ROLE OF PRIMARY CARE PHYSICIAN FIGHT AGAINST CANCER

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Abstract
Background: Primary Care Physician (PCP) represents the first line in the fight against cancer for many reasons. Enhancing the roles of the PCPs will help in saving more lives from cancer related causes.
Methods: The role of the PCP in the cancer prevention and early detection of cancer were identified and summarized. The advantages of primary care physicians were enlisted.
Results: PCP can play an important role in increasing the patient awareness and knowledge about cancer, help in decreasing the risks for preventable cancers and perform early detection for common cancers which will save lives. Recommendations for specific cancers are summarized.
Conclusion: Enhancing the role of the primary care physicians in the fight against cancer is important due to certain advantages possess by them that can be better utilized. Physicians should incorporate cancer control activities into their routine practice.

Introduction

The structure of the current healthcare system is designed in such a way that it is largely dependent on the care seeking behavior of the patient, who initiates his or her care by the natural sensors in the body. A person would ask for help when a disease becomes symptomatic. Despite advances in technology and our knowledge that can detect some diseases even before symptoms appear, the care delivery system still lags behind in its metamorphosis. Even though radical changes are needed in the existing healthcare organizations to fully adapt to advances in knowledge, there is some overlap in the alignment of disease pathogenesis with the current levels of care.

Primary care is where most diseases including cancer are first encountered. Care is further channeled to secondary and tertiary level for those who need it. The physicians working at the primary care have several advantages in applying some of the advances in technology and knowledge that relates to prevention and early detection of cancer. These advantages for the primary care physician are by default of existing design of care delivery system and with these come responsibilities that lie squarely on the primary care physicians.

Advantages For Primary Care Physician

First Contact

The primary care physicians work at the frontline of any healthcare organization. These are either family medicine specialists or the non-specialist general practitioners. The primary care physicians work in solo or group practice and are mostly linked to tertiary care organizations. The primary care doctor is the first medical expert that the patient comes in contact with which allows for early detection of cancer

Opportunity

Patients also seek counsel of their primary care physicians for problems other than cancer, this provides with the opportunity to screen for cancer early when it is not yet a problem for the patient to seek help for. Having a database of all normal patients who only seek help for smaller problems e.g. for an occasional upper respiratory tract infection, allows for the primary care physician to reach those with no symptoms of cancer by call-recall one by one.

Wider Scope of Cancer Coverage
The broader scope of work of the family physician allows them to cover screening for all screenable cancers, instead of being limited to cancer of one specialty or another.

Multiplicity of Visits
Patients have the most frequent interaction with their family physicians each year, than with any other specialty. Most cancer prevention screening procedures require no less than an annual follow-up.

Family Network
Being the family doctor for the whole family of the patient needing cancer prevention advice or screening, the primary care physician has several opportunities to alert and convince the family members to engage in cancer prevention screening for their other family members.

Whole Family Coverage
The visitors to family doctor are not limited by age or gender, therefore preventive coverage for cancers in all ages and genders can be initiated in the primary care setup. A person can be a patient of a family doctor for his or her lifetime. Family doctors often provide care to the next generation of their patients as well.

Long Term Trust
Having long-term relationship of trust with the patients and their families, the primary care physician is ideally placed to impart health education quickly, easily, with little resistance and with greater impact on the patient.

Multidisciplinary Team Support
The primary care physician's working team of nurses, health educators and others are as versatile as the scope of family practice to assist in managing the prevention of all cancers. Initiating the cancer screening for the patient is a simple process, based on age and gender and nursing staff at the primary care level have played a crucial role in several healthcare setups in this regard. Health educators do the counseling for cancer prevention where physicians are sometimes limited by their busy schedules.

Coordination of Care
The primary care physicians being in the role of classic gate-keeper, can coordinate the care of all types of cancers with the specialties that a patient may need referral to, thereby facilitating prompt treatment.

Community-link
The family doctors also have the most direct link with the community to which the patient belongs, which by default allows them to be in a leadership position to mobilize communities towards cancer prevention. Primary prevention for many cancers start with health promotion activities at the community level and no one is better suited than the family medicine physician for the job.

Home-visits
The family physicians and their team members are often the direct providers of home health care, placing them at a key position in completing the loop of home based cancer care of tertiary prevention, i.e. rehabilitation and palliative care.

Role Expectations In Fight Against Cancer
Being in the position of several advantages within the existing healthcare structure, the primary care physician is expected to take the lead role in several aspects of the fight against cancer, particularly in the arenas of primary prevention (health promotion and specific protection) and secondary prevention (screening). Family physicians are ideally positioned to implement clinical

prevention guidelines for cancer. Their experience and feedback would be vital for the guidelines to have a successful pragmatic outcome. The roles of the primary care physicians are given below as general and specific as these relate to cancer. In addition the future roles and expectations are also described based on technological advances and anticipated changes in healthcare systems.

General Role

Guideline & Program Development
Any guidelines developed or planning carried out at national, regional or local level would require the input of the representatives of family physician to develop and improve the implementation section of the guidelines or programs designed for cancer prevention.

Primary Prevention

Advocacy
This role is not exclusive to the primary care physicians but they should not fall behind in advocating and raising awareness through news papers, magazines, television, radio and other mediums / forums of communicating with the public and the decision making bodies, such as government, non-governmental organizations, businesses and others who have the resources to bring change in healthcare delivery system and the attitudes about cancer

Community Mobilization
This requires that the primary care physician extends his/her influence as a healthcare professional beyond the boundaries of the clinic and into the local community from which s/he draws practice. This measure is two-fold; first is recruiting of patients to form volunteer groups who believe in promoting healthier lifestyle in the community and also harnessing support of the local community leaders, followed by carrying out promotion activities ranging from distribution of brochures to holding health festivals etc.

Clinic Based Health Promotion
These can be carried out at the clinic level, providing individual and group counseling for promoting smoking cessation and discouraging other risky behaviors. Health educators and dietitians can have a stronger role in this regard.

Specific Protection
This role is at present limited to the provision of vaccination in the clinic for protection against human papilloma virus, the causative agent for cervical cancer in women and hepatitis vaccinations?

Secondary Prevention

Early Detection: Screening
Several cancers can be detected early. For many of the cancers there is a component of patient education on being made aware of the early signs of cancer and self examination. Screening of cancers requires physical examination by physician, while others require a specific procedure such as Pap smear or a diagnostic laboratory or radiology test. Depending on resources such screening facilities may or may not be available at the primary care level and may the family doctor may have to refer a patient to a tertiary care facility to get these done.

Prompt Treatment Referral:
The primary care physician is ideally suited to refer a patient for confirmation of a screening result by additional diagnostic workup and for prompt referral to access treatment.

High risk Patient Monitoring
Monitoring of patients with family history of cancer or with other evidence of higher risk can be

better followed up by the primary care physician, once the high risk is established.

Tertiary Prevention

Rehabilitation & Palliative care
Having a trusted long term relationship with the patient and his/her family the primary care physician can be instrumental in the decisions and care process of those diagnosed with cancer, particularly in rehabilitation and palliative care. This can be more effective if the primary care setup is advanced to cover home health services.

Cancer Specific Roles

This section highlights the role of the primary care physician limited to the activities in the clinic. The additional roles as described above in the general role section still apply.

The family doctor office would require some operational changes to be effective in clinical prevention:

1. Having a database (electronic or register) of patients under care and to be able to contact them by a calling system or an SMS system to come for preventive checkup is critical.
2. Incorporation of information technology can be very useful in alerting patients and reminding doctors, evenly distributing preventive care over a period and follow up on results. If the medical record is paper-based then alerts such as having a checklist, a separator in the file for prevention care and periodically reviewing preventive care delivered may be sufficient.
3. Cancer preventive care can be initiated by nurses, receptionists, nurse assistants for all non-high risk patients, so the process of ordering some tests can be initiated by the support staff. It would require some training, to be given by the busy family doctor. The physician can follow up on the results with the patient.
4. Having a counseling team including a dietitian and health educator is essential. Physicians at the primary care rarely have time to give good counseling regarding cancer prevention.
5. Facilities such as having a screening mammogram, or setup for pap smear collection may vary from practice to practice. Group practices are more able to provide such services, however nurses can be trained to do pap smears.
6. The detail of the level of evidence for a screening procedure, when to carry out a particular procedure and which patient population is high risk for closer follow up, are given elsewhere in this manuscript so the emphasis will be on the practical aspects of cancer prevention in the clinical setting.

Colon Cancer
1. Health education with brochures, videos and group sessions either by self or by the health educator about benefits of colon cancer screening, high fiber diet and low red meat diet.
2. Laboratory in clinic or nurses are to teach patient how to do a heme occult test.
3. Physician to interpret the results and do the flex-sigmoidoscopy if trained and has the setup or refer the patient to the gastroenterologist for colonoscopy. A well organized setup may help schedule an appointment and help prepare patient for colonoscopy.
4. Aspirin prophylaxis to be considered on a case by case basis.
5. High risk patients of familial polyposis, inflammatory bowel disease to be followed as per guidelines.

Lung Cancer
1. Health education with brochures, videos on the hazards of smoking and benefits of not smoking and group sessions either by self or by the health educator are essential.

Smoking is a risk factor for multiple other cancers, but it is specifically mentioned here because of being a causative agent.

2. Having a smoking cessation program in the clinic, with group sessions, counseling, nicotine replacement therapy, antidepressants and or vareniciline etc should be an essential arsenal of every primary care physician.

Skin Cancer

1. Health education with brochures, videos on the hazards of excessive UV light (sunlight) exposure, benefits of SPF usage and teaching patients self examination of changes in moles (especially those with higher risk; lighter skin, multiple moles, elderly (nasolabial folds for basal cell Ca) in group sessions either by self or by the health educator.
2. Physicians may also do periodic skin examination of patients with high risk for skin Ca, e.g. those with family history, although there is insufficient evidence for this screening procedure.

Breast Cancer

1. Health education with brochures, videos on breast cancer, benefits of screening mammogram, and teaching patients self examination of breasts, in group sessions either by self or by the health educator.
2. Scheduling screening mammogram periodically for all eligible patients with normal risk and those with high risk. For those not in the high risk category can be scheduled by the nurse. Patients need to be explained pre-hand about the slight discomfort of the mammography procedure in the primary care physician office by the nurse.
3. Physician to break the results to the patient if normal or abnormal and setup diagnostic mammogram if needed and counsel patient if results positive.
4. High risk determination to be carried out by the physician by screening history questions exploring family history and advise on genetic marker screening, followed by mammography on a schedule as per guidelines.

Cervical Cancer

1. Health education with brochures on cervical cancer, benefits of pap smear screening and vaccination along with individual counseling either by self or by health educator.
2. Have available in clinic anti-HPV vaccine and setup to deliver it by nursing staff who can prepare patients for it and also educate patients on its possible side-effects.
3. Having a setup of conducting pap smear in clinic, either by self or nurse / midwife depending upon the size and scope of practice with full explanation of procedure to patient. If such a setup is not possible referring patients periodically to where the procedure can be carried out.
4. Interpreting results according to protocol and providing patient support in case of positive results.

Thyroid Cancer

1. No recommendation on thyroid cancer but it is in the top-ten list of cancers among Saudi women, some local screening procedure should be considered for research. Ultrasound examination is fast becoming an extension of the hands of the primary care physician worldwide, it may be considered as a screening tool for research.
2. Health education with brochures on thyroid cancer, instruction on self neck examination, by self or health educator.
3. Patients with history of radiation to neck or family history of thyroid cancer are to be followed closely for periodic examination / ultrasound as per recommendations.

Uterine Cancer

1. Increase awareness through brochures to peri-menopausal women about the risks and symptoms of uterine cancer along with other elements of post-menopausal health.
2. Follow patients with family history of uterine cancer more closely as per guidelines.

Prostate Cancer

1. Educate patients about prostate cancer through brochures and group sessions by self or by health educator.
2. Consider periodic PSA and DRE for patients in high risk category, such as those with darker skin African heritage or family history of prostate cancer
3. Physicians explain risks and benefits of a positive result and guide patients through the decision making process of a positive result.

Oral Cancer

1. Health education on the hazards of smoking, tobacco chewing and use of pan leaves with betel nuts and tobacco using brochures, waiting room videos and group sessions by self or health educator.
2. Educate patients on detecting oral painless, precancerous lesions by teaching them self examination.
3. Physicians or dentists attached to practice to annually examine the oral cavity of high risk patients who smoke or chew tobacco in any form or have family history of oral cancer.
4. Have a smoking cessation / tobacco chewing quitting program in the clinic.
5. Physician to promptly refer patients in case a precancerous lesion or a painless ulcer is detected by oral cavity examination.

Testicular Cancer

1. Health education brochures on un-descended testes and self-examination of testes should be available in the clinic
2. Carryout thorough school physical examination of boys to rule out any un-descended testes.
3. Educate parents of boys with un-descended testes on the benefits of surgical correction and hazards of un-descended testes (abdominal). Other high risk cases such as those with family history are to be followed closely with education on self-examination and physician examination.

Leukemia

1. No recommendation but primary care physician to make a prompt referral to hematologist on incidental discovery of unusually high WBC on CBC done for some other purpose or suspicion of leukemia by any other diagnostic indicator.
2. Patients with family history are to be followed up as per recommended guidelines.

Retinoblastoma

1. No recommendation but primary care physicians must be alert on checking a red reflex in infants and toddlers.
2. Health education material should exist in clinic to alert parents about yellow / white reflex in infants among other alerts for this age.
3. Primary care physicians should promptly refer patient to ophthalmologist for any reflex other than red. .

Future Role

1. Oncogene screening of buccal mucosa cells obtained from saliva using microchips in the primary care clinic may become a reality of the near future, expected to be broadly available within the next 5-10 years, as the human genome project progresses to detected newer genes. Customized monitoring and prevention counseling for patients possessing oncogenes is an immediate outcome with the availability of the genetic testing in family doctor's office. Gene therapy may take longer but prevention counseling to alter modifiable risk factors would become the responsibility of the primary care physician for which preparations are needed to adjust at various levels in healthcare industry.
2. Use of ultrasound in the primary care setup is fast becoming a useful tool. Its application in cancer screening is researchable particularly for cancers that are diagnosed late, e.g. pancreatic, ovarian and thyroid etc.

3. Family physician can play a significant role in tumor registry by having a cancer detection program, and a notifiable disease (cancer) reporting system for the number screened monthly and detail of those found to be positive.

Training of Family Physicians

It is vital that primary care physicians and their staff are trained in early detection of cancer, through regular programs and are well supported to deliver these services.

Reference

USPSTF Clinical Prevention Guidelines