Section 1 **Concepts**

Chapter 1

Resetting the parameters

Public health as the foundation for public health ethics

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Introduction

In this chapter I introduce a number of different approaches to public health ethics. However, I do this in a deliberately provocative way. I argue that we need a revolutionary, rather than evolutionary, approach to the development of public health ethics: in other words, we ought to reset the parameters that frame this area of applied ethics. I attempt to argue for this conclusion in the three sections of this chapter. First, I outline and defend what I consider to be a necessary condition to be met by any adequate theory of public health ethics. Second, I suggest what I call the traditional liberal approach, currently dominant in much medical ethics, fails to meet this condition because of the primacy it accords the idea of non-interference. I also suggest that various proposed alternatives, although offering some welcome broadening to this traditional liberal position, ultimately remain restricted by their implicit or explicit acceptance of the parameters set by the liberal approach. Third, I briefly outline a range of areas where I argue that future work ought to be directed as a means of developing a sufficiently rich account of public health ethics: a substantive account that meets my condition. I suggest that such an account must accept a view of human interests as intrinsically social. My primary focus in this chapter is a general argument in favour of the re-orientation of the field of public health ethics. I do not defend any particular theoretical perspective, beyond a general defence of what I term 'substantive' accounts of public health ethics.

I begin this discussion with the observation that if you approach public health from the perspective of much contemporary medical ethics, many public health policies and activities are likely to be viewed as ethically dubious. This is for a number of reasons but will include the following: public health's primary focus on populations rather than individuals; public health's assumptions about necessary features of the human good; and a broader focus on other values beside non-interference. Consider just a few examples of core public health activities: cancer screening programmes are designed to reduce the number of cases in a given population, through the early discovery of asymptomatic cases. This focus might mean that informed consent and individual decision making are less of a priority than in some other areas of health care. Most preventive vaccination programmes seek to reduce the risk of individuals being infected with harmful diseases, through the creation and maintenance of a population effect called herd immunity. Such programmes aim to maximize participation because if

Public Health Ethics, ed. Angus Dawson. Published by Cambridge University Press.

insufficient individuals contribute, then this important protection cannot be achieved. A healthy environment with adequate sanitation, clean water and good air quality requires the coordinated activity of the whole community, through the day-to-day action of relevant civil or public agencies. This may impose significant cost on some industries and individuals. Health promotion can seek to change people's preferences in relation to issues such as smoking, exercise and food choices, with the aim of reducing the chronic disease burden in a population through the promotion of healthier lifestyles. Many public health research activities are focused on populations, where epidemiological work to determine risk factors for disease may require the analysis of personal health information without the consent of individuals. Preparing for and responding to public health emergencies may require infrastructure for disease surveillance and legal structures to compel behaviour and seize property (in at least some circumstances). Health inequities are the result of many different socio-economic determinants and can often be addressed only through structural and societal level policy initiatives (that may in turn restrict or negate individual choice).

If the currently dominant views in contemporary medical ethics are applied to these public health activities there is a danger that such routine public health actions will be seen to be wrongly prioritizing population over individual interests. One possible response is to accept this critique and argue that much public health activity is actually unethical because it fails to prioritize individuals and their choices, as well as the moral principles that have evolved within the field of medical ethics to protect these considerations such as informed consent and patient confidentiality. However, an alternative approach is to argue that public health is a vitally important activity and that its ends are legitimate and can only be attained through such population-level interventions. On this view, the 'problem', assuming it is one, lies with the perspective derived from traditional medical ethics, not with public health practice itself. On this latter view, it is certainly possible for public health actions to be unethical, but the mere fact that they do not easily fit within a medical ethics framework does not *make* them unethical; and we certainly have no a-priori reason to hold public health to be intrinsically unethical. In this chapter, I argue that we face an important dilemma. Either we explicitly accept the consequences of our liberal framework (and damn much routine public health practice) or we choose to re-set our parameters and rethink our ethical theories, thereby ensuring that public health activities and their justification move closer to the core of ethics. In this chapter I argue that it is time for us to move towards the latter view.

A necessary condition for any adequate account of public health ethics

In any clash between a chosen moral theory and public health practice and policy we have no reason to assume that it is the practice or policy that is problematic rather than the theory. In this section I will argue that we ought to accept a necessary condition for something being an adequate theoretical perspective in relation to public health, and that this condition ought to be applied as a filter in choosing an appropriate ethical theory for public health. I will call this condition the *nature of public health* condition. I have suggested that meeting this condition is a necessary feature of an adequate theory. What this means is not that we can rule out those moral views that fail to meet it, but that the consequences of embracing any view that does not meet the condition is likely

to be too great (in the sense that it will entail excluding a substantial amount of public health policy and practice, which we otherwise find appealing and arguably is necessary to establish the conditions for living a good life). What is the nature of public health condition? The main idea behind it is the thought that any adequate account of public health ethics must begin with a clear articulation and defence of a concept of public health. I suggest this is the case because the aims, nature and methods of public health appear to be different from those of much clinical medicine. If this is true, then we have good reason to be cautious in simply applying our methods and results from clinical medicine (the main focus of most discussions in contemporary medical ethics) in the sphere of public health. However, this focus on the definition of public health is more difficult than might at first appear because the concept is itself a contentious one. What do we mean when we talk of 'public health'? What are the legitimate aims of public health (Munthe, 2008)? There is, of course, a huge literature discussing the concept of 'health' and a smaller but growing literature discussing the concept of 'public health' (Brülde, Chapter 2).

In previous joint work with Marcel Verweij we explored many of the most influential definitions of public health that have been offered. Our own rough account of public health focuses on this area of activity as being characterized by 'collective interventions that aim to promote and protect the health of the public' (Verweij and Dawson, 2007: 21). This is further articulated in terms of two different but equally important senses of 'public' being contained in the notion of public health. These two senses of 'public' in public health can be structured around, first, the idea of the health of *the public* as a social entity or a target for an intervention (that is, a population, community or group) and, second, public as a description of the *mode of intervention*, which requires some form of collective action. As a result, on this approach, we end up with a particular view of the elements of public health, but also with an agenda for some of the issues to discuss within public health ethics. There are many issues that require clarification, but I will consider only three important central issues here. First, public health is focused on populations (not just individuals). Second, much public health work is preventive rather than curative. Third, most public health improvements cannot be brought about by individuals on their own: the attainment of public health ends requires collective efforts.

First, public health activity is concerned not just with the health of individuals but, rather, primarily focuses on the health of the population or community. What does this mean? When we think of a population it is tempting to consider it as merely a collection or aggregation of particular individuals. There is an important sense in which this is true. If we have a population and we keep taking away individuals, we will ultimately have nothing left: the 'population' does not exist as an entity independently of the individuals that collectively constitute that population. However, while this is important, it cannot be the whole story. First, this model fails to take into account such things as the way that unequal socio-economic determinants influence health. You are not just an individual, but an individual with a particular position in a society; and that position has a significant impact upon your health status. Second, we can think of different populations or societies as having better or worse health than others and we can think of a particular population's health improving or worsening over time (perhaps because they have lower or higher inequities or a lower or higher overall disease burden). Both of these examples might be used to express a concern about the public's health in these populations, and may provide a basis for aiming to

improve a population's health through population-level interventions. Third, population health cannot merely be viewed as an additive correlate of the health of the constituent individuals. For example, it looks as though, paradoxically, in targeting population health we can improve the health of the individuals in that population, but if we target the individuals as individuals then we may not improve that population's health. This is one of the many things we can learn from the work of Geoffrey Rose (1992) and his focus on the complexities of the relationship between population health and individual health. One of his examples focuses on the influence of drinking 'cultures' on individual behaviour in relation to alcohol consumption and associated adverse medical consequences. The relationship between the population and individual is a complex one. While no one would deny that there may be 'individual' factors such as an individual's genetic makeup that contribute to the risk of being a 'heavy drinker', it is important to see that the behaviour of individuals in relation to alcohol consumption is very strongly influenced by population factors such as social attitudes to alcohol and the resultant legal and political climate. The more that is drunk by the average citizen in a population, the more 'heavy drinkers' there will be. Indeed, even more specific correlations can be drawn between alcohol and disease at the population level in some situations, such as the drop in cases of cirrhosis in France during times of reduced access to wine during the two world wars (Rose, 1992: 85). What this suggests is that lifestyle choices are not simply within the control of individuals. If this is true, then we should take care in attributing causation (and therefore responsibility for lifestyle behaviour) to individuals alone.[1]

Second, public health activity focuses on seeking to prevent, reduce or ameliorate harm, not just treat patients after a negative event has occurred. This is an intuitively powerful idea. Such interventions require an inference to be drawn from known population risks and applied to the lives of individuals. This, in turn, will require interventions focused on asymptomatic individuals, and this can generate anxiety and other harms (Newson, Chapter 7). Such harms, then, need to be weighed against the benefits of prevention. The scope for prevention is vast, and it is important for public health to intervene only where it is appropriate. However, deciding when this is the case is difficult. For example, what limits ought we to place on the idea of harm? What kind of harms are relevant (Dawson, 2007; Verweij, Chapter 6)? Public health operates with a broader notion of harm than that commonly employed in contemporary medical ethics. For example, public health is concerned not just with the immediate factors that impact upon people's lives but also with the prevention and reduction of harm as well as the wider determinants of health and many of the factors that shape the kind of society within which we wish to live. Such influences upon our health are often best described in terms of probabilities and risks, and so public health is often motivated by a concern for uncertainty and precaution (John, Chapter 4). The more complex or broader the notion of harm as the focus of public health, the more likely it is that the benefits and burdens calculations will become increasingly difficult (and contentious). If it is true that much public health can only be performed through collective activity, then the bringing about of such ends will entail coordinated action (and, if the end is judged to be sufficiently important, perhaps, in some cases, coercion too).

[1] See, also, Paul (2009) for an excellent discussion of how Rose's work may help us rethink HIV prevention.

Third, public health requires collective action, as many desired public health ends are impossible to achieve for individuals by themselves. In reality, collective activity usually means state action on behalf of society as a whole. This fact can often result in the charge of paternalism, with the state taking an active decision-making role in relation to the best way that people should live their lives. Of course, we might question if such activities are really paternalistic, if this is the only way to secure these ends for the good of the whole population (Nys, 2008). But, even if the charge of paternalism is fair, we can still ask the question whether such paternalistic action is always wrong. We have no reason to just assume that all cases of paternalism are wrong by definition (in the absence of an argument to establish this rather odd conclusion).

How will these considerations work out in practice? Consider a brief example related to the key contemporary policy concern of rapidly rising rates of obesity in many parts of the developed world. First, with this approach it is important to see that this is a population problem (as well as being a concern for individuals). It is a population problem in a straightforward epidemiological sense, as we can measure obesity at the population level by analysing the differences between countries and within countries and relate these differences to other population features such as socio-economic factors. I do not mean to suggest that obesity is simply a matter of poverty: it is not. But it looks as though there is an association between obesity and socio-economic status, in that more affluent individuals are less likely to be obese (probably for very complex reasons: better access to information, better quality and variety of food, greater opportunities to exercise in stimulating ways, etc.). Second, prevention is central to obesity because we have enough empirical evidence to suggest that while prevention of obesity is difficult, treatment is virtually impossible (except for surgery, which carries risks significant enough for this to be an option only for those at very high risk from their obesity). Third, and relating back to the fact that obesity is a population problem, collective interventions will be vital if we are serious about tackling the issue of obesity. Such interventions will have to be at the societal level and are likely to include profound changes to a number of factors including the nature of work and schooling, the built environment, transport policy, the regulation of the food industry and the possible restriction to food advertising (especially in relation to children). We might argue that such interventions do not count as paternalism (as the focus is on the collective) or that they do (but they are still justifiable). In either case, it might be argued that such collective interventions may be permissible.

In conclusion to this section, it is vitally important to be clear about what we mean by public health before we begin to explore public health ethics. Any theoretical perspective orientated towards public health must, I argue, be responsive to the aims and nature of public health: too often discussions on public health ethics fail this test. Attempting to construct a public health ethics without a substantive notion of public health will inevitably result in error. Setting the correct parameters is the first step in trying to attain the correct perspective upon this vital area of health care practice.

The inadequacy of liberal medical ethics as a means of thinking about public health ethics

One important aim of this chapter is to argue that much of the work that has been done on public health ethics so far, even that explicitly aware of the need for something more than a liberal approach, has remained locked within the parameters set by the traditional medical

ethics framework. I argue here that we need to re-frame the way that we think about public health ethics and move away from the assumption that public health ethics ought to be structured in terms of debates about non-interference and the subsequent central preoccupation with apparent conflicts between individual and population. This approach, which I will label as 'liberal', encourages the idea that a particular value or set of values, primarily attached to individuals and their decision making (such as liberty and autonomy) has priority in our moral deliberations. Approaching things in this way places the onus on those seeking to argue that such values should not always hold sway in public health to justify situations where it is appropriate to restrict or interfere with an individual's liberty. In this chapter I argue that this way of conceptualizing things is part of the problem and is so dominant that it tends to be assumed without argument. I will begin by discussing what I term 'narrow' or 'pure' liberal views and then move on to what I call 'moderated' liberal views.

Narrow liberal views

The exact meaning of the term 'liberal' can, of course, be disputed. However, I will take it here to imply a set of commitments, long dominant in contemporary medical ethics, that draw upon a particular and narrow reading of the harm principle taken to be derived from John Stuart Mill's *On Liberty*. Within this view, the only ground for coercive interference in the decision making of individuals is when their actions may have negative consequences for others. Any action to reduce or prevent harm to an individual, once they are aware and informed of the relevant danger, is held to be a case of paternalism and thereby morally wrong. Within this view, liberalism is seen as centrally concerned with non-interference.[2] However, there are a number of problems with this view. First, it is not clear that this is really Mill's considered view. He explicitly includes action to preserve public goods within the list of acceptable reasons to restrict liberty. In this sense, Mill is not a 'Millian' liberal in the way that many imply (Dawson and Verweij, 2008). Second, as mentioned before, when we talk of the concept of 'harm' in relation to public health practice and policy we are interested in much more than harm to others as traditionally conceived. Public health actions are designed not merely to prevent harm, but also to reduce or ameliorate it. The relevant notion of harm implicit in routine public health activities is much broader, more contextual, more interested in the social reality of actual lived lives, and more about the conditions that are required to live a healthy life. As a result the traditional distinction drawn in much medical ethics between beneficence and non-maleficence is less obviously relevant (Dawson, 2007), and if this is true, this makes it more difficult to defend the very coherence of the idea of 'non-interference'. At the very least advocates of the 'Millian' view need to defend such a narrow conception of harm, and it is not clear that this is possible. Even if it is, we might still argue that discussion of public health requires a broader conception (that is one that permits harm prevention and harm reduction) to make sense

[2] When I write of 'liberalism' in this chapter I just mean the dominant 'Millian' strand that dominates much contemporary medical ethics. There are, of course, ways of formulating richer versions of liberalism, such as that due to Raz (1986). If anyone is offended by my characterization of liberalism they can read my text as referring to a very particular type of liberalism (perhaps, one to be thought of as liberalism*). I will also leave to one side the possibility of other options in choosing one's political philosophy, such as varieties of republicanism (Jennings, 2007a).

of the very idea of public health.[3] So, for both these reasons, an appeal to the 'harm principle' will not result in as clear a policy directive as may be assumed: public health ethics (and, in my view, medical ethics in general) cannot be built upon such shaky foundations.

However, let us assume, for the sake of argument, that this is not the case and the idea of non-interference (allegedly derived from the harm principle) is robust. The first thing to note is that quite a lot is built upon the idea of non-interference. For example, priority will be given to individual freedom or autonomous decision making because it is for individuals to decide what they should do. Liberals tend, also, to support the importance of maintaining a clear distinction between the private and the public. The private represents an area where the state or its representatives have no legitimate reason to trespass. With this approach, it is easy to see how public health ethics can get conceptualized as being about protecting the sphere of the individual from the interference of state power. An example of this might be a view of the limits of ethical health promotion as being related to the provision of information as a means for individuals to make their own decisions about what to do. People's existing preferences are to be respected because they are *their* preferences, and as a result the state ought to be neutral and not promote particular views of the 'good life'.[4]

Liberals need not see liberty as the only value that matters or the value that always takes precedence (perhaps it is that which distinguishes them from libertarians). However, there is a problem here for the advocate of non-interference that I will briefly explore. The problem arises from a failure to recognize that non-interference or neutrality towards all other values is itself a value. There are two coherent options here. First, assume that non-interference itself can be given a different status to other values. The advocate of non-interference looks as though they ought to embrace this option, but then we need an argument to establish why we ought to see non-interference as a higher or second-order value (and this account must also explain how such a higher value can cohere with other values). Second, and alternatively, while non-interference and its cognates, such as autonomy and liberty, are seen as important values, we have no good reason to assign them any special status. In this view, we have a range of important values of equal status that can be weighed against each other. Each of these values may take priority over the others in some contexts. Sometimes liberty is the winning value, but at other times it is not. With this view it makes no sense to frame the discussion of these issues in terms of only liberty. A non-privileging account of values in public health ethics will allow liberty to be legitimately defeated on at least some occasions, perhaps because there will in turn be more liberty further down the way or because other values are just more important on that particular occasion. If this second approach is true, as I think it must be, then non-interference as a privileged value is not a coherent option.

[3] Public health is, of course, often concerned with what we can think of as the 'background conditions' for living healthy lives. It is quite a stretch (perhaps even incoherent) to think of many of these activities as *coercive*, and so it might be argued, once again, that non-interference is too narrow a principle to capture all that is relevant to public health. Thanks to Adrian Viens for discussion on this point.

[4] Dan Wikler's work (1978) is a good example of a 'Millian' approach to the ethics of health promotion. Holland (2007) provides another well-worked out position defending a liberal approach to public health ethics more broadly. See Jennings (2007b) for a critical perspective upon liberal approaches to public health ethics.

In addition, a common inference from the liberal non-interference approach to framing debates in public health ethics is an assumption about responsibility. It is usually assumed that individuals have the freedom to make choices (whether or not they in fact do), and therefore responsibility for the consequences of those choices is attached to the individual choice-makers. The danger is that we are offered a rather simplistic view of both choice and responsibility (one that tends to ignore the way that many 'choices' are partly or even largely the product of factors beyond the individual's direct control [such as socio-economic, historic, geographic or cultural factors]). The liberal faces a dilemma in such a case. Either the individual is not free because they do not make choices in the relevant sense (but this may mean that no one is free) or we begin to take seriously the social construction of choice (in which case, it turns out that the degree to which we can be free is restricted in some sense. Perhaps there are only a sub-set of choices that are free, or each choice is only free to some extent). Of course, it has long been recognized that the relationship between causal and moral responsibility need not be a straightforward one. However, if it looks as though the causes of behaviour are not merely the result of an individual's 'choice', then it is clearly not appropriate to attribute responsibility for the consequences of such lifestyle 'choices' to individuals in any meaningful sense. What this raises is the possibility that many liberals are working with a deeply implausible view of human psychology and a potentially morally problematic view of responsibility attribution.

So leaving these more theoretical concerns about non-interference to one side, I now turn to some possible reasons for why the liberal framing has been so powerful. I think the liberal tradition in contemporary medical ethics has been supported by at least three features: the history of medical ethics as a discipline; its relation with the law; and a set of assumptions about pluralism. These features are partial explanations as to why the parameters are set in their current position. However, I suggest that none of these three reasons provide any convincing justification for why we must remain locked within such a framework.

First, as many people have now noted, the history of medical ethics from its early years was focused very much on dyadic clinical relationships between doctor and patient and a very narrow set of issues either related to such a relationship (for example, consent and confidentiality) or a view of ethical theory and principles focused on individual patient rights and autonomous decision making. The consensus that health care was too paternalistic resulted in the *de facto* establishment of respect for individual autonomy as the dominating principle in medical ethics. Other areas of bioethics, related to animals and the broader environment, tended to be downplayed. The other factor that has driven much ethical discussion is the apparent glamour of new technologies and cutting-edge medicine. Much contemporary medical ethics can be seen as dwelling in one of two camps: those with a tendency to see technology as providing solutions and those suspicious of it. More recently, many writers in medical ethics have started to shift their focus, and there is now growing interest in issues relating to infectious disease (particularly due to SARS, pandemic influenza, tuberculosis, etc.), the impact of social disparities upon health at the national and international level and the renewed interest in global justice, particularly in relation to arguments surrounding the impact of intellectual property issues upon access to medicines. As I have already mentioned, many others have said that medical ethics must be revised to accommodate these issues. However, I want to go further and suggest that many of those that have argued that medical ethics needs to 'expand', often apply traditional frameworks to issues in public health, and thereby fail to capture what is special or different about public health ethics.

The second feature that has tended to support the liberal approach is a set of assumptions about the relationship between law and ethics. There is a common tendency to confuse the two, and this may relate to the apparent obsession that many working in medical ethics seem to have with the issue of regulation of health care practice (often with the assumption that anything is and ought to be permitted unless it is explicitly squashed by law, resulting in the focus, too easily, becoming one of ensuring that regulation is minimal). The relation between law and ethics is a complex one, but the main point is that the two are distinct, although they may be related. The problem with confusing the law and ethics in relation to public health is that the law too often works with narrow accounts of both causation and responsibility, with a focus on individual action. This can be seen, for example, in relation to both tort and crime (Coker and Martin, 2006; Martin, 2009), although the law may also be used in other ways to promote public health (Gostin and Stone, 2007).

Third, there is an assumption in much contemporary medical ethics that as we cannot agree in our moral judgments we, therefore, ought to be committed to pluralism in ethics in general. It is then concluded that we must focus on process values rather than pursuing substantive answers to ethical questions. The relation of these ideas to liberalism is the thought that we can remain neutral in terms of values and allow individuals to make their own decisions and pursue their own view of what is morally appropriate. However, all of these commitments can be contested. First, the fact that different perspectives exist upon an ethical issue does not on its own have any implications for our normative views. There needs to be further substantive argument to establish such a claim. Second, we need to take care when talking about pluralism. This is not *value* pluralism (there is more than one morally relevant value) but *judgment* pluralism (there is more than one 'answer' to a moral issue). The former does not imply the latter, and it is the latter that the supporters of such relativistic pluralism need to establish. It should also be noted that you can be both a value pluralist (there is more than one value) and a moral realist (there are objective answers to moral questions) at the same time. Third, one thing that drives the liberal 'neutrality' view here is a commitment to tolerance. However, it often seems to be missed that judgment pluralism cannot easily be combined with a coherent defence of a value such as tolerance. Indeed, a commitment to tolerance is most easily defended from a realist tradition (that is we ought to be tolerant, even if other people think differently). Fourth, a commitment to procedure over content is not remaining neutral about values, but just choosing to adopt a particular account of ethics: one committed to procedural values as though this were not just a commitment to a particularly thin set of substantive values.[5]

Whether or not the liberal approach is an appropriate one for public health, and therefore for public health ethics, it is certainly the case that if we adopt this kind of liberal framing of public health ethics, many aspects of routine public health practice will be ruled out as unethical and this approach will not be able to capture the more substantive notion of public health outlined earlier. In other words, narrow liberal views will fail to meet my suggested condition for an adequate theory of public health ethics.

[5] Of course, all of these issues are much more complex than I suggest here. My intention is just to illustrate how the easy moral relativism of our times fits with the alleged 'neutrality' of liberalism.

Moderated liberal positions

Are moderated liberal views any more successful? I call such views 'moderated' liberal positions as they clearly suggest dissatisfaction with a simple liberal position (for example, one built solely upon an appeal to non-interference or the harm principle) in regard to an adequate public health ethics. However, I suggest that these views are still too cautious or modest. They remain locked within liberal parameters: with, despite their apparent pluralism, an implicit commitment to giving priority to the 'liberal' values of freedom and autonomy. The first three views that I discuss here, Upshur (2002), Childress *et al.* (2002) and Gostin (2005) are 'principled' approaches. They are essentially attempts to highlight a useful and pragmatic set of issues, with a clear focus on practical implementation for those working in public health practice and policy. This is a laudable aim. However, I suggest that there are specific problems with each view and there are general problems for any principled approach. Lastly, in this section, I outline and discuss the recent proposal for a 'stewardship model' described by the Nuffield Council of Bioethics (2007). I classify the latter view as a modified liberal view because, like these three principled approaches, it seems deeply committed to working within liberal parameters.

I will begin by just stating the three 'principled' views. First, Upshur (2002) offers us a set of four 'principles for the justification of public health interventions' as follows:

1. harm principle;
2. least restrictive or coercive means;
3. reciprocity principle;
4. transparency principle.

Second, Childress *et al.* (2002) in a paper involving ten authors, many of them well-known names in public health ethics, are much more ambitious, in that they are interested in sketching out an account of public health ethics, in the course of which they outline a set of moral considerations 'generally taken to instantiate the goal of public health' as follows:

1. producing benefits;
2. avoiding, preventing, removing harms;
3. maximizing utility.

They then offer five 'justificatory conditions' for interventions to promote such public health goals:

1. effectiveness;
2. proportionality;
3. necessity;
4. least infringement;
5. public justification.

Third, Gostin (2005) outlines a set of what he terms public health values as follows:

1. transparency;
2. protection of vulnerable populations;
3. fair treatment and social justice;
4. the least restrictive alternative.