



**ABSTRACT**      ชื่อเรื่อง      นวัตกรรมสิ่งประดิษฐ์ : พุทธโสธร อี เค จี อิเล็กโทรด

**Title**                      **Innovation : Bhuddasothorn EKG Electrode**

**AUTHOR :**              Mrs. Jintana Rojanai      ชื่อผู้นิพนธ์      นางจินตนา โรจนัย

Anesthetists' main mission is to provide anesthetic service implication for surgical patients. It focuses on the safe, standardized service to patients, especially electrocardiography monitoring (EKG). It is necessary to use a number of electrodes in EKG monitoring. 7,940 patients with the anesthetic implication serves were statistically obligated to use 23, 820 electrodes in Bhuddasothorn hospital in 2011. They cost 166, 740 baht. The reasons for reduction both costs and the volume of electrode wastes cause to reuse EKG electrodes through sterilization and then to invent them into Bhuddasothorn EKG electrodes. After that, they have been tested for effectiveness, for example, the clarity of EKG picture. Moreover, the medical provider should be convenient to use new ones. They should adhere to skins firmly, including the use' satisfaction. For patients, their reactions to skins from these electrodes have been evaluated during and after anesthetic implications, compared to standardized EKG electrodes. This study was approved by the hospital committee of research ethics. In the study of 100 random samplings, its data are statistically analyzed through t-test.

It indicated that the EKG pictured clarity of standardized EKG electrodes and the Bhuddasothorn EKG electrodes is not different ( $t=1.975, P=.051$ ) For the medical provider, their firm attachment on skins and the use' satisfaction in operational scale are also not different ( $t=1.136, P=.259, t=1.915, P=.058$ ). But the convenience in appliances is different ( $t=7.824^{**}, P=.000$ )  $^{**}P \leq .001$ , because it takes little time to insert K-Y gel before. For patients, the reactions to skins, both are equal. For the costs, Bhuddasothorn EKG electrode is only 1.22 baht per unit, whereas each of standard EKG electrodes is 7 baht.

คำสำคัญ(Key Words) : อี เค จี อิเล็กโทรด ( EKG Electrode)