THE HEALTH POLICY ISSUE: MAJOR CHANGES IN OUR UNDERSTANDING OF HEALTH PROBLEMS

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Major changes in the health care scene over the last half-century now pose a singular challenge to our thinking about health and disease. These changes, when examined together with current practical predicaments, suggest a number of possible strategic modifications in health policy around the world that could have a pronounced salutary effect.

If we take the changes in the health care scene over the last half-century, and especially in the last two decades, we find that they have amounted to nothing less than a major revolution, a singular challenge to our thinking about health and disease.

These changes—changes in the incidence and prevalence of disease, in our ability to describe and control disease, in the economics of care, the attitude of the consumer, the roles of the caring professions, the effectiveness of intervention, and so on—are at last beginning to force urgent reviews of both national and international health policies. For example, at their most parochial these changes have led to the growth of a highly organized cadre of doctor-bashers in the United States, and thus to a rapid growth in do-it-yourself medicine—the exciting Self-Care movement. At their most international they have led to the recent adoption by the World Health Assembly of a totally new and very challenging program of health manpower development.

I propose to mention briefly four examples out of very many such changes chosen to illustrate rather than comprehensively document what is going on; my purpose is to support the thesis that far more new strategies in health care planning are long overdue, and of course to emphasize the growing relationship in these strategies between education and health.

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1From a paper presented at the International Conference on Health Education held at Ottawa, Canada, in August-September 1976. Also appearing in Bol Of Sanit Panam, 1977.

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The Declining Need for High Technology and Skill in Effective Medical Care

In my rather complex first example, I will assert that with the rapid advances in medical knowledge and the extraordinary excitements of discovery which have come with them, it has hardly been noticed that the control of the most basic ills of populations has at the same time become a pretty simple matter.

In fact, it turns out, at least at the level of drugs and vaccines, to be both cheap and easy to control such monumental scourges as syphilis, tuberculosis, poliomyelitis, diphtheria, and measles, to say nothing of most of the crises of pregnancy and childbirth and the hardships wrought by overly large families. However, the real and exciting social policy implication of this new simplicity is that much more control can now genuinely rest in the hands of the individual, or the family, or at most the briefly trained health attendant.

Effective care for most of mankind's basic ills does not any longer need high technology or extensive skills at the bedside. But it does need changes early on in what the sociologists call the "referral chain." This means more responsibility at the family and individual levels, more knowledge of what to do and how to do it.

Now, I don't know how relieved it will make the two-thirds of the world's population who live in villages when they hear my assurance that for most illnesses they don't really need a doctor! Since villages are where the people live, not where the doctors live, they probably have never seen one anyway! But it is reassuring, at least to me, to know that a research worker formerly in my unit, Dr. Ben Essex, achieved a diagnostic concordance of over 80 per cent in an East African village when pre-clinical medical students were compared with medical consultants who had seen the same patients.

Of course, there was no reason why he should not have bypassed diagnosis and gone directly on to treatment. The diagnosis was probably not necessary. In fact, with a few dipsticks and some of the new elementary and cheap gadgetry of medicine, he might have achieved virtually complete agreement between students and consultants.

So effective medical care, where it is possible at all, should be increasingly available early in the referral chain, because high technology and high skill are not only expensive but are probably becoming less and less necessary luxuries for many of our diseases.

You will say that this is just a glimpse at the obvious, but let us be careful. Though simple and cheap, this new do-it-yourself medical care can be dangerous. Much more understanding is needed these days, and many of us have seen children, for example, dying of blood dyscrasias brought on by the too-prolonged family administration of effective but very dangerous drugs, bought over the counter of the local drug store. Self-care without understanding and proper controls on drugs can easily become self-destruction.

Do Health Services Affect Health?

My second example of health care changes stems from the growing realization that health is part of social development and that (it sounds platitudinous to say it) the human ecosystem was not created in watertight compartments under headings like economics, health, education, housing, environment, and so on, each of which makes a separate contribution to growth. Realizing this we must ask: How much do our health services really affect our health? Or, more specifically: If we improve our health services, will it always improve our health?

If we live in an ecosystem of finely balanced relationships, then it stands to
reason that the health of populations will be a function of those relationships. Thus in some countries, where the challenges to health are both sensitive and devastating, we see dramatic improvements resulting from the provision of the most elementary health services (a new service involving vector control and vaccination, for example). In other countries, where the level of health is already high and the challenges are less straightforward, the assumption that more spent on health services means better health is by no means always true.

In fact, work done in my department by us (Martini, et al, 1976—1) suggests that in a society such as ours more health services will have little effect upon health (at any rate, upon health measured in the usual rather crude ways) and that splendid though they are, the existing services contribute less to the health of the community than do variations in life-style and, of course, education.

Some will say this is just another glimpse of the obvious, but documenting the contribution of health services to health should itself be a stimulus to social policy changes, to resource reallocation, and perhaps to some more preventive medicine.

New Patterns of Disease in the Industrially Advanced Countries

The increasing contribution of chronic long-term and degenerative diseases to all mortal disease in the industrially advanced countries is well-known. It is linked to our increasing populations of elderly folk and of course, back through the cohorts, to the improved survival of children.

The main differences between the popular ways of dying today and a century ago are also well-known. The main feature which I want to emphasize is the time of onset of symptoms in relation to the disease process and pathology. Most of the acute scourges of the last century were all over in a day or two; all produced symptoms almost as soon as the pathology developed. Their contribution to all mortal disease used to be enormous, but in countries like Canada or the United States it is now negligible. Today's characteristic and popular diseases of the industrially advanced countries (cancer, heart disease, stroke, etc.) have not only turned days into years (we are dealing with 15-20 years of pathology in most of these conditions), but the symptoms—the signals that something is wrong, only occur years after the pathology has started (instead of hours), and, what is vital for my example, years after the condition has become irreversible. And the present contribution of these diseases to all mortal disease is huge.

The lesson from this crudely oversimplified example is that our enormously expensive hospitals are treating an ever-increasing number of patients whose diseases have become incurable 10 or even 15 years before they appear at the hospital door. The value, from a social policy point of view, of this hugely increasing investment in heroic, episodic, but impotent medicine must be questioned.

A good slab-side manner is simply not enough. Society, like medicine, may be impotent in the face of this challenge, but both should turn their attention to events 10 or 15 years earlier and to education for primary prevention and (when it is shown to be effective) secondary prevention.

Society's New Knowledge of and Responsibility for the Vulnerable

My fourth example of dramatic changes in the health scene is concerned with the quality of our evidence of future vulnerability to disease. Until recently, those of us interested in preventive medicine had to assume that whole populations were at risk. We were unable to distinguish clear and statistically defined subgroups in those
populations. Intervention directed at these whole populations often, and quite reasonably, showed unacceptable cost-benefit ratios.

More recently, however, knowledge gained from the longitudinal studies of cohorts of people traced for many years has been married to a new epidemiology. The results have given us an unusual ability to predict events, and with it a detailed knowledge of the characteristics of the more highly vulnerable subgroups within our populations.

A caring society is thus presented for the first time with a new and unique challenge: What are our responsibilities in the face of the prediction of future illness a long way ahead? And what are the educational implications?

Medical Care Predicaments in Three Cultures

In the face of these and other profound changes, one would expect as a response to find substantial changes in health care organization around the world, but this is rarely the case. In passing, I want to mention the main health problems of three cultures well-known to me. They present, I am afraid, three classical and very common predicaments:

The first case is that of a distant tropical community of 13 million scattered people with a natural population growth rate of 2.7 per cent per annum. The community is village-based, eats rice and fish, and is deeply religious. There are a few nurse practitioners, mid-wives, and indigenous medical practitioners, but almost no doctors.

The main health hazards of this lovely place are gut infections of course, accidents, liver flukes, bladder stones, pregnancy, pulmonary tuberculosis, and the private selling of dangerous and phony drugs. Its predicament is a huge new Western-type medical school and hospital which will consume most of the health resources of the area for many years to come.

Next, consider a very densely inhabited tropical urban area with a natural population growth rate of 2.0 per cent per annum. This is a highly organized, decentralized, and tough society. The health hazards are tuberculosis, malaria, schistosomiasis, gut infections (of course), malnutrition, and again, pregnancy. The society benefits greatly from a highly organized network of health services based on a few captive doctors, a large number of medical assistants, and many rural medical aides. There are a large Western-type medical school and several admirable schools for medical assistants.

These latter training programs were started by expatriate European professors and advisers at the medical school and the Ministry. The plans for these programs aroused growing resentment among the local medical school staff members (all with high Western qualifications). They had a sincere belief that medicine was being "downgraded" in their country. What was needed was more and more doctors, not more "poorly trained" health workers. Now that the expatriates have been thrown out, the balance is being tilted gradually in favor of Western medicine! This is their paradoxical and rather sad predicament.

My third example is a wealthy European society with universal access to doctor-provided medical care, the cost being met from insurance. Health hazards are chronic heart disease, cancer, accidents, obesity, and the diseases of the very old. Because of fee-for-service payment, the doctors insist on doing everything and doctor-patient contacts average 10 per person per annum. That is four times the rate found in similar societies without fees for service.

Their predicament is a vast and increasing insurance expenditure on curative services yielding less and less in the way of results. The situation is chaotic; all health
indices are deteriorating; health expenditures are rising; insurance funds are bankrupt; and larger and larger numbers of doctors are being produced.

Perhaps not too surprisingly, we can crudely sum up the health policy predicaments of these three totally different cultures by observing that they have much in common. For instance:

- They all have health problems which actually do need simple medical care, but they are not getting it; or if they are, they are getting it at enormous cost to the community.
- They all have health problems dependent upon health-related behavior which are not being tackled at all (diet, exercise, smoking, malnutrition, personal hygiene).
- All are putting more and more of their resources into doctor-delivered medicine which, for a variety of local reasons, is ineffective and wasteful.
- Finally, all have services which are totally curatively oriented, with all plans for the future also formulated in terms of curative medicine.

And so we could go on, but I am sure it is all familiar to you.

I would like to end this discussion by placing the major changes in the medical scene (which I outlined at the beginning) against the health policy predicaments which we see in our own individual experience, and which I have hinted at so crudely just now. From this juxtaposition we should be able to pluck a few examples of the kinds of strategies which would be appropriate for us to discuss.

Some Strategic Limitations on Health Policies

Participation

Perhaps the most important strategic change of health policy should be that implied in the title of Kenneth W. Newell’s recent WHO book: *Health by the People.*

Participation in growth—including the strengthening of health services—as each culture sees it should be the objective, rather than the imposition of our own strategies. This would accord with the ideas of many contemporary educationists and social philosophers. Nor would it outrage Illich, with his warning against the expropriation of the community’s caring responsibility by the health professionals (Illich, 1976–2). What it would *not* always do, however, (and this is often the dilemma of the World Health Organization) is improve the health of the people. This paradox must be faced. Perhaps we are too keen on the reduction of disease and too keen to impose our own value systems, health objectives, and priorities on others. This I believe to be so, but at the same time I find it easy to forgive WHO in its desire, for example, to reduce the ravages of smallpox—though I doubt that this would normally be a high priority in the villages of the eradication areas. Demands are often unrelated to health needs, and to make them congruent, to obtain a rational contribution from the people, is an educational challenge of enormous size—though one which many educationists already reject as arrogant.

The Shift to Primary Care

Another strategic change would affect the hospital. The hospital, as the cathedral of technology, is of course tied to the wonders of curative medicine, wonders which are often vociferously demanded by the people. The question, therefore, is not one of primary care or hospitals; rather, it is what—in the light of our new knowledge—should be the balance between them. Primary care, the early part of the referral chain, clearly deserves a new emphasis, new resources, and new research. The brilliant “barefoot” idea can be updated so that the
care given is much more effective in controlling disease.

The Demystification of Medicine

The next strategic goal of our new knowledge should be the simplification and demystification of medical care. The primary care practitioners with most to contribute are, of course, the people themselves; and the real issue is how to improve the quality of their care of themselves. By great good fortune, the disappearance of the doctors from the developing world (most of them headed north and west), and the enormous costs of medical care in some industrially developed areas, have conspired with a new consumer-oriented philosophy to produce a Self-Care movement which demands the diffusion of technical resources to the people.

This has come at the right time; for, as we have seen, much curative medical care has become simple and effective. Preventive care, too, has become relatively simple, though we don't yet know how effective it is. But the educational and research policy implications of these strategies are both obvious and enormous.

The Dilemma of High-Technology Medicine

The fourth strategic lesson comes straight from the new emphasis on primary care by the people. It is the need to develop low and intermediate technologies: sun-operated refrigerators for vaccines, check-lists, algorithms, dip-sticks, and so on, all for use in the villages.

This is an altogether proper use of the new ideas, but with it has come some confusion. To use and simplify the products of high technology in this way is surely excellent, but it is sometimes wrongly condemned as being comparable to the use of excessive resources on the equally high technology of tissue transplants, for example. While there is something pathetic as well as significant in the electron microscopes to be found scattered among the jungle hospitals, there is no good reason to reject the knowledge acquired from all technology. Perhaps this is yet another educational problem.

Providers and Consumers as Partners in Research

The fifth strategic need is for collaborative research. The unanswered questions about the provision and effectiveness of care are now the most important research targets in medicine. We can at last afford to pause in the search for causes and cures, and to concentrate for a while on how best to use the knowledge we already have.

This is sizeable research load, for how can we innovate until we have evaluated, how can we evaluate without new health indices (which measure the quality of life rather than survival), and how can we develop the new indices without the mutual participation of provider and consumer in the research? Such collaborative research is itself a profound educational experience for both providers and consumers, but most important of all is evaluation: How effective is what we do? and particularly, How effective is our early intervention? We must evaluate and evaluate—for unless we do, social policy is at a loss.

Training the Health Worker

I have left until the last the strategic implication which most affects me as an educator. It is best expressed as a way of thinking, a conceptual framework in which to place the task of training the new health workers. I shall finish this review by illustrating what I mean.

Hitherto the training of health workers and the definition of their roles has, with a few notable exceptions, leaned heavily upon the traditional stereotypes of the doctor, the
nurse, the Public Health Inspector, and so on. Educational objectives have been derived from history and modified, if at all, on an ad hoc basis. Very few of the health workers presently being trained have as their educational objectives the completion of tasks defined by the medical needs and demands of the populations concerned. Yet now, as never before, we are in a position to describe in detail the tasks involved. It is this accuracy of description of the tasks that is new, and it can be thought of rather like this: Each need of the population—increasingly defined in terms of social-medical goals and priorities—can be seen as a hierarchy of tasks which cluster together. These clusters and the associated skills can provide the bases of new role definitions.

One advantage of this kind of thinking is that a task analysis at once shows how the individual and the family, the neighbors and the community, are themselves major contributors of health care. This is not a surprising finding, but it is one which leads easily to task-oriented educational objectives and the notion of the whole population as health professionals.

In this presentation I have sought to give four examples of major changes in the medical scene which point, whether we like it or not, toward new strategies in health policy. I have mentioned the predicaments of two characteristic areas in the developing world and one—equally disastrous—in the industrially developed world. Finally, I have listed briefly six strategic implications for health care planning, all of which have profound educational implications.

All this adds up to the secularization of medicine and that, as with secularization of religion, is unlikely to be achieved without a struggle; but it is a very exciting process.

**SUMMARY**

Changes in the health care scene over the last half-century have amounted to nothing less than a major revolution, a singular challenge to our thinking about health and disease. Four examples out of very many other such changes help to illustrate what is going on, and to support the thesis that far more new strategies in health care planning are overdue. These four illustrative examples, described in greater detail in the text, are as follows:

First, bedside skill and high technology have become less important in the effective delivery of medical care. In fact, such care has become very easy to deliver.

Next, we have gained new awareness of the relatively small impact that health services have, in the industrialized countries at least, on community health, compared to life styles and socioeconomic factors.

Next, we have come to see the growing contradiction inherent in spending on hospitals—those huge centers of episodic care—when (at least in the advanced industrial countries) most disease is virtually incurable some years before the symptoms of disease arise.

And finally, our ability to predict future vulnerability to disease has grown, and with it our responsibility for taking preventive action.

In the face of these and other profound changes, one would expect to find substantial alterations in the organization of health care around the world. Nevertheless, this is rarely encountered. Instead, one finds community after community bound up in some kind of health care predicament. Many of these predicaments have common features. In many cases the community has health problems requiring simple medical care, but this care is not being provided—or else is being provided at enormous cost. In many cases health problems dependent upon health-related behavior—such as diet, exercise, and nutrition—are not being tackled. In many cases more and more resources are being devoted to doctor-delivered medicine
which, for a variety of local reasons, is ineffective and wasteful. And in many cases the health services are totally oriented toward curative medicine, with all plans for the future also being formulated in terms of curative medicine.

Juxtaposing such common problems as these with the aforementioned major changes in the medical scene, it should be possible to devise effective strategies for coping with the problems involved. In this regard, various strategic changes can be suggested. For example, perhaps the most important strategic change in health activities should be increased participation by the people in the strengthening of health services. Another possible strategic change would shift the balance between primary care and hospital care, giving primary care new emphasis, new resources, and new research. Another strategic goal of our new knowledge should be the simplification and demystification of medical care. Yet another should be to develop low and intermediate technologies. Still another should be to step up collaborative research. And finally, we should set ourselves the strategic goal of changing the way health workers are trained, so that those trained will have as their educational objectives the completion of tasks defined by the medical needs and demands of the populations they serve.

REFERENCES
