

Update: Pertussis Epidemiology

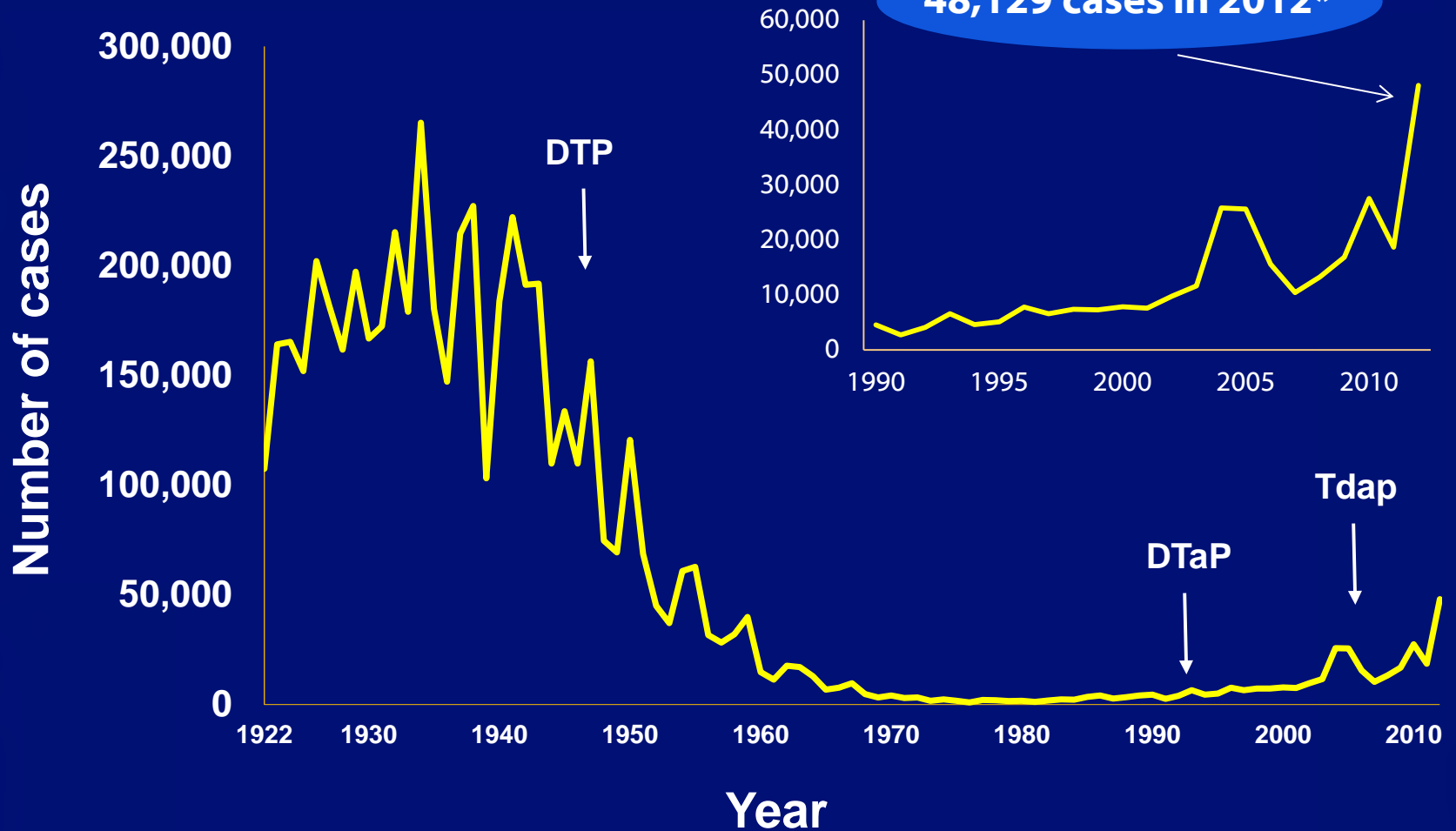
Anna Acosta, MD

Epidemic Intelligence Service Officer

Advisory Committee on Immunization Practices

June 19, 2013

Reported Pertussis Cases: 1922-2012*



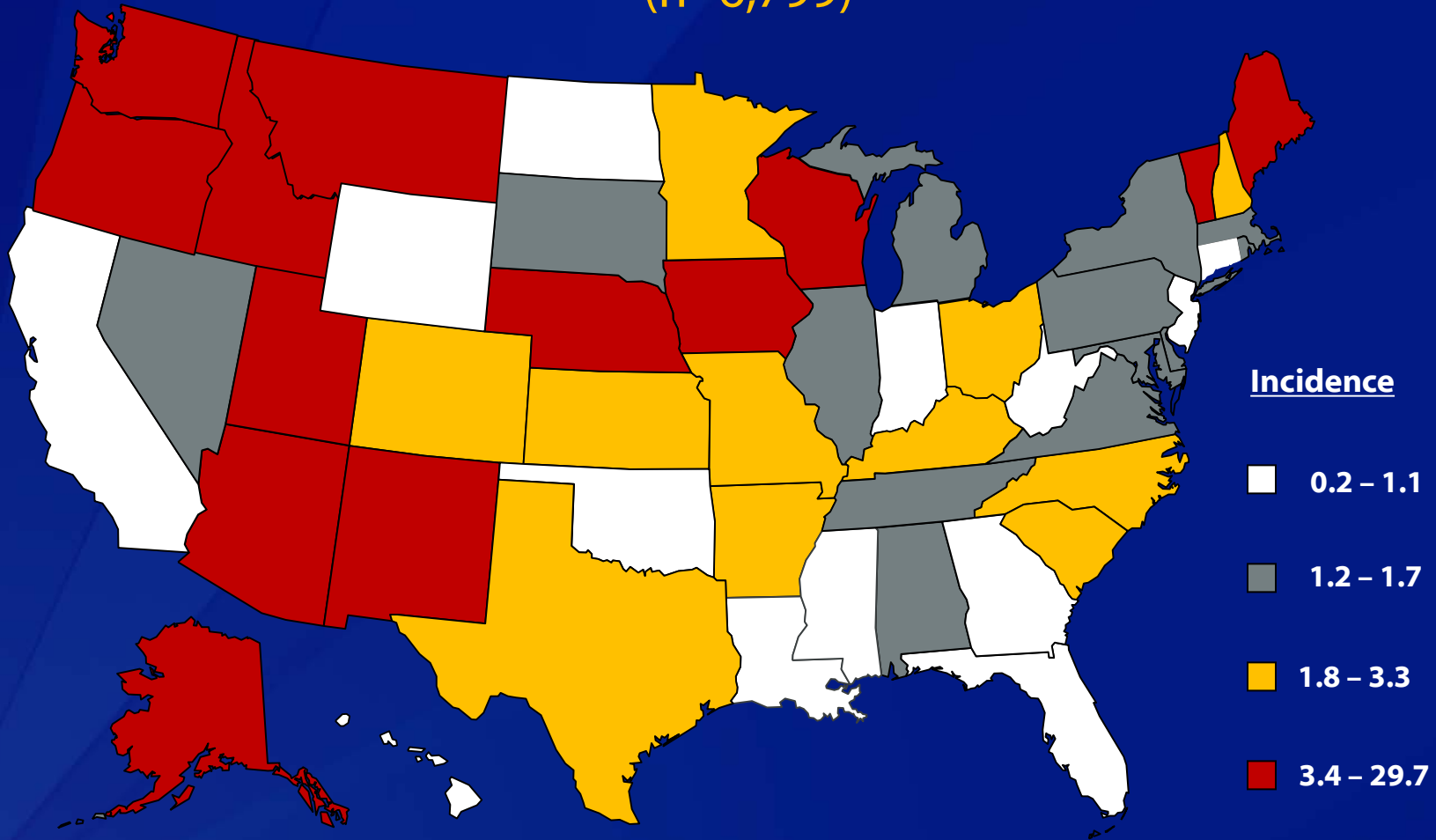
*2012 data are provisional and subject to change

SOURCE: CDC, National Notifiable Diseases Surveillance System, Supplemental Pertussis Surveillance System, and passive reports to the Public Health Service (1922-1949)

Annual Incidence by State, 2013*

2013 incidence = 2.18

(n=6,799)

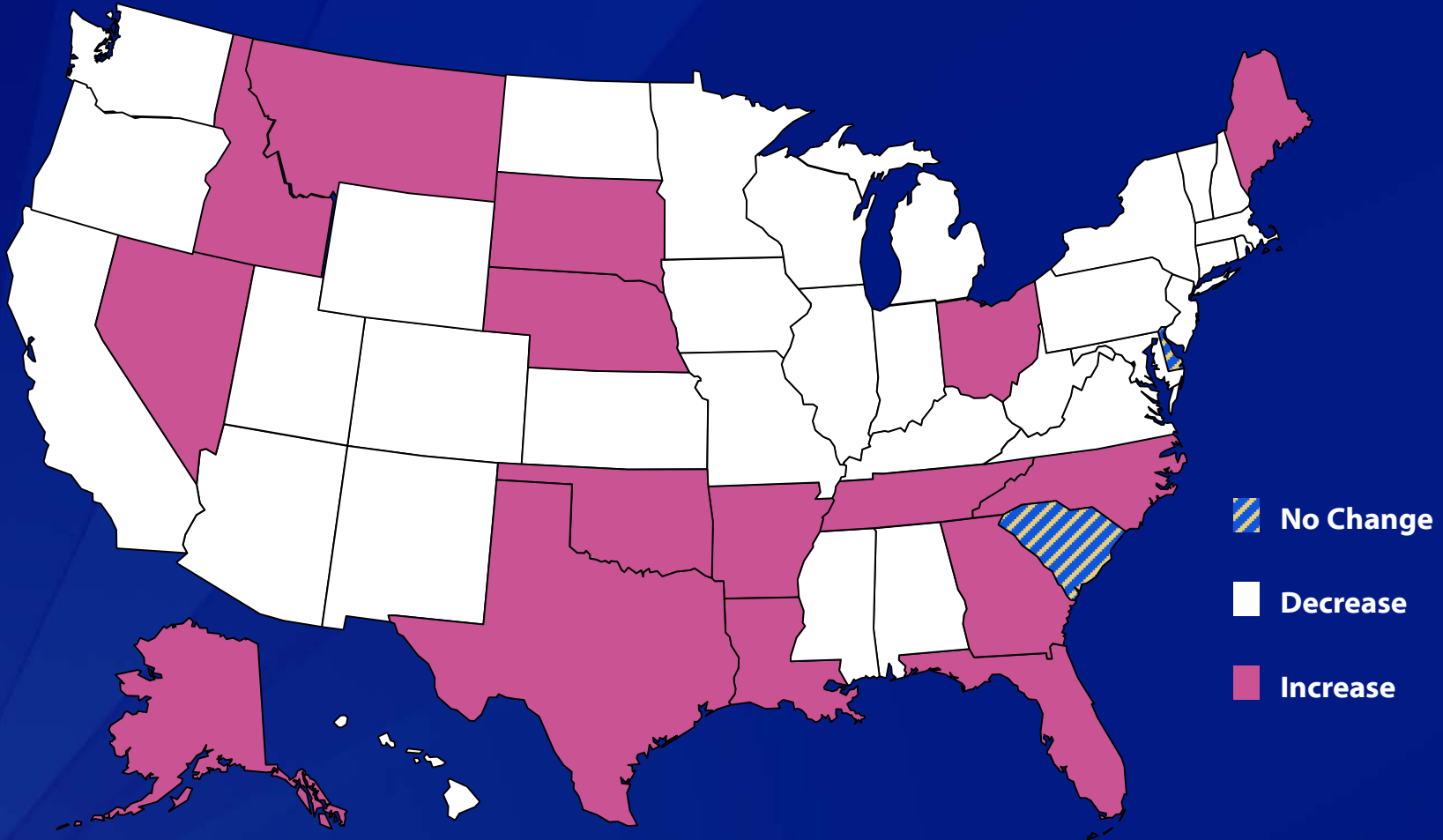


*2013 data are representative of cases reported to the CDC as of May 31, 2013

SOURCE: CDC, National Notifiable Diseases Surveillance System for population estimates; Incidence is per 100,000 population

2011 Census data used

Changes in Pertussis Reporting by State from 2012 to 2013*†

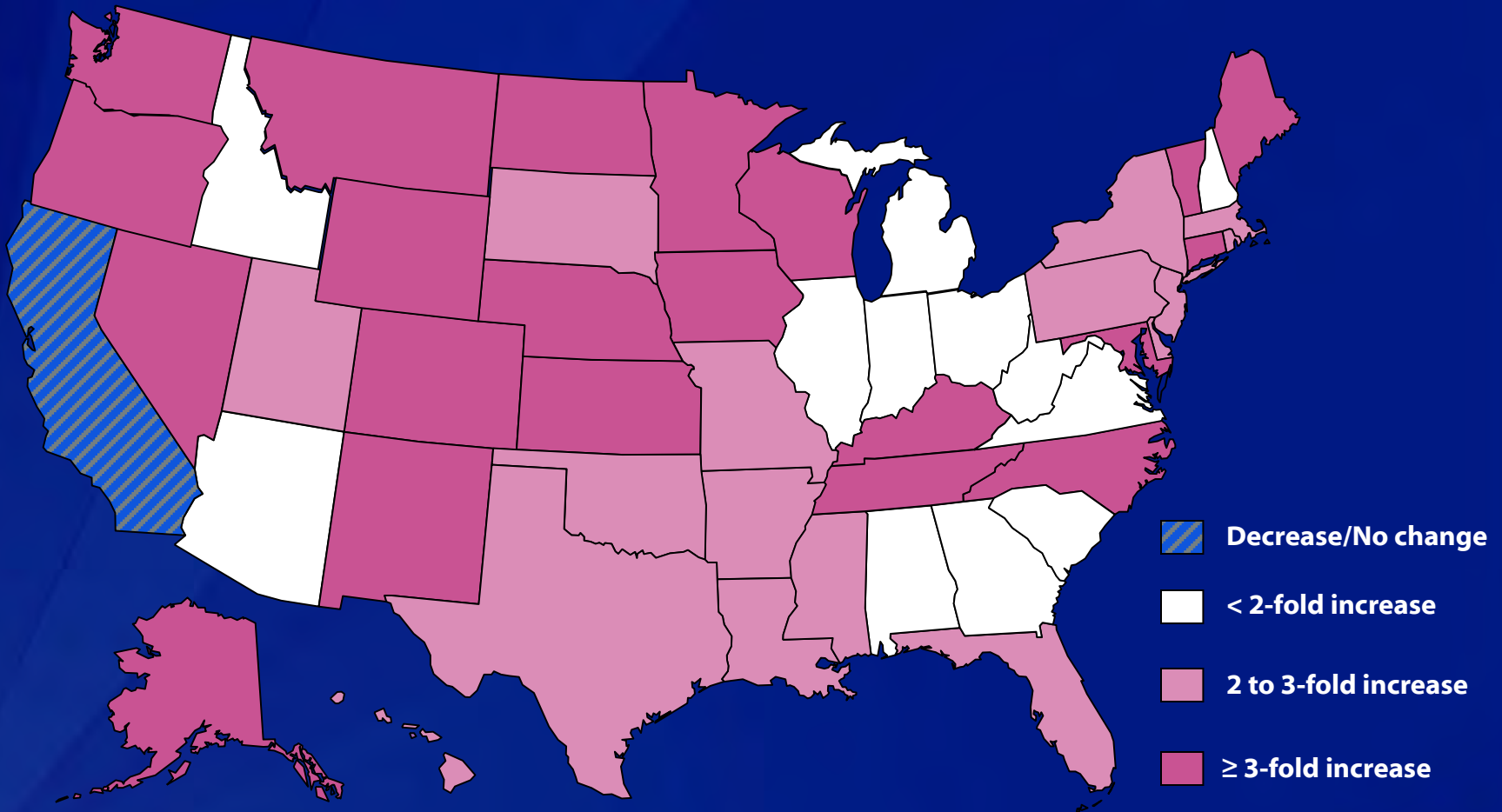


*2012 and 2013 data are provisional and subject to change

†Cases reported through Week 18 in 2012 were compared with cases reported through Week 18 in 2013
CDC, National Notifiable Diseases Surveillance System

SOURCE:

Changes in Pertussis Reporting by State from 2011 to 2012* †



*2012 data is provisional and subject to change

†Cases reported through Week 52 in 2012 were compared with cases reported through Week 52 in 2011
CDC, National Notifiable Diseases Surveillance System

SOURCE:

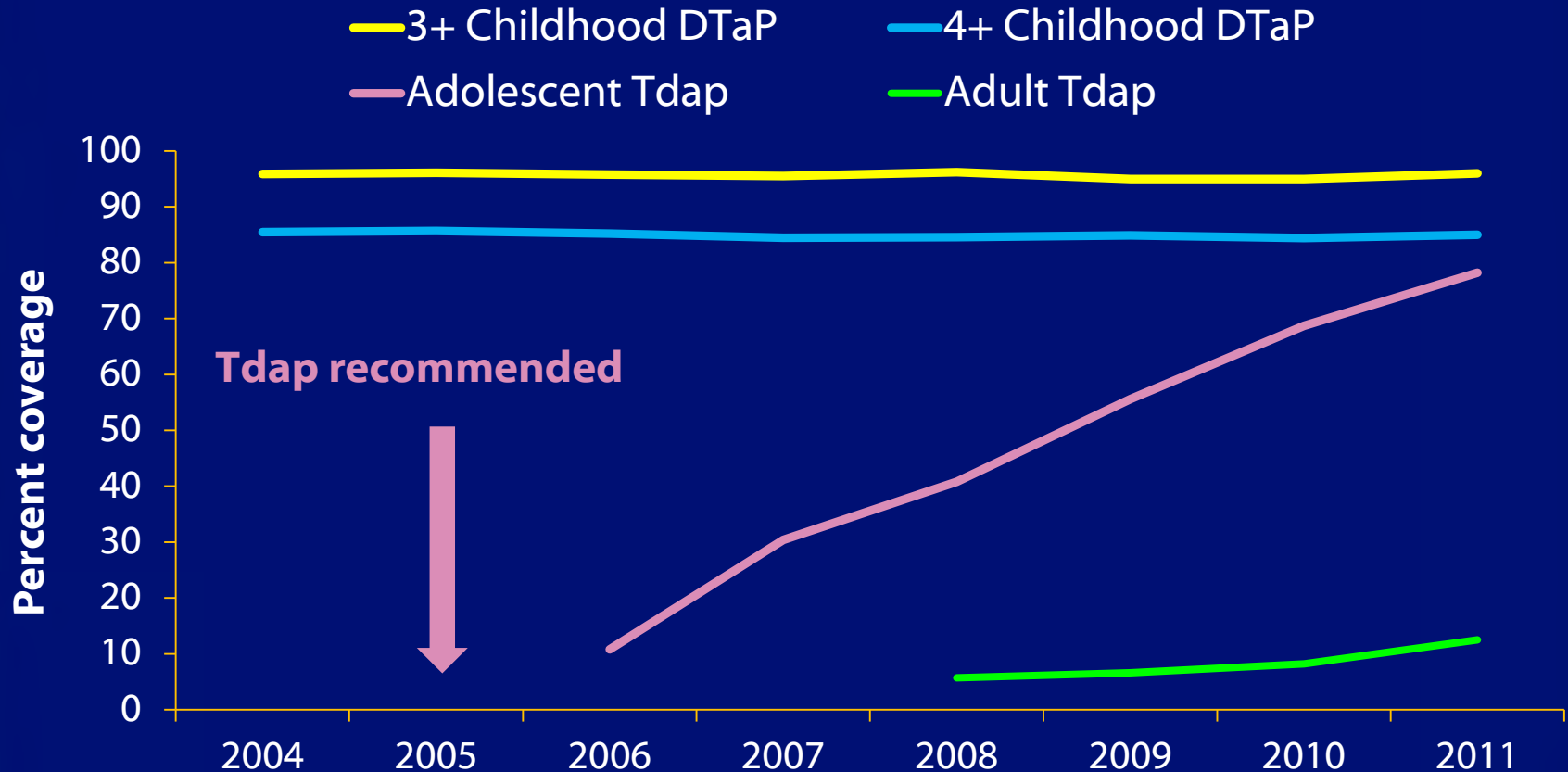
Pertussis Immunization in the US

- ❑ **Whole-cell vaccines/DTwP (1940s)**

- ❑ **DTaP (1990s)**
 - Infants at 2, 4, 6 months (1997)
 - Toddlers at 15-18 months (1992)
 - Pre-school at 4-6 years (1992)

- ❑ **Tdap (2005)**
 - Adolescents and adults
 - Preferred administration at 11-12 years

Pertussis Vaccination Coverage*† Among the US Population, 2004-2011

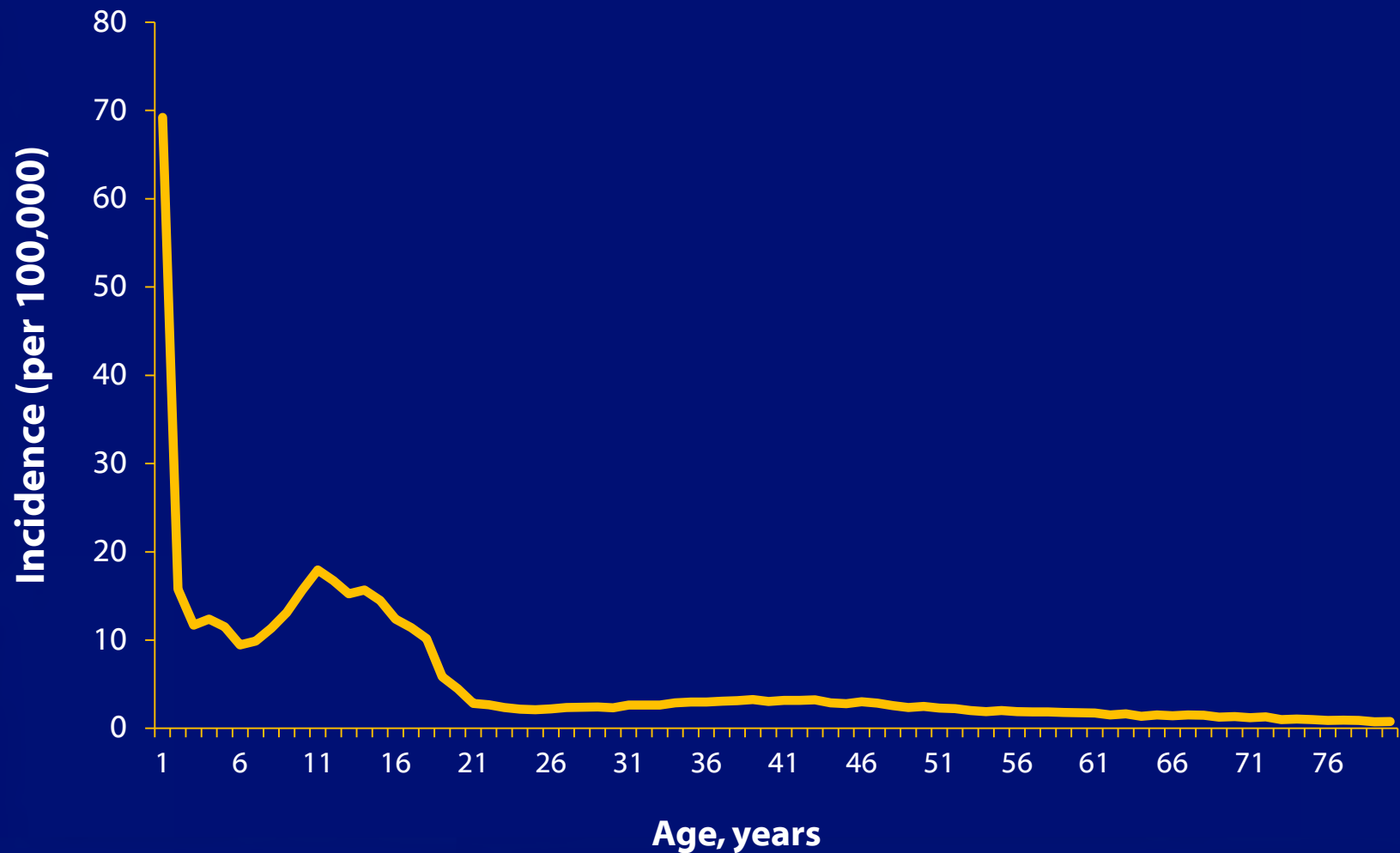


*CDC National Immunization Survey: DTaP among children aged 19 through 35 months,

Tdap coverage among adolescents aged 13 through 17 years

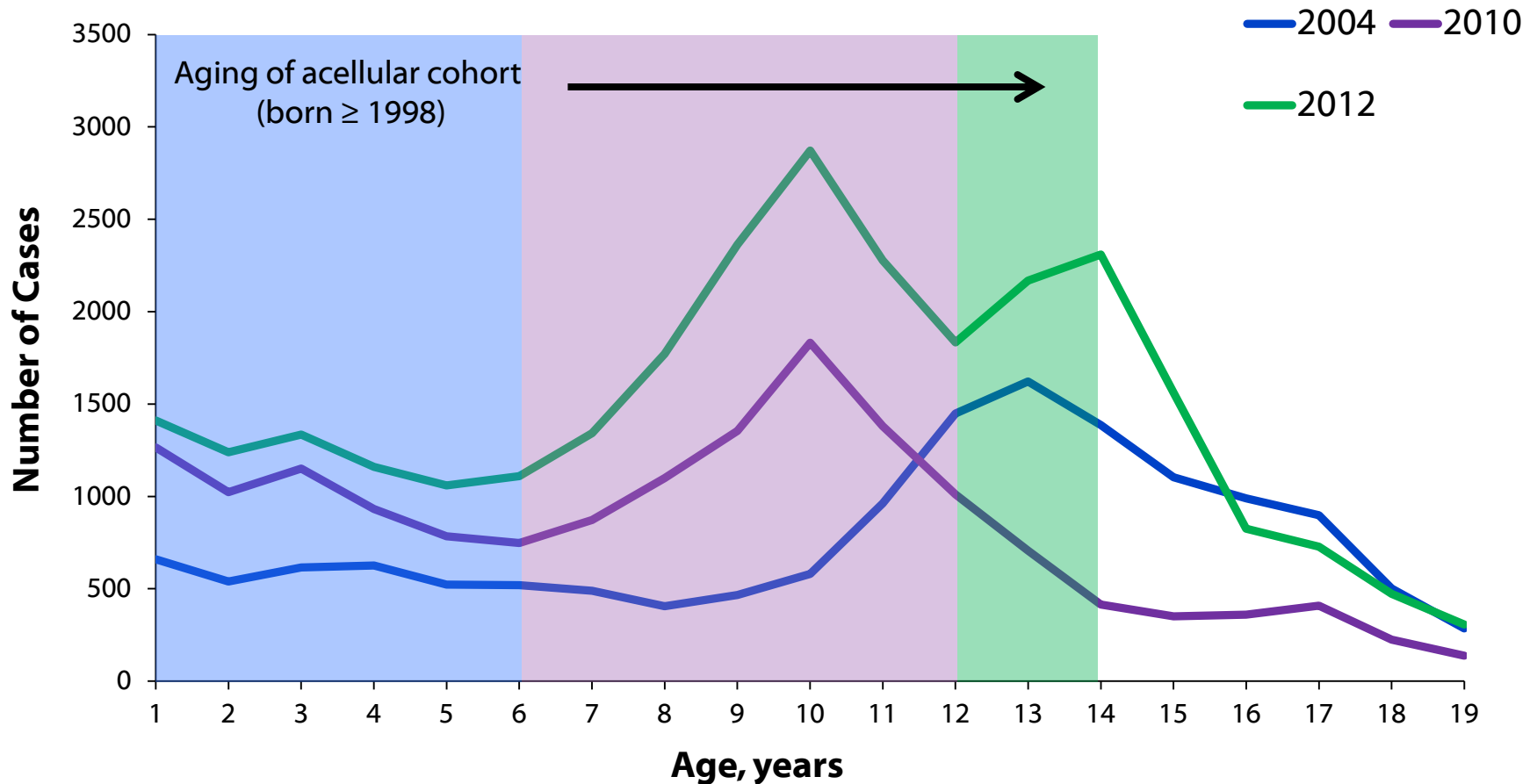
†National Health Information Survey: Tdap coverage among adults aged 19 through 64 years

Average Incidence of Reported Pertussis Cases in the US by Age, 2002-2011



SOURCE: CDC, National Notifiable Diseases Surveillance System and Supplemental Pertussis Surveillance System

US Pertussis Cases by Age: 2004, 2010, 2012*



*2012 data are provisional

SOURCE: CDC, National Notifiable Diseases Surveillance System

Summary

- ❑ **Pertussis incidence increasing**
- ❑ **Resurgence of disease in older school-age children despite high coverage**
- ❑ **Increasing incidence of adolescent disease despite recent Tdap vaccination**