Improvement strategies after sentinel event of Extracorporeal Membrane Oxygenation Therapy

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Introduction
In order to meet the challenge of growing demand and make improvement in the Extracorporeal Membrane Oxygenation (ECMO) service in Cardiathoracic Surgical (CTS) Intensive Care Unit after sentinel event, a continuous quality improvement (CQI) program was implemented in the year 2012 – 2014.

Objectives
(1)To ensure effectiveness of ECMO nursing care (2)to promote patient safety and risk mitigation (3)to enhance quality ECMO service in CTS Department

Methodology
A structuralized communication-training-simulation (CTS) program was established and focused on both management and clinical aspects.

Result
An internal audit was conducted as a tool for measuring the outcome of the improvement strategies of ECMO management in 4Q 2013 to 1Q 2014. In which 44 ICU ECMO trained nursing staffs were assessed, compliance rate was 98.6%. Management of pump failure and oxygen system achieved 97.7 % and 100% respectively. Weaknesses were the management of pressure monitoring system and pressure limit setting which scored 84.7 % and 90% accordingly. The program showed encouraging progress on quality ECMO care management, patient safety enhancement and professional development. In addition, we have embarked on a number of approaches to consolidate the safety culture of ECMO service in CTS department. We are planning to implement debriefing session to raise situational awareness in improvement after every ECMO case. And also conduct periodical drill to facilitate ECMO emergency management. We believe these strategies can build up a positive learning environment and continue to improve the ECMO nursing standard in our department.