

# Preventive Medicine

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Retired Consultant Professor of Anesthesia Mircea Chiorean wrote the following Letter to the Editor expressing his point of view regarding preventive medicine. The letter is open to debate.

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**Motto:** "All diseases can be prevented or cured, including the ones of aging, and no one can stop us prolong our life as we desire..." *Benjamin Franklin*

"Smart people will solve problems, whereas geniuses prevent them." *Albert Einstein*

Although doctors, in the Hippocratic oath, give faith both to goddesses Hygeia (the goddess of health and prevention) and Panacea (goddess of healing), in practice they give a preferential attention to healing. Thousands of years ago the Chinese, appreciating the advantages of disease prevention, did not pay doctors until they would apply profilactic measures efficiently [1]. In the Middle Ages, profilactic measures addressed to collectivities, through vaccination of the population against contagious epidemics (smallpox, cholera, etc.) In modern times, the shift of pathology towards chronic diseases (cardiovascular diseases, cancer, diabetes), changes the direction of preventive measures from collective prevention to individual prevention. In 1983, in the US, individual preventive measures were merged with collective preventive measures, in a specialty called "Preventive Medicine and Public Health" [2].

In Romania, preventive communities belong to "Public Health and Health Management". Individual preventive measures are carried out especially by family physicians and episodically, ambulatory physicians.

In the following we present our observations regarding preventive medicine.

The concept of preventive medicine is clear from the very definition of medicine, which deals with the conservation and restoration of health [3]. Preserving health, as highlighted by the old adagio: "it is better to prevent, than to cure", has its own share of setbacks [1]:

- ▶ the illusion of prolonging life and "immortality";
- ▶ most physicians and patients prefer the more spectacular results of treatment in case of established diseases;
- ▶ the lack of enthusiasm of physicians, health authorities, insurance companies and universities in acknowledging the advantages of preserving health.

Currently, through medicine/preventive care we can understand the measures taken to prevent diseases or injuries, as opposed to treating measures.

Prevention is a similar term to primary prevention. In other words, preventive medicine is the specialty that heads towards the health of people, communities and to some population groups [2].

The goal of preventive medicine is to protect, promote and maintain health, well-being, and to prevent diseases, disability and death [2].

Given that many conditions escape prevention, others cannot be diagnosed early, can only be ameliorated or subjected to preventing complications, three levels of prevention have been imagined [1,4,5,6,12,13]:

- ▶ Primary prevention, which aims to prevent the outbreak of diseases and their development, through measures involving the individual and the environment. Among the measures in this class we mention: vaccination, control of water/air, harmful factors at work, adding fluor to water to prevent cavities, using iodized salt to prevent endemic sacs, health education to prevent harmful factors (smoking, alcohol, drugs), healthy diets, physical activity or controlling pregnant women and infants. Primary prevention involves public health physicians and family physicians.
- ▶ Secondary prevention means early detection and treatment by clinical/laboratory methods, including the screening individuals who present risk factors, to prevent chronic diseases. Such measures are: early detection of hip dislocation, rickets in infants, TB, diabetes, breast cancer (mammography), cervical cancer (Papnicolau test). Screening tests for children and adults are well coded. Secondary prevention involves ambulatory physicians or family physicians.
- ▶ Tertiary prevention regards already established diseases, "regeneration" of lesions and restoration of organ functions, in order to reduce potentially fatal complications. Tertiary prevention concerns physicians at each level of hospital care.

Some authors [7] add quaternary prevention, which means methods to prevent or stop the effects of certain interventions that were unnecessary or excessive in the public health system.

### Classification of preventive measures:

- ▶ Universal prevention addresses the entire population (of a country, local communities, schools, etc.), to prevent and prohibit the abuse of alcohol, tobacco or drugs. Individuals are informed and trained to prevent complications.
- ▶ Selective prevention is directed towards groups who have a risk of developing complications from toxic or other abuses, that are beyond statistical average. There are practice campaigns against smoking, alcoholism, improper nutrition.
- ▶ Indicated prevention involves a screening process, the identification of individuals who show early signs of abuse of toxic substances, predisposition to various diseases or behavioral disorders (students, drivers, schools, women prone to breast cancer or cervical cancer, etc.)

In the 1970s, in the US, at the initiation of non-governmental agencies such as the American Health Foundation [10], together with propaganda against the negative factors that lead to lung cancer (smoking) or cardiovascular diseases (obesity, alcoholism, incorrect nutrition) several special preventive health services were started. A “pilot” service was developed by E. Wydner, which stipulated: “to practice preventive medicine just as we practice healthcare medicine” [1]. Individual preventive medicine is based on periodic, detailed and recorded medical, clinical and laboratory examinations [8]. The examining circuit of a healthy patient in such preventive health unit is as follows:

- ▶ The “educated” patient arrives to the “reception” of the establishment, from where he is guided to “Office 1”, is clinically examined and a “preventive checklist” is drawn [8];
- ▶ The patient is guided to Offices 2, 3 and 4 for biological sampling, paraclinical explorations (echography, ECG, EEG, X-Ray) or the administration of injectable treatments, if need.
- ▶ The next day, in “Office 5”, the senior doctor, after all data is taken, presents the conclusions to the patient verbally and in writing, giving the patient a CD with the epicrisis and a card with possible risks for emergency services.
- ▶ This initial examination is repeated regularly every six months by family physicians and general practitioners in emergency services.

Such a preventive medicine unit can operate with three physicians (family physicians, internists, etc.), 4–5 nurses, a secretary and auxiliary staff.

The insufficient development of individual preventive medicine has some explanations, such as:

- ▶ Curative medicine/therapy is more spectacular for physicians and may represent a higher financial motivation;
- ▶ The solutions offered by preventive medicine are less attractive for the medical equipment and pharmaceutical industries;
- ▶ The cost of equipment/devices can be a barrier to patients without proper financial resources (intrauterine devices, etc.);
- ▶ Costs should be examined even more carefully than in curative medicine [7];
- ▶ Depending on the “exploration package”, the costs of an exploration can reach 80 euros, which, compared to the “basic package” for curative medicine, is more favorable.

### Perspectives

A large number of studies show that “lifestyle changes”, through proper stress management, nutrition, exercise or psychosocial support, contribute to the prevention of chronic diseases of the modern world. Genomics and genetic engineering offer hope for overcoming cancer. Technology also supports the latest innovations in road, air or naval traffic accident prevention. Quantum medicine (bioresonance) [13] brings hope by detecting diseases in an unbalanced energetic state.

In this context, preventive health controls are supported by international conventions [9,11] and published in magazines such as the American Journal of Preventive Medicine.

In our country, the “health reform” demands the introduction of preventive medicine as a specialty/competence, in the form of graduate or post-graduate studies of 2–3 years.

The benefits of regular routine appointments for the entire population will be large, not only from a medical, but also from an economical/financial point of view.

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