Quality of Care Project (QOCP): Small Change in Ward, Big Gains for All

By **Ms May FUNG**, Manager (Nursing); **Ms Hayley LAM**, Manager (Nursing), Nursing Services Department, HAHO

Do you ever feel frustrated by a cramped nurse station, or having to lower your voices during duty handover as you don't want patients or passers-by to hear confidential information of another patient? The Quality of Care Project (QOCP) provides all nursing staff with an opportunity to improve various areas of the workplace through implementing new initiatives of all kinds.

Implemented since 2011, QOCP has three main strategies: staff engagement, participative management and bottom-up approach. It aims to enhance quality of patient care by creating a positive work environment that retains a stable workforce and builds a productive team. Goal-directed nursing initiatives have been introduced to engage nurses at unit level through ward-specific improvement interventions.

In the past 7 years, minor reconstruction of nurse station through thoughtful workplace layout re-design has facilitated nursing care workflow. Hearing aids, bath trolley, patient record trolley, air purifier, air warming unit, folding mobile screen, foldable drip stand, anti-wandering system, Radio data system(RDS) clock, fall and pressure injury prevention equipment and patient lifting devices were introduced with inputs from frontline nurses. Do not belittle these daily healthcare gadgets and minor changes on facilities. They not only improve working environment but also, more importantly, address the needs of frontline operations.

More new measures have been initiated in recent years, namely portable meal table and tailor-made linen trolley which enhance nursing care workflow; electric medication crusher and ampoule opener which improve occupational health of staff; and wireless call bell system which strengthens communication between staff and patients on extra beds. Other patient-centred items, such as colour toilet seat, bedside rail bumper and restraint free pyjamas, are implemented to strengthen patient safety. Innovative ideas such as suction tooth brush, room shampoo, and luminous sky ceilings contributing to upgrading patient care quality other than improving environment, will be introduced in 2018/19.
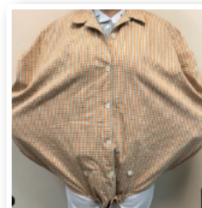
In This Issue:

Wireless call bell system, a new initiative in 2017/18, introduced to strengthen communication between staff and patients on extra beds.

Luminous sky ceilings create virtual skylights and help patients relax, relieve them from discomfort and stress and thus recover faster.

Restraint free pyjamas are innovations created to reduce the use of physical restraint on patients.
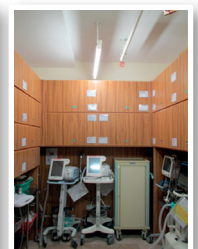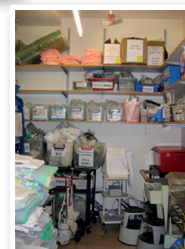
Re-design layout of treatment room with tailor-made storage cupboards to facilitate nursing care workflow.

The project is evaluated regularly. Over the years, it has gained satisfaction from over 90% of respondents (of survey), indicating that quality of patient care has been improved. We firmly believe, with bright ideas from our frontline nurses, that small changes can make big differences on patient care.

Editorial Comments

In this program is the frontline staff are being engaged and empowered in sorting out issues in their practice working environment. Seemingly small improvements like better and more pleasant illumination in the ward, dealing with daily needs like washing hair adding together can lead to big impact on quality of care to patients, physically and psychologically. Great job!

Dr Wing Yee SO
Chief Manager (Quality & Standards), HAHO

Utilization of QR Code on Medical Equipment System to Enhance Patient Safety

By **Mr IENG Siu Man[1], Mr LAW Wing Kin[1], Mr KWOK Kam Tung[2]**, [1]Advanced Practice Nurse, [2]Clerk III, Department of Tuberculosis and Chest Medicine (TBCU), Grantham Hospital (GH)

To maximize the utilization of resources, internal loan of equipment is a common practice in the department of TBCU in GH. Some equipment is of shared use by the four male/female wards which are located at three different floor levels at the TBCU. A list of shared use equipment is shown in Figure 1.

However, even though weekly checking of equipment is in place, it is sometimes difficult to avoid inaccurate, incomplete or outdated record of the on loan equipment. This would not only waste the manpower in locating the needed equipment, but also pose a hazard to our patients when the related equipment is needed in emergency situations.

In order to tackle this problem, a QR code system and a stock checking apps (Figure 2&3), which serves to improve the management of medical equipment, was designed. The QR code is a machine-readable optical label which contains the information of the individual equipment, including the code number, the equipment name, asset ID, location, functional status and repairmen record. The responsible staff has a designed operator QR code as well. The workflow of how to stock take the items and how to generate the report is shown in the Figure 4. Searching of needed equipment can be easily finished in seconds through the apps as different types of frequently used essential equipment are categorized with assigned QR codes (Figure 5).

To conclude, this QR code system and stock checking apps greatly simplify the weekly checking process and nursing staff can put more focus on patient care. The improved availability of utilization data of different equipment can also provide insights on the service gaps and budget planning.
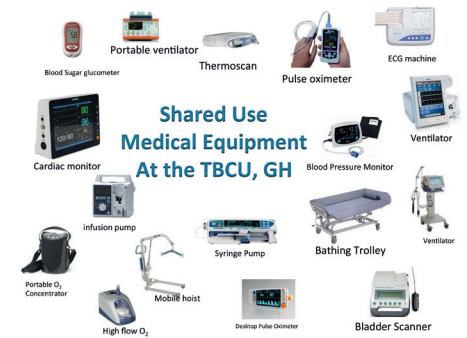

Figure 1. The list of shared use of medical equipment that are needed weekly stocktaking in the four medical wards (three different floor levels) of TBCU
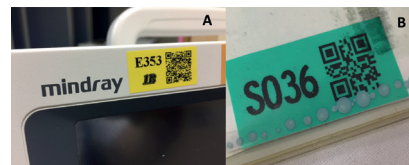
QR CODE

Figure 2. An example of the QR code use be designed. (A)The QR Code is stick to an cardiac monitoring, which includes the information on the location and name of equipment and the asset number of the euipment. (B) The QR Code for the stock taking operator
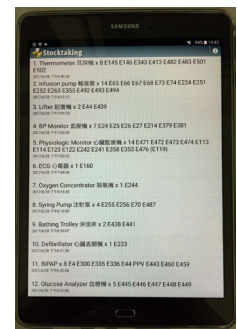
STOCKTAKING APP

Figure 3. An example of illustration shown on the stocktaking app

WORK FLOW

Open stocktaking APP → Select stocktaking Item → Scan QR Code and record → Scan Operator QR Code → Weekly generate report
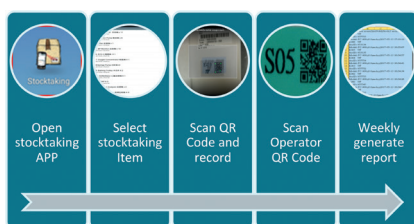
Figure 4. The workflow for the stock taking and report generation
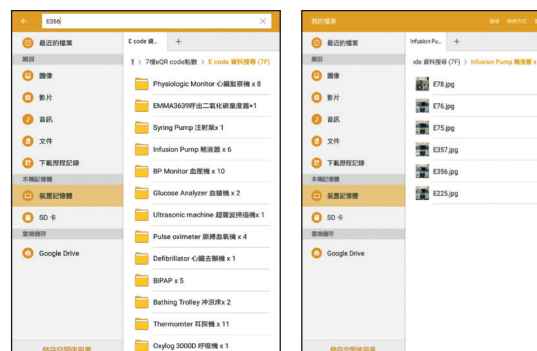
SEARCHING FUNCTION

Figure 5. An illustration of the display on the searching function of an individual equipment

Editorial Comments

The availability and location of medical equipment are the commonly required information in clinical practice. Using the 2-D barcode technique, it would streamline the clinical workflow by reducing repeatedly input of information. The data can help to keep track of the stock, status and utilization of medical equipment. Nevertheless, it is also essential for management to regularly review which particular equipment should be shared or can be made ward-based to maintain the quality of care.

Dr Joanna PANG
Senior Health Informatician(C), IT&HI, HAHO

Improvement in Sepsis Management through Multidisciplinary Collaboration in A&E of Pamela Youde Nethersole Eastern Hospital

By **Dr YUEN MSY** (Nurse Consultant, Emergency Care)[1], **Dr KWOK WS** (Associate Consultant)[1], **Dr LAU ACW** (Deputy Service Director)[2], **Dr WU A** (Consultant)[3], **Ms LIU A** (Senior Pharmacist)[4], **Dr LEUNG JKS** (Chief of Service)[1], **Dr PANG KY** (Service Director)[2], **Ms LEUNG M** (Department Manager)[4], **Mr LAU PF** (Department Operation Manager)[1]

[1]Department of Accident and Emergency; [2]Quality and Safety Office; [3]Clinical Pathology Department; [4]Department of Pharmacy, Pamela Youde Nethersole Eastern Hospital

With timely management, sepsis mortality is highly preventable.

A 2016 Q&S Audit showed that antibiotics could be given within 3-hours (old Surviving Sepsis Campaign (SSC) standard) in only 26.8% sepsis in-patients (SEPSIS-2 definition). Improvement measures were thus devised for initial management to be started in the Accident and Emergency Department (A&E). As the definition of sepsis has since evolved to SEPSIS-3 and the SSC standard changed to within one hour, the latest SEPSIS-3 quick SOFA score (qSOFA) was adopted to identify patients with higher risk of deterioration to start early management.
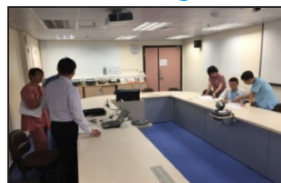
Patients suspected to have severe infection were screened using the qSOFA criteria at the A&E nurse triage station. The criteria are fulfilled if a patient is positive in ≥ 2/3 of the following:
1. Glasgow Coma Scale (GCS) <15;
2. Systolic Blood Pressure ≤ 100 mmHg;
3. Respiratory Rate ≥22 breaths/min.

These patients would have blood taken for cultures and antibiotics would be given within one hour.

To prepare for the above implementation, pre-packed antibiotics were stocked in A&E and staff education was duly carried out. A&E staff began to record respiratory rate and GCS, pharmacists counter-checked drug allergy and microbiologists devised antibiotics guidelines. Opinions were sought from all clinical departments, and handover mechanism of ill cases was enhanced. Barriers to implementation were overcome in a trial-run period, and prospective audits were carried out in the formal implementation period.

Cooperate and Collaborate with Specialists of Clinical Departments in Developing the Sepsis Management Guidelines

Adopt qSOFA in Screening Patients with Severe Infection in Triage

Consult Pharmacists for the Design of Pre-pack, Storage, Counter-checking of Allergy and Administration of Antibiotics

Consult Microbiologists for the Choice of Antibiotics

Multidisciplinary Meeting
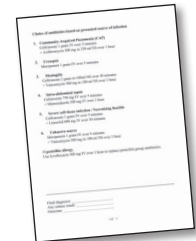
There were 104 patients who were suspected to have severe infection attended A&E from 21st August to 31st December 2017, of which 45 (43%) patients fulfilled the qSOFA criteria. Out of these 45 patients, 41 patients (91%) had antibiotics administered within one hour after nurse triage (range: 17 to 62 minutes). 44 patients (97%) had blood cultures taken. The overall compliance of the new guidelines was 91%. Workload was regarded acceptable from staff survey. Implementation was smooth and new measures were welcome by clinical departments.

In all, through multidisciplinary collaboration, the improvement measures were feasible and resulted in significant improvement in the overall management of sepsis.

Editorial Comments

Both the early recognition and timely treatment of sepsis are very important elements to prevent mortality. A multidisciplinary approach with good communication, clear protocol and workflow has been shown to improve the awareness and effective treatment of patients with sepsis in the A&E Department.

Dr Carmen CHAN
Deputy Service Director(Q&St), HKWC

CLUSTER SHARING

Kowloon East Cluster

Enhanced Recovery After Surgery in Tseung Kwan O Hospital

*By **Dr Ryan WAN**, Associate Consultant, Department of Anaesthesia and Operating Theatre Services, Tseung Kwan O Hospital*

Enhanced Recovery After Surgery (ERAS) program was implemented in Tseung Kwan O Hospital (TKOH) since 2015. It serves as an initiative to enhance the quality of care for patients undergoing major colorectal surgery. It is accomplished through collaboration of multiple disciplines, including anaesthetists, surgeons, nurses, physiotherapists and dietitians.

The aim of the program is to achieve early recovery after surgical procedure by alleviating stress response and maintaining organ functions in the peri-operative period. The team reviewed the evidence and designed a clinical pathway customized for TKOH patients. After the surgical schedule is confirmed, the patients are referred to the one-stop Peri-Operative Medicine Clinic on the same day, where they receive comprehensive assessment, education, counseling and training by the team members. As a result, the team is enabled to make full use of the pre-operative window to optimize the patients both physically and psychologically. Contemporary intra- and post-operative care are adopted, while the principles of Patient Blood Management are applied throughout the peri-operative period, in particular the use of intravenous iron for optimization of the red cell mass.

After implementation of the program, our patients achieved faster and better quality recovery, as evidenced by shorter hospital length of stay, and lower blood transfusion, complication, and readmission rates. With the success in colorectal patients, the program was extended to total knee replacement and major gynaecological surgery in 2016 and 2017 respectively, and the outcomes were also promising. The effort of striving for excellence through multidisciplinary collaboration was highly recognized and the team was awarded the HA Outstanding Team Award in 2018.

Editorial Comments

Enhanced Recovery after Surgery (ERAS) is a well-known evidence based best practices that exercise one-stop approach and multi-disciplinary collaboration to address the patient needs throughout the peri-operative period of colorectal surgery. Mutual benefit of both service providers and users were achieved. Looking forward to expanding its coverage to different types of operations and different hospitals such that more patients could benefit from it.

Ms Wah Chun LI
Manager (Nursing), HAHO