

## PRESS RELEASE

### **Study reveals ten-year territory-wide trends in the utilisation and clinical outcomes of extracorporeal membrane oxygenation in Hong Kong**

(Hong Kong, 16 November 2023) – **The utilisation of extracorporeal membrane oxygenation (ECMO) has been rapidly increasing in Hong Kong. A study conducted by a research team from The University of Hong Kong examined 10-year trends in the utilisation and clinical outcomes of ECMO in the city to have a better understanding of the current situation for future service planning.**

Since the formalisation of ECMO services in Hong Kong in 2010, the number of ECMO centres under centralised intensive care unit (ICU) governance increased from three in 2010 to seven in 2019. This study showed that among a total of 911 patients who received ECMO between 2010 and 2019, there were 297 (32.6%) veno-arterial ECMO, 450 (49.4%) veno-venous ECMO, and 164 (18.0%) extracorporeal cardiopulmonary resuscitation. The annual number of patients receiving ECMO in public hospitals increased steadily by 9.5 fold from 18 episodes in 2010 to 171 episodes in 2019. The utilisation of ECMO among patients aged  $\geq 65$  years also increased.

In addition, this research discussed major resource implications associated with ECMO service provision. More than half of the cases [469 (51.5%)] were initiated outside the regular 9 am to 5 pm hours. Nearly a quarter [222 (24.4%)] of the ECMO episodes were inter-hospital transferred from a non-ECMO centre to an ECMO centre. Among them, 54 (24.3%) underwent a major operation within 7 days of transfer. The overall hospital mortality was 456 (50.1%) and a total of 41 (4.5%) patients were successfully bridged to ventricular assistive device implantation or transplantation. Although patients receiving ECMO represent a small proportion of ICU patients overall, they require significant resources including out-of-hours services, inter-hospital transfers, and major operations.

The researchers concluded that as ECMO utilisation increased in Hong Kong, patients put on ECMO were older, more critically ill, and had more co-morbidities. They advocate for service expansion with adequate resource allocation and training to maintain quality of care.

The article “Ten-year territory-wide trends in the utilisation and clinical outcomes of extracorporeal membrane oxygenation in Hong Kong” was published in the *Hong Kong Medical Journal*.  
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## 新聞稿

### 香港體外膜氧合使用和臨床結果的十年趨勢

(香港，2023年11月16日) — 體外膜氧合(亦即人工心肺機)的使用在香港迅速普及，來自香港大學的團隊研究本港體外膜氧合使用和臨床結果的十年趨勢，以助瞭解現時的發展情況，規劃未來的相關服務。

自2010年體外膜氧合在香港正式啟用以來，由深切治療科管理的體外膜氧合中心數目由2010年的3間增至2019年的7間。這項研究顯示，在2010年至2019年期間，接受體外膜氧合治療的病例共有911例，其中靜脈至動脈體外膜氧合佔297例(32.6%)，靜脈至靜脈體外膜氧合佔450例(49.4%)，164例(18.0%)使用了體外膜氧合輔助心肺復甦。每年在公立醫院接受體外膜氧合急救的患者從2010年的18例增至2019年的171例，穩定地增長了9.5倍。65歲或以上患者在醫院內使用體外膜氧合的比率也有所增加。

這項研究同時討論體外膜氧合服務的提供對資源分配的深遠影響。超過一半接受體外膜氧合治療的病例(469例，51.5%)在辦公時間上午9時至下午5時以外啟用體外膜氧合；接近四分之一的病例(222例，24.4%)從非體外膜氧合中心的醫院轉送至體外膜氧合中心，當中有54人(24.3%)在轉院後7天內接受了大型手術。綜觀接受體外膜氧合治療的病例，醫院死亡率為456例(50.1%)，41名(4.5%)患者則成功植入心室輔助裝置或進行器官移植。儘管接受體外膜氧合治療的患者只佔深切治療病人的少數，但他們需要大量資源，包括非辦公時間內的服務、轉院服務和大型手術。

研究團隊發現，隨着體外膜氧合的使用在香港愈趨普及，接受體外膜氧合治療的患者年紀較大、病情較危重及有較多合併症。團隊認為擴展服務、確保資源分配足夠及培訓充足對保持照護質素十分重要。

詳細內容可參閱原文《香港體外膜氧合使用和臨床結果的十年趨勢》。

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Source: PY Ng, Vindy WS Chan, April Ip, et al. Ten-year territory-wide trends in the utilisation and clinical outcomes of extracorporeal membrane oxygenation in Hong Kong. Hong Kong Med J 2023;29:Epub 16 Nov 2023. <https://doi.org/10.12809/hkmj2210025>.

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