

## ORGANIZATION AND HOLDING OF HOSPITAL THERAPEUTIC NUTRITION IN HOSPITALS FOR ACTIVE TREATMENT IN RUSE'S TERRITORY

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### Abstract:

**Introduction:** Daily food consumption is a basic factor for improving both the quality of life and the well-being of people. Hospital medical nutrition needs to suit certain standards and requirements, so as to provide all the necessary micro- and macronutrients for patients. It has to be high-quality food and also has to mind the technological requirements for its preparation in the hospital, in addition to looking aesthetically pleasing and tasting good.

**Objective:** This report's goal is to study the hospital dietary nutrition in the hospitals for active care in Ruse, Bulgaria – University hospital Kanev; University hospital Medika; Mental health center Ruse; Complex-oncological center Ruse and the Specialized Hospital for active treatment of pneumo-phthisiatric diseases - Dr Dimitar Gramatikov.

**Methods:** The survey was conducted between the months of April and September 2020. The criteria for inclusion of those hospitals are: to perform an organized hospital nutrition, and the medical institution to be a hospital itself.

**Results:** In the medical establishments that are included in the study, medical dietary nutrition is carried out in accordance with the normative documents and standards which are in force for the country. The numerological system of nutrition Pevzner is applied, as the basic diets are from №1 to 15, as well as their varieties according to the disease's acuteness.

**Conclusions:** We find that, just because contemporary requirements for nutrition in the Republic of Bulgaria have been presented in developed national recommendations for healthy eating, this is not enough. What is needed is to develop and apply a fully adequate hospital diet, based on an individual assessment of nutrition status, and degree of risk from malnutrition.

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### Introduction

Nutrition in each country has its characteristics in accordance with the geographic location, cultural peculiarities and economic peculiarities. The contemporary trends in nutrition in developed countries are connected to feeding with carbohydrates and fats, meaning there is a surplus in energy substances. As a result, there is a trend towards an increase in number of people who are overweight have are obese. Today, nutrition is a complex social and economic process (Pheasant H, 2008). Nutritional peculiarity associated with Bulgaria are that partial deficiencies in certain places exist, such as a partial lack of iron in children, pregnant women and suckling mothers, and a shortage and high need for vitamins during the winter-spring period. What's also peculiar is the insufficient balance in aliments and nutritional substances in the daily menu, as well as surplus of fat, salt and sugar in the foods (Ognyanova, 2019; Popova, 2009; Mateva, L. & Stoynov, S., 2006).

### Hospital therapeutic nutrition.

The adequate oral intake of food is the first dietary precaution to either correct or prevent malnutrition. Proper menus for particular groups of patients need to be provided, as well as a proper choice for their age, religion and culture. The food intake has to be guaranteed. The monitoring of this intake is highly important to discover on time patients which have nutritional risk (Reber et al., 2019). If a patient, with the help of nutritional screening and assessment, is found to be underfed or has a nutritional risk, their food could be enriched in order to improve their food intake by adding proteins, carbohydrates and fat. If these precautions turn out inadequate, an addition must be in order. Tube feeding or parenteral nutrition may need to be considered from the very beginning for severely malnourished patients whose intake of oral supplements is almost unlikely to cover their requirements. The supplement choice depends on the nutritional profile and the patient's intake of it. Good relevance is highly important for the nutritional therapy's success and a lack of good control may lower adherence (Belojev, 2000).

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Therapeutic nutrition is responsible for the metabolic needs of the sick organism. The disease treatment is divided into: etiological, pathological, symptomatic, medical, surgical, balneological, physiotherapeutic and dietary (therapeutic nutrition), which is important for each complex therapy of every patient (Kazandjiev, 2012).

Maximal conformity of the diets is needed for the taste requirements of the individual patients; specific physiological needs of aliments and energy, peculiarities of its metabolism, traditions, religion, geographical area (Vulgarev, 2000). Individual cooking is impossible in hospital kitchens, but in some hospitals there are the so-called optional meals, expressed in the availability of 2-3 meals, of which the patient himself chooses his food for the next day.

When accepted into a hospital the patient needs to be informed of the diet and its nature. Both the expected result of the adherence to the diet and the effect of non-observance of it is clarified, as well as the approximate term for the diet observance.

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### **Methods**

The study was accomplished during the period between April and September 2020 by an official inquiry sent to the managers of the selected hospitals. The criteria for inclusion of the medical facilities are: those facilities to host a hospital and which perform organized therapeutic nutrition.

The study was conducted by the author team - lecturers from the University of Ruse "Angel Kanchev" Department of Health Care.

Methods used: Research and analysis of normative documents and interviews conducted with hospital specialists in medical nutrition.

After an official inquiry to the managers of the mentioned hospitals, documents related to the hospital nutrition were provided and an interview was conducted with the specialists in medical nutrition.

### **Results**

The food offered to patients in both the university hospitals of Kanev and Medika is cooked in the hospital kitchens that are in the medical facilities and adhere to all valid regulations in the country. In the Specialized hospital for active treatment of pneumo-phthisiatric diseases Dr Dimitar Gramatikov the realization of patients' therapeutic nutrition is provided by catering from the hospital kitchen of Kanev, expressed in cooking and delivery of ready hospital food. The food preparation and delivery is done on a schedule based on the daily admission of patients. In the Ruse Mental Health Center and Complex Oncological Center, hospital food is delivered under contract from foreign catering companies. The delivered aliments are ordered according to the Recipe Book of the Ministry of Health for hospital nutrition.

The preparation of food for all selected hospital facilities in Ruse's territory in Bulgaria is performed in observance of the requirements for diet described in the Collection of recipes for dietary meals in public restaurants and prevention and treatment facilities.

Therapeutic nutrition of patients in the aforementioned hospital facilities in Ruse, Bulgaria is applied based on the numerological system Pevzner, developed in 1929. Pevzner diets are intended for different types of diseases and include the most appropriate nutrition for the patients. The idea is that one can control his own health via food and avoid exacerbation of chronic diseases. Manuil Isaakovich Pevzner was a Russian scientist, therapist and gastroenterologist from the early 20th century, one of the founders of the Institute of nutrition in Moscow, and a honorable scientist of the Russian Soviet Federative Socialist Republic. Pevzner developed a nutrition system divided into 15 therapeutic diets, some of them divided into sub-diets (post-operation diets are separate, numbered 0), relevant to specific groups of diseases. The range of diseases in which those diets are being prescribed, is wide but primarily gastroenterological diseases amongst them, such as gastritis, colitis, ulcerous and pre-ulcerous diseases and indigestion of faeces. In addition, illnesses such as diabetes, tuberculosis, gout;

diseases of different organs and systems: liver, kidneys, bladder, cardio-vascular diseases, functional diseases of the nerves and acute infectious diseases (Belojev, 2000).

No protocols are applied for nutritional status and degree of malnutrition risk in the researched health facilities in Ruse, Bulgaria.

### **Discussion**

The main regulatory base for therapeutic nutrition in the Republic of Bulgaria is based on the hospital menu which is based on the Collection of recipes for dietary meals in public restaurants and prevention and treatment facilities from 1984, in addition to the Ordinance №23 from 19.07.2005 on the physiological norms for nutrition of the population (Boeva, 1984; Ordinance №23, 2005). This ordinance regulates the weight in grams of the portions, taste qualities, the technological requirements for preparing dietary foods and good outlook, and the requirements for hygiene, quality and energy value of the food, as well as the variety and sort of meals, in accordance with the norms of therapeutic nutrition.

The regulatory base for nutrition with catering services is based on: Food Act; Ordinance №5 of 25.05.2006 on food hygiene; Ordinance №2 of 23.01.2008 on plastic materials and articles intended for contact with food; Ordinance on the requirements for the labeling and presentation of foodstuffs, last amendment in the State Gazette, issue no. 17 of 23.02.2018; Regulation (EC) No 1935/2004 of the European Parliament and of the Council of 27 October 2004 on materials and articles intended to come into contact with food and repealing Directives 80/590/EEC and 89/109/EEC; Regulation (EC) No 852/2004 of the European parliament and of the council of 29 April 2004 on the hygiene of foodstuffs; etc.(Food Act, 2020; Ordinance №5, 2005; Ordinance №2, 2008; Ordinance on the requirements for the labeling and presentation of foodstuffs, 2018; Regulation (EC) No 1935, 2004; Regulation (EC) No 852, 2004).

Nutritional screening must be an easy and quick process, performed by a team of doctors and nurses, and sensitive enough to find all, or almost all patients with nutritive risk. The disease severity and nutritive risk can interact with each other. Moderate eating disorders, respectively malnutrition, can be more pronounced at more severe diseases. Nutritive screening must be held to all patients with both severe chronic and oncological diseases when accepted in hospitals and during their hospital stay (once a week) (Georgieva & Koleva, 2017).

In 2003, the European Society for parenteral and enteral nutrition (ESPEN) published recommendations for nutritional screening in population levels, for health facilities and geriatric patients (Kondrup et al., 2003).

During its III National Congress in 2008, the Bulgarian Society for enteral and parenteral nutrition and metabolism, accepted an Agreement for enteral and parenteral nutrition, in which the main practical approaches are represented for the assessment and therapy of the eating disorders (Kazandjiev, G., 2012). ESPEN recommends the following protocols for nutritive screening (Popova, 2009):

1. A Malnutrition Universal Screening Tool for adults
2. Nutritional Risk Screening of hospitalized patients
3. Initial Screening in Mini Nutritional Assessments for the elderly, geriatric patients.

A team of lecturers in Ruse University Angel Kanchev in Ruse, Bulgaria, Chair of Health Care, provide protocols for the assessment of nutritive status and degree of risk of malnutrition in palliative patients to nursing students during their training process for Palliative care (Georgieva & Koleva, 2017).

Malnutrition is a problem for hospitalized patients. The main reasons are not just the hospital stay itself, but also the lack of control of the nutritive status. Malnutrition itself is not treated as a diagnostic and healing problem, there's no systematic approach against undernourishment as a problem by the nursing staff (Popova, 2009).

Adequate food imports must fully correspond to the current needs of macro- and micronutrients and food energy. The main contemporary requirements for the nutrition of adolescents and elderly people are represented in the recently developed national recommendations for healthy food. The different, in degree and type, qualitative and quantitative eating disorders, and nutritional imbalances, cause a serious health risk. The aftermath of nutritional discrepancies are even more significant when

associated with other present diseases and disorders. On the other hand, when a fully adequate diet is developed and applied there are essential preconditions for the faster and more complete overcoming of health disorders. Practically, in most cases the eating disorders remain undiagnosed and uncured in both hospital and outpatient care. This is mainly due to the lack of training and assessment of the nutritive status, and also due to a lack of exact protocols for screening, assessment and performance (Kazandjiev, 2012; Popova, 2009).

A great number of hospitalized patients are exposed to additional risk due to undiagnosed malnutrition. In this regard, the timely and adequate application of clinical nutrition reduces the frequency of complication, improves the effectiveness of treating the underlying disease, reduces the sickness rate, reduces the death rate, reduces both the hospital stay and its price, and improves the quality of life and the clinical outcome. The results of multiple clinical studies confirm the crucial importance of therapeutic nutrition for the outcome of the disease, in both the clinical aspect and the pharmaco-economical aspect. The clinical diet is defined after a careful assessment of the nutritional status, the underlying disease's severity and degree of risk (Mateva & Stoynov, 2006). In most European countries, clinical nutrition guidelines for elderly patients were accepted in the last years, which in turn result in rules for good clinical practice (Volkert et al., 2019).

### Conclusions

Practically, in most cases the eating disorders remain undiagnosed and uncured in both hospital and outpatient care. This is mainly due to the lack of training and assessment of the nutritive status, and also due to a lack of exact protocols for screening, assessment and performance. Currently, the training process in the field of Therapeutic nutrition for nurses and midwives is focused on introducing therapeutic nutrition based on Pevzner, which is applied in practice in the hospitals of the Republic of Bulgaria.

Based on the research and findings, we suggest that trainings be conducted in the form of short-term courses for the development of skills and competences for the assessment of a patient's nutritional status and degree of malnutrition risk. This course must be designed for internal medicine doctors, oncologists and both trainee and practicing nurses. It's also necessary to upgrade the Collection of recipes for therapeutic nutrition, published in 1984, so as to correspond to contemporary trends and standards.

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