

Towards zero harm to patients with better workflows and equipment



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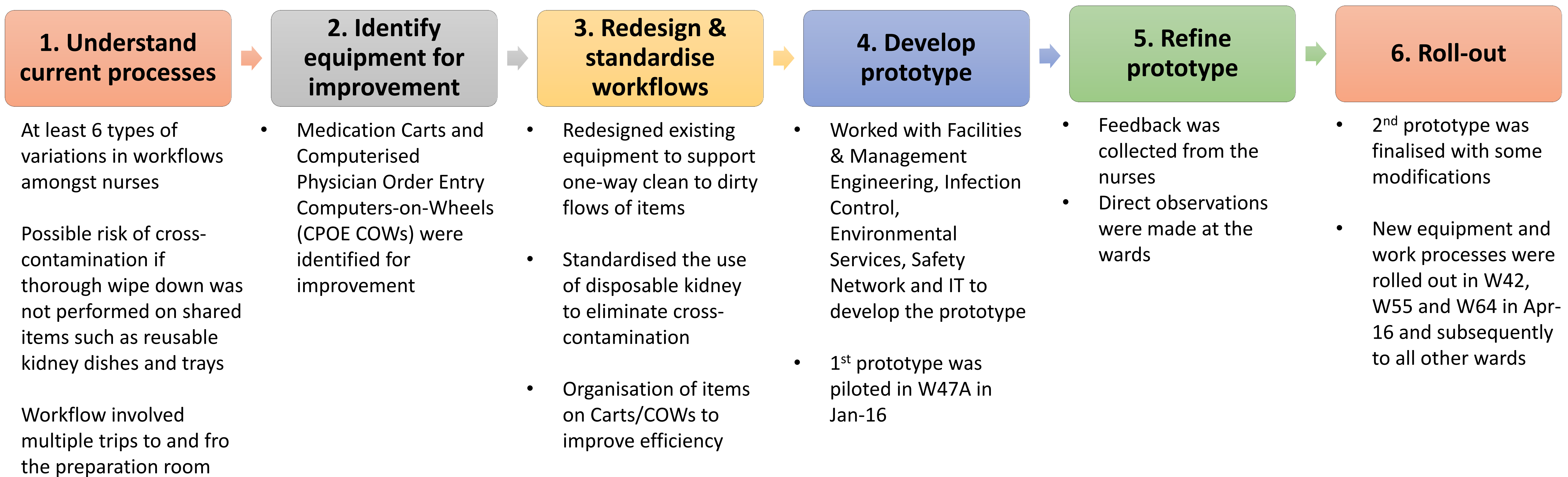
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Introduction

A workgroup, comprising of members from Nursing Division and Division of Operations & Performance Management, was convened to conduct a study on the current process of preparing and administering intravenous (IV) medications, venepuncture and peripheral blood glucose monitoring (BGM) in the wards. The aim was to improve patient safety and efficient by reviewing, redesigning and standardizing work processes.

Methodology/Approach taken



Results

- Improved infection control practices as a result of the redesigned work processes.
- Improved efficiency with essential work requisites made more accessible on equipment *(Equates to 126 hours of walking time saved and a cost saving of \$11,934 for nurses per day)*
- Better staff satisfaction with improved efficiency in performing procedures

Fig 1: Original Med Cart



Wrappers of used consumables can be thrown in the waste bin conveniently

Sharp box was attached to the Med Cart for easy disposal of sharps

Fig 2: 1st Prototype Med Cart

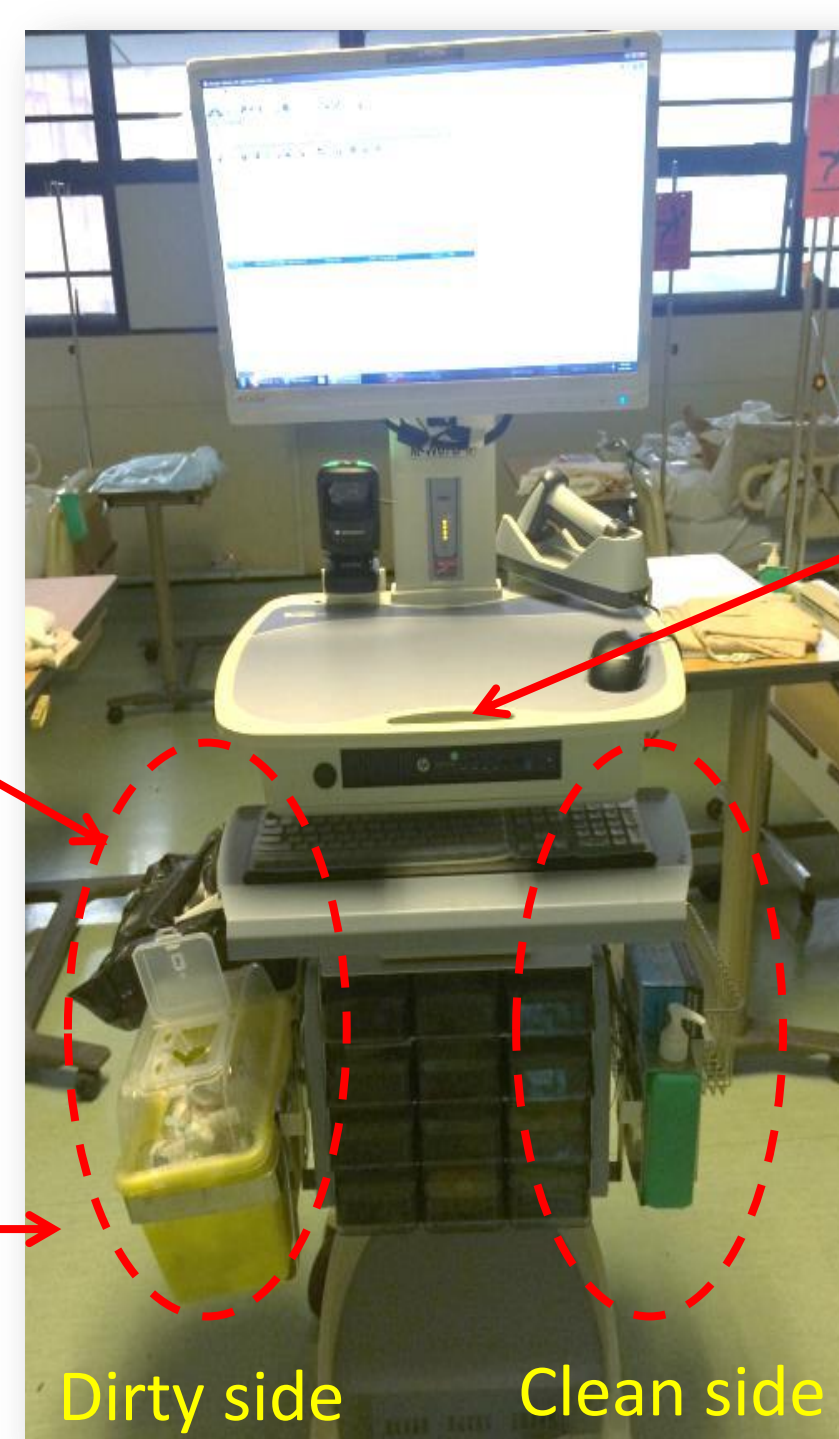
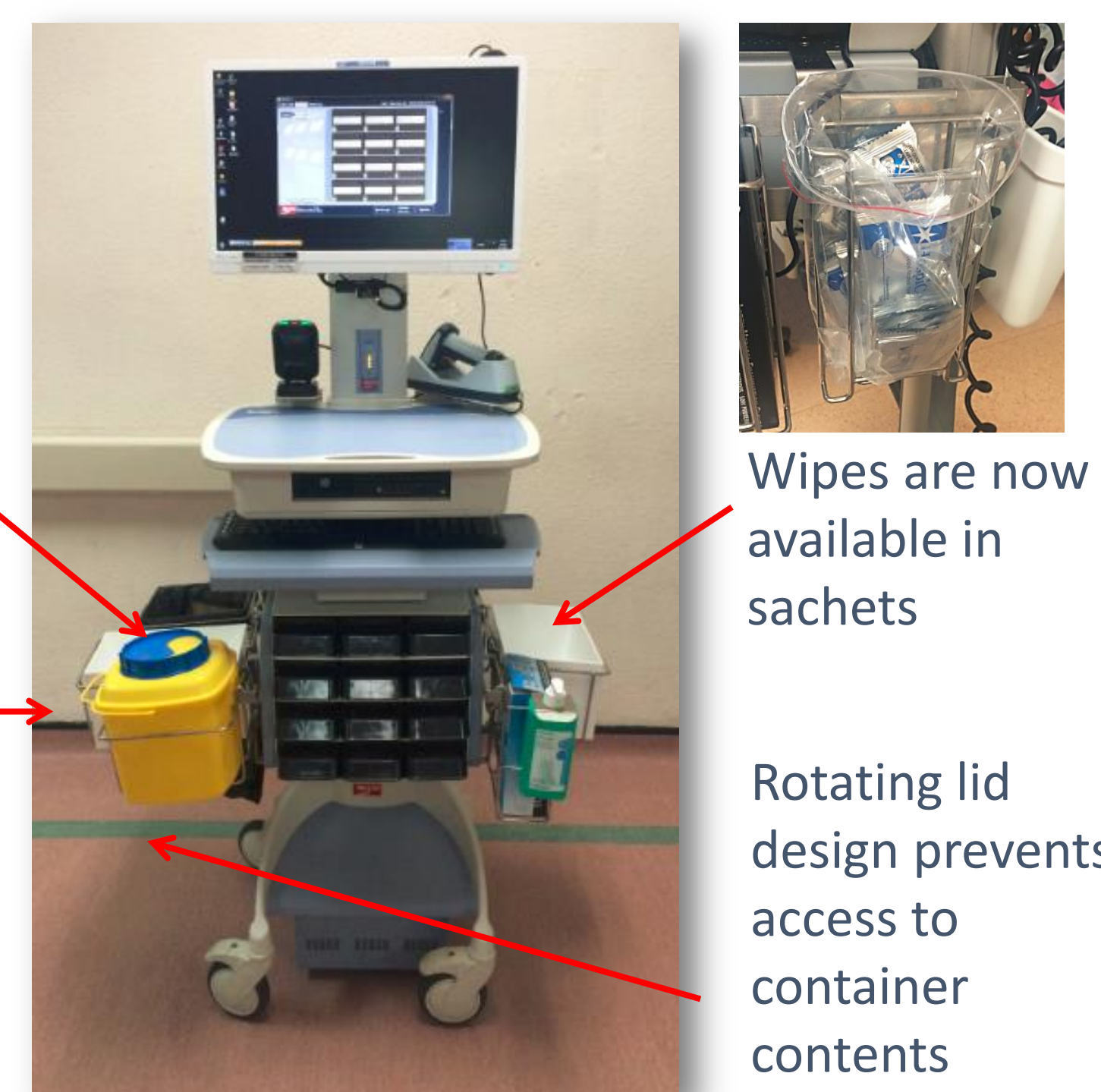


Table top must first be wiped down with wet wipes. IV meds were reconstituted on the clean table top.

Disinfectants such as hand rub solution and wet wipes, and glove box were attached on the right side

Fig 3: 2nd Prototype Med Cart



Height of waste bin was lowered; smaller width but deeper; easier lining of trash bag

A designated container to hold big glass bottles (instead of throwing into the waste bin)

Wipes are now available in sachets

Rotating lid design prevents access to container contents

The sharp box and tray which contains requisites were obtained from the prep room.

The tray was usually brought to the patient's bed during the procedure, resulting in possible cross-contamination if no thorough wipe down was performed.

Equipment were redesigned to support one-way clean to dirty flows of items during procedures.

Disposable kidney dish containing the IV meds and requisites were brought to patient's bed. After administration, the kidney dish, used consumables and sharps will be disposed immediately into the respective receptacles by the side of Med Cart.

Following feedback from senior management and ground nurses, a 2nd prototype was developed with the aim to lighten the weight. The CPOE COW drawer (Fig 4) was also re-organised to hold common requisites.



Fig 4: CPOE COW drawer

Conclusion

Introduction of new equipment i.e. Computerised Physician Order Entry (CPOE) COWs, Medication Cart, etc. results in workflows that are highly varied and may compromise patient safety and infection control practices. A systematic way of reviewing, redesigning and standardizing work processes is key to improving safety and efficiency.