

# REDEFINING AMBIGUOUS HEALTH PARADIGMS: THEIR INFLUENCE ON MEDICAL PRACTICE AND PUBLIC HEALTH POLICY

*Jorge R. Miranda-Massari*  
*José R. Rodríguez-Gómez*  
*Michael J. González*

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*“The success or failure of any government in the final analysis must be measured by the well-being of its citizens. Nothing can be more important to a state than its public health; the state’s paramount concern should be the health of its people.”*

*Franklin Delano Roosevelt*

## **Introduction**

This paper will attempt to lead the reader to critically question certain ideas focusing on how health, conceived of as a social construction, can be manipulated. We will explore how certain groups that have social recognition establish a control paradigm based on certain social mechanisms: college regulations and/or curricula that tend toward, and generate, denial of the consideration of collective responsibility as an important variable in social welfare. It intends to provide examples of how certain cultural organizations, such as large pharmaceutical companies and medical school curriculum structures, can have a negative influence on the acceptance of paradigm shifts that could have a beneficial impact on society. This paper presents, from a constructionist perspective, the need for modifying certain structural paradigms in order to further knowledge from an interdisciplinary public health sphere, aimed at fostering the common well-being. We present the need to prepare and begin to assess the different sectors that are necessary for initiating a change in some of the prevailing health paradigms (e.g. the physician is the principal element to consider in the management of a patient’s health). The article explains the importance of certain social actions that should be generated in

order to modify these prevailing paradigms, which limit social well-being in an area as important as public health.

The first section reviews some of the data on the significant changes that have occurred in the history of human life expectancy since the 18th century. This section of the paper opens the discussion, in order to detect subtleties and identify styles, decisions, and practices that help to configure the discursive elements that drive the central arguments of the text. Based on the foregoing, the second section addresses the lifestyle component—content and cultural determinations—and its relevance to preventive management, so vital in disease management. Along these lines, the third section explores how social inequality influences or affects access to public health. Once these conditions have been identified, the fourth section proceeds to highlight the economic dynamics that also influence the quality of public health. The fifth section contributes perspective for understanding the relationship among the configuration of knowledge, economic variants, and the manipulation of information and resistance to change in processes associated with public health. Based on this context, the sixth section focuses on reflecting on several aspects related to the shaping of ethical-medical issues, stressing the ethos of the relationship with the patient and the integration of knowledge into this relationship.

The conclusion revisits the original theses, puts the problems in a cultural context, and identifies and calls on leading actors. It reflects on the need for arranging for positive and inclusive initiatives that will generate the social transformations necessary for maximizing present-day worldwide processes, for the purpose of achieving a reorientation that prioritizes public health as a fundamental variable in contemporary social and economic life.

### **Life expectancy and health advances**

According to recent data from national and international public health agencies, life expectancy at birth has increased around the world. In the 1700s, it was from 35 to 40 years, and by the mid-1800s, it had increased to 45 to 50 years. During the first half of the 20th century, it rose to 60 years in the majority of industrialized countries. Currently, many developed countries, and even some developing countries, have a life expectancy at birth of 70 to 80 years (Oeppen and Vaupel, 2002).

This increase in life expectancy came as a result of improvements in the management of health conditions, the

establishment of hygiene measures (public and private), better nutrition, and greater knowledge and application of public health measures necessary for controlling infectious diseases and environmental problems that had a negative effect on survival (González, Matos, and Miranda, 2000). The greatest impact of these measures was the marked reduction in infant mortality, responsible for the increase in longevity that occurred between the end of the 19th century and the mid-20th century. Medical advances like vaccines had a marked impact, although this is considered by some to be small due to the inability to make them accessible to the children for whom they were meant. In the end, however, there was a genuine reduction in infant mortality in those societies that used them, although there were serious problems in their distribution and administration in a few places. Similarly, there were also reports of some counterproductive adverse effects that were overlooked, given the major benefits that were obtained in children by controlling many of the diseases with high mortality.

While an increase in life expectancy has occurred in the latter half of the 20th century, which is attributed to progress in medicine and public health, an increase in degenerative chronic conditions is also occurring. Since the mid-20th century, mortality has been increasing from degenerative chronic conditions, such as cardiovascular, cerebrovascular, and pulmonary diseases; cancer; and diabetes, to name a few. All these conditions have lifestyle-related risk factors. This fact suggests the need for encouraging individuals to assume most of the responsibility for their own health. Nevertheless, if individuals do not have the resources to be able to take protective action, they cannot thoroughly perform their self-care responsibilities. Some of the resources necessary for being able to care for one's health include valuing health, having adequate knowledge, and having social support to maintain healthy lifestyles, and, without a doubt, healthy activities (e.g. exercise).

Valuing health as a high priority will facilitate developing the commitment to doing what we are supposed to do in order to diminish the risks to which we expose ourselves. Although we understand that this valuation is an individual decision that needs to be respected, it is no less true that responsible leadership, in addition to their verbal and written word, should turn that valuation into consensus-based, effective actions, embodied, in turn, in coherent public health policy.

With regard to knowledge, necessary for decreasing the risk of disease, we should recognize the omissions or gaps that do indeed

exist in our educational and professional institutions. These voids in knowledge can be easily handled by simply providing sensitive, up-to-date training of health professionals, getting them to recognize that there are new scientific, systematic contributions that should be objectively evaluated for the patient's benefit. The ultimate goal of this action is aimed at lowering the risks and mortality from chronic and infectious disease in our population. Without a doubt, updating knowledge is necessary for being able to optimally treat existing diseases, because improving health professionals' knowledge and their awareness of scientific advances influence their patients' rate of survival.

The development of knowledge in the fields of alternative or complementary medicine, such as nutritional biochemistry, orthomolecular medicine, psychoneuroimmunology, acupuncture, botanical medicine, and others, has begun to be explored and widely used in recent decades, greatly benefiting patients (NIH, NCCAM, 2006). Although this knowledge has begun to appear in some educational programs, attempts at integrating it into medical practice have faced difficulties, perhaps due to the lack of objective evaluation. Moreover, some entities, including governmental authorities and professional organizations, have hampered the progress and practice of different kinds of alternative or complementary medicine, even though they have scientific evidence of its efficacy, effectiveness, and safety. We hold that when certain attitudes that are ultra-conservative, discriminatory, or focused on the defense of private economic interests threaten the health of a sector of patients—through insensitive, poorly-informed medical practice—these attitudes must be fought in all possible venues.

The role of societal support for public health has many ramifications, one of the most important being access; not only to medical services and to medicines necessary for managing conditions, but also to a healthier diet and to an urban environment that provides stress management, recreation, and activities conducive to well-rounded human development. This should be part of any informed management initiative on behalf of a community's members.

Despite the successes attained in infectious disease control (at least for most of the world's population), and despite progress in managing chronic degenerative conditions, a certain degree of stagnation and institutional incapacity can be seen, shown in the apathy generated by bureaucratic barriers in national government

entities. This can be seen in the lack of public policies to promote proper management of both infectious and degenerative conditions, even when funds are available for this purpose. Similarly, the absence of better and more up-to-date standards of medical practice creates an adverse effect, which limits advances in life expectancy. For example, apart from the wealth that a given country may have and administer (which no doubt plays a vital role), there are also a huge number of factors that determine the general health status of a population, in addition to just medical care. This is demonstrated in examples where countries that are not very wealthy (e.g. Costa Rica) tend to have life expectancies that exceed that of wealthy countries (e.g. the United States). Thus, standards of medical practice are not the only factors that have to be taken into account when evaluating the increase in life expectancy of a country.

It is important to recognize that sociocultural and organizational-administrative elements of public health (for example, the creation of sociocultural assistance organizations and pro-social and pro-public health governmental policies, which help to decrease poverty and strengthen public health structures) are vital and need to be taken into account, because they also help to increase life expectancy. It should also be recognized that these elements can be used to explain several of the differences in survival rates and in medical and health indicators among different countries. Without a doubt, recognizing the usefulness of these elements and endorsing pro-public health policies that would aid in decreasing mortality in our nations will help achieve the public objective of attaining longer life expectancies.

### **Lifestyle: Imperatives in disease prevention and management**

The medical literature shows us that an impact can be made on the leading causes of death in developed countries (e.g. cardiovascular and cerebrovascular diseases, cancer, diabetes) through changes in lifestyle, which include nutritional patterns and healthy modifications in diet, whereby adequate quantities and better quality of food are consumed. This includes the consumption of unrefined foods, fruits and vegetables, and a reduction in harmful fats (e.g. partially hydrogenated and saturated fats). According to several health experts, in addition to the foregoing, scientifically proven supplementation should also be used, which enables the individual to be better prepared and in better condition to resist disease (González, Matos, and Miranda, 2000). Furthermore, regular

exercise and anxiety and stress management should be promoted.

Adverse mental states and mental illness are factors that affect individual physical health, possibly diminishing the ability to effectively deal with daily challenges. We know, for example, that individuals with high levels of stress and anxiety have a diminished capacity to deal with disease due to a weakened immune system. Similarly, the scientific literature demonstrates that the impact of nutritional status on the defense mechanisms of the individual at different stages of life is an important factor to take into account, along with doing a nutritional assessment/evaluation. Older adults with preventable nutritional problems (e.g. osteoporosis and malnutrition from limited or inadequate access to a good diet, or from the lack of nutrition education) have been and continue to be primary targets for public health in any nation.

The importance of stressing preventive medical care over treatment for already-diagnosed conditions is vital to having a longer life expectancy. The old proverb “prevention is better than cure” becomes valid and ethical, and is crystallized by the implications for the economy and survival involved in doing so in vulnerable populations. It is, then, vital to aim ourselves at fostering a national self-care mindset and promoting preventive health programs (and curative ones when necessary) so that the population will become more forceful and focused on the positive national public health objectives that a nation sets. However, there are many limiting factors that keep this from being achieved so easily. These factors include the possibility that funds allocated to governmental preventive medicine programs may be poorly managed, corruption, the lack of objective documentation for making informed decisions, and prejudicial attitudes that affect our health.

Empowering us, by means of sensitive education, to make wise decisions regarding our health status is an indispensable requisite for keeping ourselves healthy. This is a goal of an ethical nature.

### **Economic inequality and access to health**

Unfortunately, not all people benefit alike from existing medical care, and even less so from access to adequate information, in some cases even considered to be privileged by some proselytizing sectors. It is generally known that access to health care is related to individual economic level and social strata,

education, gender, and even race. We also know that socio-demographic variables have an influence, positive or negative, on survival rates. For example, Hispanics living in the United States die of diabetes almost twice as much as white, non-Hispanics. Even though Hispanics made up only 11% of the total population in 1996, the rate of new cases of tuberculosis in this population was 21% (Centers for Disease Control and Prevention, 2006). Furthermore, Hispanics have higher rates of high blood pressure and obesity than white non-Hispanics. Similarly, there are differences within Hispanic populations themselves. For example, while the rate of low birthweight babies is lower in the overall Hispanic population compared to whites, the rate of low birthweight among Puerto Ricans is 50% greater than that of whites (CDC, 2006). Another example is African-Americans, whose mortality from heart disease is more than 40% higher than that of whites. It is striking that mortality from all types of cancer is 30% higher among African-Americans than among whites; in the case of prostate cancer, the rate is double that of whites. Breast cancer mortality among African-American women is higher than that of white women, even though their mammography rate is almost the same. Finally, mortality from HIV/AIDS in African-Americans is seven times the rate for whites (CDC, 2006).

This data provides the basis for stating that it is vitally important for health professionals to pay serious attention to existing inequalities in health status. The ability of these professionals to have a beneficial influence on those socially vulnerable groups that require specialized services will depend on recognition of this fact. In this way, it will become possible to build a better nation with better health indices for all.

The increase in the 21st century in chronic degenerative conditions considered to be epidemics in developed countries, or in developing ones, includes obesity, diabetes, and cancer. All these diseases began to increase during the 20th century, possibly as a consequence of transformations in traditional dietary habits. In fact, some additional reasons to mention have to do with interests developed by major corporations, which through advertising campaigns, induce people to replace their healthy eating habits and lifestyles with inappropriate habits and unhealthy practices.

An example of the foregoing is seen in transnational corporations that use multi-million dollar advertisements and publicity campaigns to promote smoking, the consumption of artificial infant formulas over breast-feeding, and the intake of refined food products and

foods of low nutritional density that are harmful to the health. The practice of using chemical additives and the high concentrations of fats in food, in the context of excessive competition over the acquisition of goods (a principal element in consumer societies), do not take into account the adverse consequences that these factors have on individual and collective well-being and quality of life. All of the above negatively influence the life expectancy and quality of life of a nation's citizens. To the extent that they cause potential harm to the population, it can be said that the situation has an anti-ethical character.

As is generally known, the vast majority of chronic diseases (hypertension, diabetes, obesity, metabolic syndrome, cancer) can be prevented and even controlled by simple public health measures. Behavioral modification of lifestyles that are harmful to the health, sensitive education, and raising awareness about the consequences of these conditions would make a difference, both in survival and in quality of life. Thus, educational programs need to be implemented that are aimed at taking such measures into consideration.

The inclusion of simple elements as a part of a behavior modification plan (for example, decreasing consumption of fats and refined sugar) can have significant effects on increasing the life expectancy of a population. For example, a study focused on five lifestyle factors in a population of Seventh-Day Adventists in the State of California, "tracked whether individuals engaged in regular exercise, were vegetarian, had a history of smoking, maintained a healthy body weight, or ate a small serving of nuts five to six times a week. Researchers studied the impact on longevity of each of these habits, both separately and in combination."

The study "discovered that the life expectancy of a 30-year-old vegetarian Adventist woman was 85.7 years, and 83.3 years for a vegetarian Adventist man. This exceeds the life expectancies of other Californians by 6.1 years for women and 9.5 years for men. Non-vegetarian Adventist women in the group had a life expectancy of 84 years, and non-vegetarian men, 81 years" (Adventist News Network, 2006). This is only one of many examples published in the scientific literature that illustrate how simple modifications have serious positive implications for individual survival. Seventy percent of cancers could be prevented if people quit smoking (the best known and most fatal carcinogen of all), if they ate more fiber, if they did not overexpose themselves to the sun, if they had rectal and colon examinations, if women had



regular mammograms and Pap smears, and if men had regular prostate exams (Colditz, 2004; Rodríguez, 2006).

It is important to mention that scientific knowledge focuses on and is translated into a prevailing ideology that is inflexible when considering conceptions other than traditional ones, and that is validated by a methodology that is considered irrefutable by many and that responds to a usually hierarchical and totalitarian conception. For the majority of health professionals, alternative treatment and management of health conditions cannot occur outside of convention, which is unfortunate because it restricts scientific development. Perhaps such narrow-mindedness, promoted in many medical schools (though not all), leads some clinicians to object to considering other possible alternative management options that are not conventional treatments, even when they are shown through valid scientific evidence the effectiveness of such alternatives. This uncompromising attitude causes them to reject in no uncertain terms the great range of possibilities to be tried, even closing the door on opportunities for clinical improvement in their patients.

The same medical literature, for example in the U.S., shows us how alternative therapies are commonly being used by a growing number of people (Eisenberg, Davis, Ettner, et al., 1998). Furthermore, just as an interesting piece of information, it is worth pointing out that over a decade ago, in 1990, there were 425 million consultations for unconventional therapies in the United States (chiropractic, massage therapies, and others); that is, 37 million more than visits to primary care physicians during the same period (Esguerra-Gutiérrez, 1999). Usually, one of the prevailing paradigms in the medical field is that it is presumed that only the clinician knows what is best for the patient. This may perhaps be true for a patient in an emergency, who does not have sufficient information or who has limited comprehension of that information. However, as patients become better informed and obtain more information, they can then participate along with the professionals caring for them in developing the action plan and clinical intervention, leading to a greater degree of satisfaction and adherence to a treatment plan that was mutually agreed upon.

### **Major economic interests that affect public health**

The apparatus for the economic control exercised by major corporate interests makes disparities become extreme. We are astounded when it is reported that the United States, by itself,

could adequately feed the 6 billion people living on Earth today. Bear in mind that a North American child, on average, annually consumes what 422 Ethiopians consume and that it is estimated that with only 10% of the investments of the developed world, the problems of malnutrition in the Third World could be wiped out. More dramatic still, it is said that each Westerner consumes and, therefore, creates waste in an amount four times greater than each Third World inhabitant (Argaya-Roca, 2006).

It is significant that the wealth of the 225 richest people in the world is equal to the wealth of half of humanity, and that the three wealthiest people in the world together exceed the budgets of the 48 poorest countries combined. As Fernando Zumbado (former Regional Director for Latin America and the Caribbean, United Nations Development Program) denounced in the annual Human Development Report in September 1998, 20% of the world's population still lives below the poverty line. This fact takes on urgent moral significance when it is reported that in rich countries US\$17 billion a year are spent on the care and support of pets (such as dogs and cats). There is also a notable ethical incongruity when it is reported that in these countries another US\$12 billion are spent on things such as perfume and cosmetics (Argaya-Roca, 2006).

Is this ethical? These figures gain greater importance when it is known that US\$13 billion would be sufficient for all human beings on the planet to have access to the minimum health services required for their well-being. If we add to the foregoing what Argaya-Roca (2006) points out, that 40% of humanity has to make do with just 3.3% of the resources, while 20% of the planet consumes 82.7% and, what is more scandalous, at the same time this 20% produces 80% of the contamination, then we have to recognize that the current distribution of wealth in the world is ultimately contemptible and unjust. These figures suggest that if the need for fair distribution of wealth and opportunities were introduced at the global level, life expectancy and the quality of civilization of the different nations that make up planet Earth could significantly be improved.

In a world in which the process of globalization tries to generate immediate changes, especially in areas in which knowledge and the dissemination of that knowledge, through the mass media, spread at dizzying speeds, it is necessary to recognize and evaluate those processes centered on globalization that are advantageous. We can illustrate an example of the foregoing when

intellectual spaces are developed in which knowledge classified by some as “reactionary” spreads. The phenomenon of globalization, understood as an open phenomenon, facilitates the creation of opportunities for critical deliberation, out of which later social transformations could arise and that could challenge or take apart paradigms accepted up until that time. It is highly probable that the same process of globalization could achieve whether or not a critical vision is fostered that, depending on the experiential historical-social process of the individual who receives the information, causes the individual to react in different ways: accepting/defending what is reported, rejecting it or arguing that it is false, or even beginning to transform it according to the ideological frameworks he or she has. Hence the health construct (its definition, how to maintain it, and how to detect those factors that limit it) is defended by economic interests, which do not want any type of interference.

The perpetuation of control and economic influence that is generated from this perspective means that there are only a few who can “manage” health. This is seen when in an interdisciplinary team, one of the professionals in the group questions who is the one that has greater knowledge or expertise for making a decision. Frequently, in an interdisciplinary team decisions are made without recognizing the potential contribution and expertise of each member of the group to contribute to the well-being of the individual who is seeking assistance. The need for multidisciplinary and interdisciplinary management is now a basic need if we want to be successful in working with the health of the people. But for that to happen it is necessary to revise the exclusively biomedical paradigm.

### **Manipulation of information and resistance to change**

Medicine, as a discipline, is centered, as are other fields of knowledge, on paradigms that are defended by its practitioners. According to Kuhn (1970), when such paradigms start to shift, although it is true that they emerge despite all obstacles, the same scientific community shows iron-willed resistance, to the extent of trying to eliminate these changes in not a few cases. Medicine, and the scientific knowledge that it manages, is no exception in its attitude toward paradigm shifts. Promoting a new perspective, a new method that would break the hegemony of established groups, will make life somewhat difficult for those who initially promote it. The medical standards on which therapeutic management is based are continually changing, and as a result, we cannot say that

“a single conventional means that is not subject to appeal exists for treating the multiple diseases and problems that affect humankind.” In fact, barely 2% of humanity has continuous, speedy access to medical facilities, which makes them have to seek out alternatives for the management of conditions, with or without success. What we have, then, is that medical standards are also subject to changes and challenge; they have to be in relation to scientific advances and to human sensitivity. However, it is worthwhile asking if medical care and the way treatment is provided, even with the most advanced means and methods available, are infallible. The answer is a resounding “no.” In order to provide evidence of this, we mention some data provided by Esguerra-Gutiérrez (1999) in what we consider an inspired text:

In American hospitals, every week between 2,000 and 3,000 deaths related to medical treatment occur, with the number of deaths caused by medical problems in one year three times more than the number of Americans that died in the Vietnam War and more than four times the number of deaths from traffic accidents. It is also estimated that, besides death, medical treatments injure an additional 1,300,000 people.

Moreover, the same author points out:

That adverse drug reactions are a topic of much analysis in different research studies, among them those done by David Bates, in two Harvard hospitals, in which he concluded that preventable adverse reactions cost an extra US\$2.8 million per year in a one large, sophisticated teaching hospital. Other researchers demonstrated that adverse effects increased hospital stays by an average of two days, with a cost close to \$2,300 per case.

Finally, he urges us to think critically and ponder when he writes the following:

How much money do ill-advised or unnecessary tests cost? How much, for those ordered because of physician insecurity? How much, for practicing defensive medicine? How much, for tests ordered because of the ignorance of a few professionals who do not know the indications for or limitations of many procedures? How much do tests cost that are done for purely business reasons because the professional has a direct interest in investments he has made in diagnostic equipment? How much does unnecessary surgery cost, and how much for medical errors? In short, how much does bad medicine cost?

Does this information become public knowledge? We know that those who manage the access to sources of information hold great

power in their hands, and those who selectively restrict it in order to strengthen and further special interests, can have still greater control. Who can question large corporate economic interests, if they are the ones that provide the funds for many selective drugs and procedures? Is there access to all the information necessary for adequately evaluating the protection and well-being of patients? Who can be questioned about the type of clinical/medical research and what kind of interests promote this research and under what criteria, especially when there may not be elements for controlling and monitoring the possible adverse effects that patients can suffer, or worse yet, manipulation of the outcomes? Could we question certain multinational pharmaceutical corporations that protect their capitalist interests; or universities that receive funds from these corporations, for which they compete; or physicians that are sponsored by private interests? Will there be vested interests on one side or another?

The analysis in the medical-ethical literature suggests the need for developing and encouraging critical reflection on the conditions under which much of the research is done and the mechanisms used to sponsor it. The current economic interests created and developed by the capitalist management of a globalized economy are of such a magnitude, relentless and inhuman in some cases, that they do not seem to be concerned about the negative consequences in our communities; what is important is to earn increasingly more, regardless of the harmful effects that such exploitation can generate.

We also face very major ethical challenges related to medical plan coverage. Is it ethical for a patient who smokes and has a medical plan subsidized by government funds to enjoy the same coverage for asthma and hypertension drugs that non-smoking patients have? In order to answer this question it is necessary to take into account that the patient with his behavior is contributing directly to his health problems, not to mention those of others who are near him. This poses the need for assessing the risk behaviors of the insured as part of the process of ensuring them, as well as for creating programs that encourage better lifestyles. We consider that ethically the answer should be “yes.” However, many would argue the opposite. The question is still open for debate and is quite controversial.

### **Medical ethics: Responsibility to the patient and knowledge integration**

Far too often it happens that a patient with a serious medical condition receives an additional blow from where it should least

come: his physician. The responsibility of the physician is to guide the patient in order to favor the physical, mental, emotional, and spiritual conditions necessary for the patient's adaptation, recovery, or healing. The field of psychoneuroimmunology, which studies the interrelationships between behavior and the central nervous, endocrine, and immune systems, has established important influences and confluences among the different dimensions of the human being, with important repercussions on the relationship between stress, emotions and health. The fact that conventional medicine may have concluded that it does not have solutions for a specific condition does not authorize the physician to deny hope to the patient who is suffering from the condition.

In an extremely legalistic and litigious society it is not uncommon to hear that a physician "should not offer false hope." Unfortunately, this is understood as meaning that it is best to not offer any hope. An example of this occurs with cancer patients, especially when they become interested in unconventional therapies that may be of help. Opting for non-conventional therapies does not imply using the patient as a guinea pig, since, even in experimental therapies evaluated from the perspective of the conventional paradigm, there is an ethical-legal obligation to safeguard the patient's well-being. It is paradoxical that some clinicians, even when they know that the treatments they offer are highly toxic in some cases, or very expensive, and that they cannot guarantee their effectiveness, allege that for ethical reasons they cannot administer non-toxic, usually low-cost unconventional therapy, even when all scientific factors indicate that it may be of help. Even when some of these alternatives have been studied with scientific rigor, the clinician puts up resistance to alternative therapies for the mere fact that they have not been included in medical manuals as "standard therapy." For ethical reasons, a patient should not be refused an alternative that represents a possible opportunity to improve his health without great economic cost and with an adequate level of safety, in accordance with established scientific parameters. It is striking that in European and Asian countries the practice of medicine includes elements considered to be "unconventional" in the West, which do not require medical authorization to be administered. For example, acupuncture has been regulated in Puerto Rico by the Board of Medical Examiners, limiting its practice solely to licensed physicians; but in Asia, and even in some states of the United States, non-physician health professionals are allowed to practice

it.

Another specific example is the case of vitamin C (ascorbic acid) as an anticancer and cholesterol-lowering agent (González, 2005; Riordan, 2005; Rodríguez and González, 1991). Many physicians not only do not know the scientific literature on its safety and effectiveness, but are not even interested in knowing about it. If they were to fulfill their responsibility precisely and with greater intellectual caution, they would not prejudge therapies they do not know about, and would be more interested in exploring advances in paradigms that could bring new hope in their field.

### **Conclusion**

We need major social transformations to promote better health conditions among our people; this should be a transnational ethical goal. All sectors of our society have to participate. The prevailing paradigms that restrict development of the sciences, the health sciences included, should begin to be reassessed without any fear, recognizing that the assessment process requires time and changes of attitude. Changes of attitude can be generated when there is a reflexive awareness that produces in turn a change in behavior. The desire to want to transform multiple realities in the health sector requires us to adopt plans structured with appropriate priorities, duly organized and targeted to meeting the health needs of our people.

The leadership of government and of other civil society sectors should be united in a state public health policy that would send a consistent message, through educational campaigns that begin at early childhood-elementary levels and continue up to institutions of higher learning. The mass media should help with advertising campaigns that encourage people to care for their health. Legislative sectors should promote affirmative actions in order to improve the public health of the people, promoting a fair review of health service opportunities that does not depend on the economic strength of special economic interests. Medicine needs to recover its vocation and humanist practice, in which the principal goal is the patient's well-being, without falling prey to economic factors that try to control it and manipulate it.

The foregoing implies that medical treatment should go from the simplest to the most complex and invasive, recognizing and allowing the body's mechanisms for repair and homeostasis to successfully return it to a healthy state. It also involves discipline for going to the root of the problem, which is often complex,

because, contrary to prescribing and taking a daily drug (which is something relatively simple), the physician would have the responsibility of doing a much more comprehensive assessment, which often is not done for lack of time. Without a doubt, this type of assessment would bring important consequences in economic terms that not everyone wishes to face. Patients, in turn, would have the responsibility of making changes in their lifestyle.

The current vision that predominates in the cosmopolitan, globalized world is one where people want quick and easy solutions. Life is becoming increasingly intense, and it will be a great challenge for modern society to achieve a transformation in individuals for promoting a world view of greater tranquility, where resources are developed for successful stress management, adequate exercise is promoted, consumption of toxic substances is reduced, the quality of food is improved, and sound scientific supplementation is promoted.

The economic forces that control and direct the clinical practice of different health sectors are the usufructuaries of the existing paradigms. Big industry has the economic power to influence governmental spheres, education, and the practice of medicine. In this context, there is a troubling lack of balance in the distribution of money for research on alternative therapies, and limited dissemination of information regarding advances in products—such as certain nutrients—that are not patented, but that have proven their scientific usefulness in many diseases. Control over advertising; industrial, commercial, and personal incentives; and education are areas that need a great deal of attention. Pharmaceutical complexes focus a great deal of their research on what will be “economically profitable” products, understanding that if they do not see commercial potential in the product, they will not necessarily continue with research on it, regardless of the importance it may have for a given group of patients, especially, if the group is regarded as one that is “disposable, disadvantaged, or deviant.” The constant of economic interest is observed in other fields of technology: it is not by chance, for example, that we already have investors buying up stock in small laboratories that are experimenting with nanotechnology, recognizing that this technology will be vital in the future management of diseases such as cancer and diabetes.

If we want to continue reaping success with life expectancies and improve the quality of life of the members of our society, we cannot only intend to rely on new technologies and scientific



discoveries. It is necessary to achieve better-balanced structures, especially among socioeconomic forces and public health policies, involving industries, businesses and individuals in developing a pro-social conscience. Social actions that are effective in generating the awareness necessary for successfully changing prevailing paradigms, previously presented in this paper, should be part of the civil society agenda. Education, legislation, and public debate, including the public pressure that people can apply in these matters, are vital for a successful plan that will influence the quality of life of nations. The liberating and emancipating element that is generated by making others aware of the need for recognizing scientifically useful and ethically valid alternatives should be promoted through wise and sensible critical discussion. Hippocratic ethics and social ethics require that this be done. This should be one of our goals in the field of public health.

*“An ounce of prevention is worth a pound of cure.”  
Benjamin Franklin*

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#### **ABOUT THE AUTHORS**

*Jorge R. Miranda-Massari*, clinical pharmacist, is a professor in the Medical Sciences Campus of the University of Puerto Rico and a registered pharmacist. He has Bachelor’s degrees in biology and in pharmacy. He has a Doctorate in Pharmacy from the Philadelphia College of Pharmacy and Science and a postdoctoral fellowship in Clinic Pharmacokinetics from the University of North Carolina at Chapel Hill. He completed postdoctoral training in Pharmaceutical Care in Nephrology at the University of Pittsburgh and in Clinical Anticoagulation at the Medical College

of Virginia. He is author of numerous scientific publications including editorials, reviews, and research data in peer-reviewed scientific journals. He is a consultant of the Center for the Improvement of Human Functioning in Wichita, Kansas. He is also the creator and coordinator of the first interdisciplinary course in Integrative Medicine in Puerto Rico: “Complementary Practices in Health and Healing: An Approach to Integrative Medicine,” and the Advanced Practicum in Integrative Medicine.

*José R. Rodríguez*, MD, MPH, PhD, researcher and epidemiologist; recipient of a National Institute of Mental Health scholarship to Fordham University, receiving formal training in qualitative and quantitative research methods. He is a Fellow at the American Academy of Experts in Traumatic Stress; and is also certified by the American Board of Psychological Specialties. Currently, he is a research consultant to several national and international entities. He is the author of two books and numerous publications in peer-reviewed professional journals in the fields of medical sciences, sociology, and psychology. His interests are in gerontology, mental health, nutrition, spirituality, and orthomolecular medicine.

*Dr. Michael J. González*, biochemist, is a professor in the Medical Sciences Campus of the University of Puerto Rico. He earned a Bachelor’s degree in biology and chemistry. He has a Master’s Degree in Cellular and Biophysical Biology, and another Master’s Degree in Nutrition and Public Health. He also has a Doctorate in Health Sciences from Lafayette University, and another Doctorate in Nutritional Biochemistry and Cancer Biology from Michigan State University. He completed a Postdoctoral Fellowship in Geriatrics at the School of Medicine, University of Puerto Rico. Dr. González is a Fellow of the American College of Nutrition, and author of over 100 scientific publications. He is a member of the editorial board of several scientific journals such as *Biomedicina*, the *Journal of Orthomolecular Medicine*, and *Alternative Medicine Reviews*. He has also been a consultant for several companies, and responsible for the formulation of several supplements and pharmaceutical products.

*Drs. González and Miranda-Massari* are pioneering in the development of non-toxic chemotherapy for cancer. Their work with vitamin C as an anticancer agent has recently been confirmed

by the NIH. They published the first clinical safety trial using high doses of intravenous vitamin C in patients with terminal cancer. They have also published the most complete review of vitamin C and cancer, following up on the work of twice Nobel laureate, Dr. Linus C. Pauling. They are the creators of a research, education, and service project called *InBioMed*. The principal research project, *RECNAC II*, is on cancer, and is aimed at the development of a non-toxic cancer treatment protocol. The education project has a phase in the university and a continuing education program for professionals, as well as education for the general public. The service area includes corporate consultancy and clinical problem management.