

Supporting evidence for “Tiny amounts of HIV outside the body are a threat, wet or dry” article in the Times of Swaziland by Devon Brewer and John Potterat.

The excerpts from the article below include numeric citations to the corresponding sources (listed at the end of this document):

In the 2006-2007 Swaziland Demographic and Health Survey, 98% of those interviewed said that people could get infected from the open wounds or sores of an HIV infected person (1).

However, Swazis are generally unaware that sharing sharp instruments, such as razor blades, is a risk for HIV infection (1).

Even an amount of infected blood so small that it cannot be easily seen with the naked eye can cause infection (2,3).

Since 1985, research has shown that HIV in blood can stay infectious for a week or more at room temperature, whether wet or dry (2,4).

Wiping, rinsing with water, and cleaning with common disinfectants do not kill HIV. Only high heat (such as boiling) and special chemicals kill HIV (2).

Other blood-borne viruses that cause serious disease, such as hepatitis C virus, can also stay infectious for long periods outside the body in small amounts of either wet or dried blood (5).

For example, Johns Hopkins University in the USA teaches healthcare providers in poor countries that HIV in blood cannot survive for more than one minute when exposed to the air (2). This message has even been spread in HIV prevention materials in Zimbabwe and perhaps elsewhere, too (1). Our colleague, David Gisselquist, has called such messages “not only dead wrong, they are deadly” (2).

In rich countries, health care providers and public health officials approach blood outside the body differently. They treat all blood contaminated surfaces and instruments as possibly infectious, even if the blood has been dry for a long period (6).

By recent estimates, 19% of Swazis age 2 and older (and 26% of those age 15 to 49) are HIV infected(7). The risk is extremely high in Swazi hospitals, with 70% of in-patients estimated to be HIV positive (8).

In western Kenya, adults in the Kisii ethnic group are much more aware of how long HIV survives outside the body than adults in the Luo ethnic group. The Kisii are also much less likely to be HIV infected than the Luo (4).

Sources

1. Brewer, D.D.. Knowledge of blood-borne transmission risk inversely associated with HIV infection in sub-Saharan Africa. Unpublished manuscript, available at <http://hivrisk.info/BrewerKnowledgePaper5-7-10.pdf>.
2. Gisselquist, D. (2007). Points to consider: Responses to HIV/AIDS in Africa, Asia, and the Caribbean. Adonis and Abbey Publishers Ltd, London. Available at <http://sites.google.com/site/davidgisselquist/chapter8>.
3. Reid, S. and Juma, O.A. (2009). Minimum infective dose of HIV for parenteral dosimetry. *International Journal of STD & AIDS*, 20, 828-833.
4. Ounga, T., Okinyi, M., Onyuro, S., et al. (2009). Knowledge of HIV survival on skin-piercing instruments among young adults in Nyanza Province, Kenya. *International Journal of STD & AIDS*, 20, 119-122.
5. Ciesek, S., Friesland, M., Steinmann, J., et al. (2010). How stable is the hepatitis C virus (HCV)? Environmental stability of HCV and its susceptibility to chemical biocides. *Journal of Infectious Diseases*, 201, 1859-1866.
6. Centers for Disease Control and Prevention (1999). Universal Precautions for Prevention of Transmission of HIV and Other Bloodborne Infections. Available at http://www.cdc.gov/ncidod/dhqp/bp_universal_precautions.html.
7. Central Statistical Office (CSO) (Swaziland) and Macro International Inc. (2008). Swaziland Demographic and Health Survey 2006-07. Central Statistical Office and Macro International Inc., Mbane, Swaziland.
8. Mordaunt, A. (2007). 70% of admitted patients HIV positive. *Times of Swaziland*, October 11.