Vaccine Legislation and School Immunizations

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Orange County Department of Education
The History of Compulsory Vaccination

• In the 19th Century, many European countries considered, debated, and passed laws to require their citizens to have smallpox vaccinations
  – The first regulations were passed in 1806 in Piombino and Lucca (now part of Italy)
  – In France, the laws were first applied to university students in 1810
  – The first law requiring vaccination of the general population was passed in Sweden in 1816
• Enforcement was often lax and varied between localities
• Increasing fines were sometimes used to promote compliance

Salmon, DA, Teret SP, et al; Lancet 2006; 367:436-42
Early Compulsory Vaccination Enforcement in the United Kingdom

• The Vaccination Act of 1853 required smallpox vaccination in England and Wales

• Efforts by local authorities to reduce non-compliance varied
  – Fines were often used (single or cumulative)
  – In some cases, personal property was auctioned to cover payment for accruing fines

• This campaign galvanized an early anti-vaccination movement
  – Those against ‘science’ of vaccination
  – Opponents to intrusion by governments on the basis of personal autonomy
  – Some local clergy, believed that the vaccine was “unchristian” because it came from an animal
Early Vaccine Objectors

- In 1865, 20,000 demonstrators took to the streets for anti-vaccine demonstrations
- Violators were seen as ‘martyrs’ in the fight against forced vaccination
- Authorities were often influenced by constituents, especially where opposition to vaccination was strong (some political candidates were chosen solely on their position on vaccination)
- In 1889, a ‘Royal Commission on Vaccination’ reported on the usefulness of smallpox vaccination and created the opportunity for conscientious objectors to avoid it
- Many in the British medical community supported the allowance of a conscientious exemption
The Early Politics of Smallpox Vaccination in the UK

• In 1907, 100 opponents of compulsory vaccination were elected to the 666-seat British Parliament and an amendment to the 1896 Act removed the administrative hurdles to claiming an exemption for smallpox vaccination
  – This amendment resulted in a substantial drop in the number of vaccinated children
  – By 1946, nearly half of parents in some areas were claiming conscientious objector status and the UK repealed the vaccination requirement

• Vaccination rates then fell further but tended to increase when outbreaks occurred
Compulsory Smallpox Vaccination in the United States

• In 1809, Massachusetts passed the first US immunization law requiring smallpox vaccination for the general population
• In 1895 Pennsylvania passed a compulsory school vaccination law requiring that all children provide a physician's certificate of either vaccination or certified history of previous smallpox infection before being permitted to attend school
• This was followed by a dramatic reduction in smallpox in that state
• Legislation spread along the eastern US, in part from a perceived danger from smallpox from a foreign force
• This was challenged in a case that reached the US Supreme Court in 1905
Compulsory Smallpox Vaccination in the United States

• The lawyers for the vaccine refuser (Jacobsen) argued: “A compulsory vaccination law is unreasonable, arbitrary and oppressive, and therefore, hostile to the inherent right of every freeman to care for his own body and health in such way as to him seems best; and that the execution of such a law against one who objects to vaccination, for whatever reason, is nothing short of an assault upon his person.”
The US Supreme Court Decision

- The US Supreme Court rejected each of his constitutional arguments and found that:
  
  “The liberty secured by the constitution of the United States to every person within its jurisdiction does not import an absolute right in each person to be, at all times and in all circumstances, wholly freed from restraint. There are manifold restraints to which every person is necessarily subject for the common good”

- The Supreme Court also upheld the constitutionality of school vaccination laws in 1922

  Jacobson v Commonwealth of Massachusetts, 197 US 11 (l905)
  Zucht v King, 260 U S (l92127)4.
Compulsory Vaccination Programs

- Compulsory programs may be effective for
  - Preventing disease outbreaks
  - Reaching and sustaining high immunization coverage rates
  - Expediting the introduction of new vaccines
- Programs depend on a reliable supply of safe and effective vaccines (most people must be willing to be vaccinated)
- Allowance of exemptions to compulsory vaccination may limit public backlash
- Compulsory vaccination may increase the burden on governments to ensure the safety of vaccines

Salmon, DA, Teret SP, et al; Lancet 2006; 367:436-42
Mandatory School Vaccination Laws

• Major emphasis is on the requirement that all children be adequately immunized before being allowed to enter school on a permanent basis

• Enforcement does not occur until entry to school

• Compulsory education makes it logistically possible and convenient for schools to be the site of enforcement
Timing of Mandatory School Vaccination Laws
Benefits of Mandatory School Vaccination Laws

• Prior to these laws parents tend to have their children vaccinated only during epidemics
• MSVL were very effective in reducing the incidence rates of the targeted diseases
• CDC demonstrated that states with compulsory school immunization laws in 1973 had a 50 per cent lower incidence of measles than those without such laws
• MSVL have sizable positive effects on:
  – Educational outcomes
  – Economic measures
    • Increased labor force participation
    • Increased wages for males

http://web.missouri.edu/~leedn/MSVL_DLee.pdf
Penalties for Non-Vaccinators

• Children who are not sufficiently immunized are barred from entering school
• Some states consider violation of such laws as a misdemeanor, while other states impose a fine or even jail sentence for violation for the statute
• Coplan opinion: Parents who do not vaccinate endanger other children, are at fault and could be sued for damages

http://www.slate.com/articles/news_and_politics/jurisprudence/2013/08/anti_vaxxers_why_parents_who_don_t_vaccinate_their_kids_should_be_sued_or.html
Educational Impact of Mandatory School Vaccination Laws

• Childhood health matters for adult educational attainment
• MSVL led to a sizable increase in educational attainment
  – Increase in years of schooling by approximately 0.1 years
  – Estimated increase of the likelihood of high school completion
    = 1 %
• The impact on non-whites is twice as large as that on whites
• The effect of MSVL on educational attainment increases with the strictness of enforcement
• Consistent with work of Goodman (2012) who studied variation in snow days / school absences and found that school absences negatively impact student test scores
Australian Approach to Increase Vaccination Rates

• In Australia, rates of vaccination increased from 75% to over 90% when payments were established to promote vaccination

• Payment for medical practices that achieve more than 90% coverage of children younger than 7 years

• Families can receive means-tested payment of a maternity allowance and universal child-care benefits, contingent on proof of vaccination
Raising the Bar for Receiving a Vaccine Exemption

- Rota and colleagues reported on the impact of varying requirements for obtaining non-medical exemptions to state immunization laws
  - 48 out of 50 states exempt those with religious beliefs from vaccination
  - 21 states provided exemptions to individuals who claim non-religious cultural or philosophical objections (2008)
- The complexity of obtaining an exemption is inversely associated with the proportion of exemptions filed
  - In some states there was no contact between parents and health professionals
  - Only 16 states reported that exemption requests were ever denied
  - The 19 states with the most formal requirements did not have a high proportion of exemptions when compared with states with less formal requirements

Omer SB, Salmon DA, N Engl J Med 360;19 May 7, 2009
Recent US Rates of Vaccine Refusal

- Between 1991 and 2004, the mean state-level rate of nonmedical exemptions increased from 0.98 to 1.48%.
- Exemption rates for states that allowed only religious exemptions remained at approximately 1% between 1991 and 2004.
- In states that allowed exemptions for philosophical or personal beliefs, the mean exemption rate increased from 0.99% to 2.54%.
It’s Not Just Vaccines

• CDC on Fluoride

• Groups ‘Taking a Stance Against Public Fluoridation’ in Portland, Oregon
  – Portland Sierra Club
  – Portland NAACP
  – Many Portland Indie rock groups
  – Some craft beer brewers
  – Anti-fluoridation campaign out-fundraises the pro side 3:1

WSJ: May 20, 2013
Vaccine Resistance in the 21st Century

- Vaccines are not created equal; different vaccines have different “social acceptance and resistance profiles”
- The issue of safety and effectiveness is a dominant theme in anti-vaccination messages
- The belief in alternative medicine is a strong issue for opponents
- The emphasis on individual choice and rights is another motivating theme
- Use of the Internet and social media to communicate about vaccines has become increasingly important

EF Einsiedel; OMICS; Vol. 15, No. 9, 2011
DOI: 10.1089/omi.2010.0139
IMMUNIZATION CHALLENGES

- Red = States with laws restricting thimerosal in childhood vaccines
- Blue = States with laws allowing philosophical/conscientious exemptions to immunization requirements
- Orange = States with laws that address both
<table>
<thead>
<tr>
<th>STATE</th>
<th>MANDATED VACCINE COVERAGE</th>
<th>EXEMPT FROM DEDUCTIBLE</th>
<th>EXEMPT FROM COPAY OR COINSURANCE</th>
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<tbody>
<tr>
<td>Alabama</td>
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<tr>
<td>Dist. of Columbia</td>
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<tr>
<td>Idaho</td>
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<tr>
<td>Illinois</td>
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</tbody>
</table>
INSURANCE MANDATES FOR IMMUNIZATIONS

= States where insurers are required to cover some or all childhood immunizations
Childhood Immunizations and the ACA

• “If an individual or family enrolls in a new health plan on or after September 23, 2010, then that plan will be required to cover recommended preventive services without charging a deductible, copayment or coinsurance.”

• Children 0 through 18 years that are enrolled in new group or individual private health plans will be eligible to receive vaccines recommended by the ACIP prior to September 2009 without any cost-sharing requirements when provided by an in-network provider.
  – Diphtheria, Tetanus, Pertussis
  – Haemophilus influenzae type b
  – Hepatitis A and Hepatitis B
  – Quadrivalent Human Papillomavirus vaccine for females
  – Inactivated Poliovirus
  – Influenza
  – Measles, Mumps, Rubella
  – Meningococcal
  – Rotavirus
  – Varicella

Changing Vaccine Exemptions: The Washington State Experience

• The legislation there was championed by State chapters of the AAP and AAFP

• Washington collected existing materials and put them on a web site
  http://www.doh.wa.gov/PublicHealthandHealthcareProviders/PublicHealthSystemResourcesandServices/Immunization/ExemptionInformation.aspx

• Outreach to providers included newsletters and information sheets sent by the state, AAP, AAFP, and the state’s Nurses Association
Washington State Exemption Form

Parent/Guardian, please choose the exemption(s) that apply to your child below.

- Temporary Medical Exemption
- Permanent Medical Exemption

Vaccine(s) ___________________________ Until ___________________________ Date (or Permanent)

Print Name of Licensed Health Care Provider (MD, DO, ND, PA, ARNP) ___________________________

X ___________________________ Signature of Licensed Health Care Provider ___________________________ Date

Box 1

Provider Statement: "I ___________________________, am a qualified provider (MD, DO, ND, PA, ARNP) licensed under Title 18 RCW. I confirm that the parent or guardian signing in Box 3 (Parent/Guardian Statement) has received information on the benefits and risks of immunization to their child as a condition for exempting their child for medical, religious, personal, or philosophical reasons." 

X ___________________________ Signature of Licensed Health Care Provider (MD, DO, ND, PA, ARNP) ___________________________ Date

Box 2

Parent/Guardian Demonstration of Religious Membership: "I am a member of a church or religious body whose beliefs or teachings do not allow for medical treatment from a healthcare practitioner. By supplying the information requested below, no further proof or signed provider statement in Box 1 is required for this religious exemption."

X___________________________

Name of Church or Religious Body ___________________________ Date

Box 3

Parent/Guardian Statement: "I certify that all the information provided on this certificate is correct and verifiable. I understand that if there is an outbreak of a vaccine-preventable disease my child has not been fully immunized against (as indicated above, for medical, personal/philosophical or religious reasons), my child may be at risk for disease and can be excluded from school, child care, or preschool until the outbreak is over." 

X ___________________________ Signature of Parent or Guardian ___________________________ Date
Washington Vaccine Legislation

- Washington State did not include school nurses as potential signers for their new form
- There is no specific guidance as to what form the education needs to take
- Some providers have simply had forms mailed to them and sent them back to families without an appointment being made
- There have been some complaints from families saying that their doctors are mandating that they come in to talk with them before the doctor will sign the form

Information proved by Jeffrey Wise, Policy and Planning Coordinator for Washington Immunization Program
TABLE 2. Weighted number and percentage* of children enrolled in kindergarten with a reported exemption to vaccination, by state/area and type of exemption — United States, 2012–13 school year

<table>
<thead>
<tr>
<th>State/Area</th>
<th>Medical exemptions†</th>
<th>Nonmedical exemptions‡</th>
<th>Total exemptions†</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>No.</td>
<td>(%)</td>
<td>Religious no.</td>
</tr>
<tr>
<td>Washington</td>
<td>1,092</td>
<td>(1.2)</td>
<td>274</td>
</tr>
<tr>
<td>California</td>
<td>923</td>
<td>(0.2)</td>
<td>—**</td>
</tr>
</tbody>
</table>

*Percentage of children enrolled in kindergarten
†Exemptions include medical exemptions, nonmedical exemptions, and both medical and nonmedical exemptions
‡Medical exemptions include conditions and contraindications
§Nonmedical exemptions include religious and philosophical exemptions
**Not applicable
CDC State-Specific Links

http://www2a.cdc.gov/nip/schoolsurv/schImmRqmtReport.asp

### Vaccination related web Links

<table>
<thead>
<tr>
<th>State</th>
<th>Link Type</th>
<th>Web URL</th>
</tr>
</thead>
<tbody>
<tr>
<td>California</td>
<td>Health Department</td>
<td><a href="#">California Health department</a></td>
</tr>
<tr>
<td></td>
<td>Immunization program</td>
<td><a href="#">California Immunization program</a></td>
</tr>
<tr>
<td></td>
<td>Requirements</td>
<td><a href="#">California Requirements</a></td>
</tr>
</tbody>
</table>

### School Exemptions Allowed

<table>
<thead>
<tr>
<th>State</th>
<th>Medical</th>
<th>Religious</th>
<th>Philosophical</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Temporary</td>
<td>Permanent</td>
<td></td>
</tr>
<tr>
<td>California</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
</tbody>
</table>

*Return to Vaccination Requirements*
AB 2109: The Specifics
(a) Immunization of a person shall not be required for admission to a school or other institution listed in Section 120335 if the parent or guardian or adult who has assumed responsibility for his or her care and custody in the case of a minor, or the person seeking admission if an emancipated minor, files with the governing authority a letter or affidavit that documents which immunizations required by Section 120355 have been given, and which immunizations have not been given on the basis that they are contrary to his or her beliefs.

(b) On and after January 1, 2014, a form prescribed by the State Department of Public Health shall accompany the letter or affidavit filed pursuant to

(c) The following shall be accepted in lieu of the original form

– (1) A photocopy of the signed form
– (2) A letter signed by a health care practitioner that includes all information and attestations included on the form.
Who Can Complete the Form?

- Who can complete the form? For purposes of this section, "health care practitioner" means any of the following:
  1. A physician and surgeon
  2. A nurse practitioner who is authorized to furnish drugs
  3. A physician assistant who is authorized to administer or provide medication
  4. An osteopathic physician and surgeon
  5. A naturopathic doctor who is authorized to furnish or order drugs under a physician and surgeon's supervision
  6. A credentialed school nurse

- When there is good cause to believe that the person has been exposed to one of the communicable diseases listed in subdivision (a) of Section 120325, that person may be temporarily excluded from the school or institution until the local health officer is satisfied that the person is no longer at risk of developing the disease.
What Must the Form Contain?

• (1) A signed attestation from the health care practitioner that indicates that the health care practitioner provided the parent or guardian of the person who is subject to the immunization requirements of this chapter, the adult who has assumed responsibility for the care and custody of the person, or the person if an emancipated minor, with information regarding the benefits and risks of the immunization and the health risks of the communicable diseases listed in Section 120335 to the person and to the community.

• This attestation shall be signed not more than six months prior to the date when the person first becomes subject to the immunization requirement for which exemption is being sought.

• (2) A written statement signed by the parent or guardian of the person who is subject to the immunization requirements of this chapter, the adult who has assumed responsibility for the care and custody of the person, or the person if an emancipated minor, that indicates that the signer has received the information provided by the health care practitioner pursuant to paragraph (1). This statement shall be signed not more than six months prior to the date when the person first becomes subject to the immunization requirements
AB 2109 Language

• 120370. If the parent or guardian files with the governing authority a written statement by a licensed physician to the effect that the physical condition of the child is such, or medical circumstances relating to the child are such, that immunization is not considered safe, indicating the specific nature and probable duration of the medical condition or circumstances that contraindicate immunization, that person shall be exempt from the requirements of Chapter 1 to the extent indicated by the physician's statement.

• 120375. (a) The governing authority of each school or institution included in Section 120335 shall require documentary proof of each entrant's immunization status.

• (b) The governing authority of each school or institution included in Section 120335 shall prohibit from further attendance any pupil admitted conditionally who failed to obtain the required immunizations within the time limits allowed in the regulations of the department, unless the pupil is exempted under Section 120365 or 120370, until that pupil has been fully immunized against all of the diseases listed in Section 120335.
AB 2109 Language

• (c) The governing authority (School District) shall file a written report on the immunization status of new entrants to the school or institution under their jurisdiction with the department and the local health department at times and on forms prescribed by the department. As provided in paragraph (4) of subdivision (a) of Section 49076 of the Education Code, the local health department shall have access to the complete health information as it relates to immunization of each student in the schools or other institutions listed in Section 120335 in order to determine immunization deficiencies.

• (d) The governing authority shall cooperate with the county health officer in carrying out programs for the immunization of persons applying for admission to any school or institution under its jurisdiction. The governing board of any school district may use funds, property, and personnel of the district for that purpose. The governing authority of any school or other institution may permit any licensed physician or any qualified registered nurse as provided in Section 2727.3 of the Business and Professions Code to administer immunizing agents to any person seeking admission to any school or institution under its jurisdiction.
AB 2109

• Who are affected by the new requirements?
  – All students newly admitted to a California school, kindergarten through 12th grade (K-12), and students advancing to 7th grade, and children newly admitted to a child care facility.
  – All public and private schools and child care facilities.

• When does the new law take effect?
Will all children with existing vaccination exemptions be required to file a new form?

Usually not

– Children do not need to file a new exemption form unless they are being newly admitted into a public or private:
  • Child care facility
  • Kindergarten
  • Entering or advancing in to the 7th grade; or
  • Transferring from out-of state into California.

– Children transferring from one grade school in California to another school in California and not starting kindergarten or 7th grade for the first time do not need to provide a new exemption form, as their exemptions from the prior schools should be part of the records being transferred to the new schools.
The New Form

PERSONAL BELIEFS EXEMPTION TO REQUIRED IMMUNIZATIONS

<table>
<thead>
<tr>
<th>STUDENT NAME (LAST, FIRST, MIDDLE)</th>
<th>GENDER</th>
<th>BIRTHDATE MONTH / DAY / YEAR</th>
<th>TELEPHONE NUMBER</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>M/F</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

PARENT/GUARDIAN – NAME

ADDRESS

A. AUTHORIZED HEALTH CARE PRACTITIONER LICENSED IN CALIFORNIA – FILL OUT THIS SECTION

I am a (check one): □ M.D./D.O. □ Nurse Practitioner □ Physician Assistant □ Naturopathic Doctor □ Credentialled School Nurse

Provision of information: I have provided the parent or guardian of the student named above, the adult who has assumed responsibility for the care and custody of the student, or the student if an emancipated minor, with information regarding 1) the benefits and risks of immunization and 2) the health risks to the student and to the community of the communicable diseases for which immunization is required in California (immunizations listed in Table below).

Practitioner name, address, telephone number:

Signature of authorized health care practitioner

Date - within 6 months before entry to child care or school

http://eziz.org/assets/docs/CDPH-8262.pdf
B. PARENT OR GUARDIAN – FILL OUT THESE SECTIONS

I. Check one of the boxes below:

☐ Receipt of information: I have received information provided by an authorized health care practitioner regarding 1) the benefits and risks of immunization and 2) the health risks to the student named above and to the community of the communicable diseases for which immunization is required in California (immunizations listed in Table below).

☐ Religious beliefs: I am a member of a religion which prohibits me from seeking medical advice or treatment from authorized health care practitioners. (Signature of a health care practitioner not required in Part A.)

Signature of parent or guardian

Date - within 6 months before entry to child care or school
II. AFFIDAVIT

Immunizations already received: I have provided the child care or school with a record of all immunizations the student has received that are required for admission (California Health and Safety Code §120365).

Immunizations for which exemption is requested: An unimmunized student and the student’s contacts at school and home are at greater risk of becoming ill with a vaccine-preventable disease. I understand that an unimmunized student may be excluded from attending school or child care during an outbreak of, or after exposure to, any of these diseases for the protection of the student and others (17 CCR §6060). I hereby request exemption of the student named above from the required immunizations checked below because such immunization is contrary to my beliefs.

<table>
<thead>
<tr>
<th>School Category</th>
<th>Table of Required Immunizations – Check box(es) to request exemption.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Child Care Only</td>
<td>□ Haemophilus influenzae type b (Hib meningitis)</td>
</tr>
<tr>
<td>Child Care and K-12th Grade</td>
<td>□ DTaP (Diphtheria, Tetanus, Pertussis [whooping cough]) □ Hepatitis B</td>
</tr>
<tr>
<td></td>
<td>□ MMR (Measles, Mumps, Rubella) □ Polio □ Varicella (Chickenpox)</td>
</tr>
<tr>
<td>7th Grade Advancement</td>
<td>□ Tdap (Tetanus, reduced Diphtheria, Pertussis [whooping cough])</td>
</tr>
<tr>
<td>(or admission at 7-12th Grade)</td>
<td></td>
</tr>
</tbody>
</table>

Signature of parent or guardian: ____________________________ Date: ____________________________
Future Challenges:

• The tension between competing core principles will not be resolved by a legislative approach
  – Alternative vs. allopathic medicine
  – Natural vs. scientific methods
  – Individual determination vs. public good

• There will be new biological considerations adding to the tension between population health needs and the priorities of individuals
  – Personalized vaccinations
  – Growing opportunities to ‘individualize’ schedules
  – Challenges of access and equity for new vaccines
Genetic Determinants of Vaccine Responses

• Antigen processing and presentation
  – HLA (40% of specific antibody response to HBV from HLA genes)

• Innate recognition receptors
  – Polymorphisms in a number of the innate receptor pathways, including toll-like receptors, have been associated with variable vaccine responses
Vaccination Schedules of the Future

• Whole-genome sequencing offers the potential to capture common and rare variants that influence vaccine responses
• Individuals with vaccine failures or persistent non-responders help scientists to find functional rare variants with large effect sizes
Questions:
(The right to bare arms and other topics)