

LETTER TO THE EDITOR

Incidence of needlestick injuries among Ugandan student nurses in a rural hospital

P Hulme

NHS, Manchester, United Kingdom

Submitted: 28 February 2009; Published: 15 May 2009

Hulme P

Incidence of needlestick injuries among Ugandan student nurses in a rural hospital
Rural and Remote Health 9: 1185. (Online), 2009

Available from: <http://www.rrh.org.au>

Dear Editor

The World Health Organisation estimates there are approximately 3 million cases of needlestick injury (NSI) in healthcare workers (HCW) each year, with 90% of these occurring in developing countries¹. Student nurses are thought to be at high risk of NSI due to poor technique, inexperience and poor use of universal precautions². There has been little research into the incidence of NSI in African HCW.

Method

Anonymous questionnaires were given to all students in years 1 to 3 at Kuluva School of Comprehensive Nursing in Arua District in Uganda.

Results

Questionnaires were completed by 79 of 84 (94%) students. The results showed that 20 of 79 students (25.3%) had suffered an NSI; and 50% of the NSI cases were from potentially infective sources (Table 1).

Table 1: Sources of potentially infective needlestick injuries

Serostatus of patient	No. cases
HIV Positive	1
HIV Negative	10
Unknown serostatus	9

The mechanisms of injury in the cases of NSI were variable see (Table 2).



Five (25%) of the NSI occurred in students not wearing gloves. There was no uptake of PEP where it was indicated, despite availability.

Table 2: Mechanisms of needlestick injuries

Mechanism of Injury	No NSI
IM Injection	5
Removing sutures with a blade	1
IV Cannulation	4
Assisting in theatre	4
Re-sheathing needle	2
Putting needle into a full sharps box	2
Inappropriately discarded sharps	2

NSI, Needlestick injury.

Discussion

Needlestick injury is a common problem encountered by student nurses and may lead to HIV, or hepatitis B or C infection³. In 16 (80%) of the NSI cases the cause was the students' poor technique or practice. The other four cases occurred in the operating theatre and were accidentally caused by the surgeon performing the operation. All these cases could potentially have been prevented by better technique, concentration and education.

Post-exposure prophylaxis (PEP) has been shown to reduce the risk of HIV transmission⁴ but in this study PEP was not used by any students despite it being clearly indicated. The reasons for not taking PEP may include perceived stigma or fear of taking antiretroviral drugs, the lack of a formal reporting system, inexperience and poor awareness of the risk of disease transmission.

Nine cases of NSI occurred with patients of unknown serostatus, and suggested the students were not ascertaining the HIV status of their patients. Reasons for this could be that the student was too afraid or embarrassed to ask; afraid

of letting the in-charge nurses know what had happened; ignorant of the risk; or because the patient refused permission to test their blood. The importance of determining the serostatus of the patient should be emphasised to students because it will permit appropriate use of PEP and discourage inappropriate use.

Conclusion

Needlestick injuries are a common occupational hazard for student nurses due to poor technique and human error. Almost all cases are preventable. Good education with an emphasis on universal precautions, combined with the safe disposal of sharps and the appropriate use of PEP must remain at the forefront of the battle to reduce the incidence of NSI, and the risk of the transmission of blood-borne diseases in developing countries.

Peter Hulme, MBChB
Kuluva Hospital, Arua, Uganda

References

1. World Health Organisation. *Health care worker safety aide memoire*. Geneva: WHO, 2003.
2. Ofili A, Sogbesan S. Knowledge and practice of universal precautions among student nurses at a Nigerian teaching hospital. *Africa Journal of Nursing and Midwifery* 2003; **5(2)**: 39-43.
3. Culver J. Preventing transmission of blood-borne pathogens: a compelling argument for effective device-selection strategies. *American Journal of Infection Control* 1997; **25(5)**: 430-433.
4. Gerberding J. Prophylaxis for occupational exposure to HIV. *Annals of Internal Medicine* 1996; **125(6)**: 497-501.