The Measles Outbreaks of 2018/2019: Perspectives from Local Communities

Capitol Hill Briefing

September 23, 2019
Founded in 2002, the Big Cities Health Coalition (BCHC) is a forum for the leaders of America’s largest metropolitan health departments to exchange strategies and jointly address issues to promote and protect the health and safety of their residents.
### 30 Cities – 62 Million Served by Member LHDs

<table>
<thead>
<tr>
<th>City</th>
<th>City</th>
</tr>
</thead>
<tbody>
<tr>
<td>Austin</td>
<td>Los Angeles (Cty)</td>
</tr>
<tr>
<td>Baltimore</td>
<td>Long Beach</td>
</tr>
<tr>
<td>Boston</td>
<td>Miami (Miami-Dade Cty)</td>
</tr>
<tr>
<td>Charlotte (Mecklenburg Cty)</td>
<td>Minneapolis</td>
</tr>
<tr>
<td>Chicago</td>
<td>New York City</td>
</tr>
<tr>
<td>Cleveland</td>
<td>Oakland (Alameda Cty)</td>
</tr>
<tr>
<td>Columbus</td>
<td>Philadelphia</td>
</tr>
<tr>
<td>Dallas (Cty)</td>
<td>Phoenix (Maricopa Cty)</td>
</tr>
<tr>
<td>Denver</td>
<td>Portland (Multnomah Cty)</td>
</tr>
<tr>
<td>Detroit</td>
<td>San Antonio</td>
</tr>
<tr>
<td>Fort Worth (Tarrant Cty)</td>
<td>San Diego (Cty)</td>
</tr>
<tr>
<td>Houston</td>
<td>San Francisco</td>
</tr>
<tr>
<td>Indianapolis (Marion Cty)</td>
<td>San Jose (Santa Clara Cty)</td>
</tr>
<tr>
<td>Kansas City</td>
<td>Seattle (Seattle-King Cty)</td>
</tr>
<tr>
<td>Las Vegas (S. NV Hlth District)</td>
<td>Washington, D.C.</td>
</tr>
</tbody>
</table>
Speakers

▪ Chrissie Juliano, Executive Director, Big Cities Health Coalition

▪ Dr. Colleen Kraft, Immediate Past President, American Academy of Pediatrics

▪ Dr. Oxiris Barbot, Commissioner, New York City Department of Health and Mental Hygiene

▪ Dr. Jeffrey Gunzenhauser, Chief Medical Officer, Los Angeles County Department of Public Health
The American Academy of Pediatrics (AAP) is a non-profit professional organization of more than 67,000 primary care pediatricians, pediatric medical subspecialists, and pediatric surgical specialists. It is dedicated to the health, safety, and well-being of all infants, children, adolescents, and young adults. AAP publishes annual recommended childhood and adolescent immunization schedules in tandem with ACIP, CDC, AAFP and ACOG.

Recommended Childhood and Adolescent Immunization Schedules: United States, 2019

Committee on Infectious Diseases
**History of Measles in the United States**

- In 1963 the measles vaccine was licensed in the United States, and, in 1968, measles vaccine began to be distributed.

- **Measles was declared eliminated from the United States in 2000.**
  - Elimination means there was no continuous disease transmission for more than 12 months.
  - This was possible thanks to a highly effective vaccination program and better measles control in the Americas region.

- However.....
MEASLES CASES IN 2019

Number of Measles Cases Reported by Year

2010-2019** (as of September 12, 2019)

Source: Centers for Disease Control and Prevention (CDC)
States with Reported Cases of Measles in 2019

Reported measles cases in 2019, as of 09/12/19

What is Measles?

• Measles is an acute viral disease characterized by fever, cough, runny nose, red eyes and sore throat, followed by a red or brownish blotchy rash beginning on the face and spreading throughout the body.

• Common complications of measles include otitis media, broncopneumonia, croup, and diarrhea.

• About 1 in 4 people who contract measles will be hospitalized.
**Severe Complications from Measles**

- As of September 12, 2019, 130 of the people who got measles this year were hospitalized, and 65 reported having complications, including pneumonia and encephalitis. (CDC)

- Acute encephalitis, which often results in permanent brain damage, occurs in approximately 1 of every 1,000 cases.

- In the post elimination era, death, predominantly resulting from respiratory and neurologic complications, has occurred in 1 to 3 of every 1,000 cases reported in the United States.
MEASLES IS EXTREMELY CONTAGIOUS

MEASLES

is highly contagious and spreads through the air when an infected person coughs or sneezes.

It is so contagious that if one person has it, 9 out of 10 people of all ages around him or her will also become infected if they are not protected.
**How is Measles Spread?**

- The measles virus is spread easily through the air when an infected person sneezes or coughs and someone nearby inhales the infected droplets.

- The measles virus hangs in the air and can be spread several hours after an infected person has left a room where they have sneezed or coughed.

- It can also be transmitted by direct contact with fluids from the nose or mouth of an infected person.
HOW IS MEASLES SPREAD?

• Once a child is exposed to and infected with the measles virus, his first symptoms will not appear for 8 to 12 days (the incubation period).

• Infected children tend to be contagious for 1 to 2 days before symptoms finally emerge and 3 to 5 days before the rash breaks out.

• This contagious period continues for 4 days after the rash appears.
Measles is still common in many parts of the world.

Travelers with measles continue to bring the disease into the U.S.

The main outbreaks have been associated with travelers who brought measles back from Israel, Ukraine, and the Philippines.

The majority of people who got measles in 2019 were unvaccinated.
Who Is Most At-Risk For Measles?

- Infants and children aged less than 5 years
- Adults aged more than 20 years
- Pregnant women
- People with compromised immune systems, such as from cancer, chemotherapy, or HIV infection
# 2019 Recommended Immunizations for Children from Birth Through 6 Years Old

<table>
<thead>
<tr>
<th>Age (years)</th>
<th>Birth</th>
<th>1 month</th>
<th>2 months</th>
<th>4 months</th>
<th>6 months</th>
<th>12 months</th>
<th>15 months</th>
<th>18 months</th>
<th>19-23 months</th>
<th>2-3 years</th>
<th>4-6 years</th>
</tr>
</thead>
<tbody>
<tr>
<td>Immunization</td>
<td>HepB</td>
<td>HepB</td>
<td>HepB</td>
<td>RV</td>
<td>RV</td>
<td>RV</td>
<td>DTaP</td>
<td>DTaP</td>
<td>PCV13</td>
<td>PCV13</td>
<td>PCV13</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Is your family growing?** To protect your new baby against whooping cough, get a Tdap vaccine. The recommended time is the 27th through 36th week of pregnancy. Talk to your doctor for more details.

**NOTE:**
- If your child misses a shot, you don’t need to start over. Just go back to your child’s doctor for the next shot. Talk with your child’s doctor if you have questions about vaccines.
- See back page for more information on vaccine-preventable diseases and the vaccines that prevent them.

**FOOTNOTES:**
- Two doses given at least four weeks apart are recommended for children age 6 months through 8 years of age who are getting an influenza (flu) vaccine for the first time and for some other children in this age group.
- Two doses of HepA vaccine are needed for lasting protection. The first dose of HepA vaccine should be given between 12 months and 23 months of age. The second dose should be given 6 months after the first dose. HepA vaccination may be given to any child 12 months and older to protect against hepatitis A. Children and adolescents who did not receive the HepA vaccine and are at high risk should be vaccinated against hepatitis A.
- If your child has any medical conditions that put him at risk for infection or is traveling outside the United States, talk to your child’s doctor about additional vaccines that he or she may need.

For more information, call toll-free 1-800-CDC-INFO (1-800-232-4636) or visit www.cdc.gov/vaccines/parents

**American Academy of Pediatrics**

**U.S. Department of Health and Human Services**

**CDC**

**AAFP**
Vaccine Recommendations During Outbreaks

• During an outbreak, MMR vaccine should be offered to all people exposed or in the outbreak setting who lack evidence of measles immunity.

• During an outbreak that affects infants, MMR vaccine has been shown to be effective in preventing symptoms after exposure and may be recommended for infants 6 through 11 months of age.
Herd/Community Immunity

- Herd immunity (community immunity) is the protection from contagious disease that an individual benefits from as a result of living in a community where a critical number of people are vaccinated.

- That means individuals who live in communities with high vaccination rates are effectively protected from vaccine-preventable infectious disease, even if they themselves are not able to receive certain immunizations.

- This is particularly important for children and adults who are immunocompromised and cannot receive vaccines.
What is **herd immunity**? how it works

No immunization

If only **some** get vaccinated ... the virus **easily spreads**.

With immunization

If **most** get vaccinated ... the virus is **contained**.

SOURCE Centers for Disease Control and Prevention
**Federal Legislation: Vaccines Act**

- The bill authorizes an evidence-based public awareness campaign on the importance of vaccinations.
- The bill also:
  - Allows data collected to be used to identify communities with low vaccination utilization or where vaccine misinformation may be targeted.
  - Authorizes research grants to better understand vaccine hesitancy, attitudes towards vaccines, and develop strategies to address nonadherence to the recommended use of vaccines.
Before the measles vaccination program started in 1963:

- an estimated 3 to 4 million people got measles each year in the United States;
- of these, approximately 500,000 cases were reported each year to CDC;
- of these, 400 to 500 died, 48,000 were hospitalized, and 1,000 developed encephalitis (brain swelling) from measles.

Since then, widespread use of measles vaccine has led to a greater than 99% reduction in measles cases compared with the pre-vaccine era.

We still need to educate families and communities on the importance of vaccines.
Chrissie Juliano

Executive Director

Big Cities Health Coalition
Role of Big City/Local Health Departments

Front lines of preventing and responding to outbreaks

▪ Investigate every suspected case
▪ Have legal authority to quarantine, issue emergency orders
▪ Ensure community is sufficiently vaccinated, providing them when necessary
▪ Provide clear, simple, accurate messaging on vaccination – or work with partners to do so
Role of the Federal Government

Can extend capacity of health departments, share subject matter expertise, when needed

Bully pulpit (i.e., the Surgeon General)

Reliable, Dedicated Funding, such as...

IMMUNIZATION PROGRAM

EPIDEMIOLOGY AND LABORATORY CAPACITY

PUBLIC HEALTH EMERGENCY PREPAREDNESS FUNDING
CDC Immunization Program 10-Yr Funding History

Source: CDC FY 20 CDC Budget Justification
How Congress Can Help Move the Needle

Support activities on prevention end of spectrum, not just response

- National system for surveillance of vaccine rates
- Increase research on vaccine hesitancy
- National campaign to increase awareness of benefits of vaccines and combat misinformation
- Assess impact of social media in accelerating or mitigating public health crises

Should any be enacted, appropriations will be needed to support them
DOHMH Response to NYC 2018-2019 Measles Outbreak

Oxiris Barbot, MD
Commissioner
New York City Department of Health and Mental Hygiene
OVERVIEW:

• Recap of epidemiology of outbreak & final case counts
• Two fronts of DOHMH response:
  – Measles virus
  – Vaccine misinformation
• Funds used during outbreak
• Lessons learned
• Future challenges
EPI: LOCATIONS OF MEASLES OUTBREAK
**EPI: MEASLES CASES BY DATE OF RASH & NEIGHBORHOOD (N=654)**

The chart illustrates the distribution of measles cases by date of rash and neighborhood. The cases are categorized into three phases:

- **Phase 1**
- **Phase 2**
- **Phase 3**

The chart shows the number of measles cases per week, with a breakdown by neighborhood. The neighborhoods are color-coded as follows:

- Manhattan
- Queens
- Staten Island
- Brooklyn - Other
- Brooklyn - Sunset Park
- Brooklyn - Borough Park
- Brooklyn - Williamsburg

*Date based on the following hierarchy according to available data: rash onset date, lab report date, or provider report date.*
### Epi: Demographics of Cases (n=654)

<table>
<thead>
<tr>
<th>Characteristics</th>
<th>n (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Age Category:</strong></td>
<td></td>
</tr>
<tr>
<td>&lt;1 year</td>
<td>102 (15.7)</td>
</tr>
<tr>
<td>1 to 4 years</td>
<td>277 (42.7)</td>
</tr>
<tr>
<td>5 to 19 years</td>
<td>148 (22.8)</td>
</tr>
<tr>
<td>&gt;19 years</td>
<td>122 (18.8)</td>
</tr>
</tbody>
</table>
**EPI: Vaccination Status of Cases**

- **Unvaccinated:** 477 (73.5%)*
  - Age <12 months: 100
  - Age ≥12 months: 377
- **Vaccinated:** 78 (12%)*
  - 1 prior MMR: 47
  - 2 prior MMR: 31
- **Unknown Vaccination History (primarily adults):** 94 (14.5%)

*% among cases with known vaccination status
As of September 6, 2019
DOHMH Response: Measles Virus

Provider Outreach:

- Multiple health alerts and presentations to clinicians
- Reminders to recall unvaccinated patients
- Clinical and infection control consultation
- Technical assistance to facilities/providers in affected communities
- Distribute posters and pamphlets in English and Yiddish to medical facilities
- Assist with post-exposure prophylaxis for exposed persons
- Ensure providers have enough MMR vaccine on hand
DOHMH RESPONSE: VACCINATION MISINFORMATION

Community Collaboration:

- Print ads and social media specific to Orthodox community
- Met with rabbinical and community leaders, elected officials
- Partner with Jewish Orthodox Women’s Medical Association and Vaccine Task Force on educational outreach
- Distribute 29,000 copies of pro-vaccination booklets geared to Orthodox community
- Letters to parents through schools
- Multiple rounds of robocalls (30,000 households per round)
- 3,000+ letters sent to families with unvaccinated children in Williamsburg
- Telephone hotline
- Attended community health fairs
DOHMH RESPONSE: VACCINATION MISINFORMATION

• WHO declared Vaccine Hesitancy as top 10 threat to Global Health
• Anti-vaxxers infiltrated into ultra-Orthodox Jewish community
  – Robocalls and flyers conveying false information spread throughout community
  – P.E.A.C.H., an anti-vaxx organization, led efforts to intensify vaccine hesitancy
**A SLICE OF PIE**
Parents Informed & Educated

**Making PIEs Out of PEACH:**
**MMR Edition**
Bringing Current and Reliable Vaccine Information to Frum Families

---

**VACCINE SAFETY**

**How Do I Know Vaccines Are Safe?**
Just like all drugs, vaccines undergo a lot of scrutiny before being approved. It takes many years, from the application process, all the way through all the stages of testing, to receive approval for use on humans. Once a vaccine is approved, that is not the end of the monitoring. Several organizations oversee the manufacturing, and continually gather information on all vaccines to ensure safety and effectiveness.

**Here are some organizations that monitor vaccine safety:**
The following organizations monitor vaccine safety:
- The Food and Drug Administration,
- Centers for Disease Control and Prevention,
- National Institutes of Health, and the Department of Defense, among others.
- There are surveillance systems to identify vaccine safety concerns, including:
  - Vaccine Adverse Event Reporting System (VAERS),
  - Vaccine Safety Datalink (VSD),
  - Pediatric Vaccine Adverse Event Reporting System (PVAERS), and the
  - Clinical Immunization Safety Assessment (CISA) Project.

**Anti-Vaxx Myth:** There are no safety studies on any real way to know if vaccines are safe.

**PIE: False.** Vaccines are studied and monitored from the very beginning and go through years of safety testing in labs and clinical trials before they go to market. Once the vaccine is approved, the manufacturer tests batches of the vaccine for quality and safety before the FDA can recommend it for use. Once the vaccine goes to market, multiple agencies monitor its safety and provide additional checks. Sources: HHS, 2017a

**Anti-Vaxx Myth:** It is rare for a vaccine to be removed from circulation, no matter how much damage it is causing.

**PIE: False.** As with any drug, not all adverse effects will occur during clinical trials. Therefore, once a vaccine is made available to the public, information is continually gathered to identify problems after marketing begins. Although vaccines rarely cause long-term harm, there have been a few cases where a specific vaccine was found to be unsafe once they were already in use. In those cases, the vaccine was immediately removed from circulation.

Sources: HHS, 2017b; OBR, 2005; CDC, 2015

---

**Is there any connection between autism and vaccines?**

In 1998, a study by Andrew Wakefield, then a consultant gastroenterologist, was published in the Lancet, a British medical journal. He studied 12 children whose parents claimed they noticed behavioral regression and gastrointestinal symptoms after their children received the MMR vaccine. After publishing his study, Wakefield then held a press conference where he stated that the MMR vaccine was unsafe, and advocated the use of single-antigen vaccines (i.e., separating the measles, mumps, and rubella into three separate vaccines).

**Source:** Dyer 2010; Wakefield, 1998

Wakefield’s study, however, never concluded that MMR caused either autism or the gastrointestinal problems. To the contrary, Wakefield actually made the following statement in his study: “We did not prove an association between measles, mumps, and rubella vaccine and the syndrome described.” He also concluded that, “A genetic predisposition to autistic-spectrum disorders is suggested by over-representation in boys and a greater concordance rate in monozygotic [identical] than in dizygotic [fraternal/non-identical] twins.”

**Source:** Dyer 2010; Wakefield, 1998

---

https://www1.nyc.gov/assets/doh/downloads/pdf/a-slice-of-pie
DOHMH RESPONSE: BY NUMBERS

- 547 DOHMH staff deployed
- 104,000 person hours spent
- 21,000 individuals tracked down to confirm exposure and immunity statuses
- 2,100 cases of measles investigated
- 1,600+ diagnostic tests performed by DOHMH labs
- $6 million to end outbreak
DOHMH Response: 2018-2019 Measles Outbreak Response Costs by Funding Source

- City
- State
- Federal
- Total

Millions

October  November  December  January  February  March  April  May  June  July  August  September

$-  $0.5  $1.0  $1.5  $2.0  $2.5  $3.0  $3.5
LESSONS LEARNED

• Decades old public health victories should not be taken for granted

• More granular surveillance key to early identification of susceptible populations

• Leverage community relationships to build new alliances
Future Challenges

• Vaccine hesitancy
• Continued education to prevent spreading misinformation to vulnerable communities
• On-going funding is essential to sustain educational and response efforts related to deadly outbreaks
• Los Angeles County overview
• Recent measles outbreaks in Los Angeles County
• California state legislation
  – Senate Bill 277: Elimination of personal belief exemptions
  – Senate Bill 276: Review and approval of medical exemptions by the California Department of Public Health
• Challenges and Successes
Los Angeles County

- More than 10 million residents
  - 27% of California’s population
  - Largest population of any county in the nation
  - 3 local public health departments
- 4,000+ square miles
- 88 incorporated cities
- 200+ languages spoken

Los Angeles County Department of Public Health

- **Resources:** $1.3B annual budget and nearly 5,000 employees
- **Vision:** Healthy People in Healthy Communities
- **Mission:** Advance the conditions that support optimal health and well-being for all
Recent Measles Outbreaks in Los Angeles County
On January 7, 2015, the California Department of Public Health released a Health Advisory announcing the outbreak

- Measles had been confirmed in 7 California and 2 Utah residents
- All cases had visited Disneyland or California Adventure between December 17 and 20, 2014
- Additional residents who visited Disneyland during this period were being tested for measles

Providers encouraged to suspect measles when evaluating patients of any age with a fever and rash
Epidemic Curve for 2015 Measles Outbreak – Los Angeles County

*Primary cases include 6 cases with an unknown source of exposure
On December 22, 2016, Los Angeles County Department of Public Health announced an increase in measles cases via press release:

- Measles had been confirmed in 8 people who were linked to one other.
- The cases occurred in a religious/social group.
- Cases linked to the outbreak also occurred in Ventura and Santa Barbara counties.
2016-2017 Measles Outbreak, LA County

MEASLES OUTBREAK SUMMARY REPORT
January 30, 2017
Measles 2016-2017

REPORTS 60
LAC Confirmed Cases 18
Suspect 1
OOI (Cases) 8 (6)
False 33

CONTACTS 2219
Non-Healthcare facility 1269
Healthcare facility 950
Susceptibles 100
Rec’d Prophy 13
Susceptibles 77
Rec’d Prophy 40

Transmission
3 Number of Primary Cases
7 Number of Secondary Cases
8 Number of Tertiary Cases
0 Number of Deaths

Report Stats
1/11/17 Date of Most Recent Case
12/15/16 Date of First Case
0 Range of days from Illness Onset To Report
12 Range of days from MD Visit to Report
0

Exposure Site Type

*Some cases have multiple exposure sites

<table>
<thead>
<tr>
<th>Case Distribution By Age And Immunity Status At Time Of Report*</th>
</tr>
</thead>
<tbody>
<tr>
<td>Received 1 Dose</td>
</tr>
<tr>
<td>-----------------</td>
</tr>
<tr>
<td>&lt; 12 Months</td>
</tr>
<tr>
<td>1 Year Old – 17 Years Old</td>
</tr>
<tr>
<td>18 Years Old and Older</td>
</tr>
<tr>
<td>Total</td>
</tr>
</tbody>
</table>

*MMR not received as a post-exposure prophylaxis after outbreak was declared.

Epi Curve for 2016-2017 Measles Outbreak

Number of Cases

Day of rash onset from earliest exposure date (Day 0* - 11/18/2016)

*Day 0 is an estimated source of exposure based on average incubation period.
2019 Traveler-Associated Measles Outbreak

2019 - an extraordinary year due to multiple importations of measles into LA County

- As of 9/20/19: a total of 27 cases of measles in LA County in 2019
  - 16 cases occurred in LA County residents
    - 8 were imported
    - 8 were a result of local transmission
  - 11 additional cases have occurred in non-residents who visited or travelled through LA County in 2019
  - Nearly 4,000 contacts have been identified
  - More than 300 persons have been issued legal orders to remain in quarantine or exclusion
Three Measles Outbreaks: Lessons Learned

• A worst-case scenario can happen (a single case causing an explosive outbreak)
• High levels of herd immunity can limit spread
• A single case in a highly non-vaccinated community can lead to sustained propagation that is difficult to interrupt
• Changing vaccine-related behavior in the midst of an outbreak can be difficult and have minimal impact
• Traditional communicable disease control methods are resource-intensive and may have modest impact
• Among possible interventions to prevent spread, increasing the baseline of herd immunity must be a high priority
California State Legislation
Senate Bill 277: Elimination of Personal Belief Exemptions

The Issue

• Pre-2016, personal belief exemption (PBE) rates had increased steadily, leaving under- and un-vaccinated students at risk for vaccine-preventable diseases

The Bill

• Eliminates PBEs for child care and school immunization requirements
  – Does not apply to homeschooled or independent study students who do not participate in classroom-based activities
  – Does not apply to vaccines required by the California Department of Public Health
  – Allows for medical exemptions
# LAC Kindergarten Enrollee Immunization Status, Pre vs. Post PBE Law (SB277) Enactment

The table below shows the immunization status of kindergarten enrollees in Los Angeles County (LAC) for the years 2014-2015 through 2018-2019, comparing pre (before SB277) and post (after SB277) law enactment. The table includes data on total number of schools, student enrollment, up to date status, PBE/Religious Exemption, Conditional Entrance, PME, and others lacking required immunizations.

**Source:** 2014-2015 through 2018-2019 Kindergarten Immunization Assessment – Executive Summaries

<table>
<thead>
<tr>
<th>SCHOOL YEAR</th>
<th>Pre SB 277</th>
<th>Post SB 277</th>
<th>Percent Change (Pre 277 vs. Post 277)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total Number of Schools</td>
<td>1,671</td>
<td>1,687</td>
<td>1,773</td>
</tr>
<tr>
<td>Student Enrollment</td>
<td>129,494</td>
<td>133,398</td>
<td>140,269</td>
</tr>
<tr>
<td>Up to Date</td>
<td>111,343</td>
<td>86.0%</td>
<td>120,108</td>
</tr>
<tr>
<td>PBE/Religious Exemption</td>
<td>2,074</td>
<td>1.6%</td>
<td>1,941</td>
</tr>
<tr>
<td>Conditional Entrance</td>
<td>15,908</td>
<td>12.3%</td>
<td>11,011</td>
</tr>
<tr>
<td>PME</td>
<td>169</td>
<td>0.1%</td>
<td>163</td>
</tr>
<tr>
<td>Others lacking required immunizations</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td><strong>Overdue</strong></td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
</tr>
</tbody>
</table>

*Includes students reported as attending independent study who did not receive classroom-based instruction or home-based private schools or receiving IEP services

*Overdue for one or more immunizations
Percentage of Kindergarten Students with All Required Immunizations by School Type and Year 2011-2012 thru 2018-2019

Source: 2018-2019 Kindergarten Immunization Assessment – Executive Summary
Percentage of Kindergarten Students with Permanent Medical Exemptions (PMEs) by School Type and Year, 2011-2012 thru 2018-2019

Source: 2018-2019 Kindergarten Immunization Assessment – Executive Summary
California’s vaccine battle: Here are the doctors behind Bay Area students’ medical exemptions

Five doctors signed more than half the exemptions in a Bay Area News Group survey of local school districts.
Senate Bill 276: Review of Medical Exemptions

The Issue

• Medical exemptions more than tripled after the passage of SB 277
• Physicians monetizing the granting of likely fraudulent medical exemptions

The Bill

• Standardizes the medical exemption form and requires transmittal through the State’s electronic California Immunization Registry
• Requires the reason for the medical exemption, the physician’s name, license number, and a statement certifying the clinician conducted a physical examination of the child
• Requires the State to annually monitor immunization levels and rates of medical exemptions in schools and child care/nursery schools
• Medical exemptions from schools with overall immunization rates under 95% or from physicians who submit 5+ exemptions per year must be reviewed by the California Department of Public Health per CDC, ACIP, or AAP criteria and may be revoked if determined to be invalid.
Challenges and Successes
Current worldwide outbreaks pose a serious threat of continuous importation.

Even a few cases of measles require a high level of resources to mount an appropriate public health response:
- Cost estimate: One travel case w/o propagation = $30,000
- Cost estimate: Each contact in a local outbreak = $500 - $1000

Current vaccination laws will take time to assure a high level of immunity among children; in the meantime, more than a million adults in LA County are un- or under-immunized:
- Should providers assess adult vaccination status?
- Should some adults receive 2 doses?
- Should 2-dose MMR requirements be extended to all colleges and universities (students, staff, and faculty)?

Growing distrust of vaccines and their need in today’s society.
Successes

• Partnering with legislators to develop laws that improve vaccination rates

• Funding provided through the CDC’s Public Health Emergency Preparedness (PHEP) Cooperative Agreement has been invaluable in supporting LA County’s ability to respond to measles and other public health emergencies

• Funds provided through the Prevention and Public Health Fund (PPHF) to support the Section 317 Immunization Program has been invaluable in providing immediate access to vaccines and is one of the most cost-effective interventions.
Thank you!

Jeffrey D. Gunzenhauser, MD, MPH
Chief Medical Officer and Director, Disease Control Bureau
Los Angeles County Department of Public Health
jgunzenhauser@ph.lacounty.gov
www.publichealth.lacounty.gov
Contact

www.bigcitieshealth.org
Sign up for our newsletter on our website

Twitter @bigcitieshealth
Blog http://www.bigcitieshealth.org/front-lines-blog/

Chrissie Juliano
juliano@bigcitieshealth.org
301-664-2989