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Toward Health Status Insurance

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This paper advances a new concept in health insurance. Health status insurance is a health insurance whose primary aim is to improve health status and decrease inequality in health within the covered population. Redistribution and control of cost is a secondary aim, closely integrated with the health status aim. Health status insurance differs from conventional health insurance in four respects: 1) the health status and health risks of enrollees are assessed and individual plans are developed jointly by the providers and enrollees to raise their health status to a given level; 2) interventions are not limited to the patients, but they extend to the patients' physical and social environments; 3) supplementary income or help in organizing are provided to enrollees who do not have an income sufficient to maintain their health or who need help to overcome local environmental situations adverse to their health, respectively; and, 4) the health status insurance organization actively champions national policies to change the social environment for the improvement of health. The concept of health status insurance is applicable to national health insurance systems, large private health insurance systems, or, national health service (when the responsible governmental agency becomes the health status insurer). Three modalities of implementation are presented. The readiness of society and governments to adopt health status insurance is discussed from a historical perspective.

Key words: health and welfare; health insurance; health status; insurance, health; patient outcome assessment; planning; risk factors; social class; social environment; socioeconomic status

Health insurance is actually health cost insurance. It is primarily a means of sharing health care costs among members of a participating population and of distributing them over time through the payment of premiums. It contributes to the improvement of health in two ways. It provides financial access to needed medical care in time of sickness, and it may provide some preventive services according to the rationale that, by keeping the members of the plan healthier, there will be less utilization of medical care, and therefore, lesser costs to the insurer.

There has been considerable progress in the health of industrially developed countries with national or private health insurance in the past century. However, adult health care costs continue to increase, while conditions associated with the most prevalent determinants of ill health and premature mortality in these countries – tobacco, alcohol, other addictive substances, sedentary habits, unhealthy diets, untreated conditions such as diabetes or hypertension, automobile or home accidents, violence, suicide, and sexually transmitted diseases, at the individual level; and differences in social classes, at the societal level – are still important contributors to morbidity and mortality (1-3).

Perhaps this is to be expected with a primarily economic approach to health insurance, when attempts to control costs rely on changes in economic variables – utilization, rationing, cost sharing by consumers, efficiency, price setting, limits on supply of personnel or facilities (4) – while the main features of the health care process – intervention limited to what can be done in the health care facility or in professional extensions thereof; strict limits on the time allotted to visits, procedures, or hospital stays; evidence based medicine that emphasizes predominantly disease management approaches; and, risk factors defined and addressed at the individual rather than the societal level – are largely invariant. Therefore, it may be necessary to change the rules of the game in order to improve prevention and health promotion, while containing costs.

I propose that the primary purpose of health status insurance is not to insure against the cost of care for illness, but, rather, to insure against an unacceptable loss of health, when the acceptable level is determined jointly by the patient and the physician. Control and redistribution of cost is a secondary aim, closely integrated with the health status aim.

In order to achieve this goal, it is necessary to have some degree of control over the pathogenic processes that take place in the body, in the patients' behavior, in their local physical and social environment, and in the social environment at large. Therefore, the scope of health status insurance is vaster than that of conventional health insurance.

Thus, the organization responsible for health status insurance would have four functions: (a) assessment of the health status and health risks of its enrollees and development by enrollees and physicians of individual plans to maintain or raise their health status to a given level; (b) interventions in the patients' physical or social environments, with the patients' consent, to help remove some of the barriers to their health; (c) provision of supplementary income or help in organizing for enrollees who do not have an income sufficient to maintain their health or who need help to overcome local environmental situations adverse to their health; and (d) championing of national policies to improve health.

The health status insurance concept is compatible with a national health service (where the appropriate governmental agency would fulfill the functions of the health status insurance organization); a national health insurance system, where the sick funds would be modified to fulfill the function of health status insurance carriers, or a large private health maintenance organization. In the interest of conciseness, the term health status insurance will be used hereafter to refer to any of these systems, except when specific differences between these systems are involved.

In developing the concept of health status insurance, I will examine the requirements for the four functions listed above, consider cost aspects, sketch three modalities of implementation, and finally discuss the historical relevance of this concept.

Method

The concept of health status insurance is developed here in the context of industrially developed countries and of the major health conditions of old and young adults at the individual level which are accounted for by a few major risk factors (Table 1) and of inequalities in health at the societal level.

Table 1. Contribution of risk factors to health problems in industrially developed countries.

A literature search on life style, risk factors, social status, socioeconomic status, health behavior, health insurance, and social policy in relation to health status, mortality, and burden of disease was done with Medline from 1995 to 1998. It was supplemented by networking through the bibliography of the articles retrieved in the Medline search; examination of titles and abstracts of papers in a small number of medical and social science journals issued in 1998 and 1999; reference to some standard texts, and papers known to the author from previous projects.

Theoretical Perspectives

I use the concept of health of the World Health Organization (WHO), in the sense of physical, mental and social well-being of the individual (5). However, a more specific construction of health is used, incorporating the concepts of subjective health and objective health. The subjective dimension: of health refers to the question: how healthy do people feel and act? A person may have a feeling of physical, mental, or social well-being, while having hypertension, diabetes, or some other acute or chronic condition. This is desirable since a diagnostic label should not dominate the life of an individual. However, one should be alert to the possibility that, because of ignorance or denial, such feeling of well being may interfere with preventive interventions that would affect the future health of the person. Therefore, it is necessary to include the second dimension, objective health, the status of which is usually determined by health professionals. Objective health itself has two dimensions referring to the following questions: what pathologic conditions do the persons have at present; and, what risk factors in their behavior or environment increase their likelihood of developing given pathological conditions in the future.

The improvement of population health and decrease of inequality in health may be viewed from two perspectives. The first perspective derives from advances in knowledge of the risk factors of individuals associated with specific diseases or other health conditions. Tobacco smoking is perhaps the most salient example of such risk factors (1-3). This approach lends itself to specific health care interventions based on the construction of risk factors, of their pathogenic consequences, and of clinical methods to offset these pathogenic effects at the individual level. It has been extensively used, with the individual as the unit of analysis, in randomized clinical trials and other approaches to yield a large body of evidence based medicine (6). This view is consistent with the improvement in health status and reduction of inequalities of health that has been observed following specific medical interventions (7).

The second perspective derives from the thesis that the major improvements in health during the nineteenth and twentieth centuries have not come from medical care, but, rather, from social changes which raised the income, education, nutrition, hygiene, and access to care of the population (8). Thus, the fundamental determinants of disease and mortality are to be found at the level of the social environment, and improvement of the social environment is needed to improve health (9). The unit of analysis is a population or an area as proxy for its population or for the social and environmental

factors to which that population is exposed. Empirical studies of morbidity and mortality along this line are far less advanced than in the first group of studies. They include comparisons across areas, such as cities, in the level of an explanatory variable such as hostility (10), and studies of the geographical and temporal spread of social environmental factors across areas (11). This approach is concerned with fundamental but distal determinants of disease, in the framework of multilevel epidemiology (12-13). As these studies evolve, they are likely to generate new sets of intervening and explanatory variables. For instance, the intervening variable homelessness, which is associated with increased prevalence of several diseases or injuries in people who are homeless (14) is associated with several variables in the social economy of housing, employment, and welfare, themselves related to the societal level of greed as explanatory variable(15). Despite the lack of intervention-based studies, the extensive empirical evidence with many different indicators of health status that a higher social class or socioeconomic status is associated with better health (16-18) health is consistent with the view that social factors are a fundamental determinant of ill-health.

The concept of health status insurance proposed in this paper sets a bridge between these two approaches at a concrete level, since health status insurance organizations combine delivery of care and interventions in the social and political arenas.

Terminology

The term health status is used in a broad sense to refer to the combination of subjective and objective health found in the patient-physician (or other health professional) encounter. It combines the individual norms of the patient and the professional norms of the physician. Objective measures and instruments for self-assessment of health may be used in the context of these norms for the purposes of comparing changes over time or for population based data collection.

With regard to the term life style, Abel (19), following Max Weber, distinguishes two very different components of life style, namely, life conduct (Lebensführung) and life chances (Lebenschancen). In order to establish a specific connection with risk factors at the individual level, I use the terms pathogenic behavior and pathogenic environment, respectively.

People's position in the social order is generally referred to with the phrases social class in the British and much of the European literature and socioeconomic status in the American literature. These terms refer to the different concepts of class and income. There is significant overlap between the categories defined by these two concepts, since income is strongly associated with social class. In this paper, I will use the term "social status" to refer to categories defined by studies using either class or income as explaining variable. I will use the terms social class or class, and income or wealth, respectively, when the concept that is involved calls for a more specific language.

Finally, numerous terms are used in the literature to refer to the person who is the object of health care (including self care and care by others): persons, consumers, clients, area residents, enrollees, tax payers, beneficiaries, patients, etc. In this paper, only three terms will be used. Person will be used when a very general statement is made. Enrollee will be used when referring to a person for the health of whom a health care system is responsible (be it a private or national health insurance or a national health service). Patient will be used when dealing specifically with an interaction between the person and a health care provider.

With regard to the environment, the term local environment is used in dealing with the immediate physical or social environment of a person in the home, work site, or other community site. The term general environment is used when dealing with physical or social environmental features of the nation or society at large.

Health Status Assessment and Individual Plan

Health status assessment in health status insurance systems includes not only screening for and diagnosis of present conditions and biological and behavioral risk factors, but also the determinants of pathogenic behaviors of individuals and risks in their environment. It is followed by a determination of health goals collaboratively by patient and physician or other health professional that takes into account the feasibility of a broad range of interventions. (Table 2). The intensity of provided services would be that necessary to achieve a specified health status determined by the patient and physician in each individual instance, taking into account the efforts that would be realistic on the part of patient and health providers, a balance between individual and societal goals (20) and the physical, psychological, or social complications of interventions (21). Indicators of progress would be specified at that time. The patient and the physician would also agree on a schedule for the next health status assessment and for intervening visits or referrals to help achieve or to redefine the target health status.

[Table 2.](#) Intervention of health status insurance providers at the personal level.

Thus, health status and health goals are defined by the patient and physician. This is a much less stringent approach than one that would use as criteria disease, and disease severity at one extreme or instruments for self-assessment of health at the other extreme. The disadvantage of the approach based on disease is that it would be too medicalized. The disadvantage of the approach based on self-assessment of health is that it might neglect the objective aspects of health. These disadvantages are minimized in the combined approach based on a collaborative judgment by the patient and physician. However, that combined approach is not compatible with a set of specific health outcome goals that could be measured uniformly in a population of patients.

Therefore, in order to introduce specificity in the establishment of health goals, I will turn to the intervening processes rather than the final health outcomes. These intervening processes consist of the patients' risk behaviors and the pathogenic features of the patient's environment. The intervening goals will be specific goals to modify the patients' risk behaviors and the risks to the patients' health in their environment.

Changing patients' risk behaviors and changing the patients' environmental risks are weak areas of current medical practice. Therefore, I will emphasize approaches that might improve these two areas.

Changing Risk Behaviors of Patients

Counseling by physicians to promote healthful living and decrease pathogenic behaviors before the onset of the conditions that they might cause can be effective (2). However, the extent of counseling interventions in conventional health insurance systems to modify a patient's pathogenic behavior before the condition that it might cause has set in has been limited. This is attested by experience in different industrialized countries, such as the United States (22), Sweden (23), the Netherlands (24) or Australia (25). The provision of counseling by primary care physicians differed according to risk factor. For instance in the Australian study, screening and/or counseling was higher for blood pressure (47%) and smoking (34%) than for overweight (22%) or alcohol (19%) (25). In the US study, 41% of visits of smokers included smoking cessation counseling, while 19% of visits offered counseling about physical activity (22).

There are several barriers to counseling in conventional health insurance systems, including inadequate physician readiness, whether because of insufficient knowledge, resources, motivation, or time (2). Lack of reimbursement for preventive services is another barrier in certain health care systems (e.g., in the US, Medicare in its fee-for-service modality). In pre-paid systems, the cost of some preventive service and pressures on the time of health personnel may act as barriers. Lack of trust by patients may prevent them from believing the health education messages of health care providers.

Health status insurance systems would use a systematic approach that addresses changes in the patient's risk behavior and change in the patient's environment; and, interventions at the individual level and interventions at the societal level. The approach to change in the patient's risk behaviors outlined below is based on state-of-the-art or emerging research approaches. It includes the following items:

1. Building reciprocal trust between the patient and the physician or the health care organization. An open interaction between patient and provider in which there are no barriers to understanding on either side and there is active participation in decision making by both parties is essential to the building of trust in the contemporary health care environment. Several measures to help build trust have been described by Mechanic (26,27).
2. The physician or other health professional would assess the patient's knowledge and full understanding of healthful life conduct and specific risk factors and provide needed information in understandable and specific language, including quantitative information that may be pertinent. There is scattered evidence through the medical literature that people are not aware of certain important risk factors. Often these are the people who are at greatest risk (28,29).
3. People often change behavior by proceeding through a sequence of stages, described by Prohaska, which include: pre-contemplation (not thinking about change); contemplation (awareness that a problem exists and thinking about it but not planning to do something about it); preparation (when small preliminary steps are taken but not yet effective action); action (when people actually do something that modifies their behavior); and maintenance when the changed behavior has become routine (30). The content of counseling interventions would vary according to stage. Interventions based on this model have recently been tested in controlled clinical trials (31).
4. The functions that pathogenic behaviors fulfill in the life of the individual must be understood, in order to know the barriers that these functions may oppose to change and to help the patient to find some other ways of fulfilling these functions. A typology of such functions would aid clinicians in understanding these pathogenic behaviors and finding alternatives to them. Some years ago, Ovrebo developed a typology of functions of pathogenic behaviors in qualitative studies of near-homeless

individuals in a residential hotel, based on their survival value for the individual (32). There were three main groups of concerns for survival: economic, functional, and identity concerns. Identity concerns were often overlooked. Ovrebo divided them into concerns for the "public self – that self which is connected to society, culture, other people, and the outside world – and the private self – the center of autonomy and independence, of power and control for the individual". Public self concerns included the need to be connected and the need to care and be cared for. Private self concerns included the needs for freedom, for status and a sense of self, for power, and for something of one's own; the need to be connected to one's past; and the need for hope (32). In another approach to the role of behavior in fulfilling patients' needs, therapists have used Control Theory and Reality Therapy to help patients to gain control over their pathogenic behaviors (33).

5. When pathogenic behaviors serve the function of fulfilling an addiction to tobacco, alcohol, or some other substance, the patient and health professional would develop a plan appropriate to the current stage of behavior change of the patient with the long range aim of conquering the addiction, using state-of-the-art technology (2).

6. Pathogenic health behaviors may be related to mental disorders. Many adults are demoralized or depressed. Demoralization or depression may lead to pathogenic behaviors as relief mechanisms (e.g., alcohol) or they may lead to a general pessimism or apathy that prevent taking action. Anxiety or fear may lead to denial as a psychological defense mechanism and thus prevent action or even contemplation of change. Self-destructive tendencies or impulses, and feelings of invincibility may strongly inhibit change in behavior. Finally, if the pathogenic behavior is part of a set of obsessive behaviors, there will be strong resistance to change it. Integration of the management of mental disorder and of that of pathogenic health behavior is necessary in these instances.

Research on the knowledge of members of the general public on prevention, especially with regard to their understanding of probability of effectiveness, how people validate the information they receive from differing sources, and what are the sources of information to which they are most receptive would be helpful in designing programs to better inform the public. More research is also needed on the characteristics of the process of patient comprehension and personal validation of information provided by health professionals, with the help of methods of psychological research (34).

Several research areas to enhance prevention by providers might be developed further, such as utilization of brief periods of provider time to legitimate public health education messages (35); setting aside of special visits for prevention, aided by computer software to integrate preventive interventions in the scheduling of practice's tasks (36); and multistage intervention packages to change physician behavior to improve disease prevention (37). Approaches to the dissemination of information among health professionals would also have to be addressed (38).

More research on the determinants and functions of pathogenic behaviors of individuals is needed along the line initiated by Ovrebo (32). More research is also needed to overcome inhibitors of health behaviors or of care seeking such as fear and shame (39).

Some qualifications are needed regarding the extent to which prevention of patients' pathogenic behaviors is carried out in a medical context. Firstly, the final decision is that of the patient. Health professionals may assist the patient in reaching that decision, but they must guard against imposing their own value. Well-informed patients are likely, in general, to make decisions that are in the interest of their own health. However, other factors may intervene, and, in final analysis, the patients are the ones who evaluate the utility that health behavior changes or other preventive measures have for their own self. This raises ethical considerations of values in different sectors of life of which health is only one (40).

Secondly, health service is one influence on health. Health literacy of the population, social cohesion and sense of coherence, and environmental and economic factors may have a much greater influence on health and health behavior (41).

Thirdly, there may be forces in the patient's environment that prevent or markedly interfere with change in a pathogenic behavior, so that the decision is not in the hands of the individual. In those instances, it would require extraordinary will and strength on the part of the individual to take on the full burden of behavior change in those instances, and expecting that of them may turn into a form of "blaming the victim".

The program of interventions outlined above may require considerably more time than physicians in primary care practice usually have at present. Some patients may be helped to change a specific health behavior with very brief periods of counseling. However, others may require a much more comprehensive understanding and intervention by the physician or other health professional. Thus, health status insurance programs would require a very flexible distribution of health provider time, including the feasibility of spending a large amount of time in interventions to change personal health behavior which may have to be integrated with changes in specific forces in the environment of the

patient.

Preventive Interventions in the Social or Physical Environment

Interventions by Providers

Intervention by providers in the local physical or social environment of the patients, with the consent of the patients, is a major responsibility of health status insurance organizations. It includes several types of interventions (Table 3), and its intensity can vary markedly.

Table 3. Collaborative activities of local health departments and health status insurance organizations at the community level

In the least intrusive form of such intervention, health professionals may adapt their prescription for health prevention, such as physical activity, to the lifestyle of the patient (42,43).

When health professionals become aware of pathogenic environmental factors for their patients, they may intervene by referring the problem to appropriate public health authorities. Considerable interest has been generated recently in the collaboration between personal health care and public health agencies in the United States to solve health problems of the local environment (44,45). A systematic study and classification of medical and public health collaboration, including 414 cases, has recently been completed (46,47). As increased involvement of health professionals in overcoming local pathogenic conditions develops, sometimes encountering considerable resistance, the problem of morale and burnout of these professionals has to be faced (48).

In other instances, the person-environment interaction is of a relatively unique nature when an intervention that is specific to that interaction has to be devised. In such instances, the physicians and other health professionals may be the most knowledgeable individuals as well as the ones most concerned with the patient's well being. Such intervention often requires coordination of preventive work with community organizations or even the formation of de novo linkages in the community. I will give an example from my own experience.

In the early 1980s, when I was medical director of a community health center in New York City, the nurse practitioner for adolescent health, aware of my interest in mental retardation, referred a 17 year old girl who was mentally retarded and had come with a complaint of leg pain. In the referral note, the nurse practitioner stated that she had examined and X-rayed the leg and found only a bruise, but she thought that there was more to that case. The patient was an exceedingly frightened girl of Hispanic origin, so frightened that she dared not establish eye contact, but, instead, held a sheet of paper in front of her face hiding her from her interlocutor, and she talked with extreme reluctance. During the following hour, she gradually revealed that the bruise had been inflicted by a boy at the Occupational Training Center (OTC) where she went to school, and that the boy had told her that he would break her leg. To defend herself, she came to the OTC with a knife and she was caught with the knife and told she would be assigned to a class for dangerous students. She did not impress me as someone dangerous, but rather, as someone naive and isolated who was not sophisticated in reacting to a tough environment. She further revealed that until last summer she had been a student in a special education class in an integrated school in the Bronx, but when her family moved to Manhattan, she was sent to the OTC, which was designed for students with more severe intellectual or emotional problems. She was disturbed by and ashamed of the initial assignment to OTC, but now she was terrified. As I assured her that we were on her side and would help her, a sense of relief became evident, but she was still far from trustful. I invited her to come to the adolescent clinic run by the nurse practitioner that was meeting the next day and she accepted.

The next day, she came to the adolescent clinic and participated for a while in the weekly group discussion session. Although she was very quiet, she stayed with the group. She then met with the nurse practitioner and myself. She answered questions more readily and began to volunteer information and to talk about herself extensively. Not wanting to interrupt that self-expression, the nurse practitioner and I took turns staying with her so that we could attend to our other responsibilities. By the end of that session, which lasted about two hours, several points had been established: (a) she trusted us, although we knew there would be a backlash if our efforts did not produce anything for her; (b) we had some ideas of her capabilities: she was probably mildly retarded; she was dismal in math, but quite sharp in other subjects, especially at the practical level, and we felt she could manage in the special classes of a regular school; (c) She was extraordinarily isolated – from her family, her classmates, her teachers, her new community. There was only one person in whom she would confide, an older woman, whose name she gave us, that she saw at church on Sundays; and (d) she wanted to return to a regular school but she had some anxiety about it.

Following this meeting, we thought that she was on her way to a pattern that we had encountered previously when persons with relatively mild or moderate mental retardation are put in an environment

in which they are not able to develop their full abilities and where they are subject to stresses that they do not know how to handle. They go on to a downward spiral, which has been described by Jane Mercer (49) and which ends up in a bleak, non-productive life in sheltered workshops. To prevent this course of events we thought that we had to intervene and build support for the girl in her various environments. The nurse practitioner contacted the woman with whom the girl confided at church, and we obtained her cooperation in providing moral support for the girl, especially with regard to her parents who had sided with the OTC. The nurse practitioner, our social worker, and I took administrative steps with the Board of Education and the OTC which, after some resistance, led to her transfer to the regular school. We also offered her a part-time job as nurse's aide in our facility, and continued to provide her with informal support. Three years later, she had graduated, was living in the community, and had a full-time job as a nurse's aide.

This case illustrates several features of the intervention of health status insurance providers in the micro-environment of the individual. The health professionals need clinical acumen to identify a situation when intervention in the local environment may be needed; and, knowledge of and experience with the problems encountered by persons with various conditions or risk factors, and of the local institutional and community attitudes about them. Having enough time to establish mutual trust between the patient and the health professionals is crucial, as is active patient's participation in decision making. Informal and formal support may have to be developed in the community. The health status insurance health professionals may have to overcome the resistance of individuals, groups, or organizations that have other interests or concerns related to the pathogenic environment. The involvement of the health professionals may often take them on grounds which may be the domains of other disciplines. The WHO's definition of health with its physical, mental and social well-being dimensions contributes to the justification of such involvement.

Interventions by the Health Status Insurance Organization

Health status insurance organizations may have considerable power in improving the local environment of their enrollees, especially the work environment. In the negotiations which take place with employers, they may require them to provide healthy physical or social environments to the workers. They have the resources to undertake court actions to improve the environment of their enrollees. They can also exert influence at the administrative level on various social agencies.

Direct Social Support to Enrollees

Health status insurance systems could give social support to their enrollees with low social status in order to protect their health from the pathogenic effects associated with such status. Health status is strongly related to proxies of social class or socioeconomic status such as income, occupation, or education (50,51). This is a direct association, whereby health status improves as the social status is raised. The variation in health status with social status does not exhibit a threshold effect (i.e., a change manifested above a certain poverty level), but, rather, it shows a gradient throughout the entire social scale (52), with two components: i.e., a strong effect (steeper slope of change in health status with social status) at the low end of the social status scale and a weaker effect at the upper end (51). In a few conditions, such as schizophrenia, the social status is dependent on the health status, but in most health conditions, there is good evidence that the social status determines the health status (53). Several analytical reviews have searched for unique underlying factors. From a sociological perspective, the socioeconomic status differential was thought to be related to the availability of resources (e.g., knowledge, money, power, prestige) that people may use to prevent disease or death. The differential availability of such resources was presented as a "fundamental cause of social inequality in health", since it is an invariant factor, while the more proximal causes of disease and death change with epidemiological or technological developments (53). In psychological analyses, maintaining, lowering, or raising one's location in the socioeconomic status was thought to entail stresses that might be harmful to health (54). In occupational health studies, the stresses inherent to certain patterns of autonomy and responsibility at work (which are often related to the worker's socioeconomic status) were associated with specific causes of early mortality (55). From a biosocial approach, humans low in the socioeconomic status ladder may experience endocrine mediators of poor health (56) similar to the ones that are operative in the submissive individuals of an animal population (57). Ethnological interpretations point to the relation of socioeconomic status to cultural factors (such as healthy dietary and exercise habits) which may prolong life. In addition to these individual factors, community factors, such as availability of services or resources dependent on the economic status of communities, may have an effect on health at least partly independent from the socioeconomic status of individuals who live in these communities (58). A recent study showed a direct loglinear relationship between individual income and certain indicators of morbidity (59). Since, it is not clear yet to what extent low health status is explained by (a) a lower income; (b) a lower position in the social system; or (c) life in a disadvantaged neighborhood, and since each of

these factors may play a role in lowering health status, the social support provided by health status insurance organizations should include several approaches.

Provision of Income

Health status insurance organizations would provide income subsidies to people in the lower social echelons to the extent that they need such subsidies to maintain their health. At present, the need for such subsidies might be assessed by determining the household budget which corresponds to the minimum standard of living required to meet the nutrition, housing, clothing, health care and other basic needs required to maintain health, with a modified Stone market basket approach (60). Most nations have support systems for people with a low income (e.g., conventional health insurance, disability income, workers' compensation; unemployment insurance, aid to poor families with children, other welfare support). In some instances, which vary according to country and category of people, these support systems are inadequate. The health status insurance organization would provide the difference between the minimum budget needed to maintain health and the income of the household.

Help in Organizing

The second approach is to limit the damage in health resulting directly or indirectly from social class relationships of dominance and exploitation in the economic production process, including that resulting from excessive work hours, unhealthy work patterns, substandard housing, or other forms of stress at work and in daily life. The health status insurance organization would play an advocacy and organizing role, in joint action with unions, tenant leagues, or other community organizations to resist exploitation that damages health.

Support of Neighborhood Quality

Deterioration of neighborhoods makes them unhealthy when it leads to poor quality of housing, poor hygiene, lower quality of foods, air or water pollution, arson, crime, and demoralization. Health status insurance organizations may join with other community organizations in attempting to prevent neighborhood deterioration.

Interventions at the National Level

The relation of health to the capitalist political economy of modern industrial countries has been well described by Navarro (61). The "industrial epidemics" of our times have been analyzed by d'Intignano as involving a "vicious circle: incitement and advertising/glorifying the image of dangerous practices/sale of hazardous products/loss of life and cost to society/recruitment of fresh young consumers" (62). That cycle is evident in the instance of most of the major risk factors discussed in this paper: tobacco, alcohol, unhealthy foods, sedentary habits, automobiles, violence, unsafe devices, easy sex, to which should be added in the context of violence, war industries. It is supported by powerful communication methods of television, motion pictures, large ads in the streets (and in the near future if not now, the Internet). It utilizes highly sophisticated and well paid writers, advertisers, public relation specialists and lawyers. It is a source of wealth for some of the richest companies, the owners and executives of which acquire in turn enormous political power. Supporters of this political power claim moral justification in the workings of the market. Yet, that power has to be challenged in the interest of health.

Another industrial influence on health in the industrially developed countries is low pay of many groups of workers, unemployment, or tensions at work. In the United States, over 40 million people have no health insurance, the vast majority of whom are from families with at least one wage earner (63). In addition, each country has an underclass, among the most disadvantaged of which are people who are homeless. These various groups are not only highly susceptible to high risk and unhealthy habits that are widely available at low cost, but also, their low income and location in high-risk neighborhoods makes their health more precarious.

Countervailing power (64-68) is usually conceptualized as the exercise of power by one actor to impose its will against another, but it may also be conceived as a participatory interaction among actors in which no one is in full control (65). Countervailing agency is a similar process in which the competing or participating actors are agents for other social groups (69). Structural interests have been classified as dominant, challenging or repressed (70). Dominant interests are those served by the social, economic, and political institutions as they exist at the time; therefore, they do not have to continuously organize and act in their defense as other social institutions do that for them. Repressed structural interests are the opposite of dominant ones: the institutions will not serve them unless extraordinary political energies are mobilized: Challenging structural interests are those created by the changing structure of society.

In industrialized countries, the dominant interests are the industrial powers that create health risks and inequality in health. The repressed interests are the general public, i.e. the people who are the recipients of the health risks and lower health status. The mobilization of the general public against health risks and inequality in health is not impossible but it is not on the horizon now. Canadians have

made a serious effort to involve the lay public in decision making in the past two decades as a governmental policy, especially in Quebec, have found that it is not an easy task (71). Therefore the forces for change might be found among the challenging interest groups.

Health status insurance organizations could, together with some physicians, medical educators, families of people who have suffered from health risks, and have thus become activated, emerging consumer and environmental interests, and emerging educational interests, along with some public interest lawyers and political figures, form an effective coalition of challenging interests. They might be joined, by others, such as workers, especially those exposed to health risks and those without health insurance.

Health status insurance organizations and their providers could have a key role in such coalition in exercising countervailing power to improve the environment, and to improve health and safety at work. They would join with other organizations in public education about health and in the promotion of national policies that would decrease the production and dissemination of substances and habits that contribute to health risks; and create social conditions to decrease inequality in health.

Cost and Financing of Health Status Insurance

Costs of Health Status Insurance

The interventions of health status insurance proposed in this paper might contribute to a marked increase in cost, unless methods of cost control compatible with the principles of health status insurance are introduced.

Cost control would address first the process of health care. In health status insurance systems, interactions between patients and providers are guided by the principle that interventions be commensurate with the needs for actual involvement of both parties. In present systems, many patient-physician encounters are about problems which could be dealt with by self-care. Patients would be instructed in self-care, not only for stabilized chronic conditions such as diabetes or hypertension as is done now, but also for many self-limited acute conditions and mild injuries which constitute a substantial proportion of ambulatory care visits. Such training of the patients would also include instruction in danger signals and specific instructions about signs and symptoms for which a call to the health facility would be necessary. The increased trust between patient and health professionals and greater medical knowledge of the patients and their greater sense of control over their health would facilitate this expansion of self care and the associated decrease in costs. Health status insurance systems may also use substitution of less costly services as in conventional health insurance, such as ambulatory surgery, shortened hospital stays, and substitution of home and community care for institutional care.

The health status insurance would have initial, largely non-recurring costs for the development of educational materials for enrollees and health professionals, training of physicians and other health professionals, studies of the communities where the enrollees live or work, establishment of linkages within these communities and with various advocacy groups, studies of the need for income subsidies in the population enrolled in the health status insurance, and education of appropriate health status insurance staff in health policy development at the local and national levels and in the use of countervailing power in policy development.

These initial non-recurring actions are instrumental in facilitating the new interventions of health status insurance and in increasing their efficiency. Therefore, these additional non-recurring costs should be incurred. The improved ability of health personnel to assess which patients need no health education; which ones can achieve good health behavior change with only brief interventions (72,73); which ones are at various stages of health behavior change, and which ones require extensive interactions would improve the efficiency of the services. The cost of interventions in the patients' environments would also be controlled in part by better knowledge of environmental determinants of health behavior and the ability to intervene in these environments and by more efficient networking with the community agencies that collaborate in such action, so as to make full use of the resources of these agencies.

Research on the costs of subsidies to low income enrollees would include an assessment of the financial resources of the enrollees and of the extent to which income to which they are entitled from other programs are fully utilized. It would also include research on the extent to and manner in which additional income contributes, if any, to improving the health of these enrollees.

Research on the activities of the health status insurance organization in community interventions for organizing persons to seek better health conditions, or for preventing community deterioration, as well as research on policy interventions of health status insurance organizations at the national level, would include studies on effectiveness, cost-effectiveness, and cost-benefits of these interventions as well as comparative studies of different models of process for such interventions.

Financing of Health Status Insurance

Health status insurance is a modification of well-established approaches of private or national health insurance or national health service in order to achieve better prevention and health promotion. It does not require a fundamental reform of financing, i.e., it could be financed by the mix of general revenue, employer-employee contributions, and personal contributions which is in effect in the particular country in which it is introduced. It would require initially a non-recurring financing for the special costs of introducing it.

Because one of the major purposes of health status insurance is to improve the health of people in the lower socioeconomic groups, and many of its activities will be directed to these groups, it is expected to stimulate a shift to a more progressive financing, with an increased relative contribution of people in the higher socioeconomic brackets. Research on this topic would include at first, simulation of the effects of various degrees of progressive financing on the contributions of various groups and on the funds available for services to people in the lower socioeconomic groups. It would be followed by political research on the acceptability of various modalities of progressive financing.

Implementation of Health Status Insurance

Implementation of health status insurance may take one of three routes: Gradual implementation with changes being grafted one at a time in conventional health insurance or, a large demonstration project, i.e., a social experiment, to assess the cost and effectiveness of fully introducing health status insurance; or full implementation without preliminary research.

Gradual implementation would be the easiest approach. It could be done "vertically", by selecting a particular risk factor (e.g., tobacco) and implementing the approaches of health status insurance in the instance of that factor, in the population enrolled in a conventional health insurance. The advantages of this approach are that it is sharply targeted; the magnitude of the effort is relatively small compared to more extensive approaches; it may therefore be easier to implement; assessment of its effectiveness is relatively simple; it could readily be coordinated with research study on the particular risk factor addressed; resistance against change in conventional health insurance is likely to be less if it is done one step at a time; and demonstration of successful implementation in that one instance may facilitate implementation in other instances. The disadvantages are that if the risk factor turns out to be one that is particularly difficult to control, the intervention might derail the entire program; elimination of one risk factor would not eliminate the other risk factors for the same condition, so that only a limited effect on health would be achieved; elimination of one risk factor might even lead to a compensatory increase in other risk factors; it might be more difficult to justify certain types of environmental intervention for one risk factor than for multiple risk factors; some aspects of the program, such as the subsidy program may not be easily adaptable to a single risk factor; the sequential implementation of the program, risk factor by risk factor, would take a very long time; and, last but not least, this approach might give undue prominence to risk factors at the individual level versus distal social effects on health.

The option of gradual implementation, "horizontally", across all or many risk factors, starting with one approach, e.g. interventions at the person level to decrease pathogenic health behavior, eventually followed at later stages by other types of intervention, is not advisable. If only the behavioral change at the person level is introduced initially, this would create too much of a burden on the person; it would be difficult to achieve a sustained behavior change beyond what can be done in the current conventional systems without intervention in the local environment of the patient; and it is likely to lead to a "blame the victim" approach. Likewise, intervention limited to the local environment would be weakened by the lack of preparation of the enrollee; intervention limited to income subsidies or support for organizing, are not expected to be significantly effective without change in the other dimensions. Therefore, if gradual approaches are chosen, they should be organized vertically, and not horizontally.

Conducting a social experiment in a geographically or otherwise defined population on all features of the proposed health status insurance program would be feasible only in very rich countries, or in other industrialized or developing countries with financing from a very rich country, because of the sheer size and complexity of that experiment, which would dwarf earlier social experiments, even the very large RAND Health Insurance Experiment (74). It would have the advantage that the various elements of the program would be coordinated; it would be more efficient to implement parts of the program that cut across different risk factors (e.g., income benefits, social support, some environmental changes); the outcomes in the health status insurance population could be compared with those in the conventional health insurance population, in a randomly controlled study; the relative contribution of the various elements of the program would be independently assessed with multivariate analysis; the various research components of the program listed in the section on research could be integrated within the social experiment; and, while the social experiment would take a long time (possibly 10 years), the outcome of the entire set of changes would be obtained earlier than with the gradual

approach. The disadvantages of the large social experiment approach are, besides its high cost and the need to find a foundation or agency willing to support it, that it is a very complex undertaking and that process failure in realizing the experimental program might occur so that one might not be able to evaluate the meaning of the outcomes; there may be a problem of external validity in projecting effects of a social experiment under controlled conditions to the application of the same program in routine care.

A variant of the social experiment approach would be to introduce the entire health status insurance system of interventions in a large health maintenance organization. The main advantage over the social experiment is that there is already a structure that might support the various elements of the program and associated research, and this might decrease cost and facilitate decision making in process implementation; and that one would not have to depend upon outside sources to finance the program. The disadvantages over the social experiment would be that it would involve a considerable risk for the health maintenance organization, and one would lose the randomized control feature of the social, experiment, unless such an experiment was introduced within the health maintenance organization and this, in turn, would raise costs.

Full implementation of a health status insurance program by a government would have the advantages that political will would presumably be there from the start (disadvantages of the other two approaches is that they might take a long time before results are obtained and by that time, political will might be gone). Another advantage is that the difficulties in introducing this approach in different places or different settings would be addressed from the very beginning, allowing modification of the program as it is being developed and solving the problem of external validity (except, of course for transfer of the approach to other countries). It would also be easier to educate the population about it and to develop support from the population. The main disadvantages is that it would be done without preliminary research (except to the extent that such research might be introduced in the governmental plan), that the government would face a large risk that it may not be willing to take; and that political resistance to the program might be much fiercer than if it were introduced more gradually. Thus, initial full implementation of the program would require a strong political will and governmental willingness to take risks.

To sum up, each approach has advantages and disadvantages. The gradual "vertical" approach appears to entail the fewest risks and might be the approach of choice for a country that is in the process of reforming its health care system.

Discussion

This paper has presented a concept of health insurance which promotes prevention, addresses individual as well as social determinants of illness and injury, and supports a coordinated series of interventions ranging from some at the purely personal level, to the local social and physical environment, and then to society at large. At the conceptual level it attempts to bridge two approaches, personal health risk behavior and social determinants of illness, and, with regard to the latter, two interpretations of the social determinants of health inequality, class and income.

To translate this concept into a program, a new form of health insurance, health status insurance, is proposed, along with a health status organization or system to implement it. The implementation would require changes in priorities, and health care roles, and research to develop new approaches to effectiveness and efficiency, as well as interventions in various power structures at local and national levels.

This is obviously an ambitious undertaking, at the conceptual as well as implementation level. Objections, to it may be based on considerations of political or economic realities. The current political and economic atmosphere with its predominant emphasis on cost control is not supportive of this concept. However, one should not discount the importance of "vision", the ability to visualize a complex response to the problems of our time which would guide the search for solutions to these problems. It is possible that there might be more receptivity to this program than might appear at first sight. The large number of publications on behavioral risk factors at a time when progress in that field is very gradual, and the fast growing literature on social inequality in relation to inequality in health, attest to the current interest in the two main general problems targeted by our approach.

The health status insurance represents a historical change in the concept of health insurance. Thus, it may be worthwhile to examine it from a historical perspective. Health insurance has changed since its inception in the sick funds of the nineteenth century. The initial sick funds were little concerned with health care. Their main emphasis was to have some financial security during absence from work due to illness or injury and to have funds to pay for funeral expenses when the insured person died (75). This gradually changed early in the twentieth century to an emphasis on paying for illness care when surgical and then medical care became more scientific and effective with regard to health outcome, and, also, more expensive. This is the type of health insurance that has existed throughout most of

the twentieth century and with which we are familiar, because it is "of our times".

Yet in the end of the twentieth century other changes are taking place. Initially, very little prevention was involved in health insurance; indeed there was some antagonism between the classical concept of insurance which addresses relatively rare events which are predictable only in a statistical sense, and prevention which is applied universally. During the past two decades, health insurers have supported health maintenance organizations, a fundamental concept of which is health maintenance through primary and secondary prevention. The concept of uniting prevention and health insurance is well accepted at the current time in most health insurance systems.

Other features of the proposal appear to be in tune with recent currents for change. One of them is the increased participation of patients in decision making concerning the management of their condition. Another is the increasing number of collaborative efforts between personal health services supported by health insurance and public health departments in the USA (44-47) and between personal health service delivery and public health in European countries (4).

The proposed health status insurance appears to run counter to the overriding emphasis on cost control through reduction, at first of supply and later of demand, which had dominated changes in health insurance and health service at least since the 1970s in the United States and in Europe. However, health status insurance has new approaches to cost control which might be more effective in the long run than the predominantly economic approaches that have been used till now.

Furthermore, after more than 20 years, the emphasis on cost containment may have run its course. There is increasing concern with barriers to access, both in the United States where the number of uninsured has risen to 40 million (43), and in European countries where there is concern that the increases in cost sharing by the patient may act as a barrier to necessary care (4). It may be time to give higher priority to disease prevention, health promotion, and increased quality of life for people in all social strata. The diffusion of information and ideas on inequality in health is reaching the point when it is stimulating new policies in several European countries (76). Effective prevention policies can be implemented in different health care systems (77). The prevention-based health status insurance approach might also be adaptable to several types of health care systems.

Thus, it may be appropriate to consider health status insurance at this time, especially in countries which are already engaged in the process of redesigning their health systems, as many Eastern and Central European countries are. Introduction of this concept and its organizational implementation might be gradual, health problem by health problem, provided that all levels of intervention are addressed for each problem.

References

- 1 Murray CJL, Lopez AD. Quantifying the burden of disease and injury attributable to the ten major risk factors. In: Murray CJL, Lopez AD. *The global burden of disease*. Cambridge (MA): Harvard University Press; 1996, Chapter 6, p. 295-324.
- 2 U. S. Preventive Service Task Force. *Guide to clinical preventive services*, 2nd ed. Baltimore (MD): Williams and Wilkins; 1996.
- 3 McGinnis JM, Foege WH. Actual causes of deaths in the United States. *JAMA* 1993;2207-12.
- 4 Saltman RB, Figueras J. *European health care reform. Analysis of current strategies*. Copenhagen: World Health Organization Regional Office for Europe; 1997.
- 5 World Health Organization. *Constitution of the World Health Organization. Basic documents*. 40th edition. Geneva: WHO; 1994.
- 6 Wood D, Durrington P, McInnes G, Poulter N, Rees A, Wray R. Joint British recommendations on prevention of coronary heart disease in clinical practice. *Heart* 1998;80 suppl 2:S1-S29.
- 7 Arblaster L, Lambert M, Entwistle V, Forster M, Fullerton D, Sheldon T, Watt I. A systematic review of the effectiveness of health services intervention aimed at reducing inequalities in health. *Journal of Health Services Research and Policy* 1996;1:93-103.
- 8 McKeown EA. *The modern rise of populations*. London: Arnold; 1976.
- 9 Marmot MG. Improvement of social environment to improve health. *Lancet* 1998;351:57-60.
- 10 Williams RB, Feaganes J, Barefoot JC. Hostility and death rates in ten US cities [abstract]. *Psychosom Med* 1995;57:94.
- 11 Wallace R, Huang Y-S, Gould P, Wallace D. The hierarchical diffusion of AIDS and violent crime among US metropolitan regions: inner city decay, stochastic resonance and reversal of the mortality transition. *Soc Sci Med* 1997;44:935-47.
- 12 Susser M, Susser E. Choosing a future for epidemiology. II. From black box to Chinese boxes and eco-epidemiology. *Am J Public Health* 1996;86:674-7.
- 13 Pierce N. Traditional epidemiology, modern epidemiology, and public health. *Am J Public Health* 1996;86:678-83.

- 14 Jahiel RI. Health and health care of homeless people. In: Robertson MJ, Greenblatt M, editors. Homelessness: a national perspective. New York: Plenum Press; 1992. p. 133-63.
- 15 Jahiel RI. Homeless-making processes and the homeless makers. In: Jahiel RI, editor. Homelessness: a prevention-oriented approach. Baltimore (MD): Johns Hopkins University Press; 1992. p. 269-96.
- 16 Wilkinson RG, editor. Class and health: Research and longitudinal data. New York: Tavistock; 1986.
- 17 Townsend PN, Davidson N, Whitehead M. Inequalities in health. London: Penguin; 1988.
- 18 Feinstein JS. The relationship between socioeconomic status and health: A review. *Milbank Q* 1994;71:279-322.
- 19 Abel T. Measuring health life style in comparative analysis: theoretical issues and empirical findings. *Soc Sci Med* 1991;32:899-908.
- 20 Rose G. Sick individuals and sick populations. *Int J Epidemiol* 1985;14:32-8.
- 21 Marshall KG. Prevention. How much harm? How much benefit? 3. Physical, psychological, and social harm. *Can Med Assoc J* 1996;155:169-76.
- 22 CDC. Missed opportunities for preventive counseling for cardiovascular disease - United States, 1995. *MMWR (Morbidity and mortality weekly reports)* 1998;47:91-5.
- 23 Johnson, M, Larsson LS, Saljo R, Svardsudd K. Lifestyle discussion in the provision of health care: an empirical study of patient-physician interaction. *Soc Sci Med* 1998;47:103-12.
- 24 Drenthen T. Challenges to prevention in Dutch general practice. *Am J Clin Nutr* 1997;65 suppl:1943S-5S.
- 25 Heywood A, Ring I, Sanson-Fisher R, Mudge P. Screening for cardiovascular disease and risk reduction counseling behaviors of general practitioners. *Prev Med* 1994;23:292-301.
- 26 Mechanic D. Changing medical organization and the erosion of trust. *Milbank Q* 1996;74:171-89.
- 27 Mechanic D. Public trust and initiatives for new health care partnerships. *Milbank Q* 1998;76:281-302.
- 28 Hale LA, Fritz VU, Eales CJ. Do stroke patients realize that a consequence of hypertension is stroke? *South African Medical Journal* 1998;88:451-4.
- 29 Schoenbaum M. Do smokers understand the mortality effects of smoking? Evidence from the Health and Retirement Survey. *Am J Public Health* 1997;87:755-9.
- 30 Prohaska J, DiClemente C. Stages and processes of self-change in smoking. Toward an integrative-model of change. *J Consult Clin Psychol* 1983;5:390-5.
- 31 Dijkstra A, De Vries H, Roijackers J. Targeting smokers with low readiness to change with tailored and non-tailored self-help materials. *Prev Med* 1999;28:203-11.
- 32 Ovrebo B. Understanding the needs of homeless and near-homeless people. In: Jahiel RI, editor. Homelessness: a prevention-oriented approach. Baltimore (MD): Johns Hopkins University Press; 1992. p. 139-50.
- 33 Dupper M, Gober DL. Control theory and reality therapy: counseling methods for health and wellness professionals. *Journal of Health Education* 1998;29:230-3.
- 34 Wyer RS, Radvansky GA. The comprehension and validation of social information. *Psychol Rev* 1999;106:89-118.
- 35 Mant D. Effectiveness of dietary interventions in general practice. *Am J Clin Nutr* 1997;65 suppl:1933S-8S.
- 36 James WC. Preventive medicine as a component of the office visit - is it time for a change? *West J Med* 1994;161:181-3.
- 37 Cohen SJ, Halvorson HW, Gosselink CA. Changing physician behavior to improve disease prevention. *Prev Med* 1994;23:284-91.
- 38 West E, Barron DN, Dowsett J, Newton JN. Hierarchies and cliques in the social networks of health care professionals: implications for the design of dissemination strategies. *Soc Sci Med* 1999;48:633-46.
- 39 Wiginton KL. Shame and psychosocial health: considerations for health education. *Journal of Health Education* 1999;30:30-5.
- 40 Kelleher C. Health promotion: shades of Lewis Carroll. *J Epidemiol Community Health* 1995;49:1-4.
- 41 Kickbush I. Think health: what makes the difference. *Health Promotion International* 1997;12:265-72.
- 42 Dunn EA, Marcus BH, Kampert JB, Garcia M, Kohl III HW, Blair SN. Comparison of lifestyle and structured interventions to increase physical activity and cardiorespiratory fitness. A randomized trial. *JAMA* 1999;281:327-34.
- 43 Andersen RE, Wadden TA, Bartlett SJ, Zemel B, Verde TJ, Franckowiak SCX. Effects of lifestyle

activity vs. structured aerobic exercise in obese women. A randomized trial. *JAMA* 1999;281:335-40.

44 Shortell SM, Gillies R, Anderson DA, Erickson KM, Mitchell B. Remaking health care in America. Building organized delivery systems. San Francisco (CA): Jossey Bass; 1996.

45 Halverson PK, Mays GP, Kaluzny AD, Richards TB. Not-so-strange bedfellows: models of interaction between managed health care plans and public health agencies. *Milbank Q* 1997;75:113-38.

46 Lasker RD, and the Committee on Medicine and Public Health. Medicine and public health: the power of collaboration. New York: The New York Academy of Medicine; 1997.

47 Lasker RD, Abramson DM, Freedman GR. Pocket guide to cases of medicine and public health collaboration. New York: The New York Academy of Medicine; 1998

48 Koeske GF, Kelly T. The impact of overinvolvement on burnout and job satisfaction. *Am J Orthopsychiatry* 1995;65:282-92.

49 Mercer J. Labeling the mentally retarded. Berkeley (CA): University of California Press; 1973.

50 Kunst A, Cavelaar A, Groenhof F, Geurts J, Mackenbach J, and the EU Working Group on Socioeconomic Inequalities in Health. Socioeconomic inequalities in morbidity and mortality in Europe: A comparative study. Rotterdam: Erasmus University; 1997.

51 Daly MC, Duncan GJ, Kaplan GA, Lynch JW. Macro-to-micro links in the relation between income inequality and mortality. *Milbank Q* 1998;76:315-39.

52 Marmot MG, Rose G, Shipley M. Hamilton PJS. Employment grade and coronary heart disease in British civil servants. *J Epidemiol Community Health* 1978;3:244-9.

53 Link BG, Phelan JC. Social conditions as fundamental causes of disease. *J Health Soc Behav* 1995;36: 80-94.

54 Adler NE, Boyce T, Chesney MA, Cohen S, Folkman S, Kahn RL, Syme LE. Socioeconomic status and health: The challenge of the gradient. *Am Psychol* 1994;49:15-24.

55 Karasek B, Theorell T. Healthy work: stress, productivity, and the reconstruction of working life. New York: Basic Books; 1990.

56 Evans RG, Barer ML, Marmor TR. Why are some people healthy and others not? The determinants of health of populations. New York: De Gruyter; 1994.

57 Drews C. The concept and definition of dominance in animal behavior. *Behaviour* 1993;125:283-313.

58 Waitzman NJ, Smith KR. Separate but lethal. The effects of economic segregation on mortality in metropolitan America. *Milbank Q* 1998;76:341-73.

59 Ecob R, Smith GD. Income and health: what is the nature of the relationship? *Soc Sci Med* 1999;48:693-705.

60 Stone ME. Housing and the economic crisis: an analysis and emergency program. In: Hartman C, editor. America's housing crisis: what is to be done? Boston (MA): Routledge and Kegan Paul; 1983. p. 99-150.

61 Navarro V. The politics of health policy. The US reforms 1980-1994. Oxford: Blackwell; 1994.

62 d'Intignano, BM. Industrial epidemics. In: Chiniz D, Cohen J, editors. Governments and health systems: implications of differing involvements. Chichester (UK): John Wiley; 1998. p. 585-95.

63 Jahiel RI. Health care system in the United States and its priorities: history and implications for other countries. *Croatian Med J* 1998;39:316-31.

64 Light DW. The rhetorics and realities of community health care: the limits of countervailing power to meet the health care needs of the twenty-first century. *J Health Polit Policy Law* 1997;22:105-45.

65 Emanuel EJ and Emanuel LL. Preserving community in health care. *J Health Polit Policy Law* 1997;22:147-84.

66 Frankfort DM. The normative constitution of professional power. *J Health Polit Policy Law* 1997;22:185-222.

67 Aday LA, Linder SH. "Community" as the ideal for health care reform. *J Health Polit Policy Law* 1997;22:231-43.

68 Spitz B. Community control in a world of regional delivery systems. *J Health Polit Policy Law* 1997;22:1021-50.

69 Schlesinger M. Countervailing agency: a strategy of principaled regulation under managed competition. *Milbank Q* 1997;75:35-87.

70 Alford RR. Health care politics: ideological and interest group barriers to reform. Chicago: University of Chicago Press; 1975.

71 Charles C and De Maio S. Lay participation in health care delivery making: a conceptual framework. *J Health Polit Policy Law* 1993;18:881-904.

72 Janz NK, Becker M, Kirscht JP, Eraker SA, Billi JE, Woolliscroft JO. Evaluation of a minimal-contact smoking cessation intervention in an outpatient setting. *Am J Public Health* 1987;77:805-9.

73 Lichtenstein E, Hollis JF, Severson HH, Stevens VJ, Vogt TM, Glaslow RE, Andrews JA. Tobacco cessation interventions in health care settings: rationale, model, outcomes. *Addict Behav* 1996;21:709-20.

74 Newhouse JP, and the Insurance Experiment Group. *Free for all? Lessons from the RAND Health Insurance Experiment*. Cambridge (MA): Harvard University Press; 1993.

75 Blanpain J, with Delesie L, Nys H. *National health insurance and health resources – the European experience*. Cambridge (MA): Harvard University Press; 1978.

76 Whitehead M. Diffusion of ideas on social inequalities in health: a European perspective. *Milbank Q* 1998; 76:469-92.

77 Chaulk CP. Preventive health care in six countries: models for reform? *Health Care Financing Reviews* 1994;15:7-19.

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Health status insurance is a health insurance whose primary aim is to improve health status and decrease inequality in health within the covered population. Redistribution and control of cost is a secondary aim, closely integrated with the health status insurance. Croat Med J. 1999 Jun;40(2):129-42. Author. Health insurance is an insurance that covers the whole or a part of the risk of a person incurring medical expenses, spreading the risk over numerous persons. By estimating the overall risk of health risk and health system expenses over the risk pool, an insurer can develop a routine finance structure, such as a monthly premium or payroll tax, to provide the money to pay for the health care benefits specified in the insurance agreement. The benefit is administered by a central organization such as a Your health insurance might not pay a dime toward anything but preventive care until you've met your deductible for the year. Before the deductible has been met, you pay for 100% of your medical bills. After the deductible has been met, you pay only copayments (copays) and coinsurance until you meet your plan's out-of-pocket maximum; your health insurance will pick up the rest of the tab. In this plan type, your health insurance picks up part of the tab for some non-preventive services even before you've met your deductible. The services that are exempted from the deductible are usually services that require copayments. Whether or not the deductible has been met, you pay only the copayment. Your health insurance pays the remainder of the service cost.