

Measles Outbreak San Diego, Jan – Feb 2008

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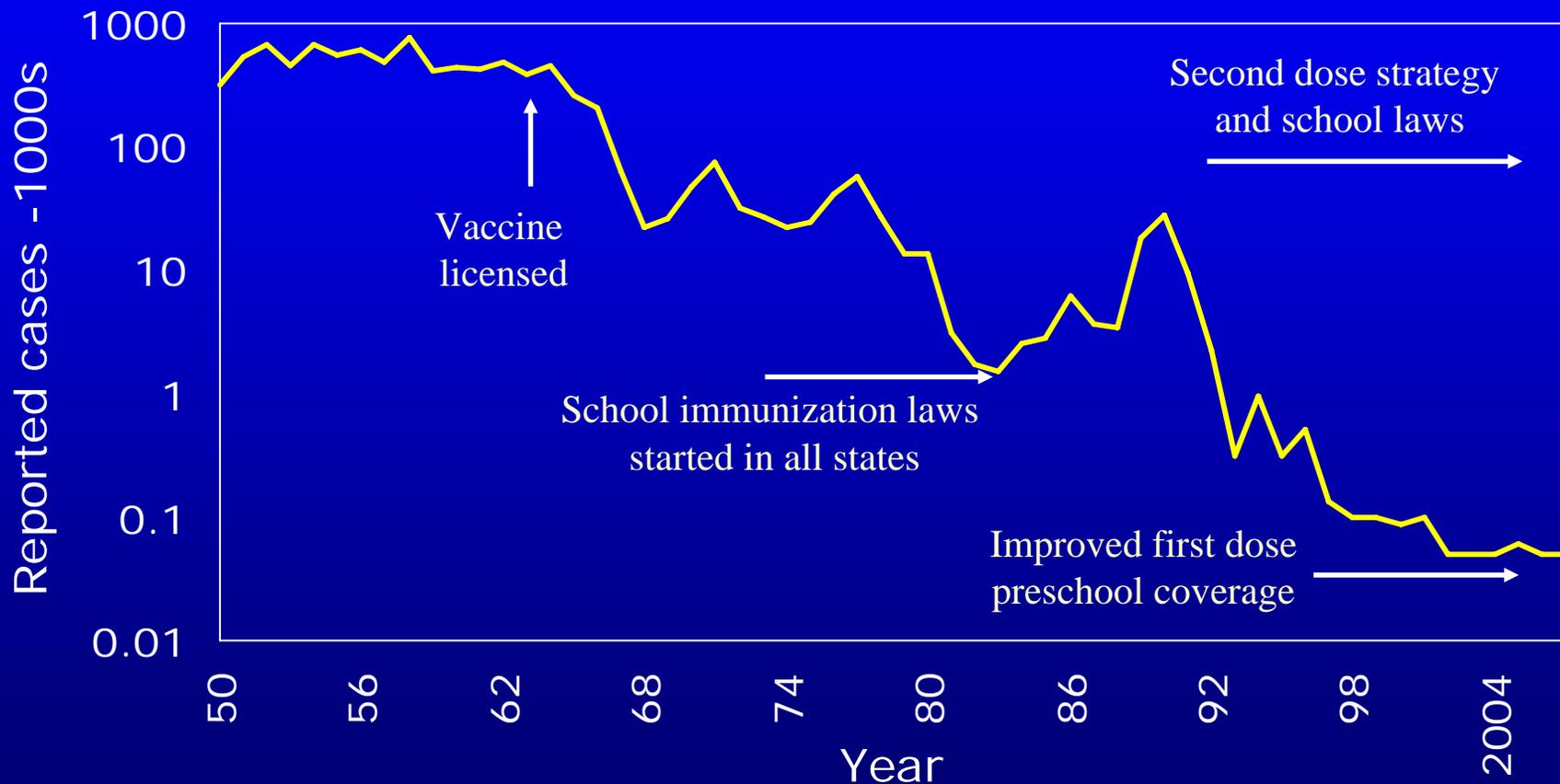
ACIP meeting, February 28th, 2008

Annual Measles Disease Burden United States, 1950s

- 3-4 million cases
- Severe complications
 - 4,000 encephalitis cases
 - 150,000 respiratory complications (pneumonia)
- 48,000 hospitalizations
- 450 deaths

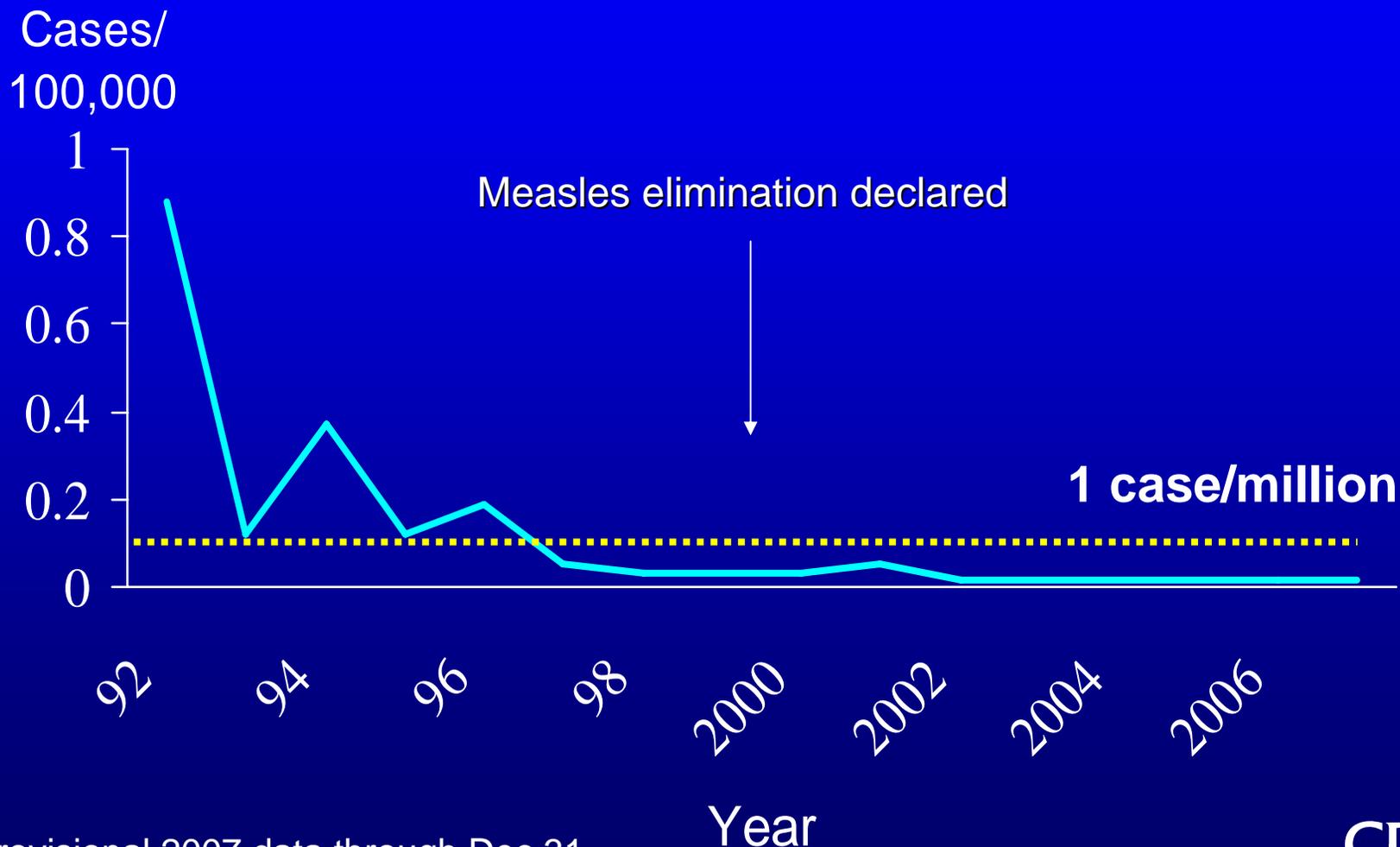


Reported Measles Cases, by Year, United States, 1950-2007*



*2007 Provisional data as of December 31, 2007

Reported Measles Incidence United States, 1992-2007*

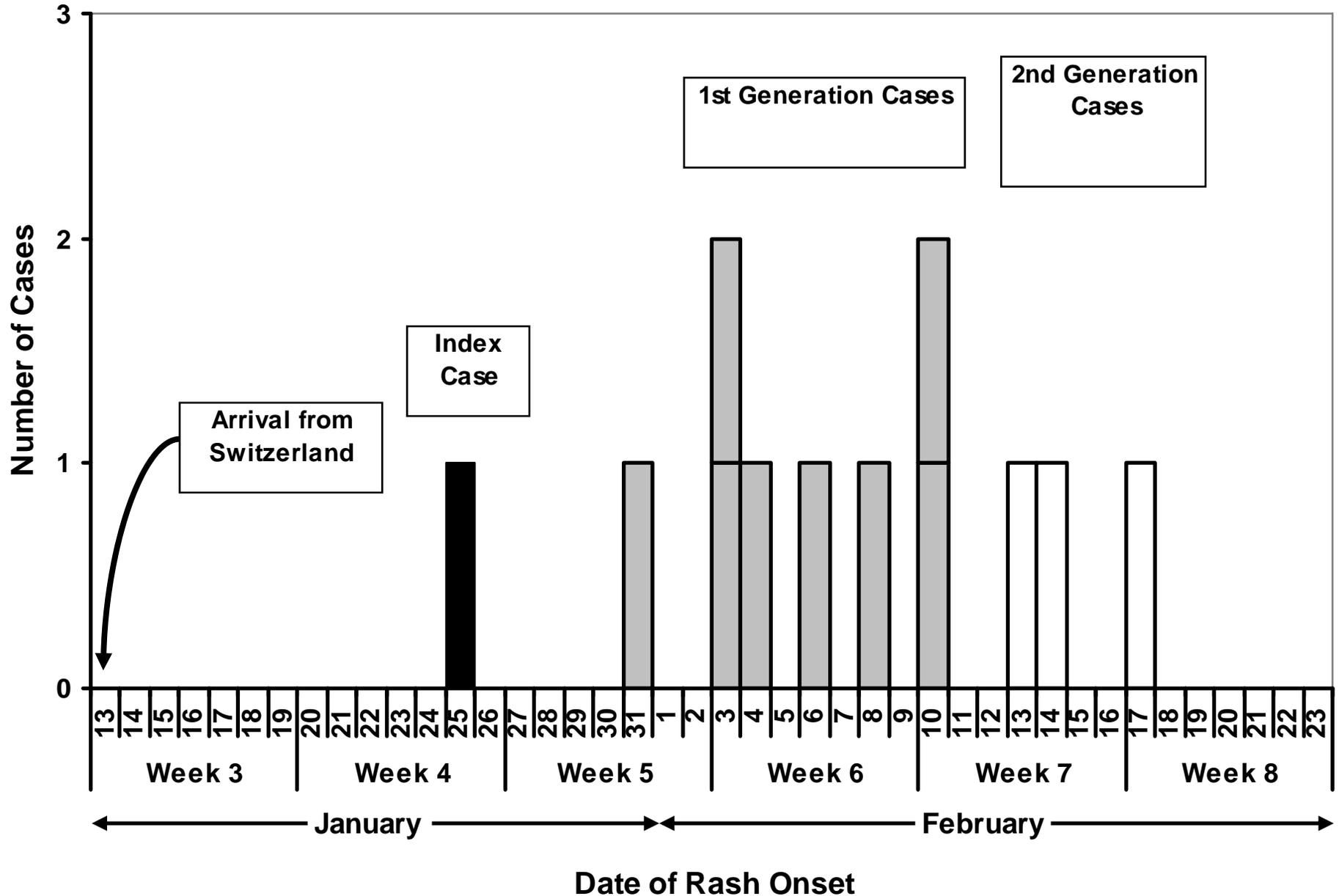


*provisional 2007 data through Dec 31

Measles Epidemiology, US, 2008

- No longer an endemic disease
- ~ 50 cases reported each year (2002-2007)
- Cases are all related to imported cases including from developed countries – Europe, Japan
- Outbreaks predominantly in unprotected populations
 - 2005 Indiana, 34 cases in unvaccinated religious community
 - 2006 Boston, 18 cases in young adults, mainly one dose vaccinees and foreign born adults
 - 2008 San Diego, 12 cases in unvaccinated children

Measles Outbreak San Diego Jan 25 – Feb 17, 2008



Outbreak Summary

- Index case 7 year old child with rash onset 12 days after returning from Switzerland
- 11 additional cases, age range 10 months to 9 years
- All unvaccinated:
 - 8 due to personal belief exemptions*
 - 3 < 12 months
 - 1 “un-immunized” due to timing of her routine vaccination (6 days after unrecognized exposure)
- 4 were infected in pediatrician’s office
- One infant hospitalized for 2 days
- One infant traveled by plane to Hawaii while infectious
- Measles genotype pending

Public Health Response

- Local, state health departments and CDC
- Enhanced surveillance for measles
- Identification of cases and contacts
- Vaccination, IG or voluntary quarantine for persons without evidence of immunity
 - 70 children quarantined
- Public Health Communications through Health Alerts and MMWR
 - Awareness for measles in travelers and their contacts
 - Importance of infection control
 - Vaccination protects against measles

Summary

The bad news

- Measles importations continue to occur in U.S and may result in outbreaks
- Measles is highly infectious and disease can be severe
- Susceptible populations are at risk for measles
- Vaccine exemptors have x 22-224 increased risk of measles compared to vaccinated persons
- Incidence of measles in a community is associated with the frequency of vaccine exemptors
- Health care providers are not familiar with measles
- Lapses in infection control

The good news

- Our “wall of immunity” held fast
- No cases in exposed vaccinated children
- Effective public health response limited outbreak size
- High population immunity in US protects those who can't be vaccinated
- Child care and school requirements are an effective strategy for achieving high population immunity

Challenge: Sustained high vaccine coverage needed to maintain measles elimination

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Thank You