



Singapore Healthcare Management 2018

Keep me COLD!



Singapore General Hospital
SingHealth

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Background

Maintaining pharmaceutical cold chain is vital for patient safety. Exposure to inappropriate conditions during transportation and storage may affect medication stability, thus compromising its effectiveness and potentially, resulting in adverse consequences.

There were 32 incidences reported in 2017 where pharmaceutical cold chain was not maintained during patient ward transfers. These incidences arise particularly when medications were packed together with non-fridge items, which led to an oversight to place the item in the fridge. Consequently, the ward had to bear the medication cost due to incongruous storage condition.

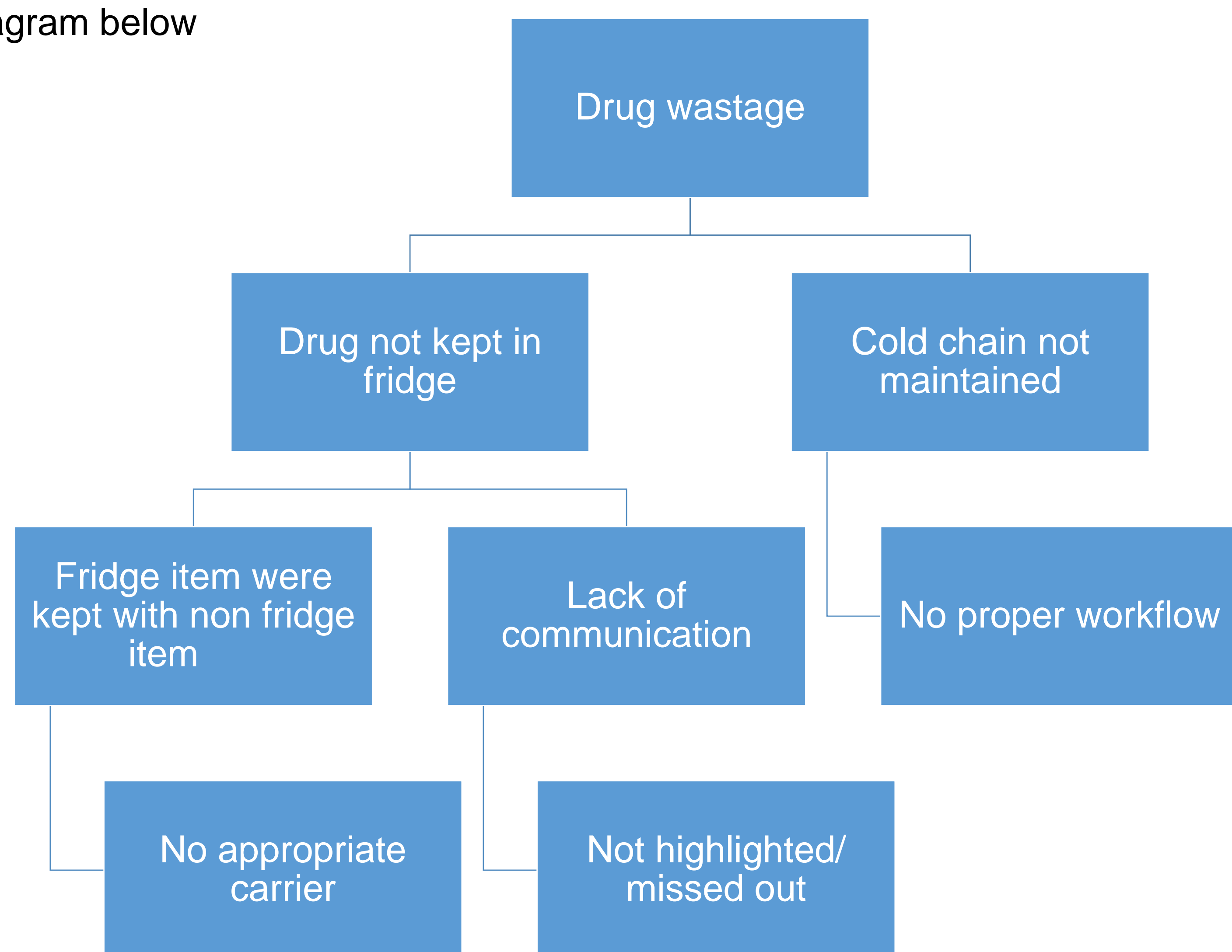
Presently, there is no established workflow to maintain cold chain during patient ward transfers. To date, fridge items are transported using a plastic bag bundled with the remaining non-fridge items.

Mission Statement

To reduce medication wastage during patient transfers by 95% in 6 months.

Analysis

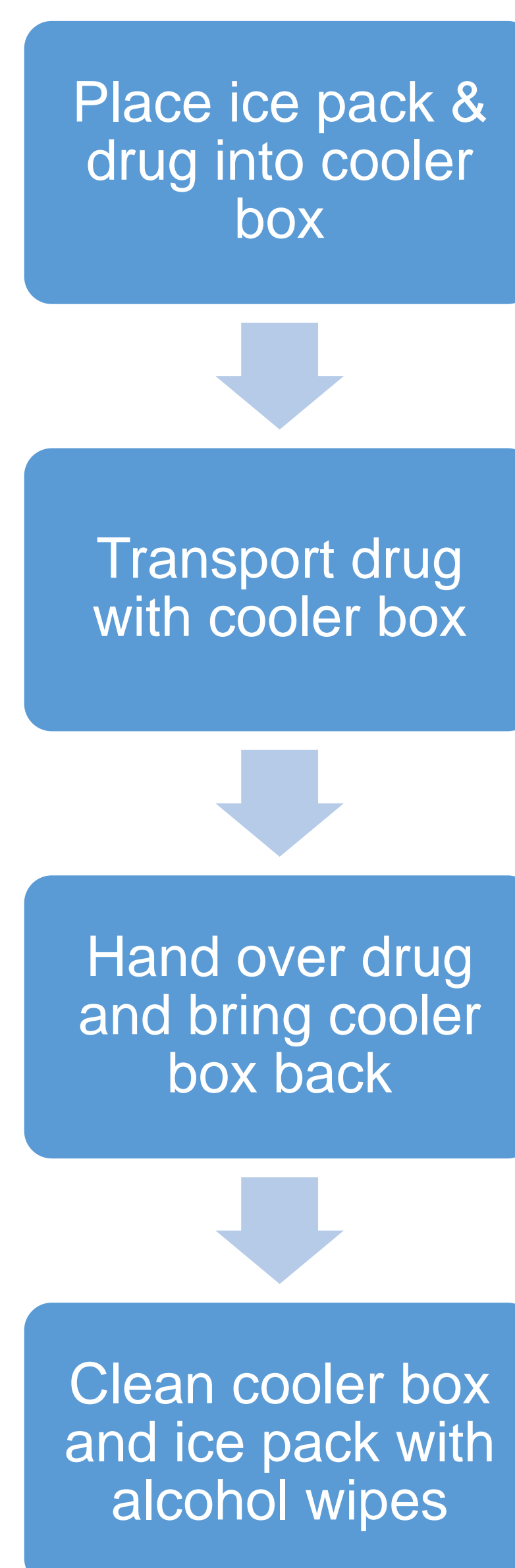
The team analyzed the problem using the 5 Whys strategy as indicated in the diagram below



Brainstorming sessions were held to address the identified root causes. The team decided to review and source for appropriate carriers available in the market that maintain pharmaceutical cold chain during patient ward transfers.

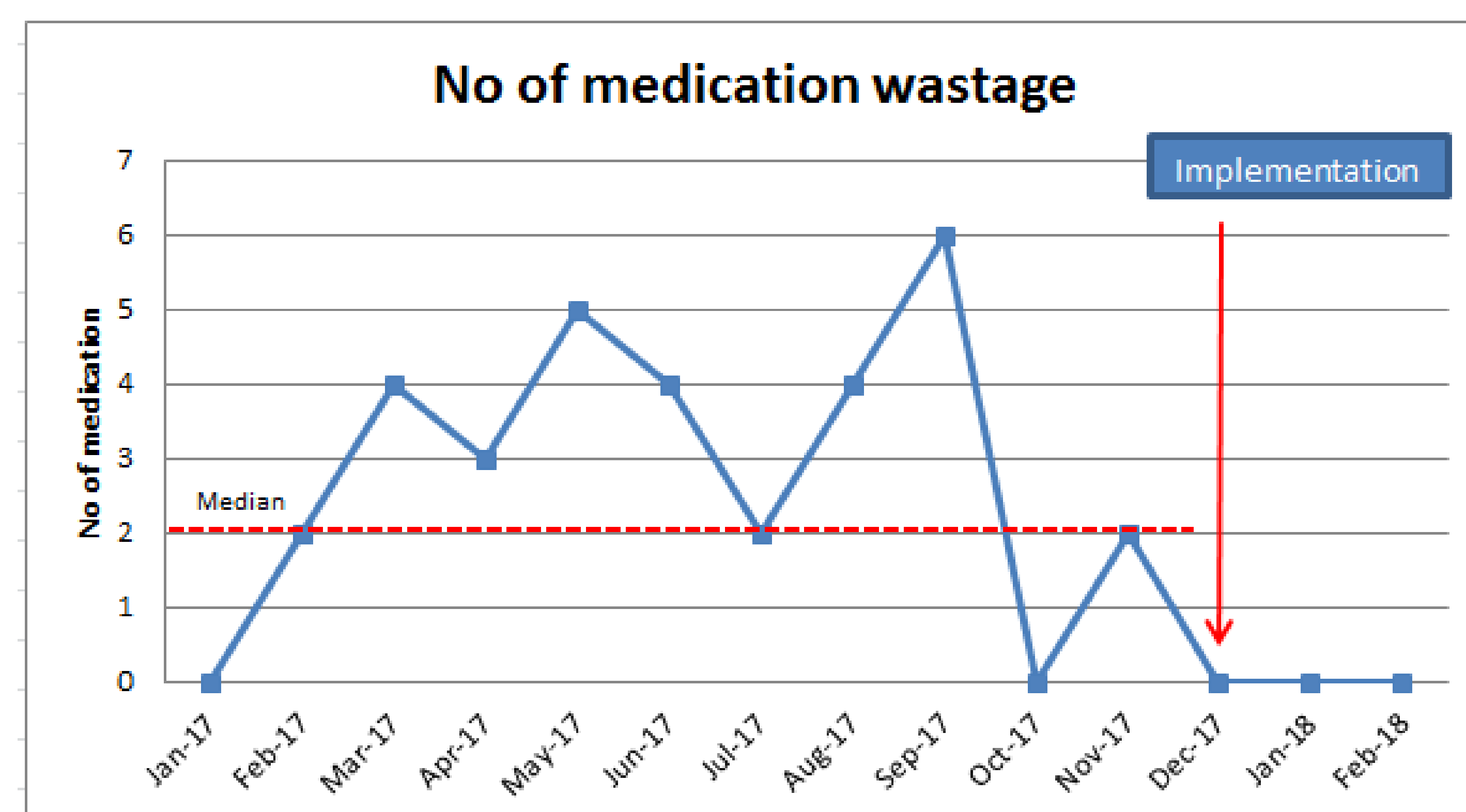
Solution

The team chose the blue cooler box as the most suitable carrier. A new workflow to transport fridge items during patient ward transfer was implemented at pilot wards.



Results

The graph below details the number of drug wastage during patient ward transfer from January 2017 to February 2018 within the institution.



Prior to this implementation, the total cost for drug wastage during patient ward transfer amounts to \$3330.36 in the hospital. Since the introduction of this initiative, no drug wastage was reported resulting in zero cost incurred.

Conclusion

Feedback received from the pilot wards were positive. The team subsequently extended the use of the cooler box for transportation of drugs during drug fridge breakdown. This initiative was shared and implemented across all nursing departments.

Product	Pros	Cons
Reusable, insulated bags/pouches	<ul style="list-style-type: none"> Compact Easily stored Cost effective 	<ul style="list-style-type: none"> Concerns with infection control Difficult to clean thoroughly Potential mixed-up with other bags during patient transfer due to look-alike
Disposable, insulated bags/pouches	<ul style="list-style-type: none"> Compact Easily stored Disposable bags prevent cross contamination 	<ul style="list-style-type: none"> Cost ineffective Environmentally unfriendly Potential mixed-up with other bags during patient transfer due to look-alike
Blue cooler box	<ul style="list-style-type: none"> Easily cleaned Cost effective Recognizable as it is a separate carrier Items inside easily identifiable as fridge item & triggers staff to put into the fridge 	<ul style="list-style-type: none"> May be misused for blood product May occupy a bigger space for storage in the ward