

George A. O. Alleyne
Director, PAHO
8 August 1999

EQUITY AND HEALTH** **(Hamburg, Germany)**

According to Aristotle's Eudemian Ethics, the following quotation was inscribed over the temple of Lelo at Delos: "Justice is fairest and Health is best. But to win one's desire is the pleasantest."

I have always been inspired by this and have come to believe that the practice of medicine, especially that related to the medicine of groups of people, provides the ideal opportunity to combine the concerns about health and justice and win one's desire. Just about the time I joined the Pan American Health Organization (PAHO) nineteen years ago, my interest in the relation between justice and health was stimulated further by a small book written by Alastair Campbell, from the Department of Ethics of the University of Edinburgh, entitled *Medicine, Health and Justice*.

Campbell dealt with the issue of ethics and priorities in medicine and stressed the value of individual freedom and needs. If patients were consumers and health care workers were providers then there was a possibility that injustice could be committed if health care was relegated to being an ordinary commodity that was exchanged between providers and consumers in the market place. Equity for him was a matter of distributive justice, and those with the same needs or capacities should be treated equally. Of course it was difficult to find adequate standards for needs. But the part that struck me most forcibly was his treatment of justice as fairness in relation to health in the context of a "balance of freedom, equality and fraternity."

He went on to describe John Rawls' Theory of Justice as it bore on health, referring to the social contract theory of justice in which the "Original Position" is derived by rational individuals devising a society under "a veil of ignorance." The two basic principles that Rawls formulated are that each person should have rights to maximum liberty compatible with a similar system of liberty for all and that inequalities are to be arranged so that they benefit maximally the least advantaged. These basic liberties were described as the "equal liberties of citizenship" which must be tempered by equality in a good society. I have always wondered why these liberties or basic values did not include specifically, as appears in several other declarations on rights and liberties, the right or liberty to have access to those measures necessary to ensure health.

* **Pan American Health Organization, Pan American Sanitary Bureau, Regional Office for the Americas of the World Health Organization.**

** **Presented at the XI World Congress of Psychiatry on "Psychiatry on New Thresholds," Hamburg, Germany, 6-11 August 1999.**

Health must be one of the ends or states that society will pursue. Health, however produced, is an essential aspect of human development, and I will resist any disciplinary arrogance that would induce me to claim that it is the best. However, health just like material wealth is important for enhancing the possibility a human being has to flourish and enjoy life's options. Without it, human beings are limited in the life paths that can be followed. If one believes that it is intrinsic to our condition that we have the same life chances, then one may conclude that it is morally correct to seek for health equality as far as possible.

I have emphasized repeatedly in PAHO that the two basic value principles that should guide our work and our technical cooperation are the search for equity in health and a Pan American approach that sees the countries of the Americas joining hands in the kinds of enterprises that lead to Health For All. I am not alone in this, as the European Region of the World Health Organization (WHO) has placed Equity in Health as the second of thirty-eight targets within its new Policy for Health for All. The target is described thus: "By the year 2020, the health gap between socioeconomic groups within countries should be reduced by at least one fourth in all Member States, by substantially improving the level of health of disadvantaged groups."

In its first policy, that was published in 1985, Equity was accorded the first place among the targets, and I must recognize the sterling work of persons like Margaret Whitehead ensuring that equity is a point of major interest in this Region.

We are not original in this concern, as the issue of equity in health and other areas of human experience has been the subject of debate by philosophers for many years, and more recently the economists have bent their minds to unraveling some of its implications and making proposals to measure and perhaps achieve such equity. As a Director of PAHO, and being neither a philosopher nor an economist, it has not been an easy task to try to grasp the essentials of the two sets of propositions, that is, those of the philosophers and the economists and at the same time devise some practical applications for an organization that is committed to cooperating with countries that have a wide range of social, economic, and health conditions, but are all united in the belief that human action can improve the health of all, particularly the disadvantaged.

I was pleased to see the title chosen for me was "Equity and Health" and not "Equity in Health." The former is broader and implies an examination of equity in the varying conditions and spheres of activity that might impinge on health. Thus, the issue for me is not only equity in health outcomes, but also equity in the various determinants of health. There is wide acceptance of the view that equity refers to differences which are unnecessary or reducible and are unfair and unjust. The concept of fairness obviously involves a moral judgement and is, therefore, intrinsically difficult. As is the case with health outcomes, similarly the inequities in health determinants are those that should not exist. Every person should, in terms of equity, have the opportunity to access those sanitary and social measures necessary to protect, promote, and maintain or recover health.

Because of biological constraints, there are differences or inequalities in health outcomes or health status that are unavoidable or irreducible, but at the same time there are myriad examples of difference or inequalities in health outcomes that are unnecessary and, therefore, represent inequity. There are differences between rural and urban areas, differences between ethnic groups, differences on the basis of gender, intergenerational differences, and the most marked of all are the differences between rich and poor both between and within countries. One of the starkest and most egregious examples of unjust differences in our Region is with regard to maternal mortality. A pregnant woman in the poorest country of our hemisphere has about a fifty times greater risk of dying as a result of her pregnancy than a woman in the rich countries. This may be related to the fact that whereas almost all women in the rich countries are attended during the birth by a trained attendant, this happens in just about 50% of the time in the poorest countries. To take another example, the population attributable risk for dying from acute respiratory infections was calculated to show that if all countries had the same mortality rate for children under 5 years, as in North America, there would be 93% fewer deaths from these infections in this age group in Latin America and the Caribbean.

Although almost all countries in the world have data to show the differences in health outcomes, I refer frequently to the United Kingdom where there is a tradition of over 150 years of collecting and analyzing health data. The famous Black Report of 1980 was a seminal work on the inequalities in health and the policies necessary to promote and restore health. Even though the report caused little positive domestic reaction at the time, it was and continues to be the stimulus for debate and research in the international arena on the inequalities of health outcome and the means to address them.

More recently another study on inequalities in health in the UK has been conducted, and the findings have been published in what is known as Acheson Report after the chairman, Sir Donald Acheson. The Report documents the persisting inequalities in health and states "...for many measures of health, inequalities have either remained the same or have widened in recent decades." This still comes as a surprise to many of us who had imagined that universal access to health care services as obtains in the National Health Service would have served to decrease the inequalities as the overall mortality continued to fall. The Report "adopts the socio-economic model of health and its inequalities" and posits that the capacity of the personal behavior and lifestyles of individuals to affect health is significantly modulated by the social and community influences in which this individual operates. In addition, there is a wide range of living and working conditions that can impact positively or negatively on the health outcomes, and the health care services are included among these conditioning factors but is not given any primacy in affecting outcome.

The data show clearly the impact of social class on health. In spite of criticisms of the formulation of the social classes, there is now overwhelming evidence of the influence of social hierarchy on health. In the classic work *Why Some People Are Healthy and Others Not* by Evans and his colleagues, Renaud makes a most definitive statement:

The lower one is situated in the social hierarchy as defined by work, lodging, education, income or whatever; the lower one's probability of staying in good health and the lower one's life expectancy. This is the most frequent and most pervasive of all the observations made in the history of public health.

The fact that health outcomes are to a large measure socially determined gives hope that these social conditions, if altered, can lead to improved health. The Acheson Report notes that in order to reduce health inequalities, “further steps should be taken to reduce income inequalities and improve the living standards of poor households.” This recommendation is remarkably accurate in that it addresses both the aspect of difference in income and the absolute level of income that is associated with poverty. There has often been debate as to whether it is income distribution or poverty that has the major impact on health. The answer is that the predominance of one or other depends very much on the economic status of the population examined.

The relation of poverty to ill health has been known for centuries, and the classic work of medical historians such as Sigerist outlines the evolution of that relationship. He describes the major lines of thought of the eighteenth century when activists like Johann Peter Frank recognized poverty as a major cause of disease and advocated for a police function in public health. The industrial revolution accentuated the appalling health living conditions of the poor and led to the utilitarian approaches of reformers like Chadwick towards improving the health of the poor in the nineteenth century.

It is appropriate here in Germany to point out the role of one of my medical heroes — Rudolf Virchow— whose leadership of the health reform movement in this country has left a remarkable legacy in terms of social security that includes health benefits. It was about 150 years ago that he investigated an outbreak of relapsing fever in Silesia and came to the conclusion that the causes were essentially social. According to Sigerist, he recommended prosperity, education, and liberty, which can develop only on the basis of complete and unrestricted democracy.

The impact of poverty on health is still evident today, and in every country it will be the poor who are the most disadvantaged, both in terms of health outcomes and in access to the factors that make for good health. Poverty is associated with mental as well as physical illness, and there are good data to show that low socioeconomic status is associated with higher rates of psychopathology. But as the Report on World Mental Health points out, “although poverty is linked to mental ill health, economic prosperity does not translate directly into either personal or social well-being.”

An analysis by Kawachi and his colleagues describes lucidly the two approaches to the economic situations associated with ill health. There is the focus on absolute poverty with the need that is expressed so often today of eliminating or eradicating poverty. These expressions borrow from the image of disease control and eradication but, although attractive as slogans, are not usually useful in operational terms. The other focus is on relative deprivation, where it is the difference in income between groups perhaps at any level of wealth that is a major determinant of health outcome. It is important to make this differential. Poverty affects the individual’s capacity to maintain or recover his or her health and in addition impacts on the societal environment that itself will affect health. Relative deprivation or, in its commonly assessed expression, maldistribution of income is not an individual characteristic, but is very much a structural aspect of the society or group in which the individual has to function.

Ana M. Melas 7/28/99 4:10 PM

Deleted: _

The relationship between income and measures of health such as life expectancy is a curvilinear one. The poorer the group of individuals, the sharper and clearer is the relationship, but above a certain level of income the curve flattens and the effect of income on health is progressively muted. In terms of country level comparisons, we can note that the effect of income on life expectancy, for example, is stronger in the developing than in the more developed countries.

In a classic series of data produced 25 years ago, Preston developed a family of curves for the relationship between income and life expectancy for different decades of this century. The curves remain qualitatively the same, but over time as countries prosper the curves shift, and there is a higher life expectancy for the same income level. This is a most important observation in that it leads to the view that there are exogenous factors such as technology, both hard and soft, that have contributed to this increase in life expectancy at similar income levels. It is the advent of this technology that has been implicated in the finding of the relatively more rapid improvements in health in many of the developing countries.

As indicated above, it is not only absolute deprivation that is important, but income inequality has an equally and sometimes more powerful influence on such health outcomes as infant mortality rate and life expectancy, as the seminal work of Wilkinson has proven. Particularly in the developed and richer countries it is income distribution rather than individual measures of wealth such as GNP per caput that are important. Income maldistribution is associated not only with health outcome but with a whole range of social pathologies with which many of you deal. In the societies with more income inequality, there is increased criminal activity, for example.

It has been suggested that it is not only difference in outcomes such as mortality rate that can be affected by maldistribution of income. Income differentials result in or are derived from different work opportunities, and these employment differentials are said to create a situation in which the self-worth and autonomy of the lower paid worker are so affected as to lead varying degrees of psycho-social stress. The spread of information that shows what can be achieved elsewhere makes the appreciation of the gap between aspirations and reality so great that there can be outcomes measured in terms of physiological abnormality. The television images of the rich and famous are seen in the most remote parts of the world, and miracles of modern technology appear to be there simply for the asking. Blood pressure, for example, increases when there is incongruity between what the individual perceives to be an acceptable or conventional lifestyle and that to which he or she is subjected or relegated because of material deprivation.

It has also been proposed that when the material deprivation is such that the expectations of the individual cannot be fulfilled, a situation develops similar to the anomie described by Durkheim. As he first conceived it, anomie refers to a state in which the usual norms are no longer clear or observed, and later he used the concept to describe anomic suicide. The competition between individuals and the incongruence between aspirations and possible satisfaction favored the impulse towards suicide. It is not farfetched to relate the increase in criminal activity and social stress attendant upon income inequality to the anomie of Durkheim.

I was intrigued by the possibility that there might be a relationship between income distribution and the rates of suicide. However, in some preliminary analyses of data from our Region, it appears that suicide and death from self-inflicted injury increase as income distribution improves. Countries with more equitable income distribution have higher mortality rates from suicide. This preliminary finding merits more research, as it would seem to run counter to the accepted beliefs.

The competitiveness of modern western society stresses and glorifies difference. Wealth may be important not only for its own sake and because it increases options but as a mark of having surpassed others. It satisfies the basic and almost primal drive for recognition. As J.S. Mill is supposed to have said: "...men do not desire to be rich, but to be richer than other men."

I am tempted to assume that there is almost no limit to the degree of income inequality that may occur, and there is evidence that this is growing worse, certainly in our hemisphere. Indeed, as Kaus puts it in a provocative book "The End To Equality", it may be pointless to seek to reduce income inequality, as there are too many forces pulling in the opposite direction in the liberal, market based societies that seem to be overtaking the world. He proposes that it may be more feasible to look for equality in certain civic areas among which he includes health care.

But there are good grounds for believing that there is some theoretical minimum gap in health outcomes for which we can strive in the search for equity. It is possible that health interventions of one or other type may contribute to narrowing this gap. Victora has put forward an interesting thesis based on data collected in Brazil, which show the impact of interventions by the health system in reducing inequities. Any intervention that is likely to improve health will be picked up and used by the more wealthy with attendant improvement in their health status. Only after that group has reached what may be considered the maximum plateau will the technology have an effect in improving the health of the poor, thereby closing the gap. There are several factors that contribute to this differential use of the interventions, and they include ease of access to services and the availability and use of information.

It is an interesting phenomenon that the health care interventions that are more equitably used and result in health outcome equity are those that depend on supply and not on demand. The coverage by vaccines is universally high in the Americas, and the success in eliminating diseases such as poliomyelitis has been due to the ability to deliver vaccines to virtually all children. The coverage for polio vaccine in the Americas is about 90% and for BCG over 90%. The prospect of eliminating measles by the end of next year is very good because of the possibility of delivering the vaccine to all those who are susceptible. Yet the usage of family planning contraceptives is low —only about two-thirds of the women of child bearing age in Latin America and the Caribbean use contraceptives regularly. The former is essentially supply-driven while the latter is very much dependent on induced demand.

Although we agree that the traditional health care services are only partly responsible for the status of the health of the population as a whole, they consume a very large fraction of the nation's health budget and are held to be valuable by all the population. While there is general agreement that in some way there should be equity in terms of health care, there is little agreement as to what that means and how it is to be achieved. Wagstaff is one of the economists who have contributed most perceptively to the debate on equity and health, particularly health

care. He points out the need to separate the wish for health care based on altruism from that rooted in a concern for social justice. He explores the latter and separates the libertarians, who are concerned with a minimum standard of care for everyone, from the egalitarians, who argue that health care should not be determined by ability to pay, and care should be allocated on the basis of need. It is unlikely that there will ever be consensus, and he argues that there is incompatibility between the three interpretations of equity in health care —"equality of access, allocation according to need and equality of health outcomes." I confess to being philosophically an egalitarian with a preference for allocation of health care according to need as being the best option for ensuring equity of health outcome. Having said that, I am very conscious of the difficulty, if not impossibility, of finding a definition of needs of a population that is universally acceptable, and I am also aware of the contradiction that sometimes surfaces between the egalitarian posture and the need for efficiency. In addition, even if one adopts a minimalist approach in the sense of a requirement to meet a minimum standard, there is the compounding problem of finding good indicators.

Equity in health care financing is equally complex, and the differentiation is made between vertical equity in which payment for care is made according to ability and horizontal equity in which those with the same ability pay the same amounts. I am not sure this distinction is useful in operational or policy terms. The various approaches to financing health care—at least in our countries of Latin America and the Caribbean—have focused on the need to abolish the segmentation of the funding sources and opt for a more universal system in which the provision of care is separated from the financing. In Latin America there are traditionally three systems of financing health care. There are the ministries of health, the social security institutions, and the private for-profit sector, and there would be general agreement that this arrangement does not lend itself to equitable access to the services that are needed. Perhaps surprisingly, the majority of the expenditure is in the private sector. One of the most thorny issues in our Region is ensuring that health care includes those persons in the informal sector who do not normally pay direct taxes. This informal sector in some countries is larger than the formal one and usually embraces the majority of the poor and especially poor women. Some 25% of the population of Latin America and the Caribbean lack access to basic health services and thus, by definition, there is no universal equity in health care.

We are currently exploring the possibility of micro-insurance schemes for the informal sector, and these will comprise grassroots organizations in areas and populations that are not normally incorporated into the government or private-operated insurance. These schemes, which are usually adapted to the local working or trade situations, are voluntary and preferably run locally, although I believe that their success will depend on at least some initial funding from the state. One of the ways to success of this approach is through having these micro schemes link up in such a manner that there is reasonable sharing of risk.

I have paid more attention to the influence of income or material wealth and health services to equity in health outcomes. This must not be interpreted that I am insensitive to the possibility that differences in other living and working conditions will also impact on health, or that the relative strengths of the various social networks will condition the ability of the individual to retain or recover the healthy state. I am very aware that trying to separate into neat and discrete categories those social factors whose unequal distribution influence health may lead

me to fall into the trap of reductionism. We have learnt only too well both in the biological and the social sciences related to health that the systemic approach is the most apt.

If health is universally regarded as a good and there is general agreement on a philosophical level as to the desirability of having equity in terms of health outcomes and equity in terms of access to determinants of health, particularly the health services, why is this so difficult to achieve? First, there would be debate as to whether there can ever be equity in terms of health outcomes and the work of Evans *et al* discusses in detail the basic reasons for there being some differential that can probably never be erased in any society. I have referred to this above. But if the services are organized by human institutions, why is there inequity in terms of availability and access?

Birdsall and her colleagues analyzed this unequal distribution of resources for health in developing countries and described efforts to correct it as “swimming against the tide.” She contends that it is based on the distribution of power in these developing societies, although I suspect her analysis is applicable to all societies. If it is governments that are primarily responsible for the allocation or direction of resources, their policies will follow the dictates of rational public choice. This thesis predicates that political decision-makers do not operate simply as individuals seeking to maximize their utility function and to satisfy the perceived needs of individuals. They act to increase the interest, power, and permanence of the group to which they belong, and this approach may be incompatible with equity in access to health services. The recipe for ensuring the reallocation of financing so that the poor benefit equitably from services includes sustained economic growth, political conditions such that there is genuine participation, and gradualism in reallocation to ensure that the resources for the most powerful and articulate groups are not abruptly reduced. I would lay particular stress on the second condition.

What is the role of organizations like PAHO and WHO in promoting and making operational the concept of equity in health, especially when our capacity to change the social ecology is limited? I believe that the first and most important task is to promote the collection of the appropriate data and transform them into useful information. It is useless to begin to speak of equity without first having some good measures of the differences that occur. Countries like the United Kingdom, with its long tradition of collection of vital statistics and other health data, are the envy of many of the countries of the developing world. But in addition, we are plagued with the many different systems of data collection that are to be found. A plethora of national institutions may be collecting the same data from individuals without any thought of making them compatible or perhaps organizing fewer systems that are interconnected. It is not uncommon to see the drive of technology producing data in such quantity and of such varying quality that the capacity of the country to analyze them is overwhelmed. Our emphasis is also to stimulate our countries to disaggregate their data, in such a way that they may be analyzed in terms of geography as a country, even the smallest one is almost a virtual space, and national averages hide the differences that occur. It is critical to have this disaggregation, as it provides information that will permit targeting those areas or groups that are in need, as evidenced by the health data. We are making every effort to stimulate more interest in the traditional vital statistics, which in many places have fallen into neglect, although they were one of, if not the oldest, form of health data to be collected. In addition, it is becoming clearer that any focus on

equity demands that the country data sets must go beyond vital statistics and include measures of the performance of the health services as well as other variables such as gender and ethnicity, and a range of social indicators that are usually collected by specific surveys. There has been significant progress, and almost every country of the Americas is now producing basic core data on health as a tool for the planning in the health sector.

Our forte is technical cooperation, which must go beyond assisting in the collection of good data. If we are to help to reduce inequity, we must identify the gaps that occur and target our own technical cooperation towards the application of the technologies that may reduce those gaps. In the case of specific diseases it is conceptually easy to define the gaps or differences between areas or groups and cooperate in the application of the technology that can reduce the gap. As noted above, this is easier with the interventions that are supply-driven, and different tools have to be used in those areas that are essentially demand-driven. The tools of marketing and the techniques of social communication are coming to the fore as behavior change of individuals or groups becomes more and more necessary to impact on the major health problems of our Region. The whole concept of equity of access to the services does not always take account of the fact that accessibility does not necessarily imply usage. The motivation for the socially disadvantaged or excluded to make use of services that are theoretically accessible may not be the same as for the more fortunate groups, even apart from the difference in transactional costs. The socially disadvantaged are apparently more resistant to changing risk behaviors than others.

I am conscious of the inequity that applies to mental illness. The forms of organization of our mental health services are a manifestation of the frank discrimination against the mentally ill that has its roots and origins in the fear and ignorance of mental illness. Mental health is rarely included in considerations of public health, perhaps because public health has been linked historically to disease eradication. When I review the many schemes for reform of the health sector that are currently occupying the attention of our countries, I rarely if ever see any mention of any specific interventions for mental health that ought to be included in the basic or essential package of services that should be made available to all. Perhaps the myth still persists that there are not efficient population-based interventions that can affect the burden of mental illness. In this case the inequity is between groups of persons rather than based on such determinants as place, sex, or race. We believe that this can be changed. We estimate, for example, that the twenty-four million persons in Latin America and the Caribbean with treatable depression who are not receiving regular therapy is evidence of a gap that can be closed. We are convinced that it is perfectly possible to institute treatment schemes at the primary care level that will go some way towards closing this gap.

Mr. Chairman, the theme of your Congress is "Psychiatry On New Thresholds," and I captured some of the excitement conveyed by your President, my friend Norman Sartorius, in his invitation in which he raised the image of your discipline stepping into a brightly lit new world. As you step forward, I hope that you will make or retain as one of the canons of your faith that it is imperative to advocate as loudly as you can for there to be reduction of those unnecessary and unjust differences that represent inequity. I hope you will see that the widening of the gaps, especially in the areas of social concern, represent a recipe for an unstable world. I hope that you will ensure that the new forms of organization of care, such as that implied in "managed care,"

will not contribute to increasing the gaps for care in mental illness. I believe that these are all goals worthy of your Association, because it was this very body that two years ago adopted the Declaration of Madrid which affirmed the following: "As members of society, psychiatrists must advocate for fair and equal treatment of the mentally ill, for social justice and equity for all."

I applaud you for the appropriateness and timeliness of that statement, and I will end by quoting from my reformist hero, Virchow, who wrote in the first issue of his Journal on Medical Reform: "The physicians are the natural attorneys of the poor, and social problems fall to a large extent within their jurisdiction." I hope that you will discharge your responsibility in a manner that would make Virchow proud of you.

I thank you and wish you every success in your Congress.

BIBLIOGRAPHY

Acheson D. *Independent inquiry into inequalities in health*. Report. London: The Stationary Office; 1998.

Aron R. *Main currents in sociological thought*. Basic Books, Inc; 1967.

Birdsall N, Hecht R. *Swimming against the tide: strategies for improving equity in health*. Washington, D.C. Inter-American Development Bank; 1995. (IDB Working Papers Series No. 305).

Birdsall N, James E. *Efficiency and equity in social spending*. Washington, D.C.: World Bank Working Papers 1990; Series No. 274.

Black D, *et al*. *Inequalities in health: report of a research working group*. London: London DHSS; 1980.

Campbell AV. *Medicine, health and justice: the problem of priorities*. Churchill, Livingstone, Edinburgh, London and New York; 1978.

Desjarlais R, Eisenberg L, Good B, Kleinman A. *World mental health: problems and priorities in low income countries*. New York, Oxford: Oxford University Press; 1995.

Dror DM, Jacquier C. *Microinsurance: extending health insurance to the excluded*. International Social Security Review; 1999 ;52(1):71-97,.

Kawachi LS, Miller M, Lasch K, Amich B III. *Income inequality and life expectancy - theory, research and policy*. Society and Health Working Paper Series No. 94-2. Boston: Harvard School of Public Health; 1994.

Kohn R, Dohrenwend BP, Mirotiznik J. Epidemiological findings on selected psychiatric disorders in the general population. In: *Adversity, stress and psychopathology*. New York: Oxford University Press; 1998.

Preston SH. *The changing relationship between mortality and level of economic development population*. London: 29:231-248; 1975.

Renaud M. The future: hygeia versus panakeia? In: *Why some people are healthy and others not? The determinants of health of populations*. Evans RG; Barer, ML; Marmor, TR. eds. New York: Aldine de Gruyter; 1994.

Rice T. Can markets give us the health system we want? *J Health, Politics, Policy, and Law*. 1997; 22:383-425.

Sigerist HE. *Medicine and human welfare*. New Haven:Yale University Press; 1941.

Victoria CG. Reducing health inequalities: can health interventions make an impact? Paper presented at the ninth annual Public Health Forum. London School of Hygiene and Tropical Medicine; April, 1999.

Wagstaff A, Van Doorslaer E. Equity in health care and financing. In: Culyer AJ, Newhouse JP, eds. *North Holland Handbook of Health Economics*; 2000.

Wagstaff A, Van Doorslaer E. Equity in the finance and delivery of health care: concepts and definitions. In: Van Doorslaer E, Wagstaff A, Rutten F, eds. *Equity in finance and delivery of health care: an international perspective*. London: Oxford University Press; 1993.

Whitehead M. *The concepts and principles of equity and health*. Copenhagen: World Health Organization Regional Office for Europe; 1990.

Whitehead M. The health divide. In: Townsend P, Whitehead M, Davidson N, eds. *Inequalities in health: the Black report and the health divide*. 2nd ed. London: Penguin; 1992.

Wilkinson RG. Socio-economic determinants of health: health inequalities: relative or absolute material standards? *Br Med J* 1997; 314:591-595.

Wilkinson RG. *Unhealthy societies: the afflictions of inequality*. London: Routledge; 1996.

R:\speeches\1999\157-e
8 September, 1999

