Implementing a quality improvement program on using bladder scan machine at United Christian Hospital

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Introduction
Bladder scan is a diagnostic tool to assist in measuring the post void residual urine (PVRU) volume. It is a portable machine that is about the size of a laptop computer. It is very common nowadays using at ward. Evidence has shown that use of bedside ultrasound to assess PVRU can prevent a significant proportion of patients from unnecessary catheterization. In addition, it does not carry the risk of infection, trauma or loss of patient dignity that may occur with catheterization. Different models of bladder scanner are using at different wards.

Objectives
1. To ensure nursing staff are well-trained in their use and follow the manufacture's recommendation
2. To evaluate and improve the effectiveness of use of bladder scanner
3. To align the standard when using the bladder scan machine
4. To provide recommendations to improve the application of the bladder scan machine

Methodology
Four training sessions for the trainers were conducted in Jan 2017. One ad hoc training session was conducted in early Feb 2017. Two nursing staff (ward manager or APN) were nominated to attend the session in each ward. A standardized audit form include a total of 18 items with 3 critical items was designed. Continence nurses audited the trainers immediately after the training session. Trainers should audit their own ward nursing staff by using the standardized audit form that can be downloaded at the uCH homepage. Video of using bladder scanner was also uploaded at the UCH homepage. The completed audit forms should be sent back to continence nurse before the deadline of submission. The entire audit exercises was 8 weeks.

Result
Total 31 wards with 728 audit forms were collected. 15 items were reported as 100% compliance rate whereas three items were reported from 99.3% to 99.6%. All critical items were reported as 100% compliance rate.
All new comers should be audited by the trainer to align the standard. Continence care team suggested to use the PVRU label at the investigation sheet instead of sticking the thermal paper or writing the pVRU result directly on the patient's file.