

STRATEGY FOR MEDICAL RESEARCH IN THE PHILIPPINES

Geminiano T. de Ocampo, M.D.

*Emeritus Professor of Ophthalmology, College of Medicine, University of the Philippines
Manila, Philippines*

In a "System of Medical Research" (1) which I published more than a decade ago, there is no chapter on strategy. I intend in this communication to emphasize some pointers on strategy for medical research in the Philippines. In 1963, Dr. J. Salcedo (2) appointed a committee to make a survey of medical research in the Philippines. After two years, a report was made on the Status of Medical Research in the Philippines. Two years ago in 1981 in the first Congress on Medical Research in the Philippines, Campos (3) reported on the "Status of Health Research in the Philippines".

Leadership. We have to scout for, attract, train, hold and support leaders for medical research in the undergraduates, post-graduates, graduates and faculty. In this time of economic stress we have to devise a plan to have and to hold them in our research faculty. Whether on full-time or part-time they must be sufficiently compensated. What happens now is that after sending abroad prospective medical researchers for training and broadening, many do not come back or if they do, after two or more years stay here they return to the States for practice and/or research. In my experience, barely half of those I have sent abroad stay here. If our aim is to have a core of medical researchers we must have two or more members in a subspecialty at a certain time. There is discontinuity in many of our medical research undertakings.

Ideagenesis and Brainstorming. The centerpoint in modern medical research is brainstorming. For an effective research set-up brainstorming session is very essential. Cooperative or collaborative research and group or departmental research cannot take its place. Hence, we must not just establish a system of professorial chairs but we must organize this group into research teams and train them to be brainstormers for medical research. The solitary investigator, research group or multidisciplinary teams are not sufficient. They could be more effective and efficient in a brainstorming organization.

International Cooperative Research. This is a new twist in medical research and it seems proper to start with the United States. It is a challenge more to the Third World than to the rich countries. What with costly, constantly changing models of sophisticated research instruments which the Third World medical researchers can hardly afford. We should start joint ventures in medical research as in business. Bright ideas originate in single minds but must be developed by many researchers with the aid of brainstorming, cooperative approach and economic support.

National Medical Research Institute. This should be patterned after the U.S. Institute of Health but not as extensive. It should target such prevalent diseases as infections and parasitic diseases, as well as cancer, immunological and degenerative diseases in the Philippines. Ideagenesis and brainstorming should be one of its important activities. It could be an instrument and a venue for international cooperative or collaborative medical investigation.

Research Training. Although there is much that is inborn, training is of great help in any investigative work. It is a great advantage if one can have the opportunity to work with a competent and productive researcher. His attitudes, his manner of questioning and analysis are of great importance. I think there is truth in the belief that one measure of greatness of a teacher are pupils who attain greater heights than himself. One contribution of a medical researcher of some worth is to inspire, train and produce investigators greater than himself. A great man is judged not only by his works but also by the men he has influenced in one way or another, who are imbued with the manner he has solved or tried to solve research problems.

Biomedical Research. In many aspects, medicine is the highest form of biology. The biological aspects of medicine, development, differentiation, protection and proliferation based on the concept of the segmentation of the genome deserve more investigation and confirmation than what is done now. We must not emphasize the mechanical, physical and chemical aspects of medicine but we must pay more attention to its biological aspect. The phenomena of life can be understood more through biology than thru physics, mechanics and chemistry. The life sciences should be utilized more in understanding medicine.

Theoretical Medicine. (4), (5) This should be given more attention than what is now included in the curriculum of medicine. As a matter of fact, the theoretical aspect of medicine is almost entirely ignored now in our medical curriculum. In the Nobel prizes, theoretical physics, theoretical economics and theoretical medicine are given prime importance. Many physicians do not even know that there is such a discipline as theoretical medicine. What they know and have been taught are mostly and mainly in the realm of practical clinical medicine with very little of experimental medicine. Theoretical medicine is strange to them.

Human Subjects in Medical Research. Animal experiments in medicine is becoming very costly. The cost of experimental animals has increased very much. This is a drawback to experimental animal research. This leaves the hospital patients and out-patients as the most practical subjects for medical research. This has advantages but also limitations. One aspect of human volunteers for drug and other forms of research is the utilization of those confined at the National Penitentiary. This should be seriously considered in our medical research.

References

1. De Ocampo, G. A System of Medical Research, Regal Printing Co., Manila, 1970. Published by the Philippine Academy of Science and Humanities.

2. De Ocampo, G., Barrera, B., Valenzuela V., J.B. Nolasco, Portez, J.C. and Cruz, R.C. 1963. A Medical Research Program for the Philippines: A Survey of Medical Research of the Philippines. 1963-65 Supported by the N.S.D.B. (now NSTA).
3. Campos, P.C. Status of Health Research in the Philippines. Read before the First National Congress on Health Research. Philippine Plaza Hotel, November 18, 1981.
4. De Ocampo, G. Selected Papers. Published by the Philippine Academy of Science and Technology. Printed by the U.P. Press, 1982.
5. De Ocampo, G. Concepts on Theoretical Bioophthalmology. Read at the 9th Congress of the Asia-Pacific Academy of Ophthalmology, Hongkong, March 15, 1983, Awaiting publications.

Alberto G. Romualdez, Jr., Discussant

Although I have been out of the medical school for eighteen years now I find myself still learning much from the ideas of Dr. Geminiano de Ocampo.

Please let me approach Dr. de Ocampo's paper by going over some of the ideas he presented and in the process point out how the National Science and Technology Authority, through the Philippine Council for Health Research and Development, is trying to implement those ideas.

On the question of leadership and attracting research workers to do research, NSTA is working for the establishment of a Scientific Career System that would offer people who want to go into a lifetime of research better career opportunities. NSTA has for the last year been haggling with the Ministry of the Budget and the Civil Service Commission for this. But I think the main obstacle has been the difficult economic situation that has prevailed in the country over the last year and a half, or two. The prospect, it seems, is that the situation will not improve until 1985. NSTA, however, continues to work on this and it is anticipated that we should at least have a system established although not quite as well as we want it to be.

The second thing that we are trying to do, and which we have started at PCHRD, is to develop a truly nationwide health research network. The thrust is toward developing and strengthening research capabilities in regions outside Metro Manila. We believe that making available research opportunities in the regions will encourage those who previously did not have the access to go into a career in research. Likewise, we are improving the local training opportunities. As Dr. de Ocampo mentioned, we have already lost many of those we sent for training abroad. One solution to this, I suppose, is for us to provide better local training opportunities.

Dr. de Ocampo suggested creating groups or research teams for the purpose of brainstorming on issues concerning medical research. At PCHRD, we have in fact put together technical committees which sometimes function as brainstorming teams. In addition, within each of these technical committees emerged smaller groups that deal with narrower problems. Dr. Edito Garcia is here. He is a member of the schistosomiasis group which is composed of people from U.P., the Ministry of Health, and other sectors that are interested in schistosomiasis research. We also have an acute respiratory infection technical working group that functions similarly and we will continue to encourage other groups to engage in discussions and cooperation in research.

In the area of international cooperative research, we have many isolated examples of people engaged in such activity. Much of our schisto works, much of our acute respiratory infection works, have been done in collaboration with foreign groups and supported by either multilateral or bilateral arrangements. The multilateral arrangements generally operate with organizations like the World Health Organization and UNDP. In the PCHRD, we are trying to coordinate our relationships, both multilateral and bilateral. An example of bilateral assistance that has

been ongoing is that from JICA. JICA assists both the schisto groups in Palo, Leyte and the Research Institute for Tropical Medicine in Alabang. Also, the Australian Development Assistance Bureau is supporting research on acute respiratory infection which includes works being done in Papua, New Guinea and some parts of Africa.

I also would like to endorse the idea of Dr. de Ocampo that institutional cooperation, the institution-to-institution arrangement, be encouraged. There had been some examples of this and we are trying to encourage more of this as time goes on. I understand that the National Medical Research Institute has been proposed at U.P. and Minister Javier is likewise supportive of its establishment. There are two problems, however. One is economic. Now is not a good time to request for funds for such a facility because of the situation. The second, which I think is the more important consideration, is how it is to be operated. Who will operate the institute and how will it link up with other institutions engaged in research? This is very important because the institute should be truly national and should be linked to implementing agencies in the field of health, with private schools, private practitioners, and so forth. That way it should be a truly cooperative undertaking that includes in its operation consideration of linkages with other institutions.

In research training, I think the best way to learn research is to do it. If we are able to increase research activities over the next few years, this will automatically enhance local training opportunities.

In bio-medical research, one of the areas that the Council emphasizes is the development of an immuno-biology group in the country. At present, we have put together people from the Research Institute for Tropical Medicine in Alabang, the new Kidney Center which will be coming up within a month or so, and the UP-PGH. This group is now formulating a program for immunology development in the country.

The last comment I would like to make is with respect to the use of human subjects in medical research. I agree that very often it is not only expedient to do human experimentation but in fact necessary in order to confirm if our findings in animal researches are also applicable or true to humans. I would like to emphasize that when we do human experimentations we should make sure that we have an appropriate ethical review committee in our institution to advise us on the matter.

Angelina Arcilla Latonio, Discussant

I consider it a privilege to have been chosen by my former professor, Dr. de Ocampo, for allowing me to express my viewpoints, to discuss in a sort of personal way what I think about strategy of medical research in our country. Before I went into this, I looked up Webster and looked for the meaning of "strategy." There are

two definitions. The first is “skillful employment and coordination of tactics” and the second one is the “artful planning and management.” So you see, there is some art in this strategy and I am glad we might probably have to ask the Fine Arts sector to help us some way later in order to attain a good strategy on research.

I dissected each of his disciplines and there were seven of them and let me just give you my comments, my expressions on what I feel about each topic. Because coming from a hospital, where people think we do not do research. I wish to tell you that we are deeply involved in research at the Veterans Memorial Medical Center. In fact, when I got my award for outstanding scientist of the UP Medical Alumni Association, there was a note there in the plaque, in the trophy which says, “for working in a non-research center”. So I thought they did not know anything about my work area.

On leadership, I admit there is a dearth of leadership especially in the private sector. From personal communications, from colleagues who happen to be non-medical people, and people from private universities, I have been observing that the stimulus generated in the public sector is in contrast to the lack of such in the private sector. This I think we should look into if we have to generate cooperative efforts for our strategy. Sometimes when I talk to these individuals they say they feel left out but they have a multitude of bright ideas so that if we can just invite them to join us, I think we will have a better orientation of our strategy.

Now the compensation; only a handful of full-time research leaders are available. I always say a fully compensated worker is a well-motivated follower. Most researchers are, you must admit this, on part-time basis and doing their thing just for the sake of extra compensation and for some prospects for promotion. While we have our top scientists, when we look at the multitude of enthusiastic researchers, anybody who wants to start on studies, projects, I think they are not really that much oriented because they feel that there is not enough compensation to do a full-time job. The more successful researchers as mentioned by the first two speakers are either pirated abroad or transferred to more progressive institutions. Well, time and again, in my institution, we notice this but we always find others who can qualify to take their place. It is an unending story of disappointment but somehow all the institutions can manage to replace these workers who have left.

On the discontinuity of medical researches undertaken – I have been doing researches of my own alone and then when I was made a member of the research committee of the Philippines Medical Association, we have discussed time and again the practical applications of the research winning papers which somehow find their final resting place in the shelves of the medical libraries. We don't follow up our prize-winning ideas. Once you win a prize, it is forgotten. You got the ₱2,500.00. You got the plaque. So what is the meaning of this research if we don't apply it to our laymen, even among our medical colleagues. It will be truly rewarding if such research papers and their winners can report on annual updates of their pet projects if only to realize what impact it has given the concerned people on the health status of the public. Also on this research committee, maybe you are not all

aware about it, are grants from the Abbott laboratories, the Ciba-Geigy, the Raul Rivas who are trying to incite stimulus even to a small extent among medical practitioners in the rural areas, even to report an interesting case. The Raul Rivas gives a very substantial \$2,000 dollar reward for any paper on Tropical Medicine. Even my own society, the Society of Microbiology and Infectious Diseases, finds ways to get some funding from drug companies and even without promoting their own products, we are able to put up prizes for junior and senior research workers in our society. So you see, there exists a scientific gap but it can be made to go widespread, decentralize if we want to involve the private sector.

I consider it timely at this time through modern researches of global target of health for all in the year 2000. We were privileged also to go to the USSR to participate in a yearly workshop on Zoonoses. The target there was to save human and animal life if only to solve the food shortage we are facing within the next few decades. So whichever country it is, if they can find a way to stimulate interest among veterinarians, among medical people to save animal life to eradicate rabies, eradicate brucellosis, I think there should be no barrier when it comes to the common interest of saving human and animal life. In simple medical language, let us publish the ideas behind such papers. For the information of the lay public, this will allow to be discussed our potential researches among our research leaders, among those companies who have tried to help us with our research grants. Let us confine our findings among our medical colleagues. Our concern for the well-being of our people is of utmost importance.

Well, on brainstorming, again I looked up the meaning of "brainstorming". It means a "sudden aberration or inspiration." If one has to make a sudden action on research, I think it is a good enough word to say brainstorming to incite motivation. My comment is this. If this is to be done, then let us include the private researchers who need only a shot in the arm to get motivated. If multidisciplinary teams are not sufficient, then let us involve the various medical disciplines, the various specialties like microbiology, parasitology, veterinary medicine, if we have to make a brainstorming move among themselves. Solitary investigators however should not be left out. They are probably the nucleus of this brainstorming operation. Also he may be the leader that Dr. de Ocampo wants to emphasize, who finds fulfillment in seeing his followers, his students gain acceptance into the research field.

On biomedical research. During the last three decades, studying the living process of man and animals has been one of mankind's greatest intellectual and technical achievements; electronmicroscopy deals with the greatest intellectual and technical achievements at the very core of life which we have finally confirmed the unity of living matter by demonstrating the universality of the genetic code and while this sounds so distant from one local source we have started anyway with ultrastructures among our own electronmicroscopists.

The international cooperative research – I am tropical disease-oriented; while I don't do anything on biomedical research, we have among today's tools the control of tropical diseases; we have relatively new methods but we always have to

remind them whatever it will amount to: they must be safe, they must be effective, they must be cheap for coming to a developing country. In the tropics: we have low funding, with frequent isolation of workers on malaria, schistosomiasis, filariasis; there have been no new major remedies for the last 30 years except probably for a little breakthrough for schistosoma-therapy. Because of this low funding, we need a long-term collaborative effort involving workers in many countries. And as I mentioned, the USSR has done this by spending half a million dollars inviting about 20 developing countries and involving 30 medical doctors and veterinarians, on zoonoses management if only to solve the food shortage which we are facing for the global strategy of "health for all" in the year 2000. Most laboratories in developing countries are inadequately staffed, equipped and funded, too narrowly-specialized to make even an effective contribution to tropical disease so we need to attract first class scientists.

Finally, the involvement in developing countries are divided into two tasks -- the task force and the network. The task force consists of the scientists; the network are the existing research institutes and universities. The research training can be extended or can be requested from the WHO, UNDP, FAO or the World Bank. There is nothing impossible in this world, I think, if you want it, you will get it. You will only have to look for it. To me, one who does not pursue, one who stops when he thinks there is nothing else forthcoming, I have pity for him.

The human subjects for medical research -- At one time, we had ideas of using people in Muntinlupa, for therapeutic trials as in schistosoma treatment; it never worked because we ended up saying we need to save human life, whatever.

As a parting word, I want to talk about self-reliance. Self-reliance really means that even in a developing country, it does not mean you need a universal institution to help. In your own small way, you can start and then if you look around, you will find that San Lazaro Hospital, other government hospitals, the College of Veterinary Medicine, even the Bureau of Animal Industry: all these are potential research areas and there is so much help you can get, not necessarily monetary but among your colleagues they can give you ideas on how to start in your own small way. So let us be self-reliant. We should ask money from the bigger institution only after looking around immediate neighborhood. But I always think don't ever give up. There is always a way you can start. I believe that one should not give up easily with persistence, self-reliance, he can go a long way with his objectives.

Those are my comments on the good paper of Dr. Geminiano de Ocampo.

