

US states make opting out of vaccinations harder

Legislative efforts aim to tackle rising incidence of disease.

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More than ten years after a study in *The Lancet* falsely linked autism to the measles, mumps and rubella triple vaccine, evidence of reduced immunization rates and rising incidence of disease are spurring politicians to try to make up lost ground.

California has tightened the laws that allow parents in the state to opt out of immunization for their children. It now joins Washington and Vermont in requiring parents who want an exemption to demonstrate that they have received factual information about the risks and benefits of vaccination from a health-care practitioner or the state's health department.

New Jersey is also considering a bill to strengthen exemption requirements, and similar legislation in Arizona has died in previous legislative sessions, but may be re-introduced next year. The issue is not a partisan one: bills have sponsors in both parties. And it has been recognized outside the medical community — although the California sponsor, Richard Pan (Democrat), is a paediatrician, most of the legislators have no medical background.

Legal loopholes

Each US state sets its own vaccination policies, and most will not generally allow children to attend public school unless they have been vaccinated against diphtheria, tetanus and pertussis (whooping cough); hepatitis B; the *Haemophilus influenzae* bacterium; measles, mumps and rubella; polio; and varicella (chicken pox). However, 20 states — including California, Washington and Vermont — allow exemptions for personal or philosophical belief, and 48 offer religious exemptions. All states permit exemptions for legitimate medical reasons.

But exemption rates are growing. In Washington, 6% of children entering kindergarten in 2010–11 had an exemption; in Vermont, the figure was 6.2%, compared with the US average of 1.5%. In California, exemptions rates rose by 25% between 2008 and 2010.

These figures are alarming policy-makers, who fear that vaccination rates may fall below the threshold where even unvaccinated people are protected. "There really is a problem when you don't have herd immunity so that you can stop the infectious diseases," says Senator Karen Keiser (Democrat), who sponsored the Washington law.

Path of least resistance

To increase vaccination rates, law-makers want to make it harder to get an exemption than it is to get a vaccination. "One of the instigators for our laws was the thought that many parents were exempting for convenience," said Michele Roberts, communications manager for the Washington Department of Public Health. "It was easier to sign the exemption form than to track down records or to get your kid to an appointment."

This idea is backed by studies linking the existence of personal-belief exemptions, and the ease of getting them, to reduced vaccination rates¹ and increased incidence of disease².

Diane Peterson, associate director for immunization projects at the Immunization Action Coalition in St Paul, Minnesota, said that strengthening existing rules, for example by requiring a doctor's signature on exemption forms or asking for annual exemption renewals, is more effective than trying to eliminate philosophical exemptions altogether. "If you don't have a personal-belief exemption, you will have abuse of the religious exemption," she says.

Research by Saad Omer, an epidemiologist at the Emory Vaccine Center in Atlanta, Georgia, points out similar abuses: he and his colleagues have found³ that medical exemptions are up to six times more common in states that have lax medical-exemption



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Most children in California must be vaccinated against measles, mumps and rubella before starting school.

requirements or don't allow philosophical exemptions.

Fear response

Growing disease rates will also encourage more parents to get their children immunized. Paul Offit, chief of the division of infectious diseases at the Children's Hospital of Philadelphia in Pennsylvania, says that people are "far more compelled by fear than reason".

Disease outbreaks are now hitting the headlines more frequently than vaccine safety concerns. This year, the number of pertussis cases in the United States looks set to be the highest since 1959, and in 2011 the country saw 222 cases of measles — the most since 1996.

Yet not everyone is in favour of vaccination. In the past two years, legislators in Kansas, Mississippi, West Virginia, Massachusetts and South Dakota have introduced bills to add philosophical exemptions — but without success.

In Washington, where the law to strengthen exemption requirements came into force in July 2011, the change is already bringing results: kindergarten exemption rates dropped to 4.5% this year. Time will tell whether the numbers in other states will follow suit.

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References

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