The implementation of innovative technology in intensive care unit for enhancing communication and education with critically ill patient’s family members

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Introduction
Information need is top as rated by family members, e.g. patient’s condition, medical procedures. Although some family members claimed not enough explanation provided, it can be uneasy for nurses of intensive care unit (ICU) to explain technical and medical procedures to family members who do not have a medical background. Literatures have already shown that the need for information is strongly related to the levels of state anxiety, so that providing adequate, accurate and comprehensible information is crucial to the family members of ICU patients. It is believed that ICU nurses can have an important role in empowering families by fulfilling the family’s pivotal need for information. Utilization of advanced technology has always been an essential component of care for the patients in ICU. ICUtv platform was implemented in 2010 and positive feedback was received. The general information was broadcasted in this platform but that information is not specific enough to patient and relatives with individual needs. The uses of mobile technology with various kinds of information can overcome this limitation. The use of tablet devices may act as a form of teaching aid for more effective technical explanations of the medical and nursing procedures, and prognosis, etc., to the family members of ICU patients.

Objectives
- To fulfill the information needs to family members of critically ill patients.
- To provide specific information to family members according to theirs' needs.
- To enhance family members’ satisfaction during patients’ hospitalization.
- To reduce anxiety and stress levels of family members.

Methodology
Tablet devices were used to provide information to family members according to their individual needs based on patient's condition. Information package was developed for uploading into the tablet devices, which were used by doctors and nurse whenever necessary. There were three main categories in information package; they were basic information, procedure-based and education-based information. Basic information included ICU introduction and workflow; Procedure-based information have some examples of renal replacement therapy, tracheostomy, endotracheal intubation, etc. While the education-based one consisted of basic patient care and range of motion
exercise techniques that can teach family members to participate in caring of patients.

**Result**
Positive feedbacks were received from family members and healthcare workers in some informal sharing. Most of them agreed the information provided is more specific than that in ICUtv. Further development of tablet devices was suggested. The use of tablet devices in clinical area was highly recommended. However, only informal feedback was collected at that moment. In the near future, we are going to conduct research to evaluate the effectiveness of tablet devices in enhancing family members’ satisfaction and reduction of their anxiety and stress level.