

**Equity and Health:
A Bioethics Agenda for the Next Decade**

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Introduction:

I am honored and to address this distinguished audience and to be charged with the task of looking forward to the leading bioethics issues over the next decade. Nuffield Council working groups consistently issue first-rate reports that argue rigorously about bioethics in a non-partisan spirit now sadly missing on my side of the Atlantic. In America, biopolitics has pushed aside bioethics.

The mandate to the Nuffield Council is to address the ethical issues in what I think of as Promethean challenges. Stem cells, cloning, pharmacogenetics, genetically modified foods, genetic screening or reproductive technologies, and developments in neuroscience-- all challenge us to see how god-like we can become in our relations with people, with animals, and with our environment without losing our moral footing. These media favorites also form the frontlines for the contemporary wars between religion and science, especially now in my country.

Though I was asked to talk to you about the leading issues in bioethics over the next decade, with the kind permission of the organizers, I have decided to focus my remarks on three cross-cutting issues about equity in health. The field of bioethics as a whole has sorely neglected these central issues in the ethics of population health, trailing rather than guiding work in social epidemiology and health policy. The Nuffield Council, one of bioethics international leaders, can help move the field to address them more systematically by raising them within the scope its charge.

The true ethical measure, I propose, of advances in the life sciences is their impact on population health and its distribution. To be sure, there are intriguing and exotic issues about each special area of biological or medical advance, but the bottom line of developments in the life sciences is their impact on our health and on equity in health. Some developments in biology and medicine by their nature have a direct impact on the distribution of health in a population; others have that impact because of the way they are disseminated. I ask you then to suppose you are serving on a new Nuffield working group evaluating some promising technology that is emerging from neuroscience or regenerative medicine or gene therapy. I propose that you bring population ethics into your evaluation by asking, What impact will it have on health inequalities between different social groups? What is its impact on intergenerational equity in the context of rapid societal aging? And what will it do to health inequalities globally?

On this short tour, I can only walk you up to the edge of these problems, entice you with their challenge, and leave you with an expanded bioethics

agenda for the next decade. I apologize if my tour is but a walk in familiar woods for those of you who already are pursuing that agenda.

2. In the face of significant health inequalities, what must we do to pursue equity in health?

On any tour we need the right equipment; on ours the equipment is conceptual, so I pause for some distinctions. I take “health” to mean normal functioning, that is, the absence of pathology, mental or physical.¹ In effect, health is a limit concept. This biomedical account of health is clearly narrower than the widely quoted WHO definition: “*Health is a state of complete physical, mental and social well-being and not merely the absence of disease or infirmity.*”² The WHO conception erroneously expands health to include nearly all of well-being, so it may no longer function not as a limit notion. People who actually measure population health, such as epidemiologists, concentrate on departures from normal functioning.

This characterization of health has implications for what counts as pursuing equality, or that more nuanced notion, equity, in health.³ Every society has some healthy and some unhealthy people. One natural way to understand the goal of equality in health—the goal of **health egalitarians**-- is to say that we should aim, ultimately, to make all people healthy, that is, help them to function normally over a normal lifespan.⁴ Pursuing equality means “leveling up” – bringing all those in less than full health to the status of the healthy.⁵

Somewhat surprisingly, the *ultimate aim* of a **health maximizers** is identical to that of health egalitarians: We maximize population health if all people function normally over a normal lifespan. Health is clearly different from income (and well being). There is no natural stopping point for income--the rich can always be richer--but being completely healthy is being completely healthy.

Despite convergence on ultimate aims, health egalitarians and health maximizers generally support different *strategies* or *policies* for achieving their common ultimate aim of producing a completely healthy population. At every point short of that ultimate goal or aim, the same aggregate measure of population health can be distributed in different ways.⁶ A maximizing strategy or policy will seek the highest achievable aggregate measure for resources invested, regardless of how the health is distributed, whereas someone concerned with equality or equity in health will put important constraints on how the health is distributed.

In the context of setting priorities for the allocation of medical resources, a family of unsolved but familiar distributive problems has begun to be discussed by people in the social sciences and in bioethics. In all of these, maximizing strategies are pitted against fairness or equity considerations.

For example, when we select an intervention because it has the best cost-effectiveness ratio, we are maximizing health benefits at the margin regardless of how the benefits are distributed. Consider three ways this maximizing strategy conflicts with concerns about equity. First, it gives no priority to those who are worse off or in greater need. Most people want to give some priority to those who are worse off even if they do not want to give them complete priority. **How much priority should we give?** That is the *priorities problem*. Second, CEA allows us

to aggregate minor benefits to larger numbers so that they outweigh significant benefits to fewer people. Yet, even though most people accept some aggregation, they reject unrestricted aggregation, refusing to allow, for example, lifesaving treatments to a few to be outweighed by very minor benefits to very large numbers. The *aggregation problem* asks **when should we aggregate?** Third, CEA doggedly pursues “best outcomes” while denying fair chances for some benefit to those with worse outcomes. Yet most people reject a strict maximizing strategy, preferring to give people fair chances at some benefit. **How should we balance best outcomes against fair chances?** This is the *best outcomes/fair chances problem*. We have considerable trouble agreeing on what the appropriate middle ground is in each of these problems.

The same distributive problems arise when we think about eliminating health inequalities. Five of the eight internationally negotiated Millennium Development Goals are inequality reducing. Their targets are aimed at poverty reduction or providing primary education to those who lack it. The three health targets, however, are stated in terms of reducing population aggregates, for example, mortality of children under 5. David Gwatkin models two extreme approaches to these aggregate goals.⁷ One, a maximizing approach, aims at rapid achievement of the target goal by directing resources to those who are already better off but easier to reach with strategies for improvement; the other, which he calls an egalitarian approach, aims to help those who are worst off first, then the next worst off and so on. He argues that program incentives and the geo-politics surrounding the MDG program mean that the maximizing strategy is more likely to be implemented—funders will want to see rapid results-- although it actually increases inequality in the population. How much priority should be given to those who are worst off? Best outcomes would result by getting the numbers up quickly: but should we not give worse off groups some fair chance at significant benefits instead?

The standard distributive problems I noted are most commonly raised in contexts where it is not morally problematic why those who are worse off are so—they are just sicker than the others for whatever reason. In the MDG problem, as in the concern about health inequalities more generally, the baseline distribution is itself morally problematic, for example, because there is some social responsibility for creating the basic inequality and making some people worse off than they would otherwise be. Racial disparities in the US are a clear example; ethnic disparities in the UK may be another; global institutions that have perpetuated third world poverty are another. The **injustice** of the existing baseline may give some extra weight to the concern that we minimize inequalities.

But how much does this consideration outweigh our concern that we are not achieving best outcomes in the aggregate? Indeed, some may object that if we single out some groups as “more deserving” of help because they were wronged, then we are abandoning the principle that we ought to focus only on need in medical contexts. We don’t give priority to fixing the broken leg of the mugging victim over the skier. When the Chinese decided to give priority in

access to antiretroviral treatments to victims of infected blood, they were criticized for stigmatizing people infected another way as being less deserving.

Moral disagreement about these conflicting concerns will be sharp. In domestic contexts, there will be political disagreements about who is really responsible for the baseline and there will be efforts to explain its injustice away (perhaps in the form of victim-blaming). In international contexts, there will be resistance from developed countries concerning the degree to which they are in any way responsible for the baseline differences, let alone their reduction. The standard distributive problem – difficult as it is—is thus made even more difficult.

Bioethics has barely risen to the challenge of solving the distributive problems. I am suggesting it must also address the added challenge posed by inequitable baselines. Specifically, it must face this challenge in thinking about every new Promethean challenge on its agenda.

Let me complicate the problem further. Most Americans, and I suppose most British, who are asked, “What does it take to assure people of equity in health?” will respond with what they take to be a truism, “Give people equal access to appropriate medical care,” for example through a universal coverage insurance scheme. At best, this apparent truism is but a small part of the answer to what it takes to assure equity health; at worst, it is misleading in important ways.

It is misleading in one way because equal access to medical services does not by itself assure equity if we have made the wrong trade-offs in our health system between equity and the maximization of aggregate health benefits. Just as important, we cannot produce equity in health simply by distributing medical or even public health resources equitably. Health inequalities have more complex origins. We know from the longitudinal Whitehall studies of British civil servants of different employment ranks, for example, as well as from other studies, that health inequalities in a population may not decrease, and may increase, even with universal coverage. The Whitehall study is especially striking since it involves a study population that suffers no poverty and has had basic education: deprivation with regard to income, wealth, or education – all important social determinants of health revealed in various studies -- is not the reason for the SES gradient of health observed in Whitehall. Our health is affected not simply by the ease with which we can see a doctor or be treated in a hospital, and not simply by the reduction in risks that come from traditional public health measures – though these factors surely matter – but also by our social position and the underlying inequality of our society.⁸

What are the ethics of the relationship between health inequalities and other inequalities? If we accept as otherwise just the inequalities we allow in our society, but these inequalities contribute to health inequalities, then should we view these health inequalities as themselves just and not something we owe people a remedy for? Or should we view any significant health inequalities across groups as grounds for altering the distribution of other goods? Perhaps our answer depends on the kinds of other inequalities that we see producing health inequalities. Turn from class, for the moment, to race.

If we look at American data, we see a significant but complex independent effect of race – or should I say racism—on health. African Americans show worse health than whites at every income and educational level. Institutional and overt racism must be included as further social determinants of health. For example, the increasing de facto (but not de jure) residential segregation by race that we see in America contributes significantly to these inequalities. The complex pattern by race and ethnicity of key behavioral risk factors (diet, tobacco, alcohol, and substance use and abuse, violence) contributes to, but does not account for, race and ethnic inequalities in health. In addition, we have measured medical treatment patterns that differ by race and that involve stereotypical assumptions by providers—a mix, perhaps, of conscious and unconscious racism. A society that has a legacy of caste structure and exclusion creates psychosocial stresses in many institutional settings (schools, the workplace, shopping malls) that are implicated in health inequalities. Similar issues affect many immigrant ethnic minorities in European countries.

Racism seems to be the easy case: health inequalities deriving from socially enforced racial or ethnic inequalities would count as inequities in most people's views. But what about the SES induced inequalities we began with? We live in societies that tolerate and even encourage some significant degree of inequality—as incentives, as justifiable desert, as an expression of diversity. When should we count as unfair or unjust health inequalities that result from other social inequalities in income, wealth, education, power and opportunity – all goods we think it justifiable to distribute less than equally? In earlier work (“Why justice is good for our health”) I argued that Rawls's principles of justice as fairness quite unexpectedly capture what the social epidemiological literature picks out as the key social determinants of health—ranging from effective political participation rights to education and early childhood training to significant restrictions on income and wealth inequalities to supports for the social basis of self-esteem. Conformance with them would flatten socio-economic gradients of health more than any we see around us. Social justice, that is, fair terms of social cooperation developed in abstraction from thinking about health, is good for our aggregate health and leads to a more equitable distribution of it.⁹

This picture suggests that a concern about equity in health must be intersectoral in scope. All socially controllable factors that affect the distribution of health become the concern of those pursuing equity in health. In a striking way, this perspective challenges one version of the view that we should treat health as a separate “sphere” – focusing on health benefits without thinking about the contributions health makes across spheres. Similarly, we should not think of health as a natural as opposed to a social good (a view held by Rawls and Nagel).

We live in a non-ideal world, one falling well short of compliance with Rawlsian principles of justice. When we think about health maximizing vs health egalitarian strategies in this non-ideal world, we face important questions left unanswered by ideal theory. David Mechanic (2002) emphasizes the following: many health improving interventions we may undertake (and let us now think of these as cutting across all spheres) have the property that they increase the

levels of health of all parts of the population even as they may increase health inequalities. For example, black infant mortality rates were 64% higher than whites in 1954 but were 130% higher in 1998, even though white rates dropped by 20.8 per 1000 and black IMR dropped by 30.1 per thousand. Mechanic, a leading medical sociologist, concludes about this and other cases that it is reasonable to accept increasing health inequalities that result from policies that improve population health as long as the health of all groups is being improved.

Mechanic's conclusion requires more careful consideration. Suppose we have two interventions (whatever sector, whatever novel technology) that both raise the health of all groups. If intervention A does less for those who are worse off than B but much more for those much better off, then both satisfy Mechanic's criterion. We may have strong views about whether to pursue A or B, depending on further facts about the magnitude of the effects or other facts about the sizes of the groups and thus the total impact of the programs. In addition, if the initial inequality is one that society is responsible for causing through unfair policies, there may be a special obligation to give more weight to equity than maximization. Further, there considerations of speed – what is a reasonable rate of progress toward rectifying the effects of past injustice?

Bioethics is not the right field to find the relevant policy levers: that presumably is a task of social epidemiologists and other social scientists. But bioethics should provide guidance to the policy decisions that involve different ways of trading off equity against maximization. This task arises in evaluating Promethean challenges, as well as in other settings. There are two key dimensions to that body of work.

First, there is purely normative work trying to find consensus on principles that might guide us in the range of cases posed by our policy options, including those that arise in developing and disseminating new technologies. Specifically, I have identified these specific problems:

1. Advancing the modest body of existing work on the distributive problems I earlier identified;
2. Clarifying when a health inequality is unjust;
3. Giving an account of how that injustice creates obligations that may alter the solution we favor for the distributive problems;
4. Clarifying what counts as a reasonable rate of progress toward reducing health inequalities;
5. Connecting all these normative issues to specific policy deliberations that arise regarding all the socially controllable factors that affect health and its distribution, not just health care, but also – and this pertains particularly to the Nuffield Council --raising these considerations in thinking about the impact of deploying a new technology or domain of technologies – a new Promethean challenge.

Second, bioethics must consider what to do when we cannot achieve consensus on principles that can resolve the disagreements we encounter in 1-5. All these problems must be solved in ways that are perceived to be fair and legitimate in real time, not in philosophical time (which can be millennia). Bioethics must pay more attention to the ethical issues involved in constructing

fair deliberative processes that can provide decisions on ethically contentious questions. Where we lack consensus on distributive principles, we must rely on procedural justice to give us fair and legitimate resolution to moral disagreements.

Jim Sabin and I developed an approach we call “accountability for reasonableness” and have used it to examine medical resource allocation in managed care contexts in the US. I have also used it to address issues of equity in scaling up antiretroviral treatments in high prevalence countries in the context of the WHO 3 by 5 program. Others are using it to improve decision-making in publicly managed systems in Canada, Norway, Sweden, New Zealand, and the UK (where NICE’s citizens council derives some support from our approach). But there are many problems developing appropriate versions of this approach at the various institutional levels where policy regarding health inequalities is made and implemented.

My agenda calls for bioethics to:

6. Develop the general account of fair process so that reasonable people who disagree can view policies as fair and legitimate
7. Apply the account to the various institutional contexts at which they must be addressed.

In short, the bioethics agenda for the next decade should attend to the standard problems of distributive justice, the extra complexity they have when they arise in the context of reducing unjust inequalities, especially in contexts where we can only make partial progress toward what justice requires. It should also develop a more robust approach toward fair procedures needed to address persistent disagreements about how to solve these distributive problems. These agenda items should be included, where relevant, in terms of reference for Nuffield working groups.

3. Equity between Age Groups and Birth Cohorts in the context of Societal Aging

Societal aging, I believe, especially in developing countries, will emerge as the major public health problem of the 21st century. In the second stage of our tour, I focus on how the Promethean challenges that are Nuffield’s meat and potatoes intersect with two under-analyzed problems of intergenerational equity, the problems of equity between age groups and between birth cohorts. These two problems, which I shall explain shortly, are both complicated by societal aging. (Ironically, though societal aging is greeted as a crisis in many recent book titles (which refer to an “age quake,” “age wave,” or “generational storm” to note a few), we should remember that it is a result of *the success*, not *the failure*, of widely pursued policies aimed at reducing mortality and fertility rates.)

Societal aging is the result of the combination of declining fertility rates and declining mortality rates. It is accentuated when some birth cohort is much larger than the one following it – as with the American post-war baby boom or the Chinese cohort that enjoyed dropping mortality rates but preceded the “one child” policy. Societal aging is a global phenomenon that has broad impacts on social structure and not just health.

In the U.S., Kotlikoff and Burns (2004) observe that “walkers replace strollers.” By 2030, nearly 20% of the U.S. population will be 65 or over, whereas only 4% were in 1900 (Fried 2000). By 2040, the number of Americans over 80 (26.2 million) will exceed the number of preschool children (25 million, Peterson 2000: 43, citing projections from 1996 Census figures). America has long prided itself on its youthful image. Though it remains the youngest among graying developed countries, in part because of its high immigration rates, it will have to embrace a new image, perhaps personified in my president, the graying cowboy.

European countries, including the UK, have already reached “zero population growth.” In Italy, the fertility rate (1.2) is well below the level at which a population can reproduce itself (2.1), and the working age population is already shrinking (as it also is in Japan). America’s fertility rate of 2.1 helps insulate it from the more extreme aging Italy faces. The UN predicts that Italy will have a median age of 54 by 2050, second only to Spain. But Italy is not alone. All the European G-7 countries are below the replacement level in fertility rates. By 2050, half of Continental Europe will be 49 or older, and well before that, by 2030, one of every two adults in developed countries will have reached retirement age. The UN projects that the ratio of working-age adults to elderly in the developed world will drop from 4.5 to 1 today to 2.2 to 1 in 2050 [see CSIS figures].

While the proportion of the elderly in developed countries is due to double over the next 50 years, from 15 per cent to 27 percent, it is due to triple in East Asia, from 6 percent to 20 percent. By 2050, there will be 332 million Chinese 65 years or over, equivalent to the world’s elderly population in 1990 (CSIS 2004— get correct cite). The two billion people over age 60 who will live in our aging world by 2050 will mostly be living in developing countries.

This rapid societal aging in developing countries takes place without the wealth and the sophisticated economic institutions that exist in developed countries. That is why I said it is the public health problem of the 21st century. As one Chinese commentator noted, China will grow old before it grows rich, unlike the developed countries. And China is not alone. The rate of increase in the number of older people between 1990 and 2025 is projected to be 8 times higher in developing countries, such as Colombia, Malaysia, Kenya, Thailand, and Ghana than it is in the UK and Sweden (Int Longevity Center]. By 2050, the transitional economies of Eastern Europe will have populations with 28% elderly, and Latin America will have over 17%, well over the US rate today. [UN figures, see CSIS world tour]

Two effects of societal aging:

Societal aging dramatically changes the profile of needs in a country, creating new and intensified forms of competition between age groups for scarce resources. It also reduces society’s ability to sustain measures for meeting those needs, sharpening competition between birth cohorts. Together these effects bring questions about intergenerational equity to the fore that may have not been noticed under different demographic conditions.

We all know, for example, that the rapid growth of those over 75 – Bernice Neugarten’s “old old,” those elderly who face especially increased disability and

dependency, will bring with it increased burdens for the management of chronic disease and long term care. Despite the presence in some developed countries of publicly funded long-term care, most such care is provided by family members, so the burden of societal aging will increasingly fall on adult working children, usually women. Yet, nearly a quarter of all the elderly in the US in 1989 had no children, and another 20% had only one child. With more women in the workforce, the problem of providing family care is intensified, since women have traditionally been the primary care givers. Pressures will increase to provide costly public programs – at the same time that the working age population is shrinking.

In developing countries, the problem is not the sustainability of the kinds of publicly supported social and medical services provided for the elderly in developed countries, but the sustainability of informal, social structures of support, such as the traditional patterns of care that involve aged parents living with adult children, as in Japan and China. China, for example, must face the specific consequence of the success of its very strict population policy: one child for urban couples, two for rural ones. Like the United States, China will have many elderly with no children and even more elderly who have only one child to support them than is the case in the United States. The Chinese refer to this as the “1-2-4” problem, one child must care for two parents and four grandparents. In 1996 the Chinese government made it a legal requirement that adult children support their elderly parents, obviously anticipating that traditional filial obligations would be strained to the breaking point by the new demographic realities. The law is not going to solve the problem. China’s problem is also the problem of all developing countries where rapid aging, extensive urbanization and industrialization, and a lack of existing health care and income support systems of the elderly all collide with traditional family values.

The point is simple: no aging society, with or without public systems of support, escapes the problems created by societal aging for sustaining and improving institutions that provide care for elderly dependents.

The increase in medical needs and the shift in the profile of those needs with societal aging is much broader than the problem of long term care for frail elderly people. With aging there are increases in the prevalence of cardiovascular disease, chronic pulmonary disease, diabetes, arthritis, and cancer, as well as Alzheimer’s and other dementias. The increased cost of treating the greater prevalence of these illnesses imposes great strains on resources and intensified competition for them in developed countries. The problem will be even more severe in developing country health care systems, many of which have barely begun to gear up to meet the needs posed by chronic diseases. In poorly funded systems, beefing up medical services for the chronic illnesses of middle and older age means stealing resources from primary care and preventive care for the whole population.

Age groups and birth cohorts: two distributive problems

Age groups and birth cohorts are easy to confuse, for the term “generation” is ambiguous between them. But they are different. Birth cohorts

age, but age groups do not. At any given moment, an age group consists of a birth cohort; over time, it consists of a succession of birth cohorts.

The age group problem is this: how do we treat age groups fairly within distributive schemes, such as health care systems? What is a just allocation of resources to each stage of life, given that needs vary as we age. When is a distributive scheme age-biased in an unfair way? Is age itself a morally permissible criterion for limiting access to new technologies? Obviously, this is a central issue when evaluating promising new medical technologies and their dissemination; that is why this issue falls squarely within the charge to the Nuffield Council, even if it is also a topic NICE has addressed in guidelines it recently posted for comment.

Medicare in the US recently approved three very expensive technologies: Left Ventricular Assist Devices (LVAD) as “destination therapy” for patients ineligible for heart transplants but suffering from advanced congestive heart failure; lung volume reduction surgery (LVRS) for select patient groups with chronic obstructive pulmonary disease; and implantable defibrillators. Only the last one fell within any usual cost-effectiveness threshold. As a participant on the MCAC deliberating about whether effectiveness criteria for LVAD were met, I was troubled that no consideration of opportunity costs entered the deliberation; indeed, with a system focused only on the elderly, equity issues in allocation over the lifespan were impossible to raise, in contrast to the NHS. Could we produce more health for both the young and the old were proper screening and treatment for high blood pressure implemented instead? Would the billions spent on these technologies—or the next technology Nuffield evaluates-- be better spent on other forms of care for the elderly themselves? How should we think about health care resource allocation across age groups?

My proposal regarding the age group problem builds on the observation that we all age, though we do not change race or sex. Treating people differently at different ages, as long as we do so systematically over the lifespan, creates no inequalities across persons. Treating people differently by race or class or gender creates inequalities that are always in need of justification. Indeed, treating ourselves differently at different stages of life can make our lives go better over all—we invest in our youth, at some sacrifice of immediate revenues and pleasures, in order to be rewarded more later in life. We take from ourselves in our working years in order to make our later, retired years go better.

My proposal takes prudent allocation over the stages of life to be our guide to fair treatment among age groups (even if prudence is not a general guide to justice). This “prudential lifespan account” must be properly qualified by assuming we already enjoy just distributions across persons and that we will live with the results over our whole lifespan. Specifically, we should allocate health care so that it promotes the age-relative fair share of opportunities (or capabilities).

Rationing by age on this view is permissible under some scarcity conditions because it would not be imprudent to so allocate. This argument does not rely on specific, contested intuitions about the fairness of age rationing (as do Allan Williams’s claim that the old have had their fair innings or Frances Kamm’s

claim that the young need more years more than the old). It relies only on the general prudential allocation model I used. Since, however, reasonable people disagree about the acceptability of this model and about specific issues, such as age rationing, we will need fair procedures of the sort I noted before to resolve such disputes about priority setting among age groups. Properly used, a transfer scheme based on prudential allocation or on some other view of fair outcomes that emerges from fair process would solve the age group problem.

A solution to the age group problem must also be compatible with solutions to the birth cohort problem. Imagine that over time different birth cohorts pass through a scheme that solves the age group problem to our satisfaction. These cohorts are each treated fairly, I proposed two decades ago, if they have comparable ‘benefit ratios’ as they age through the schemes. New technologies that were not available for the elderly when they were young but will be available over the lifespan of those now young pose a special problem of inter-cohort equity – I add it to your agenda.

This approach to the birth cohort problem presupposes that major demographic shifts, such as rapid societal aging or declining populations, do not undermine the stability of the age-group solution over time. European and American pay-as-you-go income support and health care transfer schemes have not faced such shifts until recently and could project sustainability over a considerable period. Now the situation has changed, as we have seen.

As members of a Nuffield working group evaluating a new technology, I am asking you to consider its impact on issues of intergenerational equity. Specifically, the bioethics agenda I am proposing must give these issues special attention:

8. Bioethics must address the distributive issues raised by the age group problem, including the impact of new technologies on resource allocation over the lifespan; it should consider age-bias in health systems, such as the inadequacy of long term care in the US and elsewhere, age bias in our methodologies, such as CEA, rationing by age.
9. Bioethics should address the issue of sustainability over time and the complex equity problems in treating cohorts equitably while at the same time not undermining proper solutions to the age group problem.¹⁰

Bioethics must address the problems of developing fair process for making decisions about intergenerational equity issues in a broad range of health system and inter-sectoral contexts.

4. International Equity and Health

The third part of my tour takes us abroad. All of us are familiar with the fact of dramatic international inequalities in health—in life expectancy, infant mortality, and burden of disease (DALYs). According to WHO figures, eighteen million people die prematurely each year globally from curable medical conditions, and these cases are largely concentrated among the poor countries and among the poor within them (WHO 2004; cited in Pogge 2005). Are these health inequalities unfair or unjust? What effort at reducing these inequalities do richer, healthier countries owe – as a matter of justice, not charity – to poorer,

less healthy countries? These are central questions for bioethics, and they should be addressed when we consider the promise of new technologies.

To sidestep some central controversies in international justice, I shall argue for a modest claim, that whatever other obligations of international justice developed countries and their citizens may have to reduce health and other inequalities globally, they are definitely obliged to avoid making the health of the global poor worse than it would otherwise be. Call this an *obligation not to harm*. Though it echoes the Hippocratic Oath, it is our social obligation, not a professional obligation of health practitioners. Taking a cue from Tom Pogge's work on poverty, this obligation implies developed countries must consider how international agreements, institutions, and practices contribute to those health inequalities and must revise them in ways that reduce them. These obligations should be considered by the Nuffield working groups when they evaluate the development and dissemination of new Promethean technologies.

This obligation not to harm can be challenged as both too strong and too weak. Some deny that states have obligations not to harm the health or interests of citizens in other states; treaty obligations aside, they only have obligations to protect the interests of their own citizens. Others (including me) claim states have much more robust obligations to assist than merely refraining from harming. I sidestep these controversies in order to show the power of even this modest obligation not to harm.

The obligation not to harm is compatible with the view that the main responsibility for population health and its distribution is domestic. If we graph life expectancy for countries on the vertical axis and gross domestic product per capita on the horizontal axis, we get a steeply rising curve until we reach about \$6-8000 GDPPC and then it flattens out, suggesting that low national income has a major impact on health. Where international policies cause or sustain that poverty, as Pogge (2002) has pointed out, the obligation not to harm comes into play. At the same time, some poor countries or poor states within poor countries have life expectancies rivaling developed countries, as in the case of Cuba or the Indian state of Kerala. So, although poverty has a major impact, domestic social policy also matters enormously. Even if domestic policy is a key determinant of population health levels whatever the level of poverty, some international institutions and policies impose specific harms on population health. The obligation not to harm should apply to these regardless of domestic responsibilities for health policy.

I shall briefly illustrate the relevance of the obligation not to harm with three examples: international drug policy, including property right protections and the framework of incentives for research and development to big pharmaceutical companies; the "brain drain" of health personnel from developing to developed countries, and the imposition of health sector reforms on developing countries without adequate ethical and scientific review.

International property rights and access to drugs

You are all familiar with the recent global drama regarding antiretroviral drug prices. International property rights, agreed upon through various treaties, kept the cost of these drugs way out of reach of developing countries by granting

temporary monopolies to companies holding patents. In the face of human rights and other campaigns, including the aggressive effort by Brazil and India to produce and distribute generic antiretrovirals, international agreements were modified to allow easier exemptions for public health crises and better access to generics; large drug companies were compelled to lower their own drug prices. Still, PEPFAR, until very recently, retained rigid restrictions on the use of generics, and the Indian government itself has passed legislation that may significantly raise prices for new Indian generics.

The problem of international property rights and the incentives they create goes beyond this issue of access to existing drugs. Big Pharma has long been criticized for a research and development bias against drugs needed in developing country markets. Indeed, it has responded to existing incentives by concentrating on “blockbuster” drugs for wealthier markets, including many “me too” drugs that marginally improve effectiveness or reduce side effects slightly. The Nuffield Council has noted another troubling feature of current incentive structures: the promise of pharmacogenetics, that it will produce drugs individually tailored to be safe and effective for certain genetic subgroups of patients, depends on these drugs not all turning out to be orphan drugs – drugs useful for small populations with rare diseases but unattractive for research and development for that very reason. If a large number of disease conditions stratify into such cases, many drugs will become orphan drugs. Legislative programs to support orphan drugs would then fail since the aggregate cost would far exceed what that legislation was intended to address.

Intellectual property rights and the incentive structures they support arguably make developing countries worse off with regard to health than they would otherwise be. You may object. Many drugs developed by Big Pharma under existing property right protections have filtered into widespread use as generics on “essential drug” formularies in developing countries. Health outcomes are much better than they would be absent such drugs. Since many of these drugs would not have been produced absent some form of property right protections, why say these agreements harm people’s health? Clearly, the appropriate baseline against which to measure harm is not what would happen in a completely free market, open to major market failures.

Are there property right protections that would not kill the goose laying the golden eggs but still distribute the eggs better to places where they are clearly needed? Or even that lead to more such eggs being produced for use where they are sorely needed? It is by comparison with such superior alternatives that we should measure the harm done by existing practices. Tom Pogge (Pogge 2005) has proposed that we revise incentives for drug development by establishing a tax-based fund in developed countries that would reward drug companies in proportion to the impact of their products on the global burden of disease. For example, drugs that meet needs in poor countries with very high burdens of disease would pay more, even if the drugs are disseminated at a costs close to the marginal cost of production. The tax, he admits, would be hard to establish, but it would be offset in rich countries by lower drug prices. The

program could be limited to “essential drugs” leaving existing incentives in place for other drug products.

Pogge’s proposal is an illustration of the direction that bioethics must move in thinking about harm reduction in global health.

The brain drain of health personnel

One crucial way in which richer countries have harmed poorer ones is by solving their own labor shortages of trained health care personnel by actively and passively attracting immigrants from poorer countries. In developed countries such as New Zealand, UK, US, Australia, and Canada, 23-34% of physicians are foreign-trained. In 2002, the UK NHS reported that 30,000 nurses, some 8.4% of all nurses, were foreign-trained.

Where do they come from? Over 60% of doctors trained in Ghana in the 1980s emigrated overseas (WHO 2003). In 2002 in Ghana 47% of doctors posts were unfilled and 57% of registered nursing positions were unfilled. Some 7000 expatriate South African nurses work in OECD countries, while there are 32,000 nursing vacancies in the public sector in South Africa (Alkire and Chen 2003). A 1998 survey showed vacancy levels of 72.9% for specialists in Ghana and 52.9% for nurses in Malawi.

International efforts to reduce poverty, lower mortality rates, and treat HIV/AIDS patients are all threatened by the loss of health personnel in sub-Saharan Africa. In this month’s Bulletin of WHO, an editorial points out that MDG goals of reducing mortality rates for infants, mothers, and children under five cannot be achieved without a million additional skilled health workers in the region (Chen and Hanvoravongchai 2005). The global effort to scale up antiretroviral treatments poses a grave threat to fragile health systems, for its influx of funds—hardly a bad thing in itself—may drain skilled personnel away from primary care systems that already are greatly understaffed.

The migration of health care personnel from the South to the North—a subsidy from the poor to the rich that no one can justify—is the result of a “push” from the poor reimbursements and working conditions in the countries being drained and a “pull” of greater economic and professional opportunity in wealthier countries. In addition, the “pull” is not just diffuse economic demand: targeted recruiting by developed countries have stripped whole nursing classes away from some universities in the South. The economic complexity of the push and pull is further complicated by that fact that there is a human right to migrate, something we should defend and not undermine.

In 2000, the Labor Government set a target of adding 20,000 nurses to the NHS by 2004; it achieved the goal by 2002. Indeed, the UK absorbed 13000 foreign nurses and 4000 doctors in 2002 alone (Bul WHO 2005, citing Int Org for Migrations). Recruitment from EU countries was flat (many also face shortages in face of aging populations), but immigration from developing countries continued despite an effort to frame a policy of ethical recruitment (Deeming 2004). The UK has recently announced a tougher code to restrict recruitment from 150 developing countries. In addition it has initiated a US\$100m contribution to the Malawi health system aimed at creating better conditions for retaining health personnel. The UK has thus taken two steps that are intended to reduce

both the push and the pull behind the brain drain. The UK Code aims at eliminating targeting, but it allows passive recruiting; moreover, broad international targeted recruiting continues. In addition, Malawi is but one country facing the brain drain crisis. .

Is the UK just being charitable, or should we view these actions as requirements of justice? I am claiming the latter.

Social experiments in health system reform

Many health system reforms in developing countries are the result of international agencies – the IMF, the World Bank, various NGOs, and various development funds—providing loans or gifts intended to modify poorly funded and poorly functioning delivery systems so that they are more efficient. Many of these interventions have been social experiments that impose more significant risks on populations than clinical research, yet they have not been subject to any ethical or scientific review of the sort we require for clinical experimentation. A classic example from the 1980s and 1990s is the requirement that systems in developing countries introduce user fees as a way of introducing new resources into under-funded public systems. Despite exemption mechanisms for the very poor, user fees in many places decreased access and created opportunities for corruption. Similarly, many countries were induced to seek efficiency by expanding their private health sector. Unfortunately, weak powers of state regulation led to a sector of questionable quality that pulled personnel from the public system and undermined equity in various ways. Structural adjustment programs set the stage for many of the “push” factors we say contributing to the brain drain. Decentralization was advocated as a way of improving local control over resource use and making systems more responsive to local needs, but in many places implementation has created serious problems for the delivery of public health services. These social experiments now raise special ethical problems for international efforts to scale up antiretroviral treatments (ARTs) in high prevalence countries: user fees are barriers to access, personnel drawn to private clinics are not available for public delivery systems, and weakened public health structures make delivery of ARTs more difficult.^{8,9,10} Reforms may thus not only fail to accomplish their avowed goals, but their long-lasting effects can make it more difficult to implement better reforms.

I am not by any means claiming that all such social experiments have made developing country health worse than it would otherwise be – only that some interventions have done that and that we do not have a good way of evaluating the overall contribution of these efforts since we generally fail to monitor and evaluate the results. A pro-active ethical and scientific review might establish some international accountability for reform efforts and limit the harms they may impose.

Lessons learned:

Each illustration of international harming is complex in several ways. The harms are often not deliberately imposed and sometimes benefits were intended. The harms are mixed with some benefits, and care must be taken to describe the baseline against which harm is measured. Such a complex story about

motivations, intentions, and effects might seem to weaken the case I was trying to make, that we have obligations to avoid harming health. I leave the full development of a plausible account to the bioethics agenda I have been charting for Nuffield and others:

10. Consider the implications of the obligation not to harm for reducing health inequalities internationally.

Examine Promethean challenges from the perspective of their impact on international health inequalities and the in light of the obligation not to harm.

5. Final Remarks

The focus of my bioethics agenda on population health has not been a strong suit of the field of bioethics since its inception. Does this ambitious bioethics agenda, emphasizing population health, fit with the mandate to the Nuffield Council? Many of the broad technologies Nuffield has examined offer some promise of improving the health of broad categories of patients, depending on how they are disseminated. I include here genetic screening, use of human tissues, xeno-transplantation, genetics and mental health, stem cell therapy, pharmacogenetics, clinical and health care research in developing countries. Similarly, some practices, such as the patenting of DNA, have broad implications for the development of new technologies and so for population health, if people have equitable access to them. My proposal is that as new reports on the latest technologies and practices are prepared, working groups squarely address the issues of equity and population health that I have raised. Nuffield has already looked at some of them: the terms of reference for the pharmacogenetics report, for example, mention the implications for health care, and the report, as I noted, raises the related problem of turning many drugs into orphan drugs. The terrain I am asking you to explore is not beyond reach from areas you have already traversed, even if some of it is unfamiliar ground. I believe the Nuffield Council can help lead the whole field of bioethics to address the important questions of population health that the field has largely ignored.

¹ This characterization is neutral between a value-free, stochastic account of normal functioning, such as Boorse's, and a modestly normative, etiological (or evolutionary) account, such as Wakefield's account of mental disorders as harmful dysfunctions. Neither account views pathology simply as an "unwanted condition" without providing a clear, objectively ascribable view of what makes it a dysfunction at some level within the organism.

² Preamble to Constitution of WHO, adopted by International Health Conference, NY 19-22 June, 1946; entered into force 7 April 1948, never amended.

³ I side-step a debate in the literature about whether we should be measuring all individual variation in health, later factoring in information about demographic subgroups (cite Murray, Gakidou) or should focus on health inequalities across

important subgroups, eg by class or race or ethnicity (Braveman, Starsfield, Navarro). In what follows I refer to what most are directly concerned about, troubling inequalities in health between important demographic subgroups.

⁴ When Rawls sets up his social contract situation, he invokes the simplifying assumption that all people are fully functional over a normal lifespan. We might take this to be an egalitarian default position.

⁵ My health egalitarian behaves like Parfit's "prioritarian": one would not level down the better health of some to make them more equal with those in worse health (blind the sighted to equalize health states with the blind) if there were no reasonable off-setting gain to those who are in worse health. Doing so would frustrate the ultimate egalitarian goal of making all fully normal over a normal lifespan.

⁶ I set aside, as beyond the scope of my effort here, ethical and conceptual problems that arise in the construction of summary measures of population health, which allow us to aggregate across various health conditions of different seriousness and length. Some of these problems are the subject of a growing literature on ethical issues raised by specific methodologies, but a deeper set of issues is raised by Larry Temkin's discussion of the complexity of inequality (*Inequality*, 1994. Oxford: Oxford University Press).

⁷ Gwatkin, Davidson R. "Who Would Gain most from Efforts to Reach the Millennium Development Goals for Health? An Inquiry into the Possibility of Progress that Fails to Reach the Poor." Health, Nutrition and Population Discussion Paper. The World Bank, December 2002.

http://poverty.worldbank.org/files/13920_gwatkin1202.pdf

⁸ Because these additional social factors so crucially affect population health and its distribution, the distinction that labels health as a natural rather than as a social good, as in Rawls or Nagel, is less clear.

1. To maximize population health requires making all people healthy. Making all people healthy achieves complete equity in health. (This is a conceptual point.)
2. There is no social justice without equity in health (This is a widely held normative belief).
3. There can be no equity in health without social justice (This is an empirical and causal claim that depends on what we know about the social determinants of health, combined with the hypothesis that distributing them in accord with Rawlsian principles of justice flattens health inequalities; see Daniels, Kennedy, Kawachi 1999.)
4. Therefore, achieving the best level of population health requires (causally) that we pursue social justice more broadly.

¹⁰ I note that privatization strategies do not solve the problem – they just represent one conclusion about what such equity requires and they do so without allowing us to use a scheme that addresses the age group problem at the same

time. In addition, privatization is not even a starter for lifespan health systems they way it is for income support.