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Overhauling Storage Environment to Tackle Future Challenges in United Christian Hospital Intensive Care Unit

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Introduction
To fulfill the growing demands of Kwun Tong populations, and align with the KEC clinical service plan, the bed number of UCH ICU has been increased since 2015. Besides, to pursuit the up-to-date technology with clinical applications, abundance of medical devices and variety of accessories and consumables are now available. These advancements increased the loading of storage area. Therefore, the department has been seeking solutions for better space utilization to fulfill the current and future service needs. Since 2014, Hospital Authority established the Quality of Care Improvement Program (QOCP) that enhancing frontline staff to create positive practice environment and promulgate Evidence based practice. In early 2016, a Resource Allocation Exercise (RAE) has been kicked-off by Procurement Department of UCH to increase the consumables auto-refill frequency. These changes provided a golden opportunity for UCH ICU to restructuring her storage environment.

Objectives
1. Promote staff engagement in enhancing ward environment
2. Promote staff satisfaction by better item retrieving experience
3. Enhance medication safety
4. Follow Quality & Safety and Occupational safety & health standards
5. Increase capacity and mobility of storage device
6. Improve compliance on manual handling operations (MHO)/ infection control (IC) guidelines

Methodology
Actions for Improvement: To make ensure the success of this project, opinions from our end-users were well addressed throughout the project. Numerous of modifications and fine-tuning were made based on the feedbacks from healthcare assistants, nursing and medical staff. Consultations to different parties were conducted, and their
opinions were considered before finalizing the mapping of storage area. Depreciated cabinets were replaced by the tailor-made cabinets equipped with castors and doors to enhance the capacity and mobility. The stored items were redistributed into the cabinets after regrouping and categorizing based on their usage and weight, the principles of 5-S were also applied. During the redistribution, the usage of cardboard that is vulnerable to mold infestation was replaced by appropriate containers. New auto-refill arrangement minimized the storage volume of each item, and expanded manual handling space made the Q&S and OSH recommendations are more feasible and applicable.

**Result**
The total storage area increased 20% by estimation that facilitates further service expansion and emergency readiness. As the mobility of the storage devices increased, the potential of releasing additional clinical area for patient admission during emergency deployment is enhanced. The extent of manual handling is also decreased in new designs, and relocation/redistribution enhances the compliance of MHO and IC guidelines. The stock level is kept adequate and fresh with the application of 5-S principle. After the redistribution, the regular stock medications and patient's individual dispensing medications can be locked into separated cupboard that can promote medication safety by mitigating inadvertent use of stock medication. Generally, staffs of UCH ICU are satisfied with the changes.