

可信任專業活動(EPAs) 在臨床教育之角色 -訓練與評量



高雄醫學大學醫學院
臨床教育訓練部
蔡哲嘉

Sources: Google images, Creative Common

EPAs參考資料: 楊志偉

醫療品質雜誌2016年1月P.32-38

落實核心能力導向醫學教育（CBME）—
簡介可信任專業活動（EPAs）在醫學教育之應用
Translating Competency-Based Medical Education
（CBME）into Clinical Practice: Application of
Entrustable Professional Activities（EPAs）in Medical
Education

楊志偉^{1, 2, 3, 4}

國立臺灣大學醫學院¹附設醫院教學部主治醫師²急診醫學部主治醫師³醫學教育暨生醫倫理學科
（所）臨床助理教授⁴流行病學暨預防醫學研究所博士候選人

EPA 發展與定義

發展-荷蘭學者Olle ten Cate (2005)



定義-

- 觀察評量學員在執行臨床任務的整體表現，決定學員**是否具備「可信任」核心能力**
- 依據學員**需要被督導 (supervision) 等級**來決定是否能**勝任獨立執行醫療行為**

EPA在臨床教育之角色

訓練

- 核心能力導向醫學教育Competence-based Medical Education, CBME)
- 督導等級確保病人安全: JCI評鑑授權

評量

- 臨床任務需要多重核心能力**整體統合性**評量-知識、技能、態度(KSA)
- EPA決定學員能力進階里程碑milestones

EPAs督導等級-「可信任」程度

等級 Level	執行臨床任務受信任程度
1	觀察/模擬情境下執行，未允許操作
2	直接/完全督導下執行: a.共同完成、b.需要時介入
3	間接/應學員請求督導下允許執行: 隨時候傳，再度確認(double checked)
4	允許獨立操作執行，事後確認即可
5	允許督導與教導其他資淺學員/同儕

- Chen, H. C. (2015). The case for use of entrustable professional activities in undergraduate medical education. Acad Med, 90(4), 431-6.
- ten Cate, O. (2013). Nuts and bolts of entrustable professional activities. J Grad Med Educ, 5(1), 157-8.



醫學生畢業必備80項技能能力定義

何文譽 主任

Level	定 義
Level 1	小組討論、課堂展現
Level 2	臨床 / 基礎綜合內容在討論會中展現
Level 3	目標清楚的模擬臨床訓練環境中 (例如: OSCE, Mini-CEX)，展現其執行能力
Level 4	學生能夠在幾近/或臨床實境中，展現其執行能力: 教師全程督導 (closely supervised)
Level 5	學生能夠在臨床實境中，展現其執行能力: 獨立執行，在需要時教師及時協助(teacher stand by)

ACGME能力/還須EPAs?

執行EPA須展現整合多種能力

表一、EPAs與ACGME六大核心能力關聯之範例^[14]

EPA	ACGME核心能力					
	MK ^註	PC ^註	ISC ^註	P ^註	PBLI ^註	SBP ^註
執行闌尾炎的手術	V	V				
執行患者的交接班	V	V	V			V
設計治療流程	V				V	
主持跨領域醫療團隊會議		V	V	V		V
慢性病處置		V	V	V		V

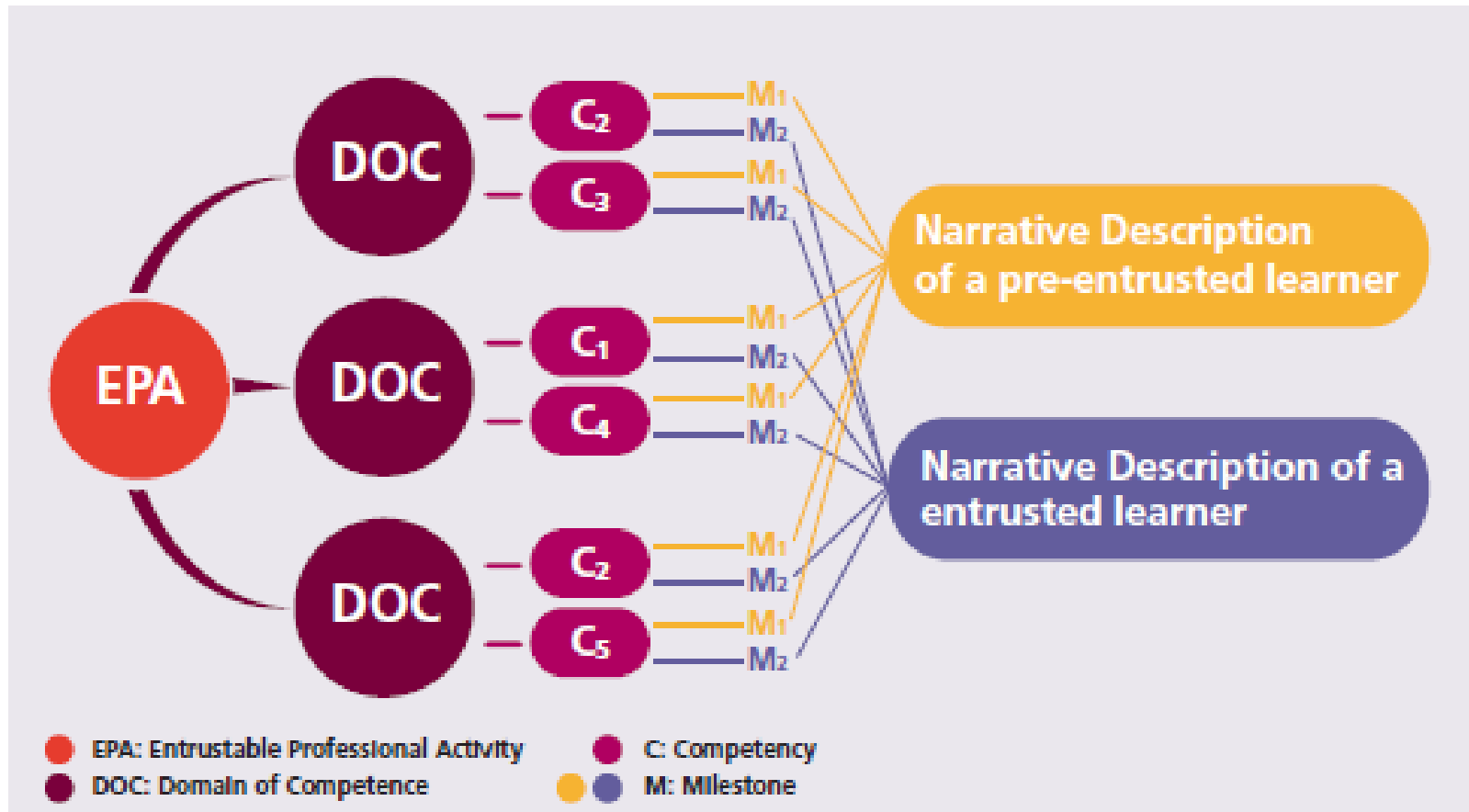
註：MK, Medical Knowledge; PC, Patient Care; ISC, Interpersonal Skills and Communication; P, Professionalism; PBLI, Practice-based Learning and Improvement; SBP, Systems-based Practice.

臨床任務EPAs督導等級 連結學員里程碑進階

Portfolio of: <i>Trainee Jones</i>	PGY1		PGY2		PGY3		PGY4	
EPA a	1	2	2	2	3	4	4	5
EPA b	1	1	2	2	2	3	3	4
EPA c	2	2	3	4	5	5	5	5
EPA d	2	3	4	4	4	4	5	5

- Ten Cate, O. (2014). AM last page: what entrustable professional activities add to a competency-based curriculum. Acad Med, 89(4), 691.

EPAs、能力、與里程碑之關連



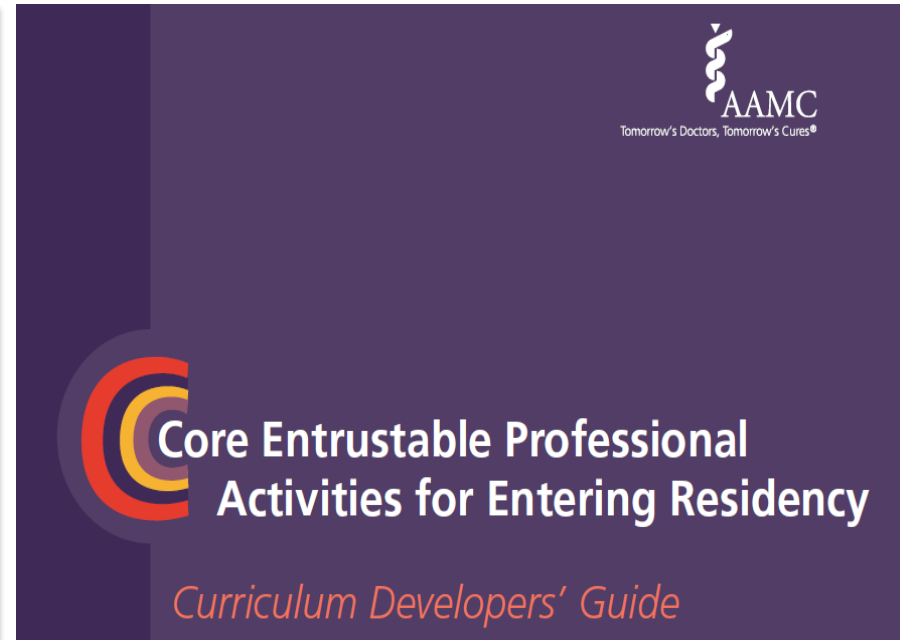
AAMC (2014) Core Entrustable Professional Activities for Entering Residency: Curriculum Developers' Guide

EPAs bridge competencies and real work



*AAMC 13 Core EPAs

*美國醫學院學會
(Association of
American Medical
Colleges, AAMC)制定
醫學生畢業進入住院醫
師訓練前必要完成合格



<https://members.aamc.org/eweb/upload/Core%20EPA%20Curriculum%20Dev%20Guide.pdf>

*AAMC 13 Core EPAs

EPAs	臨床任務訓練與評量
1	蒐集病史及執行身體診察(Gather a history and perform a physical examination)
2	以臨床實際活動情況，來排列優先鑑別診斷(Prioritize a differential diagnosis following a clinical encounter)
3	建議並判讀常用診斷的檢驗及篩檢(Recommend and interpret common diagnostic and screening tests)
4	開立醫囑與處方，並能加以討論(Enter and discuss orders and prescriptions)
5	在病歷上確實記錄臨床活動情況(Document a clinical encounter in the patient record)
6	在臨床活動中能口頭報告病人情況(Provide an oral presentation of a clinical encounter)

*AAMC 13 Core EPAs

EPAs	臨床任務訓練與評量
7	建構臨床上的問題並 找出證據 ，促進病人照顧品質(Form clinical questions and retrieve evidence to advance patient care)
8	給予或接受病人交班過程的 照顧責任 (Give or receive a patient handover to transition care responsibility)
9	與不同領域 臨床團隊 協調合作(Collaborate as a member of an interprofessional team)
10	察覺與辨認 需要快速或緊急處置 的病人，並能即時 啟動評估與處理 (Recognize a patient requiring urgent or emergent care and initiate evaluation and management)
11	獲取特別 檢查與醫療程序 的同意書(Obtain informed consent for tests and/or procedures)
12	執行醫師的 一般醫療程序 (Perform general procedures of a physician)
13	找出與辨認 醫療系統上的不足或缺失 ，培育促進病人安全及品質 改善文化 (Identify system failures and contribute to a culture of safety and improvement)

EPA-based undergraduate curriculum

	Core EPAs for clinical tasks
1	The clinical consultation: general, elderly, children, Gyn/Obs, neurological/psychiatric
2	General medical procedures*
3	Informing, advising, and guiding patients and families: Discussing test results, prognosis, and a management plan (病人/家屬衛教)
4	Communicating and collaborating with colleagues (跨領域團隊)
5	Extraordinary patient care: BLS

Undergraduate Core EPA 2: General medical procedures

2.1 Venepuncture

2.2 Peripheral intravenous line placement and connection

2.3 Participation in the OR

2.4 Speculum/vaginal examination

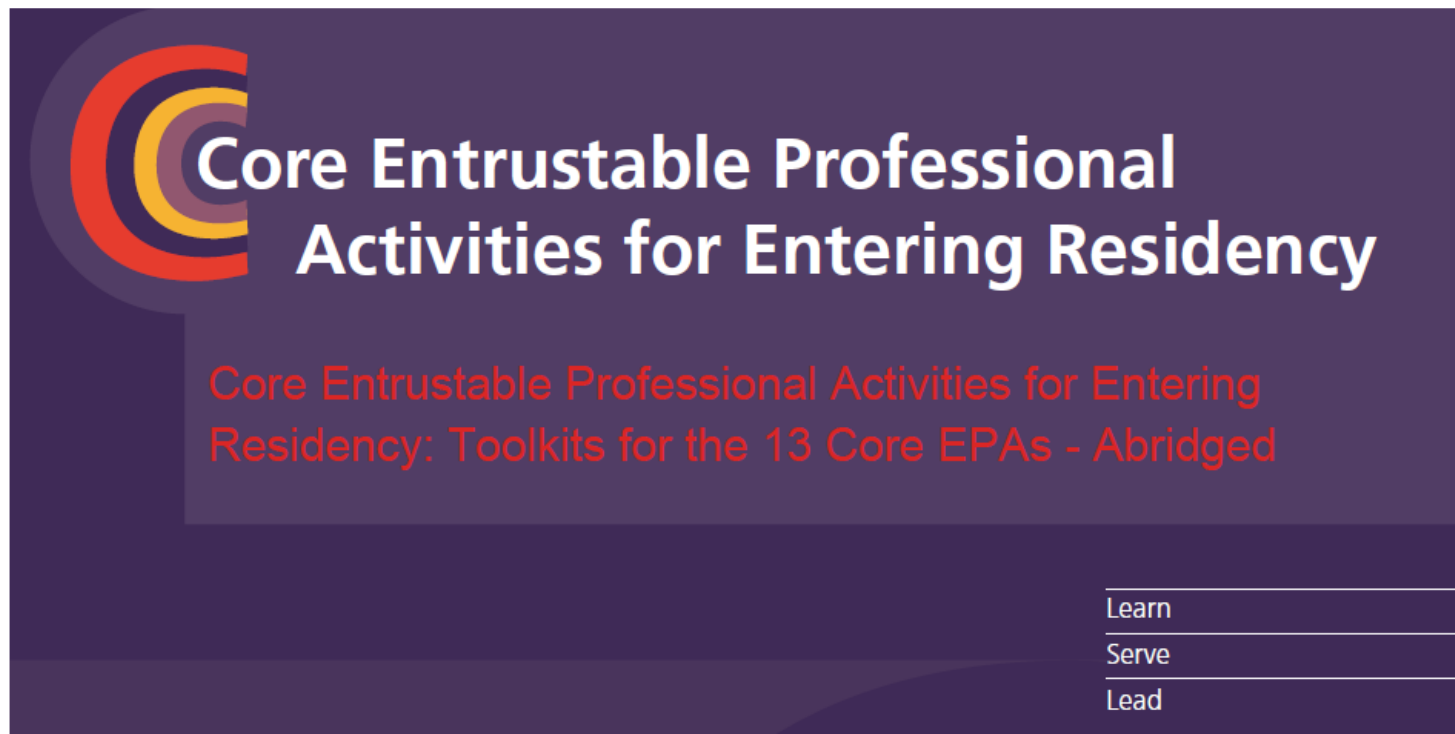
2.5 Insertion of urinary catheter

2.6 Intramuscular, intra- and subcutaneous-injection

2.7 Rectal examination

2.8 Wound care

AAMC: Toolkits for 13 Core EPAs

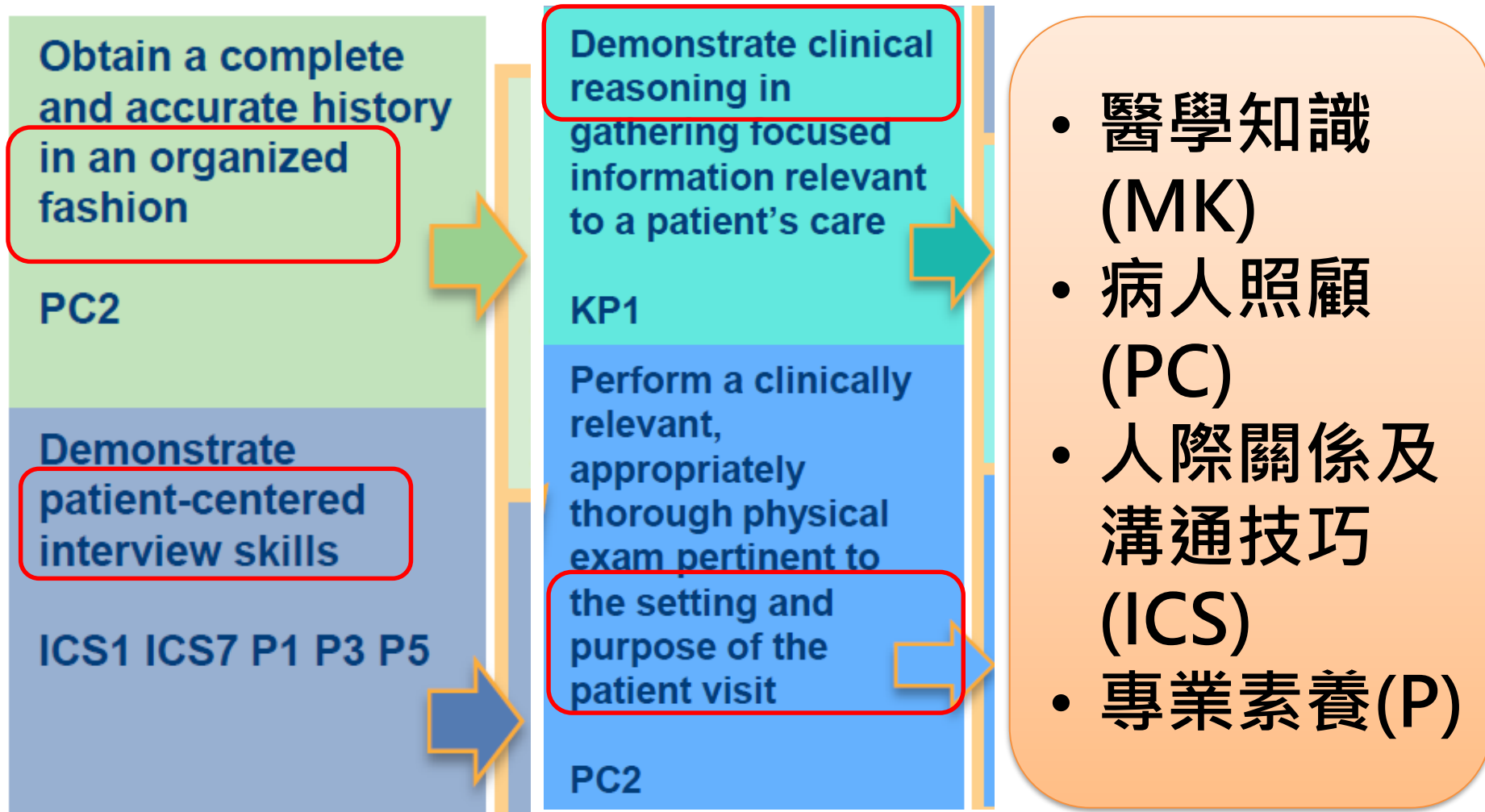


<https://www.aamc.org/download/484778/data/epa13toolkit.pdf>

Modified EPAs 可信任等級

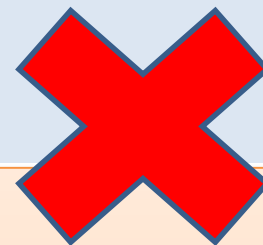
Modified Chen entrustment scale: If you were to supervise this student again in a similar situation, which of the following statements aligns with how you would assign the task?	Corresponding excerpt from original Chen entrustment scale (Chen et al 2015)
1b. "Watch me do this." 你觀察我做	1b. Not allowed to practice EPA; allowed to observe
2a. "Let's do this together." 我們一起做	2a. Allowed to practice EPA only under proactive, full supervision as coactivity with supervisor
2b. "I'll watch you." 我觀察你做	2b. Allowed to practice EPA only under proactive, full supervision with supervisor in room ready to step in as needed
3a. "You go ahead, and I'll double-check all of your findings." 你先做我將確認所有步驟	3a. Allowed to practice EPA only under reactive/on-demand supervision with supervisor immediately available, all findings double-checked
3b. "You go ahead, and I'll double-check key findings." 你先做我將確認關鍵步驟	3b. Allowed to practice EPA only under reactive/on demand supervision with supervisor immediately available, key findings double-checked

EPA 1: Gather a History and Perform a Physical Examination



需要指正之行為表現 –

EPA 1: Gather a History and Perform a Physical Examination



Does not collect accurate historical data

Relies exclusively on secondary sources or documentation of others

Is disrespectful in interactions with patients

Disregards patient privacy and autonomy

Fails to recognize patient's central problem

Does not consider patient's privacy and comfort during exams

Incorrectly performs basic physical exam maneuvers

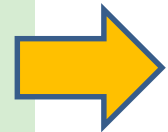
- 醫學知識 (MK)
- 病人照顧 (PC)
- 人際關係及溝通技巧 (ICS)
- 專業素養 (P)

可信任學員行為表現 –

EPA 1: Gather a History and Perform a Physical Examination

Obtains a complete and accurate history in an organized fashion

Seeks secondary sources of information when appropriate (e.g. family, primary care physician, living facility, pharmacy)

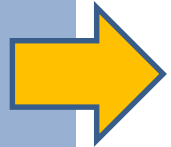


可信任學員行為表現 –

EPA 1: Gather a History and Perform a Physical Examination

Adapts communication skills to the
individual patient's needs and
characteristics

Responds effectively to patient's
verbal and nonverbal cues and
emotions

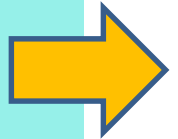


可信任學員行為表現 –

EPA 1: Gather a History and
Perform a Physical Examination

Demonstrates astute clinical reasoning through targeted hypothesis-driven questioning

Incorporates secondary data into medical reasoning



可信任學員行為表現 –

EPA 1: Gather a History and Perform a Physical Examination

Performs an accurate exam in a logical and fluid sequence

Uses the exam to explore and prioritize the working differential diagnosis

Can identify and describe normal and abnormal findings

EPA教案/評核表-格式/描述

項目	描述重點
標題 Title	簡短即可: 對穩定病人執行身體診察/ 臨床步驟(NG/Foley)/判讀檢驗報告/ 衛教
任務 描述	清楚描述臨床任務實際活動的範圍 與限制
對應 能力	涵蓋多個、最相關的對應核心能力 面向
所需 KSAs	知識、技能、態度(KSAs)/學習目標 /評核標準

EPA教案/評核表-格式/描述

項目	描述重點
評估進展 所需資訊	<u>臨床工作中多元評估回饋</u> : 整體能力(KSA) / 案例報告(CbD)/Mini-CEX/DOPS/360度
學員獨立 操作時機	授權學員獨立操作預期時機，須有個別彈性
正式授權 依據	<ul style="list-style-type: none">• 獨立操作前EPA必須熟練執行幾次合格？• 誰或甚麼機制決定學員合格與否？• 如何呈現正式紀錄？

EPAs

訓練與整體評量



臨床任務

督導回饋

信任獨立

Robots pass exams

Human care

Entrustable
可信任?

