



DESIGNING A FOOL-PROOF URINE BAG STICKER FOR BETTER URINARY CATHETER CARE

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Introduction

Catheterisation allows the patient's urine to drain freely from the bladder for collection. The catheter tube leads to a drainage bag that holds collected urine, this also allows for measurement of urine volume. As a general rule for drainage bag maintenance, the bag should always be kept below waist level to prevent backflow of urine, with risk of infection, and it should not touch the floor to prevent contamination.

The hospital has around 4000 urinary catheter days each month which provides many opportunities of care, and also potential avenue of harm if mishandled.

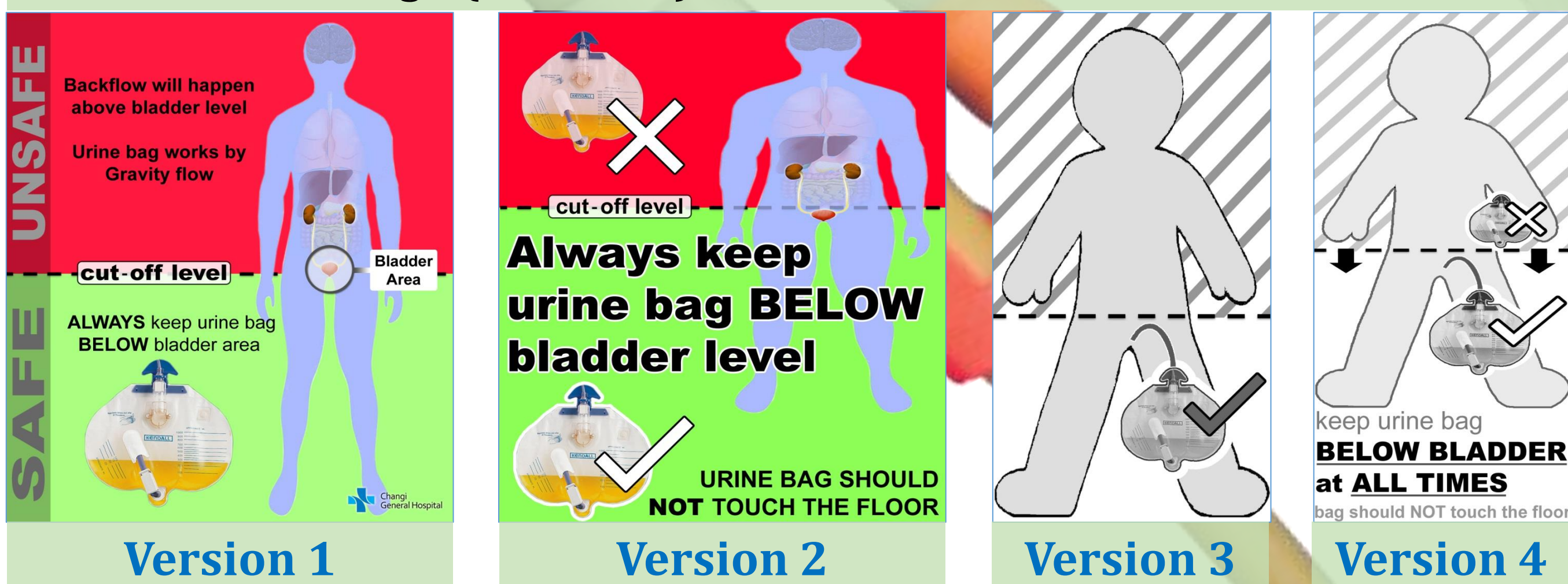
Aim

Different groups of people would handle a patient's urine bag daily; patients, family members, nurses, doctors and therapists. And mishandling was observed due to lack of knowledge in proper handling method. Education and posters are only effective to a certain extent in reaching the target audience, due to memorability.

The aim is to design an urine bag care sticker that is able to provide basic care instructions to anyone handling the urine bag, as 'information in the world' at the point of care, is more effective compared to 'information in the head' and posters in the general environment.

Iterations

The final design (in yellow background) is a result of 4 design iterations, with the aim of keeping the care instructions clear and simple. Each iteration was tested with ground users and improved for the next design, until the final design (version 5) was conceived.



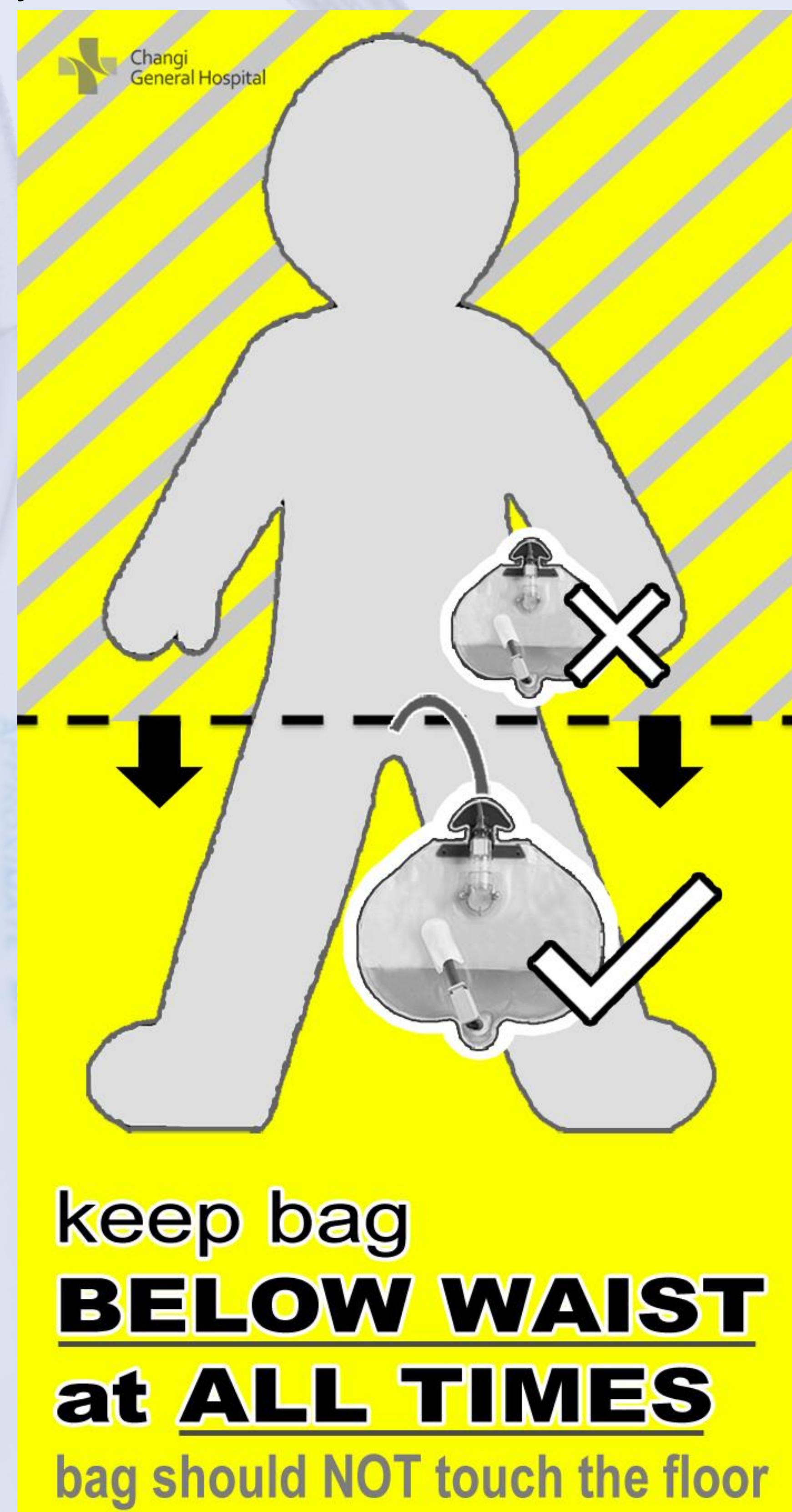
Results

There was no incidences observed where the urine bags are hung above the waist level when patients are moving about or when in bed. Qualitative feedback collected from staff and patients gave positive feedback on the visually appealing, easy-to-understand design. Even patients, who were unable to understand the English instructions, were able to convey the key message (bag below waist) of the sticker.

The sticker's visual design has filed for design protection and was successfully registered with the Singapore Design Registry (IPOS) on 31st May 2016, Design registration no: 30201602037R

Methodology

The design comprises of a simple to understand human figure with various graphics, and bold care instructions in English. For users that are unable to understand the English instructions the graphics should be able to convey the intended information.



Graphics include a human figure silhouette, diagonal lines on the top-half background, two urine bag illustration, coupled with 'cross' & 'tick' labels to indicate correct level positioning, bold black downward arrows below the waist level and dashed line at waist level. It can easily capture user's attention to provide the key care information.

The sticker is laminated for wet-conditions, with a grey-scale tone printing to keep production cost low. The sticker is an easy-stick on and for 1-time use only.

Conclusion

The stickers are currently used hospital-wide in CGH, for all urine bags with Foley catheter. There was also interest shown from other healthcare institutions, of the potential in implementing similar care stickers. Effective solutions do not have to be a technological breakthrough, but can be simple and cost effective if well-designed.