

Health policy: breaking the problem down into more manageable segments

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A basic problem in analysing the health field, and the main barrier to the fruitful development of solutions, both short and long term, is the absence of an agreed framework for sub-dividing the field into its principal elements. Without such a framework it is difficult to communicate properly or to break up the whole field into pieces which are both amenable to analysis and fit for allocation to the many units whose objectives are to promote improvement.

It is quite possible that such a framework has already been developed and published; if such is the case apologies are in order for attempting to re-invent the wheel. There is a need, nevertheless, and it is no more keenly felt than in the long range health planning branch of the Department of National Health and Welfare, to organize the thousands of pieces into an orderly pattern that is both intellectually acceptable to those who work at the frontier of change and sufficiently simple to permit a quick location, in the pattern, of any idea, problem or activity related to health.

The division and sub-division of

the subject of health will not break things up into airtight compartments; it will have, rather, an opposite effect. Organized thinking permits a more rapid identification of inter-relationships and simplifies the assessment of their importance. Without some kind of map of the health territory the network of connections can only be seen one link at a time and many long routes are taken where shorter ones are available. The dissipation of intellectual energy is wasteful; there is friction and uncertainty, duplication and gaps, and altogether too many false starts or paths that lead to nowhere. In the development of a conceptual framework in this paper, sufficient examples will be given to amply support the view that the whole must first be broken into pieces before an efficient (economic, effective, timely) use can be made of ideas and resources.

The basic framework

Four primary divisions are proposed:

- Lifestyle
- Environment
- Health care organization, and
- Basic human biology and clinical application

The *personal, or lifestyle, ele-*

ment is one of the most neglected aspects of health. It consists of the agglomeration of decisions taken by individuals which have a significant effect on their health. These decisions are taken within a framework of social values, many of which have been inherited from the past but some of which are shaped by contemporary society.

The *environmental element*, as defined for the purposes of this framework, includes all the environment under which an individual lives and which she or he has little or no personal choice in avoiding such as the air breathed.

The *health care organization element*, in the proposed framework, is limited to the quantity, quality, arrangement, nature, and relationships of people and resources in the field of health care services.

Finally the *basic human biology and clinical application* element is limited to basic biological research underlying the whole field of health and the application of medical research findings to personal health care.

The foregoing principal divisions of the health field have been chosen because of their relative clarity and integrative effect by comparison with more traditional divisions such as mental health, public health, clinical medicine and research. These traditional divisions have had the unfortunate effect of creating barriers to the development of integrated thinking and have resulted in the creation of parallel, and sometimes competitive health systems.

Finally, the divisions chosen for the framework permit the ready use of functional matrices to depict relationships. For example, the research function can be shown as touching on all four principal divisions named above. This shatters the present mind-set which tends to slot research into the biological and clinical element only and deprive the other elements of their just share of attention.

Lifestyle

The clue to many, if not most, of our health problems, not only among the young but the middle-aged, appears to be lifestyle. This in turn is at least partly related to morale. The principal causes of

death among men 45-64 years of age include lung cancer, emphysema, heart disease, and cirrhosis of the liver. The relation of these diseases to smoking, drinking and overeating is generally acknowledged.¹

It is humbling to realize that all the technological advances of clinical medicine, the prepayment and organization of health services and the removal of health pollutants, have little effect on the decision of an obese person to reach for another piece of strawberry shortcake.

The correction of lifestyle health problems is a subject which is altogether too often regarded with despair by health professionals. This despair is evident in respect of smoking, abuse of drugs, the use of seat-belts, alcoholism, obesity, lack of physical exercise and the tension of modern urban life. The system often seems to demand that a person first be sick before he becomes an object of concern, and the preponderance of attention and resources is given to the "sick care" system. If the present health care system has a basic creed it would undoubtedly start with, "Give me first an ailment so that I might apply my skills to its cure."

The main reason given for the despair with which lifestyle health problems is regarded, is that the enemy is private pleasure, what Odin Anderson calls the "short-range hedonistic model". When long-range health competes with short-range pleasure it is considered almost always bound to lose except when a patient is faced with a direct and grave consequence.

This view is now being challenged on many fronts, both by a growing general awareness of the consequences of destructive personal habits and by the success of programs in lifestyle problems which "potted thinking" had previously written off as untouchable. Some alcoholic programs claim a salvage rate of seven in ten, for instance.

In addition to the prospect that individual decisions can be affected by persuasion, many vistas are opening up by which destructive health habits can be abated by political measures, using the term "political" in its best sense. The banning of cigarette advertising might reduce the rate of new

smokers. Measures are possible for permitting and promoting a lower intake of cholesterol; the regulation that low cholesterol spreads combining butter and unsaturated oils are illegal, may be archaic from a nutritional point of view. The concept of pricing alcoholic drinks at a high level based on the absolute alcohol content of the host beverage is gaining ground. Untaxed "near beer", for instance, might draw people away from high-priced ale and beer at present alcoholic strengths. The compulsory treatment of abusers of drugs is regarded by some as interfering excessively with individual freedom but would be regarded as a blessing by many parents of speed freaks. The compulsory use of seatbelts in Australia has dramatically reduced the number of automobile accident deaths. These legislative measures have been a largely unexplored means of abating lifestyle health problems but are now getting increased attention. They will not prevent all people from slow self-destruction but they can reduce the number and put brakes on the process.

Alvin Toffler's book, *Future Shock* has focused attention, among other things, on the price paid in good health for having to absorb excessive change or having to live under a set of values which clash with basic individual beliefs. Increasingly, personal decisions are being taken to opt out of lifestyles which are "net negative"; the phenomenon is sufficiently widespread among senior executives to have drawn comment from the *Wall Street Journal*.

Finally, there is the surge of interest in fitness, in reaction against the excessive physical passivity of urban living. Cycling, trial skiing, and ice skating are undergoing a widespread revival that augurs well for the future. Jogging and the proliferation of health clubs are new phenomena which give further evidence of an emerging desire to break out of destructive molds of life.

There are still many shadows. One of these is the excessive faith placed on medical care research as a cure for all ills, particularly on chemotherapy. This faith, and the technology which gives rise to it,

are poor substitutes for a lifestyle which meets at least minimum standards for a healthy life.

Environmental

For the purposes of this paper, the environment is defined as that which an individual has normally little or no free choice in avoiding. Included are all the obvious things like the need for clean air and potable water, protective measures against pollution by pesticides, herbicides, radiation, heavy metals and noise, and the protection of the food and drug supply in the interests of health. In this broad category, however, would be included many elements not normally considered as environmental. Quarantine controls, for instance, would be included because they are measures of protection against the bacterial or viral environment. The environmental category, by defining it as all of the environment which an individual has little choice in avoiding, becomes a very important category indeed.

Environmental problems, in general, involve "trade-offs" between health protection, on the one hand, and economic, technological, social or personal advantages on the other. The control of pollutants in automobile emissions will raise the price of cars and may create, at the outset, problems of vehicle maintenance. The reduction of noise levels, say for snowmobiles, may require an increase in cost or a reduction in performance.

Measures for controlling the environment are almost all in the power of governments rather than individuals, health professionals or the health services system. This condition is favourable in that changes can be put into effect by fiat. It is unfavourable in the sense that governments are especially vulnerable to pressure groups. Unfortunately, the health hazards of a pollutant are not easy to measure and evaluate, while the economic and social effects usually are. This requires that the measurement of environmental health hazards, as environment is defined herein, is a most

important field for research. It is doubly important for government since it is usually the only agent that can act in this field on behalf of a helpless public.

The measurement of environmental health hazards has another, opposite, aspect. This consists of guarding against over-reacting to a health hazard, causing grave economic or social damage in order to protect the public against a relatively minor hazard. Agencies charged with guarding public health might pursue this goal at any price. If a price is to be paid in economic or social terms, the authorities need to know with some precision, the health importance of the hazard that will be abated or eliminated.

There are many aspects of environmental pollution; other than physical ones, which affect health but these cannot be easily dealt with. Just as an example and to conclude this section, is the following:

The American Association of Advertising tells us that there are 1600 commercial messages a day directed at the average individual. Man's role is seen to be a passive consumer. Yet it has been shown that in this barrage of nonsense messages about 80 are consciously noted and only 12 are remembered. Thus we have developed a peculiar skill at desensitizing ourselves and not consciously noticing 1588 unwanted commercial messages a day. It is appropriate to question a social system that imposes a burden of this nature on its citizens. It is equally important to wonder at the human cost that is being paid in this desensitization process. Don't we have to learn to ignore most sights, sounds and smells that are pressed upon us from all sides? What does this tell us about modern man's feeling or non-feeling and of sensory deprivation?"

Health care organizational

This element of the health system is one that has been receiving increasing attention. It includes both the services that are rendered by the system and the manner in which those services are organized and financed. It is known, in the jargon of health administration, as the "health care delivery system" a term that is puzzling to a public which

does not have health care delivered to it but must go and get it, often at considerable personal inconvenience.

The aches, pains, creaks and groans of the health care system have been spelled out in so many places and in such detail that they need not be repeated here. It includes medical practice, hospitals, extended care institutions, the system for supplying drugs, laboratories, radiology, ambulances and so on.

It is doubtful if any other major sector of Canadian life has been subjected to as much analysis as has health care, nor has any other been the subject of so many volumes of reports. The Hall Royal Commission for Canada, the Castonguay-Nepveu Commission in Quebec, the Committee on the Healing Arts for Ontario, the federal-provincial Task Force on Health Costs, the recent Manitoba White Paper on Health and the even more recent Hastings Report on Community Health Centres are representative of the scale of studies and reports that have been produced in recent years.

One reason for this plethora of analytical comment is the availability of data, following the "iron rule of data" which is that if data are available they will be analysed!

Although there is general accord on what should be done to provide health care with logic and wisdom, and the Hastings report is as good an account of what is needed as any, the system has generally been unresponsive to the normative strictures of the many reports. The principal reason is that there is little pressure or demand by the public, the health professions and the health institutions for major reform. The only truly concerned partisans are the elected representatives and the bureaucrats, at both the federal and provincial levels, who see rapidly rising health costs as a threat to other ongoing and new governmental programs.

The principal cause for public dissatisfaction was removed when hospital and medical care were put on a prepaid basis during the 50s and 60s. If there are residual demands by the public-at-large they consist mainly of extending prepayment to other parts of the system.

This is being done on a piecemeal basis by various provinces for nursing homes, optometric services, chiropractics, drugs for the aged, dental care for the young and so on.

Because of the absence of a popular movement to reform the health care system, such as that which supports pollution control, an extraordinary amount of willpower is required of governments to get reforms under way.

According to the Hastings report they must find the courage to do the following:

- Reduce the number of acute hospital beds relative to population;
- Reduce the numbers of expensive personnel used in a given volume of health services;
- Establish district boards with authority over all services;
- Establish community clinics and team medicine;
- Find alternatives to fee-for-service for clinic professionals;
- Set levels and standards of service;
- Take steps to re-distribute physician manpower;
- Involve the people in looking after their own health.

The role of the federal government so far has been of financing and of persuading or assisting provinces to pursue greater efficiency (economy, effectiveness, accessibility). It has been understandably reluctant to use its financing power to enforce standards other than the basic ones of universality, comprehensiveness and portability required by the hospital and medical acts.

With the proposed new cost-sharing agreements, which would put federal financing on a per capita basis and permit much wider latitude in the use of federal funds, the federal presence will be even less positive than it is at present.

In view of this it is likely that the provinces will vary greatly in the extent to which the health care system will be reformed — some will pursue reform aggressively and other passively. The net results will be an even greater variation, from province to province, in the way health services are organized than

there is now. This "many flowers" approach is in many ways desirable. However the federal government will have to establish minimum standards as a condition of actual or further financing, such as in the funding of community clinics.

Basic human biology and clinical application

As previously defined this element includes all basic or so-called "curiosity" research in the health field and all applied medical research to improve personal health care.

The limitations inherent in this definition are necessary in order that due importance can be given to applied research in the lifestyle, environmental and health care organizational categories. Accordingly, this element does not include measures needed to solve lifestyle health problems, which rely mainly on organized persuasion, nor measures to protect health from environmental factors, which depend mainly on legislation, nor measures to improve the efficiency of the health care delivery system which will come principally from improved organization.

Even with these exclusions the basic human biology and clinical application category comprises, in its activities and expenditures, a vast and vital part of the total health field.

Basic research and applied research for personal health care are the two fields in which Canada can profit most from the efforts of other countries. One reason is that this kind of research is neither culture-bound nor limited by legislative or attitudinal constraints. It tends to be centred on the work of universities, health research foundations and private industry, particularly the pharmaceutical houses and the producers of equipment.

Illustrative landmarks of medicotechnological breakthroughs include the production of vaccines for communicable diseases, the development of antibiotics, techniques for transplanting organs and the use of chemotherapy in mental illness.

In the past, and to a certain extent at present, the glamour sur-

rounding the pursuit of medical care research has tended to overshadow the lifestyle and environmental elements of the health field. As a consequence these other two elements have, until recently been undernourished and under-emphasized. Without in any way suggesting that the learning and teaching aspects of basic research and medical care research be reduced, it is evident that the measures that can be taken by individuals and by governments are now the pre-eminent instruments by which the level of health can be raised.

The conceptual model as a tool for analysis

All activities, problems and ideas in the health field can be identified as falling mainly into one or another of the four elements of:

- Lifestyle
- Environment
- Health care organization, and
- Basic human biology and clinical application

Thus the first prerequisite of a concept, that it be comprehensive, has been met.

Secondly, the concept permits a relatively easy identification of the element under which a particular subject or problems should fall. The term "relatively" must be emphasized because all borderline classification problems have not necessarily been overcome.

Thirdly, the concept facilitates the branching into sub- and sub-sub categories.

Finally, the concept permits a matrix approach to the analysis of functions and activities. Thus if one wants to examine manpower one can ascertain its significance in relation to each of the four principal elements. The same can be done to analyse legislation, research, facilities, programs, or any other function or activity that cuts across the health field.

With these four characteristics, i.e. comprehensiveness, ease of classification, facilitation of further subdivision, and matrix analysis, the concept is ready for use for analytical purposes.

A test of usefulness will be to run

a particular health problem through the four principle divisions to see what will be revealed. Let us suppose, for example, that one is examining the problem of deaths and injuries due to automobile accidents. Data are available which will permit the deaths and injuries of automobile accidents to be attributed in part to acts of individuals, under *lifestyle*, including speeding, carelessness, driving while impaired, failure to use seat-belts, and so on. A second attribution can be made to *environment* which might include the construction and interior of the automobile, the way highways are designed and constructed, and so on. The third attribution would be made to *health care organization* which focuses mainly on the system for delivering care to accident victims, including ambulances and helicopters, the provision of life-saving devices at the scene, reception and treatment at emergency facilities and so on. The fourth and final attribution would be *clinical application* which in this case would focus on new life-saving equipment, emergency treatment methods, and attention to accidents in medical school curricula.

This analysis would quickly reveal, no doubt, that *lifestyle*, or acts of individuals, was the principal source of accidents. These could be costed out in socio-economic terms to establish the gravity of the problem in this particular category. Similar calculations could be made under the other three headings.

If, as can be foreseen, acts of individuals dominate, measures for using persuasion or coercion to alter the pattern of individual decisions can be considered as well as legislative measures for protecting an individual against himself. Here a whole array of possibilities opens up including the compulsory use of seat-belts, enforcement of traffic laws, random roadblock breathalizer tests, compulsory completion of a defensive driving course before licensing and so on. These can be looked at individually as to their cost, acceptability and effect.

In brief, the problem of deaths and injuries due to automobiles can be analysed, under the concept proposed in this paper, in a pat-

terned way which permits a rapid focusing on the key issues.

For specialists in the subject, the foregoing approach to the automobile problem will no doubt seem elementary. But for those who are charged with keeping all health policy under review, the need for a system by which key issues can be rapidly identified for examination, for any function or problem, the conceptual approach proposed herein, may prove to be a valuable analytical tool.

Conclusion

Everyone wants good health but the willingness to pay the price for it, in terms of personal and social discipline and sacrifice, depends on societal and individual values. Sweden, which leads the world according to several important health status indicators, places a high value on good health and most Swedes are prepared to make personal sacrifices to prevent the onset of disease. North Americans, by comparison, tend to place their faith in the restorative powers of doctors, hospitals and medical technology, neglecting destructive health habits until too late.

In devising the classification proposed in this paper, an attempt has been made to balance the importance of prevention with cure. The following quotation reflects the opportunity that is offered us by attacking lifestyle and environmental health problems.

It has been reliably estimated that if obese individuals were reduced to ideal weight, the average life expectancy in the United States would increase by seven years or more. The significance of this is

illuminated when one calculates that if all forms of cancer were to be removed, the average life expectancy of the people of the United States would increase by only two or three years. It is also assuredly true that there are many more years of life in the United States wasted because of obesity than are wasted by under nutrition³

The challenge, in the health field in Canada, is to maintain the present high level of health care and medical research, while bringing our efforts up to a similar level in the areas of lifestyle and environment, where our principal problems now appear to lie. If the conceptual approach proposed in this paper takes anyone even one step further along the path to a balanced view of the health field it will have served its purpose.

Even if analysis should confirm that grave health problems are faced by the Canadian people as a consequence of faulty values, the programs and techniques for turning these values around are still undeveloped. The traumatic impact of the Canada-Russia hockey series, in terms of comparative stamina and endurance, may well signal, in Churchill's words, the end of the beginning.

Summary

This paper proposes that the field of health be divided for the purpose of policy analysis into four categories:

- Lifestyle health;
- Environmental health;
- Health care organization;

- Basic human biology and clinical application.

It is contended that this framework gives a more balanced view of the health field than the traditional divisions of prevention, diagnosis, therapy, and rehabilitation, or, public health, mental health and clinical medicine. Problems and issues are more easily identified and preventive measures are given due importance.

Résumé

Ce papier propose que le domaine de la santé soit divisé, pour objectif d'analyse, en quatre catégories:

- Mode de vie;
- Environnement;
- Organisation des soins; et
- Biologie fondamentale et application clinique.

Il est prévu que ce plan de travail fondamental donne une meilleure vue du domaine de la santé que la diffusion de méthodes préventives, diagnostiques, thérapeutiques et réhabilitation, ou, l'hygiène publique, l'hygiène mentale et la médecine clinique. Les problèmes et solutions sont plus facilement identifiés et des méthodes préventives sont données l'importance due.

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