Public Health and Normative Public Goods

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Public health is concerned with increasing the health of the community at whole. Insofar as health is a 'good' and the community constitutes a 'public', public health by definition promotes a 'public good'. But 'public good' has a particular and much more narrow meaning in the economics literature, and some commentators have tried to limit the scope of public health to this more narrow meaning of a 'public good'. While such a move makes the content of public health less controversial, it also strips important goals from the realm of public health, goals that traditionally have been, and morally should be, a part of it. Instead, I will argue, while public health should be defined by public goods, it should be defined by a broader conception of public goods that I shall call 'normative public goods', goods that ought to be treated as if they were public goods in the more narrow sense.

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Public Health as Public Goods

Jonny Anomaly has argued that public health interventions are only justified when they promote what I will call 'pure public goods': 'public health should be concerned with the provision of public goods associated with medicine' (Anomaly, 2011: 251). He then explicitly defines a public good in a way that is familiar in the economics literature (Anomaly, 2011: 251). On this view, a pure public good has three elements.[1] First, it must, trivially, be a good, that is, it must be something that benefits people in some way.[2] For public health, that good will—obviously—be connected to health. Second, a public good is non-rivalrous: one person's consumption of the good does not diminish another's ability to use it. So, for example, once we have a system of national defense in place, the fact that the system protects me does not keep it from protecting someone else as well. Contrast this protection to that provided by my pocket umbrella: if it is protecting me from the rain, it cannot protect anyone else; my use of the umbrella competes with other people's use of it. Third, a public good is non-excludable: once the good is produced, no one can effectively be kept from enjoying it. So a system of national defense cannot simply decide to leave out the one block on which I live in Western New York.

Notice that both 'non-rivalrous' and 'non-excludable' are rarely construed strictly. Consider what is usually regarded a classic public good: clean air. It is not quite non-rivalrous: my consumption of clean air does, for example, decrease the oxygen around me—though there is enough for everyone and, if there are sufficient green plants around, what I take out will soon be renewed. More importantly, it is not, strictly speaking, non-excludable: we could limit clear air to a domed stadium or we could refuse to clear the pollution in a particular region. But we consider clean air a public good because the easiest way to produce it makes it available to everyone without incurring additional costs for each person who uses it.

Pure public goods defined in this way exhibit three key features. First, people enjoy their benefits whether they want the goods and whether they pay for them. So even if I am a pacifist, I get protected by the system of national defense, and I will get protected by it even if I somehow avoid paying taxes.

doi:10.1093/phe/phx020
Advance Access publication on 27 November 2017

Second, public goods almost always require collective efforts to produce. National defense, for example, requires a sum of money that can only be generated by taxation, and only the concerted efforts of many people working together can create the infrastructure that such a good demands. We can imagine, I suppose, a Bill Gates funding a program to clean the polluted air of a region, but even he could not fund it in perpetuity, and even he would require an enormous staff to implement his plan. Most public goods of any interest require, by their very nature, the participation of large groups working together in coordination with each other. For that reason, the production of public goods often falls to governments.

Third, because people can enjoy public goods without paying for them and yet they require a cooperative effort to produce, public goods often face free rider and assurance problems. Because public goods are non-excludable, I may want to enjoy one without paying my fair share of its costs. I may reason in the following manner. On the one hand, if enough people pay, the good is produced and so I can save money by not contributing. But, on the other hand, if they do not, then the good will not be produced, and again, I simply save money by not contributing. So, whatever anyone else does, I am better off if I do not contribute. Yet since this logic works for every actor, no contributions will be made, and the good will not be produced. But if we would rather live in a world with the good than without it, then we are worse than we would be if we all contributed. So we have a classic collective goods problem (Parfit, 1984: ch. 2). But even if I do not reason in this manner, I may worry that others will do so, and so I may worry that my contribution will be wasted because not enough people will contribute to create the good. So, unless I am given some guarantee that others will contribute, I will refrain from doing so. But again, others will reason in the same way, and the good will not be produced.

Usually, the easiest way to solve these problems is simply to require people to contribute.[3] So, we tax everyone to support national defense, and we require individuals to have costly catalytic converters on their cars and businesses to have scrubbers on smokestacks, so that automobiles and factories produce less pollution. Essentially, we create a law with substantial penalties that changes the incentive structures, so that people's self-interest no longer supports defections from the program or so that everyone knows that enough people will contribute to a project to make it work. Even the most ardent libertarian agrees that one appropriate role for government is to enforce solutions to important collective goods problems. When libertarians object, their argument is not that the government has no role in such matters, but that the interests of liberty outweigh the good created or that government will create worse problems in the process.

To see how this dynamic works in public health, consider herd protection (Dawson, 2007). If enough people are vaccinated against an infectious disease, then the whole population is protected against it. If the disease appears in the population, it will not be able to spread because nearly everyone around the ill person will be immune to the disease, and so the disease will be unlikely to infect anyone else, and even if another person does become infected, that person would be unlikely to pass it on to a third. So the disease will be stopped. Most importantly, herd protection shields from disease those who are most vulnerable to infections: children who are too young to have an effective immune response, the elderly who have weakened immune responses, and the immunocompromised.

Herd protection is a pure public good because it meets the three criteria: (i) protecting people from disease, particularly those who are most vulnerable, is valuable. In addition, vaccinations are never 100 per cent effective, so it also protects those who are vaccinated and never develop immunity. (ii) Once herd protection is established, protecting one person does not affect whether another person is also protected. And (iii) once it is established, everyone is protected (whether they want to be). Creating herd protection, however, is not easy: although it varies by the infectiousness of the disease, typically 90 per cent of the population must be vaccinated to create the protection. And creating herd protection has a cost: vaccinations cost money, and although most vaccines are very safe, they all entail some small risk of side effects.

Since the creation of herd protection for disease like measles can save thousands of lives, it is valuable both to the individuals saved (though they may never know it) and to the public at large, and so governments have created mandates for many vaccinations—typically, in a requirement that children be vaccinated before they can attend school. Because such a mandate could burden families financially, the costs of the vaccine are typically covered by insurance or by government programs designed for that purpose. Still, some families have sincere religious or philosophical objections to vaccinations, usually because they have some objection to injecting foreign substances into their bodies. And others simply do not want to subject themselves or their children to the risk of vaccines, often because they have exaggerated fears about those risks.[4] Because herd protection requires only about 90 per cent

coverage, some exceptions can be granted without endangering the goal. But of course, if too many people opt out, then the good itself is threatened. So constructing a policy here is a delicate matter: we might want to allow some exceptions to respect liberty, but not so many that it endangers herd protection.

Importantly, this intervention is not paternalistic. An action is paternalistic if it restricts the freedom of a person for that person's good (Dworkin, 2016). But the point of the government action in these cases is to create the public good, not to help the person whose liberty might be restricted by the requirements. The fact that the action may also benefit the person is just a side effect—though from a public health point of view, not a trivial one.

Normative Public Goods

Pure public goods in health offer compelling cases for public health interventions. But Anomaly wants to limit the scope of public health to such public goods. In doing so, he hopes to achieve three goals. First, he wants to make public health less divisive by focusing on actions that everyone agrees are acceptable, particularly since such actions are not paternalistic (Anomaly, 2011, 252–3). Second, he focuses public health on those measures that require collective action to achieve, and so he thinks he can explain uncontroversially why government is often the best vehicle for public health, without making government the only possible actor (Anomaly, 2011: 253–4). And third, by confining public health to public goods, he makes it focus solely on populations—that is, on what can be achieved by a group for a group—and not on private medicine (Anomaly, 2011: 254–5).

I will concede that Anomaly's definition has these three advantages, and he has a point that public health should be concerned with aspects of health that benefit people in general and that call for collective action, so public health should be concerned with 'public goods' of some sort. Nevertheless, his view of public health is much too narrow.[5] The most important advances in public health in the past 200 years are the result of clean water and proper sanitation (Cutler and Miller, 2005). But neither is a public good. My use of clean water clearly competes with others' use of it; indeed, only in a few places is fresh water so abundant that it is not a scare resource. And it is easily excludable from others. And sanitation fits the model even less well. Good sanitation requires the construction of individual sewer lines to each abode, often at great expense, and for that very reason, it can easily be denied to some. (Just ask anyone in a rural area how hard it is to connect to a sewer system.) And indeed, what I put into the sewer competes with what others put into it and creates marginal costs to the system. So, on Anomaly's definition of public health, the most important public health advances in history do not count as public health at all.

We can argue that although clean water and sanitation are not themselves pure public goods, they are the most important means for creating a public good: a low-pathogen environment.[6] In an environment in which only some have clean water and sanitation, waterborne diseases will still be common, so even those who have clean water and sanitation themselves will find themselves susceptible to diseases carried by those who do not. So a low-pathogen environment, if it exists at all, must encompass a whole community, so it is not excludable and it is obviously non-rivalrous. Clean water and sanitation are clearly the easiest way (though perhaps not the only way) to create that public good.

But the public health benefits of clean water and sanitation go far beyond this public good, important though it is. Indeed, since the understanding of the role that water plays in spreading disease is a historically a late development, the role it plays in the public health predates it (Sedlak, 2014: chs. 1–4). But more importantly, clean water is needed to prevent people from exposures to toxins, like lead (Sedlak, 2014: ch. 6). But a toxin-free environment is easily limited, and so it is excludable—as the people of Flint can testify. Unlike those without pathogen-free water, those without toxin-free water do not threaten those with it. In addition, clean water is necessary for private hygiene and the attendant health benefits associated with cleanliness. And since water is necessary for life itself, having it readily available in a form that does not undermine health serves many purposes.

Yet even these considerations miss the bigger point. Whether clean water and sanitation meet the definition of a pure public good and whether they are necessary to such a good, providing them has always been considered the quintessential public health project. The reason is simple: they are vital resources for promoting health in the population. For that reason—and that reason alone—public health should be dedicated to promoting them. So whether clean water and sanitation are non-rivalrous and non-excludable, they *should* be: they *ought* to be so readily available that everyone—meaning, everyone without exclusion—can have unlimited access to them for health purposes (though perhaps not to water their lawns).

In a non-health context, think about the public value of a system of roads. Roads are relatively

non-rivalrous—though roads do have limits on how many people can use them at one time and each car on the road causes some damage and big trucks produce even more damage, damage which must be repaired over time. But they are excludable, as the existence of toll roads demonstrates. Indeed, the experience of tolls can teach an important lesson about the role of a certain class of public goods. In the early American Republic, most roads had tolls, and while allowing toll roads gave entrepreneurs an incentive to build roads where none existed, they inhibited movement and commerce (Wood, 2009: 479–82). Publicly financed roads, on the other hand, promoted both; indeed, the mere *expectation* that roads would be readily available to transport goods created opportunities for commerce and for new settlement that would not have otherwise existed.[7] Thus, the benefits of a road system go far beyond the benefits of getting people from one point to another. But those benefits emerge only if a collective effort is made to create a widespread system that is in fact available to all. Governments may not be necessary to create such a system, but often they are, if only to overcome the free riding and assurance problems that arise. And to *ensure* their availability, a government guarantee will almost certainly be needed.[8] Indeed, making road widely available and free is such a basic government service that few think about what justifies building them.

Roads, clean water and sewage constitute goods of value to the public at large. They are things that should be readily accessible to everyone without exception. They constitute what I shall call *normative public goods*. As these examples illustrate, a normative public good must meet four requirements. (i) It must be a good. (ii) The good should be readily accessible to everyone in a way that individuals need not worry about using it up, so that it becomes effectively non-rivalrous and non-excludable. (Of course, as a society, we may need to worry about the use of potentially scare resources in the creation and maintenance of such a good.) (iii) It must benefit society in one of two ways: (a) the good—like herd protection—cannot exist except through a collective effort, or (b) it creates a good that benefits a large number of people. (iv) The good must be sufficiently important to justify the collective effort. What will count as 'important' and how many people constitute 'large number' are left open to debate, and indeed they interact with each other: a good that is important enough need not benefit as many people to be worthy of attention.

Now consider how such a view applies to another core area of public health: fighting epidemics. Fighting epidemics creates the obvious good of preventing disease (i), and fighting infectious diseases requires a collective effort to prevent their spread and to organize treatments for large numbers of people (iiib). If the disease is serious enough, it warrants the effort (iv). So, fighting Ebola and Zika infections obviously qualify, but the combatting the common cold probably does not. Such diseases could affect a large number of people (iiib). As a bonus, a vaccine program could also produce herd protection, which can only be produced through a collective effort (iiia). But notice that preventing infectious diseases through vaccination is a normative public good even in cases, like vaccinating against the flu, in which we are very unlikely to create the pure public good of herd protection. Indeed, public health should combat noninfectious diseases like tetanus, where herd protection is impossible. Finally, the prevention of epidemics should encompass everyone: we should prevent as much disease as possible, and we should ensure that our efforts are available to as broad a swath of the population as possible (ii). This requirement does not entail that we do the same things for everyone. The best way to protect people in New York from Zika is to fight it in Florida. But it does imply that public health measures must strive to include everyone who might be affected and that systematic exclusions are automatically suspect.

Normative Public Goods and Public Health

My proposal, then, is that public health should be primarily concerned with normative public goods about health. As I have shown, such a view easily encompasses the traditional role of public health: fighting epidemics, providing clean water, and sanitation. Such a view focuses public health on the public aspects of health care, particularly on those that require collective action.

Notice, however, that once the question is not 'what goods *are* non-rivalrous and non-excludable', but 'what goods *should be* non-rivalrous and non-excludable', we can no longer exclude substantive normative disputes from discussions of the scope of public health. It places normative disputes at center of what counts as public health. Indeed, this criterion is so central to the conception that the other three are relatively less important. And since normative claims are often contentious and since normative disputes about public affairs are inevitably political, Anomaly's hope for making public health less political is moribund. But in seeking to exclude by definition many of the controversies that surround

public health measures, he strips away the core of an inherently normative field.

For an illustration of how to apply this normative conception of public health, consider smoking campaigns. Smoking causes over 100,000 deaths in the USA each year. Since it has such a large effect on health, a campaign to reduce smoking would seem like an excellent public health endeavor. A campaign against smoking would certainly require a collective effort, especially given the power of tobacco company advertising. But to count as a public health effort on the view I am defending, that effort must be accessible to all, and so the campaign should attempt to be effective everywhere. For that reason, it may require special efforts to reach populations who are not, for various reasons, easy to reach. A smoking prevention program is, then, a proper target of public health because it promotes a normative public good. This fact does not, of course, imply that any particular intervention is justified. The question becomes whether the actions that are necessary to create the public good are worth the costs—both in money and liberty—that would be needed to create it. We are, then, back to old questions in public health ethics. But such a result is hardly surprising: we should not expect a mere definition to decide substantive questions.

Typically, smoking campaigns start by providing health information on the effects of smoking. Such information itself constitutes a normative public good: everyone should have easy access to accurate information about it. However, note that even information is not a pure public good: it may be non-rivalrous, but it is easily excludable. If it is a public good, it is a normative pubic good. In any case, mere information is not enough to curb smoking. So modern smoking campaigns have combined two important elements: (i) bans on smoking in public and (ii) taxes (see Farley, 2015). While smoking bans do restrict the freedom of people to smoke where they like, they can be justified by the fact that smoking causes harm to others through the effects of secondhand smoke.[9] But bans also reduce the opportunities for smoking, and so they also make the act of smoking more difficult. The public health good combined with the prevention of harm is decisive. Taxes also restrict liberty somewhat, but they also have a direct effect on smoking rates, since they make the practice more expensive, often much more expensive—and the costs especially discourage teenagers for whom a higher price is likely to provide significant disincentives to begin the practice. Since cigarettes are not a necessity, the loss of liberty incurred is not great, and since its health effects are so bad, discouraging it through taxation also seems justified.

One side effect of anti-smoking campaigns is that they create what appears to be a pure public good: a stigma against smoking. The culture has a strong negative attitude toward smoking and smokers that creates an additional social cost to smoking. Once created, the stigma is non-rivalrous because it exists in unlimited supply, and it is non-excludable because it pervades the culture. Such a stigma certainly helps reduce smoking by making it very unattractive to be identified as a smoker. However, we must ask whether creating such a stigma is actually a good at all. In other contexts, like campaigns against obesity, such stigmas would not be, both because fat stigmas are counterproductive and because people are not treated with the dignity they deserve (Abu-Odeh, 2014). We should worry that the stigma against smoking does the same.

Controversies in Public Health

This new conception of public health does not, I think, resolve any of the questions that Anomaly wants to keep out of the realm of public health. For example, access to health care is a good candidate for a normative public good. But even if we agree that such access is an important goal that can only be addressed through collective effort, we must still ask what price must be paid to achieve that goal. So we will still have the same political disputes that we had before.

Anomaly also wants a narrow definition of public health because he thinks public health practitioners overreach when they want to address human rights and the social determinants of health (Anomaly, 2011: 256–8). The new view does not, however, rule out such issues. Our best evidence suggests that the health of large numbers of people is adversely affected by inequality, and such inequality could certainly be addressed only with a collective effort. So addressing the social determinants of health is a fair topic for public health. However, any proposal for intervention would face two challenges. First, it must be effective in improving health, and its effectiveness must be weighed against whatever costs such a program might incur. Since the reasons why inequalities affect health are still speculative, creating a plan that would actually improve health is little more than guesswork. Second, even if we can create an effective intervention, a program that affects inequality would obviously have enormous effects on other aspects of society, and so it would face other kinds of questions. After all, health is not the only

social goal, and other values might be undermined by pursuing a more egalitarian social policy. Insofar as public health practitioners overreach, they do so when they act as if health is the only important social goal and when they imply that other values must be subordinate to it. On the other hand, public health should not simply concede when they are confronted with a complex issue that pits different values against each other. Laying out the public health case against inequality should force those who wish to defend inequality to explain either why the costs of ameliorating inequality are too high or what other important goals are served by having it. Such a debate is bound to be highly political, but it is healthy in a democratic society. And public health practitioners have a vital professional role to play to ensure that the value of health of the community is given its due.

Conclusion

By focusing on normative public goods about health, public health focuses on issues that require a collective response. Such a view captures the importance of the 'public' in public health without sacrificing the ability of the field to address far-ranging issues. For that reason, I think it captures the right balance between definitions so broad that the field lacks focus and those that are so narrow that they do not permit the field the ability to comment on the public health problems caused by broad social issues. Normative public goods in general should by the crux of many debates on public policy, and normative public goods about health must be at the center of public health.

Notes

1. An especially clear account of public good and collective action problems can be found in Hardin, 2003.
2. Some people—including most economists—want to define a good more broadly as 'any product that can be used to satisfy a desire' (Anomaly, 2015: 112). But on such a view, if some people have a desire for air they can see, pollution will be a public good (Miller and Sartorius, 1979: 152). Of course, deciding what counts as a benefit is not a simple task.
3. We can also restructure the problem in other ways (Parfit, 1984: ch. 2). So, for example, if people come to feel guilty for failing to contribute their share, then the problem dissolves.
4. Real objections to vaccinations almost never take this form, but one could make a rational argument that as long as herd protection exists, then my children gain no benefit at all from being vaccinated, since they are already protected. However, they do incur whatever risks vaccinations have. See Dawson, 2007 for a discussion of this problem.
5. Anomaly's formulation has no clear place even for preventing public health harms. For Anomaly, a law that bans smoking in offices to prevent secondhand smoke from causing harm does not count as a public health measure because it has nothing to do with creating a public good. Even if he thinks such laws are justified because they are designed to prevent harm, he cannot claim the measures count as public health.
6. As suggested by a reviewer.
7. Note that this expectation is not itself a public good, since people can be excluded from it. Just ask any person of color traveling in the Jim Crow South.
8. Note that, often, only the guarantee is required from the government. Government need not provide the good itself if another mechanism will suffice. If, for example, housing is a normative public good, then government is not needed to provide housing for everyone. For most people, market forces will provide it. However, in the most extreme cases, government will be needed to provide either houses or subsidies.
9. Few, however, have been willing to take this argument as far as it can go. The greatest harm from secondhand smoke is probably caused to young children who live with smokers. But of course, preventing someone from smoking in their private home would be a significant restriction on liberty, and it would be impossible to enforce without.

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