

## 4th Annual ELSO-SWAC Conference Proceedings

# ECMO nurse specialist: Qatar experience

Majed Hijjeh

Address for Correspondence:

**Majed Hijjeh**

Nursing Administration, Hamad General Hospital, Hamad Medical Corporation, P.O. Box 3050, Doha, Qatar  
Email: mhijjeh@hamad.qa

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As part of the National Health Strategy in the State of Qatar to improve the healthcare sector, the Critical Care Service in Hamad General Hospital (HGH) sets up an extracorporeal membrane oxygenation (ECMO) service within the Medical Intensive Care Unit (MICU) to enhance the care provided to critically ill patients. The new service demands a new technology and specific staff training in order to maintain high standards and safe care. Therefore, our initial investment was in training the team following ELSO guidelines and the purchase of ECMO equipment, especially for the adult population in our case. In the State of Qatar, the first use of ECMO treatment as respiratory support was in May 2014. Our experience supports other research that this technique requires expert knowledge and skills to deliver best and safe practice.<sup>1</sup> We believe that this can be developed through regular practice and interaction at the bedside with patients and the ECMO technical equipment. Moreover, planning a robust ECMO education programme for the team is central to improving the quality of care and safety that we provide to these vulnerable patients. As part of our preparation process, in November 2013, six ICU nurses attended the ECMO specialist training course in London (UK). Since then, continuing educational programme has been established to train all the whole MICU nursing team focused on ECMO patient care. Several in-house training workshops and external re-training programmes were provided to nurses to develop their theoretical knowledge and technical skills with other members of the clinical team. In addition, we have performed simulation training that focused on multidisciplinary team, emphasising that teamwork is important and necessary for the care of such patients. The ECMO specialised nurse who takes care of these patients is educated to provide specialised assessment, appropriate monitoring, and clinical reasoning

interventions. In addition to manipulating the ECMO machine, understanding ventilation requirements and the patient's medical treatment is crucial to help the ECMO nurses detect the signs of deterioration early and intervene immediately. Therefore, naturally, the role of the ECMO nurse has expanded and tends to be developed with theoretical and technological developments.<sup>2</sup> The primary roles being close monitoring of alterations in blood flow and observation and maintenance of the circuit, and also an ability to assess the risks and assist with patient care. We also compared the role of the ECMO specialist nurse versus the role of the perfusionist. We believe in the importance of both roles; however, we argue that when the ECMO nurse works alongside the ICU bedside nurse, the bedside care becomes more effective. Both nurses and perfusionists are able to understand the patient's overall condition and needs during the ECMO run, and have better interpretation

regarding observed changes.<sup>3</sup> The partnership promotes the continuity of patient care and allows better communication and support of the family as an aspect of care. This also increases the opportunity of bedside training and education and allows developing other nurses under supervision.

Overall, with proper planning, education, and structuring of ECMO care, we were able to obtain outcomes that are similar to those reported internationally. We aim to further improve patient outcome, especially regarding post-ICU discharge as part of holistic nursing care.

Keywords: ECMO, ECMO education, ECMO nurse specialist, role of ECMO nurse

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