**Report Summary for a Study on:**

Report of family medicine residents on their training and attitudes towards preventive medicine for cardiovascular disease and colorectal cancer.

**Submitted by:**

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**Scientific background**

The purpose of measures taken by preventive medicine and health promotion is to extend life expectancy, improve quality of life and create more years free from disease and limitations (“healthy years”). This may be carried out within the framework of the individual, the family, or the community.

An overview of the literature found that attitudes of primary physicians regarding prevention are usually positive, but express doubt as to their ability to influence patients. Other papers in the field of primary medicine have found that almost all physicians supported the need to improve patients’ behaviors and to minimize risk factors, but few have belief in their self-efficacy.1

# By taking initial preventative measures within the public, the rate of early mortality from cardiovascular disease and cancer may be reduced by approximately 50% versus when these measures are not taken.2

According to a British study, despite work overload in the community, family doctors’ attitude is positive regarding the promotion of health and a healthy lifestyle. An increase in the number of routine referrals from patients on the subject of “a healthy lifestyle” has occurred over the course of the last 10 years, but physicians’ beliefs in the efficacy of their efforts to help the patient in this aspect is low. More training and support are required regarding an intervention plan for a healthy lifestyle by physicians.8

According to the literature,9 the rate of insurees with documentation of their smoking habits in the last five years (among insurees between 16-74 yrs. of age) was approximately 84% in 2013 and that there is good documentation by the treating physician regarding smoking. Despite this, there is a high percentage of smokers that are unable to quit smoking; according to surveys, family physicians do not act in accordance with recommendations on the subject of patient counseling regarding smoking cessation.

The data on the rate of smoking in the adult population in Israel (2012) stands at 20.6%.9

Therefore, there is great importance in physician intervention on this subject, even if adds a small percentage (1-3%) of those who have quit smoking to those rehabilitated, it is lifesaving.11

In the 1980s, three studies showed that without a doubt, a fecal occult blood test once a year may reduce the mortality of colorectal cancer by a rate of between 15-30% on condition and a positive result leads to a colonoscopy being performed.12-16 Despite this, it was found that the frequency of screening for colorectal cancer is low and that in 2013, the rate of performing exams among 50-74-yr.-olds stood at 56.6%19, 9, much lower than in the U.S. This low rate is contributed to failures in the health system as well as barriers of a failure in physician-patient communication.17

In a number of cases in which we examined physicians’ attitudes regarding preventive medicine and barriers to carrying out preventive intervention plans, the relative importance of barriers, in general, and in connotation with specific prevention, was not identified. Certain barriers may be linked only to a subgroup of preventive intervention.

**Objectives**

The primary objective is to exam the knowledge, attitudes and behaviors of physicians doing their residency in family medicine regarding identification and prevention of risk factors for cardiovascular disease in addition to malignant diseases.

**Secondary objectives**

* To examine the scope of experience that family medicine residents have acquired during residency from the aspect of: prevention, early detection, and patient counseling on the prevention of CVD (cardiovascular disease) and cancer.
* To examine the extent of their reporting and of being meticulous in filling out risk factors (weight, height, smoking, physical activity) in patient medical records (subjective question – according to self-reporting).
* To assess the quality of residency and resident training from the aspect of disease prevention, screening, and to what extent family medicine residents have positive attitudes on the subject of prevention and reduction of risk factors in patients and that they themselves adhere to healthy behavior.

**Methods**

The study included all the residence throughout the years of residency (1st -4th years) in family medicine in Israel. The questionnaire was sent to approximately 450 residents, who were requested to answer electronically or manually (according to preference).

Those examined replied to the comprehensive questionnaire which included 64 questions on the subjects of:

1. residents’ attitudes from the aspect of preventive medicine and healthy behavior
2. their clinical experience in identifying risk factors and patient counseling
3. residents’ self-assessment of their residency on the subject of preventive medicine and health promotion.

The questionnaire was filled out anonymously and is based on questionnaires on the subject published in world literature and in Israel. In addition, there are questions on personal background, smoking status, etc. (Addendum 1).

**Results**

Compliance in filling out the questionnaires was 30%. (138 replies out of 450).

**Demographics**

The description of demographic characteristics of the study population is presented in Table 1.

The study included all the family medicine residents in Israel at all stages of residency (the majority of residents were men in the early years of residence).

**Knowledge**

A description of the responses to questions of knowledge in the field of preventive medicine for the prevention of cancer and cardiac disease, are presented in Table 2

The questions on knowledge focused on areas in preventive medicine recommended to be performed according to accepted medical guidelines and work procedures at the HMO (health maintenance organization). Questions were taken from the Stage A exams in family medicine and from world literature.

In general, one may see a good level of knowledge among the residents and for most questions, over 81% chose the correct answer, except for Question 3 (45 yr.-old male, family history of hypertension [mother]. On exam, Bp 120/80. How often do you have to measure blood pressure?) which only 56% answered correctly.

**Attitudes**

Residents’ attitudes toward the subject of health promotion, preventive medicine for cardiac disease and cancer, from the personal aspect as well as in their own behavior towards patients is described in Table 3.

Almost all the residents (94%) answered that preventive medicine is important to a great extent and accordingly, approximately 80% note that it is very important that the physician exemplify healthy behavior, but only about 33% do regular physical activity as recommended (over 150 weekly hours).

**Clinical experience**

Table 4 presents the clinical experience:

From the aspect of clinical experience in cancer situations: approximately 64 % feel that they have not received, or have received very little in the area of screening for melanoma. Approximately 80% note that they received sufficient or up to a significant amount on the subject of screening exams for breast cancer. Approximately 53% of residents feel that they have not received, or have received very little in the area of screening for prostate cancer, approximately 90% note that they have received sufficient or up to a significant amount in the area of screening for colorectal cancer.

**Residency program**

The residents noted that the time dedicated in their study program was insufficient or was very little in the area of oncology and sufficient up to a significant amount in the area of cardiovascular disease.

**Discussion**

In this survey, we examined subjects’ attitudes and behaviors regarding disease prevention and reduction of risk factors during the stages of their residency. Many surveys conducted worldwide found that primary physicians’ attitudes regarding prevention are usually positive, but they express doubt in their ability to influence patients. It was also found that physicians supported the need to improve their patients’ behavior to reduce risk factors but only a minority believe in their ability to be effective.1

In oursurvey, we found that 94% think preventive medicine has a high degree of importance; the program to promote health requires more training and support23 regarding intervention by physicians in maintaining a healthy lifestyle.

According to findings in this survey, we may conclude that the majority of residents have a very positive attitude towards preventive medicine, but most do not personally behave in a healthy manner which is consistent with literature around the world as well in Israel. The response of residents in the advanced stages of residency, in the area of knowledge – is that theoretical knowledge is fairly good, but knowledge by itself is insufficient to implement a proper approach suitable for preventive medicine. We recommend that in the first year of specialization, to expand the knowledge on the pop-up window even if they work at a “temporary” clinic and to encourage them to initiate visits on this subject.

The results show the low exposure of residents to cancer disease, approximately 64% did not perform melanoma screening, approximately 53% did not perform screening tests for prostate cancer, approximately 56% were not exposed to lung cancer and approximately 74% were not exposed to melanoma. A review of the literature found that in 2014, 1580 new patients with melanoma of the skin were diagnosed in Israel, 1095 with invasive tumor and 485 with tumor in situ30. Such low exposure to clinical situations may derive from a number of reasons: a low incidence of the disease, the residents feeling that they are not the “responsible physician” during the time the patient is transferred to the oncology institute or other treating physician (for example consulting physician), extensive knowledge is required in order to treat the various types of cancer, and it is difficult for residents to acquire all the knowledge required for these conditions, as well as various ambiguous guidelines, for example: screening for prostate cancer and lung cancer. An additional reason is that in the first and second years of specialization, the residents are in the teaching clinics with a close advisor without exposure to regular patients and the residents’ work at this stage of residency is characterized by treatment of acute or administrative cases (regular medications, sick-day certificates, etc.).

**Conclusions**

According to data we have, we can see there is good theoretical knowledge among Israeli residents in family medicine and this is consistent with the scientific literature. Residents’ attitude is positive regarding preventive medicine in the area of prevention of cardiac disease and cancer, from both the personal and general aspect, but implementation of this knowledge in the clinic is not necessarily carried out at the required level, according to Ministry of Health or HMO guidelines. Therefore, we recommend:

1. To engage residents of family medicine from Day 1 on the subject of preventive medicine and require them to fill out the pop-up window in the medical record.
2. To inform residents of the importance of direct cooperation with the advisor and with clinic staff including nurses on the subject of preventive medicine and filling out “ a quality passport”, so that they cope with the subject in real time from the start of residency, as well as becoming involved with and being exposed to acute diseases in family medicine and thus decrease the difficulty the residents have.
3. To be aided by a computerized system that identifies patients at high risk for cardiovascular diseases who visit the physician on the same day (such as” the Lider system” found in Clalit [HMO] clinics) or a computerized system which identifies patients that are also at high risk who do not visit at all (such as “ the Bina System’ found in Clalit clinics).
4. To also organize a personal medical record (of the family medicine resident and the community physician) of patient names known to him, with low compliance to treatment, while informing the rest of the clinic staff of them, in order to receive their help in convincing these patients to perform screening tests or important laboratory tests as a tool to detect risk factors
5. On the subject of clinical experience, we recommend placing emphasis on cancer and also the use of cases found in reality at the clinic as well as using case descriptions representing cases which do not exist at the clinic, thus we can recommend that resident do rounds in the oncology department for additional exposure to cases. It is important to note that “home hospice” already exists in the Southern District for a number of years and constitutes part of residency in family medicine; therefore, residents of the Southern District feel more confident on the subject of cancer. All family medicine residents should be exposed to home hospice.
6. To dedicate more time in the curriculum to various areas in preventive medicine for heart disease and cancer.
7. We also recommend to introduce nutritional consultation into the curriculum in the early stages of residency (already in the first year).

**Table 1 – Demographic characteristics of the study population (N=150)**

|  |
| --- |
|  |
|  | **N** | **%** |  |  | **N** | **%** |
| **Gender** |  |  |  | **Place of residency** |  |  |
| Male | 79 | 57.20% |  | South | 40 | 40% |
| Female | 59 | 42.80 |  | Sharon and Shomron | 17 | 17% |
|  | 138 | (mis)=12 |  | Dan Petach Tikva | 10 | 10% |
| **Age** |  |  |  | Haifa | 14 |  |
| Mean±standard deviation | 33.2±3.7 |  |  | Jerusalem | 7 | 7% |
| Range | 27-47 |  |  | Center | 6 | 6% |
|  | 135 | (mis=15) |  | North | 6 | 6% |
| **Family status** |  |  |  |  | 100 | (mis=50) |
| Unmarried | 17 | 12.30% |  | **Main practice** |  |  |
| Married | 120 | 87.00% |  | City | 97 | 71.30% |
| Divorced | 1 |  |  | Rural | 29 | 21.30% |
|  | 138 | (mis=12) |  | City and rural | 10 | 7.40% |
| **Years of experience as a physician** |  |  |  |  | 136 | (mis=14) |
| Mean±standard standard deviation | 3.7±3.0 |  |  | **Smoker** |  |  |
| Range | 0.2-25 |  |  | Yes | 13 | 9.30% |
|  | 135 | (mis=15) |  | No | 127 | 90.70% |
| **Years in Israel** |  |  |  |  | 140 | (mis=10) |
| Mean±standard standard deviation | 24.2±10.1 |  |  | **Number of cigarettes per day** |  |  |
| Range | 37-אפר |  |  | Mean±standard standard deviation | 10.7±6.6 |  |
|  | 12 | (mis=1) |  | Range | 20-פבר |  |
| **Year of residency** |  |  |  |  | 12 | (mis=1) |
|  | N | % |  |  | N | % |
| 1st | 52 | 38.00% |  | **BMI** |  |  |
| 2nd | 28 | 20.40% |  | Up to 25 | 78 | 56.90% |
| 3rd | 26 | 19.00% |  | 25.1-30 | 48 | 35% |
| 4th | 31 | 22.60% |  | 30.1+ | 11 | 8% |
|  | 137 | (mis=13) |  |  | 137 | (mis=13) |

**Table 2- Knowledge in the area of preventive medicine for cancer and cardiac disease**

|  |  |  |
| --- | --- | --- |
| Multiple choice questions (the correct answer is marked by a star) | N | % |
| **A 55-yr.-old female is interested in performing tests, what would you recommend to her?**Occult blood every two yearsTest for cholesterol every 5 years\*Perform a mammography every two yearsTest for CA-125 every year(mis=5) | 10111231145 | 6.9%7.6%84.8%0.7% |
| **What is the accepted test for prostate cancer screening according to world literature?**\*There is no recommendation to perform PSA as a screening testPSA once a year for men from the age of 50Rectal exam once a year for men from the age of 50Rectal exam + PSA once a year | 12112115149 | 81.2%8.1%7.4%3.4%(mis=1) |
| **A 45-yr.old male, family history of hypertension (mother). On examination Bp 120/80. How often should his blood pressure be measured?**Six months\*One yearTwo years | 238443150 | 15.3%56.0%28.7% |
| **What is accepted practice according to the literature as a screening test for colon cancer?**\*Fecal occult blood from the age of 50 once a yearFecal occult blood from the age of 50 once every two years Colonoscopy once every 5 years | 1231116150 | 82.0%7.3%10.7% |
| **A 39-yr.-old male with a family history of colon cancer requests a colonoscopy. What would you recommend?**\*Perform a colonoscopyOccult blood from the age of 50Occult blood from the age of 40Occult blood every yearBarium enema | 13061040150 | 86.7%4.0%6.7%2.7%0.0% |
| \*Correct answer |  |  |

**Table 3 Attitudes in the field of preventive medicine, cancer and cardiac disease**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | **Unable to assess** | **Important to some extent - moderate extent** | **Important to a great extent** | **Total** |
| **N** | **%** | **N** | **%** | **N** | **%** |  |
| What is your attitude regarding the importance of preventive medicine | 2 | 1.3% | 7 | 4.7% | 141 | 94.0% | 150 |
| In your opinion, is it important that a physician personally maintains healthy behavior? | 2 | 1.3% | 29 | 19.5% | 118 | 79.2% | 149 |
| Are you vigilant about doing regular physical activity (over 150 weekly hours)? | 9 | 6.0% | 91 | 61.1% | 49 | 32.9% | 149 |
| Do you adhere to a guideline-based diet and eat at least 5 portions of vegetables and fruits a day? | 5 | 3.4% | 96 | 64.4% | 48 | 32.2% | 149 |
| In your opinion, does the physician have a responsibility to prevent disease in his patients | 5 | 3.3% | 21 | 14.0% | 124 | 82.7% | 150 |
| What is your position regarding the prevention of cancer | 4 | 2.7% | 27 | 18.1% | 118 | 79.2% | 149 |
| What is your position regarding the prevention of CVD disease | 1 | 0.7% | 13 | 8.7% | 135 | 90.6% | 149 |
| In your opinion, what is the level of responsibility that a physician has as opposed to a patient in prevention of disease | 1 | 0.7% | 74 | 49.7% | 74 | 49.7% | 149 |
| Would you refer your patient to a dietician for a guideline-based diet to prevent cardiovascular disease? | 1 | 0.7% | 42 | 28.2% | 106 | 71.1% | 149 |
| Would you recommend participation in a group for smoking cessation to your patient (if the patient smokes) | 12 | 8.1% | 13 | 8.7% | 124 | 83.2% | 149 |
| To what extent are you vigilant in filling out risk factors that your patient has (in the pop-up window) | 8 | 5.3% | 55 | 36.7% | 87 | 58.0% | 150 |
| To what extent are you vigilant in performing screening tests recommended by the HMO among your patients | 5 | 3.3% | 31 | 20.7% | 114 | 76.0% | 150 |
| In the event there is no patient compliance to screening tests, is there initiative on your part as a resident to refer him for screening tests? | 7 | 4.8% | 35 | 24.0% | 104  | 71.2% | 146 |

**Table 4 :** **Clinical experience and exposure to clinical situations at the clinic during residency in family medicine**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  | Can not assess | Not at all – very little | Sufficient | A great deal | Total |
|  | N | % | N | % | N | % | N | % |  |
| **Clinical experience at the clinic** |  |  |  |  |  |  |  |  |  |
| Melanoma screening | 28 | 18.9% | 95 | 64.2% | 21 | 14.2% | 4 | 2.7% | 148 |
| Screening test for breast cancer | 10 | 6.8% | 19 | 12.9% | 55 | 37.4% | 63 | 42.9% | 147 |
| Screening test for prostate cancer | 18 | 12.2% | 78 | 52.7% | 35 | 23.6% | 17 | 11.5% | 148 |
| Screening test for colorectal cancer | 7 | 4.7% | 8 | 5.4% | 45 | 30.4% | 88 | 59.5% | 148 |
| Physical exam of heart and blood vessels | 8 | 5.4% | 20 | 13.5% | 61 | 41.2% | 59 | 39.9% | 148 |
| Balance of risk factors for CVD diseases | 7 | 4.8% | 10 | 6.8% | 61 | 41.5% | 69 | 46.9% | 147 |
| **Exposure to clinical situations at the clinic** |  |  |  |  |  |  |  |  |  |
| Lung cancer | 14 | 9.6% | 81 | 55.5% | 44 | 30.1% | 7 | 4.8% | 146 |
| Breast cancer | 9 | 6.2% | 47 | 32.2% | 70 | 47.9% | 20 | 13.7% | 146 |
| Melanoma | 22 | 15.1% | 108 | 74.0% | 13 | 8.9% | 3 | 2.1% | 146 |
| Prostate cancer | 14 | 9.6% | 80 | 54.8% | 37 | 25.3% | 15 | 10.3% | 146 |
| Uterine and ovarian cancer | 14 | 9.7% | 107 | 73.8% | 20 | 13.8% | 4 | 2.8% | 145 |
| Colorectal cancer | 9 | 6.2% | 41 | 28.1% | 71 | 48.6% | 25 | 17.1% | 146 |
| Leukemia | 13 | 9.0% | 110 | 75.9% | 18 | 12.4% | 4 | 2.8% | 145 |

**References**

1) Notzer N., Maadi M., Abramowitz R., Hermoni D. Family residents’ report on their training and attitudes toward prevention and reducing risk factors of cancer and cardio- vascular diseases. Israeli Journal of Family Medicine 2005. Sep:124.

(2) Tabenkin H, Lahad A. Clinical guidelines: the recommendations of the Israeli task force for health promotion and preventive medicine. Israel Medical Association and the Association of Family Physicians in Israel 2013.

(3) Curriculum Guidelines Aligned with ACGME Educational Competencies. Available at: <https://www.aafp.org/dam/AAFP/documents/medical_education_residency/program_directors/Reprint267_Health.pdf>. Accessed Jul 16, 2018.

(4) Tabenkin H, Gross R, Greenberg SB, Steinmetz D, Elhayany A. Primary care physicians in Israel: self-perception of their role in the healthcare system and policy makers' and patients' perception of them as gatekeepers. Isr Med Assoc J 2001 Dec;3(12):893-897.

(5) Scott CS, Leaf D, Neighbor WE, Schaad DC, Brock DM, Van Citters RL. Preventive cardiology education and practice in residency training: residents' attitudes, perceptions, and practices. Am J Prev Med 1990;6(2 Suppl):60-69.

(6) Gans KM, Jack B, Lasater TM, Lefebvre RC, McQuade W, Carleton RA. Changing physicians' attitudes, knowledge, and self-efficacy regarding cholesterol screening and management. Am J Prev Med 1993;9(2):101-106.

(7) Feldman J, Miner M, Millis M. Training family practice residents in HIV care. AIDS Patient Care STDS 2004 Jul;18(7):395-404.

(8) McAvoy BR, Kaner EF, Lock CA, Heather N, Gilvarry E. Our Healthier Nation: are general practitioners willing and able to deliver? A survey of attitudes to and involvement in health promotion and lifestyle counselling. Br J Gen Pract 1999 Mar;49(440):187-190.

(9) Manor O, Shmueli A, Ben-Yehuda A, Paltiel O, Calderon R, Jaffe DH. National program for quality indicators in community healthcare in Israel: report 2011-2013 (Hebrew). The Ministry of Health, State of Israel 2013:1-235.

(10) Thomas K, Yaphe J, Matalon A. Current primary care physician interventions to promote smoking cessation in Israel: an observational study. Isr Med Assoc J 2007 Sep;9(9):645-648.

(11) Stead LF, Bergson G, Lancaster T. Physician advice for smoking cessation. Cochrane Database Syst Rev 2008 Apr 16;(2):CD000165. doi(2):CD000165.

(12) Hewitson P, Glasziou P, Watson E, Towler B, Irwig L. Cochrane systematic review of colorectal cancer screening using the fecal occult blood test (hemoccult): an update. Am J Gastroenterol 2008 Jun;103(6):1541-1549.

(13) Hewitson P, Glasziou P, Irwig L, Towler B, Watson E. Screening for colorectal cancer using the faecal occult blood test, Hemoccult. Cochrane Database Syst Rev 2007 Jan 24;(1):CD001216. doi(1):CD001216.

(14) Holme O, Bretthauer M, Fretheim A, Odgaard-Jensen J, Hoff G. Flexible sigmoidoscopy versus faecal occult blood testing for colorectal cancer screening in asymptomatic individuals. Cochrane Database Syst Rev 2013 Oct 1;(9):CD009259. doi(9):CD009259.

(15) Wahrendorf J, Robra BP, Wiebelt H, Oberhausen R, Weiland M, Dhom G. Effectiveness of colorectal cancer screening: results from a population-based case-control evaluation in Saarland, Germany. Eur J Cancer Prev 1993 May;2(3):221-227.

(16) Scholefield JH, Moss SM, Mangham CM, Whynes DK, Hardcastle JD. Nottingham trial of faecal occult blood testing for colorectal cancer: a 20-year follow-up. Gut 2012 Jul;61(7):1036-1040.

(17) Lachter J, Leska-Aharoni T, Warum D, Eliakim R. Overcoming barriers to colorectal cancer screening tests. Isr Med Assoc J 2008;10(8-9):621-626.

(18) Cornuz J, Ghali WA, Di Carlantonio D, Pecoud A, Paccaud F. Physicians' attitudes towards prevention: importance of intervention-specific barriers and physicians' health habits. Fam Pract 2000 Dec;17(6):535-540.

(19) Fogelman Y, Vinker S, Lachter J, Biderman A, Itzhak B, Kitai E. Managing obesity: a survey of attitudes and practices among Israeli primary care physicians. Int J Obes Relat Metab Disord 2002 Oct;26(10):1393-1397.

(20) Fogelman Y, Vinker S, Lachter J, Biderman A, Itzhak B, Kitai E. Managing obesity: a survey of attitudes and practices among Israeli primary care physicians. Int J Obes 2002;26(10):1393.

(21) Cornuz J, Ghali WA, Di Carlantonio D, Pecoud A, Paccaud F. Physicians' attitudes towards prevention: importance of intervention-specific barriers and physicians' health habits. Fam Pract 2000;17(6):535-540.

(22) McIlfatrick S, Keeney S, McKenna H, McCarley N, McElwe e G. Investigating the role of the general practitioner in cancer prevention: a mixed methods study. BMC family practice 2013;14(1):58.

(23) Braun KL, Gotay CC. Primary care physicians' knowledge, attitudes and practices related to cancer screening and cancer prevention clinical trials. Pacific health dialog 2004;11(2):160-165.

(24) Aspry KE, Van Horn L, Carson JAS, Wylie-Rosett J, Kushner RF, Lichtenstein AH, et al. Medical Nutrition Education, Training, and Competencies to Advance Guideline-Based Diet Counseling by Physicians: A Science Advisory From the American Heart Association. Circulation 2018.

(25) Momi E, Braun KL, Gotay CC. Primary care physiciansâ€™ knowledge, attitudes and practices related to cancer screening and cancer prevention clinical trials. General practice ;73:29.

(26) Wolf AM, Fontham ET, Church TR, Flowers CR, Guerra CE, LaMonte SJ, et al. Colorectal cancer screening for averageâ€risk adults: 2018 guideline update from the American Cancer Society. CA: a cancer journal for clinicians 2018.

(27) Dubnov-Raz G, Berry EM, Shemer O, Constantini NW. Who will take care of the caretaker? Lifestyle recommendations for physicians. Harefuah 2011 Jul;150(7):7, 617.

(28) Nunan D. Doctors should be able to prescribe exercise like a drug. BMJ: British Medical Journal (Online) 2016;353.

(29) Persell SD, Brown T, Lee JY, Shah S, Henley E, Long T, et al. Individualized Risk Communication and Outreach for Primary Cardiovascular Disease Prevention in Community Health Centers. Circ Cardiovasc Qual Outcomes 2015;8(6):560-566.

(30) Keinan Boker L, et al. Melanoma of the skin, update of morbidity and mortality data in Israel, May 2017. Israel National Cancer Registry, Ministry of Health 2017 May.

Addendum I-Study Questionnaire

Dear Dr.

We are conducting a study on family medicine residents’ training and their attitudes towards preventive medicine for cardiovascular disease and colorectal cancer.

The study is conducted within the framework of research experience in the Department of Family Medicine. All data will be kept confidential and will be used for research purposes only.

You are free to choose not to answer all the questions in the questionnaire or some of them and to stop answering the questionnaire at any time, we assure you that your identity will be kept confidential by all those involved in the study.

We thank you for your cooperation.

 Dr Alhamamada Ziad, Dr. Ziva Shetel,

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**Please mark the correct answer:**

1. A 55-yr.-old female is interested in performing tests, what would you recommend to her?
2. Occult blood every two years
3. Test for cholesterol every 5 years
4. Perform a mammography every two years
5. Test for CA-125 every year
6. **What is the accepted test for prostate cancer screening according to world literature?**
7. There is no recommendation to perform PSA as a screening test

 b. PSA once a year for men from the age of 50

c. Rectal exam once a year for men from the age of 50

d. Rectal exam + PSA once a year

**3. A 45-yr.old male, family history of hypertension (mother). On examination Bp 120/80. How often should his blood pressure be measured?**

1. Six months
2. One year
3. Two years

**4. What is accepted practice according to the literature as a screening test for colon cancer?**

a. Fecal occult blood from the age of 50 once a year

b. Fecal occult blood from the age of 50 once every two years

c. Colonoscopy once every 5 years

**5. A 39-yr.-old male with a family history of colon cancer requests a colonoscopy. What would you recommend?**

a. Perform a colonoscopy

b. Occult blood from the age of 50

c. Occult blood from the age of 40

d. Occult blood every year

e. Barium enema

**We appreciate if you could answer the following questions and mark the suitable answer on the scale, where 1 indicates the lowest level, and 4 or 5 the highest. Please mark 0 if you cannot answer.**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
|  | **0****Unable to assess** | **1****Not /not at all imNot/not at all important** | **2****Important to some extent** | **3****Important to a moderate extent** | **4****Important to a great extent** | **5****Important to a great extent / most important** |
| 6. What is your attitude regarding the importance of preventive medicine? |  |  |  |  |  |  |
| 7. In your opinion, is it important that a physician personally maintains healthy behavior? |  |  |  |  |  |  |
| 8. Are you vigilant about doing regular physical activity (over 150 weekly hours)? |  |  |  |  |  |  |
| 9. Do you adhere to a guideline-based diet and eat at least 5 portions of vegetables and fruits a day? |  |  |  |  |  |  |
| 10. In your opinion, does the physician have a responsibility to prevent disease in his patient? |  |  |  |  |  |  |
| 11. What is your position regarding the prevention of cancer? |  |  |  |  |  |  |
| 12. What is your position regarding the importance of preventing CVD disease? |  |  |  |  |  |  |
| 13. In your opinion, what is the level of responsibility that a physician has as opposed to a patient in the prevention of disease? |  |  |  |  |  |  |
| 14.Would you refer your patient to a dietician for a guideline-based diet to prevent cardiovascular disease? |  |  |  |  |  |  |
| 15. Would you recommend participation in a group for smoking cessation to your patient (if the patient smokes)? |  |  |  |  |  |  |
| 16. To what extent are you vigilant in filling out risk factors that your patient has (in the pop-up window) |  |  |  |  |  |  |
| 17. To what extent are you vigilant in performing screening tests recommended by the HMO among your patients? |  |  |  |  |  |  |
| 18. In the event there is no patient compliance to screening tests, is there initiative on your part as a resident to refer him for screening tests? |  |  |  |  |  |  |

**We appreciate if you could relate to your clinical residency at the Family Medicine Clinic on the following subjects.**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  | **0****Unable to assess** | **1****Not at all** | **2****Very little** | **3****Sufficient** | **4****To a great extent** |
| 1.Melanoma screening |  |  |  |  |  |
| 2.Screening test for breast cancer |  |  |  |  |  |
| 3.Screening test for prostate cancer |  |  |  |  |  |
| 4.Screening test for colorectal cancer |  |  |  |  |  |
| 5.Physical exam of heart and blood vessels |  |  |  |  |  |
| 6. Balance of risk factors for CVD diseases |  |  |  |  |  |

**How much clinical exposure did you have during residency?**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  | **0****Unable to assess** | **1****Not at all** | **2****Very little** | **3****Sufficient** | **4****To a great extent** |
| 7. Lung cancer |  |  |  |  |  |
| 8. Breast cancer |  |  |  |  |  |
| 9.Melanoma |  |  |  |  |  |
| 10. Prostate cancer |  |  |  |  |  |
| 11. Uterine and ovarian cancer |  |  |  |  |  |
| 12.Colorectal cancer |  |  |  |  |  |
| 13.Leukemia |  |  |  |  |  |
| 14. Other |  |  |  |  |  |

**How much time was allotted in the study program for the following conditions during residency?**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  | **0****Unable to assess** | **1****Not at all** | **2****Very little** | **3****Sufficient** | **4****To a great extent** |
| 15. Cancer prevention counselling  |  |  |  |  |  |
| 16**.** Cancer diagnosis |  |  |  |  |  |
| 17. Hospital treatment of cancer |  |  |  |  |  |
| 18. Clinic treatment of cancer |  |  |  |  |  |
| 19. Follow-up of cancer patient |  |  |  |  |  |
| 20. Time allotment including cancer prevention – initial detection and reduction of mortality |  |  |  |  |  |
| 21. Health promotion and cancer prevention |  |  |  |  |  |
| 22. Cancer risk factors |  |  |  |  |  |
| 23. Prevention of cardiovascular disease (CVD) |  |  |  |  |  |
| 24. CVD diagnosis |  |  |  |  |  |
| 25.Treatment for CVD patients at the hospital |  |  |  |  |  |
| 26. Treatment for CVD at the clinic |  |  |  |  |  |
| 27. Follow-up of CVD patients |  |  |  |  |  |
| 28.Time allotment including CVD prevention – initial detection and reduction of mortality |  |  |  |  |  |
| 29. Health promotion and CVD prevention |  |  |  |  |  |
| 30. CVD risk factors |  |  |  |  |  |

**We appreciate if you could asses how much residency in family medicine has contributed to you mastering the following subjects:**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  | **0****Unable to assess** | **1****Not at all** | **2****Very little** | **3****Sufficient** | **To a great extent** |
| 31. Preventive medicine and health promotion in general |  |  |  |  |  |
| 32. Cardiovascular disease (CVD) in general |  |  |  |  |  |
| 33. Cancer of all types in particular |  |  |  |  |  |

**We appreciate if you could answer a number of socio-demographic questions (please fill out or circle your answer):**

34. Gender: a. male b. female

35. Year of birth: \_\_\_\_\_\_\_\_

36. Family status: a. unmarried b. married c. divorced d. widowed

37. Date of immigration: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

38. Years of experience as a physician: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

39. Where did you finish your medical studies:

40. Stage of residency: Year 1 2 3 4

41. Place of residency in family medicine:

42. Main practice: a. city b. rural c. city and rural

43. Do you smoke? a. yes b. no

44.If you answered yes, please note how many cigarettes a day: \_\_\_\_\_\_\_\_\_\_

45. How much do you weigh (kg): \_\_\_\_\_\_\_\_ Height (meter): \_\_\_\_\_\_\_\_\_\_\_

**Thank you for your cooperation!**