

## Tattooing and Perinatal HIV/AIDS in Jamaica

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### BACKGROUND

“Tattooing”, now a growing trend in Jamaica, poses an unforeseen threat for transmission of blood-borne pathogens due to unethical and unsterile practices of persons in the art.

### Risk of HIV infection

Tattoo is a design or marking made into or under the skin or mucosa with needles or any other instrument used to puncture the skin whereby the ink or pigments are placed into the marked area of the skin (1, 2). This may pose a health risk as the tattoo process exposes blood and body fluids which may carry blood borne pathogens. The Centers for Disease Control in the United States of America (USA) data collection has no documented cases of HIV transmission through tattooing or body piercing although Hepatitis B and C have been transmitted through some of the practices (3). However, tattooing in the USA has been a closely regulated art. The main concern about tattooing and HIV is bleeding which occurs during the tattoo process and if blood or body fluids of an infected person enters the system of a susceptible recipient they may become infected by the virus if correct sterile procedures are not adhered to. Tattooing may also increase the risk of disease transmission if the correct sterilizing method is not implemented (3–5). Tattoo instruments that were used on more than one person without being sterilized, may be a contributing factor towards the spread of blood-borne pathogens such as Hepatitis B, C and HIV (3–5).

### Tattooing Practices in Jamaica

Working as a HIV Research Nurse with pregnant HIV-infected women in Jamaica, a client disclosed that the neighbourhood tattooist was murdered for spreading HIV in the community. It was further recognized that there were two

HIV-positive women who had tattoos from the same tattooist and they both lived on the same street. This disclosure of a tattooist possibly spreading HIV in a Jamaican community gave rise to serious concern especially with the increasing incidence of HIV/AIDS within the society.

This led to an informal investigation in my antenatal clinic. A HIV-positive antenatal client stated that four friends and herself received tattoos and the tattooist used the same needle on each person after wiping it with alcohol. Another stated that a hairdressing salon in her local community is being used as a tattoo parlour amid hairdressing clients. There are also known tattooists who carry out their trade through home visits. It appears that most clients' choice of a tattoo parlour was based on financial affordability rather than professionalism of the tattooist. We are also aware of two other HIV-infected married women in long term monogamous relationships with their husbands who both remained HIV-negative six months later when retested. The only risk factor for HIV infection in these women was they both reported receiving tattoos on the same day from the same tattooist in Jamaica.

One cannot ascribe the source of HIV infection to tattooing practices with absolute certainty in HIV-infected pregnant Jamaican women who are obviously sexually active. Although, the unprofessional practices and poor infection control methodologies of tattooists in the community would significantly increase the risk of this procedure transmitting blood-borne pathogens including HIV. Although there is a lack of evidence on the transmission of HIV during the tattoo process in the USA where the practice is closely regulated, there is still a high risk factor based on the potential for exposure to the blood and body fluids that occurs through the tattooing process. In Jamaica, where these practitioners are not closely regulated, it would still be challenging to ascribe HIV infection to the tattooing process in sexually active pregnant women. Notwithstanding, clients must gain an understanding of correct tattooing procedures in order to protect themselves and minimize the transmission of blood-borne pathogens. Although the greater risk of transmission is the Hepatitis B and C viruses which are more infectious than HIV and can survive longer outside the body than HIV, transmission from this route still cannot be excluded conclusively. Poor infection control practices among tattooist and body piercers (6, 7) was also a significant concern in other countries, leading to the regulation of the trade (8, 9).

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The most common motive for tattooing in modern times is body decoration. However, it is seen as a custom and is sometimes used in rituals and as a symbol in certain cultures (1, 10). Almost 50% of tattoos are done in women in some settings, many of whom are counsellors, nurses, doctors, lawyers and business managers (11). Tattooing is also linked to alcohol and drug use behaviours in youth (12). In Jamaica, tattoos have become a fashionable trend especially amongst teenagers who display minimal knowledge about the correct sterile procedures to be used in tattooing.

### **Regulating tattooing practices in Jamaica**

Jamaican clients need to identify safe tattooists who are affordable, yet have the knowledge and understanding of the risk of exposure to blood and this knowledge is fully operationalized in their workplace (13, 14). Clients must also ensure that sterile needles are opened in their presence and new ink is always used. Sterile latex gloves should always be used and stringent hand-washing should be performed. Clients must ensure that tattooist maintain regular hygienic practices throughout the tattooing process. It is important that the client asks questions about sterile procedures and also exercises caution in the choice of tattooists.

Personal service workers in Jamaica who provide tattooing or body-piercing services should also be educated on how HIV is transmitted (3–5) and take precautions to prevent transmission of HIV and other blood-borne infections in these settings (9, 13). A risk of HIV transmission does exist if instruments contaminated with blood are not sterilized, disinfected or are used inappropriately between clients. Centers for Disease Control recommends that single-use instruments intended to penetrate the skin be used once only (3, 5). Re-usable instruments or devices that penetrate the skin and/or make contact with a client's blood should be thoroughly cleaned and sterilized between use.

### **The Policy**

A policy that encourages training and certification should be implemented and monitored by public health specialists. Adaptation of the guidelines from the Minnesota Department of Health could be considered in regulating practitioners in the art of tattooing and body-piercing in Jamaica and may include: use of aseptic techniques, maintaining permanent individual records, use of sterile tools and equipment and a suitable physical environment (9).

A tattooist should use aseptic techniques by taking precautions to prevent the spread of infection such as use of germicidal soap to clean the hands of the tattooist and the skin area of the client to be tattooed, dry hands with single use paper towels or some sort of mechanical (air) dryer, prohibiting artists with certain communicable diseases from tattooing. Food, drink and smoking should not be allowed in the work area. Clean apparel and rubber gloves should be worn and sterile tools and equipment should be used. All clean and ready-to-use instruments and dyes should be kept

in a closed container or storage cabinet while not in use, only disposable needles should be used in the tattooing process and a new needle or set of needles should be used on each patron, autoclaving should be used for sterilization of the needle bar tube and needle bar of the tattoo machine before use on each patron. The needle bar tube of the tattooing machine should be cleaned after each use and before being sterilized for use with the next patron. All sharps, including the needles after removal from the needle bar should be stored and disposed of in containers that are rigid, puncture-resistant and leak-proof when in an upright position. Blood and body fluid precautions should be practiced by the tattoo artist when the potential for contact with body and bloody fluids exists in any procedure; the tattoo studio should be kept in a sanitary condition.

A tattooist should maintain permanent individual records of each person tattooed for a minimum of two years (name, address, phone number, date of birth and their signature, signed consent forms with parental consent forms for minors less than age 16 years old and verbal instructions for wound care).

A tattooist should use sterile tools and equipment. A tattooist should sterilize tools and equipment used on one client before using them on another client. The use of defective, dull or rusty equipment should be banned. Tools and equipment should be sterilized by: dry heating in an oven at 160 degrees Celsius for at least one hour or steam pressure treatment in an autoclave; all needles and instruments should be kept in clean, dust-tight containers when not in use.

A tattooist should have a suitable physical environment. Each tattoo establishment should have at least one tattooing room. This room should be separate and apart from all other areas in the establishment and access should be restricted. Patrons should be tattooed only in the tattooing room and each patron should have a separate work station. Furniture and furnishings within the tattooing room should be easily cleanable and maintained in good repair. At least one lavatory with mixing faucets supplied with hot and cold running water under pressure should be provided for every five artists for hand washing and utensil washing. Lavatories should be accessible to the tattooing room such that tattoo artists can wash their hands and return to the tattoo room without having to touch anything with their hands. Access to these lavatories should be restricted to the tattoo artists. Each lavatory should be cleanable, in good repair and kept free of storage. Poisons, including germicidal solutions, used in the tattoo establishment should be stored in covered containers with labels identifying the contents.

These guidelines may also be applied to other newer and more popular high-risk practices and establishments in Jamaica where transmission of blood-borne infections may also occur (9) such as, "body-piercing", "skin braiding" and "body branding", as the medical complications of these practices are far greater than for tattoos (3). Manicurists, pedicurists, hairdressers, barbers and acupuncturists (14) must be

vigilant due to the sharp instruments used in their establishments.

## REFERENCES

1. Saunders CR. 'Customizing the body: The art and culture of tattooing' Temple University Press. 1989.
2. Goldstein N. Tattoos defined. *Clin Dermatol* 2007; **25**: 417–20.
3. HIV and its transmission. Centers for Disease Control and Prevention, National Center for HIV/AIDS, STD and TB Prevention. Divisions of HIV/AIDS Prevention. Last reviewed March 8, 2007. [www.cdc.gov/hiv/resources/factsheets/transmission.htm](http://www.cdc.gov/hiv/resources/factsheets/transmission.htm), accessed August 27, 2007.
4. CDC Update. Universal precautions for preventing transmission of human immunodeficiency virus, hepatitis B virus and other bloodborne pathogens in healthcare settings. *Morb Mort Wkly Rep* 1988; **37**: 377–88.
5. CDC. Guidelines for prevention of transmission of human immunodeficiency virus and hepatitis B virus to healthcare and public safety workers. *Morb Mort Wkly Rep* 1989; **38(S-6)**: 1–36.
6. Oderdorfer A, Wiggers JH, Bowman J, Lecathelinas C. Infection Control Practices among tattooists and body piercers in Sydney, Australia. *Am J Infec Control* 2003; **31**: 447–56.
7. Raymond MJ, Pirie PL, Halcon LL. Infection control among professional tattooists in Minneapolis, St Paul, MN. *Public Health Rep* 2001; **116**: 249–56.
8. Raymond MJ, Halcon LL, Pirie PL. Regulation of tattooing in Minneapolis and St Paul, Minnesota: tattooists' attitudes and relationship between regulation and practice. *Public Health Rep* 2003; **118**: 154–61.
9. Tattooing Information and Guidelines for Tattooists and Consumers in Minnesota, [www.health.state.mn.us/divs/hpsc/hop/tattoo/brochure.html](http://www.health.state.mn.us/divs/hpsc/hop/tattoo/brochure.html), Minnesota Department of Health, accessed 27 August, 2007.
10. Burchell G. 'Memories of a tattooist' Oldbourne, 1958.
11. Armstrong ML. Career-oriented women with tattoos. *Image J Nurs Sch* 1991; **23**: 215–20.
12. Braithwaite R, Robillard A., Woodring T., Stephens T., Arriola KJ. Tattooing and body piercing among adolescent detainees: relationship to alcohol and other drug use. *J Subst Abuse* 2001; **13**: 5–16.
13. Can I get HIV from Getting a Tattoo or through Body Piercing? CDC's National Immunization Program. [www.cdc.gov/hiv/pubs/faq/faq27.htm](http://www.cdc.gov/hiv/pubs/faq/faq27.htm). Accessed August 27, 2007.
14. Vittecoq D. Acute HIV infection after acupuncture treatments. *Lancet* 1989; **320**: 259–1.