Are We Equipped for the New Cardiac Implantable Electronic Device (CIED) Generation? An Evaluation on the Needs for Healthcare Professionals

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Introduction
The number of patients with a CIED is rapidly and constantly growing for the expanded indications and aging of society. In the generation of Magnetic Resonance Imaging (MRI)-conditional CIED, healthcare professional cannot remain in the phase of “removal of CIED after deceased” but has to be updated in meeting with the increasing population and the changing era. In this consequence, a CIED care training seminar has been conducted by UCH Division of Cardiology in Kowloon East Cluster (KEC) in 2014. Overwhelming applications and good feedbacks have been received. There were totally 164 participants involving 86% nurses (n=141) from different departments and 14% (n=23) allied health professionals including Radiographer; Physiotherapist; Occupational-therapist; Speech-therapist; Dietitian and Clinical Psychologist.

Objectives
To evaluate healthcare professional needs and knowledge level on CIED care who has attended the seminar

Methodology
A pre and post-test were performed before and after seminar Feedback from participants have been collected and analyzed

Result
1) Four questions on general CIED concept and function were designed. Q1. Functions of Implantable Cardiovertor Defibrillator (ICD) Q2: Effect of magnet over Permanent Pacemaker (PPM) Q3: Meaning of VDD mode pacing Q4: Electro-Cardiogram (ECG) of inappropriate pacing 2) Pre and Post-test result: The test was optional and was distributed to all attendees. Over 50% completed test were received back (n=84) and analyzed as below: Pre-test Post-test Q1 64.6% 84.9%
Q2 26% 67.1%  Q3 21.9% 64.4%  Q4 27.4% 65.8%  3) Feedback from participants: Evaluation questionnaire was designed and distributed to all participants. 62% (n=102) questionnaires were returned and analyzed. The improved competence level and average satisfaction were 4.14 and 4.17 subsequently (5-point scale). All have shown with the needs on updating CIED knowledge and will recommend to colleagues. Most of them (96%) request to have regular training on this area, some even request to have intermediate or advance level training. Updating CIED knowledge is necessary for healthcare professionals in particular in this advancing technology generation. New guideline (e.g. MRI for CIED) should also be established to meet with the change and increased service need.