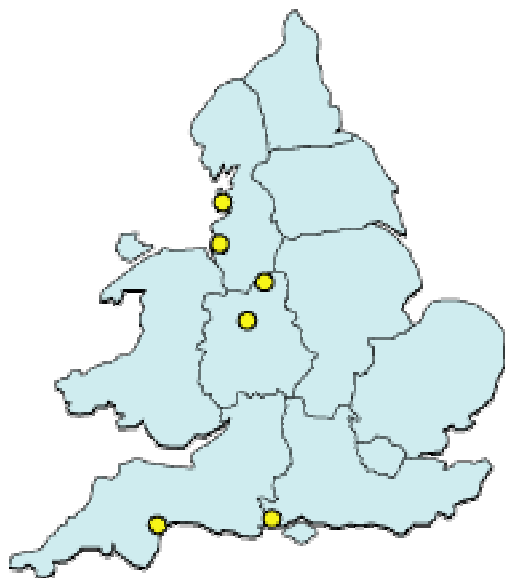


Tetanus: information for health professionals

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Five cases of tetanus have been reported in injecting drug users (IDUs) in England since July 2003 (1). Of these, four were reported in November. Four of the five cases are in females between 20 and 26 years of age. So far, all patients have survived. A sixth female IDU with trismus on admission to the emergency department was reported with onset in week 46. This last patient died of a respiratory arrest, and so far no microbiological confirmation of tetanus is available. Most tetanus cases are, however, clinically diagnosed, with only 14% of 175 cases between 1984 and 2000 being microbiologically confirmed. The geographical distribution of the six cases reported so far is shown below (Figure). Considering that the five most recent cases were reported during the past two weeks, and the fairly widespread geographical distribution, more cases of tetanus in IDUs are expected. Increased awareness is therefore extremely important.

Figure. Map of England and Wales, showing cases of confirmed and probable tetanus in IDUs, England, 1 July – 20 November 2003.



Tetanus in IDUs has rarely been reported in the United Kingdom (UK), in contrast to reports from the United States (US) where IDUs accounted for between 15% and 18% of tetanus cases between 1995-2000 (2). Only two of the 175 tetanus cases identified in England and Wales through enhanced surveillance between 1984 and 2000 were known to be intravenous drug users (3). Both of these cases had multiple skin lesions at needle puncture sites. Potential sources for tetanus infection in IDUs are contaminated drugs, paraphernalia, and contaminated skin. So far, it is unclear which of these factors is responsible for the cases in England, although contaminated drugs would best explain the current pattern of cases observed. If such contaminated drugs are distributed in other countries, cases may be occurring elsewhere in Europe. Intramuscular and subcutaneous drug use in particular are associated with tetanus infections in IDUs (4).

The vaccination status of all the cases is not yet available. Vaccination coverage in the UK has, however, been good for many years (with 80-96% of 2 year olds completing a primary course since 1979) and most cases would be expected to have received some vaccination in the past. Even fully vaccinated individuals

require additional protection through tetanus immunoglobulin for wounds that are especially tetanus prone because they are heavily contaminated, or are puncture wounds (5).

In 2000, an outbreak of serious illness and death among IDUs in Scotland, Ireland, and England, associated with *Clostridium novyi* infection, a particular supply of heroin, and a particular method of preparation and injection (subcutaneous and/or intramuscular injection). A total of 108 cases and 44 deaths was reported in this outbreak (6,7). Female IDUs were shown to be at increased risk, possibly due to the higher prevalence of subcutaneous or intramuscular injection.

Most diagnoses of tetanus are made on clinical grounds alone, and early recognition and treatment with wound debridement, metronidazole, and tetanus immunoglobulin, can be life saving. It is important that IDUs, drug workers, and clinicians are aware of early symptoms. Clinicians in emergency departments, microbiologists, general physicians, and intensive care workers should have a low threshold for considering a diagnosis of tetanus in an IDU. A common first sign of tetanus in adults is abdominal rigidity and stiffening in the jaw until it is locked in position (trismus) (4). This is followed by frequent and painful spasms, progressing in severity and becoming accompanied by dysphagia, increasing respiratory embarrassment and, in the most severe cases, autonomic neurological dysfunction. The overall case fatality ratio in the most recent UK series, which included all age groups and all types of wound, was 29% (3). Case fatality ratio in IDUs has been reported at 18% in the US (2). Early treatment with tetanus immunoglobulin may be life saving.

Primary prevention through changing drug practises in a similar way to that suggested in the outbreak in IDUs in 2000 and includes smoking heroin rather than injecting (<http://www.iduoutbreak.abelgratis.com/> or http://www.hpa.org.uk/infections/topics_az/injectingdrugusers/advice.htm).

Enhanced surveillance of tetanus in England is carried out by the Health Protection Agency Communicable Disease Surveillance Centre. Please report cases to Susan Hahné (susan.hahne@hpa.org.uk).

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