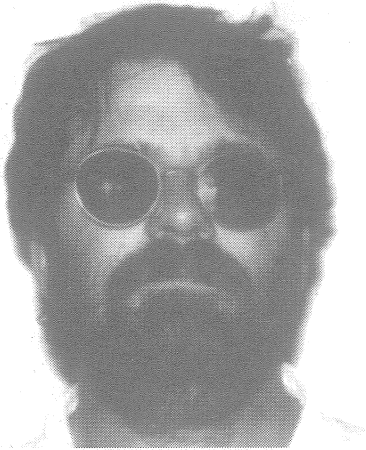


## The National Immunisation Strategy: Some Philosophical Issues

Dr Tim Dare, Lecturer in Philosophy  
Coordinator of the Diploma in Professional Ethics  
The University of Auckland



The Public Health Commission aims to attain a 95% immunisation coverage rate by the year 2000, up from 60% in 1992, and has produced a new National Immunisation Strategy (NIS) to that end. The NIS has five major strands: it seeks to reduce the number of visits necessary for full immunisation, to develop and impose standards for immunisation providers, to implement local immunisation coordination, to improve immunisation supervision, and to introduce certificates recording immunisation status. Of these five strands the introduction of immunisation certificates raises the most significant philosophical concerns and will be the principal focus of this commentary.

In a little more detail then, the NIS introduces a certificate recording immunisation status which all children born from January 1995 will be required to produce when enrolling at a school or early childhood centre. The certificate is intended to remind parents and health professionals of a child's immunisation status and thus to encourage completion of the programme, and, more importantly for current purposes, to allow schools to identify unimmunised children so that they may be excluded from school for the duration of a disease outbreak.

The NIS does not compel immunisation. Parents may opt out of the programme and no child may be excluded from school other than for

the purposes of disease control.<sup>1</sup> In this respect the NIS differs significantly from otherwise similar schemes in place in the many states in the US, where proof of vaccination, rather than merely vaccination status, is required before a child may enter at school. The NIS certificate requires parents to make a recorded choice. It reflects a clear State preference, and introduces what some will no doubt see as disadvantages to the unimmunised, but preserves parents' 'right to choose'. The remainder of this note considers the principal issues raised by this aspect of the NIS. II. a)

### *Empirical Uncertainty*

The debate about immunisation has been marked by stark empirical disagreement. Opponents of vaccination claim, for instance, "that the cot death rate would halved if vaccination were to be suspended"; proponents that "[t]here is absolutely no connection between immunisation and cot death." Proponents produce records of adverse reactions to vaccination showing that even granting their incidence, it is safer to be immunised than not; opponents produce figures showing that vaccines are both much more dangerous and much less effective than proponents acknowledge. And so on: for every empirical claim one way or the other, advocates for the opposing view produce an empirical claim to the opposite effect. To some extent these disagreements appear ideological, having less to do with empirical uncertainty than with antecedent opposition to the policies of the relevant protagonist. To some extent they reflect a genuine lack of complete certainty about the effects of immunisation. Although ideological arguments are not necessarily 'bad', I shall concentrate for the moment on the issue of genuine empirical uncertainty.

It seems likely that complete certainty about the effects of immunisation will

be impossible to achieve. Given problems of interpreting evidence, of isolating causal factors, of obtaining data about necessary coverage rates, and the like, the best we can hope for are assessments of 'degrees of probability'. It is important, however, not to misinterpret this conclusion and its significance. First, a great deal of scientific knowledge upon which we quite properly base personal decisions and public policy falls short of absolute certainty. Such uncertainty says as much about the scientific method as it does about the reliability of data or scientific claims. It is often taken to be a required feature of scientific claims that they be held 'conditionally': that scientists remain ready to review them in light of new evidence, that opposing views be raised and tested. None of this shows that scientific claims are especially 'doubtful' or 'unreliable'. The mere fact that such claims have not been proved in some absolute and eternal sense or the mere possibility that new evidence might arise does not amount to reason to regard them as particularly unreliable, and an absence of scientific (or medical) unanimity does not settle the question of the reliability of the data. Second, it should not be supposed that it is unethical to make social policy where outcomes are less than absolutely certain. This is perhaps obvious in those familiar cases, of which immunisation is an example, where there really is no possibility of 'doing nothing': failing to immunise counts as doing something as surely as immunising. More generally, policy makers will often have act under conditions of uncertainty. It is likely to be an unethical abrogation of responsibility to refuse to act other than in such conditions: in this world, little would get done. Third, these features of both scientific practice and policy-making do have normative or ethical significance. Though both scientists and policy-makers may be justified in regarding such uncertainty as attaches to a proposition as primarily a methodological assumption, they have responsibilities, especially where

important consequences are at stake, to ensure that their conduct is based upon the best possible information available to them. Finally, it is important to note that ethical issues will often remain despite the settling of empirical issues. Suppose it were 'certain', for instance, that attaining a 95% immunisation coverage would eradicate Hib disease and equally certain that Hib immunisation carries at least some risk. Future generations would benefit from the eradication, both because they would not face the threat of the disease and because they would not need to undergo the risk of immunisation. In these circumstances, which seem close to the actual ones, even with the facts in, there is an ethical question about the legitimacy of requiring or encouraging me and my children to take risks for the benefit of others, in this case unborn others. The facts do not settle the matter.

#### Utility

One influential approach to policy making generally, and to policy making in conditions of uncertainty especially, is an updated version of utilitarianism. Each alternative course of action is evaluated according to the ratio of its costs to its benefits. The option which 'maximises happiness', in the sense of having the highest cost-benefit ratio is recommended. Where costs and benefits are uncertain, their expected values are calculated by discounting each possible cost or benefit by the probability of its occurrence. Crudely, as an ethical theory the approach identifies as obligatory that option which has the highest expected utility. Note that the approach may permit or require a course of action even if, as in the immunisation case, it is possible or certain that it will cause some harm, depending upon its seriousness and probability as balanced against the probable amount of benefit immunisation can be expected to yield. The common view that the mortality and morbidity associated with immunisation are an acceptable price to pay for the very great benefits the treatment is taken to promise presumably springs from some such justificatory model.

Such approaches require policy-makers to take the least harmful route to a goal. Suppose it were true, for instance, that almost all of the benefits of a compulsory immunisation programme could be achieved by a voluntary programme. If compulsion itself is a disutility (because, perhaps, interferences with individual liberty are themselves a bad thing) we may be required to take the voluntary

route. Even assuming that it would be better to have a higher coverage rate, the disutility of compulsion may be such that the expected utility of the voluntary route is higher than that of its compulsory alternative. This may in fact be the case with immunisation. Studies suggest that coverage rates high enough to eradicate targeted diseases are achievable through education and efficient administration so that compulsion is unwarranted. All of this must be calculated as well, of course, for the NIS's compulsory choice": if disutility attaches to that option it will need to be shown that it is counter-balanced by the additional utility of, for instance, higher coverage rates.

Utilitarian approaches to social policy are subject to familiar objections, the most notable of which, in the context of the current discussion, complains of their indifference to the *distribution* of utility. Provided overall utility is maximised, it matters not how much disutility (even unto death) is suffered by particular individuals. In short, some have argued that it is never ethically permissible to risk harming one person in order to help (even many) others, claiming that do so is to deny the importance of those put at risk.

#### Individual Liberty and The Harm Principle

Individual liberty is important but nowhere absolute: so long as there is more than one person about, it is likely that the liberty of each will have to be curtailed in certain ways. Liberals have long sought a principled way of securing liberty while recognising the need for its limitation. The classic approach is the harm principle, which has it that the only reason for which a state may justifiably restrict the liberty of an individual is to prevent harm to another, and, by corollary, that the state may not interfere with people's liberty to stop them harming themselves, or in order to compel them to act for their own good. The harm principle might be regarded as an alternative to utilitarianism: it specifies that no amount of "public good" is enough to justify interferences with liberty or the imposition of harm.

The harm principle brings to light an interesting feature of immunisation: *prima facie*, in refusing immunisation people risk their own health, but assuming a person's health is their own to risk, threaten no harm to others.

And, if the unimmunised do pose risk to others, these others will only be those who have "consented" to that risk by themselves choosing not to immunise. It might seem, then, that liberal states should leave immunisation entirely up to the individual. Even such interference as the NIS's compulsory choice may appear 'paternalist'; designed not to prevent harm to people other than those whose liberty is interfered with, but to prevent harm to those very people.

There are a number of points to be made here: First, it might be tempting to say that even if it is only the unimmunised who fall ill, others *are* harmed: their families emotionally at least, the health system who will presumably bear the cost of treating them, and so on. But such appeals seem spurious. Though we can no doubt stretch the harm principle to cover such cases (and, for instance, crash-helmet and seat-belt legislation), avoidance of these harms does not appear to be our real motivation. Second, the harm principle aims to protect the liberty of those in a good position to judge their own interests: even John Stuart Mill, the harm principle's author, did not extend it to children. Perhaps in the immunisation case, we should be wary of applying the harm principle to grant parents or guardians the right to choose whether their children should be vaccinated. There is in our community, of course, a long history of leaving such decisions to parents, but we might think that were the state to compel children to receive immunisation they would be acting in any case outside the ambit of the harm principle. Third, we may wish to distinguish between those diseases which will not be eradicated, no matter what immunisation rates are attained (call them category A diseases) and those which would be eradicated given sufficiently high rates (category B). Accept that immunisation is effective but carries some risk. In the case of category A diseases the choice of those who refuse to immunise does not 'require' others to carry on taking the risk of immunisation: they would need to do so in any case. The situation seems somewhat different in the case Category B diseases: here if enough people immunise all may be able to abandon the risks of immunisation. Here one might argue that the choice of the unimmunised does pose a threat to others, so falling under the harm

principle. Fourth, as sketched the appeal to the harm principle assumes that the unimmunised have chosen that status. It portrays a community of informed persons who have voluntarily assumed whatever risk non-immunisation carries. Surveys of immunisation coverage in Auckland, however, suggest that this is a somewhat romantic view of the unimmunised community. The most common reasons for failing to have children immunised against Hepatitis B in South Auckland were a lack of transport or problems with the timing or location of immunisation clinics. We should not suppose that those at risk from non-immunisation are only the members (or children) of a community of informed objectors. Non-immunisation is more often due to ignorance or socio-economic disadvantage than choice.

#### *Free Riding and Paradoxes of Reason*

The decision whether or not to immunise (or more accurately, whether or not to have one's child immunised) appears to depend crucially upon what others decide to do. If there is a correlation between immunisation and the incidence of targeted diseases, then the larger the proportion of my community who decide not to immunise, the more important it is likely to be that I do.

This feature of the immunisation decision has some interesting results: first note that it creates a certain kind of 'decision paradox'. Suppose I decide that the relevant data shows that it is best not to expose my child to the risks of immunisation. If it is true that the larger the proportion of my community who decide not to immunise, the more important it is that I do, I must now hope that most others do not share my view. The more likely I believe it to be that they will share my view, paradoxically, the more reason I will have to disregard my original assessment. On at least some constructions, the recommendations of those opposed to immunisation make sense only if most disregard them. Second, notice a danger for public policy which arise from this paradox. Suppose I reason that most people will immunise, and judge that, because they do, it is safe for me not to. I might judge that relatively high rate of immunisation means that the risk of contracting vaccine-preventable diseases is sufficiently low to make it safe for me to avoid the risks of immunisation. Suppose further, that a significant proportion of my community agrees with me, and also gives up immunisation. At some point

of course, the benefits of immunisation will be lost. The problem for social policy is that for any individual it is best if they have the benefit of high immunisation rates without themselves bearing the risk (or paying the cost) of contributing to the attainment of that rate. If too many people seek what is best for them, however, they will do worse than they would have done had they been less concerned to maximise their own benefit. The fact that the decision to immunise has this paradoxical structure, might recommend compulsion, or at least the imposition of a model which constrains the pursuit of self interest: policy-makers recognising that every individual may be motivated by self interest to act in ways which will threaten both public and self-interest might legislate as a way of restructuring the decision for individuals. Finally, given the way in which the wisdom of the decision not to immunise depends upon the fact that most others do immunise, one might argue that the unimmunised are 'free-riders' in the sense that they take the benefit of high immunisation rates without exposing themselves to the risks unavoidably attendant upon attaining those rates. Free-riding in this sense will not always be morally objectionable (the fact my neighbours enter into a street beautification project which increases the value of the houses in our street, including mine, does not of itself seem to create an obligation upon me to join in). Whether it is objectionable in a given case is likely to depend upon judgements as to the extent to which it threatens the project as a whole, whether the project promises a benefit (as in the street beautification project) or aims to avoid a harm, whether the benefit was imposed upon the free-rider or whether they went out of their way to take it, and whether their participation in the benefit increases the costs to others (in the immunisation case the answer might differ between what I have called category A and B diseases).

#### *Double-Effects, Acts and Omissions, Physicians and Policy-Makers*

Perhaps it will seem that the arguments considered so far do not go far enough to over-ride the overwhelming duties of health professionals not to put healthy patients at risk: just as it would be wrong for a surgeon to sacrifice one healthy patient in order to obtain organs to save the lives of 5 others, so

it is wrong for a physician to participate in an immunisation programme knowing that some healthy recipients will be made ill and perhaps even die albeit for the benefit of, perhaps, millions.

The concern allows us to conclude by simply noting a number of related issues. First, a traditional response has been to distinguish between those results an agent intends to result from her conduct, and those which she merely foresees as an inevitable 'side-effect': even though the illness or death of some (small) number of patients is a predictable result of immunisation programmes, physicians are not aiming for those results and, the argument goes, are therefore not morally responsible for them. Second it might seem that the analysis of the physician's position depends upon a sharp distinction between 'acting' and 'omitting': judging that physicians do wrong when they immunise but not if they omit to do so. If non-immunisation is a genuine risk, why should the mere fact one course of action is an act and the other an omission make a moral difference? Third, it may be that we should acknowledge that the roles and responsibilities of the physicians are indeed significantly different from those of public health authorities. We might grant that physicians have special responsibilities toward the individuals who are their patients, but deny that public health authorities are in a similar position. The latter cannot avoid distributive questions: questions about, for instance, the imposition of risk 'now' or 'here' in order to gain greater benefits. Although such questions will occasionally confront physicians, they are not the everyday stuff of their professional lives as they are for the policy-maker. This analysis will raise a number of new issues, calling most obviously perhaps for clear resolution of the alleged tension between public health policy and the responsibilities of physicians. Alternatively, one might simply reject the suggestion that physicians are a special case, claiming that the arguments sketched in this commentary have equal force, whatever that force is, against both physicians on the one hand and public health authorities and parents on the other.

<sup>1</sup>Though early child care centres may set their own entry requirements.