The Experience of Ugandan Nurses in the Practice of Universal Precautions

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In Uganda, nurses do not always practice universal precautions unless they know the patients' HIV status. In our study, focused ethnography was used to explore the experiences of Ugandan nurses in the practice of universal precautions while caring for persons living with HIV. In-depth interviews were completed with 16 participants from a variety of units at a large teaching hospital in Uganda. Although participants were knowledgeable about universal precautions, the primary challenge to the practice of universal precautions was the inadequate supply of resources, both material and human. Despite challenges, the nurses displayed an enthusiasm for their work and a dedication to provide the best possible care for patients. The findings highlight the urgent need for governments and institutions, particularly in resource-constrained countries, to develop and implement policies related to universal precaution practice and to provide a consistent supply of protective equipment to ensure that universal precautions are consistently used.

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The risk of blood-borne pathogen transmission from health care workers (HCWs) to patient, and vice versa, is minimal (Shafran et al., 2010). Shafran and colleagues (2010) estimated that the risk per needle-stick injury from an infected, untreated source patient to a susceptible recipient is 30% for hepatitis B virus, 1.8% for hepatitis C virus, and 0.3% for HIV. Although blood-borne exposure results in substantially fewer new HIV infections each year than other routes of transmission, the direct exposure to blood is still the most efficient means of transmission. Effective measures exist to prevent HIV transmission resulting from needle-stick injuries and other exposures in health care settings, but many countries are making inadequate use of these highly effective tools.

HCWs, and particularly nurses, are at an increased risk of preventable, life-threatening occupational infections (Sadoh, Fawole, Sadoh, Oladimeji, & Sotiloye, 2006) because they carry out procedures that may put them at risk. Universal precautions are a set of practices designed to protect HCWs and patients from infection with a range of pathogens including blood-borne viruses (Centers for Disease Control and Prevention [CDC], 1987; Sadoh et al., 2006). In 1970 the first *Blood-borne Pathogen Guidelines from the Centers for Disease Control (CDC) Isolation Techniques for Use in Hospitals* were published; these guidelines are now known as universal precautions (Siegel, Rhinehart, Jackson, &

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Chiarello, 2007). In addition to protecting the patient and the HCW from blood-borne diseases, universal precautions eliminate the need for specific isolation procedures for patients known to have a blood-borne disease (CDC, 1987) and protect the privacy of HIV-infected patients and caregivers (Osterman, 1995). Universal precaution practices involve hand washing; wearing gloves and, at times, double gloves; sterilization of equipment; and use of protective eyewear whenever contact with blood or other body fluids is anticipated (CDC, 1987). Universal precautions also require the non-re-capping of hypodermic needles after use and the immediate disposal to a biohazard container for contaminated objects. The practice of universal precautions requires that the highest level of barrier protection methods, sterilization of equipment, and appropriate use of disposable equipment be used for all patients without regard to HIV serostatus (CDC, 1987). Gammon, Morgan-Samuel, and Gould (2008) argued that the practice of universal precautions also involved decontamination of equipment and the environment, patient placement, and linen and waste management.

It is not feasible, cost-effective, necessary, or even helpful to test all patients for all pathogens prior to giving care (Sadoh et al., 2006; Wu et al., 2008). Therefore, universal precautions have been recommended when caring for all patients, regardless of diagnosis (CDC, 1987). Despite this recommendation, HCWs, and particularly nurses (Kumakech, Achora, Berggren, & Bajunirwe, 2011), often find it difficult to translate the principles of universal precautions into practice and may be noncompliant in their use (Aultman & Borges, 2011; Cutter & Jordan, 2004; Reda, Vandeweerd, Syre, & Egata, 2009). Several authors (Gammon et al., 2008; Kumakech et al., 2011) reported that practitioners were selective in the application of universal precautions and that compliance with infection control precautions was suboptimal. Studies have shown that nurse compliance with universal precautions is affected by the availability of protective equipment, the perceived commitment of management to safety, and perceptions that universal precautions interfere with job performance (Lee, 2009).

When practicing universal precautions in a low-income country, resources may be insufficient and the number of patients may be overwhelming (Aggarwal et al., 2012; Fournier, 2004). Several authors (Furin, Haidar, Lesia, Ramangoela, & Rigodon, 2012; Relf et al., 2011) have commented on the challenges that confront nurses in Africa, where they have to cope with a very high burden of care for HIV-infected patients, colleagues, and families, while at the same time trying to cope with a shortage of HCWs. In such instances, nurses are still expected to ensure the best patient outcomes and, in doing so, they may compromise their own and their patients' safety. In a study to explore occupational exposure of Ugandan HCWs to HIV, Kumakech and colleagues (2011) reported that less clinical experience and work in a surgical unit were risk factors for occupational exposure to HIV. In a similar study, Odongkara and colleagues (2012) found that almost half (48%) of the HCWs in their northern Uganda study had been exposed to HIV-infected body fluids in the previous 5 years and that HCWs with less experience were more likely to have been exposed to HIV. Ugandan nurses typically do not practice universal precautions unless they know their patient's HIV status (Fournier, 2004); this may represent an effort to cope in the context of limited resources. Harrowing and Mill (2010) reported that Ugandan nurses suffered physical, spiritual, and psychological symptoms due to their inability to provide optimal care for their patients and argued that these symptoms were evidence of moral distress.

Based on the literature review, it is evident that the decision to practice universal precautions in low-income settings is made within a challenging context. There has been limited investigation of the use of universal precautions by nurses in low-income countries such as Uganda where the burden of disease is higher and resources are fewer. In deciding to practice universal precautions, nurses must balance the risk to themselves and their patients with the availability of resources. Previous research has demonstrated that Ugandan nurses experience moral distress due to the inability to provide optimal care for their patients using the available resources. Therefore, the purpose of our study was to explore the experience of Ugandan nurses in the practice of universal precautions and to identify factors that influenced the use of universal precautions by nurses while caring for persons living with HIV. The specific research question that guided the study was, "What is the experience of Ugandan nurses in the practice of universal precautions?"