

# **HUMAN HEALTH: MEDICAL SCIENTIFIC PRINCIPLES TO INCREASE IT**

---

Rudolf J. Stusser, M.D.

## **ABSTRACT**

To solve the present health scientific problems, requires a synthesis of the theoretical results of the analytic and reductive research made by the laboratory, clinical and public health, medical sciences. The reach of the potential maturity and efficiency of a unified medical science demands the integration by induction of those theories and a better understanding of their meanings. Thus, essential principles could be obtained within a general theory, to guide deductively a part of the present factual research to increase more the human health. This research should be placed within an integral framework of advanced ideas and models of the life and health of the human being in his environment. It must be made through the coordinating precepts of the clinical sciences. Much information from publications and meetings interchangeable by Internet, should be handled with a new integrative and interpretative, theoretical approach. International cross-disciplinary teams and a program with a theory-based network are necessary.

## **Introduction**

Medicine is near to reach successfully the ninth millennium of empirical and spontaneous development, while factual medical science is arriving to its fourth century of progress in a similar way. Both jointly have conquered some diseases and decreased many deaths, thanks to the analytical and reductive research, medical and health care, and technological, economical and social progress. However, these advances are still insufficient, especially against many illnesses and toward a better health (1,2,3).

Among many cause, this insufficiency is because medicine still does not have its own unified body of scientific knowledge (4,5). Dozens of medical sciences are taught in the medical schools along with th4e

inductive and hypothetical deductive methods providing a scientific foundation to clinical judgment and medical research (6,7). Nevertheless, not all the graduate physicians - generalists - possess solid scientific thought and skills.

The hypothesis here, is that to resolve from the roots the health scientific problems, it is necessary to obtain the essential principles of a *unified medical science, systematized within a general theory*. This research needs an integrative and interpretative, theoretical approach which synthesized and generalizes the specific principles and theories of medical sciences. Taking as basis the general principles, more theoretical and powerful hypotheses could be deduced.

Thus, new research solutions to classical and emergent diseases, sicknesses and health problems, could be achieved by the theoretical way, complementing the present empirical way to create good scientific hypotheses. Finally, this will allow the achievement of the potential maturity and efficiency of medical science. The aim of this study is to argue *these theoretical need and approach*.

### **On behalf of the increase of health**

Medical sciences have been divided in three main branches: laboratory, clinical and public health medical sciences. There is a consensus about the enormous amount of fragmentary results of the researches about diseases obtained in the last fifty years mainly by the modern western medical sciences (1-7). Besides, fewer outcomes but more though have been achieved by the traditional eastern sciences. There must be a unique doctrine of scientific medical theory regarding disease, suffering, death, and about life, well being and health, focussing the person as a whole.

Now there are many partial theories about dysfunction, failure of actions, disabilities, aging and dying. Their causes are better known, but not so the understanding, especially by the patients, of the procedures for their protection, diagnostic, palliation and cure (8). These is not so much information about the function, action, growth and survival with a better quality of life and well being of the person, family and community, within

their life cycles. These causes have to be discovered to create new means for the promotion, diagnostic and recovery of the individual and collective health, more credible first by the physicians.

Today, basic, technological and non technological research fields of medical science, make up a mosaic of more than one hundred academic disciplines, with a tendency to increase infinitely. Clinical sciences work along with art and technology, just as practical sciences of particulars (9), very much complex than agronomy or marketing. This is due to an abundance of clinical-pathological observations and confirmations and of surveys and trials results with their biases still not completely controlled (10). In addition, it is because their statistical hypotheses tested still do not reach the theoretical level of scientific conjectures, hypotheses and laws. Theory and practice of traditional medical sciences - oriental, Islamic and even western -, alternative or complementary and holistic, have been poorly studied along with modern western sciences and vice versa, thus weakening medical science.

In the multicausality field of disease, there are still many scientific doubts about which could really be the causes and effects, among some simultaneous entities (10). For instance: oncogenes cause cancer or vice versa (11). Hypertension. is cause of effect of atherosclerosis, or both are effects of unknown causes (12). A similar situation exists concerning smoking and lung cancer. Is inadequate circulation cause of effect of diabetes (13)? Cancerous tumor and metastasis originate cachexia and paraneoplasia or vice versa (14)? Are the biophysical and biochemical abnormalities in the brain of the schizophrenic patient, all causes, or some of them are partly consequences of other causes ? Are the social and psychological alterations in the schizophrenic behavior, all manifestations, or some belong to its etiology, interacting with the environmental and genetic causes (6)?

Also, there are scientific hesitations regarding the efficacy or even damage of some diagnostic, therapeutic and protective means used to handle diseases. For example: surgical treatment is not always effective due to systemic nature of cancer when first diagnosed (15). Radiation and chemotherapy may accelerate death of the elderly patient of cancer (16).

Repeated mammography screening may initiate or worsen the progression of breast cancer. It has been reconsidered that margarine containing high concentration of Trans-unsaturated fatty acids on coronary artery disease has a harmful effect (17), and that olive oil, has a neutral or even protective effect. Can the power of human mind, retard or accelerate illnesses and diseases, and/or diminish or augment health and well being ?

Besides, health research of linear and nonlinear relationships of causes and effects still has to discover much more. Is cancer a physiological mechanism of natural selection, once genome deterioration is sensed (18) ? Is asymptomatic atherosclerosis truly a disease in the advanced alderly ? Which are really healthy lipoprotein patterns ? High cholesterol levels (more than 5.2 mmol/l) are associated to more atherosclerosis (10), whereas low therapeutic concentrations (less than 3.9 mmol/l) to more cancer, suicide, violence and total mortality (19). The health causes as the means to help their actions have to be searched from within a notion of health more integral and comprehensible, and from without it, close to non-medical ideas too (20).

Now, human illness and suffering, and well being and health need more conceptual and methodological theory than do disease (2,6,8). Illness and suffering are still not well understood and handled (6,8,9). Up-to-date, health is still seen as a vague notion of a physiological state or as the summary outcome of a set of parameters values into their normal ranges (1,2). In addition, health is practically a unique well being state, contrary to thousands of diseases (3).

### **A new integrative and Interpretative, theoretical approach**

The new approach this research needs must be a creative of heuristic combination of methods, to be used from inside medical science and from outside it. This approach is needed due to the absence of a known satisfactory method to face its peculiar scientific problem.

There are networks of ideas and models to explain and attend the disease. Nations of genetic, environmental, cultural and social nature are included in models as the biomedical and biopsychosocial, upon reductionist and organicist ways of scientific thinking (7,8). Nevertheless,

for illness and suffering, well being and health, there are not such developed networks of ideas and models to explain them (2).

These concepts should be reconstructed, better interrelated, and centered into a wider context of knowledge (8). This has to include the total exposition of human genome and brain, the life cycles of the person, family and community, and the models of development of each in their physical and social environments. This reconstruction of the theories and their meanings also needs implicitly a parallel reevaluation of the theoretical results of the factual research to avoid speculation (5).

The own body of knowledge of a unified medical science should be developed, not replacing medical sciences or their conventional paradigms. Among the old paradigms there are as follows: reductionism, disease, static, linear, black box, biomedical, empirical and quantitative systems, which distorted its humanist nature. The knowledge of medical sciences should be synthesized and exceeded the old paradigms with unusual ones. These could be as follows: organicism, illness, health, dynamics, nonlinear, dialectics, Chinese boxes, biopsychosocial of infomedial, theoretical, interpretative or hermeneutic and qualitative (2,6,7,20).

Nevertheless, solution should be given hand although not definitive to the following anthropological problems: humanism - biology dichotomy of medical science (5,6,7); not technologic - technologic measurement and intervention on man phenomena (3,4,5); and the mind - body dualism of the person (2,7,8). Recently, the ethical value and principles of medicine have been rethought. Also, has been redefined the goals and frontiers of what in medicine is requiring more scientific research. The real problem now is how this research ought to be made (8).

The theoretical interconnection of medical sciences should be made by linking their main conceptual objects, goals, means, methods and principles. The scientific medical theories produced on the laboratory, clinic and public health should be coordinated by the central precepts of clinical sciences. This would guarantee the filling in of the empty, interdisciplinary spaces of the disciplinary matrix of a unified medical science.

The formalization required should be different from the axiomatization made by for classical mechanics, also thought for medicine

since that 18 - century (9,21). Recently, it has been argued that in medicine as well as in biology this formidable task is unnecessary and useless, because typical medical theories are best represented by families of analogically related models (22). Unfortunately, this occurs partially in the human medical science due to the strong influence of the exclusive biomedical model, which divides the efforts to achieve its essence on a whole human level (6).

Therefore, the central concepts and purely hypothetical states or idealizations of medical must be studied by analogy with those of the most advanced sciences. Above all, the renovation processes needed by the quantum and relativist mechanics and physics, and by the contemporary free - market economy, in respect to their classical stages of progress, must be studied (2,21). How do these theoretical forms emerge ? How do they reflect the reality ? What methods did they use ? Which have been their motions in time ? Such means will help to explain and predict the deviation of the objects of reality from the ideal model, for instance, from health or good quantity and quality of life.

Few medical theories integrate the complex systems of cognitive levels that interact with the main object of medical science. This is not only the organic molecule, the human gene, cell, meme and conscience, within a social organism, but the person as a whole. Frequently, in the theoretical arena, biological, psychological, anthropological and social theories are excluded among them or included as secondary, tertiary theories in the scientific explanations (6,7).

A complex theoretical central hard core of medical scientific theory with an integrated protective belt of more peripheral theories, must be established (23). This might exceed the exclusive biological structure stated about a general theory of evolution, medical theories of the medium range and specific biochemical theories, pyramidally (22). The hard core could be the link of medical axioms of meaning obtained by high-level induction, including all the main cognitive levels of human being. These fundamental premises would result from the synthesis of the constellation of specific principles and theories. Finally, they would serve as starting points to guide deductively a part of the research contributions to medical science.

education and care, toward more health and well being.

The use of these similar structures would increase the synthetic and deductive power of a unique medical science, besides the present analytical and inductive inferences of the common medical sciences. It would increase scientific creation of hypotheses and laws, from low to higher levels of generalization, bringing on the demand of new methods to test these hypotheses and laws, from low to higher levels of generalization, bringing on the demand of new methods to test these hypotheses deductively by the factual research. Afterwards, this process could be strengthened with qualitative and/or quantitative mathematical approaches too, something very difficult up-to-now due to the lack of deep human medical models.

Plenty of information from publications, meetings and personal communications, interchangeable by Internet, handled by systemic, axiomatic, inductive, synthetic and interpretative methods, combined in a new theoretical approach, are both needed by this research task. It might be done gradually, and not always hoping to reach a consensus. International cross-disciplinary teams and a program with a theory - based network are necessary, with the assistance of experienced scientists, which have worked in two or three main branches of medical science. It requires a strong cooperation comparable in structure more to the biomedical research and less to the clinical research, theory and practice - based international research networks. When this task reaches its goals, it will probably allow a greater use of mathematics and computer science in medical science.

The result expected would be the basis of a whole new concept of medical science and the strengthening of all its scientific activities. It should be condensed in a primer of medical science essential principles, an introducing handbook for medical students and for high school students too. In addition, this typical theoretical dictionary and canon of essential ideals, models and methods, would be useful to medical doctors trying to begin or go deep into scientific research. Finally, the preliminary project of all described here is available.

## References

1. Hesslow G. Do we need a concept of disease ? *Theor Med* 1993; 14: 1-14.
2. McWhinney IR. Changing models: the impact of Kuhn's theory on medicine. *Fam Pract* 1983; 1:3-8.
3. Weatherall D. *Science and the Quiet Art. The Role of Medical Research in Health Care.* London, UK: W.W. Norton & Co., 1995.
4. Herman J. ~~Beyond positivism: a metaphysical basis for clinical practice ?~~ *Med Hypotheses* 1992; 39:63-66
5. Ten Have H. The anthropological tradition in the philosophy of medicine. *Theor Med* 1995; 16: 3-14.
6. Engel GL. The need for a new medical model: a challenge for biomedicine. *Science* 1977; 196: 129-136.
7. Goodman A. Organic unity theory. A foundation for psychiatry as an integrative Psychiatry. *In press.*
8. Callahan D. The Goals of Medicine. Setting New Priorities. An International Project of the Hastings Center. *Hastings C Rep.* 1996; Spec Suppl: S1-S27.
9. Engelhardt Jr HT, Erde EI. Philosophy of Medicine. In: Durbin PT, ed. *A Guide to the Culture of Science, Technology, and Medicine.* 1<sup>st</sup> ed. New York, NY: Free Press, 1980: 364-461.