

# **Treatment vs Prevention in the Fight Against HIV/AIDS and the Problem of Identified vs Statistical Lives**

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## **1. Introduction**

For years, discussions about the best way to combat the HIV/AIDS pandemic have pitted proponents of scaling up antiretroviral treatment for people already suffering from AIDS against other writers, who advocate for a focus on more cost-effective prevention measures. In an important recent article, Dan Brock and Daniel Wikler (2009) frame the underlying moral issue as a debate about whether, given long-term budget constraints, there are any moral grounds to privilege the saving of identified lives through antiretroviral treatment, even if concentrating on preventive methods could save more (statistical) lives overall.

In this chapter, I critically examine Brock and Wikler's contention that since all human lives have equal worth, there can be no sound moral basis for giving any priority to the saving of identified over statistical lives, all else equal. In so doing, I develop a novel account of how the choice between "treatment" and "prevention" in population-level health-policy intersects the problem of identified vs statistical lives. The chapter concludes with a postscript on "treatment-as-prevention", a new avenue of AIDS research which stresses the preventive benefits of early antiretroviral treatment. I argue that, while scientifically promising, treatment-as-prevention does not transcend the ethical dichotomy between treatment and prevention explored in this chapter.

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## 2. Brock and Wikler's Argument

Human beings have a well-documented psychological propensity to attach greater importance to rescuing identified individuals from imminent peril than to preventing the loss of statistical lives.<sup>2</sup> By “statistical lives” I mean lives that will predictably be lost to known risk-factors in the future unless we intervene, but whose identities it is impossible for us to know, at least at present<sup>3</sup> (and sometimes even in hindsight).<sup>4</sup>

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<sup>2</sup> The labels “identified” and “statistical” lives are due to Schelling (1968). For empirical studies of the “identified victims effect”, see Moore (1996) and Jenni and Loewenstein (1997).

<sup>3</sup> Note that this way of drawing the distinction between identified and statistical lives makes the distinction non-exhaustive. Alongside identified lives, whose identities we do know at present, and statistical lives, whose identities we *cannot* know at present but only once they have been lost (and sometimes not even then: see the following footnote), there are also what one might call “identifiable lives”. These are lives whose identities we do not currently know, but which we could *come* to know before they are lost, using presently available evidence and/or scientific know-how. Suppose 50 miners are trapped underground. We may not currently know their names, but we could easily find out (e.g. by checking to see which miners are missing). These lives are identifiable. Similarly, suppose a virus threatens all and only those members of the population with blood type AB+. If we don't know who has that blood type, the lives threatened by the virus aren't identified lives. But by conducting a simple blood test, we could identify them. Although, for simplicity of exposition, I shall largely focus on the conventional distinction between identified and statistical lives in this paper, much of what I say about the special moral reasons for saving identified lives (over statistical lives) would apply to *identifiable* lives as well. I briefly return to this issue in footnote 18 below.

<sup>4</sup> That we often cannot know, even in hindsight, the identities of those statistical lives who were affected by our action is true both for cases where these lives were saved, as well as for cases where these lives were lost. Take the latter case first: Suppose a nuclear power plant very slightly raises the risk that each person living in its vicinity has of dying from cancer. At the aggregate level, the presence of the nuclear power plant foreseeably

However, is this propensity anything more than an *empirical* fact about how we tend to behave? Is there any reason to believe that it also corresponds, at least under certain conditions, to what we have *moral* reason to do? In recent years, many economists, philosophers, and lawyers have greeted this idea with skepticism.<sup>5</sup>

Brock and Wikler (2009) are a prominent example of this trend. Noting that despite recent increases in funding for antiretroviral treatment the goal of achieving universal access to treatment seems unlikely to be achieved in the foreseeable future, Brock and Wikler advocate for scaling back expensive antiretroviral treatment for people suffering from HIV/AIDS in favor of preventive interventions (educational campaigns, male medical circumcision, condom distribution, etc.), which promise to save more lives overall.<sup>6</sup> Since we cannot know in advance, nor probably even in hindsight, *whose* life will be saved by such prevention measures, the loss of life averted in this way is statistical.

Brock and Wikler write:

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results in a somewhat higher *level* of cancer deaths in the surrounding population than would otherwise have been the case. At the same time, it may be impossible to know *which* individual cancer deaths are causally attributable to the power plant (in the sense that they would not have occurred in the absence of the power plant), and which would have occurred anyway. Similarly, suppose that treating a community's drinking water reduces the number of statistical lives lost to water-borne diseases. Must it be the case that there is even a fact of the matter about *who* would have lost their life, had the drinking water been left untreated, and hence about whose life we saved? Even if there was such a fact of the matter, there is no reason to think that we could know it.

<sup>5</sup> For two seminal discussions, see Schelling (1968) and Fried (1969). For a rare recent argument in defense of giving priority to the saving of identified lives, see Norman Daniels (2012).

<sup>6</sup> See, for instance, Marseille et al. (2002).

When resources do not permit all to be saved, it is better to save more lives than fewer, provided that the beneficiaries are chosen fairly – all other things held equal. If prevention would save more lives, it is the better choice from a moral point of view – again, if all other things held equal.<sup>7</sup>

But are all other things equal? The most serious moral objection that Brock and Wikler consider is that shifting money away from treating existing AIDS sufferers into prevention is morally impermissible because it violates the “Rule of Rescue”. According to this ethical principle, “the fact that we can save identified people whose lives are imminently threatened by AIDS creates an obligation to do so that must be honored even if doing so reduces the number of lives saved overall.”<sup>8</sup>

Brock and Wikler reject the Rule of Rescue, at least as it applies to the battle against HIV/AIDS. Although they are willing to allow that principles of non-abandonment may have a place in the role-morality of medical doctors, who have face-to-face interactions and relationships of trust with individual patients, they insist that the distinction between identified and statistical lives has no moral relevance for population-level bioethics – the level at which strategic decisions in the global struggle against HIV/AIDS are taken: “Put most simply, statistical lives are just as real as identified lives saved; all have the same equal worth.”<sup>9</sup>

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<sup>7</sup> Brock and Wikler, p. 1668.

<sup>8</sup> Ibid., p. 1670.

<sup>9</sup> Ibid., p. 1671.

Even outside the sphere of bioethics, Brock and Wikler think our much greater preparedness to expend resources to save, rather than to prevent, lives from being lost frequently leads to irrational results. For instance, in most societies “no resources will be spared to try to rescue trapped miners (...) even if [less costly] safety measures that would have prevented the cave-in were deemed too expensive the previous year.”<sup>10</sup>

There is no doubt that the dispositions which Brock and Wikler allude to often do lead to irrational behavior. In their mining example, if our propensity to give greater salience to the prevention of identified losses causes us to *wait* until a cave in has occurred and *then* rescue those trapped in the mine, rather than prevent the disaster by expending fewer resources earlier on, this is a costly form of moral myopia. It is akin to the hyperbolic discounting studied by decision-theorists, which fuels procrastination and other forms of irrational behavior. I also do not wish to dispute their claim that statistical and identified lives have equal worth – a point which seems to me obviously correct.

My reservation about Brock and Wikler’s argument stems from the fact that I am not convinced that they have met their self-imposed argumentative burden, namely to show that shifting resources from the treatment to prevention will not be ‘unfair’ to those already suffering from HIV/AIDS.

My argument in the following will rest on two principal ideas: i) skepticism about interpersonal aggregation and ii) the thought that, all else equal, individuals have a stronger claim to be protected from some harm, the greater their likelihood of suffering

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<sup>10</sup> Ibid., p. 1670.

that harm. I shall introduce these two ideas in turn, before making a first pass at presenting my argument.

### **3. Competing Claims and the Distinction between Identified and Statistical Lives**

There are some ethical theories according to which the distinction between identified and statistical lives is devoid of moral significance. The most prominent such view is act-consequentialism, which holds that the rightness of an action is determined solely by the goodness of the state of affairs that it produces (or can be expected to produce). According to the act-consequentialist, an act is right just if its consequences are at least as good as those of any other available alternative act. Since, as Brock and Wikler emphasize, a statistical life is ‘just as real’ as that of an identified person, preventing it from being lost contributes just as much to the goodness of an action’s consequences as the saving of an identified life.<sup>11</sup> If, therefore, we could avert more loss of life by focusing on prevention than by rescuing the lives of identified persons through treatment, this is the course of action that act-consequentialism would require of us.

Act-consequentialism, however, is far from being an uncontroversial moral theory. Many of the strongest objections to act-consequentialism focus on its embrace of *interpersonal aggregation*: According to the act-consequentialist, in evaluating an action we should morally sum the benefits and losses it imposes on different persons to obtain an

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<sup>11</sup> In the following I assume, for the sake of simplicity, that the identical and statistical lives in question are alike in all morally relevant respects. In particular, I assume that by saving a statistical life, we allow the person to live on for the same number of years, at an equivalent quality of life, as we would by saving the life of an identified person. Hence, the number of QALYs preserved by saving either life is the same.

aggregate quantity; this characterizes the overall goodness of the action's consequences. The rightness or wrongness of the action is a function, not of how it treats each individual, but of the net balance of benefits over losses.

Aggregative reasoning of this kind frequently yields counterintuitive implications, especially where the benefits or harms to different people are very different in size. Consider:

*Life vs headaches:* We could either save Fred from death or prevent 1 million people from suffering a headache.

Many of us have the intuition that it would be wrong not to save Fred's life *regardless* of how many people's headaches we could prevent instead. The harm of a headache is trivial compared to that of losing one's life. No matter how large the *sum* of these harms, we think, it would be wrong to let Fred lose his life in order to prevent them.<sup>12</sup> Defenders of interpersonal aggregation, by contrast, are committed to the position that there must be some point (if not at one million people then at some higher number) at which preventing the headaches of the many morally outweighs saving Fred from death.

A common nonconsequentialist diagnosis for the inadequacy of aggregative views is that they fail to respect what, following John Rawls, is often referred to as 'the separateness of persons'.<sup>13</sup> Collections of people are not super-individuals. Unlike a

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<sup>12</sup> Philosophers who have defended this view include Scanlon (1998), p. 235, Kamm (2009), p. 155, and Temkin (2012), p. 36.

<sup>13</sup> See Rawls (1999), p. 167.

single individual, who may rationally choose to make some sacrifice now in exchange for receiving a stream of benefits later on, a group of people lacks the requisite unity such that imposing a significant harm on one person could be straightforwardly offset by giving sufficient benefits to others. The relations between different persons are not like those between different temporal parts of a life.

As a better way of respecting the separateness of persons, leading nonconsequentialists have argued for a different way of evaluating the rightness of our actions. According to the so-called “competing claims” model of moral rightness (sometimes also referred to as the “complaint”-model), morality requires us to determine, by a series of pairwise comparisons, that action or policy which satisfies the strongest *individual* claim or (what amounts to the same thing) minimizes the strongest complaint had by any individual (where complaints are what individuals have just in case their individual claims are not satisfied).<sup>14</sup> The competing claims model yields the intuitively correct verdict about the *Life vs Headaches* case. Since Fred has a much stronger claim to be saved from death than any individual has to be spared a headache, we ought to save Fred.

At first blush, however, it may seem that skepticism about interpersonal aggregation ought to have little bearing on the problem of identified vs statistical lives. After all, unlike in the *Life vs Headaches* example, cases where we must decide between saving some number of identified lives or a greater number of statistical lives are ones where what is at stake for the persons on *either* side of the trade-off is a harm of equivalent seriousness: losing their life. But surely, even if we are skeptical about interpersonal aggregation in

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<sup>14</sup> See, for instance, Scanlon (1998), Ch. 5; see also Temkin (2012), Ch.3 and Nagel (1991).



general, we ought to accept that, when faced with a choice between saving a smaller or a greater number of lives, we ought to save the greater number.

Most non-consequentialists do indeed accept this, at least when what is at stake for the people in either group is *certain* death.<sup>15</sup> But it is precisely in this respect that the problem of identified vs statistical lives differs from the standard ‘numbers’ problem, in a way that I shall argue is morally significant.

Saving an identified person from death means saving someone who, but for our intervention (or that of someone else), was certain (or at least very likely) to die. By contrast, the way in which we prevent the loss of statistical lives is, typically, by reducing or eliminating the risk of death faced by each member of some larger group. Suppose, for instance, that one million people each face a 1/1,000 risk of death, and that these risks are probabilistically independent. Although the risk of death to each person is small, due to the Law of Large Numbers it is a statistical certainty that *some* people will lose their lives; moreover, we can predict with a high degree of confidence that the number of deaths will equal roughly 1000. By decreasing the risk of death for each person by 10%, to 9/10,000, we can expect to save 100 statistical lives. The important take-away from this example is that saving a statistical life often comes about by *slightly* reducing a risk of death to many people that was already quite small *to begin with*.

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<sup>15</sup> Philosophers like John Taurek (1977), who deny that there is any obligation to save the greater number, are very much in the minority, even in the non-consequentialist camp. T.M. Scanlon, for instance, argues that when harms of equivalent seriousness are at stake, numbers act to “break the tie”. See Scanlon (1998), p. 232, following the argument in Kamm (1993), pp. 116-7.

This distinction, between preventing loss of life by saving people from almost certain death vs preventing loss of life by slightly reducing the risk of death for many people, whose antecedent chance of death was already significantly smaller, is mirrored in the choice between treatment and prevention: without access to antiretroviral drugs, persons who currently suffer from AIDS are almost certain to die within a short period of time; on the other hand, prevention measures merely serve to further reduce a given uninfected person's much lower *risk* of contracting and dying from AIDS in the future.

This difference, I claim, is morally significant. Like some other philosophers (for instance, Norman Daniels, in this volume) I believe that individuals have a stronger claim to be protected from a harm that they would otherwise suffer with certainty than from a mere risk of suffering a harm of equivalent size. For instance, given a choice between saving A from certain death or protecting B from a 20% risk of death, A has a much stronger claim to be protected than B. (Call this the *1 vs 1 case*). The reason for this is that a person has a much stronger *prudential interest* in avoiding certain death than a mere 20% chance of death.<sup>16</sup> This is not to say, of course, that if B is unlucky and her 20% risk of

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<sup>16</sup> Note, incidentally, that this is true whether or not the 20% risk in question stems from a causally *indeterministic* process. If the causal process is indeterministic, B has a 20% *objective* chance of dying. If the causal process is deterministic, B's 20% risk of death is *epistemic*, i.e. due not to indeterminacy at the level of physical reality itself, but to our incomplete knowledge of the state of the world and the laws of nature. Given the available evidence, there is a 20% epistemic chance that the causal process is *objectively certain* to kill B and an 80% epistemic chance that it is *objectively certain* not to kill him. However, in both the deterministic and the indeterministic case, B's rational degree of credence that he will avoid death is the same, namely 0.8. From the perspective of prudential self-interest, this is all that matters, I believe. That is, as far as the justifiability of our action to B is concerned, it makes no difference whether the 20% risk of death that B is exposed to is objective or epistemic. For a more

death materializes, she won't lose just as much as A would, if we left him to his certain death. The claim is merely that, since B is less likely to suffer this bad fate than A, her claim to our assistance is comparatively weaker.

#### **4. The Pro Identified Lives Argument and its Discontents**

We are now in a position to see how the two moral ideas I have just sketched – skepticism about interpersonal aggregation and the thought that people have a weaker claim to be saved from mere risks as opposed to certain harms – together lend support to the idea that we may have moral reason to privilege the saving of identified over statistical lives.

Consider the following *Pro Identified Lives Argument*:

I have just argued that

- (1) In the *1 vs 1* case, given a choice between saving A from certain death or protecting B from a 20% risk of death, A has a much stronger claim to be saved than B. Correspondingly, A would have a much stronger complaint if we saved B than B would have if we saved A.

Consider now the following choice:

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detailed discussion of this question, see my manuscript “Contractualism and Social Risk: How to Count the Numbers Without Aggregating” (available on request).

*1 vs 5*: We have to choose between saving A from certain death and protecting each of C, D, E, F, and G from a 20% risk of death. (Assume that the risks to each of the five are probabilistically independent. We *expect* that not eliminating the risk to C, D, E, F, and G will result in the death of one of them – though there may also be zero deaths, or more than one. However, we have no way of knowing *who* will die if we don't protect C, D, E, F, and G from their 20% risk of death. The expected losses are thus *statistical*).

It seems true that

- (2) In the *1 vs 5* case, C, D, E, F, or G – considered as individuals – would be treated no differently, if we decided to save A, than was B in the *1 vs 1* case. That is, they would each remain exposed to a 20% risk of death when they could instead have had their risk of death reduced to zero.

Hence, it seems plausible to assert that

- (3) In the *1 vs 5* case, none of C, D, E, F, or G have a stronger individual claim to be protected from their 20% risk of death than B has in the *1 vs 1* case.

Furthermore, as we saw above, many non-consequentialists accept the following principle:

- (4) In deciding which course of action to pursue, we must not *combine* or *aggregate* the claims of different individuals. Rather, according to the competing claims model, we should select that action which satisfies the strongest *individual* claim.

But from (1), (3), and (4) it follows that

- (5) In the *1 vs 5* case, we ought to save A from certain death, rather than protect C, D, E, F, and G from a 20% risk of death, since this is what satisfies the strongest individual claim. A would have a stronger complaint if we decided to protect C, D, E, F, and G from their 20% risk of death than any of these individuals would have if we saved A from certain death.

If the Pro Identified Lives Argument is sound, it would provide a justification for privileging the saving of identified over that of statistical lives in many cases. On this account, the distinction between identified and statistical lives is often morally relevant, when and because it coincides with that between saving those who are certain (or very likely) to die unless we intervene, rather than those who face a smaller individual risk of death.

There is a sense, however, in which the Pro Identified Lives Argument succeeds *too well*. Notice that its conclusion is not at all sensitive to the total number of statistical deaths that we allow to happen by saving A from certain death. Suppose that instead of five there had been 50 people whom we could have protected from having each to face a

20% risk of death. (Call this the *1 vs 50* case). Here, choosing to save A will result in approximately 10 statistical deaths. The Pro Identified Lives Argument, however, is impervious to this fact: As long as A's claim to be saved from certain death is stronger than that of any of the 50 individuals to be spared their 20% chance of death, the logic of the argument compels us to save A.

Most people will find this conclusion hard to stomach. It seems acceptable, even conform to most people's intuition, to give *somenbat* greater weight to the saving of identified over that of statistical lives (so that we might prefer to save A from certain death rather than protect, say, *eight* individuals from each facing a 20% risk of death). However, a view that would, in principle, allow us to let *any number* of statistical lives be lost in order to save one identified individual from certain death seems deeply implausible.

## **5. The Ex Ante vs the Ex Post View**

Let us, then, consider ways in which this unpalatable conclusion might be avoided.

One option I have already canvassed above: If we jettisoned non-consequentialist strictures on aggregation, thus rejecting premise (4) of the Pro Identified Lives Argument, this would allow us to say the following: while C, D, E, F, and G may each have a lesser *individual* claim to be spared their 20% risk of death, pooling these claims can yield a *combined* claim that is equivalent in strength to A's claim to be saved from certain death. Moreover, in the 1 vs 50 case, the combined claim of the 50 would far exceed that of A. While this proposal differs from standard consequentialism by making the right a function of the combined claims of individuals rather than of aggregate

goodness, its prescriptions would be extensionally equivalent to those of act-consequentialism. As such, it would place no special weight on the saving of identified lives.

Like act-consequentialism, however, this view must contend with problem cases like *Life vs Headaches* above. If we concede that the weaker individual claims of many may be morally summed and can together overcome the weighty claim of one individual in the *1 vs 50* case, do we have the resources to block the same kind of move in *Life vs Headaches*, where it would have very unattractive implications? It isn't clear to me that we do.

There may, however, be a different way of avoiding the conclusion of the Pro Identified Lives Argument, without leaving the framework of the competing claims model. Instead of jettisoning premise (4) above, we might challenge premise (3) instead. Premise (3) implicitly relies on a view – call it the *ex ante view* – according to which the strength of a person's claim to be protected from a risk of harm (and the seriousness of her complaint if she is not), is a function of the size of the harm discounted by her *own* ex ante likelihood of suffering the harm.

Someone might object to this ex ante view as follows: 'In a case like *1 vs 5*, it seems morally irrelevant that we cannot know in advance *who* of C, D, E, F, or G will end up dying if we decide to save A instead. What matters, rather, is that we know that *one of them* will die if we save A. That is, one of the five will end up just as badly off if we do not protect the five as will A if we do not save him. There is thus nothing to choose between either course of action in the *1 vs 5* case. We might as well flip a coin. Moreover, in the *1 vs 50* case, where saving A will foreseeably result in ten statistical deaths, we morally ought to protect the 10 from their 20% risk of death rather than save A, since when

individual claims of equal weight are at stake, even the competing claims model tells us to save the greater number.<sup>7</sup>

A proponent of this objection to the Pro Identified Lives Argument endorses what I call the *ex post view*. According to this view, the strength of a person's claim to be protected from a risk of harm (and the seriousness of her complaint if she is not), depends not on how likely she *herself* was to suffer a harm, but only on how likely it was that *someone* would. As Sophia Reibetanz Moreau, a defender of the *ex post view* writes:

As long as we know that acceptance of a principle will affect *someone* in a certain way, we should assign that person a complaint that is based upon the full magnitude of the harm or benefit, even if we cannot identify the person in advance. It is only if we do not know whether acceptance of a principle will affect anyone in a certain way that we should allocate each individual a complaint based upon his expected harms and benefits under that principle.<sup>17</sup>

The *ex post view* promises to avoid the excessive disregard for the protection of statistical lives that the *ex ante view* entails. Indeed, as long as it is certain that a given course of action will lead to statistical lives being lost, the *ex post view* accords these statistical victims an individual complaint just as weighty as that of identified victims.

## 6. Why the Ex Post View Must be Rejected

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<sup>17</sup> Sophia Reibetanz Moreau (1998), p. 304. Michael Otsuka (in this volume) also defends a view of this type.



Unfortunately, the ex post view faces its own set of problems which, I will argue, are at least as serious as those confronting the ex ante view.

For one thing, notice that there is an odd tension in the ex post view: a proponent of the ex post view concedes that in the *1 vs 1* case, B's complaint about being left exposed to a 20% risk of death is much weaker than the complaint that A would have if we didn't save him from certain death. By contrast, in a case like *1 vs 5*, the ex post view holds that, *whoever* of the 5 turns out to be harmed, that person would have a complaint almost as strong as A's, despite the fact that her own risk of harm was no greater than that of B in the *1 vs 1* case. Somehow, the fact that, if we save A, it is very likely that *someone* from the group of 5 will be harmed, is supposed to enhance the complaint of whoever turns out to be harmed.

But why should this be the case, exactly? Suppose C is the unlucky one. Why should C's complaint be any greater than B's in the *1 vs 5* case, just because, had C not been harmed, some *other* person from the group of five would have been harmed instead? This looks suspiciously like a tacit appeal to a new form of interpersonal aggregation: the combination of complaints by different individuals *at different possible worlds*, depending on who happens to be unlucky at that possible world. But if non-consequentialists reject the combination of claims by different people at the *same* possible world, then ought they not, *a fortiori*, to bar different individuals from aggregating their complaints across different possible worlds?

Secondly, there are many cases in which the ex post view would dramatically contradict our ordinary moral convictions. Consider:

*Mass Vaccination:* We vaccinate 100 million children against some serious, but non-fatal childhood disease, which each of these children is otherwise certain to contract. The vast majority of children will benefit from the protection the vaccination offers. However, for every child there is also a very remote possibility of fatal side effects from the vaccination itself. Specifically, we foresee that there will be roughly 100 statistical deaths as a result of the vaccination drive.

Although this example is highly stylized, cases with a structure that is similar in morally relevant respects are very common in everyday life. That is, in pursuit of moderate benefits for many people, we routinely engage in risky actions or policies that will foreseeably result in severe harms befalling a few statistical victims. (Think of higher speed limits on motorways, large-scale construction projects, vaccination drives, etc.). Nonetheless, such instances of ‘social risk’ are commonly deemed morally innocuous. Indeed, without the license to engage actions or policies of this type, social life would grind to a halt.

In the above case, it is not hard to see why a policy of vaccinating every child is intuitively permissible. Receiving the vaccination can be justified to each child as being in her own interest: avoiding the burden of a serious childhood illness, most would agree, is worth a tiny, one in a million risk of death. It is true that there will foreseeably be some statistical loss of life. But this comes about through a process that was exceedingly unlikely to harm any given child. The *ex ante* view, by discounting the complaints of statistical victims by their unlikelihood, captures this intuition.

By contrast, if the ex post view were correct, instances of social risk-imposition like *Mass Vaccination* would be morally indefensible. Given that we know in advance that there is sure to be *some* statistical loss of life if we vaccinate, the ex post view implies that we mustn't discount the harm-based complaints of the statistical victims. But of course a person's *undiscounted* complaint against premature death is much greater than any individual's complaint against suffering a non-fatal childhood disease. Hence, the only permissible course of action, according to a competing claims model informed by the ex post view, is not to vaccinate.

This is not only the intuitively wrong answer. Even more damagingly, the ex post view also lacks the resources to recognize the moral difference between cases like *Mass Vaccination* and the following case:

*Water Supply*: Everything is as in *Mass Vaccination* above, except that this time we know in advance *which* children will die as a result of being vaccinated and which will benefit. However, the only way of vaccinating the children who will benefit is by vaccinating those who will be harmed as well. For instance, assume (somewhat fancifully) that the only way of distributing the vaccine to any child is by putting it in the general water supply that all children must drink from.

Vaccinating all 100 million children in *Water Supply* would amount to sacrificing the lives of a small number of *identified* children in order to spare the other children the burden of a non-fatal childhood disease. This, clearly, is *much* more morally problematic. The

problem for the ex post view is that it must regard *Mass Vaccination* and *Water Supply* as being morally on a par. That is, it is committed to conflating the moral significance of the following two propositions:

- (i) It is certain that some children will die if we vaccinate

which is true in both *Vaccination* and *Water Supply*; and

- (ii) There are some children who are certain to die if we vaccinate

which is true only in the latter case. According to the ex post view, as long as we know that (i) is true, it is morally irrelevant whether (ii) is also true or not. The fact that in *Water Supply* we know from the start that our policy will kill a *specific* group of children, whereas in *Mass Vaccination* it will merely impose on each child a minuscule risk of death, is deemed to be morally irrelevant. This is very implausible.<sup>18</sup>

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<sup>18</sup> Consider, briefly, what changes if the lives that will be lost in *Water Supply* aren't identified, but merely *identifiable*, in the sense of footnote 2 above. Suppose that we know that the vaccine will benefit all children, except those that carry a certain, highly rare gene, which we are able to reliably detect. All children with this gene will be killed by the vaccine. However, although we know that roughly 100 out of the 100 million affected children carry the gene, we do not currently know their identities. Does this matter morally? Would vaccinating be morally less problematic in this revised version of *Water Supply* (call it *Water Supply\**) than in the original case with identified victims? I do not think it would be. The crucial moral difference between *Mass Vaccination* and the original *Water Supply* case is that only in the former case can we say to each child that, to the very best of our knowledge, receiving the vaccine is highly likely to benefit her, and has only a tiny chance of harming her.

Act-consequentialism, incidentally, faces the same problem in the reverse direction: By assumption, the *overall* outcome of vaccinating, i.e. the number of children benefited and harmed, will be the same in *Mass Vaccination* and *Water Supply*. Hence, if the consequentialist deems Vaccination to be morally permissible in *Mass Vaccination* – because the aggregate benefit of protecting close to 100 million children from a serious childhood disease outweighs the aggregate harm to the unlucky 100 who die from side-effects – the same must be true in *Water Supply* as well. But this, again, is a deeply unattractive conclusion.<sup>19</sup>

Might the force of my argument in support of the *ex ante* view be evaded by invoking a moral distinction between *harming* and *not aiding* a person? According to some non-consequentialist moral philosophers, our reasons against *imposing* some loss on a

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We would give her the vaccine even in a *single-person* case, where furthering her interests was our sole concern. By contrast, in both *Water Supply* and *Water Supply\** we know that there are some children who are certain to die if they receive the vaccine. The only difference between *Water Supply* and *Water Supply\** is that in the original case we already know these ‘doomed’ children’s identities, whereas in the revised case we could easily *come* to know them by finding out which children carry the rare gene. But surely, if vaccinating would be unjustifiable in *Water Supply*, because we already know the identities of the doomed children, ignorance of the doomed children’s identities would be a very poor excuse for vaccinating in *Water Supply\**. For this lack of information about the doomed children’s identities is one that we are entirely free to remove. Saying to each child in *Water Supply\** that “to the very best of our knowledge” she will benefit from receiving the vaccine would thus be disingenuous, in a way that it wouldn’t be in *Mass Vaccination*, where we have *no way* of knowing in advance who will benefit and who will be harmed by the vaccine.

<sup>19</sup> For a more detailed argument against the *ex post* view, see my “Contractualism and Social Risk: How to Count the Numbers Without Aggregating” (ms.). See also my “Uncertainty and Justifiability to Each Person: Response to Fleurbaey and Voorhoeve”, Frick (2013).

person are often more stringent than our reasons against allowing a person to suffer a loss of equivalent size by *not aiding* them.<sup>20</sup> Furthermore, it is true that if we choose to vaccinate in *Water Supply*, we will harm some children (in the sense of actively imposing losses on them), whereas failing to vaccinate and allowing all children to contract the childhood disease would merely constitute a failure to aid. Might this, rather than the ex ante view, provide the correct explanation of why it seems morally problematic to vaccinate in *Water Supply*, but not in *Mass Vaccination*?<sup>21</sup>

This explanation will not work. Notice that in terms of the harming/not aiding distinction, the two options in *Mass Vaccination* are exactly parallel to those in *Water Supply*: if we proceed with the vaccination, we will foreseeably *harm* 100 statistical individuals, causing them to lose their lives. By contrast, if we do nothing, we *allow* 100 million children to suffer a serious childhood disease, which constitutes a failure to aid. Thus, even if there is a morally relevant distinction between harming and not aiding, this distinction by itself cannot explain our *divergent* intuitions about *Mass Vaccination* and *Water Supply* – namely that it would be comparatively morally innocuous to vaccinate in the former case, whereas doing so in the latter would be deeply morally problematic. In order to do so, we need something like the ex ante view.

## 7. Towards a Pluralist Account of Moral Rightness

Here is where we stand: As we just saw, an ethical theory that treats the loss of statistical lives as morally equivalent to the loss of identified lives robs itself of the ability to

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<sup>20</sup> For a helpful discussion, see Kamm (2007), Ch. 1.

<sup>21</sup> I thank an anonymous referee for raising this objection.

distinguish between intuitively permissible instances of social risk, like *Mass Vaccination*, and morally impermissible trade-offs, like *Water Supply*. This is a strike against both the ex post view and act-consequentialism.

The ex ante view, by contrast, avoids this problem, but faces its own difficulties in cases like *1 vs 50* in Section 5 above. Is there a way out of this impasse?

I believe that there is, once we drop the assumption that our only choice is act consequentialism or a pure competing claims model (be it one that incorporates the ex ante or the ex post view). Instead, I propose that we ought to adopt a *pluralist* account of moral rightness.

I believe that the ex ante version of the competing claims model must form part of this pluralist view if we are to explain the clear intuitive difference between cases like *Mass Vaccination* and *Water Supply*. We thus ought to accept, contra the ex post view, that even in cases where it is foreseeable that *some* people will end up being harmed, the strength of an individual's claims against being exposed to harm must be discounted by her own ex ante probability of suffering harm.

On the other hand, cases like *1 vs 50* force us to acknowledge that a pure competing claims model informed by the ex ante view does not render the correct all-things-considered verdict in all situations either.

To escape this dilemma, we ought to embrace a pluralist position, according to which satisfying the strongest individual claim had by any person is one, but not the *only* relevant consideration in evaluating whether an action is right *all things considered*. Rather than providing an account of moral rightness *all things considered*, the competing claims model, on this view, captures an important class of pro tanto-reasons, compliance with

which contributes to making actions right or wrong all things considered. For lack of a better term, we might say that the moral reasons captured by the competing claims model are ones of *fairness*. It is unfair to let Fred lose his life so that other people may be spared the much smaller harm of a headache; and likewise it is unfair to leave A exposed to *certain* death, so that others may avoid a much smaller risk of death. However, in determining whether a course of action is morally right all things considered, the aims given to us by the competing claims model must sometimes be traded off against other considerations – importantly amongst them, pro tanto reasons to be concerned with the consequences in terms of people’s wellbeing that our action produces. In some case, such as *Mass Vaccination*, these two sets of pro tanto reasons point in the same direction; in others, like *1 vs 50*, they pull in opposite directions.<sup>22</sup>

Giving fairness its due means that in a case like *1 vs 5*, where the two possible actions do not differ in terms of their expected consequences (we expect one person to die whichever option we choose), reasons of fairness determine that we ought to save A’s identified life, since this will satisfy the strongest individual claim. Likewise, when two options do not differ by *much* in terms of their expected consequences, as in the *1 vs 8* case, reasons of fairness may outweigh a concern with people’s wellbeing. By contrast, when the difference in the expected consequences is as large as in *1 vs 50*, it is plausible

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<sup>22</sup> For a somewhat similar account, according to which fairness consists in satisfying people’s claims in proportion to their strength, but must sometimes be traded-off against other considerations, see Broome (1990) and Broome (1994).



that any concern with fairness is swamped by our wellbeing-given reasons for averting an outcome in which many more lives are lost.<sup>23</sup>

Somewhere in between these extremes, there is a tipping point at which reasons of fairness begin to be outweighed by wellbeing-given reasons. I cannot tell you where exactly this tipping point is located, nor can I provide you with a general algorithm by which to determine the relative weight to be placed on fairness and wellbeing in other cases. But nor do I think it is my role to do so. The aim and ambition of moral philosophy is to inform our moral judgment, by making us alive to the relevant ethical considerations, not to abolish the need for judgment.

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<sup>23</sup> Of course this sketched solution leaves many details to be filled in. For instance, what exactly determines the strength of our wellbeing-given reasons for choosing one option over another? The answer depends, in part, on the appropriate aggregative procedure for *combining* the wellbeing-given reasons that we have for helping different individuals. In a situation like *Life vs Headaches*, must it be the case, as act-consequentialists assume, that the very weak wellbeing-given reasons that we have for preventing each of the million individuals from suffering a headache *together* give us a stronger reason of wellbeing than our weighty wellbeing-given reason for saving Fred's life? It is not clear to me that they do. Following Frances Kamm's suggestion in *Intricate Ethics*, I believe that, in a context where we have weighty wellbeing-given reasons to prevent someone from suffering a serious harm, the much weaker wellbeing-given reasons to prevent other individuals from suffering a very minor harm are not "relevant", and cannot together outweigh the wellbeing-given reasons to prevent the serious harm. (See Kamm, 2007, pp. 34-35 and 384-85). If this were the case, then saving Fred's life would be the right thing to do, not just because it satisfies the reasons of fairness captured by the competing claims model, but also because it is what we have most wellbeing-given reasons to do. Unfortunately, I do not have the space to pursue these questions further here. In the following, I merely rely on the very plausible assumption that, when what is at stake for individuals on both sides of the tradeoff are harms or losses of the *same* (or closely similar) magnitude, as is the case when deciding whether to prevent the loss of identified or statistical lives, we have most well-being given reason to do what will save the largest number of lives.

## 8. The Importance of Temporal Structure

It is time to return to the problem of treatment vs prevention in the fight against HIV/AIDS. If my argument in the previous sections is sound, Brock and Wikler are wrong to claim that, given the equal worth of all human lives, there could be no morally relevant difference between saving identified lives through treatment and averting the loss of statistical lives through prevention.

If we do not treat people already suffering from HIV/AIDS, they will soon die with near certainty. By contrast, failing to undertake all the preventive efforts at our disposal means that uninfected persons will be at a somewhat higher risk of contracting, and dying from, AIDS in the future. But even in countries with very high prevalence of AIDS, this risk will be much lower than 100% -- indeed, in all but the very worst-affected countries, it falls below the 20% figure that I have been using in most of my examples. Therefore, if people have a stronger claim to be protected from certain death than to have their risk of death further reduced, this gives us at least a *pro tanto* reason of fairness for giving some preference to saving identified lives through treatment rather than statistical lives through prevention.

Of course, how heavily this consideration ought to weigh in our all things considered judgment will depend on how large a discrepancy there is between the numbers of lives we save by focusing on prevention as opposed to treatment. If the discrepancy is very large, it may be that any concern with fairness or people's individual claims is swamped by our wellbeing-given reasons for saving many more lives.

There is one more complexity to be considered. Note that the bioethicist's dichotomy between "treatment" and "prevention" need only partially overlap with that between saving "identified" vs "statistical" lives. Focusing on "treatment", in particular, might mean two quite different things:

- (a) using the resources at our disposal to treat people *currently suffering* from AIDS
- (b) using the resources at our disposal to invest in the means to treat people suffering from AIDS *at some future time*.

To see why this ambiguity in the term treatment is morally significant, consider the following case:

*Policy-Maker's Trilemma:* Suppose a health policy-maker must decide between the following three ways of spending the funds available to his district for fighting AIDS:

- *Present Treatment:* Spend all available funds to save the lives of 500 identified persons currently suffering from AIDS in his district.
- *Future Treatment:* Spend all available funds to enable better treatment in the future. This will foreseeably allow his health system to save 600 lives in the future. However, the new treatments will take a long time to come on-line, and won't benefit any of the identified persons currently suffering from AIDS. Without Present Treatment, these people will soon die.
- *Prevention:* Spend all available funds on prevention, reducing the number of people in his district who will contract, and die from, AIDS in

the future. This will foreseeably save 750 lives. However, again, without Present Treatment, the identified people currently suffering from AIDS will soon die.

I have argued, *pave* Brock and Wikler, that while Prevention may maximize the number of lives saved, there is at least a *pro tanto* reason to choose Present Treatment instead, since this benefits the people who have the strongest claim on our assistance.

But what if, for some reason, Present Treatment is not an option, that is, we can choose only between Future Treatment and Prevention? In this case, Prevention appears both optimific *and* the option that would be favored by the *ex ante* view. For, in this case, the only people whose interests are at stake are people *not yet suffering from AIDS*. In other words, the only deaths we can prevent in this scenario are statistical deaths. In that case, it is in the *ex ante* interest of everyone concerned, i.e. of anyone who is at some risk of contracting HIV/AIDS in the future, that we choose Prevention. For this is the option that most reduces everybody's risk of death *ex ante*. Choosing Prevention over Future Treatment, when these are our only two options, would therefore be unfair to no-one.

A similar point can be made in response to the mining analogy that Brock and Wikler used to illustrate the supposed irrationality of privileging identified over statistical lives. (“No resources will be spared to try to rescue trapped miners (...) even if [less costly] safety measures that would have prevented the cave-in were deemed too expensive the previous year.”). The behavior described here *is* irrational, even by the lights of the *ex ante* view. What we are dealing with is a choice, from the *ex ante* perspective, between

two different methods of averting deaths from a *future* mining disaster: preventing the disaster by increasing safety, or *waiting* until a cave-in has occurred and then rescuing those trapped in the mine. Under these circumstances, it is obvious that we ought to choose the more cost-effective option, which is prevention.

The AIDS pandemic, however, is different. Because it is an *ongoing* problem, our decision is never taken from a point of view that is *ex ante* for everyone. The mine accident, so to speak, has always *already* happened to some individuals, and we must decide how to respond: by rescuing those currently trapped in the mine and certain to die soon if we don't help them, or by "cutting our losses" and investing in future prevention. This, I have argued, is a harder moral problem, and one which a focus on individual claims and fairness can help to illuminate.

## **9. Postscript: Does "Treatment-as-Prevention" Transcend the Dichotomy between Treatment and Prevention?**

One of the most exciting new avenues of AIDS research over the past few years revolves around the possibility of "treatment-as-prevention" (TasP). TasP is based on the hypothesis that starting HIV-positive patients on antiretroviral drugs at a very early stage of the disease can have significant *preventive* benefits for their sexual partners. The World Health Organization currently recommends that persons living with AIDS begin antiretroviral treatment when their CD4+ count (a measure of cells in the blood that reflect the status of the immune system) drops below 350. By contrast, a recent randomized control trial (HPTN 052) showed that initiating antiretroviral treatment at an earlier, largely asymptomatic stage of the disease (when the patient's CD4+ count is

between 350 and 550) can reduce the risk of HIV-transmission to their HIV-negative partners by up to 96%. (National Institute of Allergy and Infectious Diseases, 2011). (For a helpful overview of the scientific, economic, and moral issues surrounding TasP, see the chapter by Max Essex and Till Bärnighausen in this volume).

If the champions of TasP are right, the interests of people already suffering from AIDS in receiving treatment and the interests of the rest of the population in being protected from the disease may be more in alignment than my discussion has so far assumed. To a certain degree, treatment *is* prevention. All else equal, by treating current, identified sufferers of HIV/AIDS, we also reduce the number of statistical victims amongst their sexual partners and (via sexual transmission chains) in the population at large.

Despite its considerable scientific promise, however, I do not believe that TasP renders moot the ethical debate between proponents of treatment and of prevention that has occupied us in this chapter. Indeed, given limited health budgets in many of the countries worst affected by AIDS, there currently exist alternatives that are ethically preferable to TasP *whichever* side of the treatment vs prevention debate we stand on.

Consider, first, how things look from the perspective of the pluralist competing-claims view that I have advocated in this chapter. As Essex and Bärnighausen note, citing work by De Cock and El-Sadr (2013), there is still significant debate about whether receiving antiretroviral drugs at very early, asymptomatic disease stages has any

significant medical benefit for the HIV-positive patient herself.<sup>24</sup> The primary rationale for initiating antiretroviral treatment at CD4+ levels above 350, therefore, is *not* its therapeutic effect for the infected patient but rather the preventive benefit for the patient's sexual partners (and their partners' partners, etc.).

Second, because of the high cost of TasP compared to conventional antiretroviral treatment, it is feared that rolling out TasP in many poorer countries would necessarily result in resources being *reallocated* from the treatment of some of the sickest HIV sufferers to the treatment of HIV-positive individuals at an earlier, asymptomatic disease stage (when the risk of transmission to sexual partners is arguably highest and TasP could have the biggest preventive effect). (Haire, 2011; Essex and Bärnighausen, this volume). In effect, we would treat fewer symptomatic patients overall, in order to start treating the patients we do treat sooner and thereby reap the preventive benefits of early antiretroviral therapy.

In resource-poor countries, moving from the present regime of antiretroviral therapy to a regime of TasP may thus require us to trade off the interests of some current symptomatic victims of HIV (whom we will no longer have the resources to treat if we implement TasP) against the interests of those at risk of becoming infected. This confronts policy-makers with precisely the sort of moral issue that this chapter has attempted to illuminate. If, as I have argued, a policy-maker has reasons of fairness to give somewhat greater weight to saving the lives of people who, but for her intervention,

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<sup>24</sup> Moreover, Kitahata et al. (2011) note possible undesirable side effects of early antiretroviral treatment, including diabetes, body fat changes, and – if treatment is not taken exactly as prescribed – an increased risk of drug resistance.

would be very likely to shortly die of HIV/AIDS rather than to further reduce other people's risk of contracting AIDS, this is a pro tanto consideration against cutting back on conventional antiretroviral therapy in favor of TasP or other preventive measures. So much is true at least in settings where limited resources do not permit all HIV-positive individuals to receive antiretroviral therapy at both early and advanced stages of the disease.

Suppose, however, that you disagree with my arguments in this essay. Suppose you believe, like Brock and Wikler, that the only thing that matters morally in a choice between TasP and other methods of combating the AIDS pandemic is how many lives, or perhaps more precisely, how many QALYS, we can save with each method. In that case, too, you have reasons to be skeptical about TasP as the primary method for fighting AIDS in a resource-poor setting. Research by Bärnighausen, Bloom, et al (2012) indicates that TasP is much less cost-effective, in terms of QALYs saved per dollar spent, than purely preventive interventions such as male medical circumcision. (Indeed, for the time being, it is less cost-effective even than conventional antiretroviral treatment limited to advanced stages of the disease). Given this, choosing TasP over more cost-effective methods of prevention would, for an act-consequentialist, still show an objectionable bias towards helping identified victims over preventing statistical losses.

Proponents of rolling out TasP in resource-poor settings thus confront the following dilemma: *either* it is morally justified to give some priority to saving identified victims at an elevated risk of death over preventing statistical losses. In that case, there is some reason to prefer conventional antiretroviral therapy to TasP, since this will allow the largest number of symptomatic patients to receive antiretroviral treatment. *Or* there is no



justification for giving priority to treatment over prevention; we ought simply to do what maximizes the number of QALYs we save. But in that case, too, TasP is bested by other, more cost-effective preventive interventions.

Hence, barring a dramatic fall in the cost of antiretroviral treatment, TasP cannot transcend the dichotomy between the objective of QALY maximization given to us by a pure consequentialist perspective and the stronger emphasis on fairness embodied by the competing claims model. The ethical debate between proponents of treatment vs prevention for HIV/AIDS, it seems, will remain a live one for the foreseeable future.

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