AN EVIDENCE-BASED APPROACH TO NO JAB NO PLAY IN WESTERN AUSTRALIA

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Historical context and scope of conscientious objection to vaccination

The term 'conscientious objection', as it applies to vaccine exemptions, has been criticised by some Australian politicians in recent years.[1]

However, concerns about vaccination are as old as the practice itself, and when compulsory vaccination legislation was employed in some states during early, post-federation Australia, provisions for exemptions based on conscience were permitted in all states by 1920. As an example, the Western Australian Health Act which came into force in 1911 provided that a parent could make a statutory declaration to the effect they conscientiously believe that vaccination would be prejudicial to the health of their child.[2]

A provision for conscientious objection exemptions was later adopted by the federal parliament when it enacted the Child Care Payments Act in 1997.[3] Notably, the definition included medical beliefs, in addition to religious and philosophical beliefs, even though a separate provision for exemption on the grounds of medical contraindication (as assessed by an immunisation provider), was also included in the law.

> A person has a conscientious objection to a child being immunised if the person's objection is based on a personal, philosophical, religious or medical belief involving a conviction that vaccination under the latest edition of the Standard Vaccination Schedule should not take place.[4]

This definition was retained in federal family assistance legislation which superseded this law, until conscientious objection exemptions were abolished by the 'No Jab No Pay' amendment in 2015.[5]

Conscientious objection exemptions are sometimes described as personal belief exemptions or non-medical exemptions in other developed countries.

Vaccination coverage rates are at an historical high

Vaccination coverage rates are at an historical high in Australia (and have been high for many years), raising obvious questions about the true rationale for the vaccine mandates which have been enacted in Australia since 2015, and the proposal by the Western Australia government to enact a 'No Jab No Play' law later this year. A description of the current regulatory requirements operating in all Australian jurisdictions is provided at Appendix A.

Vaccination coverage rates are calculated for three age cohorts (1, 2 and 5 year olds), and published on the federal Department of Health website. The vaccination coverage rate for Western Australia was over 93% for the one and five year old cohorts at the end of September 2018.[6] With respect to the 2 year old cohort, there is a published disclaimer to the effect that changes to the definition of "fully immunised" has artificially reduced coverage rates, which will resolve over time. For this reason, reliance on data for the 2 year old cohort is not valid for the purpose of policy-making decisions.

Risk of disease transmission is low

Public health experts from the National Centre for Immunisation Research and Surveillance (NCIRS) and the University of Sydney assert that high vaccination rates in Australia mean that the threat of disease transmission posed by vaccine refusal is low.[7] Consistent with this position, we have yet to see any published evidence to the effect that incompletely vaccinated children are creating outbreaks of disease in early childhood service settings, and this is significant considering that three state governments have already enacted different versions of 'No Jab No Play' on this basis, against the advice of such experts.

In the case of New South Wales, an expert committee from the Ministry of Health recommended that conscientious objection exemptions be retained in the existing 'No Jab No Play' law.[8] However, this recommendation was ignored by both major parties, raising questions about the undue influence of mandatory vaccination groups which are orchestrating these ideologically-driven mandates.

Undue influence of mandatory vaccination groups

Mandatory vaccination groups operating in Australia have successfully, but dishonestly, ushered in vaccine mandates across Australia, by promoting a false imperative using fear-based tactics, even though there is no evidence that parental acceptance of vaccination is declining, a view supported by Leask and colleagues (2017).

> Reading the headlines, it would be easy to believe childhood vaccination rates are declining in Australia, due to an increasing trend towards distrust of vaccines among parents. In fact, vaccination rates in Australia have been high and stable, hovering between 91% and 93% since 2003.[9]

A description of these groups and their methods is provided at Appendix B.

Vaccination objection rates are low

At the end of 2015 – the last time conscientious objection exemptions were officially recorded in Australia – only 1.45% of Western Australian children under the age of seven had such an exemption recorded.[10] A study by Gibbs and colleagues (2015) from the Communicable Disease Control Directorate of the Western Australia Department of Health found an additional 0.8% of parents who were unregistered objectors.[11]

A falsehood cultivated by mandatory vaccination groups, and promoted in the media between 2012 and 2015, was that the rate of conscientious objection in Australia had increased sixfold between 1999 and 2012:

> [...] the number of parents registering a conscientious objection to immunisation has leapt sixfold from 0.23 per cent in 1999 to 1.44 per cent.[12]

However, the base rate of 0.23% used in that calculation was the rate of conscientious objection recorded in the Australian Childhood Immunisation Register (ACIR) in 1999, rather than all conscientious objections, both recorded and unrecorded. The ACIR only started recording conscientious objections in 1998, following commencement of the Child Care Payments Act in 1998, which was the first time that parents in Australia were required to formally register a conscientious objection in order to retain eligibility to child care subsidies.

The 1993 National Immunisation Strategy noted that the overall rate of conscientious objection in Australia at that time was less than 2%, suggesting that the true rate was somewhere between 1.5% and 2%, which is consistent with more contemporary estimates.[13] If this larger base rate had been used in the calculation, rather than the 0.23% base rate (conscientious objections recorded in the ACIR for 1999), there would have been very little change in the overall rate of conscientious objection, certainly nothing like a sixfold increase.

Beard and colleagues (2016) concluded that most of the purported increase in the rate of conscientious objection was likely due to increased awareness that registration of such exemptions preserved eligibility for family assistance payments, which rose in value during this period, rather than a real increase. They also reported that vaccination coverage rates during that period were high and stable.[14]

It is also probable that some children, whose parents had registered a conscientious objection prior to 2016, actually had a medical contraindication to vaccination, but their parents chose to register a conscientious objection rather than go through the more arduous process of applying for a medical exemption. As noted above, the definition of 'conscientious objection' adopted in federal family assistance legislation between 1998 and 2015 included medical beliefs, even though a separate provision for exemption on the grounds of medical contraindication (as assessed by an immunisation provider), was also included in the legislation.[15] Hull and colleagues (2018) reported a significant spike in new medical exemptions recorded in 2015 (which continued in 2016, but to a lesser extent) which is likely to represent a migration of conscientious objectors with medical beliefs against vaccination, into medical contraindication exemptions.[16]

Laws targeting vaccination objectors are ineffective

It is uncontroversial that parents with a conscientious objection to vaccination are extremely unlikely to acquiesce to coercion, so laws targeting this group will act as a punitive measure rather than contributing to the government's goal of increasing vaccination rates.[17]

In a study of parents attending a specialist vaccination clinic in Melbourne, Forbes and colleagues (2015) found that when compared with pre-clinical parental positions on vaccination, there was a trend for the children of conscientious objectors to remain unvaccinated.[18]

Classes of incompletely vaccinated children

An Australian longitudinal study by Pearce and colleagues (2015), found that only 1.4% of mothers disagreed with vaccination and that socioeconomic disadvantage, social isolation, psychological

distress, non-use of formal childcare, and child health issues/concerns, were the most important predictors of incomplete vaccination.[19]

Leask and Danchin (2017), suggest that laws imposing penalties on vaccine objecting parents do not target the largest contributor to under-vaccination, which are those children whose parents face access barriers.[20]

Beard and colleagues (2017) concur that conscientious objectors are the least important of the groups contributing to under-vaccination, and expressed concern about unintended consequences arising from denying children access to early childhood education.[21]

Despite Australia's high rate of compliance with Australia's vaccination program, Chow and colleagues (2017) reported that over half of all parents or caregivers in their study expressed some degree of concern regarding the vaccination of their child, known as vaccine-hesitancy.[22] However, the research of Forbes and colleagues (2015), found that, unlike conscientious objectors, vaccine-hesitant parents often proceeded to vaccinate their children when their concerns were addressed in a clinical setting.[23]

There is also evidence to suggest that vaccination rates in Australia are likely to be higher than is recorded in the Australian Immunisation Register due to both reporting[24] [25] and recording error.[26]

As far back as 2016, Dr. Peter Richmond from the Telethon Kids Institute expressed the view at a Perth vaccination conference that the true vaccination rate for Western Australia may have already been close to 95% at that time.[27]

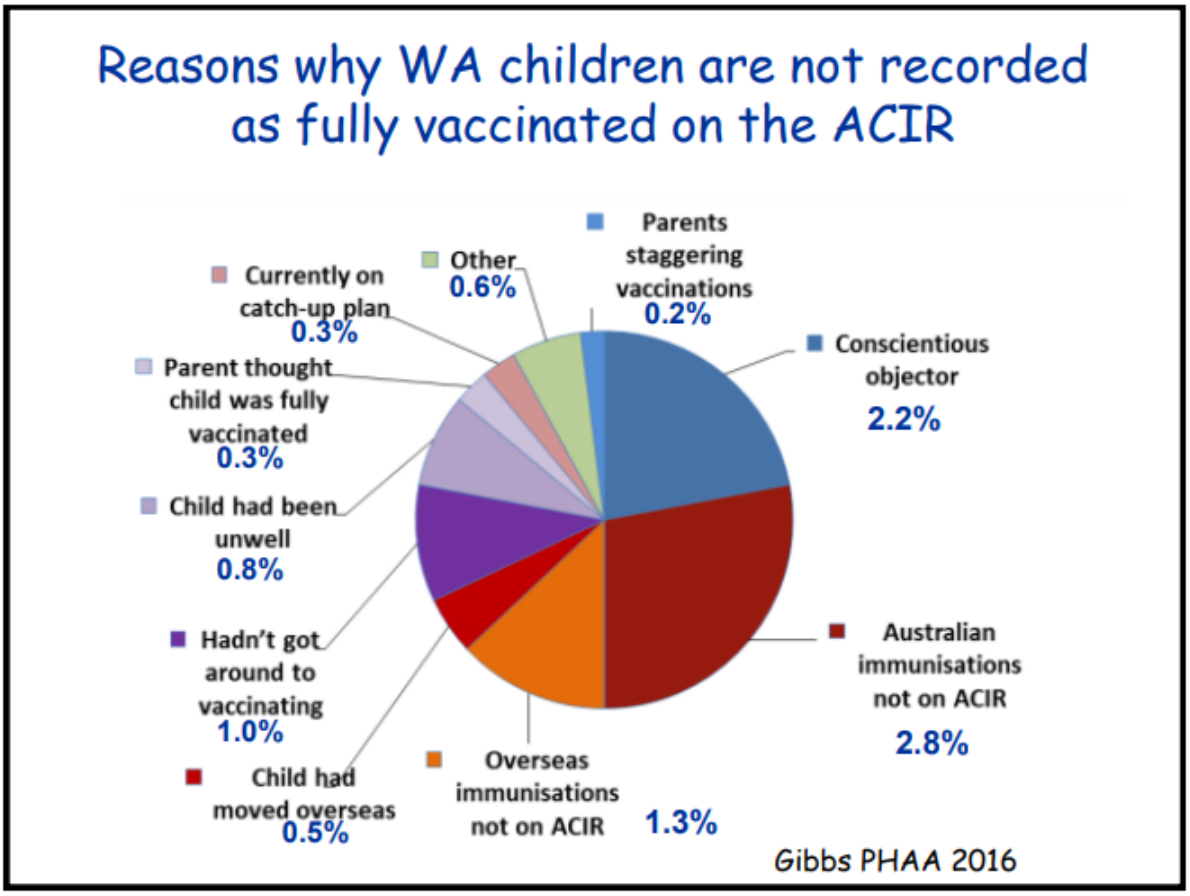
A video of Dr. Richmond's complete 20 minute conference presentation is available online.[28]

His view was informed by the analysis of Gibbs and colleagues (2015) from the Communicable Disease Control Directorate of the Western Australia Department of Health, which found that over 4% of Western Australian children were not recorded in the register as being vaccinated, even though these children had been vaccinated overseas (1.3%) or in Australia (2.8%).[29]

A diagram on the next page shows a percentage breakdown of the reasons for children not being recorded as fully vaccinated in the vaccination register.

A recent study into the accuracy of records held by the immunisation register, found that of the Western Australia records showing a child was overdue for vaccination, 10.4% were in fact up-to-date with scheduled vaccinations.[30]

What is clear is that the vast majority of incompletely vaccinated children in Western Australia are not the children of conscientious objectors, but rather, are recorded as incompletely vaccinated for a variety of other reasons.



Source: HealthEd Immunisation Update: No Jab No Pay – the solution to improving immunisation uptake?, Annual Women's & Child Health Update, Perth 2016[31]

No Jab No Play is not in the best interests of children

Human rights law expert, Associate Professor Paula Gerber, in reference to the proposed 2013 New South Wales 'No Jab No Play' amendment, argued that denying access to education is not an appropriate way of increasing vaccination rates, and is not in the best interests of children.

> ...discriminating against children whose parents have decided not to vaccinate them, by withholding access to education, is not an appropriate way of achieving this. It is not in the best interests of children to try to increase one right (health) by denying access to another right (education).[32]

No Jab No Play is a retrogressive measure

Abolishing children's access to early childhood education and socialisation opportunities is a serious matter, which should not be undertaken lightly. From a human rights law perspective No Jab No Play represents a retrogressive measure, in that it turns back the clock to a time when only the wealthy had access to childcare and kindergarten services. Most citizens would agree that in an advanced country like Australia, forcing parents into using unregulated, backyard childcare services is not in the best interests of children, but is a necessary consequence of excluding incompletely vaccinated children from regulated services.

In a recent interview with ABC's Life Matters radio program, early childhood education consultant, Jennifer Rivarovski, expressed concerns that exclusionary laws deny the benefits of early childhood education, will force children into unregulated childcare services, and may threaten the viability of services in some geographical areas.[33] Echoing Rivarovski's concerns about the viability of some services, reports from some childcare services in Victoria in 2016, indicated that they have been struggling due to falling enrolment numbers, going from having waiting lists to grappling with vacancies.[34]

According to media reports, most childcare and early childhood education services in Queensland have not been exercising the option to implement vaccination requirements, despite having the power to do so since 01 January 2016.[35]

A spokesperson for C & K childcare, which runs 143 centres in Queensland, stated:

> We do not exclude children on the basis of their immunisation status. We support the right of every child to have a quality early childhood education experience.[36]

Despite the low participation rate in 'No Jab No Play' by childcare and early childhood education services in Queensland, that state's vaccination rate for five year olds was at 94.46% for the quarter ending September 2018, compared with 94.62% for Australia.[37]

No Jab No Play breaches common law rights

The Scrutiny of Acts and Regulations Committee (SARC), when evaluating the Victorian 'No Jab No Play' amendment in 2015, concluded that parents who are unable to care for a child themselves due to work or other commitments and who cannot afford to utilise private care for their child may have no choice but to have their child vaccinated in order to enrol that child in an early childhood service.[38]

The Victorian committee's conclusions alludes to the concept of 'practical compulsion' which the High Court's Justice Webb used to describe circumstances in which a person, although legally entitled to decline, would be required to sacrifice the whole or a substantial part of their livelihood in doing so.[39]

With respect to families who rely on the main carer's capacity to access paid work, there is no question that a 'No Jab No Play' law which does not provide for appropriate exemptions invokes the concept of 'practical compulsion'.

The Australian Immunisation Handbook states that for consent to be legally valid, it must be given voluntarily in the absence of undue pressure, coercion or manipulation.[40] Similarly, section 3.5 of the Medical Board of Australia Code of Conduct requires that consent be voluntary.[41] There is an obvious conflict between these legal obligations and coercive vaccination laws.

Haire and colleagues (2018) expressed great concern that coercive vaccination laws over-ride valid consent, concluding that the evidence does not support an increasingly mandatory approach to increasing vaccination rates, delivered through paternalistic, coercive clinical practices.[42]

No Jab No Play is inconsistent with the Universal Access to Early Childhood Education program

The rationale for this federal government program is to ensure that all children have access to a quality pre-school education program for 15 hours per week or 600 hours per year, delivered by an early childhood teacher in the year prior to full-time school.[43]

The Australian Labor Party has committed to extending this program to three year olds in the event it forms government after the federal election this year.[44]

The Australian Institute of Health and Welfare (2015) has emphasised the individual and societal benefits of early childhood education opportunities.

> Early educational intervention has been shown to have a substantial short-term and long-term effect on cognition, social and emotional development, school progress, antisocial behaviour and even crime. Both Australian and international studies have shown that children's literacy and numeracy skills at age 4–5 are a good predictor of academic achievement in primary school. As a result, policies and programs that focus on the early years can only enhance educational outcomes for children.[45]

No Jab No Play is inconsistent with the Disability Discrimination Act

Following advice provided to the New South Wales government, and debate about its proposed 'No Jab No Play' amendment in 2013, the parliament took the decision to provide for conscientious objection exemptions due to concerns that a vaccination requirement, without exemptions, would be in breach of the federal Disability Discrimination Act 1992[46], and necessarily expose childcare services to complaints of unlawful discrimination.

As Parliamentary Secretary Melinda Pavey stated:

> I am advised that on the issue of protection, section 48 of the Commonwealth Disability Discrimination Act dealing with discrimination against those with infectious disease will face problems as paragraph (b) states that "discrimination reasonably necessary to protect public health" will be determined by the level of risk. Clearly, a child with a vaccine-preventable disease poses a risk to other children. However, an unvaccinated child poses the risk in the future. The risk is that a court will not find a refusal to enrol an unvaccinated child is reasonably necessary to protect public health. This amendment will leave childcare centres open to challenges from parents who claim discrimination against their child. Exemptions under a Commonwealth or State law apply only to actions taken in direct compliance with the prescribed law. The New South Wales Public Health Act is not a prescribed law under the Commonwealth Disability Discrimination Act.[47]

No Jab No Play is inconsistent with the ICCPR

The right to freedom of religion, thought and conscience, consistent with Article 18 of the International Covenant on Civil and Political Rights (ICCPR)[48] is not adequately protected by the Australian and Western Australian constitutions, so we rely on members of parliament to protect this important right. The authority of governments to infringe this right under sub-section (3) is limited to necessity, which is not applicable in Western Australia due to the absence of evidence showing that vaccination objection is risking public safety or the rights of others.

Reasons for vaccination objection

Reasons for vaccination objection are legitimate and diverse, encompassing both religious and secular beliefs. There are also significant concerns with the methodological quality of vaccine science purporting to support vaccine safety and effectiveness.

Aborted foetal cells are utilised in the manufacture and end-product of some licensed vaccines

Several vaccines licensed in Australia utilise human diploid cells derived from aborted foetal tissue in the manufacturing process, and it is important to acknowledge that individuals may have (and are entitled to) personal moral, ethical or religious objections to the use of vaccines for this reason.

Some viruses used in vaccines require the use of 'cell lines' in which to grow the vaccine virus.

Two of the cell lines used in the manufacture of vaccines (called human diploid cell lines – WI-38 and MRC-5) were originally derived from human foetal tissue in the 1960s.

Winstar Institute 38 (WI-38) refers to human diploid lung fibroblasts which were derived from the lung tissues of a female foetus, aborted because the family felt they had too many children in 1964 in the United States. [49]

Medical Research Council 5 (MRC-5) refers to human diploid cells which were derived from the normal lung tissues of a 14-week-old male foetus aborted for "psychiatric reasons" in 1966 in the United Kingdom.[50]

Walvax-2 is a new cell line that has been recently developed. This cell line was obtained by performing a special kind of waterbag abortion on nine Chinese women; a method designed to keep the foetus intact, and alive while the cells were harvested.[51]

Children of God for Life, has researched and published extensively on the harvesting, and use of aborted foetal cells in vaccine products.[52]

The table below lists vaccines manufactured using aborted foetal cell lines, and which are currently mandated under the federal 'No Jab No Pay' law and state-based 'No Jab No Play' laws in New South Wales and Victoria.

Vaccine	Schedule Age	Cell Line
Priorix – GlaxoSmithKline Live attenuated Measles Mumps Rubella Viruses (MMR)[53] OR MMR II – Merck Sharp & Dohme (Australia) Live attenuated Measles Mumps Rubella Viruses (MMR)[54]	12 mths	MRC 5 WI 38
Proquad – CSL Limited/Merck & Co Inc Live attenuated Measles Mumps Rubella Varicella Viruses (MMRV)[55] OR Priorix-Tetra – GlaxoSmithKline Live attenuated Measles Mumps Rubella Varicella Viruses (MMRV)[56]	18 mths	WI 38 MRC 5 MRC 5
Quadracel – Sanofi Pasteur Pty Ltd * Diphtheria-Tetanus acellular Pertussis-inactivated poliovirus (DTPa-IPV)[57] * Infanrix IPV, which is cultured on vero cells derived from the kidney of African Green Monkeys, is available as an alternative	4 yrs	MRC 5

Table 1: Vaccines which utilise products of abortion in the manufacturing process and end-product

In a letter to the New South Wales Health Minister, and tabled in the parliament in September 2017, the Chief Health Officer, Kerry Chant claimed that vaccines provided under the National Immunisation Program do not contain foetal cells.[58] However, the manufacturer's product information of one of the mandated vaccines states that the vaccine contains residual components of MRC-5 cells including DNA and protein.[59]

Abortion is a controversial procedure to which many people have varying objections, not exclusive to those informed by religious doctrine. The particular methods used to conduct the abortions, such as the "waterbag" abortion, challenges the ethics of even those who are not strictly opposed to abortions.[60]

Parents opposed to abortion for religious, or conscience-based reasons are opposed to using these vaccines even if it was possible to establish that residual cell fragments were not present in the end product (as the New South Wales Chief Health Officer incorrectly claimed). These parents view the use of vaccines prepared with the products of abortion as a moral evil, or a direct violation of the teachings of pro-life religions, which include Christianity, Judaism, Islam, and Buddhism.

Objections to the use of animal products

Animal products are employed in the manufacturing process, and end product of all vaccines. For example, the Measles Mumps Rubella vaccine (MMR II), by Sequiris/Merck utilises chick embryo cell

culture, human albumin, and foetal bovine serum in the manufacturing process.[61] For this reason, many vegans and advocates of animal rights have a deeply-held belief against the use of all vaccines.

People for the Ethical Treatment of Animals (PETA), claims that vaccine testing alone consumes an estimated 2.5 million animals every year, causing them pain, suffering and death.[62]

A number of religions also object to the consumption of animal products. As with the religions objecting to the use of foetal cells, religions such as Hinduism, Islam and Judaism have a theological objection to the use of some animal products.

Methodological quality of vaccine science is poor

There are legitimate concerns about the quality of evidence purporting to support vaccine mandates. Dew (2012) argues that individuals who actively refuse to take part in vaccination programs, ought not to be simply dismissed as being irrational, and conversely, that public health is not simply a rational, scientific endeavour, evidenced by the fact that vaccination campaigns – and by corollary, herd immunity theory – are not falsifiable, if we follow Karl Popper's prescription for science.

> [...] whatever happens as the result of a campaign can be explained away without having to modify the beliefs that justify immunization. In other words, there is no outcome that would prove the theories underlying immunization as false, and so there are no grounds for contesting immunization campaigns.
> [...]
> In some respects, immunization campaigns have exhibited more of the characteristics of astrology than of Popper's ideal of science.
> [...]
> Many of the decisions being made in such campaigns are extra-scientific; yet, they are being presented to the public as being purely objective.[63]

That vaccination campaigns are not falsifiable, and therefore not strictly scientific, is significantly at odds with the populist narrative of today that 'the science is settled'.

Vaccines are licensed merely on the basis of evidence of immunogenicity (antibody production), a surrogate marker of immunity, rather than evidence of effectiveness against the target disease. Immunogenicity and effectiveness may or may not be the same thing, a good example being the Pertussis (Whooping Cough) vaccine. Pertussis antibodies have never been accepted as evidence of immunity for the purpose of health care worker vaccine mandates[64], yet were assumed to be a surrogate of immunity for the purpose of pre-licensure clinical trials. There is now clear evidence that Pertussis antibodies are not an indicator of immunity to the disease.[65]

Post-licensure field efficacy studies (observational studies) which purport to show a vaccine is effective in preventing the targeted disease are all subject to systemic error or bias[66], which is probably why the Australian Immunisation Handbook, a clinical guideline, does not rely on the evidence grading system used for many other approved NHMRC clinical guidelines[67].

The lack of scientific rigour inherent in vaccine science is one of the key reasons why vaccine recommendations have proliferated over the last 30 years. Time and time again, we see obvious vaccine failure being covered up by our government health officials and vaccine experts[68] which they are able to get away with, due to this lack of rigour. Worse still, these experts have either actively lobbied for vaccine mandates in Australia, or remained silent about the significant shortcomings of vaccine science, particularly in terms of the conclusions that can be drawn from observational studies purporting to show increased rates of disease in the unvaccinated.

Similar limitations are found in vaccine science purporting to show that vaccines are safe.

It is incumbent on the Western Australia government to commission an independent investigation into the statistical and epidemiological methods employed in vaccine science, using experts from outside the field of public health, before enacting further mandates based on vaccine science.

Ethical concerns of public health and medical experts

Isaacs (2012) argues that proposed immunisation programs should be measured against seven ethical principles: (1) benefits/justification, (2) risks, (3) effectiveness, (4) equity and justice, (5) autonomy, (6) reciprocity, and (7) trust.[69] He suggests that there is a strong argument that vaccination should be voluntary as long as voluntary vaccination levels remain acceptably high, as is the case in Western Australia.[70]

Leask and Danchin (2017) assert that coercive vaccine laws can only be justified when no other options are available; and that it is better to employ the least restrictive option with the greatest gain; that option being, the targeting of laws at the largest and most significant contributing group to under-vaccination, which is not conscientious objectors. [71]

The Royal Australasian College of Physicians (RACP) is a professional medical college of over 17,000 physicians and 8,000 trainee physicians, which includes specialist paediatricians, from Australia and New Zealand. In their submission to the 2016 statutory review of the New South Wales Public Health Act 2010, they opposed abolishing conscientious objection.[72]

In a letter to the South Australian Communicable Disease Control Branch of the Department of Health, the RACP (2017) expressed concern about children being denied the benefits of early childhood education and that the risks posed by incompletely vaccinated children are often exaggerated.

> As paediatricians who advocate for the welfare of children, we are bound to draw attention to the enormous body of research demonstrating the benefits of childhood education before school commencement, especially in disadvantaged households. Denial of this access is a serious matter, with likely long-term adverse consequences for the healthy development of the children involved. In this context, the risk of VPDs to fully vaccinated children from children who are under-vaccinated is often exaggerated.[73]

Further, they suggested a 'No Documentation No Play' type of law, which Western Australia has recently implemented, as an alternative to a blanket ban on the enrolment of incompletely vaccinated children.

> The RACP believes compulsory documentation of immunisation status and allowing prompt exclusion of under-immunised children should a case or outbreak of vaccine-preventable disease occur, provides sufficient protection to all children attending an early child care or early childhood education service. As explained above, universal exclusion of under-vaccinated children adds little or no further protection.[74]

Victorian paediatrician, Dr. Jenny Royle, who unequivocally supports vaccination, strongly criticised the Victorian No Jab No Play law during a panel discussion at the 2018 National Immunisation Conference held in Adelaide during June.

> I vehemently oppose the Victorian law, No Jab No Play. […] I don't want people to be disadvantaged by strategies to increase immunisation coverage, and the Victorian law, No Jab No Play, disadvantages children and their families. I think denying a child entry into kindergarten is wrong. I think it's a disproportionate response to the risk that a fully immunised child has in being in a kindergarten with a very small number of children who aren't 100% up-to-date with their immunisations, and that risk is disproportionate to the punishment.[75]

The National Centre for Immunisation Research and Surveillance (NCIRS) has published a list of studies about interventions that can be used to increase vaccination rates which don't have to involve limiting important human rights.[76]

The inconvenience model achieves a balance

Navin and Largent (2017) evaluated three regulatory approaches to non-medical exemptions, as conscientious objection exemptions are sometimes called in other developed countries: (1) elimination, (2) prioritising religion, and (3) inconvenience.[77] The federal 'No Jab No Pay' law, and the Victorian and New South Wales 'No Jab No Play' laws, fall within the elimination model. These experts recommended that non-medical exemptions should be available to parents who object to vaccination for both religious and secular reasons, and that the best way to decrease exemption rates – if there is a concern that parents are objecting to vaccination for frivolous reasons – is to make the exemption application process more burdensome for parents (inconvenience).

The inconvenience model is also favoured by Leask and Danchin (2017), who argue that regulatory approaches to vaccine rejection should be firm but fair, enabling hard-to-obtain exemptions that promote engagement, not alienation from the health system.[78] To this end, they support yearly registration of conscientious objection exemptions[79], instead of once only, as was operating between 1998 and 2015 inclusive with respect to federal family assistance legislation[80] and between 2014 and 2017 inclusive with respect to the New South Wales No Jab No Play law[81].

The inconvenience model achieves a balance between the interests of governments wishing to increase vaccination rates on the one hand, and the rights of parents who have concerns with vaccination, on the other.

A 'No Jab No Play' law which includes hard-to-obtain exemptions, would serve as a reminder to those parents who are not vehemently opposed to vaccination to get their children up-to-date,

while preserving the medical autonomy of those parents who have strong objections against vaccination, or who vaccinate their children selectively.

Recommendations

1	The Western Australia No Jab No Play law should include a provision for conscientious objection exemptions, with yearly registration of objections, consistent with the inconvenience model outlined above.
2	The law should also include a provision for broad-based medical contraindication exemptions in accordance with a clinician's judgement in each individual case.
3	The government should commission an investigation into the methodological quality of vaccine science, drawing on advice by independent experts from outside the field of public health.
4	The government should commission an immediate inquiry into the effectiveness of Whooping Cough vaccination, and the safety of the large number of boosters which are now recommended across a person's lifetime.

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