

Editorial

Challenges in the Healthcare Systems and Formative Needs of Family Doctors

Palmiro Poltronieri 

Agrofood Department of National Research Council, Institute of Sciences of Food Productions, ISPA-CNR, via Monteroni km 7, 73100 Lecce, Italy; palmiro.poltronieri@ispa.cnr.it

Received: 1 August 2018; Accepted: 8 August 2018; Published: 14 August 2018



In the current issue of the journal, a special issue entitled “The Emerging Concept of Planetary Health: Connecting People, Place, Purpose, and Planet”, guest edited by Susan Prescott and Alan C. Logan [1], hold the attention of scientists and stakeholders on the difficulties of preserving public health and to fight the disease states, resulting from a series of causes and lack of initiatives from policy-makers. There is a diffuse state of “dis-ease” spread among individuals, due to changes in society, in the foods, in the lifestyles, in environment, and loss of community (loss of language, tradition, and stories), and far less tangible aspects of loss (such as loss of value systems, loss of purpose, peace, respect, spirituality, compassion, and wonder). Life and the “ecosystems” in our social structures, governments, corporations, and others can influence the ecosystems that sustain us, or act as barriers to the health.

As is found from medical studies and by common sense, a dramatic change in human lifestyles has been linked to the increase either in mental problems (loss of social values, weakening of relationships, violence against relatives, often female victims) and in the increase of non-communicable diseases (NCD), among them are cardiovascular problems, exacerbation of allergies, hyper-reactive immune system activation and pro-inflammatory states [2–7], inflammatory bowel disease, constipation, and modifications in gut microbiota [8–11]. Epigenetic (human epigenome) changes in chromatin structure and function are influenced by factors, such as physical activity and exercise, with the potential to enhance cognitive and psychological health, improve muscular fitness, and lead to better ageing with improved quality of life [12–15].

A healthy state can be described graphically as a function with several variables (on the y-, z-, and n-axes), disposed on n-dimensional fields. As we live in relationship to others (family, society), we challenge either the physical body and the psychic dimension, the soul, with continuous stresses. The ageing process depends on how long we can withstand and cohabit with the pressures from the external fields, society, environment, reactive oxygen species, radicals, and radiation. There is a point of “no return”, from chronic to acute states of disease, that often is caused by genetic alterations, DNA mutations, and chromosome deletions or rearrangements. The science can do very little at this stage, and a feasible approach is based on gene therapy. For all the types of cancers with a dominant component of mutated genes, drugs are the only weapon we have at our disposition. On the other hand, when the epigenetic changes can be reversed by actions on the chromatin state, on enzymes and on non-coding RNAs, that can be silenced (introducing and expressing RNA sponges) or reactivated (with RNA oligomers) [16–18].

Intermittent fasting and dietary (calorie) restriction are increasing interventions to promote healthy ageing and to delay age-associated decline in brain functions. Dietary restriction is an example of mild stress-induced hormesis, and this technology has a widespread effect on health and ageing. Humans may be subjected to beneficial hormetic effects and may upregulate the stress response and modulate adaptation [19].

Medicine is the science and practice of the diagnosis, treatment, and prevention of disease. Medicine includes health care practices evolved to maintain and restore health by the prevention and treatment of illness. In modern clinical practice, physicians personally assess patients in order to diagnose, treat, and prevent disease using clinical judgment. The doctor–patient relationship typically begins an interaction with an examination of the patient’s medical history and medical record, and a medical questionnaire followed by a physical examination. Family medicine or *primary care* is, in many countries, the first port-of-call for patients with non-emergency medical problems. It is a common practice today to exploit beneficial microorganisms for general intervention as well as for specialized therapies, thus combining the microbiota influence on the organism and their probiotic effects, as competition with pathogens, improvement of gut neuromodulators, constipation, etc. [20,21].

The ageing process is plastic and can be positively modulated by a proper lifestyle. We need to educate new generations of doctors aiming to enable people to realize their potential for physical, social, and mental well-being and to participate in social life, and to address the fundamental questions: How well should we live? Are immune system-related diseases a deregulated trait of ageing process?

Then, in medical schools we can see an escalation of extremely focused training of medical doctors in highly specialized fields. Neurosurgery is such a case. It may be useful to re-evaluate the discipline of family doctors, and to give them enough training in order to deal with dis-ease states with approaches either at physical and emotional level.

In the past, experience-based knowledge developed various effective forms of medicine, known as traditional medicine (sciamans, medicine men) and folk medicine (use of herbs and knowledge of plants and their properties). The intervention of the sciaman was aimed to cure the soul before the symptom, as often the symptom (stress, respiratory defects or allergy) may be just a manifestation of a deeper malaise. In modern times, this was a reason for the doctor to prescribe a change, a travel, a holiday, a stay on the mountain.

In addition to the problematics discussing results-driven data and on a sound basis by the community, we need to educate a new generation of young doctors to oppose with science the non-scientific debates and anti-vax campaigns, that pose obstacles to medical intervention against infectious agents. Overall, it is estimated that in the future we will assist a surge of demand of doctors, and we need to approach this demand and to the needs of an increasing stressed population with a formative pathways able to provide them the psychological basis, together with knowledge on molecular mechanisms, to afford an appropriate therapeutic intervention and to advise the patients with remedies to give them a hope to live well and recover from their illnesses.

Conflicts of Interest: The author declare no conflicts of interest.

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