



## Symposium 24

### EMS 無限可能：智慧應用新領域

## Unlimited Possibilities in EMS: Smart Applications for the Future of Emergency Medical Services

時間：2025 年 6 月 28 日(六) 15:30~17:00

會議室：401 會議廳

座長：侯勝文醫師(新光醫院)、黃建雄醫師(林口長庚醫院)

15:30~15:50 廣角鏡：智慧科技在 EMS 的全面化發展

Integrating Smart Technologies into EMS: Towards a Comprehensive Transformation

主講人：林皓陽醫師(臺大醫院)

15:50~16:00 綜合討論

16:00~16:20 放大鏡：智慧科技在派遣端的客製化應用

Smart Technology for Customized Decision-Making in Emergency Medical Dispatch

主講人：金冠成醫師(部立台北醫院)

16:20~16:30 綜合討論

16:30~16:50 顯微鏡：AI 教學在 EMS 的應用與發展

Under the Microscope: Applications and Development of Artificial Intelligence in EMS Education

主講人：邱俊文醫師(彰化基督教醫院)

16:50~17:00 綜合討論

### 課程簡介

#### ● 廣角鏡：智慧科技在 EMS 的全面化發展

智慧科技正全面重塑緊急醫療服務(EMS)的運作方式。人工智慧(AI)、穿戴式裝置、5G 通訊、行動決策支援系統與無人機等技術，已逐步從實驗室走向臨床應用。如何提升病患辨識準確性、資源調度效率與現場處置能力已是當前緊急救護領域所關注的議題。而面對這樣的轉變，我們在 EMS 智慧化的道路上又會面臨什麼樣的挑戰與機會？



- **放大鏡：智慧科技在派遣端的客製化應用**

Smart technologies are reshaping emergency medical services (EMS) dispatch by enabling more personalized and adaptive decision-making. Traditional dispatch models rely heavily on human judgment, which can be prone to error and limited by caller communication. Recent advancements in artificial intelligence (AI), speech recognition, and natural language processing (NLP) have demonstrated improved sensitivity and faster recognition of out-of-hospital cardiac arrests (OHCA) and severe trauma during emergency calls. AI can also analyze caller emotions to tailor dispatcher instructions in real time.

Beyond AI, smart devices—such as wearables, contactless monitors, and even public surveillance systems—are being explored to detect emergencies instantly, even before a call is made. Customizing dispatch strategies based on caller characteristics, scene context, or regional needs is becoming increasingly feasible.

These technologies also extend to post-recognition logistics, such as rapid AED delivery via drones or autonomous vehicles. While each innovation alone may not be transformative, their integration paves the way for a smarter, more responsive EMS system. This talk explores how technology enables dispatch systems to move from standardized protocols to context-aware, dynamic responses.

- **顯微鏡：AI 教學在 EMS 的應用與發展**

人工智慧(AI)正逐步改變教育領域，提供個人化學習路徑、提升教學效率並拓展知識獲取途徑。本講題將聚焦 AI 科技在緊急醫療救護(EMS)教育訓練中的具體應用與未來發展潛力。

本演講有三大主題：

1. 演示 AI 在圖像生成上的應用：例如生成教學投影片、X 光片、或評估事故現場照片中的關鍵創傷資訊，加速視覺診斷能力的培養。
2. 簡介 AI 在文獻與知識管理上的功能：如何協助學員快速檢索最新救護指南、分析並萃取實證醫學知識。
3. 介紹智能模擬訓練：探討 AI 如何創建、可互動的虛擬病患與複雜災難場景，提供學員在安全環境中演練臨床決策與團隊合作，並獲得即時回饋。

期待未來 AI 作為 EMS 教育的常用賦能工具，輔助教官、學員提升核心能力，並展望其在塑造未來 EMS 人才上的挑戰與契機。