

WHEN NEAR ENOUGH, IS NOT GOOD ENOUGH

Reducing Sharps Injuries in Hospital Wards

Author

Peter Delipoulos B.E.(civil), General Manager, PDMedical Pty Ltd
Disclosure: PDMedical is the manufacturer and distributor of the Sharps Caddy

Introduction

To tackle the problem of needle stick injuries, PDMedical engaged with the infection control nurses of St Vincent's Private Hospital Melbourne and developed the Sharps Caddy.

The infection control nurses and their clinical advisor were not prepared to accept a "near enough is good enough" approach to minimising the risk of sharps injuries in the wards to nurses and the potential consequences of transmitting a blood borne virus to them.

This is an example of effective collaboration and innovation between health workers and experts external to health care sector.

**How nurses and business
can successfully
collaborate and innovate**

Background

A problem in need of a solution:-

- In Australia, it is estimated that over 18,000 nurses and other health care workers suffer needlestick and sharp object injuries every year.
- Needlestick injuries are associated with potentially life threatening blood borne diseases.
- Injury often results in significant stress, emotional fear and anxiety for the health care worker and their family.
- Reducing sharps injuries can reduce the financial burden on the health system.

PD Medical were looking to engage with the medical sector to develop innovative Australian made products.

Needlestick Injury
Can Transmit

HEPATITIS B
HEPATITIS C
HIV



Method

&

Discovery

Problem brief

We adopted a formal process to describe and document the problem.

It was important for us not to confuse the requirements phase from the development phase and avoid the urge to solve the problem before we fully understood it and the desired outcome.

Investigation

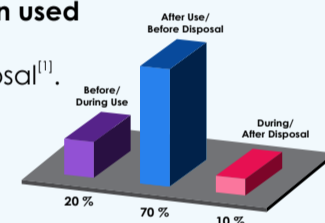
- Operational environment in the wards.
- Literature reviews.
- Discussions with nurses and infection control staff.
- Carrying out time/motion study.

Development

The development of a few concepts was made easy by the formality adopted and the patience exercised by all in the requirements definition phase.

The reviews and early engagement with nurses in the wards provided the clarity needed to succeed in a single pass through development and into the manufacturing phase.

- When sharps injuries occur
 - * **20%** of needle stick injuries occur before or during use
 - * **70%** occur **after the needle has been used but before disposal.**
 - * Only **10%** occur during or after disposal^[1].



- Nurses work under constant time pressure. The solution had to be intuitive for it to be accepted by nurses and one that would help them do their job quickly, effectively, safely and efficiently.

- Facilitating compliance to the "5 Steps of Hand Hygiene" needed consideration in order to create a more comprehensive solution to infection control.

- What needs to be available at point of use:- Tray, Sharps Container, Hand Hygiene Bottle

- Disposing of the contaminated sharps at the point of use has the greatest potential to minimise the risk of accidental injury and infection.**



[1] NaSH-CDC National Surveillance Systems for Hospital Health Care Workers, Data from 1995-1999

Results

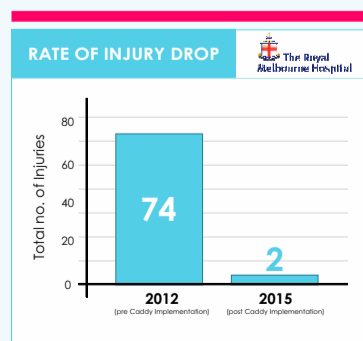
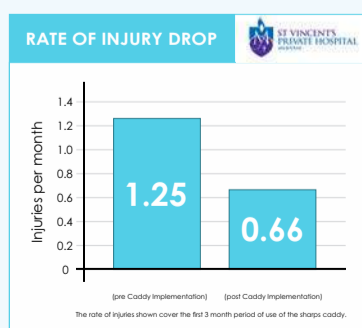
- A caddy for use in administering drugs and the safe carry and disposal of contaminated sharps at the point of use.

A simple solution to a difficult problem.



Disposal of sharps at the point of use makes the Sharps Caddy effective in protecting nurses from the risk of injury and infection.

- A significant reduction to the rate of sharps injuries.



Nurse response...

"It's intuitive to use and having the sharps bin and hand wash next to the tray allows us to do what comes naturally. A constant reminder of best safe practice with everything you need right next to you!"



Conclusion

- The development of the sharps caddy and the subsequent benefits and reductions to sharps injuries in hospital wards would not have been possible had the infection control team at St Vincent's accepted a "near enough is good enough" approach to their responsibility.
- Innovating through collaboration may be the best way help staff perform their duties in a more efficient and safe way, improve the level of patient care and for hospitals to benefit from the resulting efficiencies.
- Collaboration and innovation is not only possible but it is also practical and rewarding.

The Team



(L-R)
Peter Delipoulos - General Manager, PDMedical
Michelle Batty - Infection Control Nurse, St V's
Carolyn Moore - Infection Control Nurse, St V's
Karen Barry - Infection Control Nurse, St V's
Jan Wayland - Infection Control Manager, St V's
(St V's: St Vincent's Private Hospital Melbourne)
E: peter@pdmedical.com.au

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