

The meaning and goals of equity in health

W-C Chang

The meaning and implications of "equity in health" are discussed. A conceptual framework is proposed to delineate the roles of empirical and normative research in determining when inequalities in health are equitable.

J Epidemiol Community Health 2002;**56**:488-491

Mooney, in his review article entitled "What does equity in health mean?", stated that ". . .clarifying what equity means or should mean is a difficult but important task".¹ After noting that "various definitions and dimensions are possible", however, he concluded that "it is difficult to say which is correct—what is "right" is a value laden question". Are we making any more progress in clarifying this concept since that time?

It is obvious and is now widely accepted that equity differs from equality. Noting that World Health Organisation documents used the term "equity in health" to refer to differences in health that are unnecessary, avoidable, unfair, and unjust, Whitehead² offered the following working definition:

"Equity in health implies that ideally everyone should have a *fair opportunity* to attain their full health potential and, more pragmatically, that none should be disadvantaged from achieving this potential, if it can be avoided (page 433).

Equity is therefore concerned with creating equal *opportunities* for health, and with bringing health differentials down to the lowest level possible." (page 434).

Daniels *et al* commented: "If we can also agree on what is avoidable, unnecessary, and unfair . . .then we can agree on which inequalities are inequitable."³ Unfortunately, such an agreement seems to be as elusive as ever. The purpose of this paper is to go beyond Whitehead's working definition and further explicate and clarify the meaning and implications of "equity in health".

EQUITY AS A NORMATIVE CONCEPT

To clarify the meaning of equity in relation to health, a series of propositions will be advanced. My first proposition is that equity is a *normative* concept. This is a reason why it differs from equality, which is an *empirical* concept. It is a purely empirical question to design a valid and reliable instrument, and use it to measure any differences or inequalities in health status that may exist between various individuals or groups.

To assert certain inequalities as inequities, however, further normative appraisal is required. The most fundamental among such appraisals is a biological one: Are there any biological differences that may explain the observed variations in health status? If no plausible biological differences can be found, then it is probable that the variations in health status are caused by (physical and social) environmental factors, and hence are more amenable to human intervention. Figure 1 was plotted from the data presented in *Healthcare International*,⁴ showing that life expectancies in lower income countries such as Russia (RU), South Africa (SA), and Brazil (BR) were below 70 years, as compared with over 75 years in higher income countries such as Japan (JA), Canada (CN), and Sweden (SW). There is no obvious biological explanation to account for such differences in life expectancy. This is clearly the case between China (CH) and Taiwan (TW), for instance, with a difference of about five years in life expectancy despite their similar racial and ethnic compositions. Therefore, it is safe to attribute these inequalities in health to environmental, social, political, and economic policy differences, which are amenable to intervention, and hence are unnecessary and avoidable.

Are these inequalities unjust and unfair, and hence inequitable? That may be true for some countries if economic exploitations by other countries are responsible for their lower health status. No such exploitation between Taiwan and China has occurred in the past 50 years to conclude that disparity in health status between the two, although amenable to intervention, is indeed inequitable. A necessary condition for inequity, therefore, is the breach of either *horizontal equity* (equal treatment to equals) or *vertical equity* (unequal treatment to unequal need)⁵ by the *same authority*. The case of independent authorities pursuing different political and economic paths, resulting in disparities in health status as in the above example, is less clear cut. Some may adhere to a totally egalitarian principle and denounce all such inequalities as inequities as they may be avoidable and unnecessary. Others may take a more conciliatory approach and only condemn those inequalities that result from grossly unethical behaviours such as corruption and human rights violations as inequities.

A VALUE JUDGMENT ON DISPARITIES IN HEALTH STATUS

My second proposition is that equity in health is primarily concerned with passing a value judgment on *health status*, which may be equal or unequal between individuals and groups. To conclude that any similarities or differences in health status are equitable or not, however, it is

W-C Chang, Canadian VIGOUR Centre Research Group, Department of Medicine, 214 Heritage Research Centre, University of Alberta, Edmonton, Alberta, Canada T6G 2S2

Correspondence to: Dr W-C Chang; weiching.chang@ualberta.ca

Accepted for publication 5 January 2002

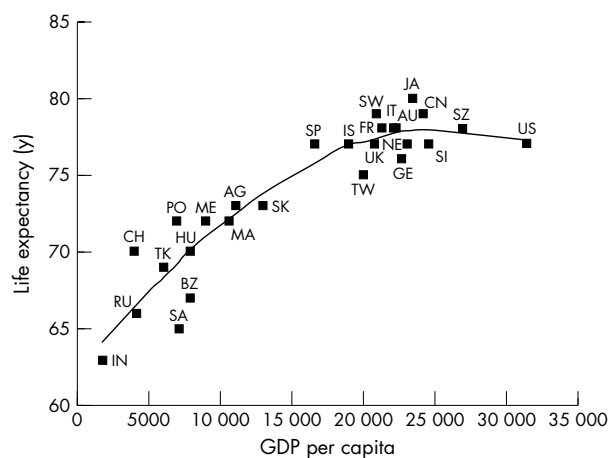


Figure 1 Life expectancy compared with GDP per capita for selected countries. Source: The Economist Intelligence Unit, 1999. The country codes are as follows: AG=Argentina, AU=Australia, BZ=Brazil, CH=China, CN=Canada, FR=France, GE=Germany, HU=Hungary, IN=India, IS=Israel, IT=Italy, JA=Japan, MA=Malaysia, ME=Mexico, NE=Netherlands, PO=Poland, RU=Russia, SA=South Africa, SI=Singapore, SK=South Korea, SP=Spain, SW=Sweden, SZ=Switzerland, TK=Turkey, TW=Taiwan, UK=United Kingdom, US=United States.

necessary to go beyond the measured health status and examine its determinants. For instance, life expectancy at birth in almost all countries is higher for women than men.⁶ Is this inequality in life expectancy rooted in biological differences between sexes, and hence no attempt should be made to narrow the gender gaps? Or, should “affirmative action for men”, such as redesigning their societal roles and occupational activities, be considered, so as to improve the life expectancy of men more than women? How about “affirmative action for women” if, despite their higher life expectancies, women are shown to face greater barriers to achieve optimal levels of health? To tackle the issue of equity, it should be clearly understood that the central task is to assess, empirically and normatively, the similarities or differences in health status between individuals or groups. While the empirical component deals with assessing health status, its determinants and their modifiability, the normative component addresses the question of values—that is, the ethics and desirability of interventions. Such interventions are more difficult to justify when the inequality in health status such as between genders is rooted in human biology.

EQUITY AND HEALTH FOR ALL

My third proposition has to do with the goal of equity in health, which is to promote actualisation of optimal health *for all*. Equity in health, therefore, is concerned with providing and enhancing opportunities for all individuals to achieve their optimal health given their potential. As such opportunities tend to be more deprived and less available to the disadvantaged than the advantaged, the goal of equity in health is congruent with Rawls’ maximin theory that maximises the minimum position—that is, to give priority to the least advantaged in society.¹⁷ This may result in “bringing health differentials down to the lowest level possible”,² but that need not, and should not, be the overriding principle of equity in health as advocated by egalitarians.⁸ It is of utmost importance for equity to mean that *all* individuals be provided “equal” opportunities to actualise their health potential regardless of whether the differentials between groups are narrowed or not. The gender differentials in health illustrate this point: no one knows whether it is appropriate or desirable to institute a measure that aims for narrowing the gap in life

expectancies between genders. It would be totally inappropriate, then, to try to enhance the opportunities for better health only for certain groups (for example, men) at the expense of others (for example, women), by misinterpreting the idea of “bringing health differentials down to the lowest level possible”. Therefore, the most appropriate course of action is to do our best to optimise the health status of both genders. Besides, health status among individuals will always vary, as physical endowments differ and some people have genetic or congenital illnesses or have acquired disease or injury. “Health for all”, despite its appeal, is an unattainable dream if interpreted literally. It should be interpreted to mean that all individuals be given opportunities to actualise their “optimal” levels of health given their potentials.

EQUITY AND DISTRIBUTIVE JUSTICE

My fourth proposition is that equity in health is based primarily, if not solely, on the ethical principle of distributive justice. Some authors have propounded different notions of equity and fairness, stating that fairness, being a broader concept than equity, also encompasses efficiency, accountability, and autonomy of patient and provider.^{8,9} Fairness, being an ambiguous term, can be used broadly to encompass all these concepts. However, its narrower sense connotes distributive justice and, as such, is coextensive with equity. It is confusing, therefore, to discuss fairness and equity without clarifying which sense of fairness is being used in the discourse. For instance, clinical efficacy and systemic efficiency have been suggested as “benchmarks of fairness”.⁸ It is clear, however, that the main justification of clinical efficacy and systemic efficiency is the ethical principle of beneficence rather than distributive justice. It is quite conceivable that a system can be both equitable and, at the same time, inefficient or ineffective. Inequity may become a concern, however, if benefits and costs are unequally distributed among different individuals or populations, in which case effectiveness and efficiency may become an issue of distributive justice and equity. Similarly, to include consumer choice as a benchmark of fairness⁸ may be appropriate if “fairness” is used in the broad sense, but inappropriate if used in the narrow sense, as consumer choice has more to do with the principle of autonomy than justice. Furthermore, consumer choice may come into conflict with other cherished goals of health care, such as public accountability and evidence-based decision making. To encompass consumer choice in its concept would obscure the meaning and message of equity, which is to seek (distributive) justice for all.

EQUITY APPRAISALS NEED TO BE BROAD BASED

My fifth proposition is that equity in health is concerned with the ethical principle of distributive justice at all levels and in all domains. It is concerned with: (a) the distribution of health (the end) as well as of opportunities (the means) to achieve optimal health; (b) meeting health and health care needs equitably, through a health care insurance scheme and a formal health care system; (c) applying the principle of distributive justice to all aspects of health care, including financing, funding, access, responsiveness, and quality; and (d) the macro-management and micro-management and decision making of the health care system. It is well known for many decades that determinants of health are multifactorial, encompassing human biology, environment, lifestyle, and health care organisation; hence, authority and responsibility for improving health are also widely dispersed to individuals and organisations at all levels and in all sectors.^{10,11} That is why the issue of equity in health is extremely broad based, touching upon questions of justice and equity beyond the traditional health care sector. All these factors are interrelated, as expected. Figure 2, for instance, shows a significant positive correlation between life expectancy and fairness of financial

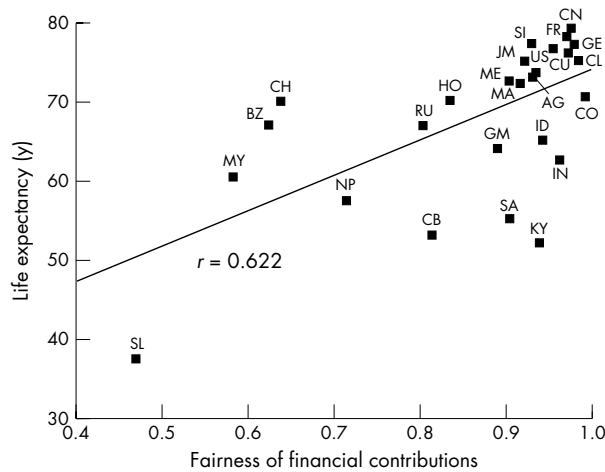


Figure 2 Life expectancy versus fairness in health care financing. Data source: WHO World Health Report 2000. The countries and their codes are as follows: AG=Argentina, BD=Bangladesh, BZ=Brazil, CB=Cambodia, CH=China, CL=Chile, CN=Canada, CO=Columbia, CU=Cuba, FR=France, GE=Germany, GM=Guatemala, HO=Honduras, IN=India, ID=Indonesia, JM=Jamaica, KY=Kenya, MA=Malaysia, ME=Mexico, MY=Myanmar, NP=Nepal, RU=Russia, SA=South Africa, SI=Singapore, SL=Sierra Leone, US=United States, VZ=Venezuela.

contribution and financial risk protection ($r=0.622$, $p=0.001$), based on the data from selected countries in the *World Health Report 2000*.⁶ The rather wide spread, especially at the top end of the fairness scale, indicates that other factors, such as absolute and relative income levels, are also strongly correlated with life expectancy. This point is further illustrated, for instance, by a strong inverse relation between income and use of invasive cardiac procedures on the one hand, and waiting times for those procedures and mortality outcomes on the other hand, in countries such as Canada and Italy with universal health care coverage for all citizens.^{12, 13}

These examples show that inequalities in health are amenable to interventions, and hence are avoidable, at least partially, by measures such as improving fairness of financial contribution and financial risk protection, more equitable

Key points

- The meaning of equity in health remains unclear, as there is no agreement on what inequalities are unnecessary, avoidable, unfair and unjust, and hence, inequitable.
- Equity in health is to promote actualisation of optimal health for all, and especially the disadvantaged, which may, but not necessarily, bring health differentials down to the lowest level possible.
- Unlike the empirical concept of equality, equity is concerned with the ethical principle of distributive justice at all levels and in all domains.
- Hence, the issue of health equity is extremely broad based and touches upon questions of justice beyond the health care sector.
- A framework for equity in health is proposed as a guide to policy development and research.

incomes distributions, and more timely access to quality health care. As well, it is well known that many infectious and hypertensive diseases are more amenable to public health and medical interventions and are deemed more “preventable” and “avoidable” than degenerative diseases.¹⁴ Similarly, some medical care errors and injuries can be more readily minimised by redesigning the systems “to make errors difficult to commit and create a culture in which the existence of risk is acknowledged and injury prevention is recognised as everybody’s responsibility.”¹⁵

OTHER HEALTH CARE GOALS

My sixth and final proposition is that equity in health is important but not necessarily the most important health care goal for all people. This point is again illustrated by figure 1, showing that life expectancy continues to rise with a country’s GDP per capita up to around \$US15 000. When the income surpasses a certain threshold, for example, \$15 000 per capita in that study,⁴ life expectancy reaches a plateau. After that threshold, countries with *greater income equity* tend to have higher life expectancy.^{16–18} That relative income becomes a stronger predictor of mortality than absolute income as a country’s living standards rise is also exemplified by the

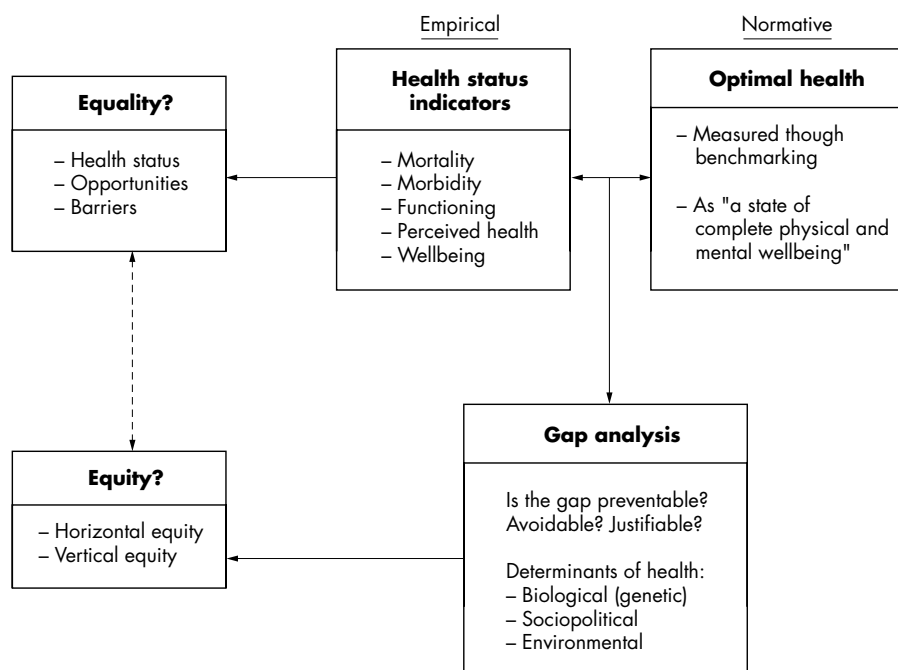


Figure 3 A framework for appraising equity in health. The empirically derived health status indicators form a basis of assessing equality in health. By contrast, equity in health is determined by analysing gaps between observed health indicators and the normative measures of optimal health, their determinants, and the preventability and justifiability of such gaps and inequalities.

experience in Taiwan.¹⁹ It is therefore understandable and perfectly justifiable that a quest for a degree of affluence should become a preoccupation of the less wealthy individuals and countries. It is a misplaced priority, however, at least from a health perspective, for affluent individuals and countries to continue their incessant drive towards more wealth rather than switching their priorities to other worthy endeavours such as improving the environment, lifestyle, and education and health care systems. Figure 1 also illustrates that better health does not always correspond with higher income. An example in this regard is the comparable life expectancies in years in 1998 between Cuba (74 for male and 78 for female) and the United States (73 for male and 80 for female) despite disparities in per capita income.⁶ Thus, even a low income country can achieve a high level of health by building healthy communities and adopting healthy policies and lifestyles. Social and economic determinants, important as they are, are not always the most powerful factors that influence the health of a population.

A CONCEPTUAL FRAMEWORK FOR EQUITY IN HEALTH

The above propositions lead to a conceptual framework, which is schematically presented in figure 3. Firstly, the health of individuals, groups, communities, or nations is measured in terms of health indicators. It should be noted that health is a complex, multidimensional concept, which, according to the Preamble to the Constitution of the World Health Organisation, is "a state of complete physical, mental and social well-being and not merely the absence of disease or infirmity."²⁰ This broadest possible definition, especially the social dimension, has been subjected to serious criticisms from thoughtful scholars, and was branded as "the quintessential expression of medical imperialism, of the assumption that everything in life falls within the jurisdiction of the health care or disease care system and of those who control the system."²¹ While Callahan preferred a narrow definition of health as "a state of physical well-being",²² it is my view that health is primarily used to characterise an individual as a mind-body unity. Thus, I would define health as "a state of physical and mental well-being", which may be measured in terms of subjective and objective, and negative and positive indicators such as mortality, morbidity, physical and mental functioning, and perceived health and wellbeing. Although life expectancy at birth is used extensively in this paper because of its availability, other health indicators may also be used, if available, to test the propositions presented in this paper.

Health indicators empirically indicate an equal or unequal health status between individuals, communities, and nations. Inequalities in health status, moreover, may point to inequalities in opportunities and barriers to working towards optimal health. Optimal health is conceived here as a state of complete physical and mental wellbeing and, as such, is a normative concept. Disparities in health status often suggest suboptimal levels of health subgroups with low health status.

To ascertain whether inequalities in health are inequitable or not, it is necessary to perform a gap analysis to clarify whether the disparities between the observed and the optimally achievable health status are preventable, avoidable, or justifiable. This would require a close examination of various determinants of health, which are biological, social, political, cultural, historical, and environmental in nature. The purpose of such an investigation is to provide evidence for or against the existence of horizontal or vertical equity.

SUMMARY AND CONCLUSION

A number of propositions are proposed in this paper to clarify the meaning of equity in health. Equity, unlike equality, is perceived as a *normative* concept based on the ethical principle of *distributive justice* at all levels and all domains. Equity in health, moreover, is primarily concerned with passing a value judgment on equal or unequal *health status* among individuals and groups, with a goal of promoting actualisation of *optimal health for all* given their health potentials. The most fundamental among all normative appraisals of equity is a biological one: equity is in question in the face of variation in health status, only if there is no plausible biological explanation for that variation. Even with a plausible biological explanation, further normative and empirical research is required to determine what other social and environmental factors affect health status, and when health inequalities are inequitable. Finally, a conceptual framework is proposed to delineate the roles of empirical and normative research in determining when inequalities in health are equitable.

REFERENCES

- 1 Mooney G. What does equity in health mean? *World Health Stat Q* 1987;**40**:296–303.
- 2 Whitehead M. Who cares about equity in the NHS? *BMJ* 1994;**308**:1284–7.
- 3 Daniels N, Kennedy BP, Kawachi I. Why justice is good for our health: the social determinants of health inequalities. *Daedalus* 1999;**128**:211–51.
- 4 The Economist Intelligence Unit. *Healthcare International*. 4th quarter 1999. London: The Economist Intelligence Unit, 1999.
- 5 Robinson J, Elkan R. *Health needs assessment. Theory and Practice*. New York: Churchill Livingstone, 1996.
- 6 World Health Organisation. *The World Health Report 2000. Health systems: improving performance*. Geneva: World Health Organisation, 2000.
- 7 Gwatkin DR. Health inequalities and the health of the poor: what do we know? What can we do? *Bull World Health Organ* 2000;**78**:3–17.
- 8 Caplan RL, Light DW, Daniels N. Benchmarks of fairness: a moral framework of assessing equity. *Int J Health Serv* 1999;**29**:853–69.
- 9 Daniels N, Bryant J, Castano RA, et al. Benchmarks of fairness for health care reform: a policy tool for developing countries. *Bull World Health Organ* 2000;**78**:740–50.
- 10 Lalonde M. *A new perspective in the health of Canadians. A working document*. Ottawa: Minister of Supply and Services, 1974.
- 11 McKeown T. *The role of medicine*. London: Nuffield Provincial Hospitals Trust, 1976.
- 12 Alter DA, Naylor CD, Austin P, et al. Effects of socioeconomic status on access to invasive cardiac procedures and on mortality after acute myocardial infarction. *N Engl J Med* 1999;**341**:1359–67.
- 13 Ancona C, Agabiti N, Forastiere F, et al. Coronary artery bypass graft surgery: socioeconomic inequalities in access and in 30 day mortality. A population-based study in Rome, Italy. *J Epidemiol Community Health* 2000;**54**:930–5.
- 14 Kjellstrand CM, Kovithavongs C, Szabo E. On the success, cost and efficiency of modern medicine: an international comparison. *J Intern Med* 1998;**243**:3–14.
- 15 Leape LL, Woods DD, Hatlie MJ, et al. Promoting patient safety by preventing medical error. *JAMA* 1998;**280**:1444–7.
- 16 Kennedy BP, Kawachi I, Prothrow-Smith D. Income distribution and mortality: cross sectional ecological study of the Robin Hood index in the United States. *BMJ* 1996;**312**:1004–17.
- 17 Ross NA, Wolfson MC, Dunn JR, et al. Relation between income inequity in Canada and in the United States: cross sectional assessment using census data and vital statistics. *BMJ* 2000;**320**:898–902.
- 18 Wilkinson RG. Income distribution and life expectancy. *BMJ* 1992;**304**:165–8.
- 19 Chiang T-L. Economic transition and changing relation between income inequality and mortality in Taiwan: regression analysis. *BMJ* 1999;**319**:1162–5.
- 20 World Health Organisation. A definition of health. From the Preamble of the Constitution of World Health Organisation. Reprinted in: Beauchamp TL, Walters L, eds. *Contemporary issues in bioethics*. 2nd edn. Belmont, CA: Wadsworth, 1982:48.
- 21 Antonovsky A. *Health, stress, and coping*. San Francisco, CA: Jossey-Bass, 1979.
- 22 Callahan D. The WHO definition of health. In: Beauchamp TL, Walters L, eds. *Contemporary issues in bioethics*. 2nd edn. Belmont, CA: Wadsworth, 1982:49–54.