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Role of Family Physician in Periodic Health Assessment Screening: A Review

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Authors' contributions

This work was carried out in collaboration among all authors. All authors read and approved the final manuscript.

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ABSTRACT

A family physician is considered the first line of healthcare with patients. In the public sector, a medical officer is a generalist with no postgraduate training. The periodic health assessment has its roots at least as far back as the industrial revolution, employers paid for annual medical fitness examinations and tests to assess the state of their workers with intention of keeping their workforce healthy and safe. The technique is now included into the work of primary care physicians and is still practiced across multiple countries but it may be named with a different name such as Periodic health examination (PHE). The PHE allows for the implementation of evidence-based preventative measures, the education of patients on lifestyle issues, the updating of vaccines, and, most importantly, the detection of risk factors and diagnoses by updating the patient's cumulative profile. In low-risk individuals, however, treatment may not be essential every year. There's serious question about the value of Periodic health assessment/examination. In this article we'll be reviewing the PHE, its value and the role of family physician in it.

Keywords: healthcare, Periodic health examination, chest X-ray, lung cancer

1. INTRODUCTION

The periodic health examination (PHE) has its roots at least as far back as the industrial revolution, when employers paid for annual medical fitness examinations to keep their workers healthy. The technique is now included into the work of primary care physicians and is still practised across Canada. Various terms are used to describe it (e.g., annual health examination, periodic health visit) [1]. Some nations support PHEs for otherwise healthy people aged 40–75 years, claiming that these individuals have a rising burden of lifestyle and chronic illnesses that might be treated with PHEs. Patients in Canada, however, may be confused by the continued diversity in practice, with a tendency toward lowering or abolishing the use of PHEs in adults [1].

By convention, the phrase "family doctor" should be used to mean the following: A family physician, a general practitioner, or a medical officer are all examples of medical officers. A family physician is a physician who has completed postgraduate study in family medicine. In the public sector, a medical officer is a generalist with no postgraduate training. A qualified private practitioner with no postgraduate training is known as a general practitioner [2].

According to the study, almost 58 percent of patients dying of coronary heart disease had their fatal condition discovered as a consequence of participation in periodic health checkups, and similar programmes found only half of the patients dying of cancer [3]. The impact of such initiatives would be significant if we assumed that we could completely stop or treat these conditions once they were identified. Periodic health examinations, on the other hand, may plainly fail to discover a significant share of even dangerous disorders. Although it could be argued that the programme participants described here did not have their periodic health examinations at frequent enough intervals, it should be noted that a randomised trial found that chest X-rays taken as frequently as every six months to detect pre-symptomatic lung cancer had no discernible effect on mortality [3].

Doctors used to be generalist practitioners in the past. However, technical and scientific advancements have opened up intriguing possibilities in medicine during the last fifty years. The division of medicine into subspecialties has resulted in breakthroughs in disease knowledge. The generalist way of practise declined, while subspecialists focused in hospitals achieved dramatic improvements in particular organs, systems, or illnesses, the performance of specialised operations, or the use of expensive and advanced technology [2]. The American Academy of General Practice (AAGP) was founded in 1947 in the United States to represent the shrinking number of general practitioners. Following then, a series of events prepared the way for family medicine to be recognized as a professional specialty with accreditation and board certification [3].

IMS Health presented a statistical overview of the top ten reasons patients contact family doctors and other specialists in Canada in 2009. The "general medical exam," with 10.5 million visits each year, came in second only to appointments for hypertension [4]. Assuming fee-for-service compensation and the fact that a

routine medical examination (also known as an annual physical or a periodic health examination [PHE]) takes twice as long as a regular appointment, this translates to approximately 21.4 million appointments per year at a cost of $2 billion in consultation fees alone [4].

To make educated choices in the office environment and in the larger public, all physicians should "know" their practise populations. A clinician, for example, could be able to immediately assess rates of sickness, anthropometric measurements of the population, individual- and population-level test findings, trends, and a snapshot of therapy actions using a well-designed electronic medical record. However, to identify and meet the group's requirements, effective population-based chronic illness management programmes involve monitoring and population health assessment techniques. Surveillance and epidemiologic analytic techniques may be implemented in clinics to enhance practise, provide clinical guidance, and improve the health of patients and the surrounding community [5].

As according growing evidence, general health checks, which include both the standard yearly physical exam and the periodic health visit, do not reduce patient morbidity and mortality and are a costly procedure. Insurance providers and health-care providers have questioned the value of yearly physical exams for healthy people, preferring a more frequent health check instead. A physical examination is not often included in a routine health visit, which focuses on preventative treatment [6]. A physician's judgement determines if a periodic health visit is necessary, and it is customised to each patient's individual needs. The customary yearly physical examination of asymptomatic persons, according to the Canadian Task Force for Preventive Health Care, is not supported by evidence and may cause damage. They explain that periodic preventative visits tailored to age, risk, and particular test intervals may be more beneficial [7-10].

2. METHODS

Study Design: Review article.

Study Duration: Data will be collected between 1 July and 30 October 2021.

Data Collection: Medline and PubMed public database searches was carried out for papers written all over the world on periodic health assessment in primary care settings. The keyword search headings included “periodic health assessment, family physician, primary care, checkup, chronic diseases", and a combination of these were used. For additional supporting data, the sources list of each research will be searched.

Criteria of Inclusion: The papers were chosen based on the project importance, English language, and 20 years’ time limit. Criteria for exclusion: all other publications that do not have their main purpose in any of these areas or multiple studies and reviews were excluded.

Statistical Analysis: No predictive analytics technology was used. To evaluate the initial results and the methods of conducting the surgical procedure, the group members reviewed the data. The validity and minimization of error were double revised for each member's results.

Value of Periodic Health Assessment: The PHE provides an opportunity to implement evidence-based preventative measures, educate patients on lifestyle concerns, update vaccines, and, most significantly, detect risk factors and diagnoses by updating the patient's cumulative profile (i.e., patient history). In low-risk patients, however, treatment may not be essential every year. The PHE might be used to help disadvantaged groups who would otherwise be unable to attend on a regular basis. It might also help with chronic illness management and deprescribing initiatives. The patient–doctor interaction is increasingly being demonstrated to have an impact on health outcomes. However, prolonged, relationship-based treatment may be only achievable if other, unneeded visits are reduced [1].

In the case of coronary disease, it has been consistently established that blood pressure, serum cholesterol, exercise, cigarette usage, blood glucose, and a variety of other variables all affect one's chance of suffering and dying from a myocardial infarction. These statistical connections between 'predictors' and eventual illness have sparked the development of 'anti-coronary clubs,' as well as a slew of scientific and lay publications arguing for countrywide risk factor modification programmes to prevent or postpone the onset of manifest coronary disease. Such algorithms assume that statistical correlations imply causal linkages, but investigations to resolve this crucial topic are

only now beginning. However, periodic health screening programmes based on these predictors can only be beneficial if they can be blamed or 'explained' for a considerable fraction of coronary heart disease [3].

Question of Value of PHA/PHE: Those who already contact their family doctors on a regular basis, and even patients who have four extended chronic-disease visits per year, are more likely to book dedicated PHEs [4]. There is no convincing evidence that scheduling a PHE appointment instead of case-finding manoeuvres during routine visits leads to improved health outcomes, or that people who participate in this yearly ritual are healthier or have lower morbidity and death than those who do not. In reality, there is enough data to suggest that many of the studies performed during the PHE may be detrimental and not in the patient's best interests [11]. Advocating for patients involves avoiding needless medical procedures, and the CMA Code of Ethics and the College of Family Physicians of Canada's four principles of family medicine both highlight a duty for wise use of health-care resources [12].

Traditional fee-for-service approaches may lead to an overabundance of services, such as routine health checkups. Because physicians must offer the service directly in order to charge, quality of care may decrease in such models where volume is rewarded and interprofessional team-based treatment is discouraged. Capitation models, on the other hand, may contribute to under-provision of care, particularly for patients with multiple comorbidities. This form of care offers limited motivation for quality-based treatment in the absence of additional value-based components to capitation models. Bundled care models can foster team-based approaches, but greater patient volume expectations may raise the amount and intensity of physician effort. The evidence for pay-for-performance models in primary care is mixed, and there is presently no direct pay-for-performance incentive for performing the periodic health visit [7,13-19].

Preventive care services are more likely to occur during a dedicated visit, which is one of the key justifications in favour of a PHE. With the computerization of medical practises, scheduling required preventative care at proper intervals and during regular visits should be simple. Electronic medical records are costing taxpayers a significant amount of money, and the public is already demanding a return on their investment. Every visit to an acute care facility should, in essence, incorporate a component of preventative treatment. While physicians devote a significant amount of time to PHEs, provincial governments are increasingly relying on nurse practitioners, pharmacists, and other health professionals to provide acute treatment to individuals who require it. Patients who might be better treated by family physicians crowd emergency rooms, yet the majority of these patients receive no preventative treatment [4].

In all preventative and screening actions directed at asymptomatic patients, overdiagnosis and overtesting are issues, especially when any benefits are minor or hypothetical. Annual physical examinations may enhance the chances of discovering disorders with unknown clinical significance. Although investigating and treating incidentally identified anomalies can be useful, the risks of labelling, false-positive findings, and problems from unneeded testing and treatment must be considered. Screening trials have only lately attempted to quantify the cost or consequences of false-positive diagnosis or unneeded therapy [20,21].

Role of Family Physician: Family medicine has evolved to its current form in the United States and the United Kingdom during the 1950s and 1960s. During the last two decades, it has gained traction across the Middle East, Africa, Latin America, and South Asia.Family medicine is becoming more popular in India. It has been recognised that they may serve as the backbone of the health-care delivery system and play a critical role in achieving the objectives of the National Rural Health Mission, which will shortly become the National Health Mission [2].

At its foundation, family medicine necessitates physicians serving as resources for both their practise communities and their individual patients. The diagnosis and treatment of all patients require an understanding of the biophysical medical model of disease and sickness and how it affects people. However, the individual's sickness experience is frequently influenced by larger causes. The condition of health experienced by people of a community is determined by a variety of factors, including income, culture, environment, genetics, education, and general social structure, to mention a few. The impacted population may be vastly different from, or even bigger than, the designated target of a clinic. Identifying and modifying these characteristics can help all

Canadians improve their health, both in practise and in the broader community [5].

In the following ways, family practise varies from other specialties [2]:

1. Family physicians frequently deal with undifferentiated clinical issues, i.e. problems that have not been assessed by any other physician before, and they are frequently the initial point of contact
2. The prevalence of illness and clinical conditions in general practise differs significantly from the prevalence of disease and clinical problems in a hospital clinic or ward's designated group. Because the predictive value of clinical data changes depending on the prevalence of a disease in a specific population, the same symptom, sign, or test in family practise and hospital practise will have different predictive values.
3. A family practitioner will often detect illness at an early stage, before the entire clinical picture has emerged. Because clinical data's sensitivity and specificity change depending on the stage of an illness, tests effective in general/family practise may differ from those beneficial in hospital practise.

At each stage of development, interactions with the environment can alter immediate and long-term health issues. As family doctors, it is critical that can be performed treatments from a public health standpoint. These public health efforts may be divided into key aspects in the Canadian context, as stated by the Advisory Committee on Population Health and the National Advisory Committee on SARS and Public Health. The benefits of incorporating public health components into family medical practise are obvious: Successful treatments can reduce sickness and damage, improving health while also saving taxpayers and governments money. Health-protection, illness and injury prevention, and health promotion interventions, as well as health evaluation and monitoring, can all be produced [5].

3. CONCLUSION

There's many articles debating against the true benefit of periodic health assessment as seen as waste of time of medical official and can lead sometimes to over diagnosing and overtreating. Family physician and primary care practitioners have a great role in periodic health assessment for different age groups. Periodic health assessments should be done for specific cases which have high-risks of developing a disease as patients who have chronic disease.

CONSENT

It is not applicable.

ETHICAL APPROVAL

It is not applicable.

COMPETING INTERESTS

Authors have declared that no competing interests exist.

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