



Singapore Healthcare
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STREAMLINING PROCEDURE PREPARATION IN THE CTICU

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BACKGROUND

In the CTICU, an average of 136 emergency, urgent and elective procedures are done yearly and one issue that is constantly brought up during debriefing sessions is **the delay to procedures**. Based on research in cardiac intensive care units, cardiac arrest occurs in about 3-4% of patients and only 17% of them survive till discharge. However, once a higher level intervention is rendered in time, it has been associated with a survival to discharge of 57.14%.

Thus, time is of the essence in rendering any intervention to the patients

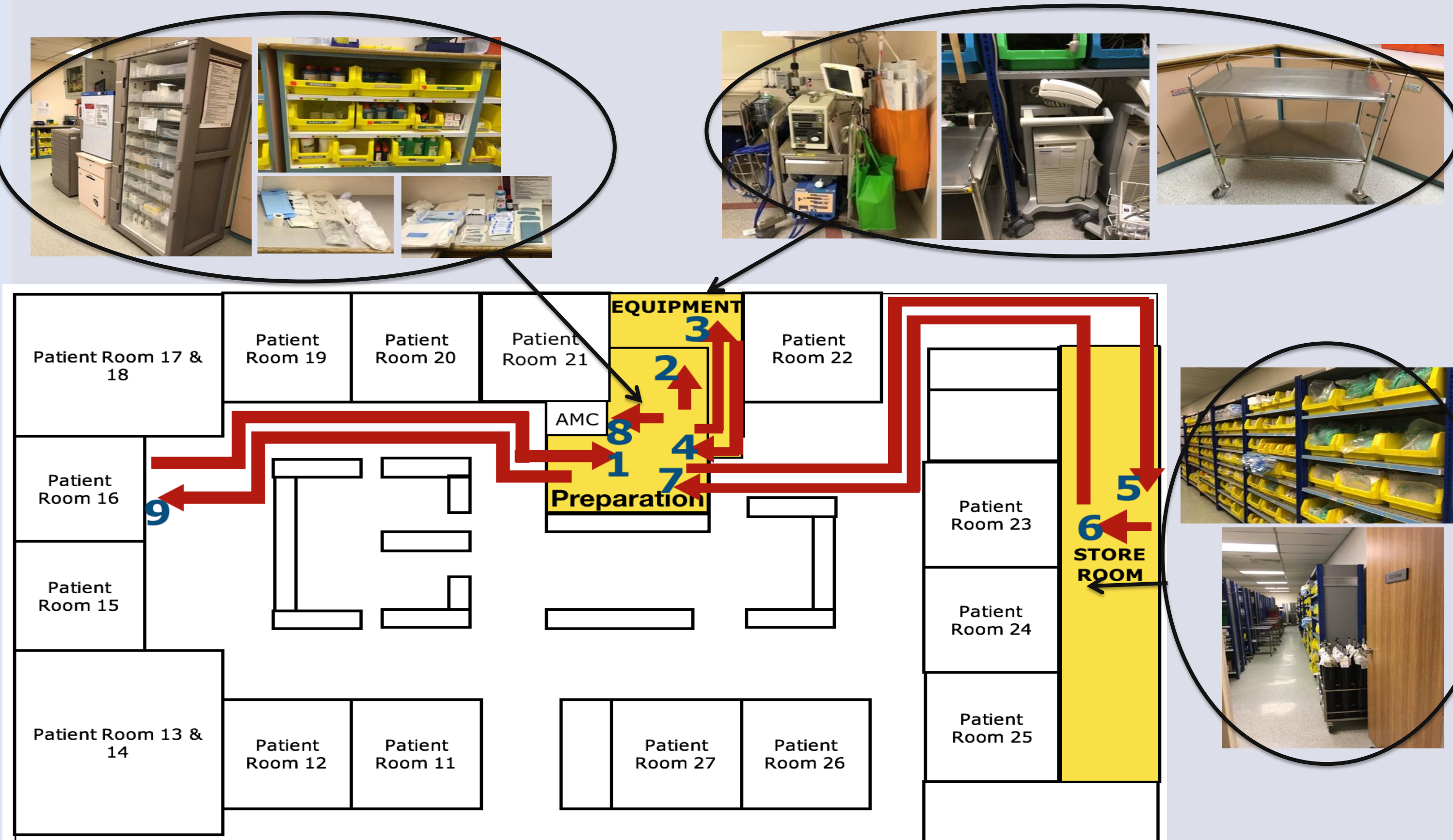


PROJECT AIMS

- Reduce procedure preparation time
- Reduce the number of times nurses return to the preparation room to **1 and below**

PRE-IMPLEMENTATION

CURRENT PROCEDURE PREPARATION WORKFLOW



REASON FOR DELAYS

Staff Are Unsure of
How to Prepare For
These Procedures

Staff Have to
Go to Different
Locations to
Collect Items

Staff Forgetting
Items Needed For
Procedures

Unavailable
Requisites

METHODOLOGY

The project is aligned with the **Plan-Do-Check-Act** structured improvement methodologies.

The team drew inspiration from one of the lean production methods for reducing waste, the **Single Minute Exchange of Dies**.

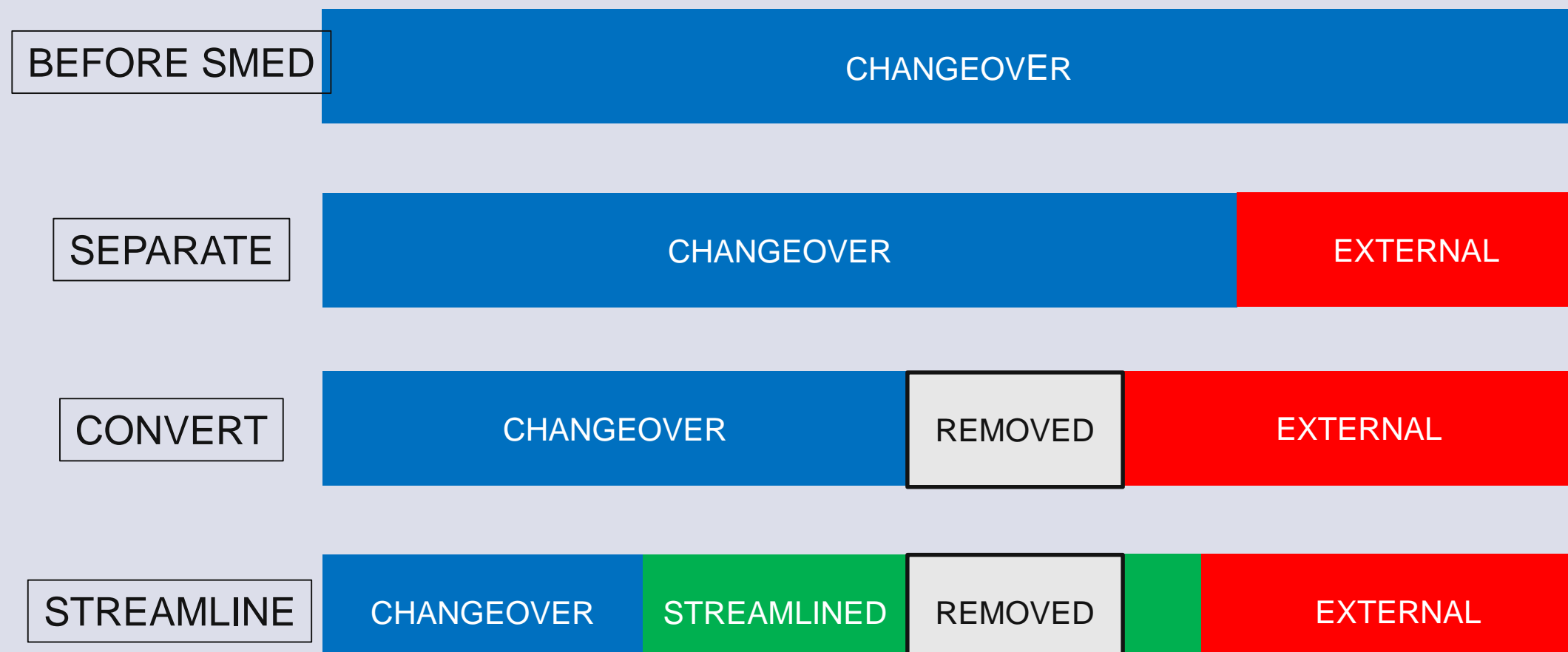
- Data collection & analysis
- Verify & validate root causes
- Decide which procedures to work on
- Obtain Feedback

- Pack boxes
- Daily role calls to raise awareness
- Hands-On Trial Session

- Provide lidded boxes
- Change the list of requisites as per feedback
- Nurse in-charge to clean the boxes weekly

- Requisites become dirty when exposed
- Not enough of certain requisites
- Requisites may get contaminated

PLAN-DO-CHECK-ACT



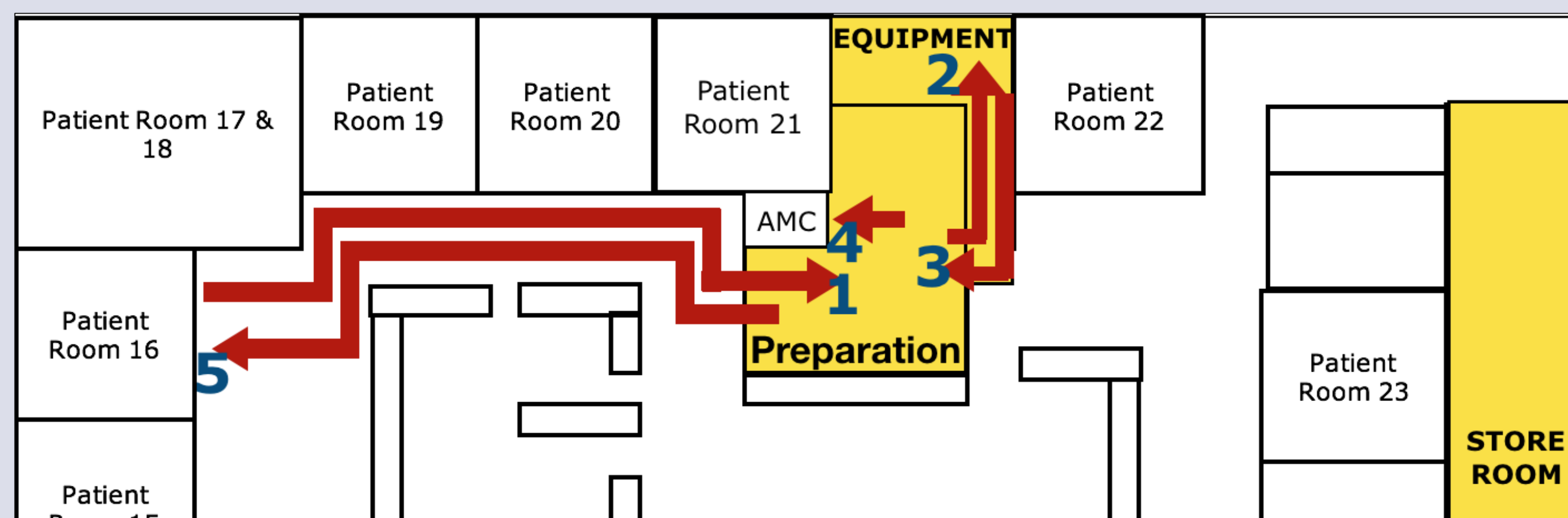
SINGLE MINUTE EXCHANGE OF DIE

SOLUTIONS

REQUISITE BOXES



NEW IMPROVED WORKFLOW PROCESS



Sustainability

- Nurse In-Charge Will Check the Requisites Weekly
- Nurse Will Replenish After Use
- Incorporate Into Orientation Program for New Nurses

RESULTS

TANGIBLE RESULTS



NO. OF PROCESS
STEPS
REDUCE FROM 9 TO 5



NO. OF TIMES STAFF FORGOT
REQUISITES **< 1**



10 HRS 39 MINS 1 S
OF LIFE-SAVING TIME

INTANGIBLE RESULTS

Patient Safety

- Increase Survivability
- Avoid Severe Consequences
- Reduce Stressors to Family Members
- Maintain Quality of Life

Staff Morale Enhanced

- Reduce Stress and Anxiety
- New Staff Are Less Confused
- Reduction in Conflicts Between Nurses & Doctors

CONCLUSION

With the harmonizing of the workflow process, patients' safety and care is assured. The amount of time reduced allows for more time spent with patients at the bedside, therefore improving patient safety as well as satisfaction.