

Alaska – What have vaccines done for you?



February 2014
ANTHC Immunization Program;
Rosalyn Singleton MD MPH
ris2@cdc.gov
729-3418

Vaccination: an ounce of prevention saves a ton of lives

- Vaccination is a Global Issue: The World Health Organization estimates that vaccination saves between 2 and 3 million lives every year.
- In the US, vaccination has prevented 103 million infections and disease rates are at historic lows – However, 1.5 million vaccine-preventable deaths occur each year around the world.
- Keeping vaccination rates high requires sustained commitment and access to vaccines.

Vaccine-Preventable Disease Success, Alaska

■ BEFORE VACCINES:

- Hib meningitis and sepsis – 40-80 cases/yr in children.
- Hepatitis A – Alaska-wide epidemics with up to 4,000 cases.
- Hepatitis B – 10% of Alaska Natives in some regions.
- Measles outbreaks contributed to high infant mortality.

■ BECAUSE OF VACCINES:

- 0-2 cases of Hib per year!
- No hepatitis A epidemics since vaccine!
- Alaska Natives have the lowest rate of Hepatitis B in the U.S.
- No measles cases in Alaska since 2000!

Polio

- Polio attacks the nervous system and can cause muscle weakness, paralysis or death.
- In 1952 there were 21,000 polio cases in the US – the last US polio case was in 1979.
- Thanks to polio vaccination, polio cases are down 99%; however, polio has recently reemerged in areas that had been polio-free for years.
- Polio is just one plane flight away



Diphtheria

- In 1925 a diphtheria epidemic threatened Nome. The nearest serum was in Anchorage.
- A relay of dog teams rushed the vaccine from Nenana to Nome.
- The serum arrived in time to prevent the epidemic and save hundreds of lives.
- Today diphtheria is a disease of the past because of vaccine.
- However, a US citizen who had refused Td vaccine died from diphtheria after visiting Haiti.



Hib disease

- *Haemophilus influenzae* type b (Hib) causes meningitis, pneumonia, cellulitis, epiglottitis and sepsis in infants & children.
- **Alaska Native Hib disease before Vaccine**
 - 5-10 times higher rate of disease than other US children
 - Younger peak age (4-6 months)
- **Since Hib Vaccine:** Hib disease has decreased >95%



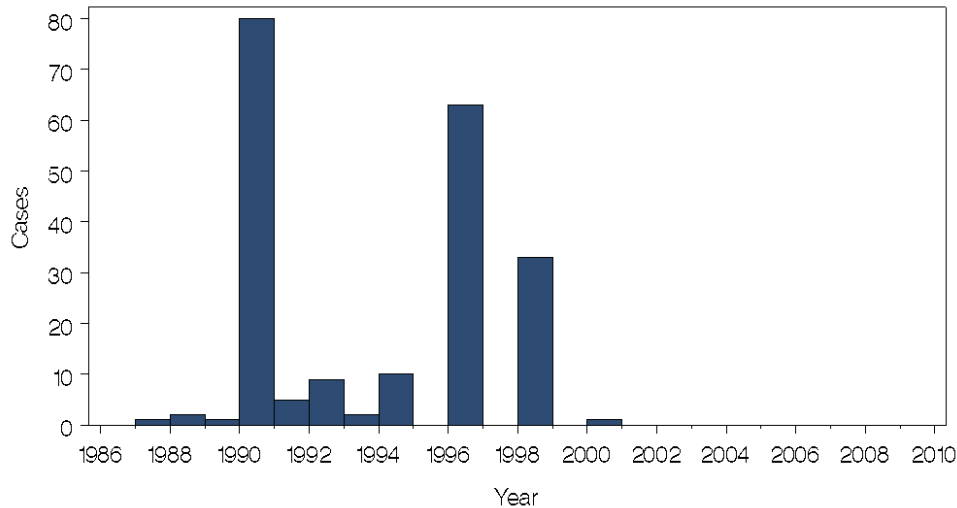
Hepatitis A and B in Alaska

- In 1970s-80 Alaska Natives had the highest rate of hepatitis B infection and liver cancer any non-immigrant group in US
- Alaska also had the highest rates of hepatitis A infections in US in most years up to 1995.
- **Universal vaccination and School requirements have eliminated spread of hepatitis A and B in Alaska**
 - Alaska Native people have the lowest hepatitis B infection rate of any US ethnicity:
 - Alaska has one of the lowest rates of hepatitis A infection of any state.



Measles

- Measles causes a rash, fever, pneumonia and diarrhea, and can leave children blind, deaf or brain damaged.
- Measles deaths have decreased globally by 74%, but measles still kills 450 people each day.
- Although measles is imported into the United States every week, Alaska has had no measles since 2000 – thanks to our 2 dose MMR school requirement



Measles in Alaska 1986-2010

