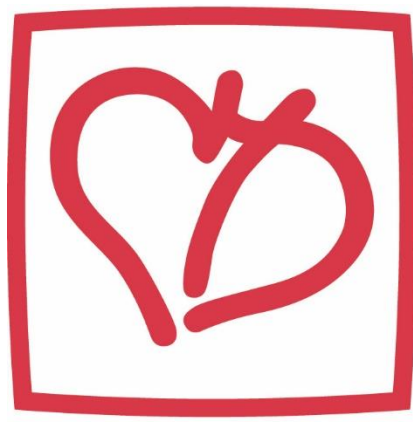




Singapore Healthcare
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IMPROVING THE PROCESS OF TRANSFERRING CARDIOTHORACIC SURGERY PATIENTS TO STEPDOWN WARDS

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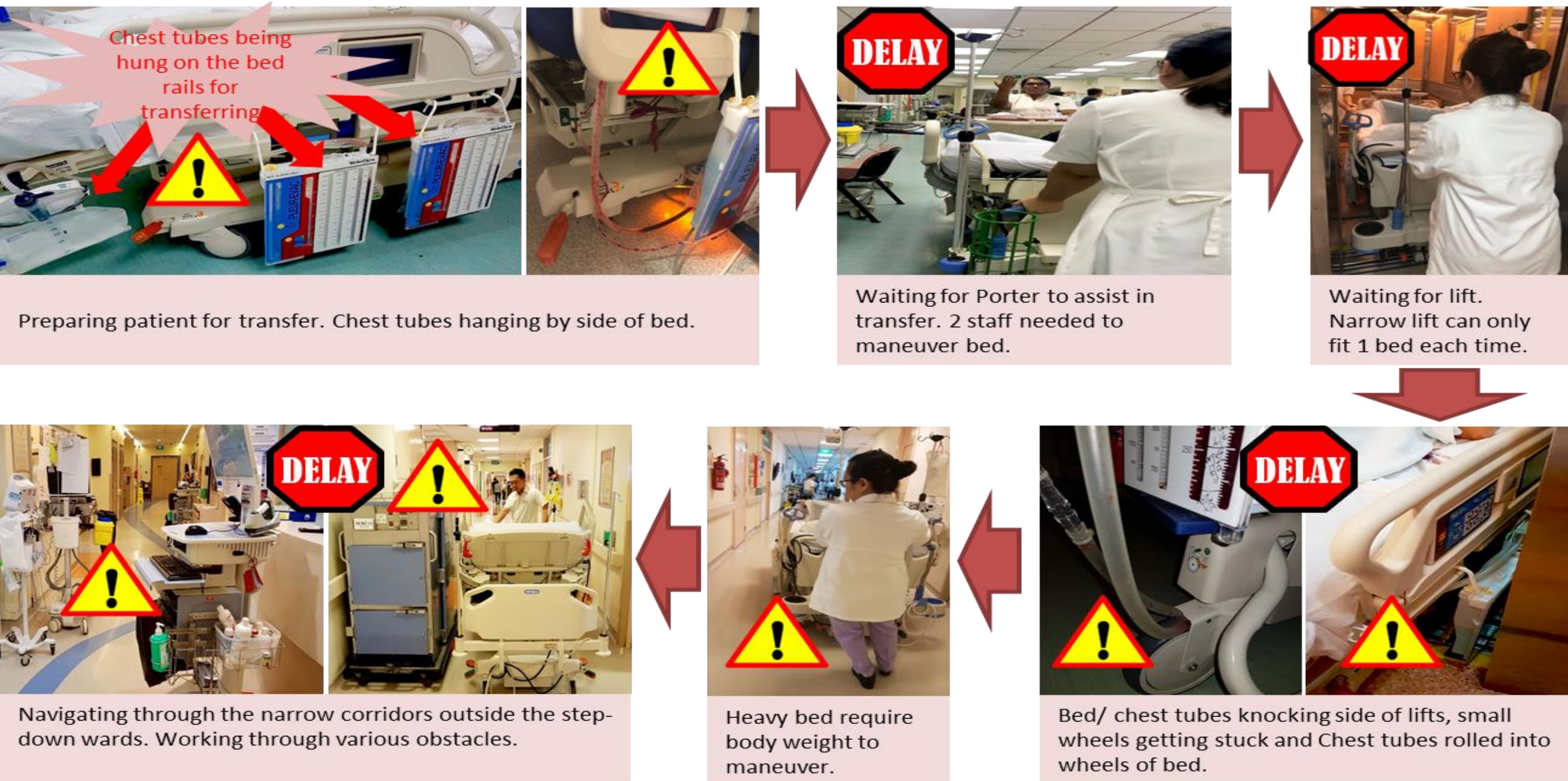


National Heart
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BACKGROUND

Frequent delays in the patient stepdown process had led to long waiting time in accepting post-surgery patients to CTICU. The project aimed to develop an efficient and safe methods of transferring patients to stepdown care and freeing up beds for post-operative patients. Prior to the new implementation, the transfer process requires two staff and there are numerous delays in many touch points. The narrow hallways and small lifts added to the challenges and risks during the transfer. The risks include chest drainage tubing getting caught in-between bed's rail and bed knocking against walls of narrow hallways and lift doors.

Pre-Implementation Stepdown Transfer With Bulky Bed



Target Setting

- Zero Clinical Incidences During Patient Step-Down Transfers
- Reduce Patient Step-Down Transfer Time by 50%

SOLUTION

The solution used wheelchairs as an alternative to replace beds during patients' stepdown transfer. The implementation processes went through three Plan-Do-Check-Action (PDCA) cycles:



In PDCA 1- Patients or staff had to hold the chest drainage system that is attached to the patient during stepdown transfer. The wheelchair had no place to hold the chest drainage.

In PDCA 2- A metal bar was installed at the back of the wheelchair to hang the chest drain. The solution worked well for patients' transfer to general ward but was not feasible for CTICU post-surgery patients who have two chest drainage systems upon stepdown transfer.



Final Solution



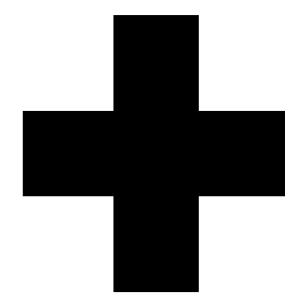
In PDCA3- The team re-modified the wheelchair with a double metal casing installed behind the wheelchair to hold up to two chest drainage systems securely. The casing is removable and compatible with the standard wheelchairs used in the hospital.

RESULTS

Our project had met our goal for Zero Clinical Incidences. We eliminated the waiting time wasted for porter and **Transfer Time was Reduced by 59%** due to the streamlined process. The manpower required to transfer patient was also **reduced from 2 to 1 staff**.

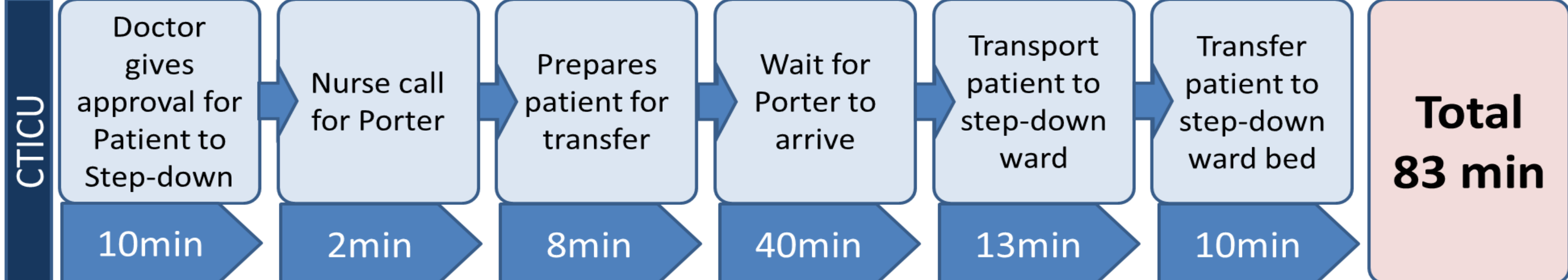


Clinical
Incidences

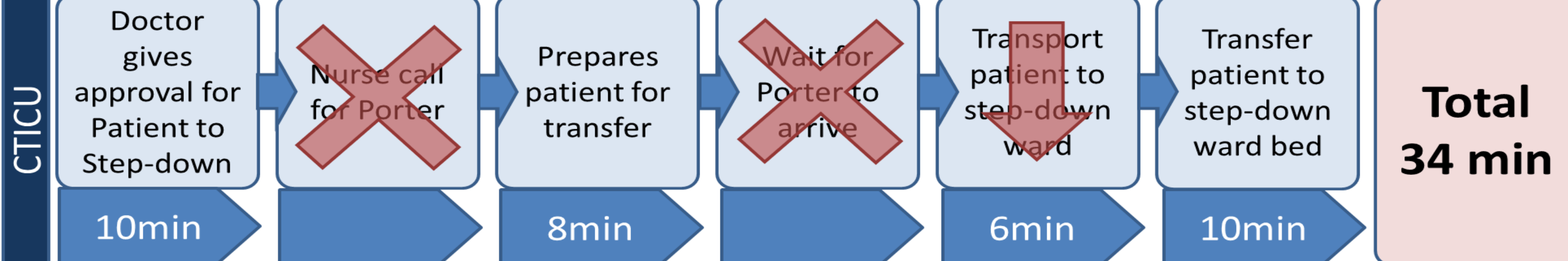


Transfer
Time

BEFORE



AFTER



Time saved for stepdown transfer in Ward 56 and CTICU were estimated to be **2141 and 2409 hours** per annum respectively. Total time saved was **4550 hours per annum**.

	Total time taken (patient transfer)	No. of Manpower (patient transfer)	Total time per patient transfer	Number of patients/ annum	Total man hours/ annum	Time Saved
Ward 56 ICA						
Pre implementation	46 minutes	2	92 minutes	2007	3077.4	2141 hours
Post implementation	28 minutes	1	28 minutes	2007	936.6	

	Total time taken (patient transfer)	No. of Manpower (patient transfer)	Total time per patient transfer	Number of patients/ annum	Total man hours/ annum	Time Saved
CTICU						
Pre implementation	83 minutes	2	166 minutes	1095	3029.5	2409 hours
Post implementation	34 minutes	1	34 minutes	1095	620.5	

Total Time Saved = 4550 hours/ annum

Sustainability: The team perform regular data collection in the clinical areas and tracks our data through weekly run chart. The same modified patients' wheelchair transfer mode is used to ensure that the solutions are implemented uniformly.

CONCLUSION

The re-designed work process leads to better collaboration and coordination of care for patients. Nurses are able to spend more quality time for patient care. Streamline process in patients' transfer has shortened turnover time for bed to be ready for new admission. This has facilitated the potential bed crunch at emergency department and post operation patients. The team has demonstrated their commitment in constantly seeking improvement for smoother inter-institutional processes to achieve better patient service and patient-centric motto: "Target Zero Harm".