

臨床能力評估方法與回饋技巧





Competence

Evaluation

畢業後醫學教育新趨勢



- 以核心能力為導向的訓練

Competence-based training

- 以訓練的成果作為評鑑的主要依據

Outcome-based assessment and accreditation

醫學教育之核心能力



- WFME-seven core competencies(1999)

世界醫學教育聯盟

- IIME-GMER(2000)

國際醫學教育研究院

ACGME-Outcome Project (2001)

美國畢業後醫學教育評委員會

- IOM-five competencies(2003)

美國醫學研究院

- GMC-Foundation training(2005)

英國一般醫學評鑑委員會

} 畢業前

} 畢業後

評估工具的使用 (Foundation training)

- 多源回饋(Multi-source feedback,**MSF**)
- 醫病互動的直接觀察
 - Mini clinical evaluation exercise (**mini-CEX**)
 - Direct observation of procedural skills (**DOPS**)
- 案例討論 (Case based discussion,**CbD**)

GMC 2005

ACGME Outcome Project

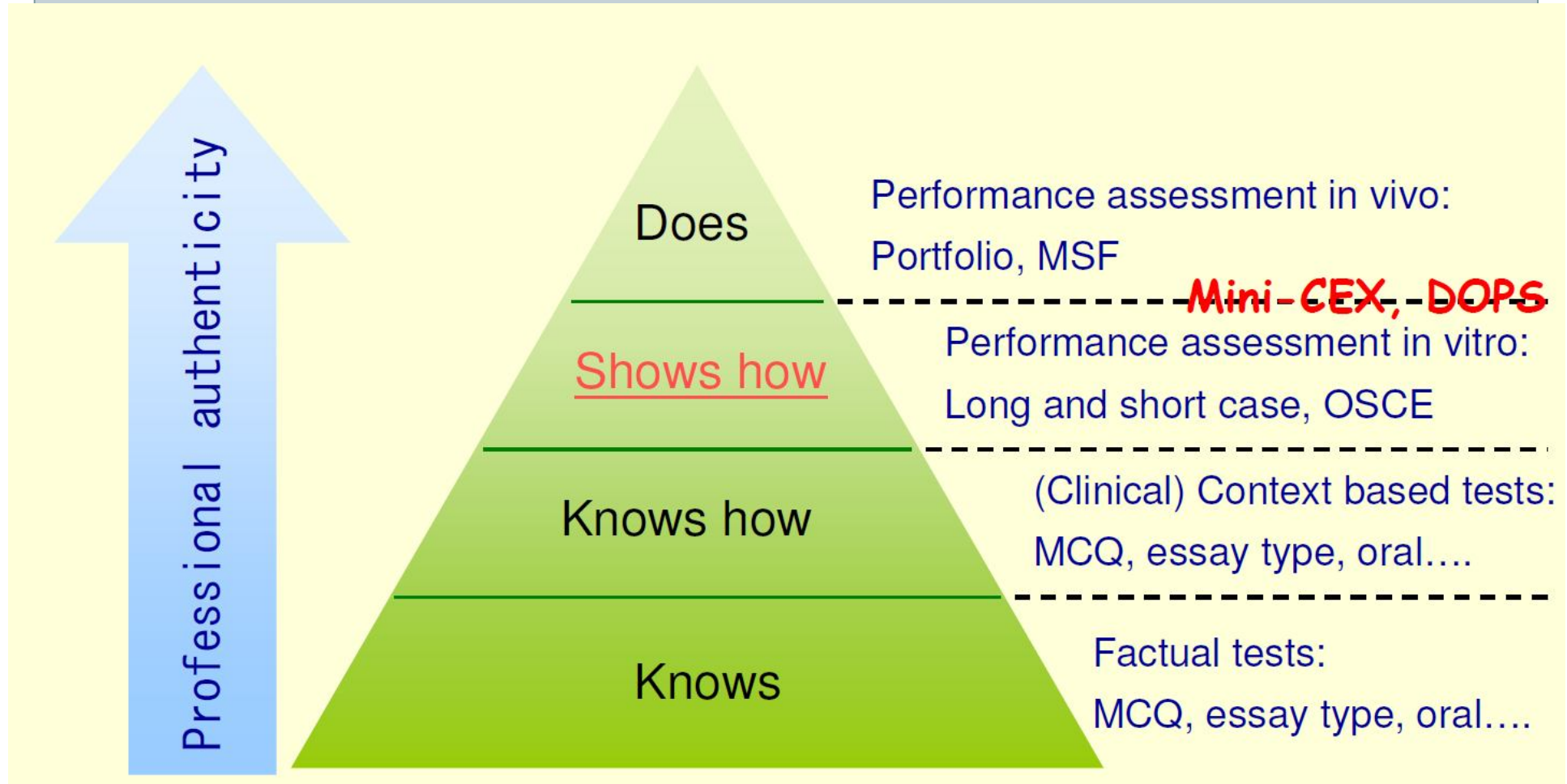


- 目標：增進並改善畢業後醫學教育品質
- 以往：評量住院醫師訓練計劃的焦點在結構 (structure) 和過程 (process)
 - 著重於評鑑 “a program’s potential to educate”
- 將來：不只評量結構與過程，更重要的是訓練計畫所達到真正的成果 (outcomes)
 - 著重於評鑑 “a program’s actual accomplishments”

ACGME=Accreditation Council for Graduate Medical Education

Chicago, United States

Assessment from Each level



臨床能力評估工具分類



- 筆試 paper-based test
 - MCQ, short essay.....
- 口試 oral examination
 - Standardized oral exam, CbD/CSR....
- 情境模擬 simulation
 - OSCE, simulator, screen-based simulation, virtual reality....
- 實地評核 workplace-based evaluation
 - DOPS, Mini-CEX, PAT, patient survey, MSF.....

臨床能力評估工具(一)



- Objective Structured Clinical Examination (OSCE)
- Mini-Clinical Evaluation Exercise (Mini-CEX)
- Direct Observation of procedural Skills (DOPS)
- Case-based Discussion (CbD)/Chart Stimulated Recall (CSR) Oral Examination

臨床能力評估工具(二)



- 360-Degree Evaluation/Multi-Source Feedback (MSF)
- Patient Survey/Patient satisfaction questionnaire
- Peer Assessment Tool (PAT)
- Team assessment of behavior (TAB)
- Portfolio /Passport
- Procedure, Operative or Case Logs

臨床能力評估工具(三)



- Standardized Oral Examination
- Paper-based test
- Simulator : screen-based simulation, part-task trainer, high-fidelity simulation

OSCE



- **Objective** 客觀的
 - All the candidates are presented with **the same test**
- **Structured**
- **Clinical Examination**

OSCE



- Objective
- **Structured 結構的**
 - The marking scheme for each station is structured
 - Specific skill modalities are tested at each station ,eg. History taking, Clinical examination, Explanation, procedures
- Clinical Examination

OSCE



- Objective
- Structured
- Clinical Examination 臨床測驗
 - Test of performance of clinical skills : not a test of knowledge
 - The competence of “ Show How”

迷你臨床演練評量(mini-CEX) mini-Clinical Evaluation Exercise

- 美國內科醫學會(ABIM)發展推薦的評量工具

www.abim.org/minicex/minicex.pdf

- 可行性高，教師學員認同

NorciniJJ,et al.Ann Intern MED 1995

- 於21所醫院進行前導研究，頗受好評

NorciniJJ,et al.Ann Intern MED 2003

- 信效度優於傳統評量法

Durning SJ ,et al.Acad med 2002

- 亦可適用於醫學生

Haucer KE.Acad Med 2000&Kogan JR.Acad Mad 2002

Mini CEX 執行方式

時間

隨時、每次約15~20分鐘

人員

一位臨床老師
一位學員
一位病患

事情

觀察學員臨床技能

地點

病房、門診、急診、ICU

物件

評量記錄單

臨床教師需予適當回饋之處

各項臨床能力教學與訓練(Mini-CEX)



- 面談技巧 Medical Interviewing Skills
- 身體檢查 Physical Examination Skills
- 諮商技巧 Counseling Skills
- 臨床判斷 Clinical Judgment
- 專業素養 Humanistic Qualities/Professionalism
- 組織能力及效率 Organization/ Efficiency
- 整體表現 Overall Clinical Competence

DOPS



- Direct Observation of Procedural Skills
- 操作型技術評量表
- 由評分者直接觀察受訓者實務性技術的技巧並給予評量

DOPS Procedures



- Venipuncture
- IV Cannulation
- Arterial puncture
- Blood culture
- Subcutaneous injection
- Intradermal injection
- Intramuscular injection
- IV injection

- Perform and interpret spirometry
- Urethral catheterization
- Nasogastric tube insertion
- Intubation
- Use of local anesthetics
- Airway care

DOPS 的評分項目(一)



1. Demonstrates understanding of indications, relevant anatomy, and technique of procedure
2. Obtains informed consent
3. Demonstrates appropriate preparation preprocedure
4. Appropriate analgesia or safe sedation
5. Technical ability as applicable to procedure
6. Aseptic technique

DOPS 的評分項目(二)



7. Seeks help where appropriate
8. Post procedure management
9. Communication skills
10. Consideration of patient and professionalism
11. Overall ability to perform procedure

CbD/CSR



- Case-based Discussion (CbD) in England
- Chart Stimulated Recall Oral Examination (CSR) in USA and Canada
- A kind of standardized oral examination

CbD/CSR



- 由考生準備自己記錄的病歷或病歷摘要
- 由接受過訓練及有經驗的醫師負責考問
- 考問內容：
 - 安排各種檢查的理由
 - 檢查的判讀
 - 臨床發現的代表意義
 - 診斷
 - 治療計畫等

CbD/CSR



- 每本病歷的考試時間為5-10分鐘
- 共考3-6本病歷或病摘
- 共需教師1-2位

360° evaluation/MSF



- 360-Degree Evaluation in USA and Canada
- 由最近經常接觸被評分者的人評分
- 評分者可包括：
 - 上 - 主治醫師、護理長、總住院醫師
 - 下 - 實習醫師、見習醫師
 - 左 - 其他住院醫師、護理人員
 - 右 - 病人、家屬

360° evaluation/MSF



- Multi-Source Feedback in England
 - Patient survey (or patient satisfaction questionnaire in USA)
 - Peer assessment tool (PAT)
 - Team assessment of behavior (TAB)
- 由學員提名評分者
- 包括：導師、教師、護理、同儕及其他醫療人員

Patient Survey



- 調查病人對醫院、門診、住院迴診的滿意度
- 針對醫師的不同面向做評估
 - 病人照護能力
 - 迴診時間
 - 治療計畫
 - 服務態度

PAT評量項目範例(一)



1. Ability to diagnose patient problems
2. Ability to formulate appropriate management plans
3. Awareness of own limitations
4. Ability to respond to psychosocial aspects of illness
5. Appropriate utilization of resources ,e.g. ordering investigations
6. Ability to manage time effectively /priorities
7. Ability to deal with stress
8. Technical skills (Appropriate to current practice)
9. Willingness and effectiveness when teaching/training colleagues

PAT評量項目範例(一)



10. Communication with patients
11. Communication with care providers and /or family
12. Respect for patients and their right to confidentiality
13. Verbal communication with colleagues
14. Written communication with colleagues
15. Ability to recognize and value value the contribution of others
16. Accessibility/reliability

Portfolio/Passport



- Portfolio學習歷程
- Passport學習護照
- Procedure, Operative or Case Logs
- 由學員匯集各項學習的證明及成果

Portfolio/Passport



- 可包括
 - 曾進行的各種臨床步驟
 - 曾回顧的醫學文獻
 - 曾面對的倫理問題及解決方法
 - 曾做過的醫療品質改善計畫等
- May be the best evaluation tool to assess “Practice-based learning and improvement”

Standardized Oral Examination



- 使用18-60個真實病歷做表現評估
- 考問醫師必須先接受過口試訓練
- 考問醫師先陳述一個病例再提出臨床考題
- 每一病例的考問時間為3-5分鐘

Paper-based test



- **Written examination**
 - Multiple choice questions
 - Short essay
- **Psychometric qualities/Construct validity**
 - Formative/summative
 - Quiz/national licensing examination

Simulation in Health Care



- Verbal
- Role play
- Standardized patient (OSCE)
- Screen-based (DXR 、 Laerdal MicroSim...)
- Part-task Trainers
- Computerized Mannequin
- Virtual Reality (bronchoscopy ,laparoscopy...)

High-Fidelity Simulation (HFS)



- Use of extremely realistic patient simulator (high-Fidelity Patient Simulator)
- A computer-model-driven
- True-to-life scenarios
- Currently two full-scale computerized simulators are available :
 - **SimMan** manufactured by Laerdal Medical, in Stavanger, Norway.
 - **METI**, provided by Medical Education Technologies, Sarasota, Florida

Assessment Tools



- **Utility=**
 - Reliability
 - Validity
 - Educational impact
 - Acceptability
 - Feasibility
- **Quality of Feedback**

回饋四法寶-STDS



- 特定性(Specific)
- 及時性(Timely)
- 描述性(Descriptive)
- 三明治(Sandwich)

特定性(Specific)



- 具體客觀的描述，讓學員知道如何增進能力
 - 用語言
 - 用影像
 - 自己示範
 - 再做一次

及時性(Timely)



- 學員有較高的學習意識
→ 學習成效好
- 可以互相回饋
→ 引導思路急醫療決策能力

描述性(Descriptive)



- 應該用描述性的回饋，避免單純判斷性的、評價性的回饋
- 溝通技巧的回饋避免用好、壞、對、錯等字眼；因為溝通技巧沒有〔好〕、〔壞〕，只有比較適當或比較不適當

三明治(Sandwich)



- 優缺點併陳
 - 哪裡做的適當
 - 哪裡做的不適當
 - 下次該怎麼做/類似的狀況該怎麼做
- 同理心
- 學習欣賞學員的優點

回饋四法寶-STDS



- 特定性、具體內容→避免空泛的評價
- 及時性→提供及時有效的回饋
- 描述性的內容→避免判斷性言語
- 回饋三明治→先從正向的回饋做起

臨床教育進行回饋的五大步驟

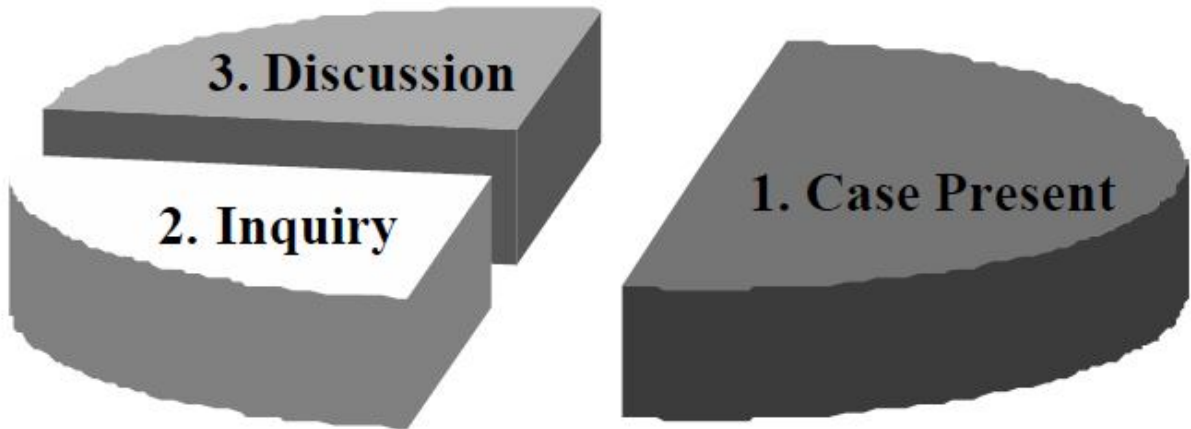


- **Get a commitment (a plan) → 設定教學目標**
 - 讓學員抒發己見，瞭解學習需求，設定教學目標
- **Probe for supporting Evidence → 探索證據支持**
 - 透過開啟式的問題，了解學員的思路
- **Teach general rules → 教導一般性原則**
 - 原則性教學，訓練分析思考能力
- **Reinforce what was done right → 正向回饋強化**
 - 強調做對的部分，並分析其原因
- **Correct mistakes → 改正缺失**
 - 提出缺失，並提供解決方案



5 Microskills

- Teach**
- 3. Teach general
 - 4. Provide positive
 - 5. Correct errors



Diagnose patient

- Diagnose Learner**
- 1. Ask for a commitment
 - 2. Probe for underlying reasoning

