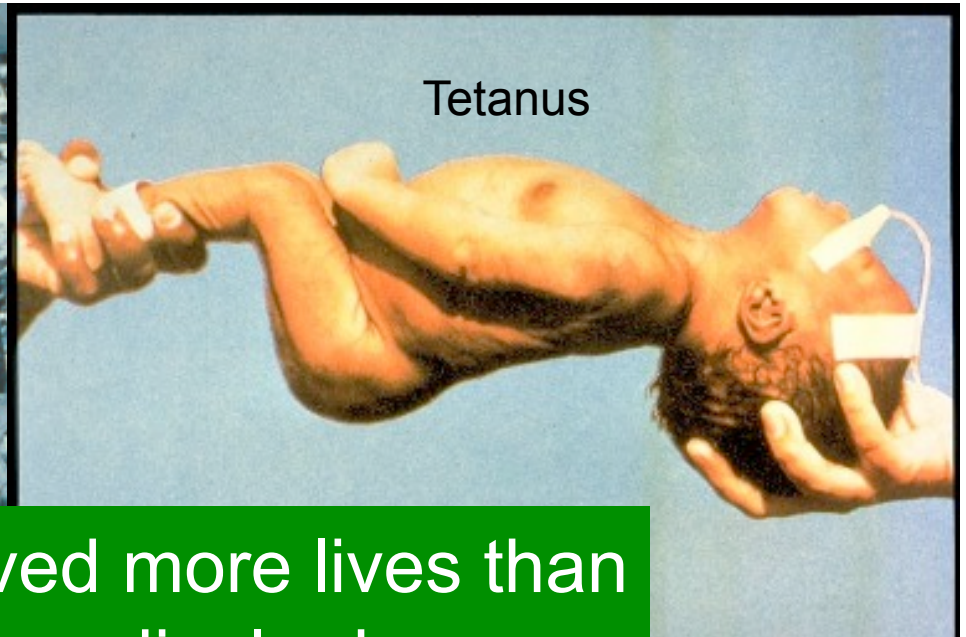
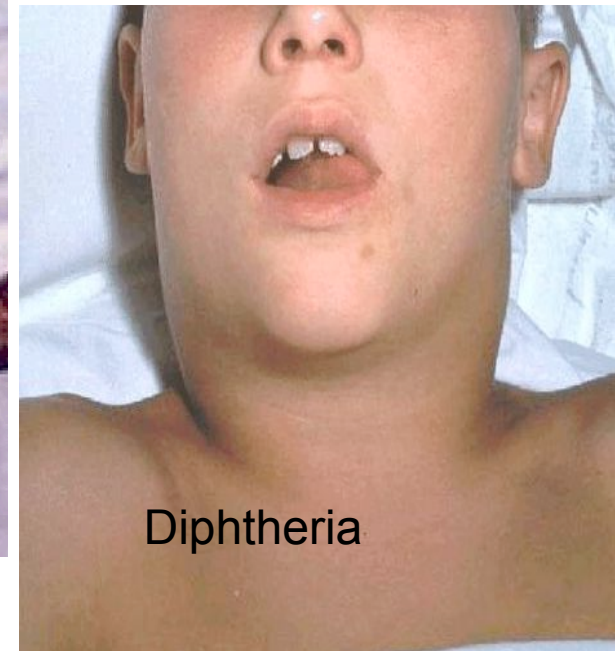


**CLINICAL ASSOCIATE
PROFESSOR DEBORAH
LEHMANN**

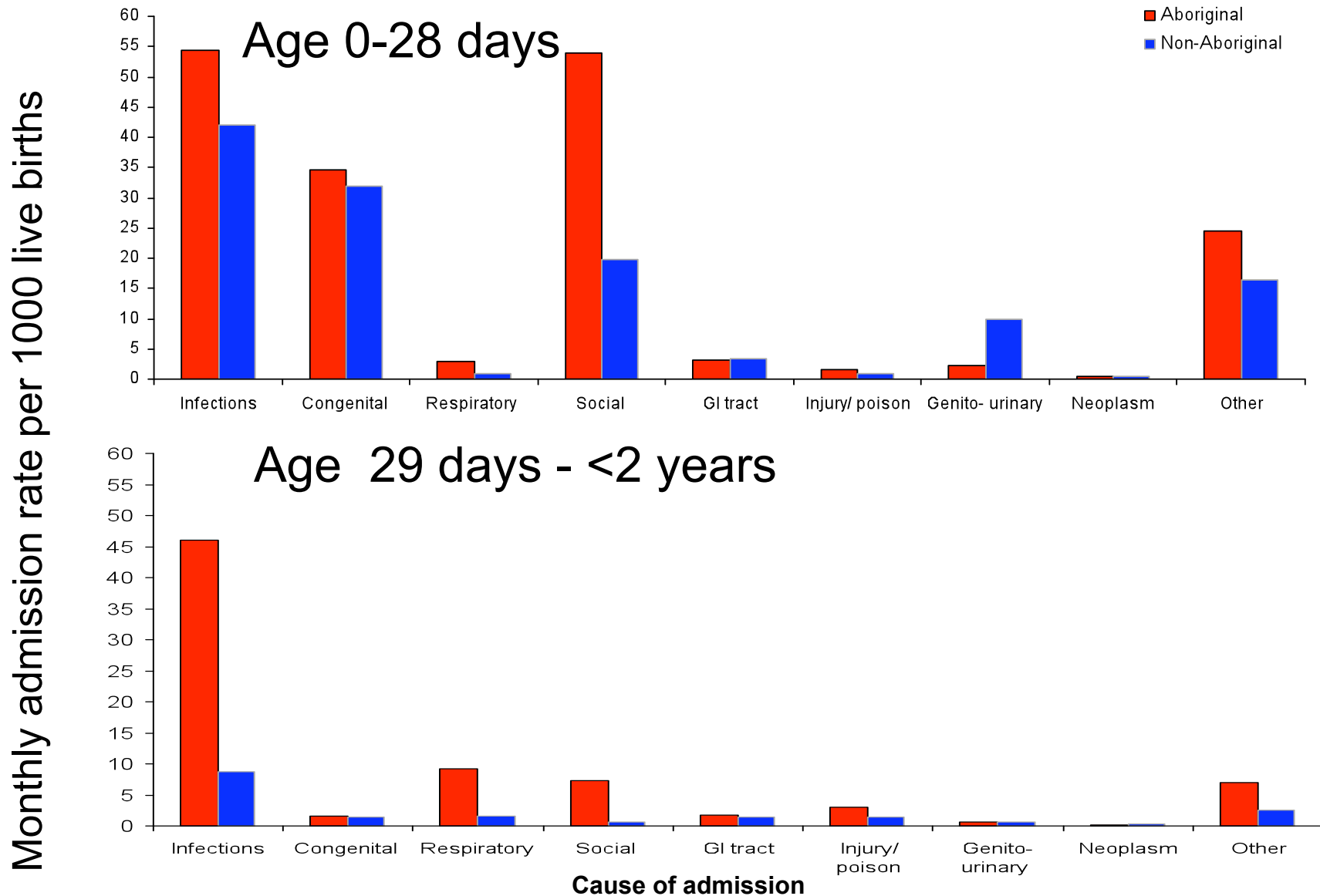
Infectious disease researcher, Telethon Institute
for Child Health Research



Vaccines have saved more lives than any other single medical advance

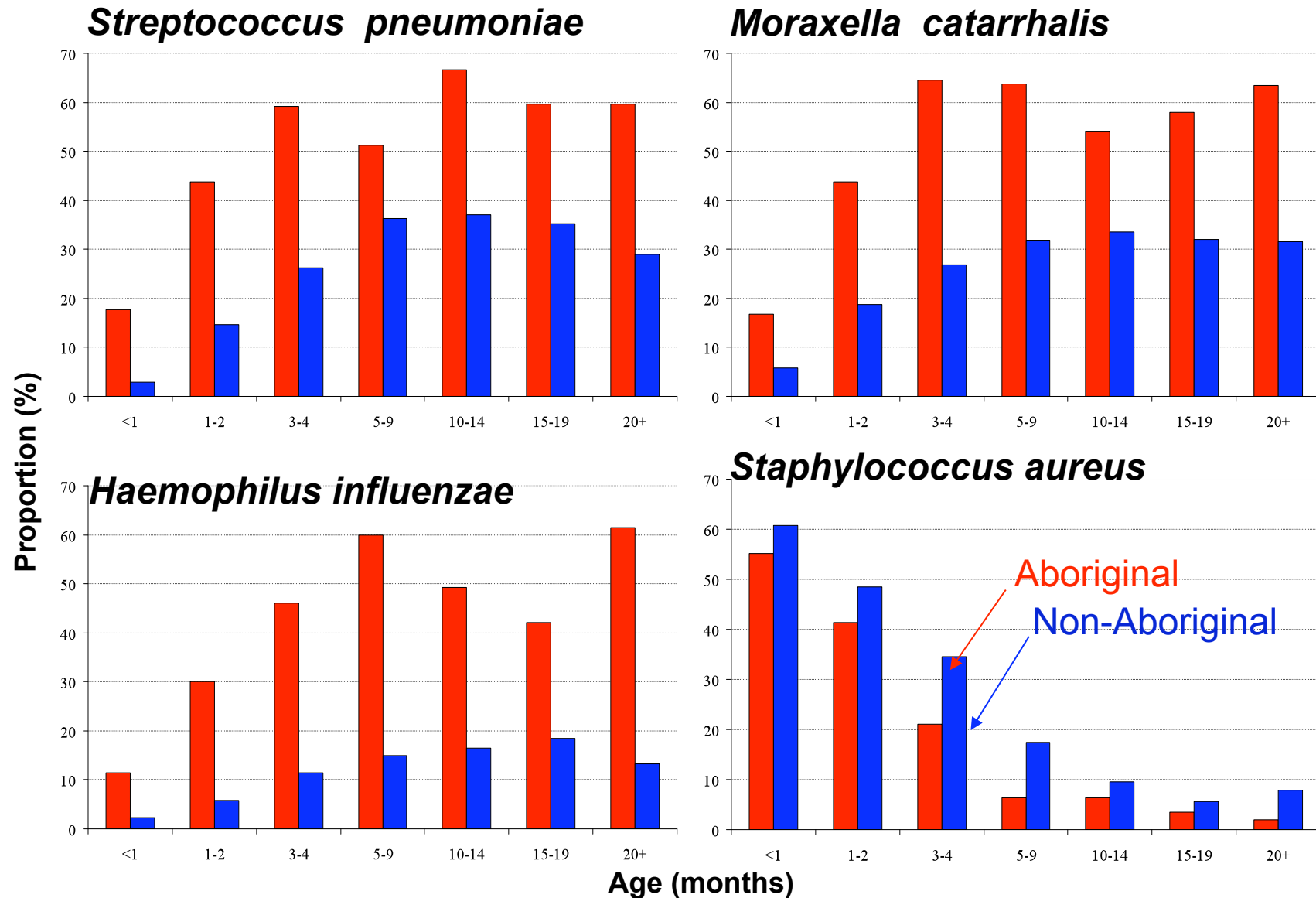


Infection is the most common reason for young children to be admitted to hospital in WA



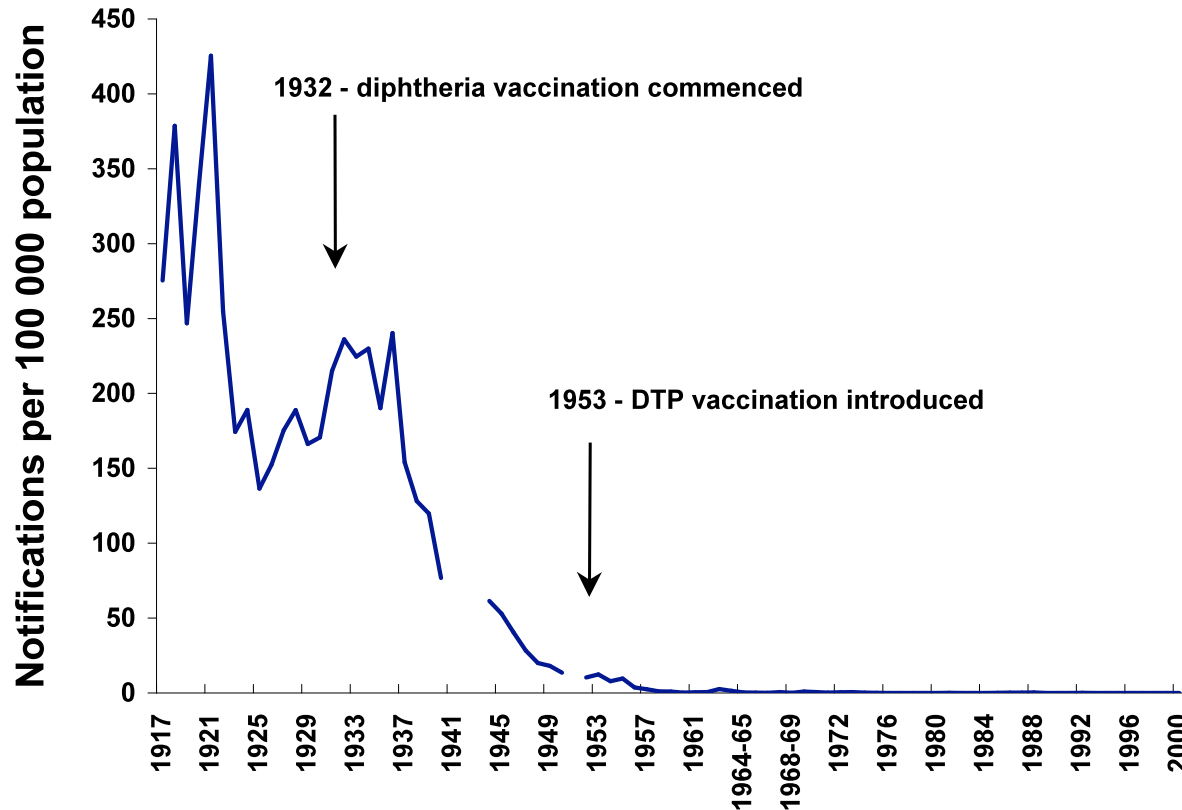
Source: Carville KS, Lehmann D, et al. *Pediatr Infect Dis J* 2007;26:210-6.

Many different bacteria are carried in noses of healthy people



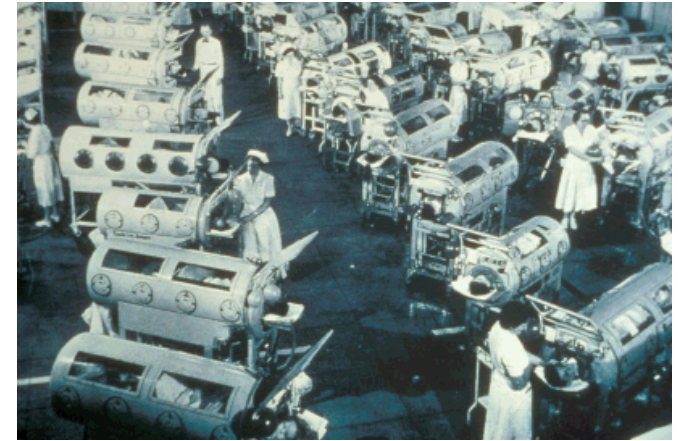
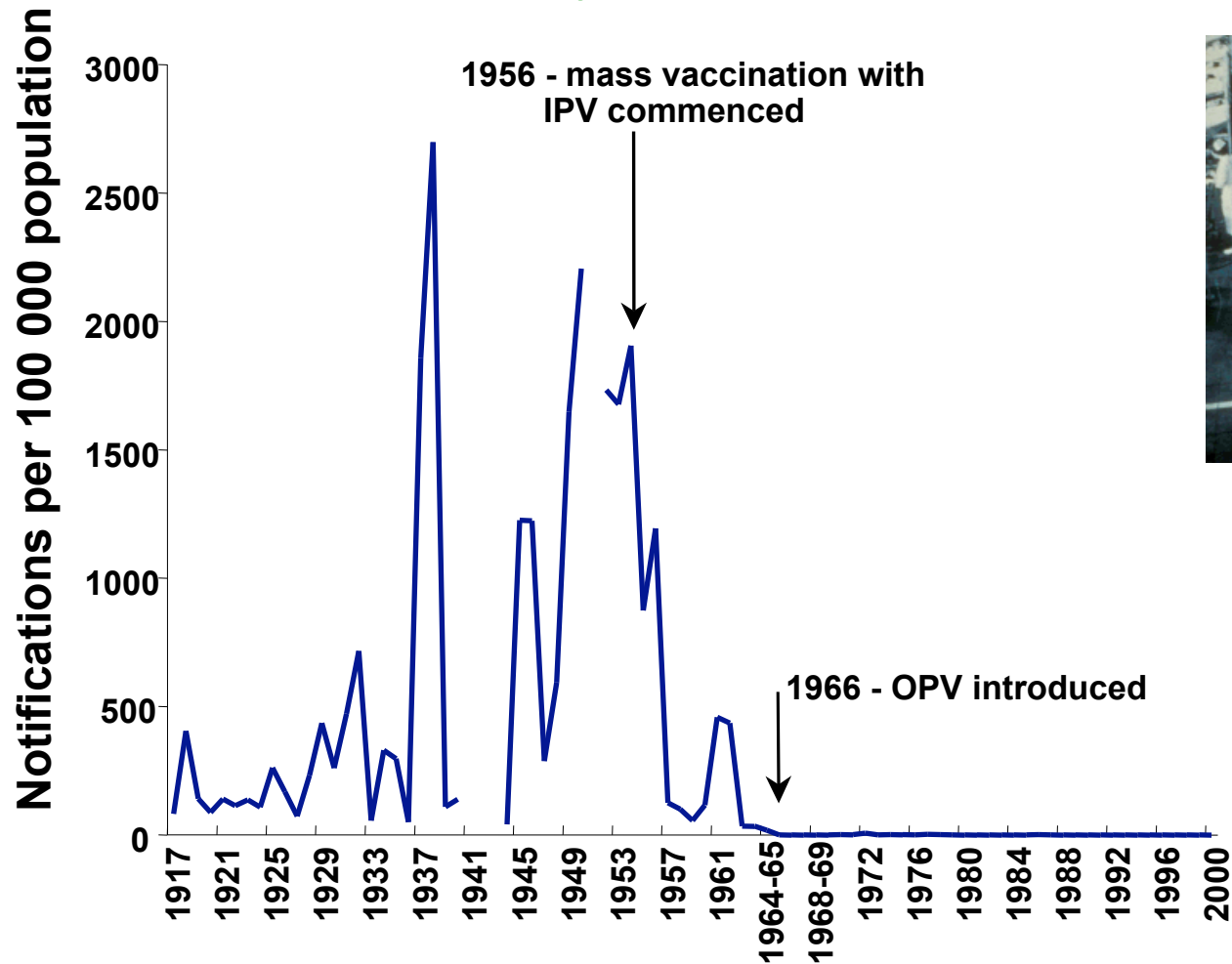
Source: Watson K, ...Lehmann D. *Pediatr Infect Dis J* 2006;25:782-90.

Diphtheria, 1917-2000 Australia



- 56 cases in 1988
- 1 imported case in 2001
- Outbreak in former USSR with disruption of vaccination programs resulted in >4000 deaths
- High vaccination coverage needed to maintain immunity

Polio, 1917-2000 Australia

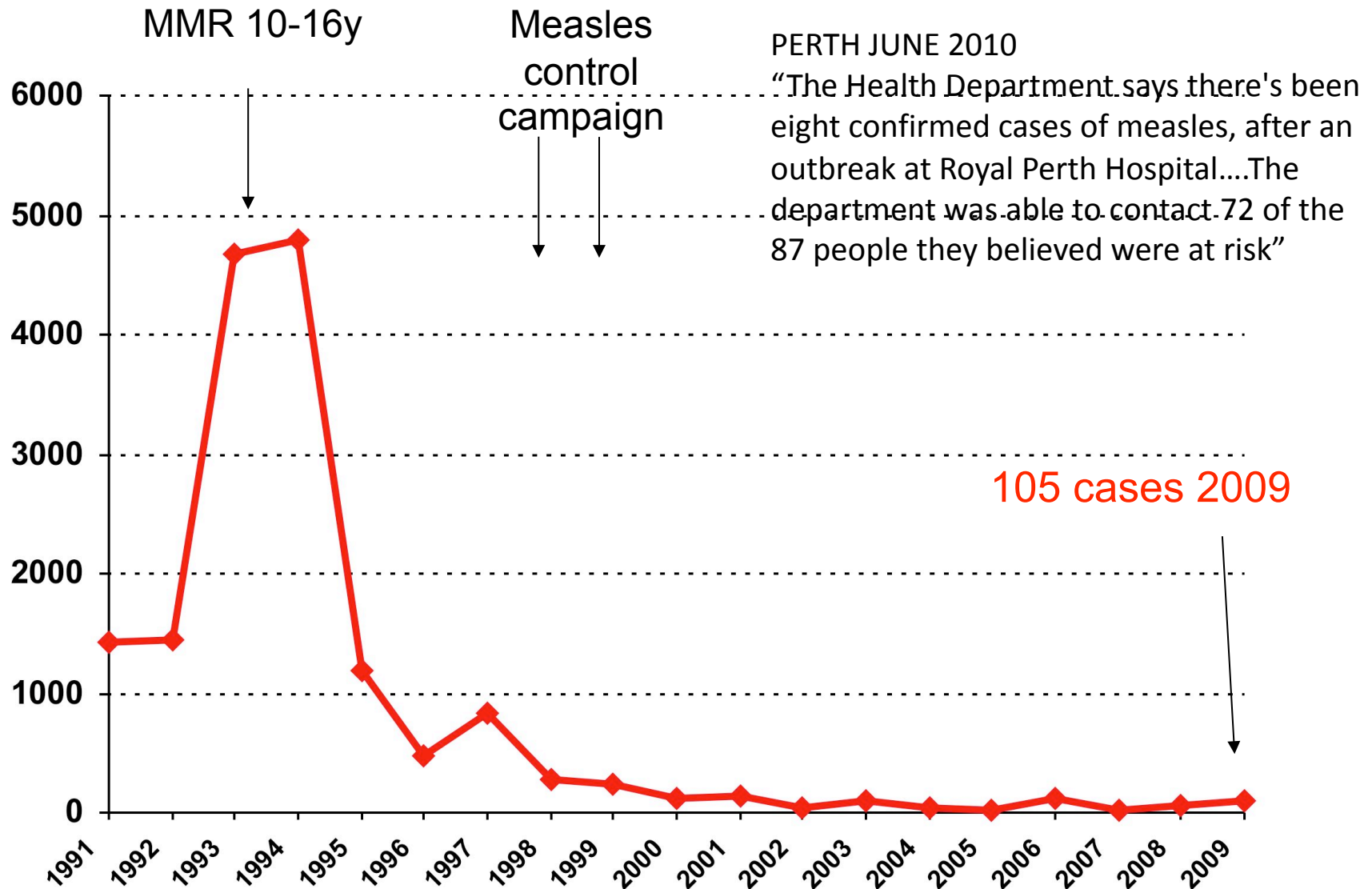


Los Angeles 1952



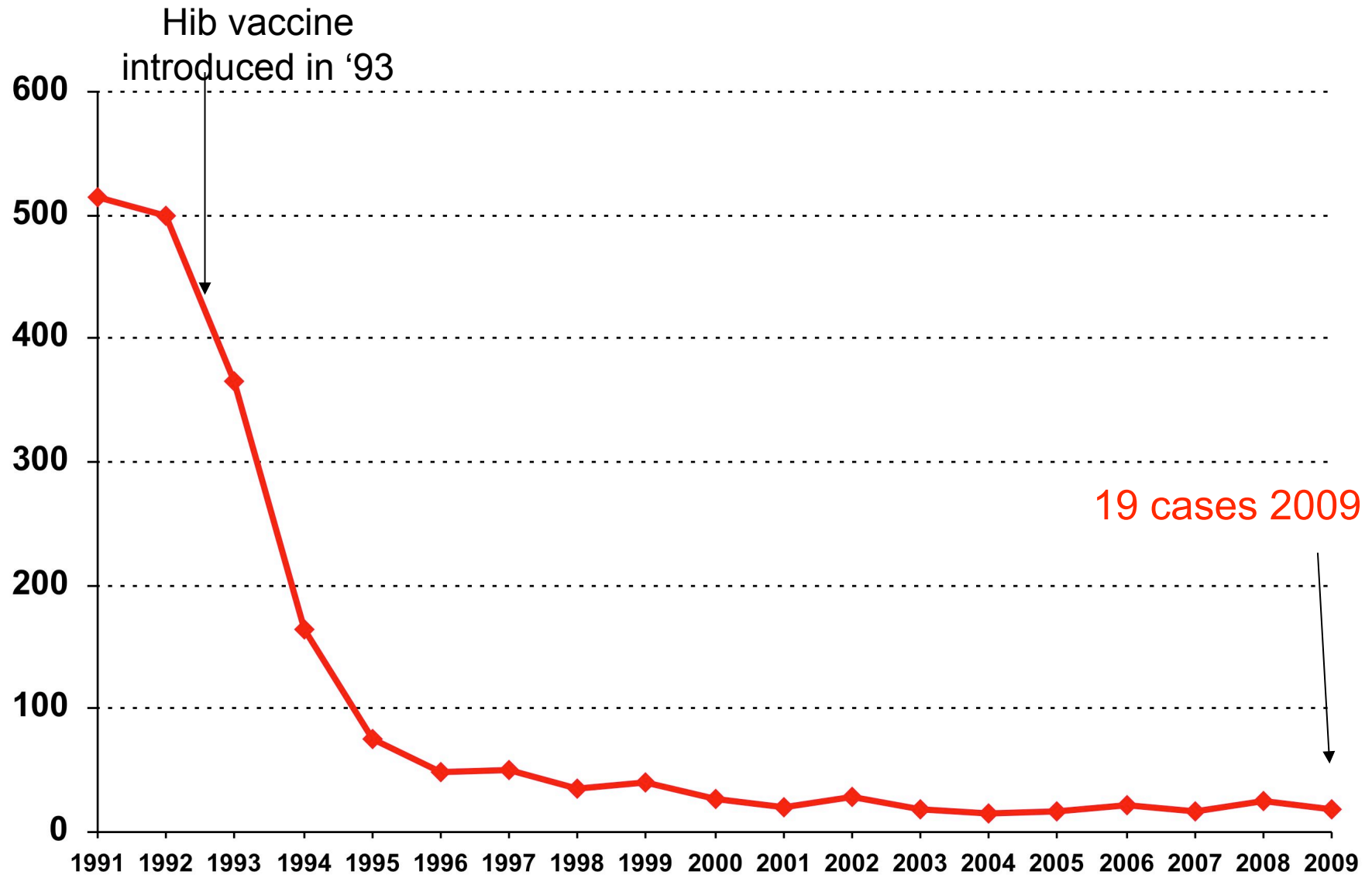
- Australia declared polio-free in 2000
- Have to maintain high vaccine coverage with killed polio vaccine until eradicated globally

Cases of measles in Australia 1991 - 2009



Source: National Notifiable Diseases Surveillance System

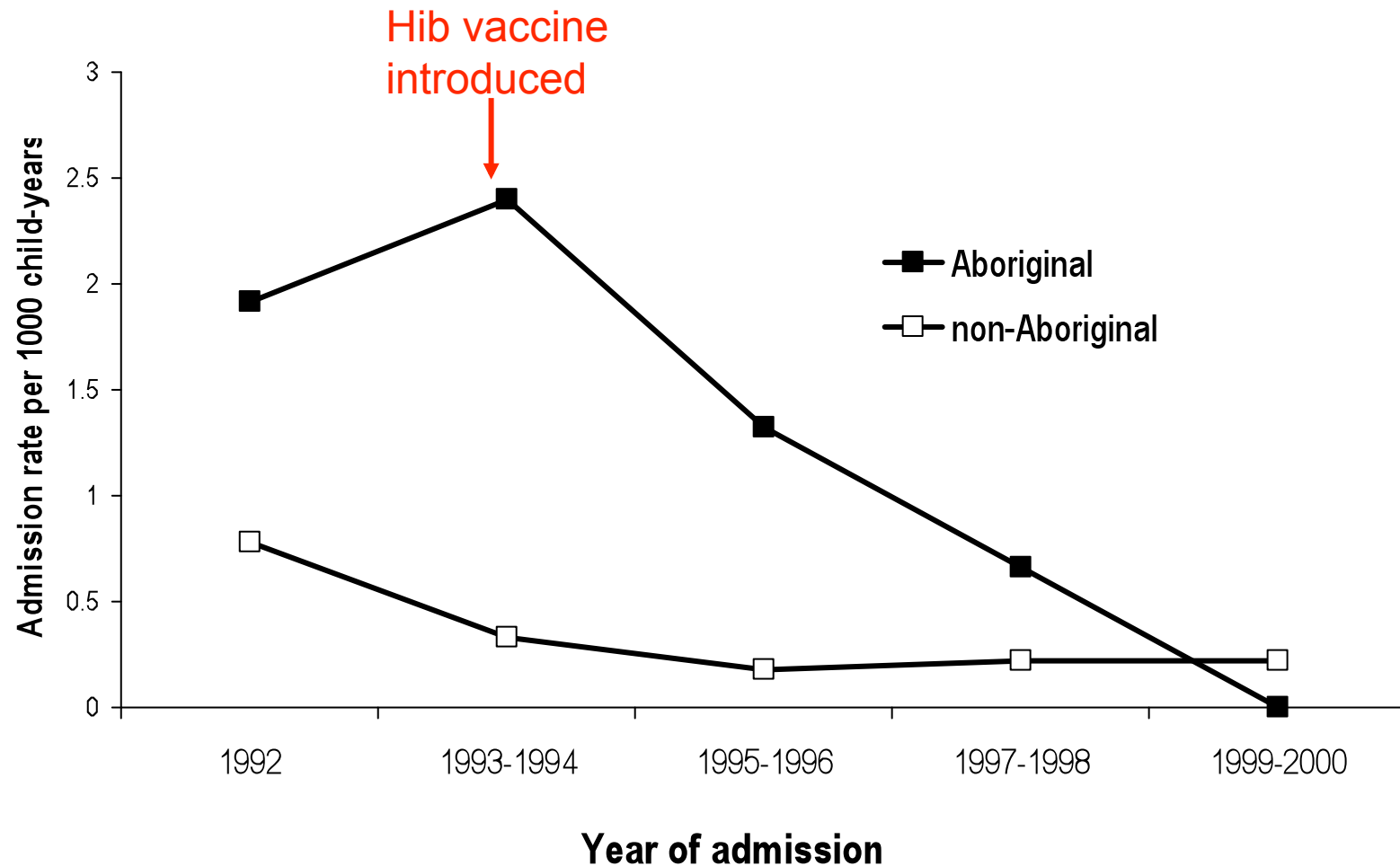
Cases of *Haemophilus influenzae* type B (Hib) disease in Australia, 1991 - 2009



Source: National Notifiable Diseases Surveillance System

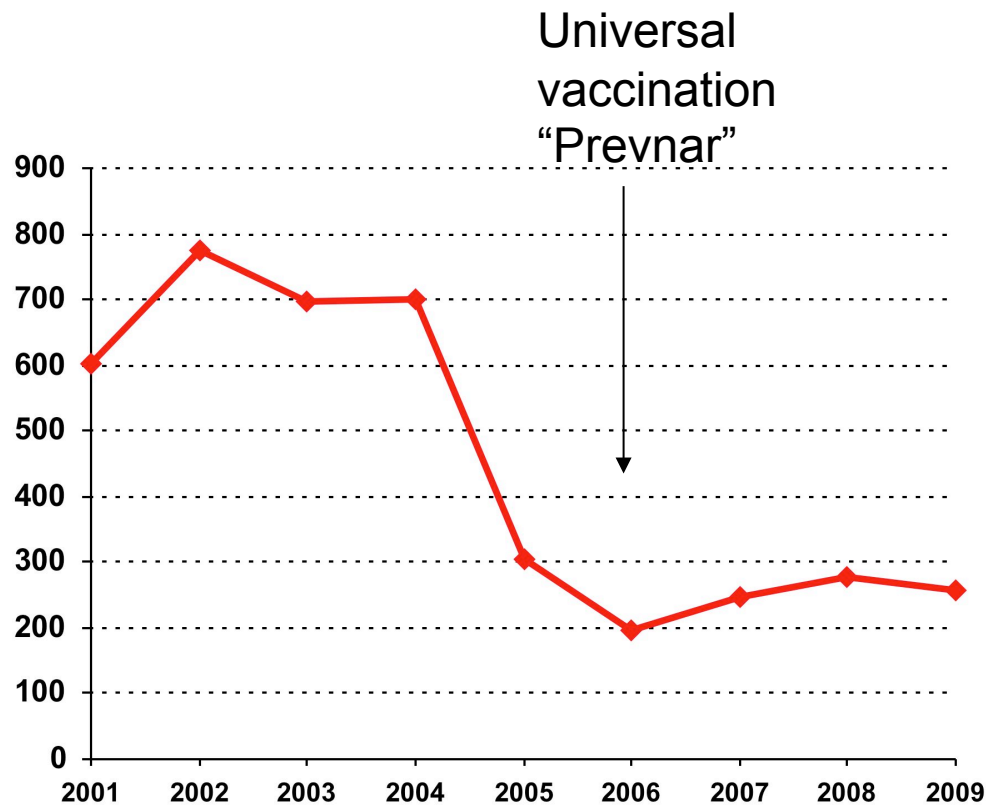
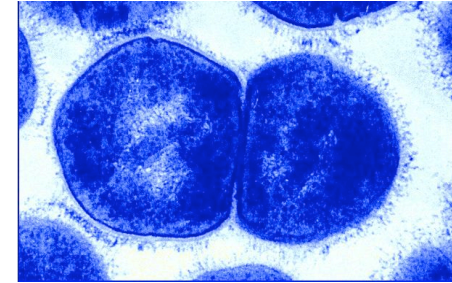
Vaccines help 'Close the gap'

Overall rates of admission to hospital for meningitis in Western Australian children age 12-23mths



Source: Moore H, Lehmann D. Medical Journal of Australia 2006;185:404.

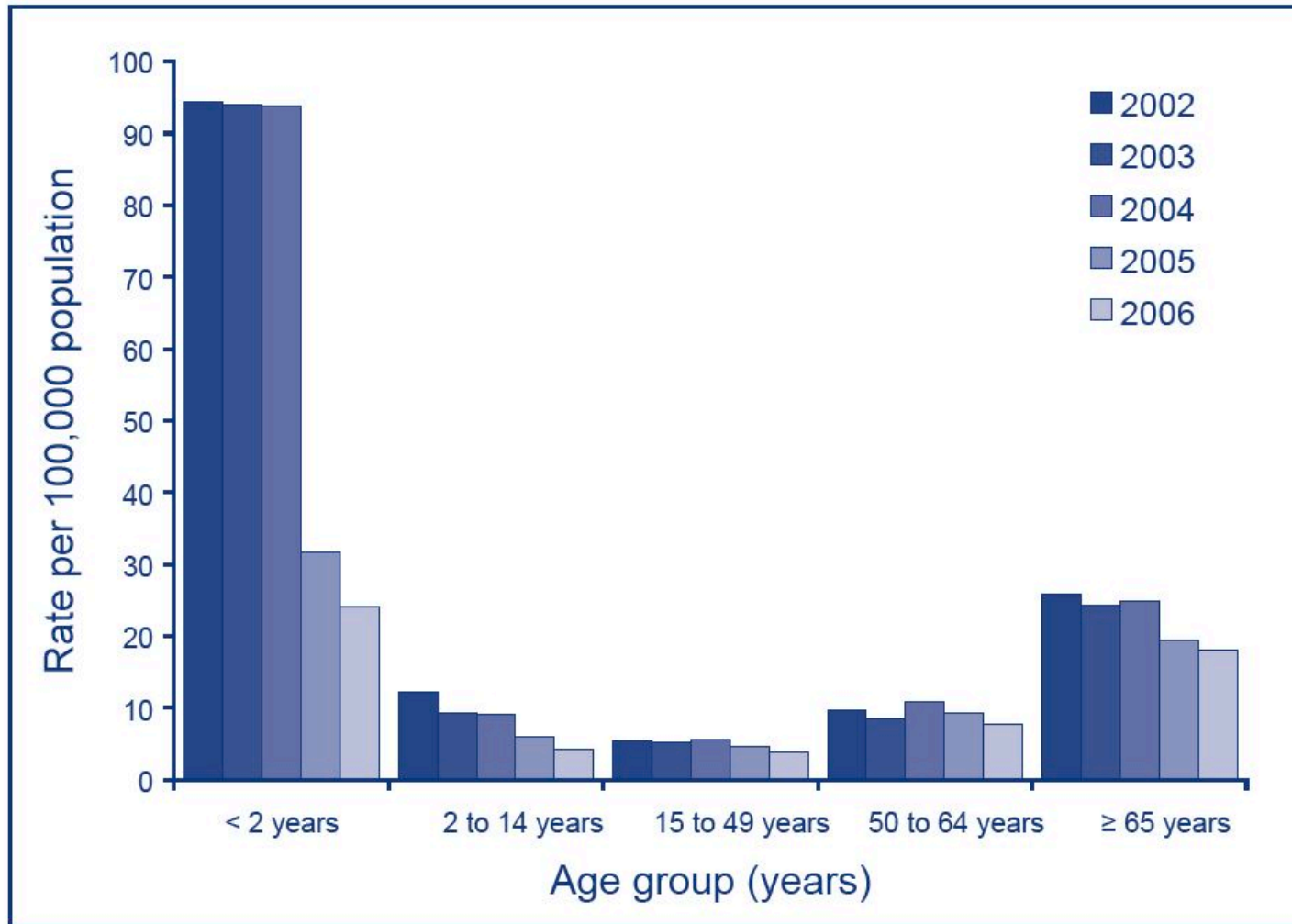
Number of cases of pneumococcal disease in Australia 2001 -2009



- The pneumococcus kills >800000 children annually (worldwide)
- Causes meningitis, pneumonia and infection of blood
- 92 known different types (serotypes) of pneumococcus
- Vaccine covering 7 types licensed in 2001
- Universal program 2005
- Vaccines including 10 and 13 types recently been licensed

Source: National Notifiable Diseases Surveillance System

Notification rate of pneumococcal disease, Australia, 2002 to 2006, by age group



Source: CDI Vol 32 No 1 2008

The Vaccine Cycle

