

Mission Statement

Ang Mo Kio Polyclinic (AMK) nursing team initiated a quality improvement project to further improve the current work process of wound dressing for nurses.

As part of this initiative, the dressing room team members designed a new dressing trolley for use in the newly renovated dressing room.

Team members

	Name	Designation
Team Leaders	Priyamol James	Senior Staff Nurse
	Letchmi D/O M. Sanggaradas	Staff Nurse
Team Members	Diaz Rhea Donnalyne Serafin	Staff Nurse
	Ervina Lee Hung Yee	Staff Nurse
	Sa'adiyah Bte Ramlee	Senior Enrolled Nurse
	Mazuin Binte Raimi	Enrolled Nurse
	Quilon Karen Adlao	Enrolled Nurse
Facilitator	Richard Low Sai Yin	Deputy Head Nurse
Sponsors	Dr Karen Ng	Clinic Head
	Nirmala Nair	Head Nurse

Initial state / Current Condition



Current design of dressing trolley



Poor segregation of dressing items

The dressing trolley that is currently in use have the following problems and limitations:

- Insufficient storage space for dressing items causing inconvenience when retrieving them.
- Poor segregation of sterile and non sterile items resulting in poor compliance to infection control guidelines.
- Poor ergonomics - On an average working day, a nursing staff had to bend about 30 times to retrieve dressing items for use from the lower compartment.

Targets

The new dressing trolley must fulfill the following requirements:

- Sufficient storage space for dressing items.
- Good product quality and durability to withstand heavy daily usage.
- Clear segregation of sterile and non sterile dressing items into proper custom built compartments. These compartments can be easily changed and adjusted to fit in new dressing products.
- Compliance with infection control guidelines.
- Better ergonomics for staff with zero bending.

Identification of Design Gaps

Problem Identified	Design methodology
Poor ergonomics	To ensure all compartments for retrieving items can be reached without bending
Poor segregation of sterile and non-sterile items	To ensure that there are distinct separate compartments or drawers for sterile and non-sterile items
Insufficient storage space for dressing items	To measure the dimensions of every item and to allocate a space for it before finalizing the size of the drawer

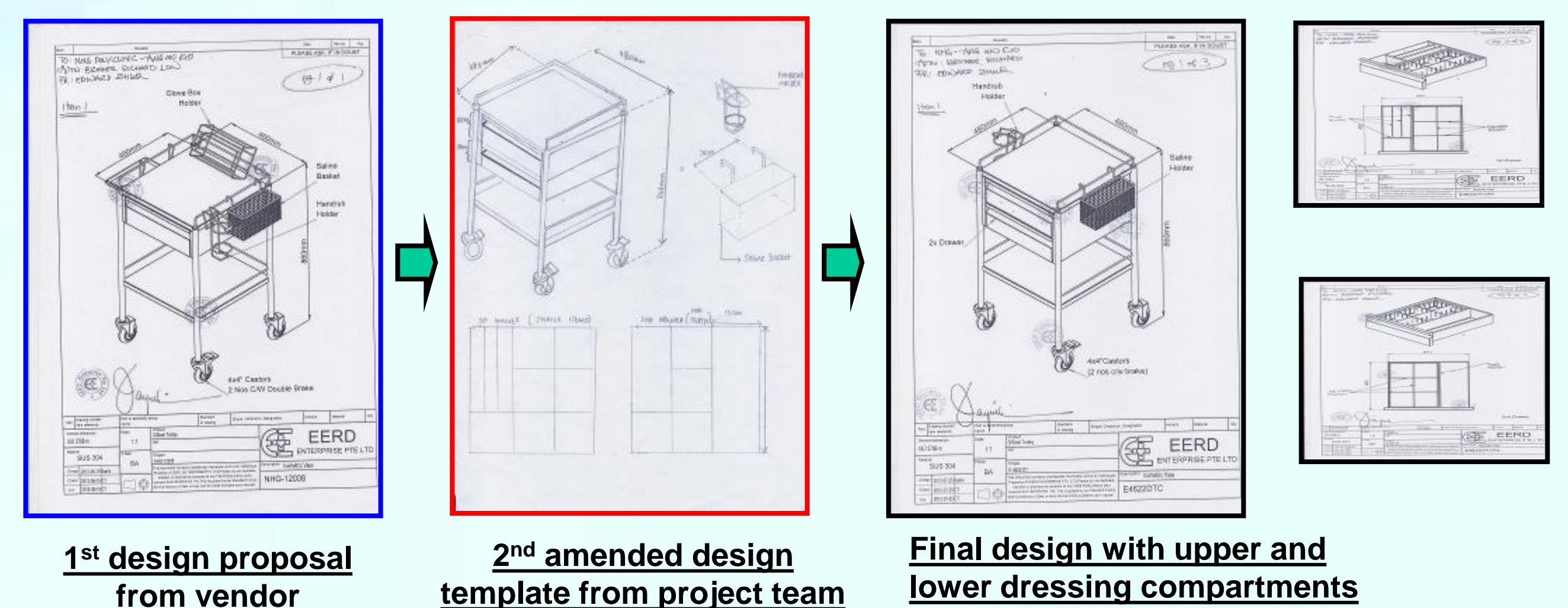
Countermeasures proposed

The project team brainstormed and decided that they will have to redesign the entire dressing trolley to incorporate new features to eliminate their current problems:

- As part of the design process, the team worked on the exact technical specifications they envisioned for the new dressing trolley.
- This was done through a process of examining all the dressing items currently in use and deciding on where each dressing item should be placed using the 6S methodology.
- The exact measurements of every dressing item were also taken as well to ensure that all items can fit well into the new trolley.

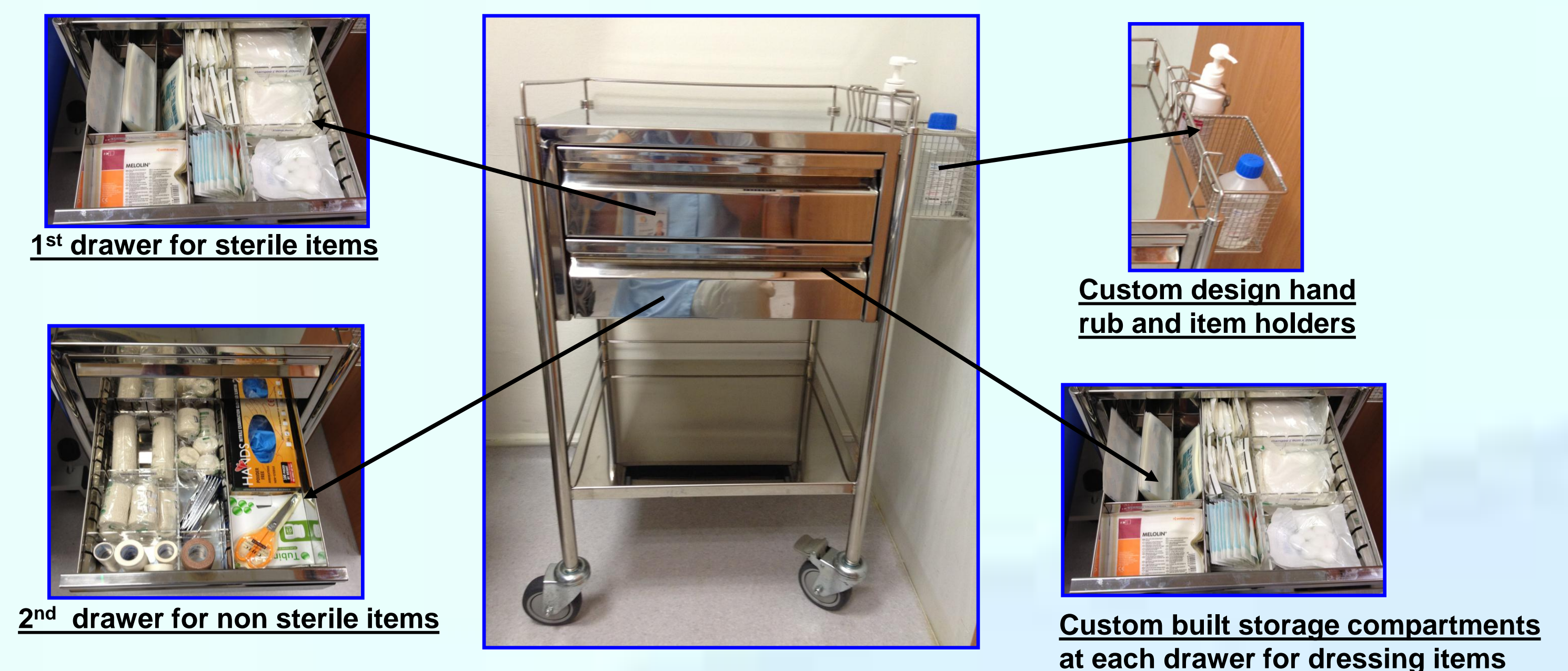
Testing of countermeasures

The project team went through 3 rounds of discussion to confirm the final design template of the new dressing trolley.



Results:

The selected vendor constructed the dressing trolley based on the design specifications stipulated. A sample of the dressing trolley below:



This project was a success with the following results achieved:

- Adequate space for all relevant dressing items.
- Compliance to infection control guidelines with proper segregation of sterile and non sterile items in top and lower compartments respectively.
- Custom built storage compartments at each level enabling easy storage and retrieval of items. Internal compartments can also be easily changed to fit in new items.
- After 3 months of implementation, end users gave a 100% satisfaction rating to the new dressing trolley.
- Improved ergonomics with no more bending to retrieve dressing items.

Insights and lessons learnt

What went well and why?

- The targets that the project team wanted to achieve were all delivered with very good outcomes.
- This trolley can be used for other nursing services rooms as well.

What did not go well and what you could have done?

- The depth of the dressing trolley was not long enough for one dressing item. For future versions of the trolley, to consider increasing the depth.