

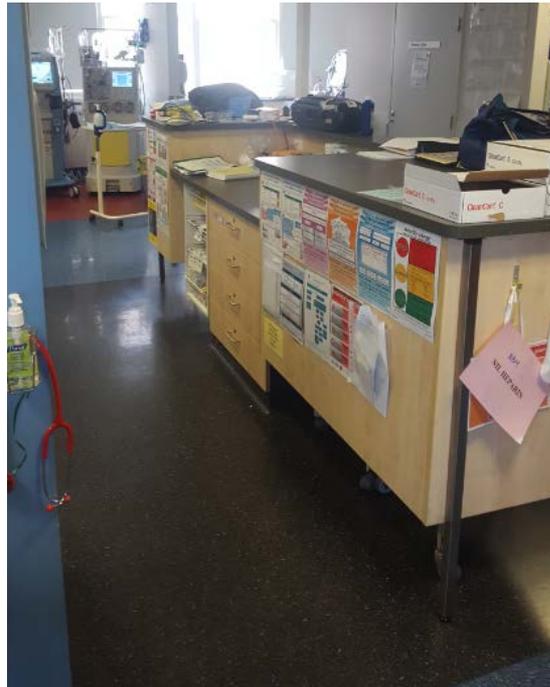
Joanne Young

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Medication Area Redesign Using Human Factors Principles

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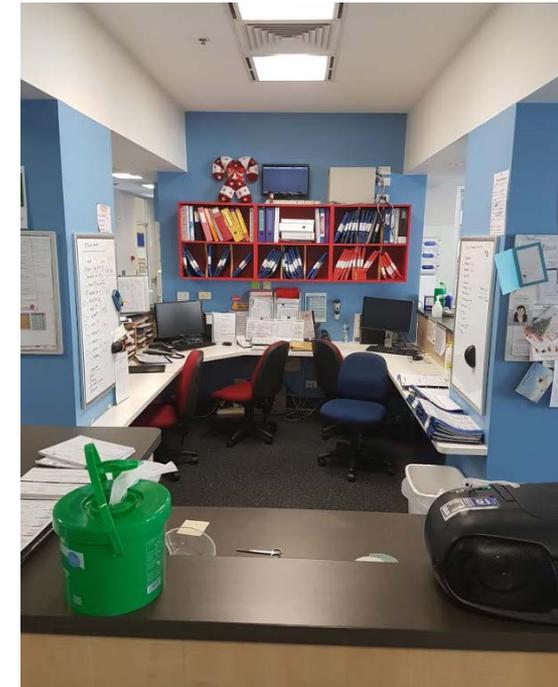
Problem being Addressed



Used as a thoroughfare



Very cluttered and challenging to clean



Within main nursing station

**Prone to distraction during medication preparation
→ risk of human error**

Objectives

- To use human factors methodology to redesign a medication preparation and storage area
- To apply these learnings and incorporate human factors principles into a guide for medication area design for our hospital

Methodology

Consultation with stakeholders



Consultation with experts



Data collection



Task analysis



Design new medication area



User trial

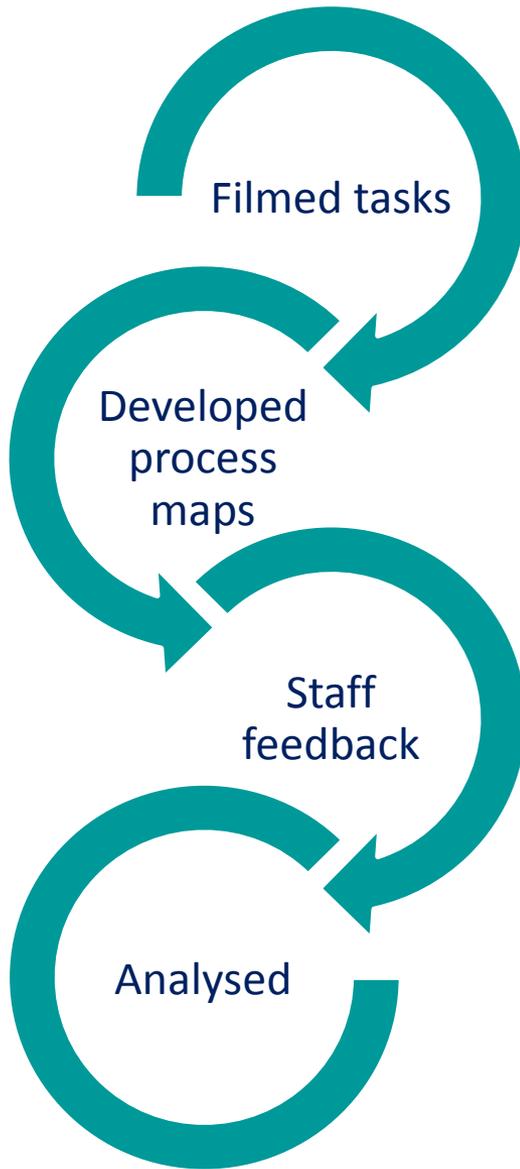


Refine medication area design & provide technical specifications for build



(Develop 'Medication Room Design Guide')

Task Analysis

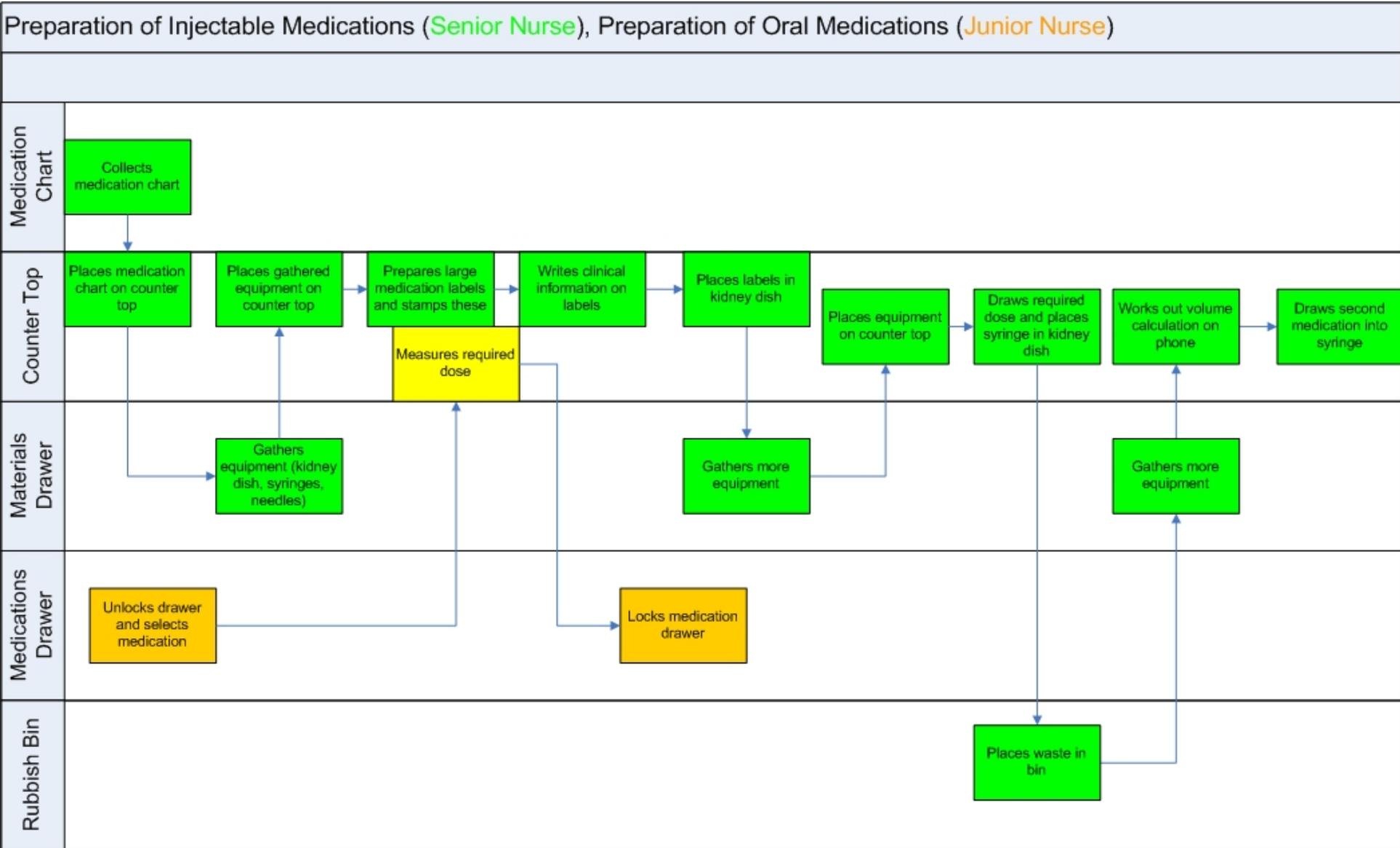


- Task duration and variability
- Task frequency
- Task sequence
- Task allocation
- Task complexity
- Environmental conditions
- Tools required for the task
- User skills, education, and training

Video



Example Process Map



Analysis of the Task Analyses

Nursing Staff



- Well-lit bench
- Clean environment
- Pull out drawers just like current
- Uncluttered bench with room to lay out required materials
- Out of the way of people flow
- Keep bench at same height
- More storage space
- Clear, structured labelling of medicines
- Quiet area clear from interruptions, but able to hear patient alarms and the phone if necessary

Pharmacy Technician



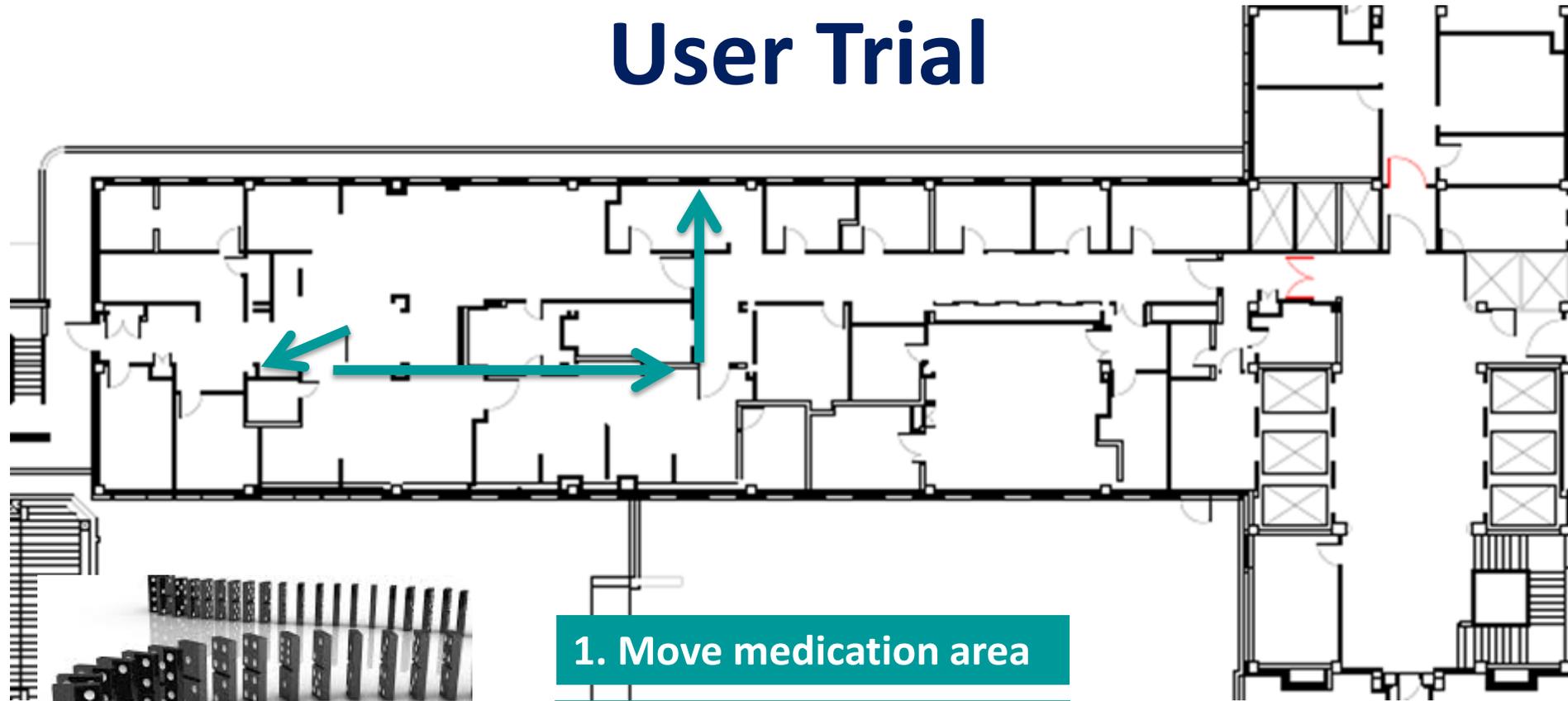
- Trolley gets in the way
- Dividers to separate medicines is important

Clinical Assistant



- Uninterrupted access
- More storage space
- Able to restock without interfering with nursing work flow

User Trial



1. Move medication area

2. Move linen trolley

3. Move computer

User Trial



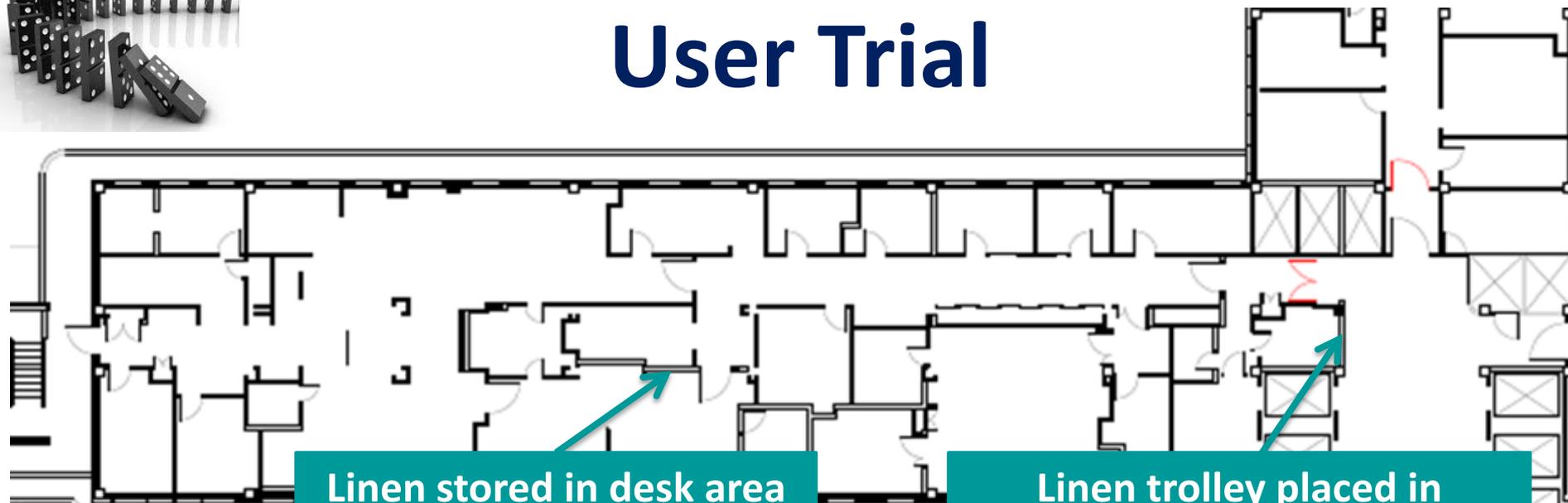
OLD linen trolley area

NEW medication area





User Trial



Linen stored in desk area

Linen trolley placed in hallway

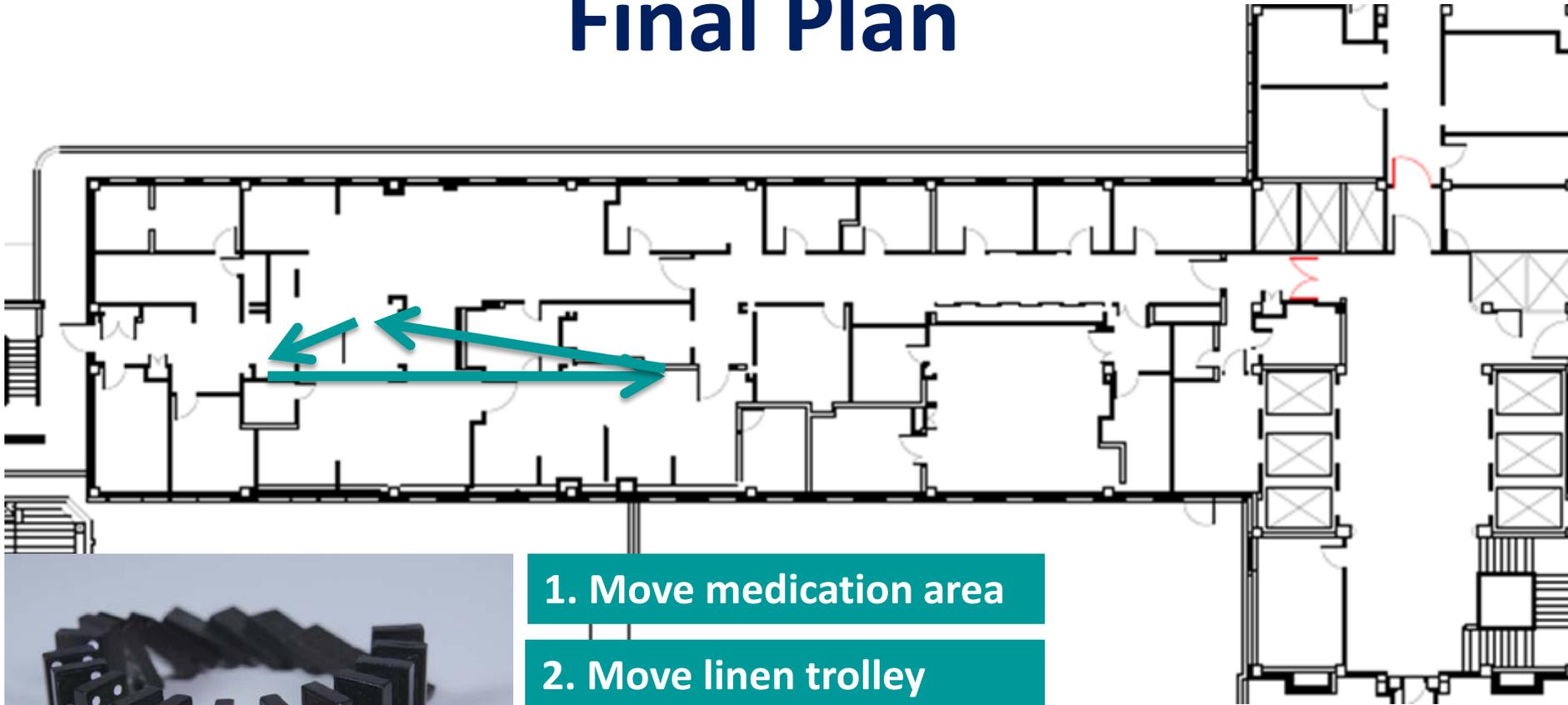


User Trial Feedback

- Overall
 - General acceptance
 - Liked the new space
 - Felt it would provide better patient care
- Suggestions
 - Store some small-volume fluids (100mL) in medication area
 - Need a shelf for a frequently used medication resource
 - Leave the controlled drug safe next to the nursing station
 - Need alcohol gel nearby
 - Move computer to existing medication area (stand up desk)



Final Plan

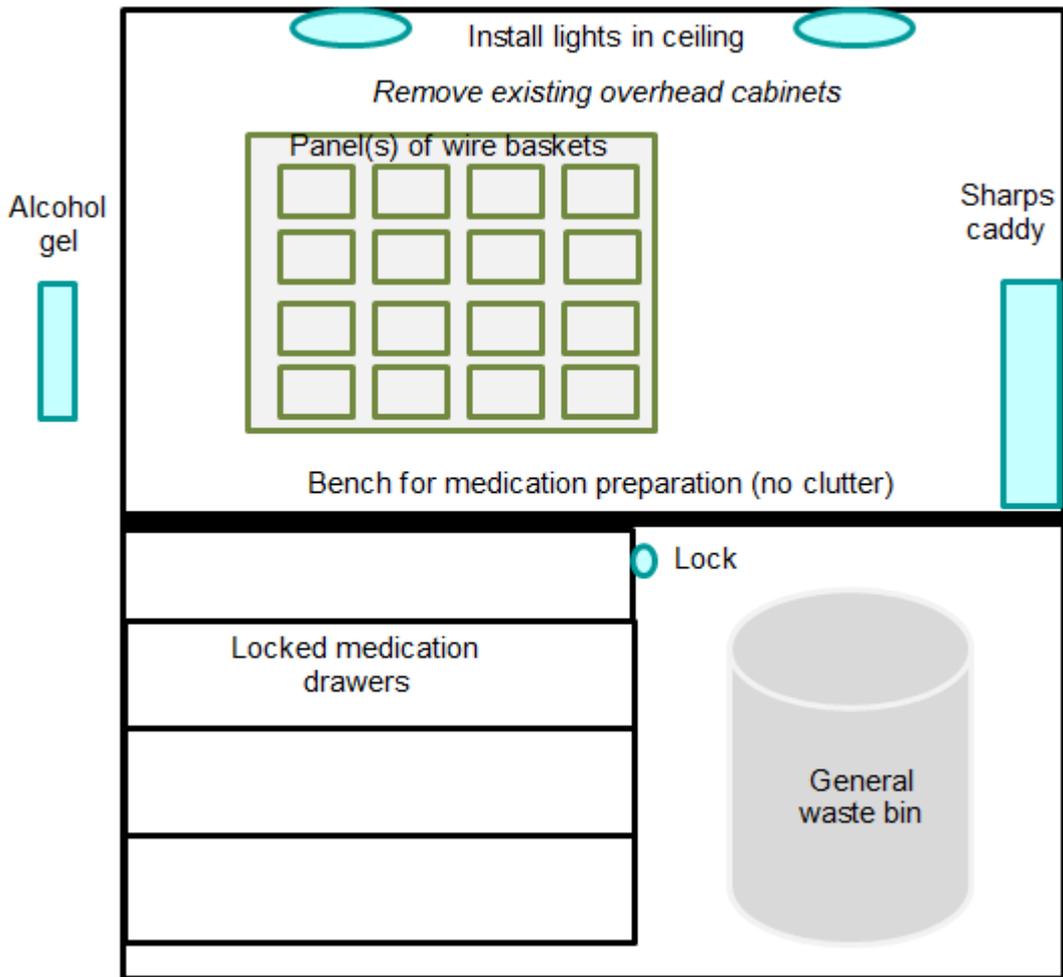


1. Move medication area

2. Move linen trolley

**3. Move computer
(stand up desk)**

Final Plan



Using human factors methodology allowed us to:

