European Union

Delegation to Montenegro

Policy brief

Prevention and early detection of colorectal cancer in Montenegro

Coalition for Social Changes

Juventas

The Monitoring Center CEMI

The project is funded by the European Union and managed by the EU Delegation to Montenegro. The project is implemented by the Monitoring Center CEMI.

Policy brief

Prevention and early detection of colorectal cancer in montenegro

Coalition for Social Changes

Juventas
The Monitoring Center CEMI

Publisher:

Centar za monitoring CEMI

(eng. The Monitoring Center CEMI)

Tel: +382 (0) 63 230 369
e-mail: cemi@t-com.me
www.cemi.org.me

Printed by Studio Mouse, Podgorica

Introduction

Within the framework of the project "Strengthening advocacy function of CSOs in Montenegro through developing policy-oriented capacities of Coalition for Social Changes", implemented by the Monitoring Center - CEMI in cooperation with Juventas and Cazas, formed a Coalition for Social Changes, comprised by ten NGOs from Montenegro. This coalition has prepared recommendations for the improvement of policies in the areas of health, social care, employment and education, which are regulated by the Poverty Alleviation and Social Inclusion Strategy (PASIS). This document establishes a series of activities and measures with the aim of preserving and improving the health of citizens. To such an end, a set of laws and bylaws have been adopted, which regulate the prevention and control of chronic non-communicable diseases, including malignant tumors.

Achieving this goal includes measures of prevention and early detection of malignant neoplasms for which there are valid and acceptable screening tests: breast, cervical and colorectal cancers. Currently, prevention and early detection of breast and cervical cancer is being implemented in Montenegro, while the implementation of the legally established measures of prevention and early detection of colorectal cancer are not fully implemented.

Today, when we know that 80-95% of patients with colorectal cancer can be cured if diagnosed early through organized and effective system of early detection, it is expected that the implementation of the legally established measures, would have a significant impact in the reduction of morbidity and mortality caused by this disease. [1]

The recommendations of this study include measures that significantly contribute to improving the health of the population, because proper prevention enables detection of malignant colon tumors in the early and limited stage, i.e. in the stage of so-called pre-malignant lesions or early cancers, when the prospects for curing are great. In this way, health care is provided to all patients who are at risk of getting the disease, including the socially vulnerable, thus contributing to equitable healthcare.

For purposes of this study and other studies that monitor the implementation of PASIS, CATI (computer-assisted telephone interviewing) survey was conducted on a sample of 1050 citizens of Montenegro, who were asked to express their views on health, education, levels of social exclusion and employment policies in Montenegro. Further, in-depth interviews with representatives of medical institutions and decision makers in this area were conducted.

Normative framework

Ministry of Health, Labor and Social Care of the Republic of Montenegro, adopted in July 2007, Poverty Alleviation and Social Exclusion Strategy (hereinafter referred to as „PASIS"). [2] This strategic document is based on the Strategy of Development and Poverty Alleviation, which was adopted by

1 Rob Hicks, Trisha Macnair, „Bowel Cancer", BBC Health, http://www.bbc.co.uk/health/physical_health/conditions/in_depth/cancer/typescancer_bowel.shtml, January 2010, accessed on December 29th, 2010
ACS American Cancer Society, http://www.fascrs.org/aboutus/press_room/backgrounders_and_tip_sheets/colorectal/ accessed on December 10th, 2010

2 Poverty Alleviation and Social Exclusion Strategy, Ministry of Health, Labor and Social Care, Podgorica, http://www.minradiss.gov.me/biblioteka/strategije, July 2007, accessed on November 15th, 2010

the Government of Montenegro in November 2003. The Ministry of Health, Labor and Social Care in January 2007, formed an expert group with the task of analyzing the degree of implementation of the Strategy of Development and Poverty Alleviation and evaluating the then current situation, and proposing the necessary policies and programs in terms of reducing the poverty of vulnerable groups in the areas of education, **health**, social protection and employment, in accordance with the international standards.

According to the PASIS, the health care system of Montenegro ensures the preservation and improvement of the health of the population, achieved through the implementation of a series of activities and measures aimed at health promotion, disease prevention, treatment and rehabilitation of patients.

One of the priorities of reform of health sector, as defined by the PASIS, is the change of attitudes towards health. This reform is based on the principles of health policies aimed at raising awareness of citizens on responsible patterns of behavior in terms of health. In addition, the document establishes that the provision of health care system needs to be ensured in the most acceptable and most equitable way, while its development needs to be harmonized with the development trends from European health care systems. Pursuant to the established reforms, the emphasis of the health policy is placed on the prevention of chronic non-communicable diseases, as one of the leading causes of morbidity and mortality worldwide.

Within the framework of PASIS implementation, the Strategy for the Prevention and Control of chronic non-communicable diseases[3] was prepared and the Law on data collections in the field of health care adopted.[4] Additionally, of importance for the implementation of PASIS goals of great importance are previously passed the Law on health insurance[5] and the Law on health care[6] , while for the latter an amendment is being prepared. [7]

According to Monstat, the Statistical office of Montenegro from 2006,[8] malignant neoplasms are, after cardiovascular diseases, a leading cause of death in Montenegro. In 2006, in Montenegro 974 persons died from malignant neoplasms. Among the most common causes of mortality from malignant neoplasms in Montenegro, colorectal cancer occupied second place for men (13.9%) and third for women (8.3%).

Objectives set by the Strategy for the Prevention and Control of chronic non-communicable diseases include the reduction of morbidity and mortality from chronic non-communicable diseases, including some forms of malignant neoplasms, as well as the improvement of quality of life. The realization of these objectives when it comes to malignant neoplasms is planned through the establishment of the National Program for the Prevention and Control of malignant neoplasms, which would include measures of primary prevention and early diagnosis of the disease as well as reduction of exposure to risk factors, particularly for malignant neoplasms for which there are valid and acceptable screening tests.

3 Strategy for the Prevention and Control of Non-communicable Diseases, Ministry of Health, Work and Social Care, November 2008
4 The Law on data collections in the field of health care "Official gazette", number 80/08
5 The Law on health insurance „Official gazette", number 29/05
6 The Law on health care „Official gazette", number 39/04
7 The information on the implementation of PASIS, Ministry of work and social care, http://www.minradiss.gov.me/biblioteka/strategije, June 2010, accessed in November 2010
8 Monstat, „Leading death causes according to gender in Montenegro", 2006

With the aim of carrying out the planned reforms of the health system, the Government of Montenegro has developed following strategic documents: Health policy in Montenegro until 2020, which served as a basis for legislative, policy oriented and action programs, as well as the Strategy for Healthcare Development[9]. Furthermore, for the purposes of the implementation of Healthcare System Improvement Project, the World Bank loan was acquired. These funds ensure, inter alia, the development of primary health protection and improvement of secondary and tertiary healthcare sectors[10].

Complementary to the aims of the Project, the following acts were adopted:

- Regulation on the extent of rights and standards of health care and mandatory health insurance (Official gazette, number 79/05),
- Protocol on standards, norms and ways of accessing primary healthcare protection through chosen team or chosen doctor (Official gazette, number 10/2008),
- Master plan for Development of Healthcare in Montenegro, for the period 2005-2010
- Master plan for Development of Healthcare in Montenegro, for the period 2005-2010[11]

With the adoption of the Protocol on standards, normative and ways of accessing primary healthcare protection through chosen team or chosen doctor, the necessary conditions for the implementation of the main goals of the Strategy for chronic noncommunicable diseases are established, furthered by the definition of certain obligations as defined by the Law on Health Care.

Article 1 of the Law on Health Care defines healthcare as a set of measures and activities aimed at preserving, protecting and improving health, prevention and control of diseases and injuries, early detection of diseases, timely treatment and rehabilitation. Consequently, **prevention and early detection** of diseases is associated with the implementation of prevention and early detection of cancer at the level of primary health care. More specifically, the Article 33 of this Law further defines health services that are implemented at the primary health care level and includes detection, prevention and control of malignant diseases.

In terms of malignant neoplasms, the objectives of the Strategy for the Prevention and Control of chronic noncommunicable diseases include screening tests for: breast, cervical, colorectal, prostate and skin malignant neoplasms. The Law on Health Insurance establishes additional medical measures and procedures of prevention, control and early detection of diseases, with special emphasis on providing the health care to persons suffering from malignant diseases (Article 17, paragraph 1, item 6). Furthermore, the Article 12 of the Regulation on the extent of rights and standards of health care and mandatory health insurance[12] , regulates services provided by the chosen doctor at the level of primary health care, which include preventive screening tests for early detection of cervical cancer (PAP test), breast cancer, as well as breast examination and mammography. Since **prevention and early detection of colorectal cancer are not fully provided** in Montenegro, it is necessary on the one hand to extend the normative framework and on the other to implement existing legal provisions and integrate prevention and early detection of colorectal cancer into the primary health care system.

9 The Government of Montenegro, The Strategy for Healthcare Development, www.mzdravlja.gov.me/files/1158667679.doc, 2003, accessed on November, 3rd 2010

10 Ministry of Health, http://www.mzdravlja.gov.me/vijesti/37766/177975.html, November 19, 2009, accessed on December 15 2010

11 Ministry of Health, http://www.mzdravlja.gov.me/rubrike/strategija-razvoja-zdravstva-crne-gore/97487/MASTER-PLAN-RAZVOJA-ZDRAVSTVA-CRNE-GORE-ZA-PERIOD-2010-2013.html, June 10th 2010, accessed on November 12th, 2010

12 Regulation on the extent of rights and standards of health care and mandatory health insurance, October 13, 2005

The adoption of a series of laws in the area of health imposes a need for the establishment of mechanisms which would regulate collection of data that is crucial for the monitoring of the field of health care, especially in terms of the prevention, monitoring and control of colorectal cancer. Calman-Hine report points out the importance of comprehensive data collection for cancer, which enables monitoring the effectiveness of prevention and treatment of this disease, as well as time trends related to the epidemiology of this disease[13]. In addition, the existence of a comprehensive data system for colorectal cancer enables precise determination of the etiology of the disease in a patient, which is of critical importance for both the prevention and control of the disease[14].

While the Montenegrin legislation envisages the preparation of collection of data for malignant neoplasms – Registry, the legal liabilities however are yet to be applied. In result, the Registry for malignant neoplasms in Montenegro is still not established. On December 26th, 2008, the Law on data collections in the field of health care was adopted, which regulates that the data collections are used for the monitoring and the analysis of the public health, planning and programming of health care and for assisting government agencies in conducting health policies[15]. The Institute for public health is the competent body for managing the data collections, regulated by Article 4 of this Law. Register as a special data collection is maintained for diseases of major socio-medical significance and infectious diseases, including the malignant neoplasms (Article 9). In addition, Article 12 of this Law provides the establishment of data collections at the level of prevention within the non-hospital care. The law also regulates the procedures of updating the data collections, by which the healthcare providers are required to submit data from medical records to the body in charge of managing the data collections, through reports and statements, including the reports on malignant neoplasms.

For now, despite a clear, legally binding obligation, the Registry for malignant neoplasms in Montenegro has not been established. Although the development of the Registry is planned for this year, the lack of the Registry has broader implications, since it prevents the fulfillment of legal obligations, implementation of activities and achievement of goals that are established by the strategic documents. In accordance with the obligations set out by the Law on Health insurance, the abovementioned goals of the Strategy for the Prevention and Control of chronic noncommunicable diseases and the PASIS, it is obvious that the prevention and early detection of colorectal cancer have not yet been systematized in Montenegro.

Analysis of the current situation

According to the data of World Health Organization, set out in the European Strategy for the Prevention and Control of noncommunicable diseases[16] for year 2006, out of 150.322.000 people suffering from chronic noncommunicable diseases in Europe, 17.025.00 or 11% were diseased from malignant neoplasms. During the same year, out of total 9.564 million persons who died from the chronic noncommunicable diseases, 1.855.000 or 19% died from malignant neoplasms. Therefore, malignant neoplasms were in 2006, third in morbidity from all chronic diseases in Europe, after the

13 Calman Hine report, April 1995, page 7 http://www.dh.gov.uk/prod_consum_dh/groups/dh_digitalassets/@dh/@en/documents/digitalasset/dh_4014366.pdf, accessed on December 5th, 2010

14 M.D Manser, D.F Levine, D.F.H Pheby, R.W Pitcher, " Colorectal cancer registration: the central importance of pathology", April 19, 2000 http://www.ncbi.nlm.nih.gov/pmc/articles/PMC1731103/pdf/v053p00875.pdf, accessed on November 19th, 2010

15 Article 2 of the Law on data collections in the field of health care, Official Gazette, number 80/08

16 Anna Ritsatakis, Peter Makara, „Gaining Health: Analysis of policy development in European countries for tackling noncommunicable diseases", World Health Organization, Copenhagen, 2006. http://www.euro.who.int/__data/assets/pdf_file/0018/105318/e92828.pdf, accessed on December, 5, 2010

diseases of circulatory system and neuropsychiatric diseases, and second in terms of mortality, after the diseases of circulatory system.

Due to the lack of the Registry for malignant diseases, it is not possible to determine either the prevalence or incidence of malignant diseases in Montenegro. Currently, the only source of data on the prevalence of this disease and the mortality rates in Montenegro are publications from Monstat. After cardiovascular diseases, malignant neoplasms are the most common cause of death in our country. According to MONSTAT, 974 persons died of malignant neoplasms in Montenegro in 2006, while 891 persons died in 2009, from same diseases.[17] The mortality rate for malignant disease in 2006 was significantly higher in males (573 or 58.8% for men: 401 women or 41.2%), while in 2009, a slight increase in mortality rates among was recorded (504 or 56.5% for male: 387 women or 43.5%). Additionally, the number of deaths from malignant neoplasms in Montenegro, in relation to the total number of deaths for the period from 2001 to 2006, it can be noticed that the number has not changed significantly.

Colorectal cancer and Healthcare system in Montenegro

Diagnosis and treatment of patients with colorectal cancer in Montenegro is performed in institutions of secondary and tertiary health care. Subspecialists gastroenterologists perform examinations of patients referred by chosen doctors from Health Care Centers, and in accordance with current clinical practice guidelines, refer patients to invasive endoscopic diagnosis that includes colonoscopy. Invasive endoscopic diagnostic endoscopy is performed by the gastroenterologist in laboratories, while in the case of diagnosis of colorectal cancer, further evaluation and treatment of the disease is in the competences of gastroenterologists, gastrointestinal surgeons and oncologists.

The National Program for the Prevention and Control of malignant neoplasms has not been established in Montenegro, which would include measures of primary and secondary prevention of colorectal cancer, although the adoption of such a program is presumably planned for the third quarter of 2011. Preventive examinations undertaken by the chosen doctors at the primary health care, which do not include examinations of patients with previously diagnosed colorectal cancer, are foreseen by the Article 33 of the Law on Health Care and the goals of the Strategy for the Prevention and Control of chronic noncommunicable diseases, but not implemented. The implementation of preventive screening for the prevention and early detection of colorectal cancer can also be achieved through expansion of the Article 12 of the Regulation on the extent of rights and standards of health care and mandatory health insurance. In this context, the proposals provided in this study are complementary to aspirations for the establishment of an adequate system of prevention and early detection in the general population with an average (normal) risk of developing colorectal cancer, as well as for the persons with an increased risk of developing this disease.

The best way of treating cancer is the primary prevention, i.e. prevention of the development of disease through the elimination of harmful effects or by promoting positive behavior patterns. Health education, proper diet and lifestyles and other measures of primary and secondary prevention can reduce the incidence of colorectal cancer, and in most cases the disease can be detected at an early stage when treatment results are significantly better. Researchers estimate that the application of all that is known about the cancer prevention can help prevent the development of these diseases in nearly two-thirds of the cases.[18]

17 Statistical office of Montenegro - Monstat, "Montenegro in numbers", Podgorica 2010
18 Cornuz J, Auer R, Senn N, Guessous I, Rodondi N. „Prevention and Screening", National Health Institute USA, December

The prevention of cancer however is not always possible, since not all causes for the development of this disease are known or avoidable. Consequently, secondary prevention or early detection is still of great importance. When the disease occurs, the success of the treatment depends primarily on the degree of expansion of the disease at the moment of the diagnosis. On the basis of existing evidence on the effectiveness and the utilization of available methods for early detection, screening programs for cervical, breast and colon cancer are now generally accepted and recommended. Symptoms that indicate the existence of colon cancer are occult or overt bleeding, changes in the intestinal emptying, weight loss, abdominal pain and anemia. Patients who have some of these symptoms are not included in the screening program, but are instead redirected for diagnosis.

The modalities of screening for people at average risk of developing colorectal cancer

The modalities of screening for people at average risk of developing colorectal cancer, according to the National Guide for doctors in primary health care for the prevention of cancer of the Ministry of Health of the Republic of Serbia includes the necessary risk stratification based on family and personal history. [19]

a) To all persons older than 50 years, who do not belong to any group at risk, it is necessary to offer participation in programs of early detection of colorectal cancer. /IA/[20]

b) The optimal method of screening is the fecal occult blood test. /IIaB/[21]

c) Persons who have no family history of colorectal cancer need to be tested annually for the presence of occult blood in the stool. /IIaB/

d) Persons with a positive test need to be referred to a secondary level institution, where colonoscopy is to be performed.

e) Persons who express a desire to undertake endoscopic screening should be referred to an institution of the secondary level to undertake flexible rectosigmoidoscopy, once every 5 years.

Experience in the application of the fecal occult bleeding test, as a screening test for early detection of colon cancer, conducted in the United States, Great Britain, Sweden and Denmark led to a decline in relative mortality rates of colorectal cancer to 18-33%. [22]

In Montenegro systematic preventive examinations at the primary health care level for early detection and prevention of colorectal cancer are not implemented for groups of patients with an average level of risk for the development of this disease.

2010. Otto S. Lin „Early detection improves chances to beat colorectal cancer“, Institute for digestive diseases, Virginia, 2003

19 Each recommendation is stratified according to international standards, with Roman numbers I, II, IIa, IIb and III, while the degree of proof is classified with letters A, B and C.

20 Proof or general consent on whether the given treatment or procedure is useful or efficient. The data is based on multiple randomized clinical studies or meta-analysis

21 Proof or an opinion that is in favor of usefulness and effectiveness of the proposed measures. The data is based on one randomized clinical study or broad nonrandomized study.

22 Zoran Krivokapić, “ Early detection of colorectal cancer”, http://www.medicicom.com/content/view/282/64/, October 2009, accessed on January 13, 2011. godine

The modalities of screening for people at an increased risk of developing colorectal cancer[23]

Modality of screening for people with a genetic load for the occurrence of colorectal cancer (NHPCC, FAP, juvenile polyposis and Peutz-Jeghers syndrome) according to the National Guide for doctors in primary health care for the prevention of malignant diseases of the Ministry of Health of Serbia, includes a series of measures that ensure early detection and prevention for patients with the higher risk of developing this disease.

1) Persons and members of their families who are, based on the family anamnesis and clinical analysis, diagnosed with one of the abovementioned syndromes, need to be recorded into the registry by the family doctor /IIaB/

2) It is necessary to refer these persons to a specialist of the tertiary institution, where molecular analysis will determine the presence of one of the mentioned syndromes. Additionally, persons with proven molecular disorders and members of their family need to be registered in the National Registry for hereditary tumor syndromes. /IIaB/

3) HNPCC (hereditary non-polyposis colorectal cancer)

• Colonoscopy once every 2 years starting at the age of 25 or 5 years younger than the age of the youngest cousin who is suffering from the colon cancer if that person is younger than 25. Monitoring is discontinued at the age of 75 or earlier if the absence of molecular mutations responsible for the development of the syndromes is confirmed. / IIaB /

4) FAP (familial adenomatous polyposis)

• For family members where genetic mutations cannot be detected, it is necessary to perform sigmoidoscopy annually starting from the age of 13 to 15 until the age of 30, and then once every 3 to 5 years until the age of 60. / IIaB /

• For family members where the existence of multiple adenomatous polyps or APC gene mutations are detected, preventive surgery of colon should be advised at the age between 16 and 20. / IIaB /[24]

5) PJS (Peutz-Jeghers syndrome)

• Colonoscopy is recommended once every three years, starting at the age of 18. / IIbB /

6) JP (juvenile polyps)

• Colonoscopy is recommended once every 1 to 2 years, starting at the age of 15 to 18 or earlier if symptoms occur. / IIaB /

Recommendations for people with a positive family history of colorectal cancer, according to the clinical practice guidelines in oncology (National Cancer Comprehensive Network) for 2009 include:

1) For persons who have first-order relatives suffering from colorectal cancer aged between 50-60 years, colonoscopy is recommended from 40 years of age, which is repeated every 5 years.

23 This group does not include persons diagnosed with inflammatory bowel disease

24 Usefulness and efficiency of the proposed measures is less based on evidence or opinions. The data is based on randomized clinical trials or extensive nonrandomized study.

2) For persons who have first-order relatives suffering from colorectal carcinoma aged <50 years, a colonoscopy is recommended at the age of 40 or 10 years younger than the youngest member who is suffering from colorectal cancer. Colonoscopy should be repeated every 3-5 years.

3) For persons who have first-order relatives suffering from colorectal cancer at the age >60, colonoscopy is recommended starting at the age of 50, and should be repeated every 5 years.

4) For persons who have two first-order relatives diseased from the colorectal cancer at any age, colonoscopy is recommended at the age of 40 or 10 years younger than the youngest member who is suffering from colorectal cancer. Colonoscopy should be performed every 3-5 years after initial screening, depending on other familial predispositions.

5) For persons who have two second-order relatives diseased from the colorectal cancer at any age, colonoscopy is recommended at the age of 50, and should be repeated every 5 years.

6) For persons who have one first-order relative or one or more third-order relatives who are suffering from colorectal cancer, including first-order relatives suffering from noninvasive adenomas should be treated as patients with an average risk. Colonoscopy is the preferred screening method.

In Montenegro systematic preventive examinations at the primary health care level for early detection and prevention of colorectal cancer, are not implemented for groups of patients with genetic load for the development of colorectal cancer.

Conclusion and recommendations

Proposed measures for implementation of the prevention and early detection of colorectal cancer in Montenegro

The issue of prevention and early detection of colorectal cancer in Montenegro is legally established, while there are no mechanisms necessary for the proper implementation. The lack of the Registry substantially prevents the monitoring and implementation of planned activities, which further complicates planning and systematization of health care. The preparation of national clinical practice guidelines on prevention, diagnosis and treatment of colorectal cancer is a prerequisite for the preparation of the National program of prevention and early detection of colorectal cancer. Early detection of colorectal cancer should be provided through the implementation of preventive examinations, as well as development of screening modalities for categories of patients at average and increased risk of developing the disease. Categorization of patients in terms of the risks for developing the disease, it is necessary to prepare and distribute brochures and questionnaires at the National level, and update the Registry with obtained data. Finally, introduction of molecular analysis for determining the genetic load for some hereditary factors that lead to the development of this disease, would significantly contribute to reducing the medical costs.

Legal regulation of early detection of colorectal cancer at the primary health care level

Problem: Failure to meet legal obligations defined by the Article 33 of the Law on Health Care and Article 17 of the Law on Health Insurance.

The consequence: The lack of implementation of early detection of colorectal cancer at the level

of primary health care.

Objective: The establishment or amendments of a legislative framework for the early detection of colorectal cancer at the level of primary health care.

Measures:

1. Adoption of regulation in accordance with the Article 33 of the Law on Health Care, which would regulate preventive examinations in terms of early detection of colorectal cancer at the primary health care level.

2. Amendment of the Article 12 of the Regulation on the extent of rights and standards of health care and mandatory health insurance, which would include preventive screening tests for colorectal cancer.

Registry for colorectal cancer

Problem: Failure to fulfill legal obligation of establishing the Registry of malignant neoplasms in Montenegro.

The consequence: Difficulty for systematization of prevention and early detection of colorectal can**cer**

Objective: Establishment of the National Registry for malignant diseases, which would include information on colorectal cancer and establishment of a Registry for hereditary tumor syndromes.

Measures:

3. Implementation of the legal obligations defined by Articles 2, 8 and 9 of the Law on data collections in the field of health, in terms of preparing the National Registry for malignant neoplasms, including colorectal carcinoma.

4. Implementation of the legal obligations defined by Articles 2, 8 and 9 of the Law on data collections in the field of health, in terms of preparing the Registry for hereditary tumor syndromes.

National clinical practice guidelines for the prevention and diagnosis of colorectal cancer in Montenegro

Problem: Lack of national clinical practice guidelines for the prevention and diagnosis of colorectal carcinoma.

The consequence: Lack of clearly defined clinical recommendations for the prevention and diagnosis of colorectal carcinoma.

Objective: Preparation of national guidelines that would define the procedures on prevention of colorectal cancer.

Measure:

5. Improvement of the existing health system in Montenegro, through preparation of national

clinical practice guidelines on the prevention and diagnosis of colorectal cancer, by eminent experts in this field, which would be in accordance with European recommendations

Screening tests for persons at average risk of developing colorectal cancer at the primary health care level

Problem: Lack of preventive examinations in primary health care for persons with average risk of developing colorectal cancer

The consequence: Failure to achieve early detection of colorectal cancer for patients without symptoms and risk factors, resulting in late detection of colorectal cancer.

Objective: Implementation of preventive examinations in primary health care for persons with average risk for developing colorectal cancer, with the aim of detecting bowel polyps and colorectal cancer in early stages.

Measures:

6. The implementation of screening modalities for persons at average risk for developing this disease, through fecal occult blood testing. The target population includes males and females aged between 50-74, without personal anamnesis of polyps and/or colorectal cancer, no anamnesis of inflammatory bowel disease and no family anamnesis of colon cancer.

7. Preparation and distribution of flyers and brochures on early detection of colorectal cancer, at the national level

8. Preparation and invitations for occult blood testing

9. Preparation and distribution of questionnaires on the existence of risk factors for colorectal cancer

10. Supply and distribution of tests for occult blood in the stool to home addresses

11. Processing of the questionnaires and updating of the Registry for colorectal cancer

Center for the implementation of molecular analysis on the presence of gene load/inherited syndromes that lead to the development of colorectal cancer

Problem: The lack of molecular analysis that helps determine gene load/hereditary syndromes, which lead to the development of colorectal cancer

The consequence: Referral of patients abroad to perform molecular analysis and significantly increased cost of diagnosis

Objective: Implementation of molecular analysis on hereditary tumor syndromes that lead to the development of colorectal cancer.

Measures:

12. Expanding the activities of the Center for Genetics of the Clinical Center of Montenegro, so

that it includes genetic analysis of hereditary non-polyposis colorectal cancer, familial adenomatous polyposis, Peutz-Jeghers syndrome and juvenile polyposis.

Screening tests for persons at an increased risk of developing colorectal cancer at the primary health care level

Problem: Lack of preventive examinations in primary health care for persons with an increased risk of developing colorectal cancer

The consequence: Failure to achieve early detection of colorectal cancer for patients with an increased risk for developing colorectal cancer

Objective: Implementation of preventive examinations in primary health care for persons with an increased risk for developing colorectal cancer, with the aim of polyposis and colorectal cancer in the early stages, when complete healing is possible.

Measures:

13. The introduction of criteria for the classification of persons with increased risk of suffering from KRK

14. Production and distribution of flyers and brochures on early detection of colon cancer

15. Creating and sending a questionnaire about possible risk factors for developing colon cancer, which include providing information on the existence of a positive family burden of colorectal cancer, and genetic load of pre-cancerous diseases.

16. Updating the Register for colorectal cancer and hereditary Registry tumor syndromes data collected questionnaires

17. Referral of patients by doctors selected in the third level institution to perform molecular analysis of belonging to one of the above syndrome, and then possibly to colonoscopy according to established criteria.

18. The introduction of criteria for the classification of persons with an increased risk for the development of colorectal cancer

19. Preparation and distribution of flyers and brochures on early detection of colorectal cancer

20. Preparation and distribution of questionnaires about possible risk factors for the development of colorectal cancer, which would include information on the existence of a positive family burden of colorectal cancer and genetic load of pre-cancerous diseases.

21. Update of the Registry for colorectal cancer and the Registry for hereditary tumor syndromes based on the data collected from questionnaires.

22. Referral of patients by chosen doctors to the third level institutions to perform molecular analysis with the aim of determining the presence of syndromes, or colonoscopy.

Education and training of gastroenterologists for performing the colonoscopy

In Montenegro, there are not enough gastroenterologists appropriately trained to perform colonoscopy, which is one of the prerequisites for successful screening. Education of doctors is one solution to this problem.

Problem: Lack of adequately trained subspecialist gastroenterologists to perform endoscopic procedures.

The consequence: Percentage of achieved total colonoscopies is below international standards

Objective: Implementation of adequate, total colonoscopies

Measure:

18. Education of medical personnel and training of gastroenterologists in the renowned endoscopic centers in the region, as well as in the EU countries.

About organisations

Coalition for Social Changes was established on the 15th of December 2009, among ten leading organizations of civil society in the area of health, social protection, labor market and education: The Monitoring Center, AD Center Equista, Center for Civic Education, Juventas, CAZAS, Institute for Social inclusion, Pedagogical Centerof Montenegro, Montenegrin Association of Youth with Disabilities, Association of parents of Children with Disabilities „Sunbeam". The Coalition is open for who all interested organizations of civil society, dealing with problems of poverty and social exclusion, can freely join. Main aim of forming of the Coalition is contribution to stregthening of advocacy capacities and watchdog functions of civil society organizations in Montengro, in order to influence creation of policies and laws in the area of education, labor market, social and children's protection.

Juventas

Juventas is a non-profit organization established on January 29th, 1996 in Podgorica. Juventas envisages Montenegro as a stable, democratic society in which young people can freely express utilize their potential. Some of the goals of Juventas are: to stimulate critical thinking and develop a culture of dialogue, promotion of culture, peace, tolerance and peaceful conflict resolution, promotion of human rights, healthy lifestyles, and fight against drug abuse. More information at www.juventas.co.me

The Monitoring Center – CEMI

The Monitoring Center – CEMI is a nongovernmental, non-profitable organization founded in May 2000, whose main goal is to provide infrastructural and expert support for continuous monitoring of the process of transition in Montenegro. CEMI envisages Montenegro as a land of free citizens, the rule of law, social justice and equal opportunities. The mission of CEMI is to continuously provide support to reforms and strengthening of institutions of political system and civil society organizations, by proposing and monitoring the implementation of public policies in the fields of human rights and freedoms, fight against corruption and Euro-Atlantic integration of Montenegro. CEMI implements its activities through three programs: Democratization and human rights, Fight against corruption and European Integration, while the organizational structure consists of four departments: Public policy research department, Legal department, Public opinion survey department and Public Relations Department. More information at: www.cemi.org.me

Abot authors

Nikola Milašević, *medical practitioner*

Born on 10.04.1982 in Podgorica, where he finished elementary school, elementary music school and high school. Graduated from primary school with honorary award Luča. Nikola enrolled in School of Medicine – University of Belgrade, the class year 2001/2002, and graduated with the grade point average of 9.46.

From May to October 2009 he worked as a chosen doctor at the Health Care Center in Podgorica. He is currently at a second year of specialization in the field of Intern medicine, for the purposes of the Oncology Department and radiotherapy at the Clinical Center.

Participant of NGO Juventas project "Drop in", for harm reduction of drug users.

Representative of NGO Juventas for the Study of prevention and early detection of colorectal cancer in Montenegro.

Speaks English and Italian.

Ana Vojvodić, program asistent, NVO Juventas, program assistant, NGO Juventas

Born on 1.04.1986 in Podgorica, where she graduated from primary and high school. Currently a student of last year of the University of Law in Podgorica.

From 2001 until now, she actively participates in the activities of youth civil sector in Montenegro. She attended numerous trainings from the field of peer education, prevention of addiction and reproductive health. She organized and gave lectures at numerous trainings of high school students as a peer educator, coordinator and program assistant.

Currently participates in programs of enhancing the activism of the youth and their significant involvement in the decision-making processes.

Mensur Bajramspahić, *Public policy researcher*

Born in Bijelo Polje, on 29.04.1986, where he graduated with honors from elementary school, elementary music school and high school. He graduated from the American University in Bulgaria, with a major in Political Science and International Relations and two minors: Literature and Fine Arts. He studied at the University of North Carolina, Asheville, through International Student Exchange Program.

During his study, he was a member of the Debate club, University Choir, Better Community club. With the camp "Hope", he participated in the reconstruction of New Orleans.

Speaks English, Bulgarian and Russian.

References

Primary sources:

Guidelines for the prevention and early detection of colon caner, accessed on December 12, 2010

Health statistics of Republic of Serbia, 2009, Institute for Public Health, Belgrade 2010. ISSN 2217-3714

Master plan for Development of Healthcare in Montenegro, 2010-2013, Ministry of Health

Master plan for the development of Healthcare of Republic of Serbia, 2010 – 2015, November 2009

National clinical guideline; Minimal clinical recommendations for the diagnosis, treatment and monitoring, Ministry of Health, Serbia, September 2002.

National guidelines for primary care doctors, Prevention of malignant diseases, Ministry of Health, Serbia, November 2005

National Program for fight against cancer, Ministry of Health of Republic of Serbia

National Program for testing the colon cancer- Informative brochure ISBN: 1-74186-606-5, ISBN: 1-74186-607-3, Publication number: P3 – 386

National Program for the prevention of colorectal cancer, Ministry of Health, Serbia

National Strategy for the development of health 2006-2011, Croatian Sabor

Poverty alleviation and social exclusion Strategy, Ministry of Health, Work and Social Care, Podgorica

Prevention of malignant diseases National guideline for primary health care doctors, Ministry of Health, Serbia, November 2005

Program of early detection of colon cancer, Ministry of Health and Social Care, Croatia, Zagreb, 2007

Protocol on standards, norms and ways of accessing primary healthcare protection through chosen team or chosen doctor

Registry for cancer, Croatia, http://www.hzjz.hr/rak_index.htm, accessed on December 19th, 2010.

Registry for cancer, Institute for Public Health of Serbia, October 2006

Regulation on the extent of rights and standards of health care and mandatory health insurance, October 13, 2005 (Official gazette, number 79/05),

Resolution „Prevention and control of cancer" World Health Organization no. 58.22, May 25, 2005,

http://apps.who.int/gb/ebwha/pdf_files/WHA58/WHA58_22-en.pdf, accessed on December 28, 2010

Statistical office of Montenegro - Monstat, "Montenegro in numbers", Podgorica 2010

Statistical office of Montenegro - Monstat, „Leading death causes (groups of diseases) according to gender in Montenegro", 2006

Strategic plan of development of healthcare 2010-2013, Ministry of Health and Social Protection of Republic of Croatia

Strategic plan of development of healthcare in Bosnia and Herzegovina, for the period 2008-2018, Federal Ministry of Health, Bosnia and Herzegovina

Strategy for poverty alleviation in Serbia, Belgrade, 2003

Strategy for the development of healthcare of Montenegro, Ministry of Health of Montenegro

Strategy for the development of primary healthcare, Federal Ministry of Health, Federation of Bosnia and Herzegovina

Strategy for the Prevention and Control of chronic noncommunicable diseases, Ministry of Health, Work and Social Care, Podgorica

Strategy for the Prevention and Control of chronic noncommunicable diseases of Republic of Serbia

The law on data collections in the field of health "Official Gazette of Bosnia and Herzegovina" numbers 2/92 and 13/94

The Law on data collections in the field of health, Montenegro

The Law on health care, "Official Gazette of Bosnia and Herzegovina", number 29/97

The Law on health care, „Official Gazette of Montenegro", number 39/04

The Law on health care, Croatian Sabor, Zagreb, January 15. 2008, Number: 500-01/08-01/03

The Law on health care, the government of Serbia, "Official Gazette of Serbia", number 107/05 and 72/09

The Law on health insurance, "Official Gazette of Bosnia and Herzegovina", number 30/97

The Law on health insurance, „Official Gazette of Montenegro", number 29/05

The Law on mandatory Health Insurance, Croatian sabor, Zagreb, January 15. 2008, Class: 500-01/08-01/12

The law on rights, obligations and responsibilities of patients, "Official Gazette of Bosnia and Herzegovina", number 40/10

The Law on the protection of rights of patients, Croatian Sabor, Zagreb, December 24, 2004, number:

01-081-04-3610/2

Secondary Sources:

ACS American Cancer Society, „Key statistics for colorectal cancer? “, http://www.cancer.org/Cancer/ColonandRectumCancer/DetailedGuide/colorectal-cancer-key-statistics, February 16, 2010, accessed on January 10, 2011

ACS American Cancer Society, http://www.fascrs.org/aboutus/press_room/backgrounders_and_tip_sheets/colorectal/ uvid accessed December 10, 2010.

Anna Ritsatakis, Peter Makara, „Gaining Health: Analysis of policy development in European countries for tackling noncommunicable diseases“, World Health Organization, Copenhagen, 2006. http://www.euro.who.int/__data/assets/pdf_file/0018/105318/e92828.pdf, accessed on December 5, 2010

Bruce WR, Wolever TM, Giacca A, “Mechanisms linking diet and colorectal cancer: the possible role of insulin resistance. “ University of Toronto, Canada, http://www.ncbi.nlm.nih.gov/pubmed/10965515, 2000, accessed on December 24th 2010

Burkitt, D., “Causes of disease “Lancet, 1969. 2: p. 1229–1231.

Calman Hine report, April 1995, page 7 http://www.dh.gov.uk/prod_consum_dh/groups/dh_digitalassets/@dh/@en/documents/digitalasset/dh_4014366.pdf, accessed on December 5th, 2010

Cornuz J, Auer R, Senn N, Guessous I, Rodondi N. „Prevention and Screening“, National Health Institute USA, December 2010.

Deckelbaum RJ, Fisher EA, Winston M, Kumanyika S, Lauer RM, Pi- Sunyer FX et al. “ Overview of current issues in nutrition“, 1999; 100: 450-456.

Donna Myers „ Colon polyps and cancer risk“, February 2007

Edoardo Botteri, Simona Iodice, Vincenzo Bagnardi, “Smoking and colorectal cancer“, Journal of American Medical Association, http://jama.ama-assn.org/content/300/23/2765.abstract 2008, accessed on January 10, 201

Fond for Healthcare of Federation of Bosnia and Herzegovina, Health condition of population and health protection, 2007

J Ferlay, P Autier, M Boniol, M Heanue, M Colombet and P Boyle, „The estimates of cancer incidence and mortality rates in Europe“, Annals of Oncology 2007, Volume 18, No 3: 581-592

Judith Karner-Hanusch, Martina Mittlböck, Thomas Fillipitsch, Friedrich Herbst, „Family history as a marker of risk for colorectal cancer: Austrian experience“ World Journal of surgery, 1997

M.D Manser, D.F Levine, D.F.H Pheby, R.W Pitcher, “Colorectal cancer registration: the central importance of pathology”, April 19, 2000 http://www.ncbi.nlm.nih.gov/pmc/articles/PMC1731103/pdf/v053p00875.pdf, accessed on November 19th, 2010

Meyerhardt, Jeffrey, Giovannucci Edward. „ "Physical Activity and Survival after Colorectal Cancer Diagnosis", Journal of clinical oncology, August, 2006

Obren Popović, Mihajlo Božanić, „Polyps and colorectal polyposis" Intern medicine, 2003

Otto S. Lin „Early detection improves chances to beat colorectal cancer", Institute for digestive diseases, Virginia, 2003

Parkin DM, B.F., Ferlay J, Pisani P „Global cancer statistics: Globocan 2000. Int J Cancer, 2001. 94(2): p. 153-156

Report on deaths in Croatia for 2009, http://www.hzjz.hr/publikacije/umrli_2009.pdf, accessed on January 13, 2011

Rob Hicks, Trisha Macnair, „Bowel Cancer", BBC Health, http://www.bbc.co.uk/health/physical_health/conditions/in_depth/cancer/typescancer_bowel.shtml, January 2010, accessed on December 28, 2010

Schroy PC 3rd, Lal S, Glick JT, et al. "Patient preferences for colorectal cancer screening: How does stool DNA testing fare?" 2007; number: 13:393–400.

Simona Valean, P. A. Mircea, Doinita Crisan, Magda Petrescu, "Sporadic Colorectal Cancer or Hereditary Lynch Syndrome: Anamnestic Epidemiologic Study Using Amsterdam and Bethesda Criteria", BTCC Journal, April 2010.

WHO. Cancer prevention. Available at http://www.who.int/cancer/prevention/en/

Zoran Krivokapić, "Early detection of colorectal cancer", http://www.medicicom.com/content/view/282/64/, October 2009, accessed on January 13, 2011

Centar za monitoring CEMI
(eng. The Monitoring Center CEMI)
Tel: +382 63 230 369
e-mail: cemi@t-com.me
www.cemi.org.me

Prevention and early detection of colorectal cancer in Montenegro