Target Zero Medication Errors due to Weight Transcription Errors

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KK Women's and Children's Hospital
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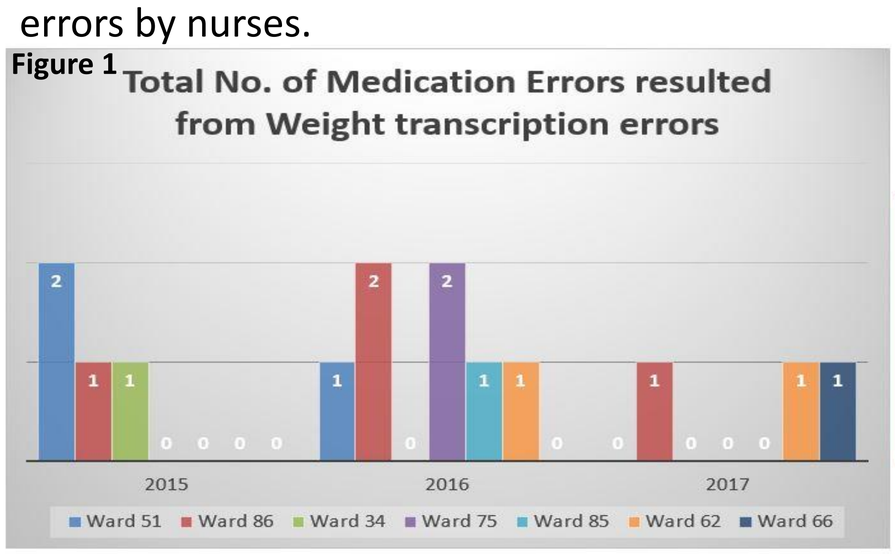
Jeslyn Neo Hwee Teng[1], Lee Siew Kum[2], Cher Loh Hoon[3], Lim Sok Lian[4], Luisa Rico Cruz[5], Peggy Ng[6], Gan Yu Yin[7], Ona Rolenda Factoranan[8], Ren Zhongqiu[9], Sam Koh Chang Hoe[10]

1. Snr. Exec. and 2. ADN (Div. of Nursing), 3. SNM (Ward 75, 76, CDT), 4. SNM (Ward 46, 55, 56), 5. NM, 6 and 7. SSN, 8. EN (Ward 66), 9. SSN (Ward 62), 10. AM (QSRM)

Background

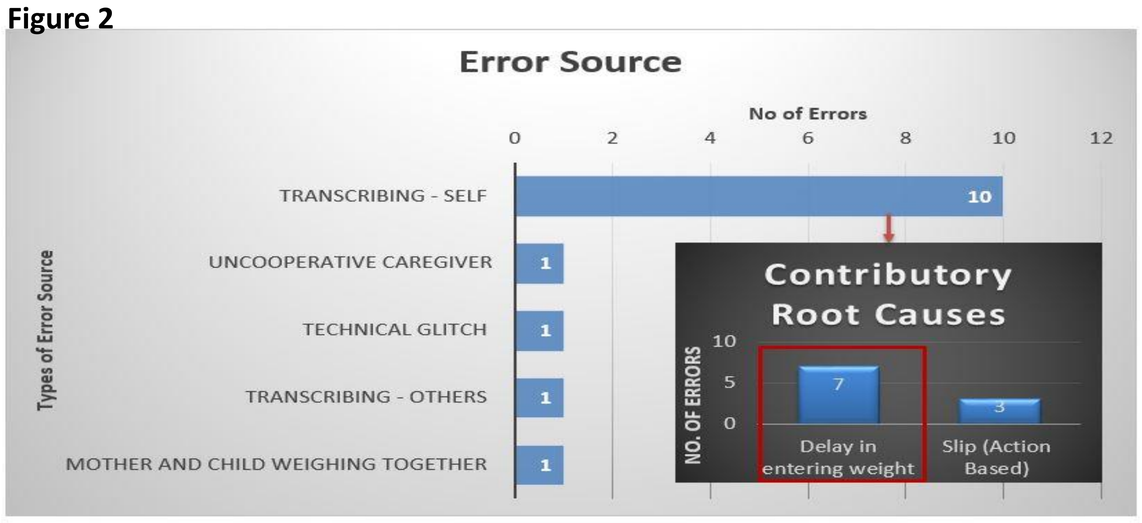
From year 2016 to 2017 (figure 1), there were a total of 14 medication errors resulted from weight transcription errors. 10 (71%) were due to transcription errors by nurses.

Figure 1



The Hospital Medication Review Committee reviewed medication-related incidents using the modified Human Factors Checklist to analyse the contributory factors. 3 out of the 10 cases were due to "slip (action-based)", 7 were due to "wrong plan-of-action choice (delayed action)" (figure 2). All 14 incidents were over or under dosage of medication being administered that might cause harm to patients.

Figure 2



Shortage of computer-on-wheels (COW) was an imminent issue causing delay of nurses' documentation of weight into patients' records. Additionally, there were no guidelines available on weight taking process, especially for the newly recruited nurses who were unfamiliar with the new environment and might not be properly guided in the weight taking process.

AIM

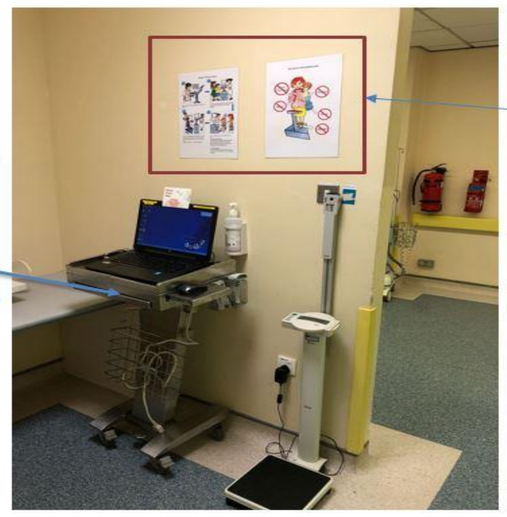
To reduce the time taken for nurses to complete the aforementioned process, which may result in the unlikelihood of nurses committing transcription errors due to delay again through:

- Having a designated weighing corner and stationing a COW permanently to resolve in unavailability of COWs.
- Developing a step-by-step visual guide for all nurses to refer to whenever in doubt.

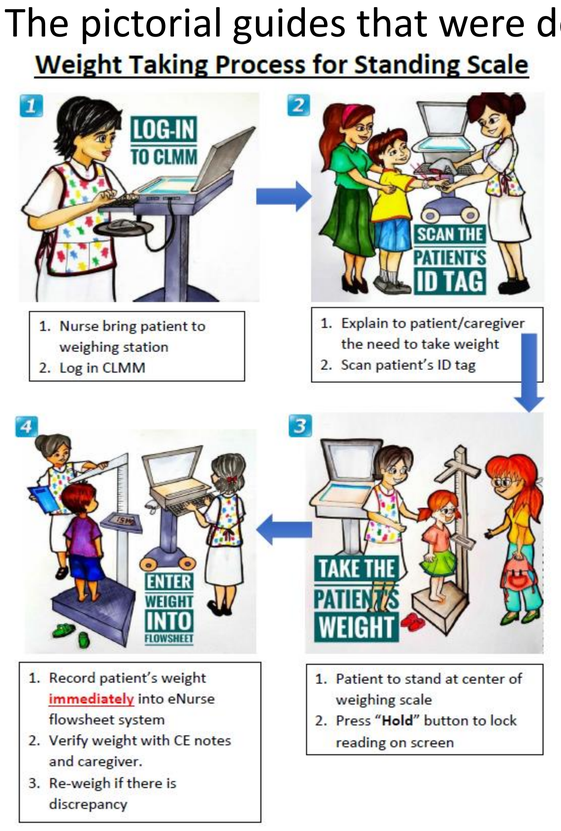
Methods

The two piloted wards 62 and 66 implemented the proposed solutions. Picture 1 shows the designated weighing corner in one of the wards.

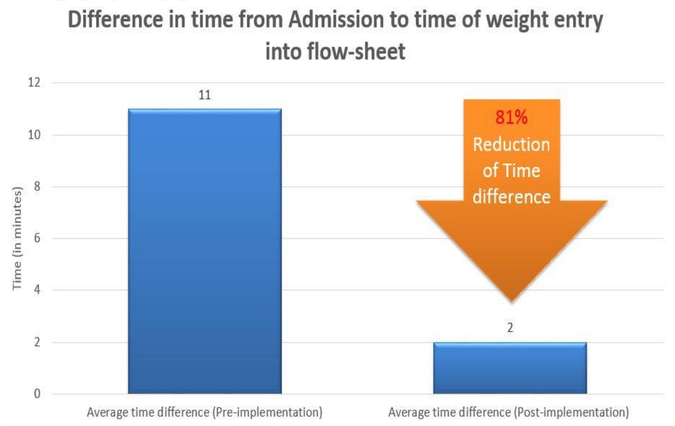
Picture 1



The pictorial guides that were developed by the team:



Results



A total of 180 data points were collected over two weeks starting from mid Feb to end Mar 2018 for pre and post implementation. Figure 3 showed an **81%** reduction on the time difference from point of admission to point of weight entry from an average of **11** minutes to **2** minutes. There were no medication errors reported due to weight transcription errors in both pilot wards since implementation to date.

Conclusion

A robust system using technology could make procedures fool proof. However, helping healthcare professionals make a good behavioural choices is key to prevent occurrence of errors. The team's solutions act as effective control measures in targeting zero patient harm, yet achievable at a fraction of what technology would cost. Solution has been implemented at all wards and monitoring of errors continues.