



To: CAHAN San Diego Participants  
Date: May 23, 2014

### **Tattoo-Associated Nontuberculous Mycobacterium Skin Infections**

This health alert informs the medical community about recent San Diego cases of skin infection after tattoo placement caused by nontuberculous mycobacterium (NTM). The County of San Diego Health and Human Services Agency (HHS) requests that providers report similar cases.

#### **Case Descriptions**

Case #1: A previously healthy San Diego resident noted a pruritic rash within 48 hours of receiving a tattoo at a local shop in late February 2014. The individual sought care and on exam was found to have scaly papules and plaques along portions of the tattoo where black ink had been applied. Despite multiple medical visits and treatment, symptoms progressed over four weeks. Medications included topical and oral antibiotics covering typical skin pathogens, as well as topical and oral steroids. Skin biopsy and culture were performed in April and were diagnostic for *Mycobacterium chelonae*/*Mycobacterium abscessus* group.

Case #2: A previously healthy San Diego resident received a black ink tattoo at a local shop in early March 2014. The individual reported a red, pruritic rash around the tattoo site four to five days after tattoo placement. The patient received care from several providers including a course of oral antibiotics and topical steroid cream, but symptoms persisted. Skin biopsy and culture were performed in May and were diagnostic for *M. chelonae*/*M. abscessus* group.

#### **Background on NTM Infections**

Tattoo-associated NTM infections, including those caused by *M. chelonae*, *M. abscessus*, *M. fortuitum*, and *M. haemophilum*, have been previously reported in [the United States](#) and [other countries](#). Many NTM species are found in water. Contamination with these organisms can occur during the manufacturing of tattoo ink, when ink is diluted with non-sterile water at the time of tattoo, or when tattoo needles are rinsed before re-inking.

Tattoo-associated NTM infections can present with a range of findings at the site of the tattoo, from mild inflammation with papules and pustules, to severe abscesses requiring surgical debridement. Infections have been noted in both healthy and immunocompromised persons and symptoms can occur days to weeks after tattoo placement. Differential diagnoses include *Staphylococcal* or *Streptococcal* infection; inflammatory reactions to tattoo ink; flares of dermatologic conditions, such as psoriasis or eczema; and sarcoidosis.

Skin biopsy should be performed and confirmation of NTM infection should include culture or polymerase chain reaction (PCR) testing. Treatment is lengthy and requires multiple antibiotics, as multidrug resistance has been documented. Expert consultation with an Infectious Disease specialist is encouraged.

More detailed information about these infections can be found in recent reports in the [New England Journal of Medicine](#) (includes photos of infections), the [Morbidity and Mortality Weekly Report](#), and [Eurosurveillance](#) (includes photos).

#### **Investigation of Potential Infection Source**

Tattooing and other body art practices are regulated under the [Safe Body Art Act](#) of the California Health and Safety Code. HHS and the County of San Diego Department of Environmental Health initiated an investigation with the California Department of Public Health upon report of the first case. Environmental sampling and case finding are ongoing.

While state and local authorities oversee the practice of tattooing, ink and ink colorings (pigments) used in tattoos are subject to Food and Drug Administration ([FDA](#)) regulation as cosmetics and color additives. The FDA and the Centers for Disease Control and Prevention are also investigating these cases.

### **Recommendations**

San Diego County healthcare providers are requested to:

- Consider NTM infections in the differential diagnosis of infection after tattooing, especially after failure to promptly improve with treatment for typical skin pathogens.
- Inform patients who may be considering tattoos of the potential health risks that may be associated with their application. Useful links for consumers are available from the FDA in [English](#) and [Spanish](#).
- Report any cases of NTM infection associated with tattooing or piercing to the Epidemiology Program by faxing a [Confidential Morbidity Report](#) to 858-715-6458 or by calling 619-692-8499 (Mon-Fri 8-5).

Thank you for your continued participation.

#### **CAHAN San Diego**

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