

The Safety Transfer in Acute Critical Patient by Telemedicine (START) Program at Udonthani General Hospital

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Abstract : Objective: The majority of the high-risk patients (ST-elevation myocardial infarction (STEMI), Acute cerebrovascular accident, Sepsis, Acute Traumatic patient) are admitted to district or local hospitals (average 1-1.30 hr. from Udonthani general hospital, Northeastern province, Thailand) without proper facilities. The referral system was support to early care and early management at pre-hospital stage and prepare for the patient data to higher hospital. This study assessed the reduction in treatment delay achieved by pre-hospital diagnosis and referral directly to Udonthani General Hospital. Methods and results: Four district or local hospitals without proper facilities for treatment the very high-risk patient were serving the study region. Pre-hospital diagnoses were established with the simple technology such as LINE, SMS, telephone and Fax for concept of LEAN process and then the telemedicine, by ambulance monitoring (ECG, SpO₂, BT, BP) in both real time and snapshot mode was administrated during the period of transfer for safety transfer concept (inter-hospital stage). The standard treatment for patients with STEMI, Intracranial injury and acute cerebrovascular accident were done. From 1 October 2012 to 30 September 2013, the 892 high-risk patients transported by ambulance and transferred to Udonthani general hospital were registered. Patients with STEMI diagnosed pre-hospitally and referred directly to the Udonthani general hospital with telemedicine closed monitor (n=248). The mortality rate decreased from 11.69% in 2011 to 6.92 in 2012. The 34 patients were arrested on the way and successful to CPR during transfer with the telemedicine consultation were 79.41%. Conclusion: The proper innovation could apply for health care system. The very high-risk patients must had the closed monitoring with two-way communication for the "safety transfer period". It could modified to another high-risk group too.

Keywords : safety transfer, telemedicine, critical patients, medical and health sciences

Conference Title : ICICEM 2015 : International Conference on Intensive Care and Emergency Medicine

Conference Location : London, United Kingdom

Conference Dates : February 16-17, 2015