DO NEEDLES WITH SAFETY DEVICES REDUCE THE RISK OF NEEDLESTICK INJURIES IN HEALTHCARE WORKERS IN INPATIENT HOSPTIAL SETTINGS?

Maddy Fisher: 11002492

The facts:

- Healthcare professionals are at a significant risk of needle stick injuries. The risk of transmission for HIV following a needle stick injury is approximately 0.3%, 3% for Hepatitis C and 30% for Hepatitis B.
- There is no immunization available for HIV, and therefore the reduction of needlestick injuries remains the main preventative strategy.
- Safety devices come in a number of forms, including needle-free IV systems or the use of passive or manually activated safety devices including needle guards and retractable safety syringes.
- The United States and the European Union have made the use of safety devices compulsory. These devices are still not widely used in New Zealand.

Literature Review:

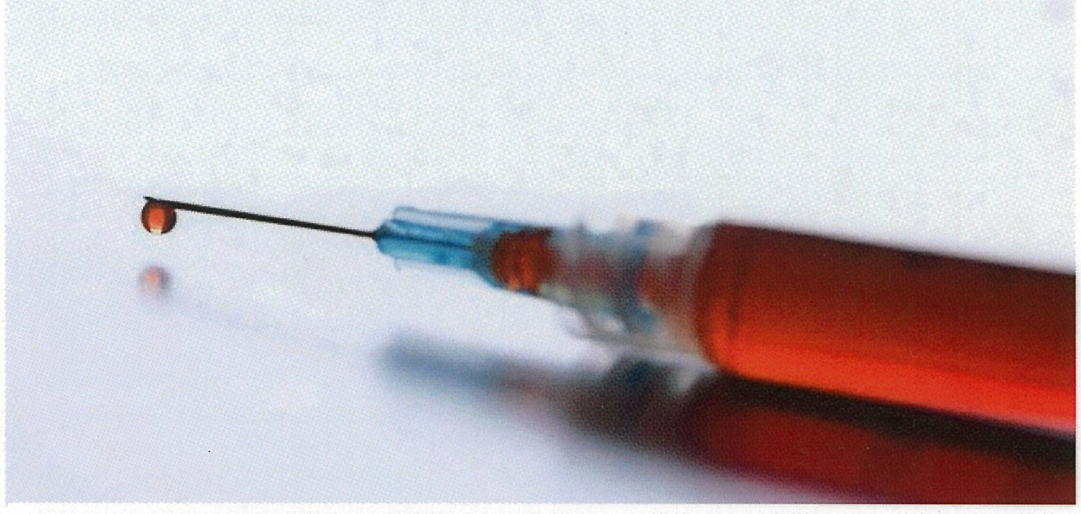
- Each study resulted in a reduction of needlestick injuries from between 55% and 74%.
- These studies show that the use of relatively simple protective needle safety devices and interactive education are effective measures for reducing needle stick injuries.
- Education and the use of these devices appear to be as important as their use alone.
- Passive (fully automatic) safety devices were associated with the lowest needle stick injury rate. 70x more needlestick injuries were reported when using safety devices that were manually activated.

Implications for practice

- None of the papers reviewed mentioned the long-term healthcare costs of infection to staff but both the personal and financial consequences are high.

- In a country with a relatively low incidence of non- immunisable disease (Hepatitis C and HIV) then a cost benefit analysis would be necessary although this excludes the personal cost to individuals.

PICOT CATEGORY	INFORMATION RELATING TO QUESTION	EXPLANATION
POPULATION	Healthcare workers in inpatient hospital settings	This is a critical health issue to nursing staff due to a number of contractible diseases.
EXPOSURE (INTERVENTION)	Needles with safety engineered devices	I will look for articles that have used an experimental design that compare the needle stick occurrence using needles with safety engineered devices.
COMPARISON/ CONTROL	Needles without safety engineered devices	To find out if the safety engineered devices are working, we must compare them to normal needles.
OUTCOME	Reduction in rate of needle stick injuries	I am interested to find out whether the safety engineered devices really reduce the number of needle stick injuries in healthcare workers
TIME	Not relevant	Not relevant



Recommendations

- Studies have shown that relatively simple protective needle safety devices and interactive education are effective measures for reducing needle stick injuries. New Zealand hospitals should enforce the use of safety engineered needle devices.
- Educational seminars should be offered to provide information about the issues associated with needlestick injuries, as well as demonstrations of how to use the devices properly.

References

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