of life, hospitalization episodes, mortality rates and effectiveness of treatment in the intervention group. The cost-effectiveness ratio showed twice greater effectiveness of home-based programme as compared to the standard treatment.

40. Vekov, T., R. Koleva-Kolarova, **N. Veleva**, S. Aleksandrova-Yankulovska, G. Grancharova. Patient – physician communication and its influence on patients' perceptions of medical errors. EUPHA 2011 Annual Conference, 10-12 November, 2011, Copenhagen, Denmark. - *European Journal of Public Health*, Vol. 21, 2011, Suppl. 1, 110; **общ IF = 2.728**

Summary. Background: The quality of health care in Bulgaria has been a subject of constant debate. Healthcare establishments and medical specialist are prone to medical audits and inspections regarding the equity of access, medical standards compliance and the quality of health services.

The **aim** of this study was to perform a sociological survey amongst two groups of randomly selected patients and one group of randomly selected physicians through standardized self-administered questionnaires regarding health services quality and medical errors.

Methods: In the first group 2 580 patients were interviewed about their experience with medical treatment (out-patient and in-patient), patient-physician communication and medical errors. In the second group 1 643 hospital patients were interviewed about their satisfaction with hospital treatment. In the third group 128 physicians were interviewed about patient-physician communication and factors which influence patients' satisfaction with medical services. The study was performed between February 2010 and February 2011.

Results: 368 (14.26%) patients from the first group reported that there were medical errors in the course of their treatment but only 12 (3.26%) submitted official complaints either at the Medical audit agency or the health establishment authorities. The most common medical errors were incorrect diagnosis (51%), inadequate pharmaceutical therapy (32%), surgical errors (8%) and hospital infections' complications (2%). 55% of the patients reported negative health impact, 25% - additional financial health costs and 16% - negative psychological consequences. In the second group 279 patients (17%) rate adequate patient – physician communication as a key factor which determines their perception of the quality of medical services, discharge recommendations are found to be equally important – 270 (16.8%), information about prescribed therapy (25%) and lack of pain (12%) follow. In the physician group 43 (34%) interviewed think the communication with patients is important, while 85 (66%) rate therapeutic results and medical therapy consistency higher.

Conclusions: The different perceptions of patients and physicians lead to miscommunication problems which might impact negatively the quality of medical services.

41. Vekov, T., R. Koleva-Kolarova, G. Grancharova, **N. Veleva**, M. Draganova. The reform of out-patient health care delivery in Bulgaria – does it provide for integration of care for cardiovascular conditions? - *In: Abstract book from EHMA 2011 Annual Conference: Integration in Health and Healthcare, 22–24 June, Porto, Portugal, 2011, 129*

Summary. Context: One of the main scopes of the health reform in Bulgaria was the restructuring of the out-patient health care delivery system in order to improve effectiveness, enhance quality and performance. The general practitioner (GP) figure was introduced to provide primary care for chronic patients (e.g. cardiovascular diseases) and the polyclinics were restructured in specialized diagnostic consultative centers. Standards for inpatient management of cardiovascular diseases were implemented, but outpatient guidelines are still lacking.

The **aim** is to explore whether the change of the out-patient health delivery structure in Bulgaria supports the integration of care for chronic cardiovascular diseases.

Methods: We performed a meta-analysis of previous own researches of the therapeutic treatment of 723 197 cardiovascular patients, in order to assess the quality and continuity of care, patient satisfaction and access to care.

Results: The analysis revealed poor control over the main risk factors for cardiovascular diseases: 43.55 % of all patients suffered from hypercholesterolemia; 26.57% of the patients demonstrated decompensated heart insufficiency. The share of the mono therapies with high medication dosages in Bulgaria was twice as high as compared to the EU practice. In 27.14% of the double-therapy and 59.46% of the triple therapy cases there was non-adherence to the ESC guidelines. The patient satisfaction surveys revealed that only 31.40% of the patients found improvements in the quality of out-patient care, 34% thought that access to care was enhanced, and 41.70% - that access to out-patient specialists was improved.

Discussion: The reform in the out-patient health care delivery did not fully achieve its priority set goals. The quality and continuity of care are poor, resulting in increased cardiovascular hospitalisation levels and high mortality rates. Future reforms should be directed towards developing and implementing national out-patient cardiovascular guidelines and replacing the capitation reimbursement with pay-for-performance models.

42. Vekov, T., R. Koleva-Kolarova, G. Grancharova, **N. Veleva**, M. Draganova. Overhospitalization – a key issue in hospital management in Bulgaria. – *In: Abstract book from EHMA 2011 Annual Conference: Integration in Health and Healthcare, 22–24 June, Porto, Portugal, 2011, 130.*

Summary. Context: Ten years after the launch of the inpatient reform, the hospital system in Bulgaria still faces many shortcomings. The existing infrastructure is outdated and highly exceeds the needs of the society. Hospital performance is still unsatisfactory with regards to quality of care, effectiveness and containing inpatient

expenditures. There is a clear tendency of increasing rate of hospitalization episodes, which constitutes one of the key reasons for steady increase in hospital expenses. The **aim** of this study is to analyze the reasons and the trends in hospitalization patterns in Bulgaria.

Material and methods: The analysis encompasses performance and statistical indicators of hospitals in Bulgaria for the period 2000 – 2007. Data is derived from the Annual reports of the National Health Insurance Fund in Bulgaria and the Annual statistical reports of the Bulgarian Institute of Statistics.

Results: The analysis revealed that the average hospitalization rate in Bulgaria is 22 patients/per annum per 100 inhabitants (16 pts in the EU) and there is an annual increase of 26%. The main diagnoses for hospital admission are bronchopneumonia and heart failure. In 2007, 612 103 patients were hospitalized via the emergency units without referrals, which constitutes 49.3% of all hospitalization episodes for the year. Only 65.5% of all Bulgarian patients for the period 2000-2007 received treatment in primary care facilities, as compared to over 80% in other EU countries.

Discussion: The analysis reveals that the over hospitalization trend in Bulgaria is due to induced demand from the providers, the existing incentives to increase volume by reporting inexistent activities or up-coding diagnoses, the opportunity to transfer patients among wards, the inefficiency of the referral system and the increasing rate of self-referrals from medical specialists who work in both outpatient and inpatient establishments. These shortcomings have led to deteriorating quality of inpatient care, high rates of avoidable mortality, and increased hospital mortality. Future reforms should be directed towards applying mechanisms for performance-based competition and a hospital reimbursement system based on quality.

43. Draganova, M., T. Vekov, **N. Veleva.** The diversity of nursing activities in Bulgarian hospitals. – *In Abstract book from the 13th European Doctoral Conference in Nursing Science, 14-15 September, Graz, Austria, 2012, 136-137.*

Abstract. Background. Today we experience a shortage of resources in all spheres of life. In healthcare this shortage is extremely tangible. The lack of sufficient human, material and financial resources is a key problem for most of the hospitals in Bulgaria. The availability of those resources varies with different hospitals. Commonly there is a shortage of nurses in all of them.

In the last 10 years there is a significant exodus from the nursing profession in Bulgaria. Main push factors for young people attaining proficiency in nursing are: Nursing care specificity; Long and expensive basic education – 4 years; Low remuneration for nursing labor; Subordination of nursing profession on the medical profession. The national strategy for the development of Bulgarian nursing of the Bulgarian Association of Health Care Professionals sets the focus on the crisis of Bulgarian nursing and its salvation. The languished interest of young people for the nursing profession is a matter of fact. The number of nurses that prefer realization abroad is also disturbing. As a result of all the current process concerning the Bulgarian nursing logically arise a number of questions: Who is taking care for the Bulgarian patient? What is the precise expression of everyday nursing activities? Are the everyday nursing activities adequate to the existing regulation? Bulgarian regulation concerning nursing activities includes the Ordinance on healthcare professionals' competences enforced in January 2011 and job descriptions. Nursing activities are object of a number of Bulgarian surveys focused mainly on time

management. They investigate the most time consuming nursing activities, which are the time prevailing activities by shifts etc.

Procedures' classifications that are used in those surveys are universal for medical professions. At present in Bulgaria there is no nursing activities classification which is adequate to the specificity of nursing labor.

Aim. The aim of the present study is to identify and analyze the everyday activities of nurses working in hospital settings in order to elaborate nursing activities classification relevant for Bulgaria.

Material and Methods. The method of self-chronometry was used with 30 practicing nurses during two weeks for all shifts (morning, afternoon, day, night). Each nursing activity performed was recorded along with the corresponding time duration in individual work diaries particularly designed for that study. The participants were free to define activity types themselves as they occupy different positions in different types of hospitals and wards. The survey was conducted in March – May 2012.

Results. We collected 30 diaries. All of the participants are students in specialty "Healthcare management" in the Faculty of Public Health of the Medical University in Pleven, Bulgaria. The majority of them are staff nurses – 20, and the rest of them are nurse managers - 7 senior and 3 head nurses. An interesting finding of the study is the great diversity of recorded activities. More than 100 everyday nursing activities were performed according to the records.

Only 10% of the recorded nursing activities are in collaboration with physicians. One third of the everyday nursing activities is not included in their job description.

Conclusion. The elaboration of classification of nursing activities which is corresponding to the reality and is synchronized with job descriptions is an opportunity for an objective assessment of nursing labor and differential pay.

44. Vekov, T., N. Veleva, S. Aleksandrova-Yankulovska, G. Grancharova, M. Draganova. Patients' criteria for good physician's practice (Bulgaria 2011), 5-th European Public Health Conference, All Inclusive Public Health, 8-10 November 2012, Malta European. - *Journal of Public Health, Vol. 22, 2012, Suppl. 2, 263; общ IF = 2.516*

Summary. Background. The transition of Bulgarian healthcare sector from state regulated monopoly to competitive market system involves the development of health services marketing as well as growing importance of patients' opinion and appraisal of physicians practice and quality of health services. The future market success of health services' providers depends highly on their knowledge about patients' needs and expectations.

The aim of the study is to identify the real patients' criteria for physicians' appraisal in order to bring evidence to health care providers in the process of improving health services efficiency and responsiveness to consumers' needs.

Methods. In 2011 standardized interviews were conducted by specially trained interviewers with 1340 patients in 14 medical centres and diagnostic-consulting centres located in 8 regional cities in Bulgaria. The questionnaire consisted of questions concerning information about the way of receiving the patient, patient-physician communication, duration of medical examination, physician's explanations about diagnoses, treatment and outcome perspectives and the attitude of the physician to the patient.

Results. According to the patients' responses more than 70% of the physicians didn't give a smile while receiving them; 47% of them didn't even look at the entering patient; 23% didn't pay any attention to the patient and the entire communication was left to the nurse. Only 23% of the physicians spent enough time to listen carefully to patients' complaints and 5% refused the patient a hearing. In most of the cases (32%) the examination duration was 20 minutes on average, and 43% of the patients claimed that there was no examination at all. The majority of physicians (86%) didn't explain logically and in details the diagnostic methods, the nature of disease, the treatment alternatives, unwanted and side drug effects and outcome perspectives.

Conclusions. Despite of the ongoing health reform in Bulgaria the patients' opinion about physicians' behaviour and practice demonstrates a great gap between patients' expectations about good medical practice and real situation in healthcare settings. The major problems of health services market lie in the lack of appropriate communication between healthcare providers and consumers.

45. Vekov, T., N. Veleva, S. Aleksandrova-Yankulovska, G. Grancharova, M. Draganova. Patients' behaviour as an important factor for physician-patient communication (Bulgaria 2011), 5-th European Public Health Conference, All Inclusive Public Health, 8-10 November 2012, Malta. - *European Journal of Public Health*, Vol. 22, 2012, Suppl. 2, 263-264; **общ IF = 2.516**

Summary. Background. Most of the research on physician-patients' relationships stress on physicians' behavior, patients' needs satisfaction, patients' rights protection and patients' criteria for physicians' appraisal. In our previous studies we found that in spite of the present competitive market environment a limited number of physicians practice according to the modern market management and communications. Studies on physicians' criteria to appraise patients' behavior are very rare in our country.

The aim of this study is to identify the real physicians' criteria for patients' appraisal in order to improve the physician-patients' communication.

Methods. Standardized interviews were performed with randomly selected 413 physicians in April-June 2011. Most of participants were general practitioners (231 - 56%), followed by specialists in out-patient care (98 - 24%) and 84 (20%) physicians from 3 public and 4 private hospitals. All physicians were interviewed during their working hours. They were asked to formulate their perceptions on patients' behavior to gain physicians' confidence, liking and sympathy and what type of patients' behavior is more likely to lead to physicians' disapproval.

Results. The majority of interviewed physicians (36%) pointed out as the most important characteristics of patients' behavior to be polite, smiling and good-natured. Far below in the ranking are patients' appearance and hygiene. Most of the respondents (41%) considered the complaining about the examinations and on the behavior of other physicians as bad characteristics of patients' behavior. The other 28% of respondents disapproved patients that come to see them with a prepared statement about their diagnosis and treatment; 13% pointed out as most annoying the presence of accompanying persons that are hyperactive or panicked and act like patients' competent mentors; 10% were annoyed of being asked straight from the door about the price of the examination and manipulations.

Conclusions. This study identified unfriendly behavior and patients' complains from other physicians as most repellent for doctors. Our findings reveal that often patients

are not able to gain real sympathy and devotedness of the physician which influences the communication and treatment process.

46. Vekov, T., S. Aleksandrova-Yankulovska, G. Grancharova, **N. Veleva**, M. Draganova. Assessment of health care reform by Bulgarian physicians (comparative study for 2007-2011). – *In Abstract book from EHMA Annual Conference 2013 "What health care can we afford? Better, quicker, lower cost", 26-28 June, Bocconi University, Milano, Italy, 2013, 151.*

Summary. Context: Health reform in Bulgaria is fundamental and concerns the whole structure, parameters and principles of health care. Its effective realization requires strong managerial competency in conformity with contemporary managerial principles and technologies. Physicians' attitude towards health reform as well as their satisfaction of the changes is of utmost importance. It is crucial to collect and analyse specific sociological data about the evolution of medical professionals' assessment of health reform as direct participants and medical care providers. The aim of our research was to investigate the dynamics of physicians' opinions and expectations of health reform over the period 2007-2011.

Methods: The study was conducted in two stages (2007 and 2011) and focused on comparative analysis of physicians' views concerning their awareness about the reform, the attained positive expectations, quality and access to medical care as well as the realized unfavourable effects of the changes in health care system. Data was collected using the same standardized self-administered questionnaire consisting of close-ended questions. The study groups involved 1733 medical professionals randomly selected in eight regional areas - 1015 in 2007 and 718 in 2011. The distributions of participants in both parts of the study by sex, age and medical specialties were very similar: the percentages of women were predominant (56.9% in 2007 and 58.1% in 2011); more than 60% of respondents were 41-60 years old and over 50% were general practitioners. Data processing was performed by SPSS v.13.

Results: The data underlined an improvement of out-patient care by 13.3%, while hospital care changed for the worse by 17.6%. The same was the opinion about the medical care at home - it has worsened by 8.3%. The number of physicians dissatisfied with their salaries has increased - the percentage of respondents expecting some improvement and more fairness in their monthly payment has decreased by 11.2%. There were no significant changes in physician-patient communication - 64.3% in 2007 pointed out the improvement of physician's responsiveness as a positive result of reform as compared to 60.2% in 2011. An increase in bureaucracy and in health care expenses for the patients were also alarming signals for ineffectiveness of health reform. The respondents pointed out some positive changes in the accessibility of medical care (from 57.1% in 2007 to 71.7% in 2011) and in decreasing of informal payments by 9.8%.

Discussion: The evolution of professional opinion about health care reform in Bulgaria and the comparative analysis based on the data collected over the period 2007-2011 undoubtedly demonstrated significant increase in physicians' negative assessment of health care reform as a whole and particularly in relation to its objectives, terms, priorities, realized positive expectations. Our conclusions confirmed the results of some other studies in the country. The determining groups of factors for the ineffectiveness of health reform and the physicians' dissatisfaction relate mainly to the numerous and complicated administrative problems, the low

payment of medical professionals, the way of financing and functioning of the national health insurance fund, the unclear and partially performed reforms, the lack of total vision about the development of health system, the attitude of the public and the media to the medical professionals, and the corruption in the health system.

47. Veleva, N., M. Draganova, T. Vekov, S. Aleksandrova-Yankulovska, G. Grancharova. Bulgarian Nursing Workforce Forecast (2013-2023). 6th European Public Health Conference, Brussels, Belgium, 13-16 November 2013. - *European Journal of Public Health*, vol. 23. 2013, Suppl. 1, 242-243; **общ IF = 2.516**

Summary. Background: Today there is a global shortage of nurses. There are severe imbalances between the developed and developing countries as well as among the regions within the countries. As the market mechanism is unable to solve the problem governments worldwide are becoming increasingly involved in workforce planning.

Until now no scientific forecasts of the needs for nurses were produced in Bulgaria. There are particular evaluations of the professional association (BAHCP), the Ministry of health and other stakeholders which are not based on profound situation analysis and estimation but are rather an expression of the generally held view that there is a shortage of nurses.

Aim: To make an evidence-based forecast of the needs for nursing workforce until 2025 in order to support the decision makers in the process of human resources planning in Bulgaria.

Material and Methods: Specifically for this study the nursing association provided data on its members by specialty, gender, age group, employment status, foreign certificates etc. with reference date of March 2013. In addition we used the official information of the National Institute of Statistics on the nursing personnel, population projections, general mortality rates etc. A supply and demand simulation model of the market for nurses (2013-2025) was constructed using system dynamics approach. It estimates the supply of nurses and the deficit or surplus. The ratio of nurses needed per 100 000 population is set on historical bases calculations.

Results: In the scenario with moderate population decrease until 2025 the Bulgarian market for nurses is expected to be balanced at about the same as the current absolute number of 27 000 specialists. The nurse:population ratio will increase from 365 at present to 400 but still it will be lower than the EU average (750).

Conclusion: On the supply side Bulgarian health system has got the capacity for providing enough nurses to meet the market needs but the demand side of the market does not provide adequate job opportunities and remuneration for nurses. The shortage of nurses that exists in our country is not a physical deficit of persons with nursing qualification but lack of individuals motivated to practice nursing.

Message 1: Bulgarian market for nurses will continue to be self-sufficient. There is no need to further increase the numerus clausus for nursing students or import nurses from abroad.

Message 2: The adequate policy is to apply human resource strategies aimed at motivation and retention of the highly qualified nurse professionals in Bulgaria.

48. Vekov, T., S. Aleksandrova-Yankulovska, G. Grancharova, **N. Veleva**, M. Draganova. Effective approach to improve the value of out-patient care in hypertensive patients. 6th European Public Health Conference, Brussels, Belgium, 13-16 November 2013. - *European Journal of Public Health*, vol.23, 2013, Suppl. 1, 245; **оџц IF = 2.516**

Summary. Background. The general practitioners (GPs) in Bulgaria, as in many other countries, are rewarded on per capita basis. This does not motivate them to take responsibility for the outcomes of care, to control effectively the course of chronic diseases and to improve the tertiary prevention by minimizing the number of hospitalizations and changes for the worse. It is important to underline that the value in health care should be measured mainly by the therapeutic results for the patients and the physicians should be paid accordingly to the outcomes achieved. Such an approach will improve the value for patients, the financing institutions, the health care providers, and will contribute to the economic stability of the health system.

The **aim** of this study was to evaluate how the changes in GP's behavior to hypertensive patients' treatment will affect the value for patients and the remuneration of physicians.

Methods. The study was conducted within one year period (from January to December 2012), including 112 GPs and 2240 hypertensive patients – 20 patients per one GP. The predominant part of patients were women (62.2%) and 37.4% men. The main criterion for inclusion was arterial hypertension (AH) without any other comorbidity. Each patient was checked by his GP at least 6 times per year. The variables monitored included: pulse frequency, systolic and diastolic blood pressure, lipid profile, smoking, diet, physical activity and hospitalization. The value improvement was measured by the positive changes in all monitored variables. The value received by the hypertensive patients in out-patient care was divided in two parts: a value in hypertension treatment and a value in prevention of consequent heart disease and incidents, like acute coronary syndrome. The changes in the values received by the patients were calculated as the ratio of the relative improvement in clinical indicators (control of blood pressure, pulse rate, and lipid profile) and improvement in body-mass index and cessation of smoking) to the relative increase in health care expenditures.

Results. The results show that when the therapeutic targets are well determined, and the physicians are well-motivated to reach them, the patients received significantly higher value of treatment. By the end of the study 63.1% of the patients had well-controlled blood pressure, serum cholesterol level was within the reference range in 90.2% of patients, and pulse rate was normal in 91.5% of the patients. Only 23 patients out of 2240 (about 1%) were hospitalized during the year of observation. Among the preventive measures the highest value for patients was registered for the cessation of smoking where the percentage of smokers has reduced from 17.9% at the beginning to 5.3% at the end of the study (relative improvement of 338%). Quite high relative improvement (265%) was observed for accepting a healthy diet, but the absolute number of patients on a healthy diet was not satisfactory – 7.2% at the beginning and 19.1% at the end of the study. Almost no change was registered for physical activity (9.5% and 10.5% respectively). All the expenditures for the realization of this one-year programme, including check-ups, tests and physicians' motivation rewards for improved treatment and preventive results, add up to a total of 235 BGN per patient a year. As compared to the amount of money provided for such

patients by the National Health Insurance Fund (64 BGN per patient a year), there was an increase of expenditures by 367%.

Conclusion. The value in out-patient care for hypertensive patients should be measured by the positive changes in the therapeutic and behavioral results. This will improve the value for all participants in out-patient health care and will contribute to the economic stability of health system.

49. Грънчарова, Г., М. Камбунова, М. Драганова, **Н. Велева**. Изява на тип „А” поведение сред ръководните медицински специалисти. – В: *Сборник резюмета от Първа национална трипартитна конференция на българското общество за изучаване и борба със стреса (с международно участие), 12-13 септември, Пловдив, 2003, 175-176.*

Резюме. Наблюдаваната тенденция през последните десетилетия за широко прилагане на различни методики за търсене на сложни връзки между личностните измерения и здравето позволи на изследователите да изучат редица рискови фактори, произлизащи от самата личност. Личностов тип А постоянно бърза да изпълни задачи, често се заема с две или повече дейности едновременно и е жертва на „заболяване, свързано с бързане“, както го описват Friedman и Rosenman. Екстремалното поведение на личностов тип А се свързва със заболяване на сърцето или на други, свързани със стреса проблеми.

Цел на проучването. Да се определи преобладаващата личностова ориентация сред ръководните медицински специалисти (медицински сестри, акушерки, лаборанти и др.) чрез приложение на въпросник, разработен от Friedman и Rosenman.

Методи. Необходимата първична информация бе набрана чрез анонимно срезово проучване. Обект на изследването бяха 108 ръководни медицински специалисти /медицински сестри, акушерки, лаборанти и др./ На проучването се отзоваха 91 от анкетираните лица или реализираната възвръщаемост на анкетните карти е 84,3%.

Резултати. След провеждане на проучването се установи, че по отношение на този тест отговорите се разпределят по следния начин: 44 с личностова ориентация тип А; 30 с личностова ориентация тип В; 17 с оптимална личностна ориентация, т.е. тези анкетирани аса дали по равен брой отговори, характерни и за двата типа ориентация.

Изводи. Сред анкетираните по-висок е относителния дял на ръководителите с личностова ориентация тип А, но не може да се каже, че сред ръководните кадри силно преобладават хора с определен термометър и личностова ориентация.

50. Гладилков, Ст., **Н. Велева**. Търсене и предлагане в здравеопазването. Основни понятия и приложението им в условията на реформа на българското здравеопазване. - В: *Сборник резюмета от Юбилейна научна конференция „30 години ВМИ–Плевен”, Под ред. на Г. Грънчарова, 15-17 октомври 2004, 258.*

Резюме. В условията на реформа пазарните механизми широко навлизат в управлението на българското здравеопазване. Тези механизми имат своя специфика и тя дава отражение върху пазарните сили: търсене и предлагане, които в здравеопазването имат своето специфично звучене. Настоящото съобщение има за цел на базата на данни от достъпната клитература и собствен анализ, да осветли посочения проблем и да предложи общоприети термини за търсенето и предлагането в здравеопазването.

Тълкуването на понятията се осъществява от гледна точка на „теорията за човешкия капитал“ на Майкъл Гросман. Разгледани са ролята и мястото на лекаря и пациента в търсенето и предлагането на медицинска помощ, а също и факторите, оказващи влияние на тези процеси.

Привеждат се конкретни примери от практиката на първичната медицинска помощ нас.

Ключови думи: търсене, предлагане, здраве, медицинска помощ, потребности

51. Грънчарова, Г., М. Драганова, М. Камбурова, А. Велкова, **Н. Велева**, М. Сълева, Р. Колева. Реализация на бакалаврите по Здравни грижи – състояние и нерешени проблеми. - В: *Сборник резюмета от Юбилейна научна конференция „30 години ВМИ–Плевен“*, Под ред. на Г. Грънчарова, 15-17 октомври 2004, 256.

Резюме: Ефективността на всяка образователна система се доказва чрез степента на реализация на придобилите съответна образователно-квалификационна степен. Това важи още повече за новите специалности и образователно-квалификационни степени, каквато е „бакалавър по здравни грижи“.

Целта на настоящето съобщение е да се установи степента на реализация на бакалаврите, завършили ВМИ – Плевен, основните причини, затрудняващи реализацията и самооценката на дипломираните относно усвоените знания и практически умения.

Материал и методи: През 2000 г. и 2003 г. се проведени пощенски анкети сред общо 521 дипломирани бакалаври и студенти в специалността „Здравни грижи“. Въпросникът съдържа 23 въпроса: първата част касае оценката на придобитата професионална компетентност по управление на здравните грижи, педагогическите умения и друга подготовка; втората част разкрива професионалния статус при кандидатстване, в момента, професионалните планове и причините, затрудняващи реализацията.

Резултати и обсъждане: Отзовали са се 249 анкетирани (46%). Нараснал е значимо дялът на заемащите ръководна длъжност, но към 2003г. над 50% от дипломираните не заемат подходящи ръководни длъжности. Основните причини са: липса на общовалидни критерии при назначаване, липса на подкрепа от ръководителите на здравните заведения, от съсловната организация и др.

Заклучение: Необходимо е обединяване на усилията на висшите училища, професионалните организации и ръководните здравни органи за адекватна професионална реализация на новото поколение бакалаври по здравни грижи, които ще допринесат съществено за успеха на здравната реформа.

Ключови думи: бакалаври, реализация, знания, практически умения, професионални планове

52. Драганова, М., **Н. Велева.** ICNP - Международна класификация на сестринската практика. - В: *Сборник резюмета от Юбилейна научна конференция „30 години ВМИ–Плевен”, Под ред. на Г. Грънчарова, 15-17 октомври 2004, 262.*

Резюме. Въведение: Международният Сестрински Съюз (ICN) и Северноамериканската асоциация по сестринска диагноза (NANDA) споделят вярата си, че сестринските данни за пациента са основата на един цялостен електронен запис за пациента. Използването на стандартизирана терминология в сестринската практика, би могло да подпомогне вземането на правилно решение, планирането на интервенции, касаещи както лечението, така и превенцията.

Целта на настоящето съобщение е да се представи същността, развитието и основните идеи на Международната класификация на сестринската практика (МКСП) за развитието на сестринството.

Докладът е изготвен на базата на критичен анализ на литературни източници.

Резултати: Международната класификация на сестринската практика се създава през 1989 г., в резултат на общата идея на Международния сестрински съюз и Северноамериканската асоциация по сестринска диагноза, съществуваща от 1973 г. NANDA International и Международния сестрински съюз поставят началото на колаборация, която ще подпомогне унифицирането на сестринската терминология.

Обсъждане: Международната класификация на сестринската практика е унифицирана система на сестринския език за сестринските диагнози (статуса на пациента/клиента), сестринските интервенции и резултатите от тях. Съвместната дейност в областта на сестринската диагноза на двете водещи организации, е достатъчно силен аргумент за задълбоченото изучаване у нас и на двете класификации.

Заклучение. Международната класификация на сестринската практика е една алтернатива за българското сестринство. Изучаването и в базовото сестринско образование у нас ще осигури възможност за избор при адаптирането на световната сестринска наука и практика към нашите условия, а това от своя страна ни поставя в една адекватна на европейското сестринство позиция.

Ключови думи: ICN, NANDA, ICNP, сестринска диагноза

53. Драганова, М., **Н. Велева,** М. Камбурова. Значимост на сестринската документация за осигуряване на качествени здравни грижи. - В: *Сборник резюмета от Втори Балкански конгрес по история на медицината, 20-22 октомври, Варна, 2005, 43.*

Summary. Introduction: The documentation in the public health is a written prove for the interaction, for the links between the health professionals, clients and their families, health organizations, laboratories, health establishments, educational centers, as well the results, answers of the patients from the interaction with all this institutions. A number of investigations in the last years among the medical attendance professionals, indicates that the percentage of people with negative attitude to registration and keeping documentation is still high.

Aim: The aim of the present report is to emphasize the significance of the documentation in the medical nurse practice for qualitative medical attendance.

Materials and methods: International and Bulgarian literature is studied about the essence of nurse documentation, standards of nurse documentation, as well their role for qualitative medical attendance.

Results and discussion: The nurse documentation is a part of the clinical text written by nurses and in fact is the full, exhaustive information about the health status of the patient/client, the need of nurse attendance, the nurse attendance carried out and their results. According to investigation results in Bulgaria, more than a half of the investigated people think that the existing documentation does not reflect the full volume of the nurse activity. The increasing needs of the citizens, the reform in the public health lays down new requirements to the nurse work connected with the individual approach to the patient, personal responsibility for work done as well evaluation of the work done by nurses.

As a conclusion, we can tell that documentation is needed, which could give a complete idea of the medical nurse work.

Key words: nurse documentation, qualitative medical attendance

54. Драганова, М., Н. Велева, К. Кънчева, Документирането на сестринската дейност – предпоставка за приложението на сестринския процес. - В: *Сборник доклади от 6 Национален форум на професионалистите по здравни грижи, Шумен, декември 2007, 31.*

Резюме. Цел: Целта на съобщението е да се анализира връзката между документирането като елемент на сестринската дейност и приложението на сестринския процес.

Материал и методи: Проучена е международна и наша литература, относно сестринския процес и неговото документиране. Използвани са документален метод и сравнително-системен анализ.

Резултати и обсъждане: Според сестринската наука, процеса на предоставяне на сестрински грижи и неговото документиране се разбира по различни начини. Някои от авторите, например, го приемат като описание на задачите на медицинските сестри, за други това е метод за решаване на проблеми и вземане на решение, трети приемат сестринския процес и неговото документиране като един теоретически и философски модел на мислене, описване и обгрижване като едно цяло. Независимо от начина на възприемане, предоставянето на сестрински грижи изисква адекватно документиране.

Сестринският процес се базира на сестринската теория, развита от Ida Jean Orlando. Тя развива тази теория през петдесетте години на миналия век като наблюдава медицински сестри в действие. В резултат на наблюдението тя стига до следните обобщения: Пациентът трябва да бъде в центъра на грижите, приоритет на сестринските грижи да бъде главно подобряване резултатите за пациента, а не реализиране на сестринските цели; сестринският процес за грижи е в основата на сестринския план за грижи.

Заключение: Изучаването на сестринския процес в базовото обучение на медицинските сестри у нас се разширява. В резултат на това, в близките години медицинските сестри от практиката ще бъдат теоретически подготвени. Това налага да се обмислят и механизмите за практическото приложение на сестринския процес, което се реализира чрез документирането му.

Ключови думи: сестринска документация, сестрински процес, медицински сестри.

55. Davidova, R., St. Yochkova, **N. Veleva**, E. Ivanov. Active learning of Anatomy: comparative research between the final exam results of Anatomy and some clinical disciplines. – *In Abstracts from XXI National Congress of the Bulgarian Anatomical Society with international participation, May 31 – June 2, Sofia, 2013.*

Summary. In the Anatomy department we have implemented elements of active learning since 2001. These are: Group Learning in Osteology and Arthrology part, Clinical Questions in the course of Splanchnology and Clinical Tasks in the dissection course. We have preceded interim research about final exam marks, satisfaction of acquired knowledge and skills. In the recent work we continue the research comparing the final exam of Anatomy and some medical disciplines which need substantial anatomy knowledge like Pathology, Radiology and Neurology. We pull out the marks of 204 students studied anatomy in our department from 2001 to 2005. Two groups were formed: Active Learning Group (ALG, n 102) and Control Group (CG, n 102) randomly generated students studied in the standard program. The statistical proceeding was made using STATISTICA program. Examination scores were analyzed by the modified Levene equal variance test (F-test), ANOVA; the correlations between the marks of anatomy and other disciplines were made by linear regression analysis. The mean grade of the anatomy exam was 4.39. It is significantly higher in the active ALG – 4.53 comparing with those in the CG – 4.30 ($p < 0.001$). Results show significant correlation between the final exam marks of anatomy and the neurology (4.39 / 4.90) for the ALG and CG (4.30 / 4.45). There was not a significant correlation between the final marks of anatomy and pathology. The results show that the ALG- students continue with a higher exam results. From the inquiries we determined that the students from the ALG were more satisfied of the acquired knowledge and skills as well as of manner of learning which they apprehend as “interesting” and “fascinated”. Active learning of anatomy heightens the interest and finally the results in acquiring the anatomy knowledge and thus helps students in learning of some clinical disciplines needed substantial anatomy knowledge.