



**Service Priorities and Programmes**  
**Electronic Presentations**

**Convention ID:** 1003

**Submitting author:** Ms Man Wai Leung

**Post title:** Advanced Practice Nurse, Prince of Wales Hospital, NTEC

**Back to the Basics - Reducing Percutaneous Injuries of Staff Nurses in Operating Theatre**

*Leung MW (1), Kwok LM (1)*

*Operating Theatre, Prince of Wales Hospital*

**Keywords:**

operating theatre

sharps injury

percutaneous injury

nurse

**Introduction**

Operating room (OR) nurses are very susceptible to percutaneous injuries, as they are constantly exposed to various sharps. Such occupational hazard cannot be overlooked as it can lead to blood-borne infections. Thus, a CQI program was implemented to reduce percutaneous injuries in OR. A new training method was employed in 3Q11 for all newly-recruited OR nurses. The training, aside from traditional slide presentation, was amended by adding demonstration and return demonstration session about sharps handling. Common causes of percutaneous injury were also shown and discussed. Besides, the use of hands-free technique was emphasized by encouraging staff to use a simple blue kidney dish as neutral zone in 4Q11. Yet, their effectiveness had to be assessed. To facilitate future planning, understanding the injury mechanism, and the relationship between injured nurse's experience and the occurrence of percutaneous injury, was also essential.

**Objectives**

1. To explore the relationship between OR experience and percutaneous injury occurrence. 2. To identify the percutaneous injury mechanism. 3. To evaluate the effectiveness of the new training method and the use of neutral zone.

**Methodology**

The number of OR nurses suffering from percutaneous injuries from 2006 to 2012 was reviewed and the causes of injury were categorized. Their OR experience was also measured.

**Result**

Total no. of percutaneous injuries from 2006 to 2012: 71 cases 1. Injured staff OR experience: It was categorized into 3 groups: Group 1 - "less than 1 year experience", Group 2 - "1 year experience or above ~ less than 5 years experience", Group 3 - "5 years experience or above" T-test results: i) Group 1 vs Group 2:  $P = 0.4839$  (not statistically significant) ii) Group 1 vs Group 3:  $P = 0.0034$  (statistically significant) iii) Group 2 vs Group 3:  $P = 0.0058$  (statistically significant) 2. Injury mechanism:

i)Improper handling: 32% ii)Surgeon-inflicted: 23% iii)Unattended sharps / improper sharps placement: 21% iv)During sharps retrieval: 13% v)During sharps transfer: 7% vi)During sharps discard: 3% vii)Unknown cause: 1% 3.Effectiveness of the new training method and the use of neutral zone: The number of percutaneous injuries decreased from 18 to 6 between 2011 and 2012. Implications: It is misconception that junior nurses suffer more percutaneous injuries. In this study, the more experience OR nurses had, the more susceptible they were to percutaneous injuries. Contributing factors could be multiple. The new training method and the use of neutral zone were found to be effective. Future training should focus more on correcting improper sharps handling and placement. Aside from training for nurses, surgeons should also be taught the proper sharps handling technique.