

# 應用基於模擬的精熟學習教學法 進行人工血管植入手術之教學

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## 摘要

近年來醫學教育轉為結果導向(outcome-based)的能力導向教育(competency-based education),而精熟學習法(mastery learning)是能力導向教育的一種形式。而基於病人安全,傳統的「見習、實作、教學」(see one, do one, teach one)的外科教學也面臨了挑戰,各種基於模擬的教學(simulation-based education)也越來越受重視。儘管如此,國內實際上的外科教學卻鮮少使用模擬器,住院醫師仍是在真實的病人身上練習並逐漸成熟。此計畫以一常見之小手術:人工血管植入為標的,希望研發低價、低擬真度的模型讓第一年住院醫師能先在模擬器上熟悉手術步驟。並藉由精熟學習法的方式來設計課程,期待能讓絕大多數的住院醫師在短時間內熟悉人工血管植入手術的整體流程以及技術細節,除了增進住院醫師基礎技巧的學習效率,更進一步的保障了病人安全。

## Abstract

During the recent decades, outcome and competency-based education has been introduced into the graduate medical education curriculum. The traditional dogma "see one, do one, teach one" of surgical education has increasingly been challenged as the increasing awareness of patient safety. Simulation-based surgical education has been the main focus in many international surgical education centers. Despite this trend, simulators are rarely implemented in the current surgical education in Taiwan. Surgical residents develop their skills by practicing on real patients. This project picks a common minor operation: implantation of a totally implantable venous access device, targeting the first-year surgical residents. By developing a low-cost, low-fidelity model for them to practice and designing the curriculum according to principles of Mastery Learning. We hope that the majority of the residents could mastery the skills required in safely performing the surgery, increasing the efficiency of learning and ensuring patient safety.