

Milestones 2.0 in CBME

郭秋萍

2023-5-26

時間	講題	主講者
13:30-13:45	報到	
13:45-14:30	<ol style="list-style-type: none">1. The What/When/Why of Milestones 2.0?2. Finding your way without a map	郭秋萍醫師
14:30-15:15	<ol style="list-style-type: none">1. The challenges of change2. Timeline and future work	郭秋萍醫師
15:15-15:30	Discussion & Feedback	郭秋萍醫師

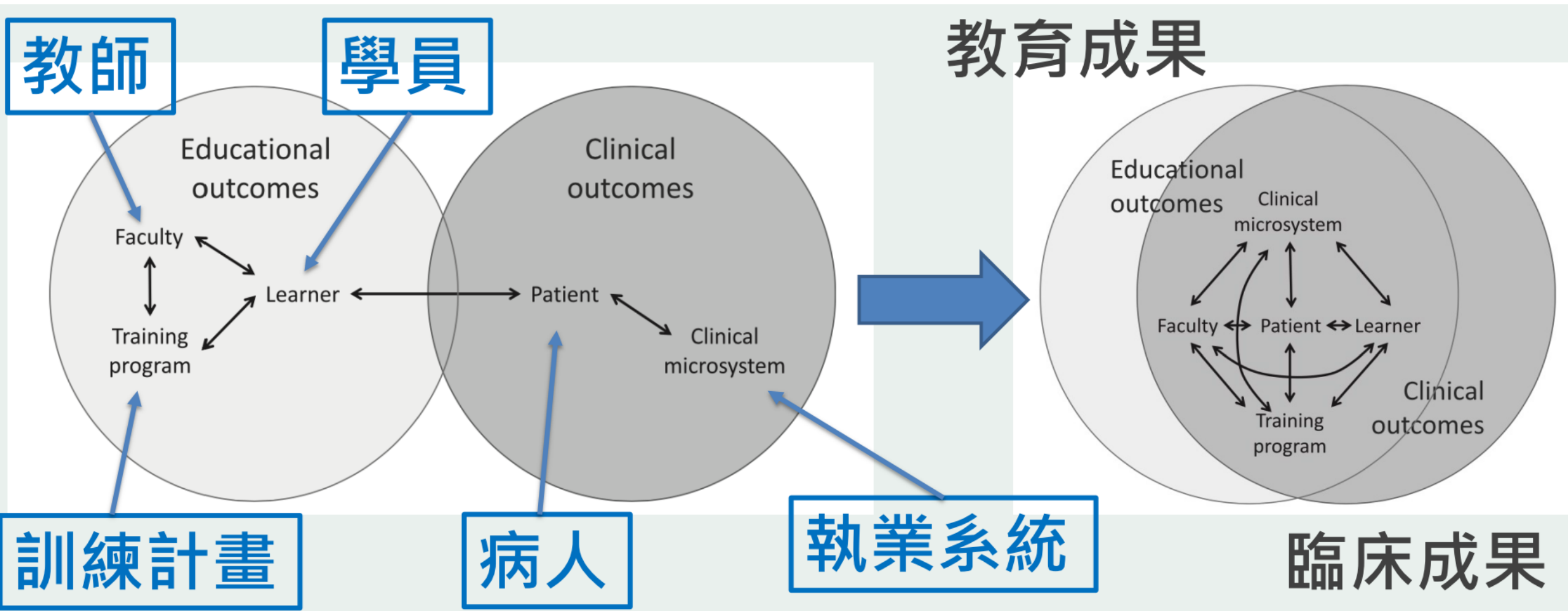
序號	編號	姓名	單位	職稱
1	D652	鄭文婷	6F造血幹細胞移植病房 (淡)	護理師(護理)
2	F427	馬嘉慧	MICU(B)(淡水)	護理師(護理)
3	D885	黃慎苓	十六病房(淡水)	護理師(護理)
4	F024	朱雅安	放射線科 (淡水)	醫事放射師
5	5686	龔律至	急診醫學科	S5
6	F566	劉玳如	教育文書課	管理師
7	2503	楊玉如	營養課(淡)	營養師
8	2564	蔡一賢	營養醫學中心	資深專業營養師
9	5425	彭可佳	職能治療	職能治療師
10	B398	班迅雷	職能治療 (淡水)	職能治療師
11	7151	陳淑芬	護理部 (淡水)	護理師(護理)

CBME的目的

訓練出符合當地需求有能力的專業人員



CBME的理想



核心能力架構

美國ACGME六大核心能力

1. 病人照護
2. 醫學知識
3. 自我學習與精進
4. 人際溝通技巧
5. 專業素養
6. 系統下執業



加拿大Can MEDS 七大角色

1. 專業人員
2. 溝通者
3. 合作者
4. 領導者
5. 健康倡議
6. 學者
7. 醫學專家



THE CANMEDS
ROLES FRAMEWORK



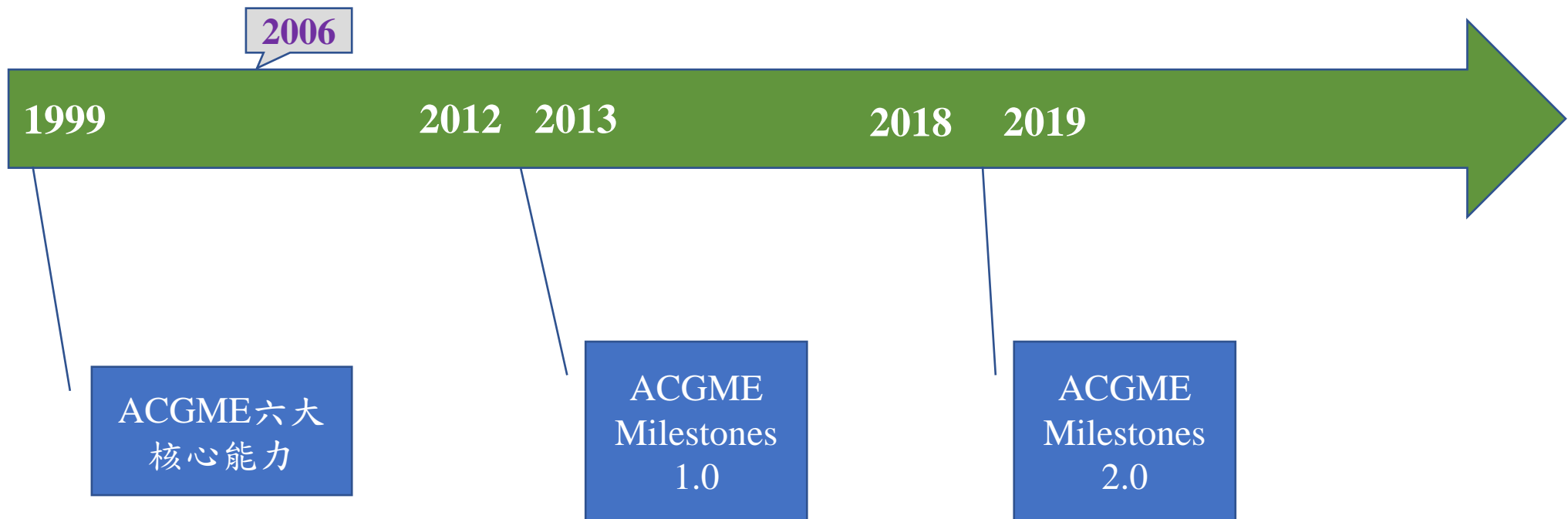
英國GMC明天的醫師

1. 良好的臨床照護
2. 與病人和家屬的關係
3. 與同事合作
4. 職場管理
5. 社會義務和當責
6. 專業素養

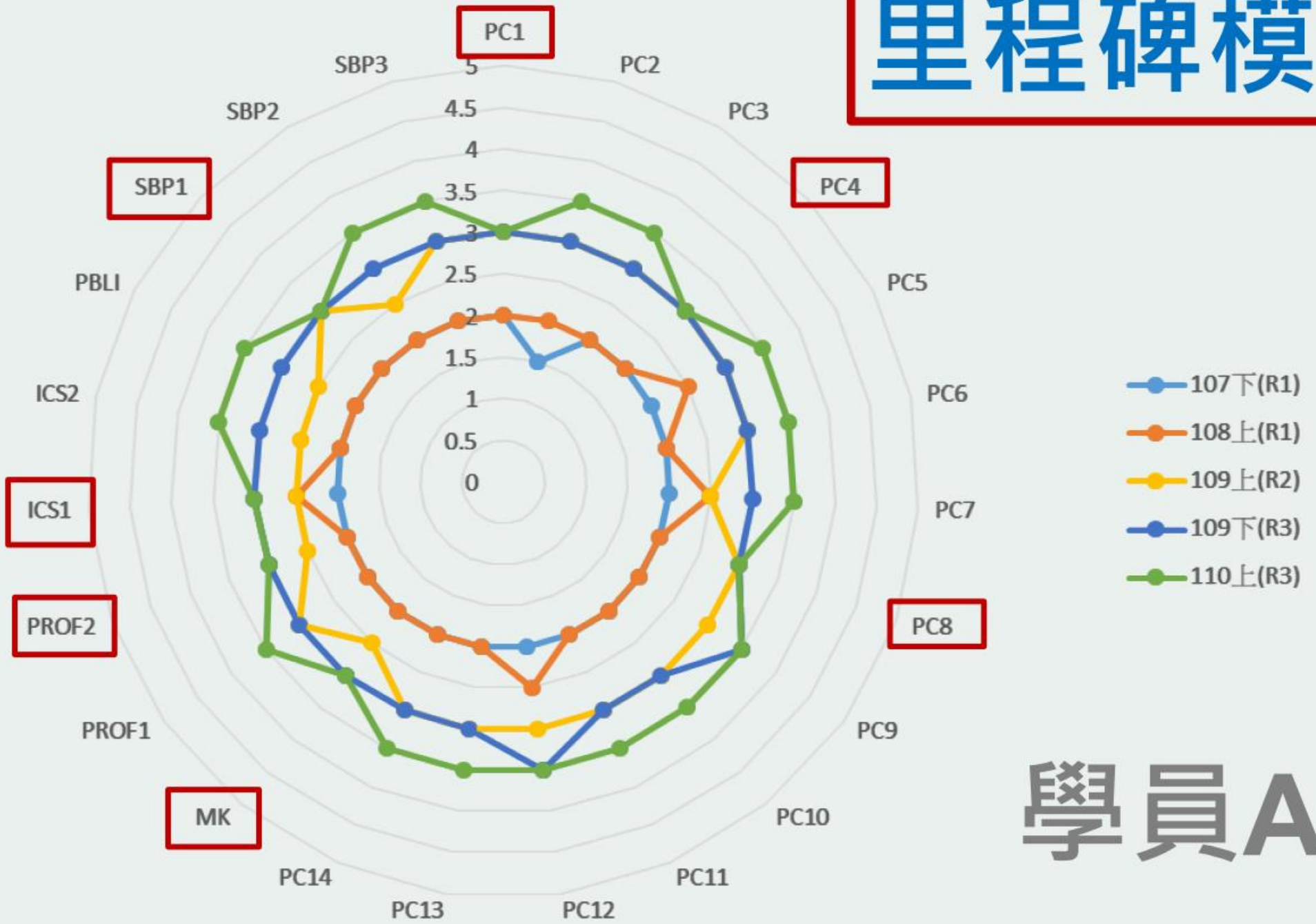


Milestones project

訓練專業養成的架構



里程碑模式



學員A

**Competent
professionals**

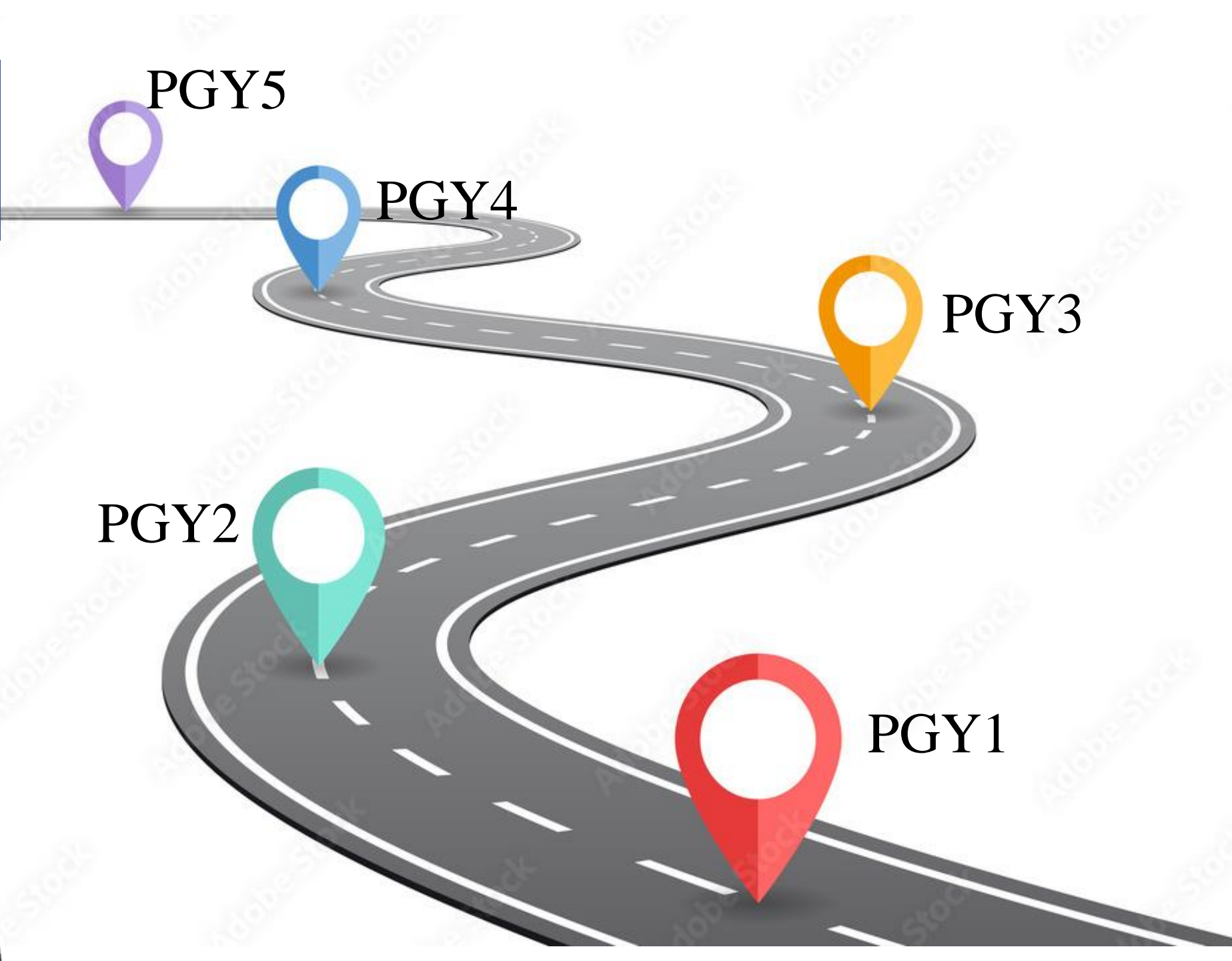
PGY5

PGY4

PGY3

PGY2

PGY1



當你聽到 Milestones 2.0 時的反應？



Milestones 1.0

- 將醫學教育轉型成outcome-based education
- 對可觀察的能力進行聚焦式的評估
- 強調各專業的核心能力及次核心能力
- Milestones 1.0的
 - ◆ 優點: 聚焦在outcomes、可直接觀察
 - ◆ 挑戰: **可執行性、複雜度**

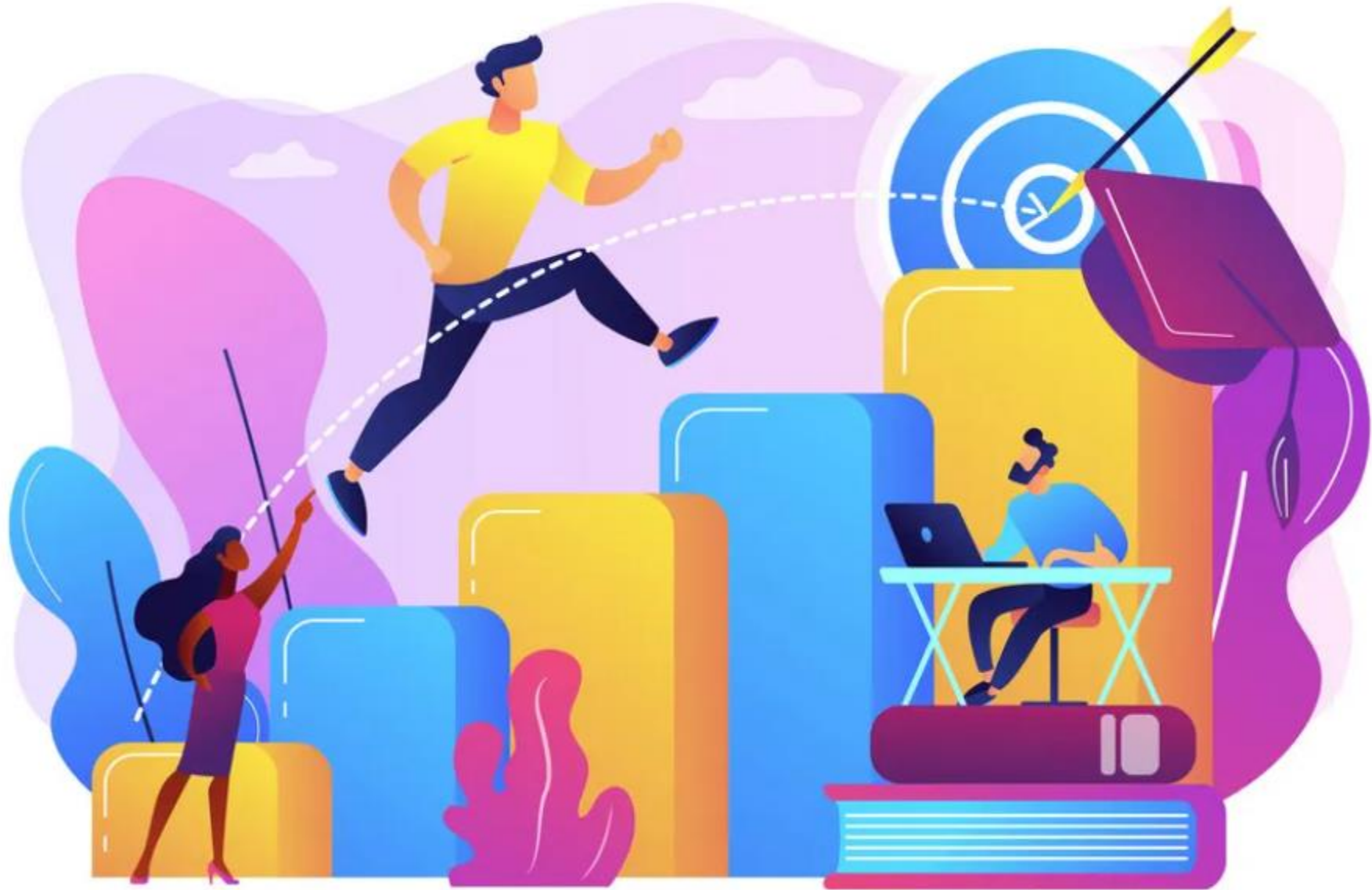
Milestone

里程碑（milestone）：對於特定能力的可觀察可測量的表現敘述

Novice	Advanced Beginner	Competent	Proficient	Expert
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從第一級新手到第四級展現專科醫師能力，再到第五級的專家表現，每一級又會有數個關於此次核心能力於此等級階段的描述，~~每一個描述也就是一個「里程碑」~~

Learning trajectory



內科專科醫師訓練里程碑

6大核心能力

22項次核心能力

257項能力等級描述 (里程碑)



核心能力	次核心能力	
病人照護	PC1	收集並整合病人正確資訊，以確定病人的臨床問題
	PC2	為病人訂定並完成周詳的處理計畫
	PC3	漸進地負責且獨立處理病人/依年資加強處理病人時的責任和獨立性
	PC4	執行臨床醫療技術作能力
	PC5	要求及提供會診照護
醫學知識	MK1	臨床醫療照護知識
	MK2	診斷性檢查和臨床技術之知識
制度下之臨床工作	SBP1	能在跨領域團隊（例如：同儕、主治醫師、會診醫師、護理人員、其他協助醫療的專業人員及支援人員）中有效率的工作
	SBP2	能認出系統性的錯誤並會倡導系統層面的改善
	SBP3	能確認影響健康照護成本的因素，倡導與實施符合成本效益的照護
	SBP4	在健康照護體系內和跨體系間能有效的轉送病人
從工作中學習及成長	PBLI1	藉由目標監測執業是否進步/自我反省式的目標評估監測
	PBLI2	透過自我表現檢測學習並進步的能力
	PBLI3	透過回饋學習並進步的能力
	PBLI4	在病人照護過程中學習與進步的能力
專業素養	PROF1	專業且尊重地與病人、照顧者、醫療團隊成員(如同儕醫師、護理師、藥師、前輩醫師等)互動
	PROF2	接受並承擔責任
	PROF3	尊重病人的獨特性與個別需求
	PROF4	專業行為表現誠信並合乎倫理
人際關係及溝通技巧	ICS1	能與病人與其照護者進行有效溝通
	ICS2	跨領域團隊的有效溝通（例：同儕、顧問、護理師、輔助專業人士及其他支援同仁）
	ICS3	合適地應用與完成醫療記錄、交班及轉送病人

病人照護

1、收集並整合病人正確資訊，以確定病人的臨床問題 (PC1病人照護patient care)

	Level1	Level2	Level3	Level4	Level5
里程碑項目	<p>沒有收集正確的病史資料，且沒有以身體診察確認病史。</p> <p>無法認知病人主要的臨床問題，及可能危及病人生命的問題。</p>	<p>部分病人獲得正確的病史。</p> <p>但沒有尋找或是過度依賴二手的資訊，且身體診查不詳盡確實。</p> <p>認知部分病人主要的臨床問題，或只產生少數的鑑別診斷。</p>	<p>具有完整的問診、身體診察、鑑別診斷能力。</p> <p>會取得並參考二手資料處理問題。</p>	<p>正確而有效率地從病人獲得正確的病史，並進行正確的身體診察。</p> <p>整合資料以產生優先的鑑別診斷和問題清單。</p>	<p>獲得相關病史細節，包括二手資訊，並辨認出細微的或是不尋常的身體診察所見，以得知鑑別診斷。</p> <p>為角色模範，教導臨床問診、身體診察、及鑑別診斷。</p>
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

3、漸進地負責且獨立處理病人/依年資加強處理病人時的責任和獨立性(PC3病人照護patient care)

	Level1	Level2	Level3	Level4	Level5
里程碑項目	<p>需要直接監督以照護病人，且無法處理需要緊急或危急照護的病人。</p> <p>完全不能擔當處理病人決策的責任。</p>	<p>需要直接監督以確保病人安全及照護品質。</p> <p>能處理部分門診病人的訴怨及常見慢性病，及提供部分門診病人預防性照護。</p> <p>處理部分有明確診斷的住院病人，但無法處理複雜的住院病人或需加強照護的病人。</p>	<p>需要間接監督以確保病人安全和照護品質。</p> <p>於門診提供合適的預防性照護和慢性病處理。</p> <p>對住院病人提供周詳的照護，於加護病房內在監督下提供合適的照護。</p> <p>於緊急或危急情況能主動啟動處理程序。</p> <p>無法獨立監督或領導團隊內提供照護的資淺醫師。</p>	<p>能獨立的監督以確保病人安全和照護品質。</p> <p>合適地尋求其他指導或會診。</p> <p>能適當地處理需緊急或危急照護的狀況。</p> <p>有效地監督團隊的照護決策。</p>	<p>能獨立監督及指導團隊處理不尋常的，罕見的，或複雜的疾病。</p>
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

制度下之臨床工作

8、能在跨領域團隊（例如：同儕、主治醫師、護理人員、其他協助醫療的專業人員及支援人員）中有效地工作(SBP1制度下之臨床工作Systems-based practice)

	Level1	Level2	Level3	Level4	Level5
里程碑項目	<p>拒絕認可團隊中其他專業人員的貢獻。</p> <p>因自己的無效率和錯誤而使團隊人員感到挫敗。</p>	<p>能認知團隊中其他人員的任務，但卻不知如何/何時加以運用。</p> <p>經常需要團隊人員提醒才能完成醫師應盡的責任（例如：和家屬溝通、輸入醫囑等）。</p>	<p>瞭解團隊所有成員的任務和責任，但卻無法一致地有效運用。</p> <p>必須時會參與團隊的討論，但不主動尋求其他團隊成員的意見。</p>	<p>瞭解團隊中所有成員的任務和責任，並有效地團隊協力工作。</p> <p>主動參與團隊會議並協力制定決策。</p>	<p>整合團隊所有成員以照護病人，使每一成員於照護病人時發揮最好的技巧。</p> <p>有效率地協調團隊其他成員的活動，使照護臻於完善。</p> <p>被團隊中其他成員視為施行高品質照護的團隊領導者。</p>



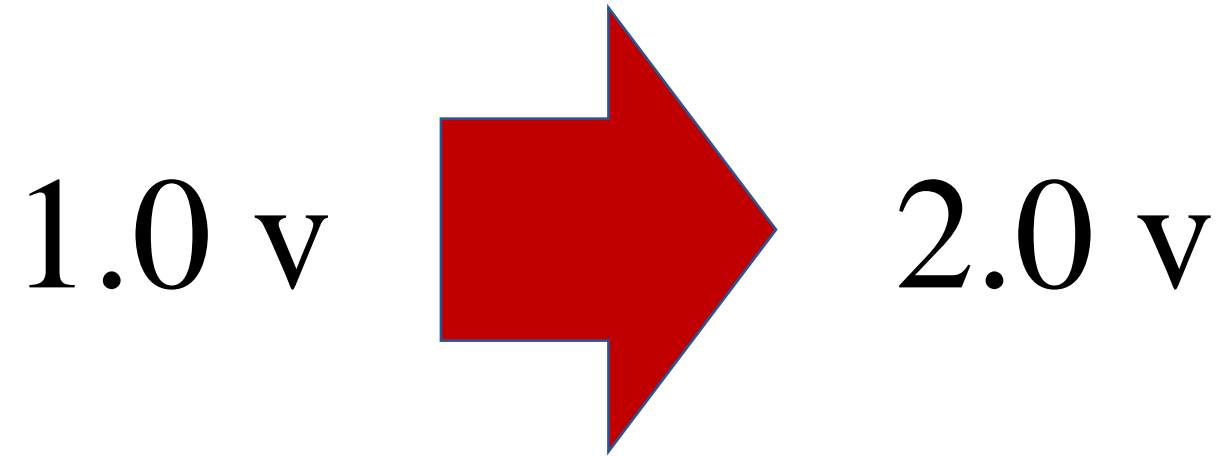
制度下之臨床工作

10、能確認影響健康照護成本的因素，倡導與實施符合成本效益的照護 (SBP3制度下之臨床工作 Systems-based practice)

	Level1	Level2	Level3	Level4	Level5
里程碑項目	<p>無視提供照護的成本問題。</p> <p>不思考克服符合成本效益之照護的障礙。</p>	<p>欠缺對影響照護成本的外部因素（例如，社會經濟的、文化的、識字能力的，保險狀況）之認識，以及外部利益相關者對照護成本所扮演的角色。</p> <p>在處方診斷或治療介入措施時，不考慮有限的健康照護資源。</p>	<p>認知外部因素影響病人對健康照護資源的利用，並可能成為符合成本效益的照護的障礙。</p> <p>最少化不必要的診斷的和治療的檢查。</p> <p>對某些病人群（例如，疾病篩檢檢查）的成本意識原則，有不完整的了解。</p>	<p>一貫地致力於解決符合成本效益之照護的病人方面特有的障礙。</p> <p>倡導有成本意識地利用資源（例如，急診部求診，醫院再入院）。</p> <p>在標準的臨床判斷和決策中，包括篩檢檢查，納入成本意識原則。</p>	<p>教導病人和健康照護團隊成員，認知和克服符合成本效益之照護和適當利用資源的常見障礙。</p> <p>積極參與創始及照護施行模式設計，以克服或減輕實施符合成本效益之高品質照護之障礙。</p>



Why Change ??



Milestones 2.0

- Milestones 1.0升級/進化的架構
- 次核心能力數量的改變
- Wording的修改
- 減少對milestone的描述
- 提供對學員能力進展更即時的重認

從 Milestones 1.0 到 2.0

1. 次核心能力的數量改變
2. 描述及架構更簡化，增加跨專業間的共通(用)性
3. 減少次核心能力下，里程碑的描述數量
4. 用字更直覺簡化 (growth mindset) (正能量)
5. 更貼合未來的執業需求
6. 改善即時能力進展的建檔
7. Implementation Guidebook

1.0	1. Gathers and synthesizes essential and accurate information to define each patient's clinical problem(s). (PC1)				
	Critical Deficiencies			Ready for unsupervised practice	Aspirational
2.0	Patient Care 1: History				
	Level 1	Level 2	Level 3	Level 4	Level 5

Example: How are they different? Sleep Medicine

1. Gathers and synthesizes essential and accurate information to define each patient's clinical problem(s). (PC1)					
Not Yet Assessable	Critical Deficiencies		Ready for unsupervised practice	Aspirational	
Does not or is inconsistently able to collect accurate historical data	Consistently acquires accurate and relevant histories	Requires accurate histories in an efficient, prioritized, and hypothesis-driven fashion	Obtains relevant historical subtleties, including sensitive information that informs the differential diagnosis	Role-models and teaches the effective use of history and physical examination skills to minimize the need for further diagnostic testing	<div style="background-color: #4b0082; color: white; padding: 5px; display: inline-block;">Core Competency</div> <div style="background-color: #4b0082; color: white; padding: 5px; display: inline-block;">Sub-Competency</div>
Does not perform or use an appropriately thorough physical exam, or misses key physical exam findings	Consistently performs accurate and appropriately thorough physical exams	Performs accurate physical exams that are targeted to the patient's problems			
Relies exclusively on documentation of others to generate own database or differential diagnosis or is overly reliant on secondary data	Inconsistently recognizes patient's central clinical problem or develops limited differential diagnoses	Uses and synthesizes collected data to define patient's central clinical problem(s) to generate prioritized differential diagnosis and problem list	<div style="background-color: #c8e6c9; padding: 5px; border: 1px solid #4b0082;"> Patient Care 1 Gather and Synthesize Information from Sleep Medicine Patients Across the Lifespan </div>		
Fails to recognize patient's central clinical problems			Level 1	Level 2	Level 3
Fails to recognize potentially life threatening problems			Elicits and concisely reports a hypothesis-driven patient history for common patient presentations Seeks and obtains data from collateral sources, with guidance Performs a hypothesis-driven physical exam for a common patient presentation and attends to patient comfort and safety	Elicits and concisely reports a hypothesis-driven patient history for uncommon patient presentations Independently seeks and obtains data from collateral sources Performs a hypothesis-driven physical exam for an uncommon patient presentation	Efficiently elicits and concisely reports a hypothesis-driven patient history for complex patient presentations, incorporating pertinent psychosocial and other determinants of health Reconciles current data with collateral sources for common cases Performs a hypothesis-driven physical exam for a complex patient presentation
				Level 4	Level 5
				Obtains relevant historical subtleties, including sensitive information that informs the differential diagnosis Reconciles current data with collateral sources for uncommon and complex cases Elicits subtle findings on physical exam	Role models integration of history and physical examination and collateral data
Comments:			Comments:		
			Not Yet Completed Level 1 <input type="checkbox"/> Not Yet Assessable <input type="checkbox"/>		

Narrative Descriptors/
Milestone Elements



Example: How are they different? Allergy and Immunology

Version 08/13

Allergy and Immunology Milestones, ACGME Report Worksheet

Diagnostic Tests and Procedures: Selects, performs, and interprets diagnostic tests or procedures appropriately — Patient Care				
Level 1	Level 2	Level 3	Level 4	Level 5
<ul style="list-style-type: none"> • Demonstrates basic understanding of the commonly used allergy and immunology diagnostic tests and procedures 	<ul style="list-style-type: none"> • Orders tests appropriate for common clinical conditions and according to evidence-based guidelines • Interprets test results with the support of an attending physician • With supervision, performs common clinical diagnostic procedures (e.g., skin testing) 	<ul style="list-style-type: none"> • Begins to recognize when additional testing will be of limited benefit • Independently interprets test results • Independently performs common clinical diagnostic procedures, and with supervision performs specialized procedures (e.g., challenges) 	<ul style="list-style-type: none"> • Consistently recognizes when additional testing will be of limited benefit • Appropriately orders specialized allergy and immunology tests and interprets results • Independently performs specialized clinical diagnostic procedures 	<ul style="list-style-type: none"> • Participates in the writing or reviewing of guidelines • Identifies and appropriately utilizes new tests not routinely available • Identifies and appropriately utilizes new diagnostic procedures

Comments:

Patient Care 3: Diagnostic Tests and Procedures for Allergy and Immunology Patients				
Level 1	Level 2	Level 3	Level 4	Level 5
<p>Demonstrates basic understanding of commonly used allergy and immunology diagnostic tests and procedures</p> <p>Interprets test results, with supervision</p>	<p>Selects tests for patients with common clinical conditions and according to evidence-based guidelines</p> <p>Independently interprets common test results</p> <p>With supervision, performs common clinical diagnostic procedures (e.g., skin testing)</p>	<p>Selects tests for patients with complex conditions, including selected use of specialized testing and an understanding of limitations of the test</p> <p>Interprets complex test results, with supervision</p> <p>Independently performs common clinical diagnostic procedures, and with supervision, performs specialized procedures (e.g., challenges)</p>	<p>Develops individualized cost-effective testing strategies to evaluate patients with complex conditions</p> <p>Independently interprets specialized and complex results in the context of the individual patient</p> <p>Independently performs specialized clinical diagnostic procedures</p>	<p>Participates in the writing or reviewing of local or national diagnostic guidelines or policies</p> <p>Identifies, critically evaluates, and selectively uses emerging and investigational tests or procedures</p>

Comments:

Example: Pulmonary and Critical Care Medicine

Internal Medicine Subspecialties Milestones

Revised: Pulmonary and Critical Care Medicine (PCCM) specific Milestones 2.0

Table 1. Comparison of subcompetencies in Milestones 1.0 versus 2.0

Milestones 1.0		Milestones 2.0	
PC1	Gathers and synthesizes essential and accurate information to define each patient's clinical problem(s).	PC1	History and physical exam
PC2	Develops and achieves comprehensive management plan for each patient	PC2	Disease management in critical care
PC3	Manages patients with progressive responsibility and independence	PC3	Disease management in pulmonary medicine
PC4a	Demonstrates skill in performing and interpreting invasive procedures	PC4	Preprocedure assessment
PC4b	Demonstrates skill in performing and interpreting non-invasive procedures and/or testing	PC5	Procedures (invasive and noninvasive)
PC5	Requests and provides consultative care	–	–
MK1	Possesses clinical knowledge	MK1	Clinical reasoning
MK2	Knowledge of diagnostic testing and procedures	MK2	Scientific knowledge of disease and therapeutics
MK3	Scholarship	–	–
SBP1	Works effectively within an interprofessional team	SBP1	Patient safety and quality improvement

Patient Care	Medical Knowledge	Systems-Based Practice
History	Applied foundational sciences	Patient safety and quality improvement
Physical examination	Therapeutic knowledge	System navigation for patient-centered care
Clinical reasoning	Knowledge of diagnostic testing	Physician role in health care systems
Patient management—inpatient Patient management—outpatient		
Practice-Based Learning and Improvement	Professionalism	Interpersonal and Communication Skills
Evidence-based and -informed practice	Professional behavior	Patient- and family-centered communication
Reflective practice and commitment to personal growth	Ethical principles	Interprofessional and team communication
	Accountability/ conscientiousness Well-being	Communication within health care systems

內科里程碑 1.0 and 2.0 (1/3)

PC1 : Gathers and synthesizes essential and accurate information to define each patient's clinical problem(s)	PC1: History
PC2: Develops and achieves comprehensive management plan for each patient	PC2: Physical Examination
PC3: Manages patients with progressive responsibility and independence.	PC3: Clinical Reasoning
PC4: Skill in performing procedures.	PC4: Patient Management – Inpatient
PC5: Requests and provides consultative care.	PC5: Patient Management – Outpatient
	PC6: Digital Health
MK1: Clinical knowledge	MK1: Applied Foundational Sciences
MK2: Knowledge of diagnostic testing and procedures.	MK2: Therapeutic Knowledge
	MK3: Knowledge of Diagnostic Testing

內科里程碑 1.0 and 2.0 (2/3)

SBP1: Works effectively within an interprofessional team	SBP1: Patient Safety and Quality Improvement
SBP2: Recognizes system error and advocates for system improvement	SBP2: System Navigation for Patient-Centered Care
SBP3: Identifies forces that impact the cost of health care, and advocates for, and practices cost-effective care	SBP3: Physician Role in Health Care Systems
SBP4: Transitions patients effectively within and across health delivery systems	
PBLI1: Monitors practice with a goal for improvement	PBLI1: Evidence-Based and Informed Practice
PBLI2: Learns and improves via performance audit	PBLI2: Reflective Practice and Commitment to Personal Growth
PBLI3: Learns and improves via feedback	
PBLI4: Learns and improves at the point of care	

內科里程碑 1.0 and 2.0 (3/3)

PROF1: Has professional and respectful interactions with patients, caregivers and members of the interprofessional team	PROF1: Professional Behavior
PROF2: Accepts responsibility and follows through on tasks	PROF2: Ethical Principles
PROF3: Responds to each patient's unique characteristics and needs	PROF3: Accountability/Conscientiousness
PROF4: Exhibits integrity and ethical behavior in professional conduct	PROF4: Knowledge of Systemic and Individual Factors of Well-Being
ICS1: Communicates effectively with patients and caregivers	ICS1: Patient- and Family-Centered Communication
ICS2: Communicates effectively in interprofessional teams	ICS2: Interprofessional and Team Communication
ICS3: Appropriate utilization and completion of health records	ICS3: Communication within Health Care Systems

1. Gathers and synthesizes essential and accurate information to define each patient's clinical problem(s). (PC1)				
Critical Deficiencies			Ready for unsupervised practice	Aspirational
Does not collect accurate historical data	Inconsistently able to acquire accurate historical information in an organized fashion	Consistently acquires accurate and relevant histories from patients	Acquires accurate histories from patients in an efficient, prioritized, and hypothesis-driven fashion	Obtains relevant historical subtleties, including sensitive information that informs the differential diagnosis
Does not use physical exam to confirm history	Does not perform an appropriately thorough physical exam or misses key physical exam findings	Seeks and obtains data from secondary sources when needed	Performs accurate physical exams that are targeted to the patient's complaints	Identifies subtle or unusual physical exam findings
Relies exclusively on documentation of others to generate own database or differential diagnosis	Does not seek or is overly reliant on secondary data	Consistently performs accurate and appropriately thorough physical exams	Synthesizes data to generate a prioritized differential diagnosis and problem list	Efficiently utilizes all sources of secondary data to inform differential diagnosis
Fails to recognize patient's central clinical problems	Inconsistently recognizes patients' central clinical problem or develops limited differential diagnoses	Uses collected data to define a patient's central clinical problem(s)	Effectively uses history and physical examination skills to minimize the need for further diagnostic testing	Role models and teaches the effective use of history and physical examination skills to minimize the need for further diagnostic testing
Fails to recognize potentially life threatening problems				

Patient Care 1: History				
Level 1	Level 2	Level 3	Level 4	Level 5
Elicits and reports a comprehensive history for common patient presentations, with guidance	Elicits and concisely reports a hypothesis-driven patient history for common patient presentations	Elicits and concisely reports a hypothesis-driven patient history for complex patient presentations	Efficiently elicits and concisely reports a patient history, incorporating pertinent psychosocial and other determinants of health	Efficiently and effectively tailors the history taking, including relevant historical subtleties, based on patient, family, and system needs
Seeks data from secondary sources, with guidance	Independently obtains data from secondary sources	Reconciles current data with secondary sources	Uses history and secondary data to guide the need for further diagnostic testing	Models effective use of history to guide the need for further diagnostic testing
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Comments:				
				Not Yet Completed Level 1 <input type="checkbox"/>
				Not Yet Assessable <input type="checkbox"/>

Allergy
and
Immunology

Milestones 1.0	Milestones 2.0
PC1: Medical Interview and Physical Examination	PC1: Medical Interview and Physical Examination of Adult Allergy and Immunology Patients PC2: Medical Interview and Physical Examination of Pediatric Allergy and Immunology Patients
PC2: Diagnostic Tests and Procedures	PC3: Diagnostic Tests and Procedures for Allergy and Immunology Patients
PC3: Management Plan	PC4: Management Plan for Allergy and Immunology Patients
PC4: Coordination of Care	SBP2: System Navigation for Patient-Centered Care
MK1: Allergy and Immunology Medical Knowledge	MK1: Basic Science of Allergy and Immunology MK2: Clinical Science of Allergy and Immunology PROF2: Accountability/Conscientiousness
SBP1: Utilizes/accesses outside resources. Demonstrates awareness of and accommodation to circumstances affecting patient care, including the patient's financial resources and other factors that can affect health care delivery and quality. Understands the basics of patient safety and clinical risk management, with emphasis on avoidance of medical errors. Uses technology and external resources to accomplish safe and effective health care delivery.	SBP1: Patient Safety and Quality Improvement SBP3: Physician Role in Health Care Systems SBP4: Community and Population Health
PBLI1: Research and Scholarly Activity	MK3: Research and Scholarly Activity
PBLI2: Self-evaluates performance. Identifies strengths, deficiencies, and limits in self knowledge and expertise. Sets learning and improvement goals in a manner that fosters productive self-directed learning. Actively participates in quality improvement project(s). Locates, appraises, and assimilates evidence from scientific studies pertinent to patients. Uses technology to enhance patient care and self-improvement.	SBP1: Patient Safety and Quality Improvement PBLI1: Evidence-Based and Informed Practice PBLI2: Reflective Practice and Commitment to Personal Growth PROF3: Self-Awareness and Help-Seeking



Milestones 1.0

PROF1: Exhibits ethical and responsible behavior, including respect, compassion, honesty, and integrity in all aspects of practice and scholarly activity. Is accountable to patients, society, and the profession and acknowledges errors. Maintains responsibility for his or her own emotional, physical, and mental health, including fatigue awareness and avoidance, and commitment to lifelong learning and self-assessment. Demonstrates sensitivity to diverse patient, staff, and support personnel populations. Considers needs of patients, families, and colleagues

ICS1: Provides team-based care and develops productive relationships with patients, peers, staff members, and interdisciplinary care team members. Ensures that patients understand their condition(s) and treatments, encourages questions from patients, and provides explanations appropriate to patient needs. Educates and counsels patients, families, and colleagues when appropriate. Identifies and accommodates special communication needs of vulnerable populations [e.g., children, elderly, patients with complex biomedical or psychosocial conditions, persons with disabilities, immigrant and refugee populations, veterans, prisoners, **LGBT** (lesbians, gay, bisexual, transgender) patients, etc.]. Uses technology and information sharing modalities to facilitate communication.

Milestones 2.0

PROF1: Professional Behavior and Ethical Principles
PROF2: Accountability/Conscientiousness
PROF3: Self-Awareness and Help-Seeking
ICS2: Interprofessional and Team Communication
ICS3: Communication within Health Care Systems

SBP4: Community and Population Health
ICS1: Patient- and Family-Centered Communication
ICS2: Interprofessional and Team Communication
ICS3: Communication within Health Care Systems

Allergy
and
Immunology

Milestones 2.0: Harmonized Milestones

Core Competencies	Subcompetencies
Medical Knowledge (MK)	Unique for each (sub)specialty
Patient Care and Procedural Skills (PCPS)	
Interpersonal and Communication skills (ICS)	Patient- and Family-Centered Communication (ICS-1)
	Interprofessional and Team Communication (ICS-2)
	Communication Within Healthcare Systems (ICS-3)
Practice-Based Learning and Improvement (PBLI)	Evidence-Based and Informed Practice (PBLI-1)
	Reflective Practice and Commitment to Personal Growth (PBLI-2)
Professionalism (PROF)	Professional Behavior and Ethical Principles (PROF-1)
	Accountability/Conscientiousness (PROF-2)
	Self-Awareness and Help-Seeking (PROF-3)
Systems-Based Practice (SBP)	Patient Safety and Quality Improvement (SPB-1)
	System Navigation for Patient-Centered Care (SBP-2)
	The Physician's Role in Healthcare Systems (SBP-3)

Subcompetencies
for Cross-Specialty,
Harmonized
Milestones

18. Responds to each patient's unique characteristics and needs. (PROF3)

Critical Deficiencies			Ready for unsupervised practice	Aspirational
<p>Is insensitive to differences related to culture, ethnicity, gender, race, age, and religion in the patient/caregiver encounter</p> <p>Is unwilling to modify care plan to account for a patient's unique characteristics and needs</p>	<p>Is sensitive to and has basic awareness of differences related to culture, ethnicity, gender, race, age and religion in the patient/caregiver encounter</p> <p>Requires assistance to modify care plan to account for a patient's unique characteristics and needs</p>	<p>Seeks to fully understand each patient's unique characteristics and needs based upon culture, ethnicity, gender, religion, and personal preference</p> <p>Modifies care plan to account for a patient's unique characteristics and needs with partial success</p>	<p>Recognizes and accounts for the unique characteristics and needs of the patient/ caregiver</p> <p>Appropriately modifies care plan to account for a patient's unique characteristics and needs</p>	<p>Role models professional interactions to negotiate differences related to a patient's unique characteristics or needs</p> <p>Role models consistent respect for patient's unique characteristics and needs</p>

Professionalism 3: Accountability/Conscientiousness

Level 1	Level 2	Level 3	Level 4	Level 5
Performs administrative tasks and patient care responsibilities, with prompting	Performs administrative tasks and patient care responsibilities in a timely manner in routine situations	Performs administrative tasks and patient care responsibilities in a timely manner in complex or stressful situations	Proactively implements strategies to ensure that the needs of patients, teams, and systems are met	Creates strategies to enhance other's ability to efficiently complete administrative tasks and patient care responsibilities

Milestones 2.0

- The learning trajectory within the core competencies
- Framework of assessments
 - **NOT assessment tool**
- Standard map of expected physician behaviors that we can map against

Professionalism 1: Professional Behavior and Ethical Principles				
Level 1	Level 2	Level 3	Level 4	Level 5
Demonstrates knowledge of expectations for professional behavior and describes how to appropriately report professional lapses	Demonstrates insight into professional behavior in routine situations and takes responsibility for own professionalism lapses	Demonstrates professional behavior in complex or stressful situations	Recognizes situations that may trigger professionalism lapses and intervenes to prevent lapses in self and others	Coaches others when their behavior fails to meet professional expectations

Milestones 2.0的應用

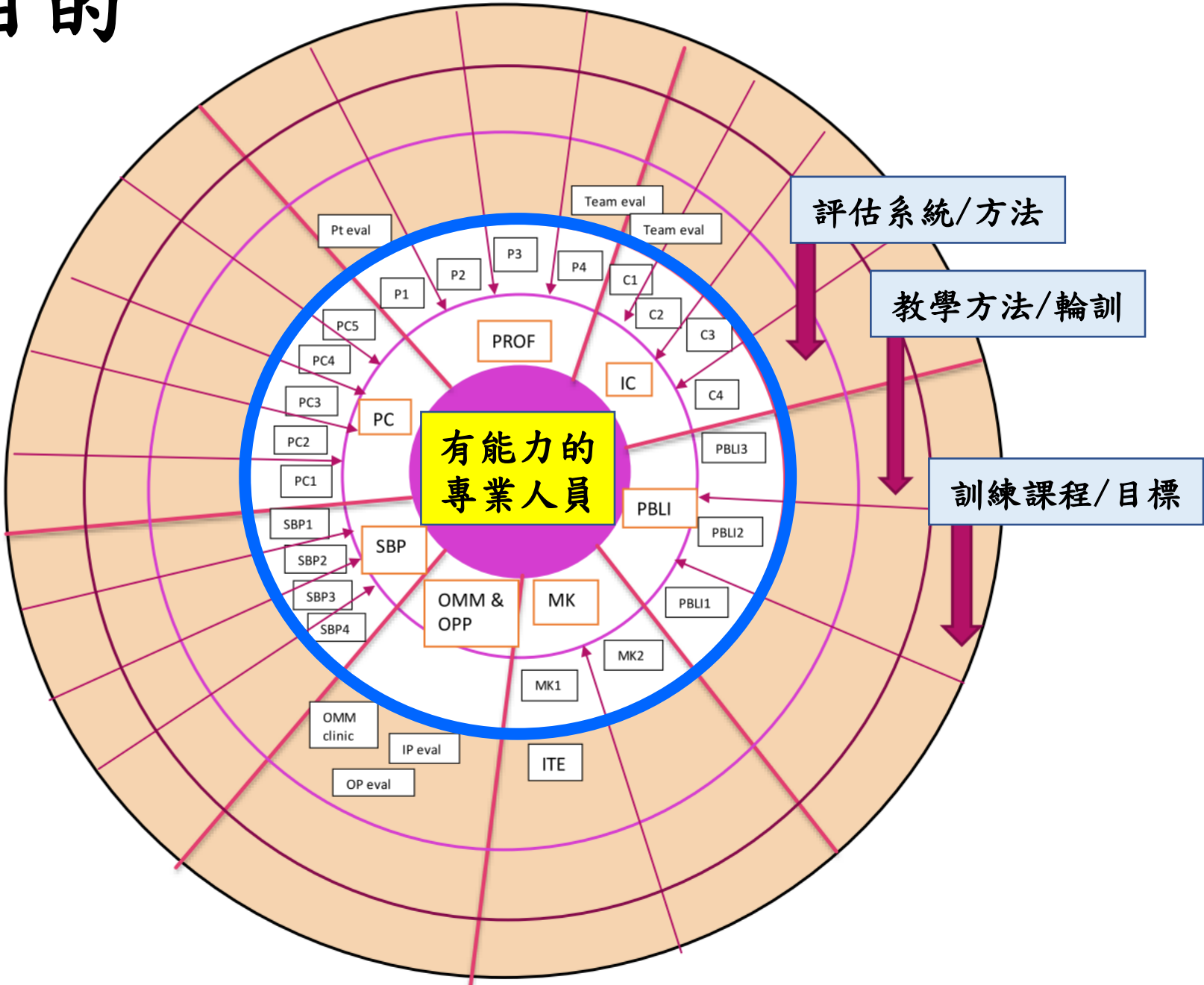
訓練計畫

- 設計學習成長軌跡
- 聚焦性評量
- 及早發現學習不佳學員
- 辨識出進展快速的學員
- 設計課程目標

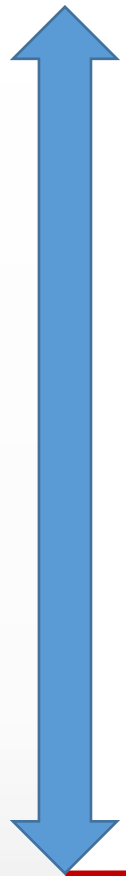
學員

- 公開透明的學習目標
- 有意義的回饋
- 自我評量
- 自我導向的學習 (個別化的學習計畫)

CBME的目的



Workplace-based assessment



臨床實際操作
(Does)

評估臨床表現：多源回饋 (Multi-Source Feedback)
個人檔案回顧 (Portfolios)

表現怎麼做
(Shows How)

評估核心能力：迷你臨床演練評量 (Mini-CEX)
客觀結構式臨床測驗 (OSCE)
直接觀察臨床技術測驗 (DOPS)
模擬(simulation)、(CbD)

知道怎麼做
(Knows How)

臨床案例評估：案例討論
(Case Based Learning)
口試

知道
(Knows)

知識評估：紙筆測驗 (MCQ)

已完成 52

已完成

360度評量
 梁瑜鑫 教師項
 內科 西醫PGY
 學員指定
 【評核項目-360度評量表】
 08/012018~08/312018
 no:272219

CbD
 梁瑜鑫 雙向問卷
 內科 西醫PGY
 學員指定
 【評核項目-CbD】
 08/012018~08/312018
 no:272218

Mini-CEX
 梁瑜鑫 雙向問卷
 內科 西醫PGY
 學員指定
 【評核項目-Mini-CEX】
 08/012018~08/312018
 no:272217

DOPS
 張路加 雙向問卷
 選修 西醫PGY
 學員指定
 【評核項目-DOPS】
 09/012018~09/302018
 no:263369

Mini-CEX
 張路加 雙向問卷
 選修 西醫PGY
 學員指定
 【評核項目-Mini-CEX】
 09/012018~09/302018
 no:263361

360度評量
 劉惠綺 教師項
 內科 西醫PGY
 學員指定
 【評核項目-360度評量表】
 11/012018~11/302018
 no:263360

360度評量
 高子翔 教師項
 內科 西醫PGY
 學員指定
 【評核項目-360度評量表】
 12/012018~12/312018
 no:276766

CbD
 高子翔 雙向問卷
 內科 西醫PGY
 學員指定
 【評核項目-CbD】
 12/012018~12/312018
 no:276765

Mini-CEX
 高子翔 雙向問卷
 內科 西醫PGY
 學員指定
 【評核項目-Mini-CEX】
 12/012018~12/312018
 no:276764

Mini-CEX
 陳先慧 雙向問卷
 內科 西醫PGY
 學員指定
 【評核項目-Mini-CEX】
 01/012019~01/312019
 no:264705

360度評量
 吳宥達 教師項
 內科 西醫PGY
 學員指定
 【評核項目-360度評量表】
 02/012019~02/282019
 no:265047

CbD
 吳宥達 雙向問卷
 內科 西醫PGY
 學員指定
 【評核項目-CbD】
 02/012019~02/282019
 no:265046

CbD
 林政浩 雙向問卷
 內科 西醫PGY
 學員指定
 【評核項目-CbD】
 03/012019~03/312019

Mini-CEX
 林政浩 雙向問卷
 內科 西醫PGY
 學員指定
 【評核項目-Mini-CEX】
 03/012019~03/312019

360度評量
 許君璋 教師項
 選修 西醫PGY
 學員指定
 【評核項目-360度評量表】
 04/012019~04/302019

地點	<input type="radio"/> 門診 <input checked="" type="radio"/> 一般病房 <input type="radio"/> 開刀房
病歷號碼	50330076
病人性別	<input type="radio"/> 男 <input checked="" type="radio"/> 女
年齡	72
主要診斷	Advanced bronchogenic carcinoma

電子化、手機化

二、評估項目

醫療面談	<input type="radio"/> 1.有待加強 <input type="radio"/> 2.有待加強 <input type="radio"/> 3.有待加強 <input type="radio"/> 4.合乎標準 <input type="radio"/> 5.合乎標準 <input checked="" type="radio"/> 6.合乎標準 <input type="radio"/> 7.優良 <input type="radio"/> 8.優良 <input type="radio"/> 9.優良 <input type="radio"/> 10.未評(NA)
身體檢查	<input type="radio"/> 1.有待加強 <input type="radio"/> 2.有待加強 <input type="radio"/> 3.有待加強 <input type="radio"/> 4.合乎標準 <input type="radio"/> 5.合乎標準 <input checked="" type="radio"/> 6.合乎標準 <input type="radio"/> 7.優良 <input type="radio"/> 8.優良 <input type="radio"/> 9.優良 <input type="radio"/> 10.未評(NA)
人道專業	<input type="radio"/> 1.有待加強 <input type="radio"/> 2.有待加強 <input type="radio"/> 3.有待加強 <input type="radio"/> 4.合乎標準 <input type="radio"/> 5.合乎標準 <input checked="" type="radio"/> 6.合乎標準 <input type="radio"/> 7.優良 <input type="radio"/> 8.優良 <input type="radio"/> 9.優良 <input type="radio"/> 10.未評(NA)
臨床判斷	<input type="radio"/> 1.有待加強 <input type="radio"/> 2.有待加強 <input type="radio"/> 3.有待加強 <input type="radio"/> 4.合乎標準 <input type="radio"/> 5.合乎標準 <input checked="" type="radio"/> 6.合乎標準 <input type="radio"/> 7.優良 <input type="radio"/> 8.優良 <input type="radio"/> 9.優良 <input type="radio"/> 10.未評(NA)
諮商衛教	<input type="radio"/> 1.有待加強 <input type="radio"/> 2.有待加強 <input type="radio"/> 3.有待加強 <input type="radio"/> 4.合乎標準 <input type="radio"/> 5.合乎標準 <input checked="" type="radio"/> 6.合乎標準 <input type="radio"/> 7.優良 <input type="radio"/> 8.優良 <input type="radio"/> 9.優良 <input type="radio"/> 10.未評(NA)
組織效能	<input type="radio"/> 1.有待加強 <input type="radio"/> 2.有待加強 <input type="radio"/> 3.有待加強 <input type="radio"/> 4.合乎標準 <input type="radio"/> 5.合乎標準 <input checked="" type="radio"/> 6.合乎標準 <input type="radio"/> 7.優良 <input type="radio"/> 8.優良 <input type="radio"/> 9.優良 <input type="radio"/> 10.未評(NA)
整體適任	<input type="radio"/> 1.有待加強 <input type="radio"/> 2.有待加強 <input type="radio"/> 3.有待加強 <input type="radio"/> 4.合乎標準 <input type="radio"/> 5.合乎標準 <input checked="" type="radio"/> 6.合乎標準 <input type="radio"/> 7.優良 <input type="radio"/> 8.優良 <input type="radio"/> 9.優良 <input type="radio"/> 10.未評(NA)
評估優良或有待加強時，請教師依評等項目逐項說明回饋	<ul style="list-style-type: none"> 對於病人的情緒及肢體語言能運用同理心適當的回應 在詢問病史時要有邏輯性及系統性，適時整理並摘要病史 檢查過程中要注意病人的舒適感及隱私 依照正確的檢查技巧及順序執行 能建立良好的醫病關係，且獲得病人的信任 提供適當的醫療處置，並考慮其利弊得失及醫療花費

已完成 71		已完成				優良	適當	待加強	N/A
學習心得	學習心得	學	六大核心能力	項目	評核內容				
徐任廷 雙向問卷 胸腔內科 實習醫學生 【學習心得-心得報告】 09/18 ²⁰¹⁷ ~10/01 ²⁰¹⁷ no:224631	張佳平 雙向問卷 胸腔內科 實習醫學生 【學習心得-心得報告】 09/18 ²⁰¹⁷ ~10/01 ²⁰¹⁷ no:224736	施欣好 胸腔內科 【學習心 09/18 ²⁰	病人照護	1	臨床基本技能（含病史詢問能力）	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>
				2	以病人為中心照顧病人	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
			醫學知識	3	具備基礎及臨床科學知識	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>
			在工作中學習成長	4	病例報告能力	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>
				5	主動積極學習（主動發問、積極參與討論）	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
			人際與溝通技巧	6	與病人和家屬之溝通能力	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>
				7	與醫療人員之溝通能力與團隊合作	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
			專業素養	8	守時（如：參與教學活動不遲到早退、按時繳交作業）、回應臨床單位傳呼	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
				9	具有同理心，醫療行為符合醫學倫理	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
			在制度下的工作能力	10	在醫療體制下執行資源運用及有品質的病人照護	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>
			學科評分						
			總評	傑出(> 95) 優良(91-95) 適當(86-90) 尚可(80-85) 待加強(< 80)					
			分數	90					
			描述性評語						
黃振修 多元 胸腔內科 實習醫學生 【訓練評值-多元評估表】 10/02 ²⁰¹⁷ ~10/15 ²⁰¹⁷ no:223735	陳翌暘 多元 胸腔內科 實習醫學生 【訓練評值-多元評估表】 10/02 ²⁰¹⁷ ~10/15 ²⁰¹⁷ no:223840	陳韋廷 胸腔內科 【訓練評 10/02 ²⁰							
陳翌暘 雙向問卷 胸腔內科 實習醫學生 【學習心得-心得報告】 10/02 ²⁰¹⁷ ~10/15 ²⁰¹⁷ no:223791	陳韋廷 雙向問卷 胸腔內科 實習醫學生 【學習心得-心得報告】 10/02 ²⁰¹⁷ ~10/15 ²⁰¹⁷ no:223896	黃敦維 胸腔內科 【訓練評 10/30 ²⁰							
葉綺薇 多元 胸腔內科 實習醫學生 【訓練評值-多元評估表】 11/27 ²⁰¹⁷ ~12/10 ²⁰¹⁷ no:223525	林硯澤 多元 胸腔內科 實習醫學生 【訓練評值-多元評估表】 01/22 ²⁰¹⁸ ~02/18 ²⁰¹⁸ no:229894	林采榆 胸腔內科 【訓練評 01/22 ²⁰							
王俐婷 雙向問卷 胸腔內科 實習醫學生 【學習心得-心得報告】 02/05 ²⁰¹⁸ ~03/04 ²⁰¹⁸ no:230467	高峻閔 多元 胸腔內科 實習醫學生 【訓練評值-多元評估表】 03/05 ²⁰¹⁸ ~03/18 ²⁰¹⁸ no:222895	高任宏 胸腔內科 【訓練評 03/05 ²⁰							

■ 評分的内容

標準何在?

怎樣算未符合要求?
怎樣算表現優異?

評估項目	達到標準									未觀察
	劣 ←								優 →	
1. 醫療面談	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5	<input type="checkbox"/> 6	<input type="checkbox"/> 7	<input checked="" type="checkbox"/> 8	<input type="checkbox"/> 9	<input type="checkbox"/>
2. 身體檢查	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5	<input type="checkbox"/> 6	<input type="checkbox"/> 7	<input checked="" type="checkbox"/> 8	<input type="checkbox"/> 9	<input type="checkbox"/>
3. 人道專業	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5	<input type="checkbox"/> 6	<input type="checkbox"/> 7	<input checked="" type="checkbox"/> 8	<input type="checkbox"/> 9	<input type="checkbox"/>
4. 臨床判斷	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5	<input type="checkbox"/> 6	<input type="checkbox"/> 7	<input checked="" type="checkbox"/> 8	<input type="checkbox"/> 9	<input type="checkbox"/>
5. 諮商衛教	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5	<input type="checkbox"/> 6	<input checked="" type="checkbox"/> 7	<input type="checkbox"/> 8	<input type="checkbox"/> 9	<input type="checkbox"/>
6. 組織效能	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5	<input type="checkbox"/> 6	<input type="checkbox"/> 7	<input checked="" type="checkbox"/> 8	<input type="checkbox"/> 9	<input type="checkbox"/>
7. 整體適任	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5	<input type="checkbox"/> 6	<input type="checkbox"/> 7	<input checked="" type="checkbox"/> 8	<input type="checkbox"/> 9	<input type="checkbox"/>

互動內容

思維態度

CbD: Case-Based Discussion (表 22)



馬偕紀念醫院 醫學教育部

以案例導向之討論表
Case-based Discussion (CbD)

2011.9.20 修訂

■ 個案為主的討論

- 彌補其他教學方式及考核方式的不足
- 學員處理過的臨床病例
- 針對受訓學員親自書寫的病歷記錄及報告，與學員進行有系統的面談及結構性的回饋方式進行
- 老師和學員都要事先準備
- 選擇案例很重要
- 對象不同，標準不同

院區：台北院區 淡水院區 其他院區 _____

教師職稱：主治醫師 研究醫師 總醫師 其他(請註明) _____

教師科別：內科 外科 婦產科 兒科 其他科 _____

學員：M6 M7 PGY R1 R2 R3 其他 _____

病例來源：門診 一般病房 加護病房 急診 開刀房 其他 _____

病歷號碼：18819587

臨床問題：呼吸 循環 神經學 精神及行為 疼痛
手術適應症及方法 胃腸 感染 其他 _____

討論重點：病例記載 臨床評估 處置 專業性討論

病例複雜性：低 中 高

請依照下列項目評估學員表現	未達預期標準	接近預期標準	達到預期標準	超過預期標準	N/A*
1. 病歷記載	<input type="checkbox"/> 1 <input type="checkbox"/> 2	<input checked="" type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5 <input type="checkbox"/> 6	<input type="checkbox"/>
2. 臨床評估	<input type="checkbox"/> 1 <input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input checked="" type="checkbox"/> 5 <input type="checkbox"/> 6	<input type="checkbox"/>
3. 病例研究及照會	<input type="checkbox"/> 1 <input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input checked="" type="checkbox"/> 5 <input type="checkbox"/> 6	<input type="checkbox"/>
4. 處置	<input type="checkbox"/> 1 <input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input checked="" type="checkbox"/> 5 <input type="checkbox"/> 6	<input type="checkbox"/>
5. 追蹤及未來治療	<input type="checkbox"/> 1 <input type="checkbox"/> 2	<input type="checkbox"/> 3	<input checked="" type="checkbox"/> 4	<input type="checkbox"/> 5 <input type="checkbox"/> 6	<input type="checkbox"/>
6. 專業性討論	<input type="checkbox"/> 1 <input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input checked="" type="checkbox"/> 5 <input type="checkbox"/> 6	<input type="checkbox"/>
7. 整體臨床判斷	<input type="checkbox"/> 1 <input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input checked="" type="checkbox"/> 5 <input type="checkbox"/> 6	<input type="checkbox"/>

*N/A: 沒有討論此項目,無法評估.

評語	表現良好的項目	建議加強的項目
	1. 病人處置 (pn cedure) 能力強 2. 對病人及家屬解釋病情清楚, 詳細, 誠懇及認真, 獲得家屬好評 3. 主動積極評估病人及照會, 使病人得到適時之照護 4. 能提出自行查閱之期刊與VS討論	1. 病歷寫作速度可再加速 管醫師希望病歷內容皆在腦中消化整理後再做邏輯性之記錄 在病人較多時, 反而達不到預設之目標, 且會造成病歷完成延

學員對此次評估的滿意度：1 2 3 4 5 6 7 8 9 10
(低-----高)

教師對此次評估的滿意度：1 2 3 4 5 6 7 8 9 10

直接觀察時間：45 (分鐘) 回饋的時間：15 (分鐘)

教師簽章：郭立國 4033 學員簽章：廖子 號：5106

日期(年/月/日)：2015/4/20 ; 時間：16 時 00 分

360度評量

- 由最近經常接觸被評分者的人評分
- 由學員提名評分者
- 評分者可包括：

上- 主治醫師、護理長、CR

下- 實習醫師、見習醫師

左- 同儕、護理人員

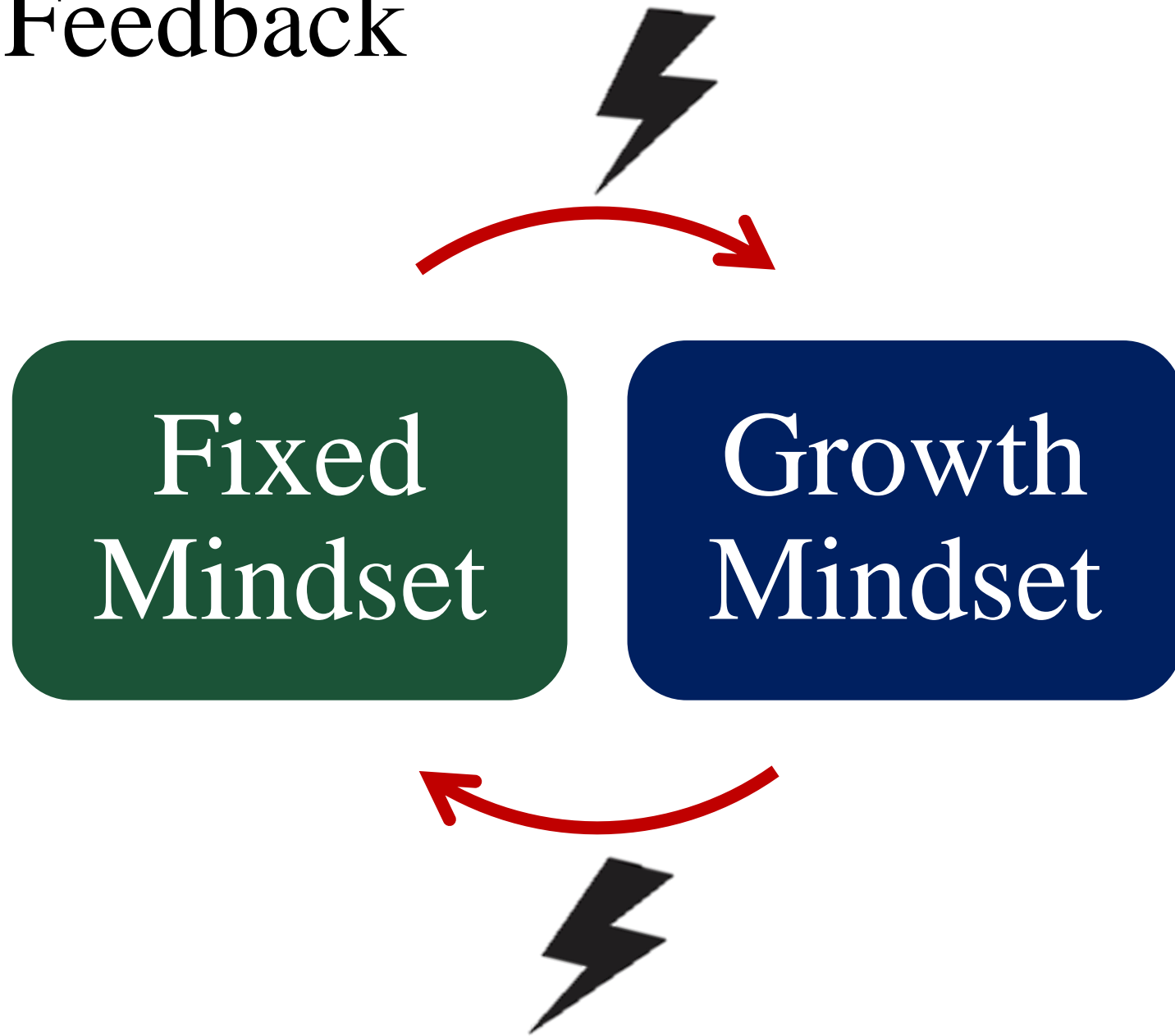
右- 病人、家屬



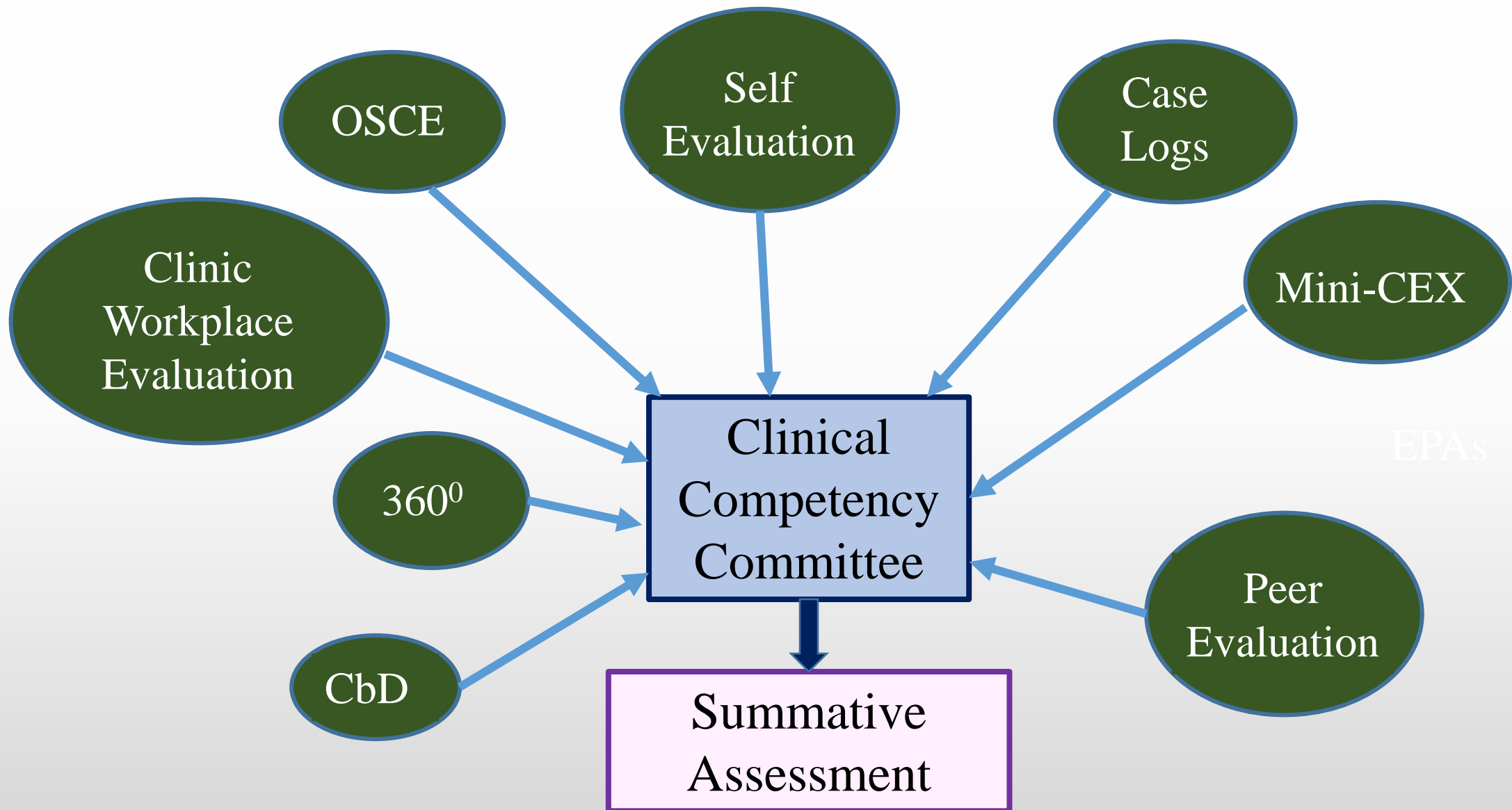
回饋的意義



Providing Feedback



全方位的多元評量



執行Milestones 2.0



Mapping

修改、增刪
評估工具與
課程內容

Mapping Subcompetencies to Assessment Tools

- **Identify Subcompetencies:** 定義次核心能力的內容
- **Select Assessment Tools:** 針對每一次核心能力選擇合適的評估工具
- **Implement the Assessments:** 使用選定的評估工具來評估學員 (訓練老師使用評估工具、訂定日期規則評估、建立紀錄及追蹤評估結果的系統)
- **Review and Refine the Mapping:** 定期檢討與改善，以確保評估的有效性 (收集師生的回饋、分析評估的結果)
- **Align with Curriculum:** 次核心能力的評估，必須與課程的教育目標保持一致

Subcompetency	Assessment Models or Tools
Patient Care 1: History	<ul style="list-style-type: none"> ● Chart stimulated recall ● Direct observation ● Medical record (chart) audit ● OSCE ● Simulation ● Mini-CEX
Patient Care 2: Physical Examination	<ul style="list-style-type: none"> ● Chart stimulated recall ● Direct observation ● Medical record (chart) audit ● OSCE ● Simulation
Medical Knowledge 1: Applied Foundational Sciences	<ul style="list-style-type: none"> ● Chart stimulated recall ● Direct observation at bedside, in meetings or during conferences ● End-of-rotation evaluation ● In-training examination
Systems-Based Practice 1: Patient Safety and Quality Improvement (QI)	<ul style="list-style-type: none"> ● Chart or other system documentation ● Conference presentation with evaluation ● Direct observation ● Multisource feedback ● Portfolio ● Simulation

Mapping Subcompetencies to Assessment Tools

Subcompetencies to Evaluation Methods Map	Current methods/systems for evaluation													Other possible data sources			# data sources	
	Rotation Exals	Nurse Exals	Video Observation	Communication Assessment Tool Data	ITE	MedChallenger Data	Suture Workshop Checklists	Px procedure Logs	Explorer Data	FMC Morale	M & M	Journal Club	Epic Data	Resident Self Reflection Journals	Milestone Case Card/Mini CEX	CCI for object		MC-FP/SW Module
PC 1. Cares for acutely ill or injured patients in urgent and emergent situations and in all settings.	x													x				1
PC 2. Cares for patients with chronic illnesses	x													x				1
PC 3. Partners with the patient, family, and community to improve health through disease prevention and health promotion														x				0
PC 4. Partners with the patient to address issues of ongoing signs, symptoms, or health concerns that remain over time without clear diagnosis despite evaluation and treatment in a patient-centered, cost-effective manner														x				0
PC 5. Performs specialty appropriate procedures to meet the healthcare needs of individual patients, families, and communities, and is knowledgeable about procedures performed by other specialists to guide their patients' care	x						x	x						x				3
MK 1: Demonstrates medical knowledge of sufficient breadth and depth to practice family medicine	x				x	x											x	3
MK 2. Applies critical thinking skills in patient care	x																	1
PROF-1 Completes a process of professionalization														x				1
PROF-2 Demonstrates professional conduct and accountability	x	x												x				2
PROF-3 Demonstrates humanism and cultural proficiency			x											x				2

X = have a system in place but needs development

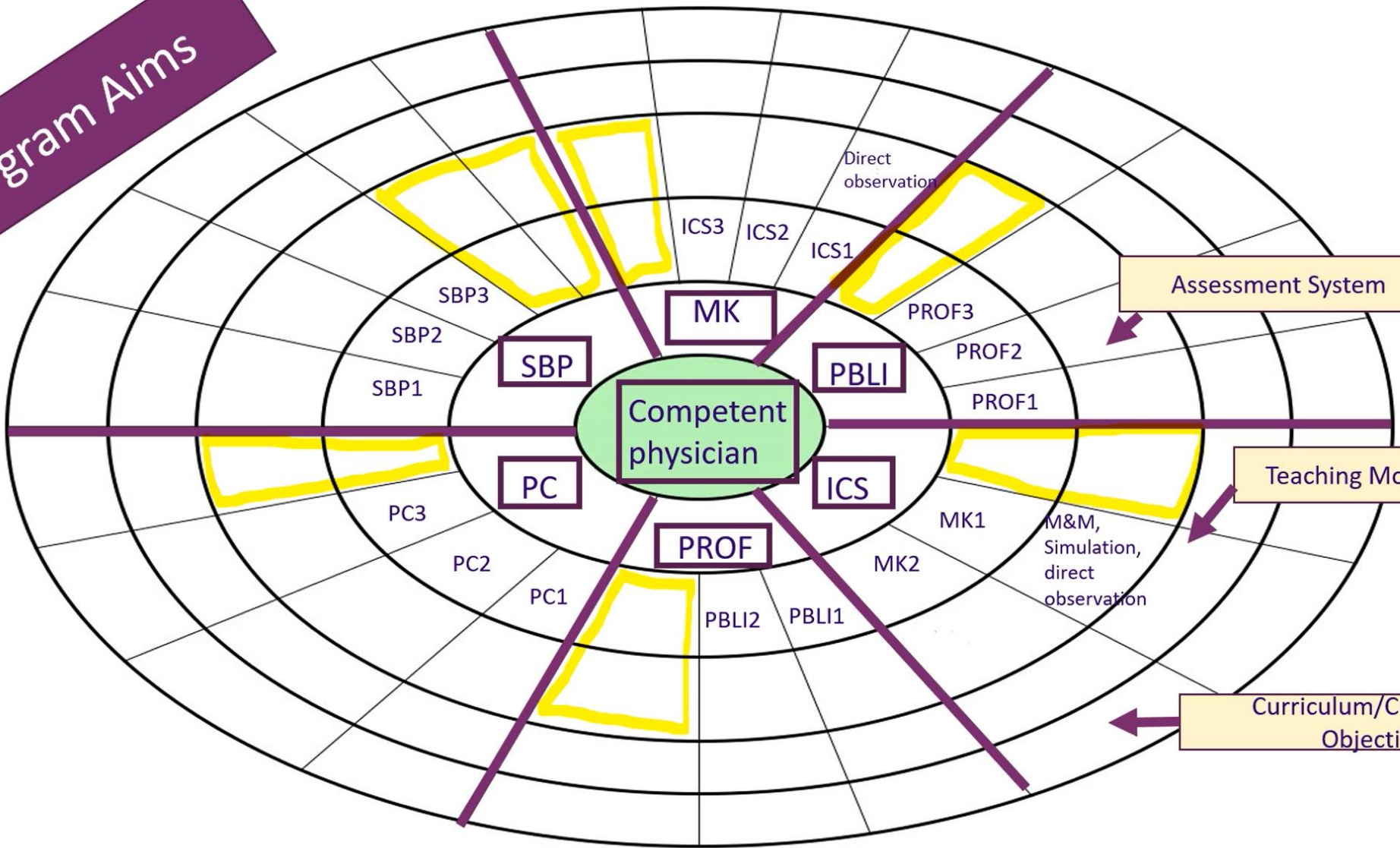
Other possible data sources

data sources

Example: Dermatology Supplemental Guides

Patient Care 1: Medical Dermatology	
Overall Intent: To diagnose and manage dermatologic disease	
Milestones	Examples
<p>Level 1 <i>Obtains basic dermatologic history and physical exam</i></p> <p><i>Identifies management options for common dermatologic conditions</i></p>	<ul style="list-style-type: none"> • Obtains history from a new 42-year-old patient presenting with rosacea, and examines the face • Identifies cryotherapy and field therapy as options for a 74-year-old patient presenting with eight thin actinic keratoses on the face and scalp
<p>Level 2 <i>Evaluates patients with common dermatologic conditions, with assistance</i></p> <p><i>Manages patients with common dermatologic conditions, with assistance</i></p>	<ul style="list-style-type: none"> • Evaluates a 63-year-old farmer with a new, bleeding lesion on the right cheek; the attending points out key dermoscopic findings • Assesses the lesion as a basal cell carcinoma, and a full-body skin exam is offered and performed • Makes a decision to order a skin biopsy on the right cheek, with the attending supervising • Proposes topical steroid and dry skin care precautions for a patient with new onset hand eczema
<p>Level 3 <i>Independently evaluates patients with common dermatologic conditions</i></p> <p><i>Independently manages patients with common dermatologic conditions</i></p>	<ul style="list-style-type: none"> • Evaluates a 45-year-old woman with psoriasis affecting 10 percent body surface area • Discusses need for topical therapy, options and indications for systemic therapy, and need for connection to primary care • Selects treatment for a patient with limited alopecia areata including intralesional and topical corticosteroids or immunotherapy; counsels appropriately of the side effects and expected results of a given treatment
<p>Level 4 <i>Independently evaluates patients with complex dermatologic conditions</i></p> <p><i>Independently manages patients with complex dermatologic conditions and/or comorbidities</i></p>	<ul style="list-style-type: none"> • A hospitalized bone marrow transplant patient in the intensive care unit (ICU) presents with a new onset blistering eruption • Performs a complete exam of the skin and mucous membranes, reviews medications, reviews laboratory evaluations, coordinates histopathologic evaluation with the dermpath team and gathers additional information from the interprofessional team • Determines next appropriate medication on the therapeutic ladder and prescribes second line systemic medication for recalcitrant chronic cutaneous lupus and discusses third line therapies
<p>Level 5 <i>Independently evaluates and manages patients with rare, atypical, or refractory dermatologic conditions</i></p>	<ul style="list-style-type: none"> • Consults on a patient who has been seen by three other dermatologists; performs extensive chart review and collects prior slides for review, leads discussion at a clinicopathologic conference about how the diagnosis of Galli-Galli disease was determined, and starts patient on systemic retinoid therapy
<p>Assessment Models or Tools</p>	<ul style="list-style-type: none"> • Direct observation • Evaluation of case review/discussion • Examinations

Program Aims

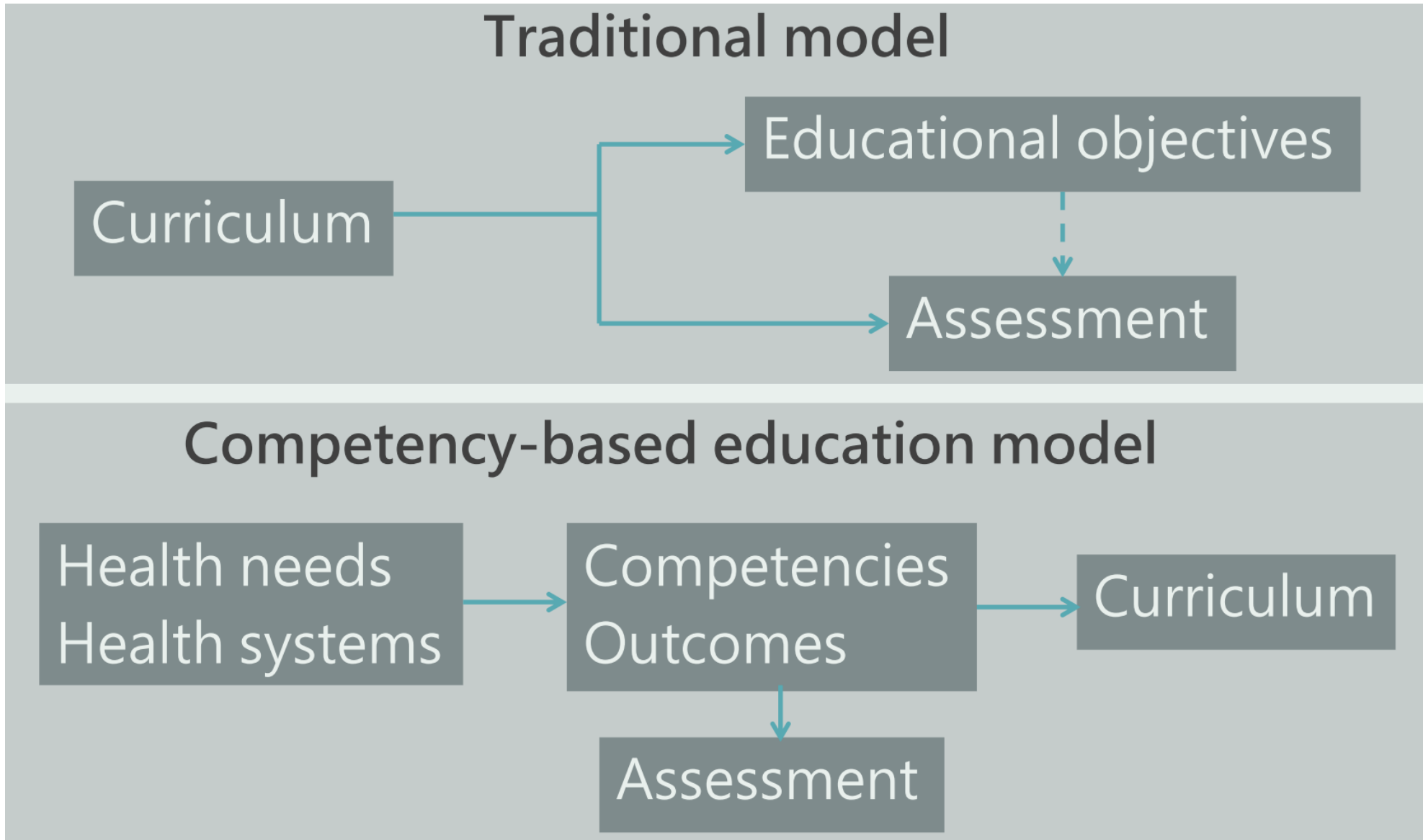


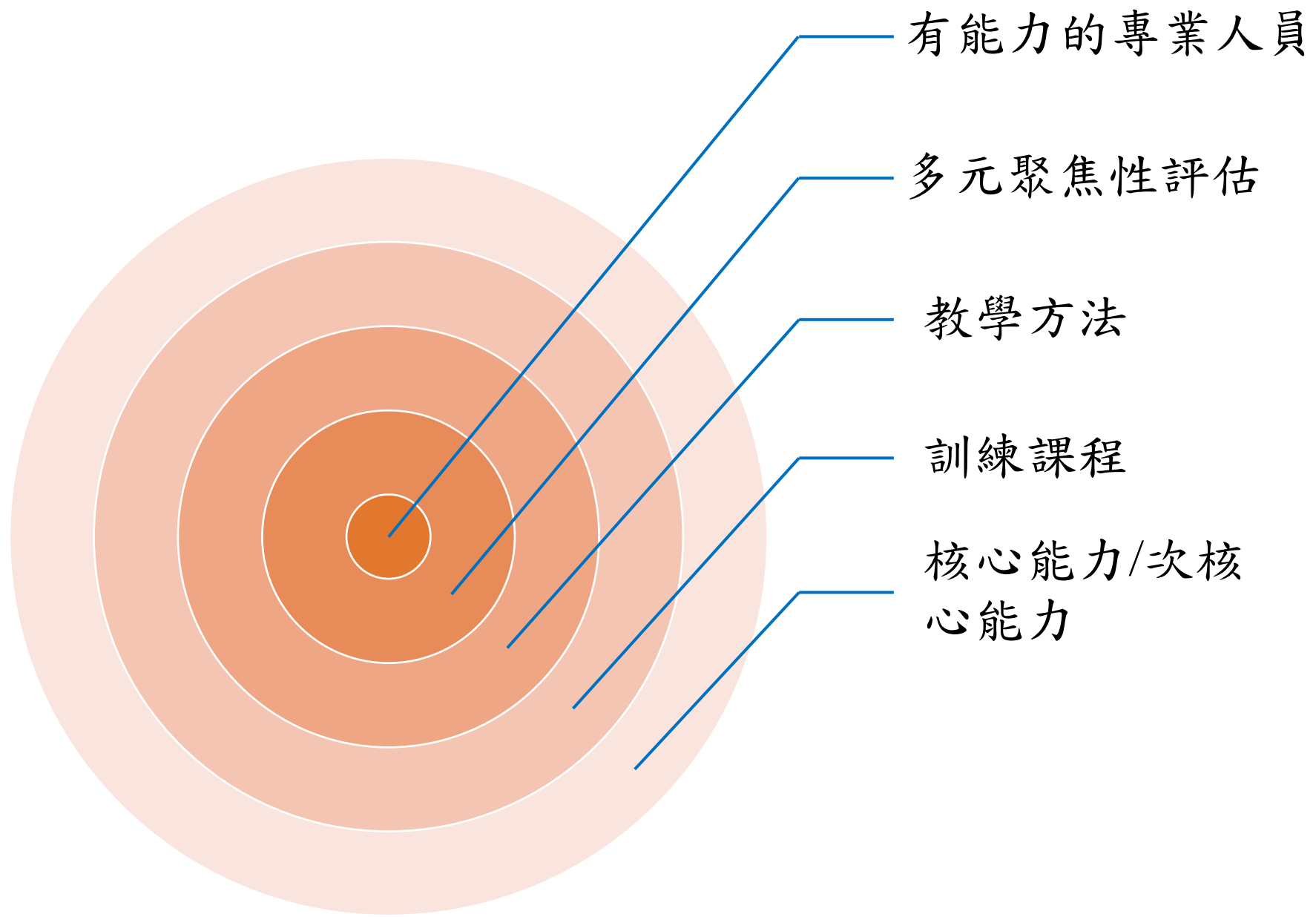
Assessment System

Teaching Modalities/Rotations

Curriculum/Curriculum Objectives

Models of Education





Take Home Messages

- Milestones是專業養成的藍圖，可以啟發課程規劃與評量設計也能引導教師回饋
- Milestones**不是**評量工具或評量表單
- 推動CBME的第一步，需專家團體共識規劃能力架構與進展描述
- 推動CBME的第二步，**為培養勝任能力而量身打造的教與學**，才是CBME的關鍵，把對專業的描述與藍圖，轉譯為可行的訓練計畫 (能力導向的訓練計畫) (教與學的質變)
- 計畫性的評估中，每個評量必須對應所要達到的學習或課程目標 (**Assessment for learning**)



Final thoughts and reflections

師培課程
滿意度調查

