

The risk of foetal damage if exposed during pregnancy is estimated at:

- 90% in first 10 weeks
- 10-20% by 16 weeks
- Rare after 20 weeks

Vaccine schedule in Ireland

Rubella immunisation with the combined MMR vaccine is recommended for all children at 12 months as part of the primary childhood immunisation programme. A booster dose MMR is recommended at 4-5 years. Single vaccines are not recommended.

Non-immune women of child-bearing age should be vaccinated with MMR vaccine.

4.2.11 Tetanus

Epidemiology of disease and impact of vaccination

Tetanus is an acute often fatal illness caused by a toxin produced by the bacterium *Clostridium tetani*. The bacteria can form spores that can survive in soil for years. The disease is more common in agricultural regions where contact with animal excrement is common and immunisation is inadequate. This occurs more frequently in developing countries. Intravenous drug use has also contributed to outbreaks of tetanus.

High-risk groups in Ireland are the elderly who have never been immunised and injecting drug users.

In Ireland tetanus has been notifiable to the Medical Officer of Health since 1981. Although rare, cases do occur and have been associated with dog bites, gardening injuries and working with horses (Figure 4.11). People who recover from tetanus do not have natural immunity and require a course of tetanus vaccine. Tetanus cannot be transmitted from person to person.

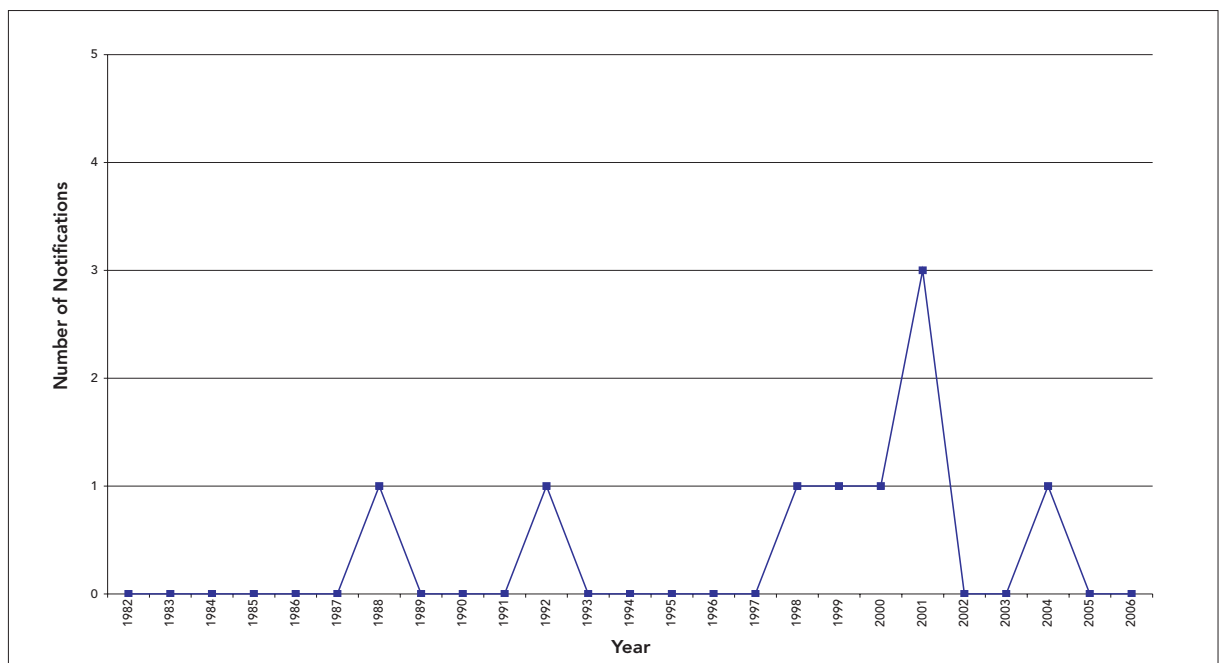


Figure 4.11: Tetanus Cases reported in Ireland 1982-2006.

Source: Health Protection Surveillance Centre

Transmission

Transmission occurs when spores are introduced into the body through a puncture wound, lacerations, burns and trivial or unnoticed wounds. It has also occurred when spores are introduced into the body through injecting drug use and occasionally through abdominal surgery.

Incubation period

The incubation period is 3-21 days but can range from one day to several months depending on the extent and location of the wound. Most cases occur within 14 days - the most severe cases are associated with a shorter incubation period, more heavily contaminated wounds and a worse prognosis.



Photo courtesy of CDC

Signs and symptoms

Initially: muscle stiffness of the jaw ("Lock-jaw") occurs in 50% cases. This is followed by neck stiffness, difficulty swallowing, stiffness of stomach muscles, muscle spasms, sweating and fever

Complications include;

- Fractures
- Hypertension
- Laryngospasm
- Pulmonary embolism
- Aspiration
- Death

Vaccine schedule in Ireland

Tetanus vaccine is administered at 2, 4 and 6 months with diphtheria, pertussis Hib and hepatitis B and IVP (referred to as the "6-in-1" vaccine). A booster dose is given at 4-5 years and at 11-14 years. Prevention of tetanus is dependent on the administration of five doses of tetanus vaccine at appropriate time intervals and early recognition and appropriate treatment of potential tetanus wounds.

4.2.12 Tuberculosis**Epidemiology of disease and impact of vaccination**

Tuberculosis (TB) is an infection of the lungs and other organs caused usually by *Mycobacterium tuberculosis*. Less than 1% of humans acquire bovine TB by ingestion of unpasteurised milk from infected cows or more rarely through airborne spread. Whilst the incidence of TB has declined since the 1950s, the number of TB cases notified has risen annually since 2003 (Figure 4.12).

Some people who are infected do not develop active disease and have latent TB infection. These individuals have a positive tuberculin skin test but normal chest x-ray. They have a 5-10% lifetime risk of developing TB disease.

Transmission

Transmission is from person to person by airborne droplet spread by people with pulmonary or laryngeal TB, predominantly by coughing although sneezing and singing may contribute to spread. The risk of transmission depends on the amount of bacilli in the sputum, the closeness and duration of the contact, and the susceptibility of the contact. People with TB are considered infectious if the bacilli are demonstrable on direct sputum stain.