# ***DEAR LEGISLATOR:*** Please Read Before Voting on SB 276

**SB 276 is attacking the same medical exemptions written by California-licensed physicians that were promised protection by legislators under existing law SB 277. *This new bill would deny thousands of California children with vaccine injuries their promised protection* through medical exemptions by restricting language to only include anaphylaxis or near-death. Children who experience seizures, encephalitis, allergic reactions, gastrointestinal damage, and autoimmune disorders will not be protected by our state from further medical damage.**

## 1. MEDICAL EXEMPTIONS INCLUDE ONLY 0.7% OF CALIFORNIA CHILDREN.

Only 0.7% percent of California schoolchildren are using a permanent medical exemption to safeguard them from injury through state-mandated vaccination[1]. Vaccine-compromised children and their at-risk siblings who previously used a PBE for school entry are now forced to use M.E.s, resulting in the change from 0.2%-0.7%. These children have a fundamental right to be medically protected from harm without losing their Constitutionally-protected right to a public or private education.

| | 2017-2018 | | |
|---|---|---|---|
| | All | Public | Private |
| Number of Schools Reporting Kindergarten Students | 7,957 | 6,074 | 1,883 |
| Number of Kindergarten Students | 564,121 | 522,082 | 42,039 |
| All Required Immunizations | 95.1% | 95.3% | 92.9% |
| Conditional Entrants | 1.8% | 1.7% | 3.3% |
| Permanent Medical Exemptions | 0.7% | 0.6% | 2.1% |
| Personal Belief Exemptions | 0.0% | 0.0% | 0.0% |
| Others Lacking immunizations† | 1.1% | 1.1% | 0.4% |
| Overdue^ | 1.2% | 1.2% | 1.3% |

## 2. OUTBREAKS OF DISEASE ARE HAPPENING AMONG THE VACCINATED IN CALIFORNIA.

The recent 2019 whooping cough outbreak in Los Angeles County involves 100% vaccinated individuals. 90 out of 90 cases in the county were fully vaccinated and still contracted pertussis and spread pertussis to others[2]. The two high school campuses where the outbreak began have a combined 98.6% vaccination rate among 1600 students -- none of the 18 students with medical exemptions caught the illness.

> But all of the sick students had been vaccinated against the disease, according to school officials. In fact, all 90 people who have recently come down with pertussis — the official name for whooping cough — in Los Angeles County this year had been immunized against it, according to county officials.

## 3. MEDICAL EXEMPTIONS ARE NECESSARY, VACCINES ARE "UNAVOIDABLY UNSAFE."

Vaccine injuries are not rare, and vaccines are *guaranteed to cause harm* to some children—in fact, vaccines are labeled by the U.S. Supreme Court as "unavoidably unsafe."[3] According to the Vaccine Adverse Events Reporting System (VAERS), more than 35,000 reports of vaccine reactions are reported every single year in the U.S.—events ranging from swelling to seizures, hospitalization, permanent disability and death[4]. Additionally, it is estimated only around 1% of adverse reactions are ever reported, and doctors are not encouraged to admit, diagnose, or report vaccine injuries. Side effects are not "one in a million"-- that refers to only anaphylactic shock. Seizures can happen in 1 in 660 doses of certain vaccines[5], 1 in 250 for siblings of a child with a previous seizure, and seizures caused by vaccination can cause lifelong epilepsy in children[6]. The truth is vaccine reactions encompass DOZENS of specific conditions and injuries -- epileptic seizures, brain inflammation, neurological disability, intestinal damage, onset of severe allergies, loss of previously acquired skills, etc. These are listed by manufacturers of the vaccines in the package inserts, but NONE are considered "contraindications" by the CDC. All vaccine-injured children (and their siblings), are at an increased risk for permanent disability and should therefore be protected by California law.

## 4. VACCINATION RATES ARE OVER 95% FOR ALL 10 MANDATED DISEASES.

According to the CDPH, vaccination rates are 95.1% for Kindergarten entry in California, including 96.4% for DTaP, 96.8% for polio, 96.9% for MMR, 97.6% for Hep B, and 98.2% for varicella. This is well above the 95% rates the state has declared it needed for "vaccine-induced herd immunity".

**2017-2018 Kindergarten Immunization Assessment – Executive Summary**
**California Department of Public Health, Immunization Branch**

| | |
|---|---|
| 4+ DTP | 96.4% |
| 3+ Polio | 96.8% |
| 2+ MMR | 96.9% |
| 3+ Hep B | 97.6% |
| 1+ Var (or physician-documented disease) | 98.2% |

## 5. WANING IMMUNITY IS RESPONSIBLE FOR OUTBREAKS, NOT CHILDREN WITH M.E.s.

California outbreaks of communicable disease like pertussis, measles, and mumps are happening as a result of waning immunity, or "secondary vaccine failure." Vaccination does not create immunity in everyone (primary vaccine failure), and unlike natural immunity, vaccine-induced immunity does not last indefinitely (secondary vaccine failure). As a result, even 100% vaccination compliance will NEVER stop the spread of these diseases, and children with medical exemptions are not to blame for disease outbreaks in our state or in the country.

- In 2017, half of CA measles cases were adults, 33% of total cases were vaccinated.[7]
- In 2017, 95% of CA pediatric pertussis cases had been vaccinated.
- In 2016, 93% of CA pediatric pertussis cases were vaccinated.[8]
- In 2015, 62% of CA measles cases were adults, 58% of total cases were vaccinated.[9]
- In 2015, 85% of CA mumps cases were vaccinated.
- In 2015, 92% of pediatric pertussis cases were vaccinated.
- In 2014, 53% of CA measles cases were vaccinated, 48% of total cases were vaccinated.[10]
- In 2014, 95% of CA pediatric pertussis cases were vaccinated.
- In 2013, 61% of CA measles cases were adults, 33% of total cases were vaccinated.[11]

## 6. LEGISLATORS ARE GOING BACK ON PROMISES MADE TO CALIFORNIA PARENTS.

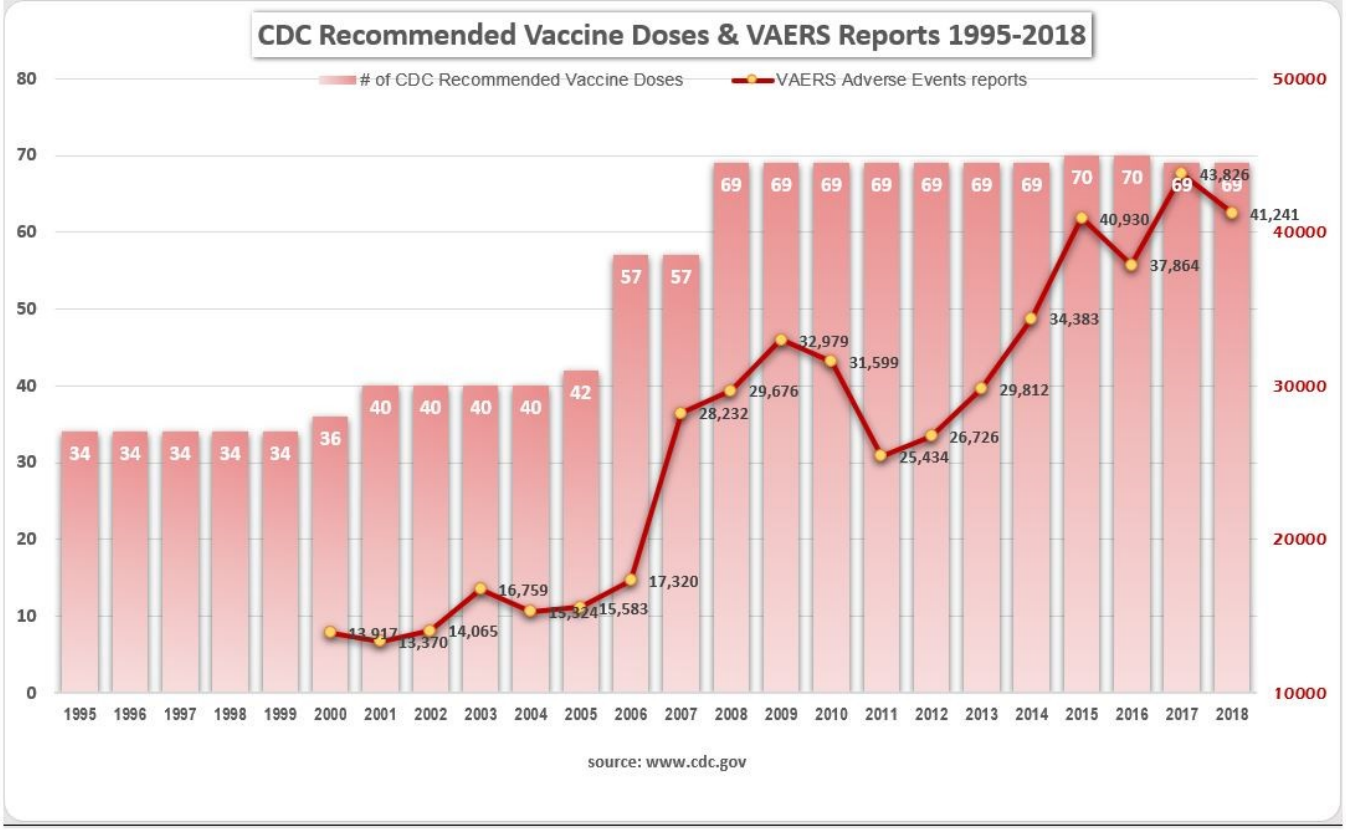
In 2014, the author of AB 2109 said 150,000 licensed healthcare practitioners would easily be able to sign personal belief exemptions for parents, opting out of even 1 dose of vaccines, for their child to go to public or private school in California. Two years later, with SB 277, authors completely removed the right to opt out of even 1 dose of vaccines for children to go to public or private school. 277 was passed ONLY because authors promised fellow legislators in amendments that medical exemptions would be protected, they would be at the discretion of the licensed doctor, the state would "not go after doctors" who wrote them, exemptions would not be restricted to CDC contraindications, and family history could be taken into consideration when qualifying. SB 276 completely removes everything that has been promised to California parents and other state representatives over the past 4 years and undermines citizens' trust in our elected representatives.

## 7. PHARMACEUTICAL COMPANIES HAVE NO LIABILITY FOR VACCINE INJURIES.

In 1986, liability was removed for vaccine manufacturers by the National Childhood Vaccine Injury Compensation Act, which shields the companies completely from being held accountable for any injury or death. To date, there has been over 4 BILLION dollars paid out from a tax on each vaccine through a federal compensation program due to vaccine injuries[12] – children ARE being harmed, and there is no way to tell which children it will be ahead of time. Medical exemptions are CRUCIAL to protecting children in our state from permanent damage and injury.

## 8. VACCINE DOSES HAVE DOUBLED SINCE 2000 -- 69 DOSES and RISING FOR ALL CHILDREN.

**The CDC now recommends 69 doses of 16 vaccines for every American child. The vaccine schedule has tripled since 1985 and doubled since 2000. The combined schedule has NEVER been tested for safety. The Institute of Medicine states in their 2013 study on vaccine safety, *"Studies designed to examine the long-term effects of the cumulative number of vaccines or other aspects of the immunization schedule have not been conducted."*[13]**




## 9. DOCTORS - NOT ARBITRARY OFFICIALS - KNOW CHILDREN BEST.

**Doctors who treat families of children with vaccine injury know the complex medical and family history of each child best. An arbitrary health official, who has never even met the child, cannot possibly have enough background or knowledge of the particular case to decide whether a medical exemption is necessary or valid for that family. Vaccination is a complex medical intervention -- one that requires thorough and extensive knowledge on specific vaccine ingredients, immune response, and the potential for harm based on the genetic susceptibility, current health status, and family history of the child (as specified in SB 277).**

## PLEASE OPPOSE SB 276

[1] https://www.cdph.ca.gov/Programs/CID/DCDC/CDPH%20Document%20Library/Immunization/2017-2018KindergartenSummaryReport.pdf
[2] https://www.latimes.com/local/california/la-me-ln-whooping-cough-vaccine-20190316-story.html
[3] https://www.supremecourt.gov/opinions/10pdf/09-152.pdf
[4] https://vaers.hhs.gov/
[5] https://www.ncbi.nlm.nih.gov/pubmed/15265850?fbclid=IwAR0g2ufaUX1Ut4oFjfa526Q1wXsSCr3VP04i01qgsb-t2Bc3XJYeAW91JMg
[6] https://academic.oup.com/aje/article/165/8/911/184889?fbclid=IwAR2BKl49dd1m0wABTU04prKTMcsWApAFjpxoCq6gB5rXZYcXgBJujmqEjtw
[7] https://www.cdph.ca.gov/Programs/CID/DCDC/CDPH%20Document%20Library/Immunization/VPD-AnnualReport2017.pdf
[8] https://www.cdph.ca.gov/Programs/CID/DCDC/CDPH%20Document%20Library/Immunization/VPD-AnnualReport2016.pdf
[9] https://www.cdph.ca.gov/Programs/CID/DCDC/CDPH%20Document%20Library/VPD-AnnualReport2015.pdf
[10] https://www.cdph.ca.gov/Programs/CID/DCDC/CDPH%20Document%20Library/VPD-AnnualReport2014.pdf
[11] https://www.cdph.ca.gov/Programs/CID/DCDC/CDPH%20Document%20Library/VPD-AnnualReport2013.pdf
[12] https://www.hrsa.gov/sites/default/files/hrsa/vaccine-compensation/data/monthly-stats-march-2019.pdf (page 9)
[13] http://www.nationalacademies.org/hmd/~/media/Files/Report%20Files/2013/Childhood-Immunization-Schedule/ChildhoodImmunizationScheduleandSafety_RB.pdf

## CDC CONTRAINDICATIONS

- Anaphylaxis
  *(life-threatening allergy)*
- Encephalopathy
  *(coma, reduced consciousness)*
- Anaphylactic allergy to egg/yeast
- Severe immunodeficiency
  *(ex. cancer, organ transplant)*
- Intussusception
  *(only for Rotavirus vaccine)*


## VACCINE REACTIONS (according to FDA package inserts) NOT INCLUDED in CDC CONTRAINDICATIONS

- Encephalitis
- Guillain-Barré syndrome
- Seizures
- Brachial neuritis
- Fever over 105 degrees
- Stevens-Johnson syndrome
- Stroke
- Hypotonic, unresponsive episodes
- Severe nerve dysfunction
- Vasculitis (blood vessel inflammation)
- Spinal cord paralysis
- Coma
- Pulmonary Embolism
- Systemic Lupus Erythematosus
- Severe nerve paralysis
- Moderate to severe allergic reactions
- Angioneurotic edema
- Limb paralysis
- Apnea
- Cyanosis
- Swollen lymph nodes
- Cellulitis
- Hypotonia
- Spinal cord inflammation
- Pneumonia
- Thrombocytopenia purpura
- Worsening of multiple sclerosis symptoms
- Rapid heart rate or palpitations
- Wheezing or asthma attacks
- Eczema
- Hair loss
- Vasovagal syncopy
- Vertigo
- Chronic tinnitus
- Facial nerve paralysis
- Inflammatory bowel disease
- Inflammation of the pancreas
- Permanent arthritis
- Acute disseminated encephalomyelitis (brain and spinal cord inflammation)
- Optic nerve inflammation
- Kawasaki disease
- Multiple nerve inflammation and dysfunction
- Onset of multiple sclerosis
- Henoch-Schönlein purpura (a very severe immune reaction that involves the skin and kidneys)
- Bloody stools
- Panniculitis
- Nerve deafness in the ear
- Severe eye inflammation that can permanently affect vision
- Abscess at the injection site
- Testicular pain and swelling
- Subacute sclerosing panencephalitis
- Ataxia (balance problems with difficulty walking)
- Pneumonitis (a severe inflammatory reaction in the lungs)
- Extensive swelling of the injected limb and nearby joints
- Bacterial skin and tissue infections
- Difficulty swallowing
- Tremors
- Autoimmune arthritis
- Thyroiditis
- Blood clots in the limbs

***All above adverse reactions are listed on FDA Vaccine Package Inserts for Childhood Vaccines on the CDC Recommended Schedule including:** *Hep B, Hib, PCV, Rotavirus, DTaP, Polio, Flu, MMR, VZ, Hep A, Meningococcal, HPV*. Source: https://www.fda.gov/BiologicsBloodVaccines/Vaccines/ApprovedProducts/ucm093833.htm

1601 N. Tucson Blvd. Suite 9
Tucson, AZ 85716-3450
(800) 635-1196 or (520) 327-4885
FAX (520) 326-3529 or 325-4230
www.aapsonline.org

Association of American Physicians and Surgeons, Inc.
A Voice for Private Physicians Since 1943
*Omnia pro aegroto*



To: California Legislators March 27, 2019

Re: SB 276, the elimination of physicians' right to determine medical exemptions for vaccines

The Association of American Physicians and Surgeons strongly opposes this proposal (SB 276) to require patients to submit to government-ordered medical treatments without informed consent, even when a physician certifies that a medical exemption is warranted.

The traditional ethic in the Oath of Hippocrates requires physicians to refrain from deliberately harming patients. The State of California is denying patients the protection of this code and is instead imposing on them the judgment of a government agency, the Department of Public Health. Unlike physicians, these officials have no accountability for harm that individual patients may suffer.

Vaccines are unavoidably unsafe, as recognized by the U.S. Supreme Court, and also by Congress in establishing the Vaccine Injury Compensation Program. Most doctors nevertheless recommend many vaccines, as they believe the benefit *to the patient* exceeds the risk. The public health authorities, on the other hand, may impose their dictates on the presumption that the overall benefit *to the population, as they calculate it,* overrides individual rights or more than counterbalances any adverse effects that individuals may endure.

History shows that many serious adverse effects of medical intervention may be unrecognized for long periods of time. Bureaucracies are by nature glacially slow in updating their policies—especially when conflicts of interest occur. A mistaken policy can cause far more harm than errors by individuals. Thus, protecting individuals' freedom also protects the population, as individuals can adapt far more quickly to new information or circumstances.

We urge California lawmakers to protect individuals' right to choose their medical treatment, the ability of physicians to practice in accordance with long-established medical ethics, and the right of patients to benefit from the independent judgment of their physicians. Please reject the government overreach and intrusion into medical decisions that SB 276 embodies.

Respectfully yours,

Jane M. Orient, M.D.
Executive Director

PHYSICIANS FOR INFORMED CONSENT

March 27, 2019

To: California Legislators

Re: SB 276 (Pan) as amended on 3/25/19 – Immunizations: medical exemptions;
Elimination of physicians' right to determine medical exemptions to vaccination for their patients

Position: **OPPOSE**

We at Physicians for Informed Consent (PIC), on behalf of our California members, oppose SB 276 as amended by Pan, as it is both unscientific and unethical.

PIC is a nationally recognized 501(c)(3) nonprofit organization representing hundreds of doctors, as well as scientists and attorneys, whose mission is to safeguard informed consent in vaccination. In addition, our Coalition for Informed Consent consists of over 150 member organizations which represent millions of Americans.

SB 276 is unscientific because:

- **SB 277-mandated vaccines have not yet been proven to be less risky than the diseases they are designed to prevent.**

  For example, the chance of dying from measles is 1 in 10,000, based on U.S. data from the pre-vaccine era. However, the risk of dying or being permanently disabled by the measles, mumps, and rubella (MMR) vaccine has not been proven to be less than 1 in 10,000. This makes mandating the MMR vaccine unscientific and unethical. See attached Measles Disease Information Statement (DIS), Vaccine Risk Statement (VRS), and Immunocompromised Schoolchildren Risk Group Information Statement (RGIS).

  In addition, in 2017, we reported in *The BMJ* that every year an estimated 5,700 U.S. children (approximately 1 in 640) suffer febrile seizures from the first dose of the MMR vaccine—which is five times more than the number of febrile seizures expected from measles. This amounts to 57,000 febrile seizures over the past 10 years due to the MMR vaccine alone. As 5% of children with a history of febrile seizures progress to epilepsy, a debilitating and life-threatening chronic condition, the estimated number of children whose epilepsy is due to the MMR vaccine in the past 10 years is 2,850.[1] Furthermore, the risk of seizure from MMR in siblings of children with a history of febrile seizures is 1 in 252, and the risk of seizure from MMR in children with a personal history of febrile seizures is 1 in 51.[2]

SB 276 is unethical because it:

- **Promotes medical bullying by governmental agents and obstructs parents from being able to protect their children from the potential risk of vaccine injuries (i.e., it violates the principle of informed consent/informed refusal).**
- **Thwarts doctors from being able to protect their patients' health through personalized vaccine recommendations based on infectious disease risks and individualized vaccine-injury risks, and instead promotes an outdated one-size-fits-all governmental vaccine schedule which is not based on new medical discoveries.**
- **Subjects the health of California's children to the mercy of a State Public Health Officer with whom they don't have a patient-doctor relationship.**

Finally, the National Childhood Vaccine Injury Act (NCVIA) of 1986 was created by Congress as a remedy to mounting vaccine injury lawsuits. Since then, it has not been effectively possible to sue vaccine manufacturers or physicians for vaccine injuries and instead the Vaccine Injury Compensation Program (VICP) has cumulatively awarded about $4,000,000,000 for severe vaccine injury cases or deaths—to only a small fraction of the VICP petitioners who apply within the two- or three-year statute of limitations. Consequently, it is mostly families whose children have suffered uncompensated vaccine injuries and the doctors who care for them (including many of PIC's M.D. and D.O. members) who have a heightened awareness of the risks vaccines pose to the health of some American children and the diligence required to provide informed consent in an environment that is effectively immune from the tort system, civil litigation, and publicity.

For these reasons, we oppose SB 276 on both scientific and ethical grounds.

We are here to assist you in these highly technical matters and hope you will not allow bad science to violate the ethics of informed consent.

Sincerely,

Shira Miller, M.D.
Founder and President
Physicians for Informed Consent

1 Miller S. Re: The unofficial vaccine educators: are CDC funded non-profits sufficiently independent? *BMJ.* 2017;359:j5104. https://www.bmj.com/content/359/bmj.j5104/rr-13.

2 Vestergaard M, Hviid A, Madsen KM, et al. MMR vaccination and febrile seizures: evaluation of susceptible subgroups and long-term prognosis. *JAMA.* 2004 Jul 21;292(3):351-7. https://www.ncbi.nlm.nih.gov/pubmed/15265850.

Enclosed: Measles Disease Information Statement (DIS), Vaccine Risk Statement (VRS), and Immunocompromised Schoolchildren Risk Group Information Statement (RGIS)

"One-size-fits-all" does not work with a complex medical intervention such as vaccination because of the unique biochemistry of each child. As a result, vaccines trigger injuries and conditions in a subpopulation of genetically susceptible children, with no advance warning. There is a wide body of peer-reviewed scientific evidence that demonstrates how vaccines and vaccine adjuvants can trigger chronic autoimmune disorders, immune dysregulation, and other inflammatory adverse events in certain children, and their siblings. This medical literature reinforces the need for caution regarding mandatory vaccine policy and the importance of broad-based medical exemptions that consider prior vaccine reactions, possible genetic susceptibility, and family history to protect these children from harm.

Example 1: Describes the onset or worsening of Autoimmune/Inflammatory Syndrome (ASIA) after vaccination.[1]

17 software. Forty-three out of 120 patients with moderate or severe manifestations following immunization were hospitalized from 2008 to 2011. All patients fulfilled at least 2 major and 1 minor criteria suggested by Shoenfeld and Agmon–Levin for ASIA diagnosis. The most frequent clinical findings were pyrexia 68 %, arthralgias 47 %, cutaneous disorders 33 %, muscle weakness 16 % and myalgias 14 %. Three patients had diagnosis of Guillain–Barre syndrome, one patient had Adult-Still's disease 3 days after vaccination. A total of 76 % of the events occurred in the first 3 days post-vaccination. Two patients with previous autoimmune disease showed severe adverse reactions with the reactivation of their illness. Minor local reactions were present in 49 % of patients. Vaccines containing adjuvants may be associated with an increased risk of autoimmune/inflammatory adverse events following immunization.

## Concluding remarks

There is a clear indication that vaccination can and potentially does have autoimmune side effects and can even trigger a full-blown autoimmune disease, although it is quite rare. Secondly, the association of vaccination and autoimmunity can raise a serious medico-legal issue. The meaningful question of legal compensation to those patients who developed a life-long disease following mandatory vaccination might be tested. Thirdly, we are as yet unable to identify those who are prone to develop these complications. It is apparent that susceptibility to vaccine-induced autoimmunity is also determined by genetic predisposition, which further emphasizes the importance of "the mosaic of autoimmunity" [34]. Finally, vaccination

Example 2: Discusses the connection between vaccines and autoimmune side effects, raises the moral question of culpability with mandated vaccines, and acknowledges the limitations in identifying children with genetic predispositions to side effects.[2]

**Table 1.** Autoimmune diseases reported after vaccination

| Disease | Type of vaccine |
|---|---|
| Systemic lupus erythematosus | HBV, tetanus, anthrax |
| Rheumatoid arthritis | HBV, tetanus, typhoid/paratyphoid, MMR |
| Multiple sclerosis | HBV |
| Reactive arthritis | BCG, typhoid, DPT, MMR, HBV, influenza |
| Polymyositis/dermatomyositis | BCG, smallpox, diphtheria, DPT |
| Polyarteritis nodosa | Influenza, pertussis, HBV |
| Guillain-Barré syndrome | Influenza, polio, tetanus |
| Diabetes mellitus – type I | HiB |
| Idiopathic thrombocytopenia | MMR, HBV |

Example 3: Outlines how vaccination can trigger autoimmune disorders in individuals with genetic predispositions.[3]

immunosuppressants and showed improvement. After reviewing the 27 cases of vasculitis after hepatitis B vaccination reported in the current literature, the authors suggest that, in some cases, vaccination may be the triggering factor for vasculitis in individuals with a genetic predisposition. Physicians should be aware of this possible association.

**Vaccines that cause autoimmunity**

Numerous studies and case reports have documented the appearance of autoantibodies and autoimmune phenomena following vaccination; arthritis, vasculitis, encephalitis, neuropathy and demyelination are the most frequently reported adverse events. Causality between several vaccines and autoimmune phenomena is accepted by the medical community. A causal relationship between influenza vaccine and Guillain–Barré syndrome was noted following an outbreak of the disease after administration of the swine flu vaccine in 1976. In 1993, the Institute of Medicine of the National Academies used theoretical criteria, clinical history and laboratory results to declare a causal relationship between the oral polio vaccine and transverse myelitis. The Advisory Committee of Immunization Practices at the Centers for Disease Control and Prevention concluded 3 years later that a causal relationship exists between arthritis and two vaccination combinations: diphtheria–tetanus–pertussis (DTP) and measles–mumps–rubella (MMR). In addition, a causal relationship between MMR and autoimmune thrombocytopenia has been recognized by the Institute of Medicine. Other associations, such as the clustering of insulin dependent diabetes mellitus following hemophilus influenza type B (HiB) immunization and Guillain–Barré syndrome after Menactra® (Sanofi Pasteur, Lyon, France) meningococcal vaccination.

**Vaccine combinations**

Children in the USA are immunized with up to 14 different vaccines before they are 2 years of age. Vaccinations can be given either as a single combined inoculation (such as MMR) or as multiple immunizations, which can result in as many as 8 different antigens being given simultaneously. Combined vaccines have the advantage of fewer injections, reduced administration costs and increased compliance; however, practically all combined inoculates have been associated with adverse events. Theoretically, the more complex a vaccine and the more varied its array of antigens, the more it is likely to trigger an immune response that might eventually turn into an autoimmune disease. Moreover, other ingredients contained within vaccines accumulate when multiple vaccines are given, creating what can be termed the 'burden of vaccination'.

Autoimmune diseases develop in individuals who are genetically susceptible and whose immune systems have been triggered by environmental factors (such as infections or drugs). Infectious agents are considered to be the most common triggers of autoimmunity, and vaccines that contain antigens from infectious agents might induce autoimmunity by similar mechanisms such as molecular mimicry, epitope spreading, bystander activation and polyclonal activation. Other components of vaccines might also induce adverse events. Vaccines include adjuvants, which are used to stimulate the immune system, preferably without having any specific antigenic effect of their own. Although the mechanisms of adjuvancy are not fully elucidated, adjuvants seem to modulate a common set of genes, promote antigen presenting cell recruitment and mimic specific sets of conserved molecules such as bacteria components, thus increasing the innate and adaptive immune responses to the injected antigen.

Example 4: Lists the many autoimmune adverse events associated with specific vaccines, raises concerns about the connection between side effects and combination vaccines, and describes how vaccine and adjuvants trigger immune responses in genetically susceptible people.[4]

Example 5: Discusses how Hepatitis B vaccination can trigger immune diseases in genetically predisposed people.[5]

autoimmune neuromuscular disorders. However, case histories and series hint at a temporal association between hepatitis B vaccines and the development of various neuropathy syndromes, polyarteritis nodosa complicated by vasculitic neuropathy, myasthenia gravis and dermatomyositis. Conceivably, the hepatitis B vaccines have a potential to occasionally trigger the onset of immune diseases in individuals with an underlying genetic or immunological susceptibility.

Family history of seizures, preterm birth, low birth weight, and male sex are risk factors for febrile seizures[23] but the RR of febrile seizures following MMR vaccination did not vary significantly according to these factors in this study. The highest RR was found among siblings of children with epilepsy; a 4-fold increased rate of febrile seizures following MMR vaccination was observed compared with nonvaccinated siblings of children with epilepsy. However, our statistical power in this

Example 6: Covers the increased risk of seizures in siblings.[6]

Example 7: Describes the role genetic predisposition plays in autoimmune disorders caused by vaccine reactions.[7]

Numerous studies have found that autoimmune diseases have a genetic predisposition. The abnormal immune response probably depends upon interactions between susceptibility genes and various environmental factors. Evidence for genetic predisposition

Family history of autoimmunity was prevalent among patients developing SLE following HPV vaccination [8]. In another study, 19% of 93 patients with autoimmune conditions following hepatitis B vaccination had a family history of autoimmunity [7].

Genetic variation of *MTHFR* has been associated with a range of clinical outcomes, including altered cardiovascular function, organ transplantation, toxicity of immunosuppressive drugs, and systemic inflammation [25–28]. Elevated plasma levels of homocysteine stimulate endothelial inflammatory responses, which could contribute to the development of systemic AEs. Alternatively, because vaccination elicits immune responses involving the rapid proliferation of cells, demand for DNA synthesis metabolites would be elevated, and alterations in the level or activity of the MTHFR enzyme may exert significant influence over this process.

Example 8: Explains MTHFR variations and their association with increased adverse events (AEs) after vaccination due to specific immune response. [8]

Example 9: Observes the connection between familial susceptibility and adverse events with the HPV vaccine.[9]

following HPV immunization was collected. Data regarding type of vaccine, number of immunization, family and personal, clinical and serological features, as well as response to treatments were analyzed. In the reported cases, several common features were observed, such as personal or familial susceptibility to autoimmunity or adverse response to a prior dose of the vaccine, both of which may be associated with a higher risk of post-vaccination autoimmunity.

## DISCUSSION

Go to:

In this work, designed to investigate both the genetics of an adverse vaccination effect and of febrile seizures, we demonstrated that two loci were distinctly associated with febrile seizures as an adverse event following MMR vaccination and that four additional loci were associated with febrile seizures in general. Further, in the absence of *TMEM16C*, hypothalamic neurons were less responsive to heat, which could lead to impaired homeostatic control when body temperature rises, and hippocampal neurons became hyperexcitable, which could possibly contribute to febrile seizure genesis.

Example 10: Covers why genetics play a role in immune response from vaccines. [10]

In conclusion, using detailed health register information on vaccinations and febrile seizure episodes, we identified common variants at two loci associated with febrile seizures as an adverse event following MMR vaccination. From a public health perspective, it is essential to study the underlying causes of any serious adverse event of the MMR vaccine, a preventive pharmaceutical product given to millions of children each year, and our findings provide important leads for further research in the fields of immunogenetics and vaccinology. Concomitantly, we identified four loci associated with febrile seizures in general, which together with supporting evidence from electrophysiological experiments underline the importance of altered ion channel function in this common childhood disorder. Further functional studies will illuminate the biological mechanisms behind the associations reported here and might also provide more general insights into mechanisms of epileptogenesis and neuronal hyperexcitability.

Example 11: Adverse events after vaccination and immune system predisposition.[11]

Recombinant hepatitis B (HB) vaccines have successfully reduced infection, cirrhosis and carcinoma, but questions have endured about causality of serious adverse events following vaccination. After an event in a pediatric patient an investigation reviewed HLA vaccine response effects and analyzed genetics in reported cases. There are apparent common causal immune mechanisms among reported adverse events. HLA class II alleles/haplotypes linked to HB vaccine cellular/non-response and Crohn's disease can create conditions that actively/passively amplify, respectively, all or other components of the immune response to the HB vaccine. Presence of the HLA class I allele A2 can result in heavy cytotoxic T-cell activation and vaccine/self-peptide presentation to immune cells. If HLA autoimmune susceptibility alleles/haplotypes are present that control other immune response components, the probability is elevated that these will activate cross-reactive immune cells; the cells, their inflammatory secretions and/or auto-antibodies may initiate adverse events reflecting those susceptibilities. Probable DRB1 amplifying alleles are noted. High-resolution DNA typing and results analysis are described to test the hypothesis in known HB vaccine adverse event patients. Possible practical applications stemming from hypothesis validation are described.

**There are genetically susceptible children who are at risk from vaccination, and in order to protect them, prior adverse events and family history of adverse events and immune disorders ARE necessary when formulating a medical treatment plan with their trusted health care practitioner. These children and their at-risk siblings need to be protected by the state with medical exemptions.**

[1] *https://link.springer.com/article/10.1007/s12026-013-8400-4*
[2] *http://www.diet-studies.com/open/Tishler2004-open.pdf*
[3] *https://www.sciencedirect.com/science/article/pii/S0953620508000770*
[4] *https://www.ncbi.nlm.nih.gov/pubmed/19865091*
[5] *https://www.sciencedirect.com/science/article/pii/S0022510X10000924*
[6] *https://jamanetwork.com/journals/jama/article-abstract/199117*
[7] *https://www.ncbi.nlm.nih.gov/pubmed/25277820/*
[8] *https://academic.oup.com/jid/article/198/1/16/841083*
[9] *https://link.springer.com/article/10.1007/s10067-013-2266-7*
[10] *https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4244308/*
[11] *https://www.tandfonline.com/doi/abs/10.1080/08916930500095504*

# An Analysis of the 2018 study discussing California: Medical Exemptions post-SB 277

Pediatrics
November 2018, VOLUME 142 / ISSUE 5
Article

## Experiences With Medical Exemptions After a Change in Vaccine Exemption Policy in California

Salini Mohanty, Alison M. Buttenheim, Caroline M. Joyce, Amanda C. Howa, Daniel Salmon, Saad B. Omer

In the 2 school years after the implementation of SB277, the proportion of kindergarten students reported to have received all required vaccines increased from 92.8% in 2015–2016 to 95.1% in 2017–2018, and the rates of personal belief exemptions (PBEs) have steadily declined since the 2013–2014 school year.[7] However, the rates of medical exemptions in California after the passage of SB277 increased 250% (from 0.2% in 2015–2016 to 0.7% in 2017–2018).[7] Counties that had high PBE rates before SB277 also had the largest increases in medical exemptions during the first year of SB277 implementation, leaving portions of California susceptible to vaccine-preventable outbreaks.[8,9] Potential explanations for this steep increase include underuse of medical exemptions before SB277 (when PBEs could still be obtained) and the willingness of some physicians to write medical exemptions for

The change in medical exemption rates are to be expected, once PBEs were removed by law. Many vaccine-compromised children and their at-risk siblings utilized a PBE prior to 277. PBEs included 2.5% of children prior to 277, and now the only remaining exemption encompasses just 0.7% of the entire state. **There is NO statistical way that could affect "herd immunity".**

Participants found **FEW or NO medical exemptions to be problematic**. And what was "reported" was based on conditions not fitting the extremely narrow CDC contraindication criteria, which IS NOT THE LAW.

care providers signing medical exemptions (**Table 4**). Most participants reported seeing few or no medical exemptions that they believed were problematic. The most commonly reported conditions that participants described as suspicious were family history of allergies and family history of autoimmune disorders because these are not medical contraindications to immunization according to the Advisory Committee on Immunization Practices.[10] However, participants did acknowledge that although they might not agree that

Our study has several limitations. First, data were collected ~1 year after SB277 implementation, so the results may be subject to recall bias. However, given that this is an issue that health officers continue to be actively involved in, recall bias is likely to be low. Second, although qualitative studies are not meant to be generalizable, the results are based on a voluntary sample of 35 health jurisdictions, and participants with strong opinions about SB277 may have been more likely to participate and may have biased the sample. The local health departments that participated in this study were located in

Participants in this limited study, containing only 34 interviews, were involved based on having strong opinions on SB 277, and according to the authors, **"may have biased the sample."**

# DOSES of VACCINES for U.S. CHILDREN from BIRTH-18 YEARS (CDC)

## 1983

DTP (2 months)
OPV (2 months)
DTP (4 months)
OPV (4 months)
DTP (6 months)
MMR (15 months)
DTP (18 months)
OPV (18 months)
DTP (4 years)
OPV (4 years)
Td (15 years)

*1986:
Pharmaceutical manufacturers producing vaccines were freed from ALL liability resulting from vaccine injury or death by the Childhood Vaccine Injury Act.

## 2019

*Influenza (Pregnancy)*
*TdaP (Pregnancy)*
Hep B (birth)
Hep B (2 months)
Rotavirus (2 months)
DTaP (2 months)
HIB (2 months)
PCV (2 months)
IPV (2 months)
Rotavirus (4 months)
DTaP (4 months)
HIB (4 months)
PCV (4 months)
IPV (4 months)
Hep B (6 months)
Rotavirus (6 months)
DTaP (6 months)
HIB (6 months)
PCV (6 months)
IPV (6 months)
Influenza (6 months)
Influenza (7 months)
HIB (12 months)
PCV (12 months)
MMR (12 months)
Varicella (12 months)
Hep A (12 months)
DTaP (18 months)
Influenza (18 months)
Hep A (18 months)
Influenza (30 months)
Influenza (42 months)
DTaP (4 years)
IPV (4 years)
MMR (4 years)
Varicella (4 years)
Influenza (5 years)
Influenza (6 years)
Influenza (7 years)
Influenza (8 years)
Influenza (9 years)
Influenza (10 years)
HPV (11 years)
HPV (11 years)
Influenza (11 years)
TdaP (12 years)
Influenza (12 years)
Meningococcal (12 yrs)
Influenza (13 years)
Influenza (14 years)
Influenza (15 years)
Influenza (16 years)
Meningococcal (16 yrs)
Influenza (17 years)
Influenza (18 years)

**TOTAL DOSES: 69**
Injections: **50**
*(3 Doses of Rotavirus are liquid)*

1983
TOTAL DOSES: 24
Injections: 7
*(4 Doses of Polio were liquid)*

(SOURCE: www.CDC.gov)

DTP- Diphtheria, Tetanus, Pertussis (whole cell)
OPV- Oral Polio Virus
MMR- Measles, Mumps, Rubella
Hep B- Hepatitis B
DTaP- Diphtheria, Tenatus, Pertussis (acellular)
HIB- Haemophilus influenzae Type B
PCV- Pneumococcal
IPV- Inactivated Polio Virus
Varicella- Chicken Pox
Td- Tetanus, Diphtheria
Tdap- Tetanus, Diphtheria, and Pertussis
HPV- Human papillomavirus (Gardasil)