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Title: Virtue Ethics and the United Kingdom (UK) Vaccine Damage Payment Scheme (VDPS).

Author: Dr David I. Benbow, School of Law, University of Sheffield, Bartolome House, Winter Street, Sheffield, S3 7ND, England. Email address: d.benbow@sheffield.ac.uk. ORCID ID: https://orcid.org/0000-0002-2266-0611 .

ABSTRACT

I contend that virtue ethics provides the best ethical justification for vaccination programmes, and associated payment schemes for vaccine damaged individuals (which have been adopted in twenty-four countries and one province). Virtue ethics justifies vaccination programmes, as they contribute to the common good, and associated payment schemes, as they demonstrate compassion, justice and prudence in response to virtuous vaccination decisions by citizens. I also argue that the virtues of maturity and prudence justify voluntary vaccinations. I utilise several virtues to analyse, and suggest reforms to, the United Kingdom's (UK) Vaccine Damage Payment Scheme (VDPS). I also compare the UK VDPS with the schemes that have been adopted in other states, in particular the Vaccine Injury Compensation Programme (VICP) which has been adopted within the United States (US).

Keywords: Common good, justice, no-fault liability, vaccine damage, virtue ethics, tort law.

Word Count: 10,000.

Introduction

The proliferation of anti-vaccination sentiment during the Covid-19 pandemic necessitates a thorough consideration of the ethical justifications for vaccination policies and laws. I argue that virtue ethics can ethically justify and morally support vaccination programmes, associated compensation schemes and voluntary vaccinations. Vaccination programmes are justifiable as, in Aristotelian terms, they contribute to the common good, or, in Adornian terms, they help to ensure that vaccine preventable diseases do not hinder human functioning. The decisions of individuals to vaccinate themselves and their children instantiates the virtues of prudence and courage. The award of compensation, by states, to vaccine damaged individuals, instantiates the virtues of prudence, compassion and justice. I contend that the virtues of maturity and prudence justify voluntary vaccinations. My paper indicates that virtue ethics could potentially morally justify more areas of law. I utilise different virtues identified by virtue ethicists, such as justice, compassion, humility and maturity, to analyse the United Kingdom's (UK) Vaccine Damage Payment Scheme (VDPS), established by the Vaccine Damage Payments (VDP) Act 1979, and recommend reforms. I also compare the VDPS with similar schemes in other states, such as United States (US) Vaccine Injury Compensation Programme (VICP). The VDPS provides a one-off payment to eligible claimants who have been injured by a vaccine designed to immunize them against one of several diseases. I recommend the following reforms to the VDPS: the scheme should include all recommended vaccines administered within the UK; the scheme should apply to claimants of all ages (currently, it only applies to adults in certain circumstances); the 60% disablement eligibility requirement should be reviewed; the scheme should be made more transparent, for example, via

the adoption of a vaccine injury table (VIT) and the publication of VDPS tribunal decisions; the time limits for submitting claims should be abolished; and, full compensation should be awarded to claimants who have sustained injuries (on the balance of probabilities) as a result of a vaccination.

Payment Schemes

Twenty-four countries and one province[1] have established no-fault vaccination injury payment schemes (Mungwira *et al*, 2020). The number of countries with such schemes is slowly increasing over time (Mungwira *et al*, 2019, Looker and Kelly 2011). Some scholars recommend a global vaccination injury compensation system to build trust in vaccines (Halabi and Omer 2016). There have also been calls and proposals within other states, such as Ireland (Vaccine Damage Steering Group 2009) and Australia (Wood *et al*, 2020), for compensation schemes to be adopted, although there are concerns relating to costs and the potential impact on vaccine confidence (Wilson and Keelan 2012). In respect of the latter, some anti-vaccination ideologists argue that the existence of compensation schemes demonstrates "that there is broad recognition that vaccines are, in fact, genuinely dangerous" (Berman 2020, p.58). Two mothers cited the UK VDPS as a reason for their concerns regarding vaccine safety in parental disputes about child vaccination (*A Father v A Mother* [2020] and *M v H* [2020]). Parental dissatisfaction with the VDPS has been noted within previous literature (Dingwall and Hobson West 2006). If governments are perceived to be hiding something about vaccines or acting unfairly, this may undermine public trust (Hobson-West 2016).

The proliferation of anti-vaccination ideology during the Covid-19 pandemic (Centre for Countering Digital Hate (CCDH) 2020) necessitates a thorough consideration of the ethical justifications for vaccination policies and laws. The payment schemes for vaccine damaged individuals established in some states have been justified by theories, such as utilitarianism and Rawlsianism, within the existing literature. Utilitarian and Rawlsian theories also predominate within contemporary tort law scholarship and correspond with instrumental and non-instrumental theories of torts. However, Alan Calnan (2010) argued that adhering to either tort law theory absolutely is implausible, as the former regards justice as incidental to promoting the public good, while the latter neglects that rights may be used instrumentally. Stephanie Pywell (2000, p.252) noted that VDPS payments are not ‘‘an admission of negligence’’ or the result of strict liability, hence the scheme ‘‘appears to defy convenient classification’’. Although the scheme is not technically strict liability (due to its eligibility criteria), it is a no-fault scheme, hence I will consider, and note the limitations of, relevant tort law literature, in evaluating the scheme. I contend that virtue ethics is preferable to alternative theories in justifying such payment schemes and provides a means for critiquing the criteria of such schemes.

Theoretical Justifications for Vaccine Programmes

Virtue ethics is primarily inspired by the ancient Greek philosopher Aristotle. Prominent virtue ethicists include Philippa Foot, Alasdair MacIntyre, Martha Nussbaum and Theodor Adorno. Rather than focussing on consequences or duties, virtue ethicists

emphasise the habits and knowledge pertaining to living a good life. MacIntyre (2007, p.191) defines a virtue as:

> "an acquired human quality the possession and exercise of which tends to enable us to achieve those goods which are internal to practices [such as healthcare] and the lack of which effectively prevents us from achieving any such goods".

Foot (2002, p.2) stated that "it seems clear that virtues are, in some general way, beneficial" as "human beings do not get on well without them". Virtues are not prescriptive, but their cultivation aids individuals in engaging with ethical issues (Foot 2002). Virtue ethics has informed literature on medical law (Gay 2019), tort law (Feldman 1999) and jurisprudence (Farrelly and Solum 2007). Numerous virtues have been identified by different virtue ethicists. Aristotle (2009) identified several virtues including prudence (*phronesis*), temperance (self-control), courage and justice. The virtues of maturity (*mündigkeit*), humility and affection/compassion are evident in Adorno's work (Finlayson 2002). MacIntyre (1999) identified the virtues of independent practical reasoning and the virtues of acknowledged dependence, such as just generosity and misericordia (mercy). Foot (2001) utilised several virtues, within her work, including justice, temperance, charity and courage. I focus primarily on the virtues of maturity, humility, compassion, prudence and justice, which have been utilised by most virtue ethicists.

Immanuel Kant (1784) influenced Adorno's notion of the virtue of maturity, which refers to the capacity to use one's own understanding (Finlayson 2002). States should endeavour to develop citizen's critical thinking skills to enable them to make good decisions regarding vaccines. Adorno (2001, p.169) describes humility as ''reflecting on our own limitations'' so that ''we can learn to do justice to'' difference. States should encourage citizens to cultivate humility and recognise their own limitations in assessing risks, given the link between the Dunning-Kruger effect (whereby people overestimate their own abilities) and vaccine anxieties (Motta *et al*, 2018). Scientists should also cultivate humility and be honest about the limitations of current scientific knowledge. The virtue of affection/compassion, which was referred to as pity in Aristotle's work, refers to empathy for the suffering of others (Finlayson 2002). The word pity has connotations of condescension and superiority which the ancient Greek words, *eleos* and *oiktos*, used by Aristotle, did not have (Nussbaum 2003). Nussbaum (1996) notes that Aristotle's description of pity, which is similar to modern conceptions of solidarity (Jaeggi 2001), has three components: firstly, that the suffering of an individual is serious rather than trivial; secondly, a belief that the suffering was not caused (or primarily caused) by the individual's own culpable action; and thirdly, the own possibilities of the pitier are similar to those of the sufferer. These components are satisfied when people suffer serious vaccine injuries.

In terms of justice, Aristotle (2009, p.84) famously distinguished between two particular forms of justice: distributive justice (which concerns distributions of ''honour or money or the other things that fall to be divided among those who have a share in the constitution'') and corrective justice (which concerns rectifying transactions between individuals). Such particular forms of justice inform modern tort law scholarship, with

some scholars focussing on the latter (Weinrib 2012, Coleman 1992) and others recognising the importance of the former (Cane 1997, Keren-Paz 2007). Such scholarship is generally divorced from Aristotle's broader views about justice, which are vital in understanding vaccination programmes and associated payment schemes for vaccine damage. Aristotle's broader conception of political justice is designed to achieve the common good or ''what is for the benefit of the whole community'' (Aristotle 1981, p.207). King LJ stated, in *Re H (A Child) (Parental Responsibility: Vaccination)* [2020], that ''the current established medical view is that the routine vaccination of infants is in the best interests of those children and for the public good''. Mark Murphy (2006) distinguishes between three different conceptions of the common good: instrumentalist, which refers to the realization of reasonable objectives by members of a community (Finnis 2011); distinctive, which refers to ''the obtaining of some state of affairs that is literally the good of the community as a whole'' (Murphy 2006, p.63); and, aggregative, which refers to the ''realisation of some set of individual intrinsic goods, characteristically the goods of all (and only) those persons that are members of the political community in question'' (Murphy 2006, p.63). George Duke (2016) views the three conceptions as different dimensions of the common good.

Adorno is regarded as a negative Aristotelian, as he believed that we cannot conceptualise what realised humanity would consist in, hence the good is unknown to us, although we can know the bad, which involves the denial of our animal nature and other elements of human functioning (Freyenhagen 2013). In my view, vaccination programmes achieve the good of the community as a whole (distinctive conception) in enabling citizens to become immunised against different diseases (instrumental conception). If enough citizens are vaccinated, this will disrupt the transmission of

diseases (through the achievement of herd immunity), protect those who cannot be vaccinated (for example, those who are immunocompromised) and reduce the amount of healthcare resources devoted to treating vaccine preventable diseases (aggregative conception). Alternatively, in Adornian terms, vaccination programmes help humans avoid diseases which could hinder their functioning. The instrumental conception of the common good is principal, as vaccines primarily benefit individuals through enabling their flourishing, by ensuring that they are not blighted by vaccine preventable diseases. The distinctive and aggregative conceptions are secondary. Nussbaum (2000) contends that comprehensive conceptions of the good can only be specified at a high-level of generality. Such conceptions are also potentially contestable (Deneulin and Townsend 2007), hence debates may be had about specific vaccines.

The virtue of prudence requires people to appropriately assess risks and what happens in most cases (Aquinas 1981). As vaccine injuries are extremely rare (Gorovitz and MacIntyre 1976), prudent individuals, appropriately assessing the relevant risks, would ensure that they and their children receive routine vaccinations (unless there are contraindications). Such decisions also demonstrate courage, as vaccinations may hurt (Annas 2011) and may rarely cause damage. The argument that vaccines contribute towards the common good, or help to avoid the bad, is not undermined by the existence of vaccine damaged individuals. Such damage is rare, and it is not possible to determine who will suffer damage prior to vaccination. Whereas utilitarians associate the common good with the greatest good for the greatest number, which could justify individual suffering, there is no tension between individuals and society in my conceptualisation of the common good. The ethical naturalism of virtue

ethics could be criticised as essentialist, but this criticism can be circumvented by viewing nature as dynamic rather than static (Adorno 1984).

I have demonstrated that virtue ethics provides a strong ethical justification for vaccination programmes, which are just as they achieve the common good or avoid the bad. Vaccination programmes require citizens to exercise virtues, including prudence and courage, to ensure that they and their children are vaccinated. Vaccination programmes may also be justified by other ethical theories. As utilitarian thinkers advocate the greatest good for the greatest number (Bentham 1977), vaccination programmes, which are intended to benefit everyone, can be justified by reference to utilitarianism. Rawlsian theory also provides a justification for vaccine programmes. Rawls (1999a, p.127) criticised common good conceptions of justice for neglecting that different individuals have ‘‘different ends and purposes’’ and their own views of the good life. Rawls (1999a, p.491) argued that we should view the ‘‘right as prior’’ to the good. Nonetheless, Rawls (1999a) promulgated a thin conception of the good by identifying natural primary goods, which society does not control, and social primary goods, which society does control. Although Rawls (1999b, p.50) originally characterised health as a natural primary good, he subsequently stated that ‘‘basic health care [should be] assured for all citizens’’. Nonetheless, virtue ethics better captures the objective nature of the good of vaccination programmes for all citizens than Rawlsian theory (which is non-objectivist) and utilitarianism (which focuses on the good of the majority and could thus be interpreted as implying that such programmes do not benefit a minority).

Compulsion

Vaccinations are not currently mandatory in the UK. Alberto Giubilini (2019, p.104) argues that Rawlsianism justifies mandatory vaccinations as fairness supports "sharing burdens required by the preservation of public goods". A utilitarian justification of compulsion is that vaccine harms are outweighed by "gains in health and well-being and reductions in disease incidence" (Colgrove 2019). However, as the public outrage in response to mandatory smallpox vaccinations for UK children (imposed by the Vaccination Acts of 1853, 1867, 1871 and 1873) in the nineteenth century (which led to declining vaccination rates) demonstrates, compulsion may backfire (Larson 2020). Utilitarians may oppose compulsion if evidence suggested that it reduced vaccine confidence. In terms of virtue ethics, MacIntyre (2016) favours compulsory vaccinations. However, the virtue of maturity indicates that citizens should be encouraged to reach good decisions about vaccinations themselves. In my view, educating citizens about the common good (or avoiding the bad) that vaccinations objectively achieve is preferable to compulsion (Benbow 2021, Spinoza 2007). This argument differs from autonomy-based justifications for voluntary vaccinations, which are predicated on individuals being best placed to subjectively determine whether vaccinations are good. Additionally, prudent policymakers should consider the potential for compulsion to backfire.

Theoretical Justifications for Vaccine Damage Payment Schemes

Although there are many potential justifications for vaccine damage payment schemes, I focus on utilitarianism, Rawlsianism and virtue ethics. Michelle Mello (2008) contends that the utilitarian justification for such schemes is that the social

benefits of vaccination outweigh the costs of compensation. Several anti-vaccination ideologists also argue that vaccination programmes are utilitarian, as they aver that such programmes harm a minority to benefit the majority (Holland 2011). Such arguments overlook that vaccines primarily benefit the individual who is vaccinated and indicate that public health messaging derived from utilitarianism may be easily misinterpreted and misrepresented. Mello (2008, p.35) noted that the primary motivation for offering compensation for smallpox related injuries in the US, in 2003, was to encourage first responders to submit to voluntary vaccination, but that "there is little evidence to support the assumption that easy availability of compensation increases willingness to undergo vaccination". From a utilitarian perspective, compensation schemes could potentially have utility in encouraging vaccination uptake, but conceivably the availability of compensation could also deter vaccination uptake. The lack of evidence either way renders utilitarianism an insecure justification for associated payment schemes. Virtue ethicists believe that the potential consequences of policies and laws are relevant, but do not solely dictate what policies and laws should be adopted. Consequently, if evidence existed that payment schemes reduced vaccine confidence, in my view, this would require states to endeavour to take more action to cultivate pertinent virtues, such as maturity (which requires citizens to acknowledge that vaccines can rarely cause harm), prudence and courage, among citizens, rather than abolishing payment schemes.

Utilitarianism has influenced scholars within the law and economics tradition, who view the goal of tort law as wealth maximization (Posner 1997). Such scholars argue that no-fault liability is preferable to fault liability where it is more efficient, for example if it deters harmful activities (Posner 1997). In the US, product liability relating to the DTP

vaccine did not affect the safety of the vaccine (Polinsky and Shavell 2010, Manning 1994). As there is no deterrence to the use of some vaccines, which have rare but unavoidable risks, law and economics cannot justify no-fault liability in such circumstances. Other strands of utilitarianism focus on welfare, preferences or interests (Hare 1981). The needs of vaccine damaged individuals are an important interest which could conceivably justify payment schemes from a preference utilitarian perspective, but the theory is not clear as to what interests count and how different interests are weighed.

Rawls (1999a) argued that individuals within the original position (a thought experiment in which individuals determining a society's basic structure and institutions are unaware of the positions that they will occupy within the social order) would agree to the following two principles of justice: the liberty principle (each individual is entitled to a fully adequate scheme of basic liberties, which is compatible with the same scheme of liberties for others) and the difference principle (social and economic inequalities must be to the benefit of the least advantaged and attached to positions and offices available to all). The latter has been utilised to justify vaccine damage compensation schemes (Preloznjak and Simonovic 2018). George Fletcher (1972) used Rawls' conceptualisation of fairness to argue that liability is based on reciprocity of risks, with fault-based liability for reciprocal risks and no-fault liability for non-reciprocal risks. Gregory Keating (2001) contended that those benefiting from an activity should recompense those harmed by it. Keating (2019, p.83) used Rawls' fair play argument for political obligation to justify both mandatory vaccination (to prevent free riders) and ''strict enterprise liability on vaccination-related health injuries''. Rawls' (1964) fair play argument is that someone who voluntarily accepts the benefits from a

scheme of social co-operation, which requires nearly everyone's co-operation and sacrifice, has a duty to co-operate. According to Keating (2019, p.86), ''within a coherent community of risk, when many are benefitted and few are harmed, the imposition of strict enterprise liability fairly distributes the costs of the harms that do occur'' by spreading ''the costs of those injuries across all those who benefit from vaccination''.

Keating overlooks that Rawls changed his fair play arguments. In '*A Theory of Justice*', Rawls (1999a) contended that such arguments only applied to those better placed members of society. Instead, Rawls (1999a) endeavoured to explain political obligations via the notion of a natural duty to promote and support just institutions. Michael Sandel (1998) critiqued Rawls' fair play and natural duty arguments for being unable to explain the allegiances (such as solidarity) of encumbered selves. Sandel (1998) also critiqued Rawls' notion that the right precedes the good. The potential misuse of this argument is evident in the fact that some anti-vaccination ideologists argue that parental rights not to vaccinate their children should precede the good (Wagner 2011). Rawls' (2005, p.36) argument for the priority of the right over the good is based on ''reasonable pluralism'' about the good, yet Sandel (1998) notes Rawls' theory (as articulated in '*The Theory of Justice*'), illiberally, does not allow scope for evident disagreement about justice. I agree with Sandel (1998) firstly, that the state cannot be neutral with regards to certain issues, such as vaccines, and secondly, that the good precedes right, as arguments to the contrary may justify antisocial practices. Fletcher and Keating have been criticised for conflating ''nonreciprocity of risk with the thought that the risk-imposer is the prime beneficiary'' (Slavny 2014). Vaccine damage is dissimilar to no-fault liability in other contexts as the recipients primarily benefit from

most vaccines. For example, vaccine damage is dissimilar to the rule in *Rylands v Fletcher,* namely that someone who brings onto their land something (non-natural) liable to do mischief, which escapes, is strictly liable. One defence to that rule, as seen in *Peters v Prince of Wales Theatre (Birmingham) Limited* [1943], is if the source of danger benefited the claimant. Vaccine damage is also different to Keren-Paz's (2019) arguments for strict liability for harms suffered by some patients of innovative treatments, which often show significantly improved results over time. In that scenario, although it is hoped that the patients will benefit, subsequent patients often primarily benefit via improved knowledge (Keren-Paz 2019).

As there are potential problems with utilitarian and Rawlsian justifications for vaccine damage payment schemes, I assess whether virtue ethics provides an adequate justification. Aristotle recognised that harm may be caused intentionally or by mistake or misadventure (Wright 1995). Richard Wright (1995) contends that the latter two correspond with objective negligence and strict liability, although others argue that the concept of negligence derives from Roman rather than Greek thought (Daube 1969). Aristotle's (2009) notion of corrective justice was concerned with losses and gains. In the Aristotelian tradition, gain is viewed as the fulfilment of one's will (Gordley 1995). When an individual is vaccinated, the will of the state (which recommends vaccines) is achieved, but if the individual is injured, they and their families may incur losses. However, vaccine damage cannot be regarded as a wrongful loss where the transaction (the vaccination) has been consented to (Calnan 2008). James Gordley (1995, p.156) argues that an Aristotelian account explains the imposition of strict liability "when activities are less common and more dangerous" and two exceptions recognised by US courts, namely abnormally sensitive plaintiffs and when the claimant

and defendant are pursuing a joint benefit (for example, a national park was not liable when a bear attacked a visitor in *Rubenstein v United States* [1973]). As vaccinations are intended to primarily benefit the recipients, Aristotelian theory, as expounded by Gordley, does not justify compensating vaccine damaged individuals.

However, Aristotle's broader views about justice provide a justification for such compensation. Although, Aristotle did not consider emotions in his analysis of justice, he thought that pity was an appropriate consideration for distributive justice (Trivigno 2014). I argue that states should acknowledge virtuous actions by their citizens, such as ensuring that they and their children are vaccinated, which demonstrates the virtues of prudence and courage. Aristotle (1926) noted that people feel pity if the people who have suffered misfortune are seen as virtuous. The award of compensation recognises both the needs of the vaccine injured individual and desert, which is neglected by modern ethical theories (MacIntyre 2007). In addition, the award of compensation to vaccine damaged individuals demonstrates the virtues of compassion and justice, by state policymakers, as well as prudence, because such damage is an anticipated consequence and thus can be factored into overall vaccination programme costs (Gorovitz and MacIntyre 1976).

A US study indicates that appeals to the general social benefits of vaccination are ineffective in enhancing intentions to vaccinate (Hendrix *et al*, 2014). Theories which predicate compensation on the societal benefits of vaccination, such as the utilitarian and Rawlsian arguments analysed above, may lend credence to anti-vaccination arguments that vaccination programmes harm a minority to benefit a majority and

hinder public health messages endeavouring to increase vaccination uptake. As communitarian critics (such as Sandel and MacIntyre) of Rawls criticised the liberal overemphasis on individual rights for neglecting communities, this problem could also potentially assail communitarian theories. I contend that virtue ethics better justifies voluntary vaccination programmes and associated vaccine damage payment schemes and should inform public health messaging regarding vaccines. I acknowledge that altering the ethical theory underpinning public health messaging is unlikely to change the views of inveterate anti-vaccination ideologists, but it may reduce their influence on those who are, or may be induced to be, anxious about vaccines. I also argue that different virtues provide more guidance, than utilitarian and Rawlsian arguments, about the appropriate design of associated compensation schemes. In the remainder of this article, I outline the historical background to, and eligibility criteria of, the UK VDPS, before utilising different virtues to recommend reforms.

The UK VDPS

James Callaghan's Labour government introduced the VDP Act 1979 in an attempt to restore confidence in vaccinations after a vaccine scare (Millward 2017). The scare involved the triple vaccine, diphtheria-tetanus-pertussis (DTP), and focussed on the pertussis (whooping cough) component of the vaccine, which a paper (Kulenkampff *et al*, 1974) suggested was causing neurological illnesses. A second influence on the VDPS' creation was a political campaign for vaccine compensation spearheaded by the mother of a child allegedly injured by the inactivated polio vaccine (IPV), Rosemary

Fox, who founded the Association of Parents of Vaccine Damaged Children (MacLeod 2017). A third influence was government concerns that excessive liability claims could drive vaccine manufacturers out of the market, thereby threatening the supply of vaccines (MacLeod 2017). The thalidomide tragedy, which involved children being injured after the drug thalidomide was prescribed to some pregnant women in the late 1950s and early 1960s, was a fourth influence on the scheme (Dworkin 1978, Henson 2007). A fifth influence was the report of the Royal Commission on Civil Liability and Compensation for Personal Injury (the Pearson Commission) (1978, p.298) which recommended that ‘‘the government should be strictly liable in tort for severe damage suffered by anyone as a result of vaccination recommended in the interests of the community’’.

In contrast to the Pearson Commission’s recommendations, the scheme established via the VDP Act 1979 provides a payment (initially £10,000) to those who are, on the balance of probabilities, severely disabled (the original threshold was 80% disablement) as a result of a vaccination for one of the diseases specified in the statute. The VDPS does not prevent an individual bringing a negligence claim (VDP Act 1979, S.6(4)) or a product liability claim, although the prospects of succeeding in such claims are slim. In contrast, in the US, a claimant must file a claim with the VICP, which was established by the National Childhood Vaccine Injury (NCVI) Act 1986, before they can proceed with a civil lawsuit. The VDPS is currently administered by the NHS Business Service Authority. UK ministers appear to have been unaware of the existing schemes within other jurisdictions when creating it (H.C. Deb. 09 May 1978). The VDP Act 1979 was passed as an interim measure. The Callaghan government promised to review the recommendations of the Pearson Commission

and to adopt a permanent measure thereafter (H.C. Deb. 09 May 1978). However, the subsequent Conservative government confirmed that the Pearson Commission's recommendations would not be adopted (H.C. Deb. 28 November 1983). The VDPS has been criticised as piecemeal and incoherent (Brazier and Cave 2016, Conaghan and Mansell 1999). The Covid-19 pandemic has renewed parliamentary interest in the scheme. Christopher Chope (Conservative MP) has introduced the Covid-19 Vaccine Damage Bill into parliament, which proposes to establish an independent review into the disablement caused by Covid-19 vaccines and available compensation. Although Chope contends that he intends to increase vaccine confidence (H.C. Deb. 02 March 2022), some of his statements (for example, his claim that many hospital in-patients were there due to the Covid-19 vaccine) have been criticised (Turnidge 2021) and may do the opposite.

Type of Vaccination, Identity of the Claimant, Time Limits and the Severity of the Injury

I argue that the virtue of compassion supports reforming the VDPS so that it applies to non-trivial injuries caused by all recommended vaccines given that individuals, or their parents, have acted virtuously (demonstrating prudence and courage) in ensuring that such recommended vaccines are administered, to achieve the common good (or avoid the bad), and the injuries sustained could possibly have affected any recipient. In some states with schemes, such as France, compensation is only available for mandatory vaccinations (Mungwira *et al*, 2020). In contrast, the relevant schemes apply to all vaccines in states such as Finland and New Zealand (Keane *et al*, 2019).

The VDP Act 1979 originally applied to vaccines for the diseases outlined in S.1(2). Vaccines for other diseases, such as Covid-19 (The Vaccine Damage Payments (Specified Disease) Order 2020), have subsequently been added via statutory instruments. The only vaccines for diseases which are listed on the routine immunisation schedule which are absent from the scheme are hepatitis B vaccines (recommended for those who are aged sixteen weeks and for workers who may be exposed to blood, bodily fluids or tissues in their employment) and shingles vaccines (recommended for those aged 70 years). Although David Ennals (Secretary of State for Health and Social Services between 1976 and 1979) stated that the scheme would apply to children and adults (H.C. Deb. 09 May 1978), the legislation provides that eligible vaccine recipients (except for vaccines against poliomyelitis, rubella and meningitis c, as per S.1(3)) must have been under the age of eighteen (unless there was an outbreak of the disease, as per S.2(1)(B)). Of the claims rejected, up to August 2013, 64 (approximately 1.2%) were due to the claimant being over 18 years of age (MacLeod 2017).

In 2009, 158 MPs signed an early day motion (EDM) 1646 (2008-09) which recommended that the VDPS should include occupational vaccines, as many adults were required to have vaccines as a condition of employment, but were not currently able to make a VDPS claim if they were vaccine injured. Some workers injured by hepatitis B vaccines have received Industrial Industries Scheme (IIS) benefits, although there appears to be a postcode lottery in this respect (H.C. Deb. 8 July 2009). The Department of Health has admitted that excluding adults from the scheme breaches the public sector equality duty (Equality Act 2010, S.149(1)(A), Hodge, Jones and Allen Solicitors 2018). As the government recommends routine vaccines,

those who decide to ensure that they, and their children, receive them are acting virtuously (demonstrating prudence and courage) and thus in the rare, but anticipated, circumstances that damage occurs, the state should demonstrate compassion and compensate injured recipients irrespective of their age. I therefore recommend that the VDPS be reformed to include all recommended vaccines and to remove the eligibility criteria concerning age.

The statute also provides that the disabled person must be over the age of two when the claim was made or, if they died before that date (and after 9th May 1978), must have exceeded that age when they died (S.2(1)(C)). Of the claims rejected up to August 2013, 16 (approximately 0.3%) were due to the claimant being under two years of age (MacLeod 2017). This criterion has been misrepresented in anti-vaccination discourse. For example, Jackie Fletcher, who founded Justice Awareness and Basic Support (JABS), an overtly anti-vaccine group (Millward 2019), in 1994, has described the exclusion of children under two years of age as the VDPS' main anomaly (Beck 2010). Fletcher's VDPS claim for her son, Robert (who was diagnosed with severe brain damage after receiving the measles, mumps and rubella (MMR) vaccine), was initially rejected in 1997, but successfully appealed in 2010 (Delgado 2010). Fletcher asserted that ''Robert was 13 months old when he had his seizure and, under the rules today, he wouldn't be eligible to claim'' (Beck 2010). However, Fletcher misinterpreted the relevant rule, which has not changed since the VDPS was established. Although a child must be at least two years old when a claim is made, this does not preclude consideration of vaccines administered before that age (Vaccine Damage Payments Unit (VDPU) 2020).

In a 2015 House of Commons VDPS debate, several MPs noted that the death of a child below this age is just as devastating for parents (H.C. Deb. 24 March 2015). The virtue of compassion could also justify payments to such parents because, as per the components of pity mentioned above, the death of a child is serious, the parents acted virtuously in ensuring that their children were vaccinated and death due to vaccination (although rare) is a possibility that all parents could encounter. Parents are currently entitled to damages of £15,120.00 (Fatal Accidents Act 1976, S1A(3) as amended by The Damages for Bereavement (Variation of Sum) (England and Wales) Order 2020), where death is caused by a wrongful act, neglect or default (Fatal Accidents Act 1976, S.1 and 1A as amended by the Administration of Justice Act 1982). A similar payment could also be made to parents of vaccine damaged children who have died before the age of two. Such a payment may also prevent misinterpretations and misrepresentations of the VDPS.

The virtue of compassion also strengthens arguments to abolish the time limit for filing vaccine damage claims. Limitation periods are designed to prevent unreasonable claims and are also justified on the basis that evidence may not be available after a certain time-frame. The VDP Act 1979 originally required claims to be made within six years of the vaccination, the date on which the disabled person attained two years of age or 9 May 1978. The statute was amended to liberalise the limitation period, in 2002, and S.3(1)(C), as amended by the Regulatory Reform (Vaccine Damage Payments Act 1979) Order 2002, now stipulates that claims must be made on behalf of the disabled person on or before whichever is the later: the date on which the

disabled person attains the age of 21, or where he has died, the date on which he would have attained the age of 21; and the end of the period of six years beginning with the date of the vaccination to which the claim relates. Of the claims refused by the VDPS, up to August 2013, 551 (approximately 10%) were because the claim was out of time (MacLeod 2017). Of these rejected claims, 113 were rejected after the amendment in 2002, between 16 July 2002 and 31 July 2013 (DWP 2020). This suggests that many claims are still rejected on this basis despite the amendment. In the US, where the statute of limitations is three years, Anna Kirkland (2016) argues that this should be extended as many claimants, and their families, have had much to deal with following vaccine damage. The schemes in some states (such as Germany) do not have time limits (Keane *et al*, 2019). I recommend that UK policymakers should demonstrate compassion by abolishing the time limit for filing claims.

The virtue of compassion also strengthens arguments for reviewing the eligibility criteria regarding severity of injury. Aristotle (1926) stated that pity relates to things distressing and destructive ‘‘if they are great’’, including injuries and disease. The virtue of compassion does not therefore warrant compensation for some trivial injuries following vaccination, such as sore arms. The VDP Act 1979, S.1(4), originally stated that ‘‘for the purposes of this Act, a person is severely disabled if he suffers disablement to the extent of 80%’’. The percentage was reduced to 60% in 2002 (The Regulatory Reform (Vaccine Damage Payments Act 1979) Order 2002). The disability of claimants is quantified to determine whether it meets the requisite threshold of the IIS (Social Security Contributions and Benefits Act 1992, S.103). A vaccine-relevant example is paralysis of a limb following administration of the oral polio vaccine (OPV) (Department of Health 2006). As per *G (A Minor) v Secretary of State for Work and*

Pensions [2017], a tribunal is required to assess the applicant's future prognosis. Despite the reduction to 60%, the UK still ''has one of the steepest eligibility hurdles for compensation'' (Keelan and Wilson 2011, p.28). Of the 5,333 claims rejected up until August 2013, 113 (approximately 2%) were where causation was accepted but the claimant was not severely disabled (MacLeod 2017). Jim Shannon (Democratic Unionist Party MP) criticised the threshold in the aforementioned 2015 debate, stating that the statute was ''too outdated to recognise'' the ''spectrum of difficulties that those affected face'' (H.C. Deb. 24 March 2015). As there is much variability in terms of the level of disablement that neurological, psychological and fatigue and pain conditions cause, some argue for a more nuanced approach (Boulden and Mawdesley-Thomas 2020). A sliding scale, with different levels of awards for claimants based on severity of injury, has been recommended (Association of Personal Injury Lawyers 2001) and rejected (H.C. Deb. 24 March 2015). A review would ascertain whether the threshold is preventing the scheme from helping some of those that it was intended to benefit.

Causation

There has been a convergence of tort law principles between different jurisdictions worldwide, which Aristotle's (1998) ideas about causation have influenced (Engle 2009). Aristotle (1998) distinguished between material, efficient, formal and final (teleological) causes. It may often be difficult to determine whether a vaccine is the efficient cause (determined by the 'but for' test) of a vaccine recipient's injuries. A concern is that if the causal rules are too restrictive, people will be undercompensated, but if they are too generous, people will be overcompensated (Keelan and Wilson

2011). The balance of probabilities (also described as the "preponderance of the evidence" or "preponderance of probabilities") standard, which requires that a claimant prove that it is over 50% likely that the vaccine caused the injury, has been adopted in most jurisdictions with payment schemes (Keane *et al*, 2019). The VDP Act 1979, S.3(5) states that the question as to whether severe disablement has been caused by vaccination "shall be determined…on the balance of probability". As the standard is lower than the evidential proof for scientific causation (at least 95%) (Goldberg 2011), it was speculated that "the number of [VDPS] awards made will therefore exceed the number of cases of vaccine damage suggested by rigorous scientific investigation" (Robinson 1981, p580). In my view, assessing causation requires utilising the virtues of maturity (recognising that not all injuries are caused by vaccines), humility (recognising the limits of scientific knowledge) and compassion (recognising that some possible victims risk not being compensated). VDPS tribunal decisions are not published in full, hence it is difficult to assess how decisions have been made. A policy change also means that the awards granted after 2001 cannot be attributed to specific vaccines (MacLeod 2017).

In the US VICP, causation is presumed (but can be rebutted) if a claimant can demonstrate that their injuries/conditions occurred within a prescribed time-frame, following the administration of a vaccine listed in the VIT (MacLeod 2017). The VIT contains lists of types of adverse reactions that, based on existing epidemiological studies, are presumed to be caused by a vaccine within the time-frame listed (Goldberg 1996). Alternatively, a US claimant can demonstrate causation (off-table) if they can demonstrate: a medical theory causally connecting the vaccination and the injury; a logical sequence of cause and effect; and, a proximal temporal relationship

between the vaccine and the injury (*Althen v Secretary of Health and Human Services* [2005]). Betsy Grey (2011, p.343) contends that the NCVI ''accepts a lesser quantity and quality of evidence as meeting the preponderance standard'' than tort law cases. Grey (2011, p.348) argues that until the ''overriding objective of the vaccine program [the teleological cause] is clarified, the appropriate level for sufficiency of causal proof cannot be determined''. Grey (2011) states that less stringent rules are appropriate if the aim of the scheme is to minimise litigation against vaccine manufacturers and that more stringent rules are appropriate if the objective of the scheme is to enhance vaccine confidence. As mentioned above, the UK VDPS was established, in part, to enhance vaccine confidence. However, Ennals misleadingly implied that the civil standard of proof would be lowered for the VDPS (H.C. Deb. 05 February 1979). Some, such as the campaign group Justice For All Vaccine Damaged Children (Fox 2006) and the Labour MP Russell Brown (H.C. Deb. 24 March 2015), contend that the benefit of the doubt should be the relevant standard. The problem with this standard is that any vaccinated child who is subsequently deemed to be ill, without an identifiable cause, could succeed using it (Fox 2006). The virtue of maturity indicates that not every illness should be ascribed to vaccines. In my view, a prudent individual would not support a shift to a standard lower than the balance of probabilities, as there is a risk that this may negatively impact vaccine confidence. For example, in 2012, a court in Rimini, Italy, awarded damages to a child who had allegedly (and, in the court's view, possibly) developed autism following administration of the MMR vaccine (*Bocca v Ministry of Health* [2012]). The decision, which was subsequently overturned (Appeals Court of Bologna [2015]), may have spread vaccine hesitancy within Italy (Aquino *et al*, 2017).

The virtue of maturity indicates that the balance of probabilities standard should be retained. Nonetheless, I also aver that the virtue of humility requires that there should be more transparency regarding its application. Pywell (2001) argued that the causal rules applicable to the VDPS seemed to be being applied more stringently over time. However, the decline in awards seems to be partly explained by the removal/replacement of some vaccines from the recommended schedule. For example, the removal of smallpox vaccine, in 1971, in respect of which 64 VDPS awards were made between 1979 and 1995 (MacLeod 2017), seems partly responsible for a decline in awards. Similarly, the switch from OPV, in respect of which 256 VDPS awards were made between 1979 and 1988 (H.C. Deb. 19 December 1988), to the safer IPV, in 2004, may also be a factor in the decline in awards (Department of Health 2006). The decline can also ostensibly be partly explained by a justified change to VDPS policy (Brahams 1990) following Stuart-Smith LJ's rigorous consideration and undermining of the purported link between the DTP vaccine (658 VDPS awards were made between 1979 and 1988 where the vaccine was for pertussis or included a pertussis element (H.C. Deb. 19 December 1988)) and neurological illnesses in *Loveday v Renton* [1990].

Pywell (2002, p.74) recommended replacing the VDPS "with a system modelled on the" US VICP. The adoption of a VIT by the UK would be beneficial because, as Keelan and Wilson (2011, p.32) argue, tables allow for "more transparent, consistent, predictable, and rapid assessments of" claims, could help counter misperceptions that the government is hiding something and would demonstrate requisite humility on behalf of state policymakers. Nonetheless, off-table claims exceed table claims in the US, as Congress' hope for scientific progress in ascertaining the reasons for vaccine

injuries has not materialised (Grey 2011). Consequently, it is unlikely that adopting a VIT would solve every issue concerning causation in the UK. Grey (2011) recommends that the US NCVI replace the causation requirement (which is laden with tort meaning) with an association requirement that would clarify that less stringent rules are applicable to vaccine damage cases than traditional tort cases and give clear direction that the purpose of the NCVI is to protect the vaccine market. The virtue of humility supports the enhancement of transparency, within the UK, through the adoption of a VIT, the annual publication of awards which have been made in respect of specific vaccines and publication of VDPS tribunal decisions, in full, so that there can be more informed scrutiny regarding the application of the causal rules.

Payment Awarded

As the VDPS furnishes claimants with a lump sum payment, it has been described as ‘‘not really a compensation system’’ (Mariner 1987, p.607). The original amount awarded was £10,000. The amount has gradually been increased over time and is currently £120,000 (The Vaccine Damage Payments Act 1979 Statutory Sum Order 2007). The amount awarded has been described ‘‘far too low for some cases’’ (Hodges 2020) and ‘‘not adequate compensation for’’ those ‘‘seriously and profoundly disabled’’ (H.C. Deb. 24 March 2015). The amount awarded is lower than the amount awarded by schemes in other jurisdictions (Pywell 2001) and with hypothetical awards in negligence cases, for example, if a vaccine were administered despite a contraindication (H.C. Deb. 24 March 2015). Christopher Hodges (2020) recommends that any vaccine damage scheme should award the same level of damages as courts

would to fully compensate victims' needs. Successive governments have used the existence of social welfare to justify the amount paid under the scheme (H.L. Deb. 08 March 1979). It was recently confirmed that "there are no plans to change the level of payment" (H.C. Deb. 9 September 2019).

Some paediatricians (Robinson 1981), Parliamentarians (such as Lord Hailsham (H.L. Deb. 08 May 1985)), and scholars (such as Cane (2010)), have queried whether any unique payment to vaccine injured children is justified. By contrast, although Jane Stapleton averred that needs rather than cause should determine the existence and amount of compensation (Stapleton 1986a), she seems also to have thought that merit is also important as she contended that vaccine damaged individuals are an exception as they have undertaken risks for the "benefit of society" (Stapleton 1986b, p.112). The fact that citizens have acted virtuously (demonstrating prudence and courage) in ensuring that they and their children are vaccinated suggests that they do merit compensation in the rare circumstances that damage occurs. A virtue ethics approach, compassionately recognising both need and merit in relation to vaccine damaged individuals justifies full compensation. An analogy may be made with other no-fault compensation schemes, such as the Armed Forces Compensation Scheme (see The Armed Forces and Reserve Forces (Compensation Scheme) Order 2011) which provides either a tax-free lump sum or index linked monthly guaranteed income payment for injuries, illnesses or death caused by military service, which Aristotle (2009) viewed as instantiating the virtue of courage. The economic policy of austerity (pursued by UK governments since 2010) has negatively affected everyone with disabilities (whatever the cause) and their families (Ryan 2019). Compassion also

necessitates that there should be a review of whether general social welfare provision is adequately meeting the needs of all disabled people and their families.

Conclusion

I contended that virtue ethics ethically justifies voluntary vaccination programmes and associated compensation schemes. I utilised different virtues (such as justice, maturity, humility and compassion) and comparisons with other schemes (such as the US VICP) to suggest reforms to the UK VDPS. I argued that: the VDPS should include all recommended vaccines; transparency should be increased via the adoption of a VIT and publication of VDPS tribunal decisions and awards (specifying the particular vaccines); the 60% disablement requirement should be reviewed; the scheme should apply to claimants of all ages; the time limits for filing claims should be abolished; and, full compensation should be awarded.

Notes

[1] Austria, China, Denmark, Finland, France, Germany, Hungary, Iceland, Italy, Japan, Latvia, Luxembourg, Nepal, New Zealand, Norway, UK, US, Russia, Taiwan, Thailand, Slovenia, South Korea, Sweden, Switzerland, Vietnam and the province of Quebec in Canada.

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Correspondence

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