Device Safety Enhancement Project in North District Hospital
Yuen SM, Pun SD, Tam NY Venus, Lee PY Vivian, Tong WC
Department of Medicine, North District Hospital

Keywords:
Cardiac device
CIED
Safety enhancement

Introduction
Owing to the advance in the development of cardiac implantable electronic device, especially arrhythmia related one, there were increasing number of implantation in Hospital Authority. For instance, there were approximately 300 CIED implantations in New Territories East Cluster in the year of 2016. These devices include arrhythmia monitoring system, pacemaker, implantable cardiac defibrillator and cardiac resynchronization therapy. Not only is the implantation procedure crucial for providing optimal care for patients, the aftercare, such as the peri-operative adjustment, possible magnetic interference and explantation of device from the deceased, is equally important in maintaining clinical safety.

Objectives
To promote identification of hospitalized patients with cardiac devices
To educate proper care of patients with cardiac devices
To enhance medical staff communication and provide channel of seeking advice when in doubt

Methodology
In December 2016, we interviewed frontline medical staff on their usual practice on handling patients with CIED. By looking into the loophole of the current practice we develop a structured workflow to identify admitted patients with CIED. A signage, which could be used in the nursing station or bedside, was designed to alert the frontline staff.

The workflow of explantation of CIED from the deceased was polished, stressing on communication with patients’ relatives, infectious control and electrical safety throughout the procedure. Cardiac device safety ward round will be carried out regularly to promote workflow implementation. It provides opportunity for face-to-face staff communication, sharing difficulty and thinking of the solution. A yearly seminar is planned to update staff about the latest technology.

Result
The enhanced workflow and the acknowledgement form for handling CIED from the
deceased was published and was uploaded to the iMed website of the North District Hospital. A PowerPoint file with photos demonstrating steps in explantation of CIED was also readily available on the iMed.

The signage was published in early January, which was already distributed to most wards in North District hospital during the first device safety ward round on 20th January, 2017. Our team visited not only the medical wards, but also the surgical ward, the intensive care unit, the day ward and the emergency departments. The proper usage of the signage and the explantation kit for implantable cardiac defibrillator was demonstrated. It allowed opportunity for frontline staff to ask questions regarding to handling of cardiac device during hospital stay. The seminar for frontline staff is under planning.