計畫性評估與臨床能力委員會：能力導向訓練計畫快速上手

中國醫藥大學附醫師培中心
China Medical University Hospital
Center for Faculty Development
周致丞 主任
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Disclosures

- I have a role in ACGME international Hub, International CBME Collaborators (ICBME), and Ins and Outs of EPAs international Course Faculty
- Slides courtesy

Programmatic assessment and clinical competency committee:

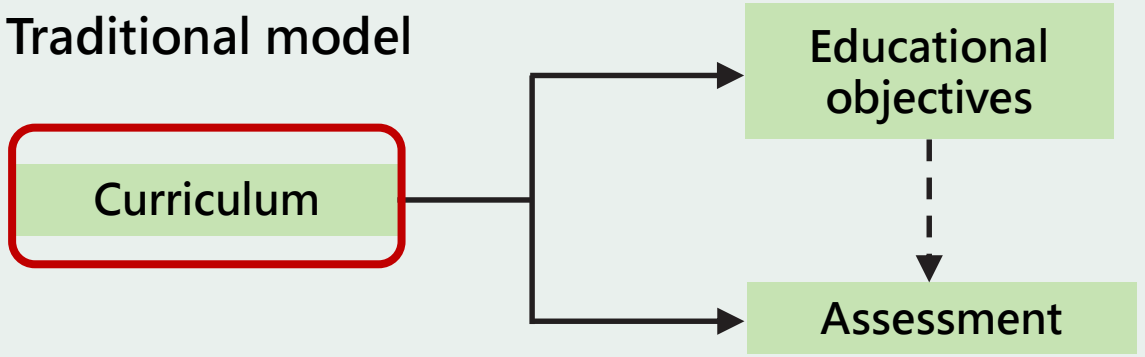
Integrating your program into competency-based training

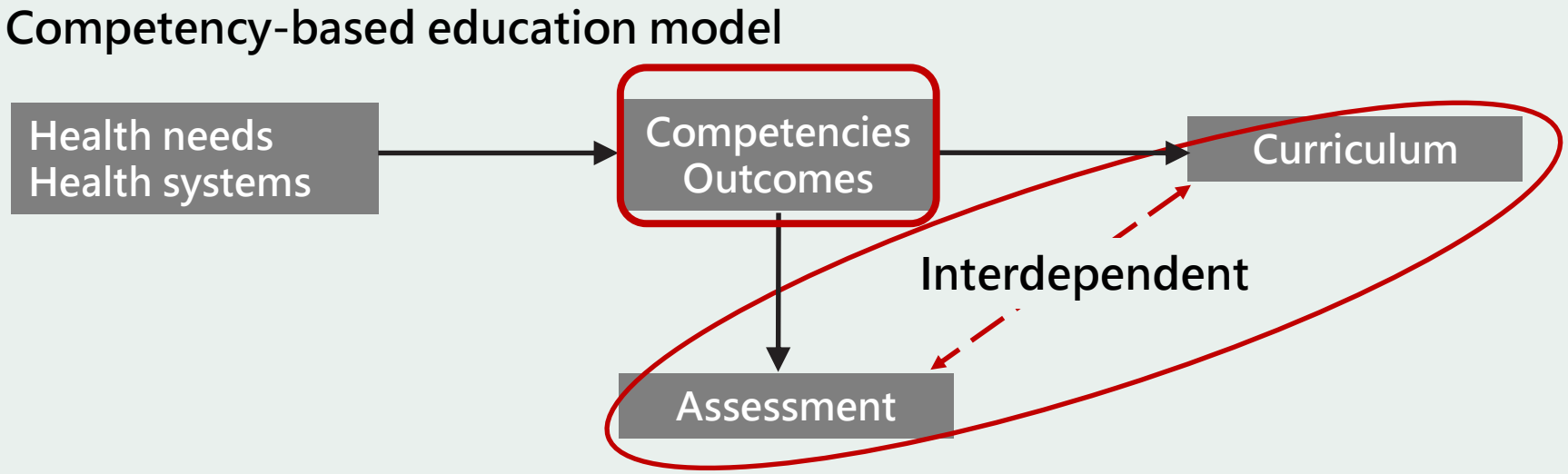
- Relationship between programmatic assessment and CBME
- The role of CCC
- The shift of mindset of teacher and trainee on assessment
- Integrating your program into competency-based training

Do you like assessment?

https://pixabay.com/photos/abdominal-pain-pain-appendicitis-2821941

Start with System Needs





ACGME

Frenk J, et al. Health professionals for a new century: transforming education to strengthen health systems in an interdependent world. Lancet. 2010

二、專科醫師訓練制度改革

- ✓ 規劃「跨層級」聯合訓練方式:如家醫科訓練包括3個月之偏遠地區衛生所訓練模式

「跨層級」聯合訓練

發展能力導向的專科醫師訓練制度

- ✓ 訂定專科醫師訓練各階段應完成之核心、次核心能力及進階制度

- ✓ 針對訓練容額需求，納入實證研究及調查
- ✓ 檢討次專科醫師人力發展需求及培育制度

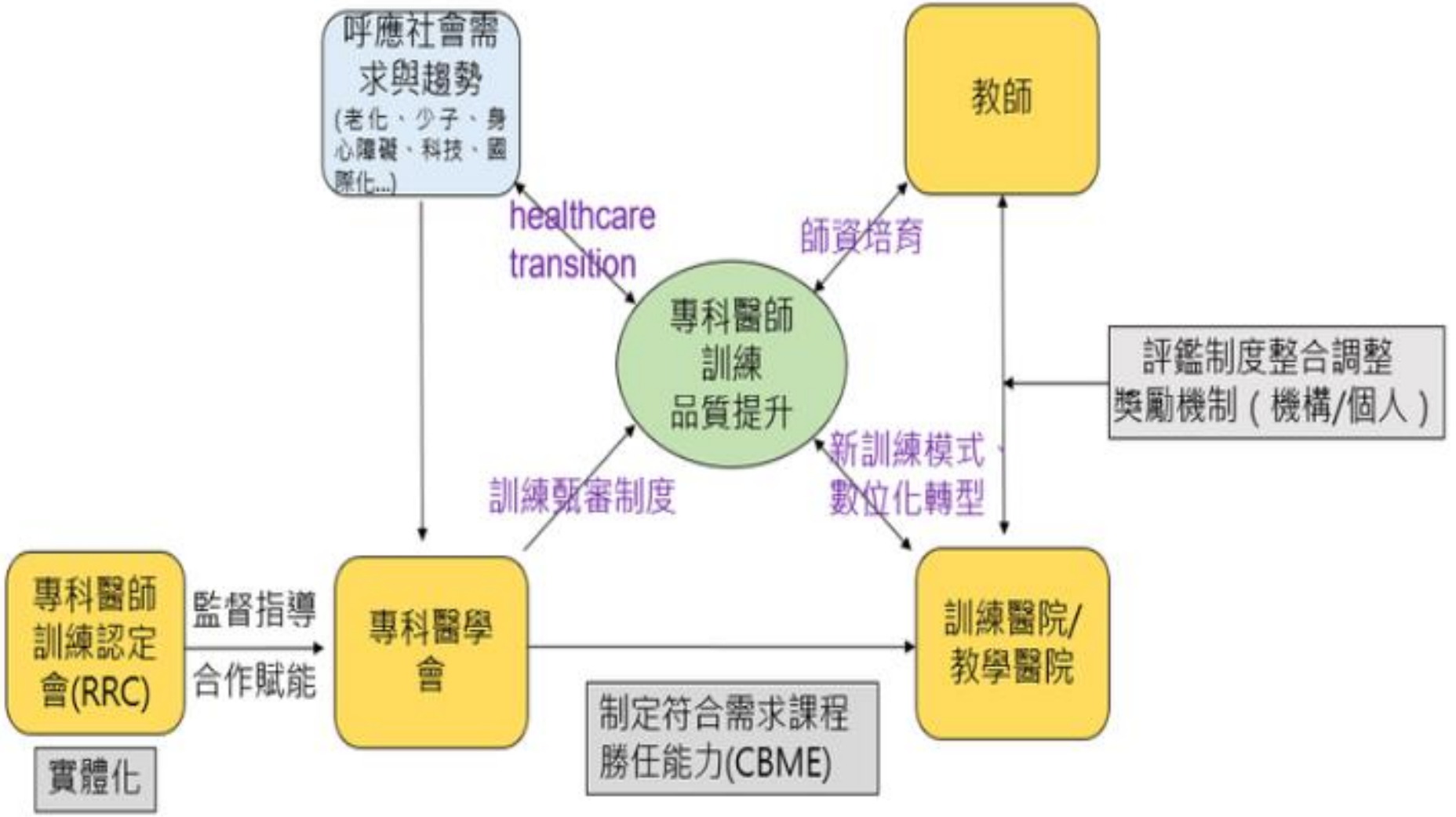
未來專科醫師訓練容額需求之檢討

訓練課程需與時俱進調整

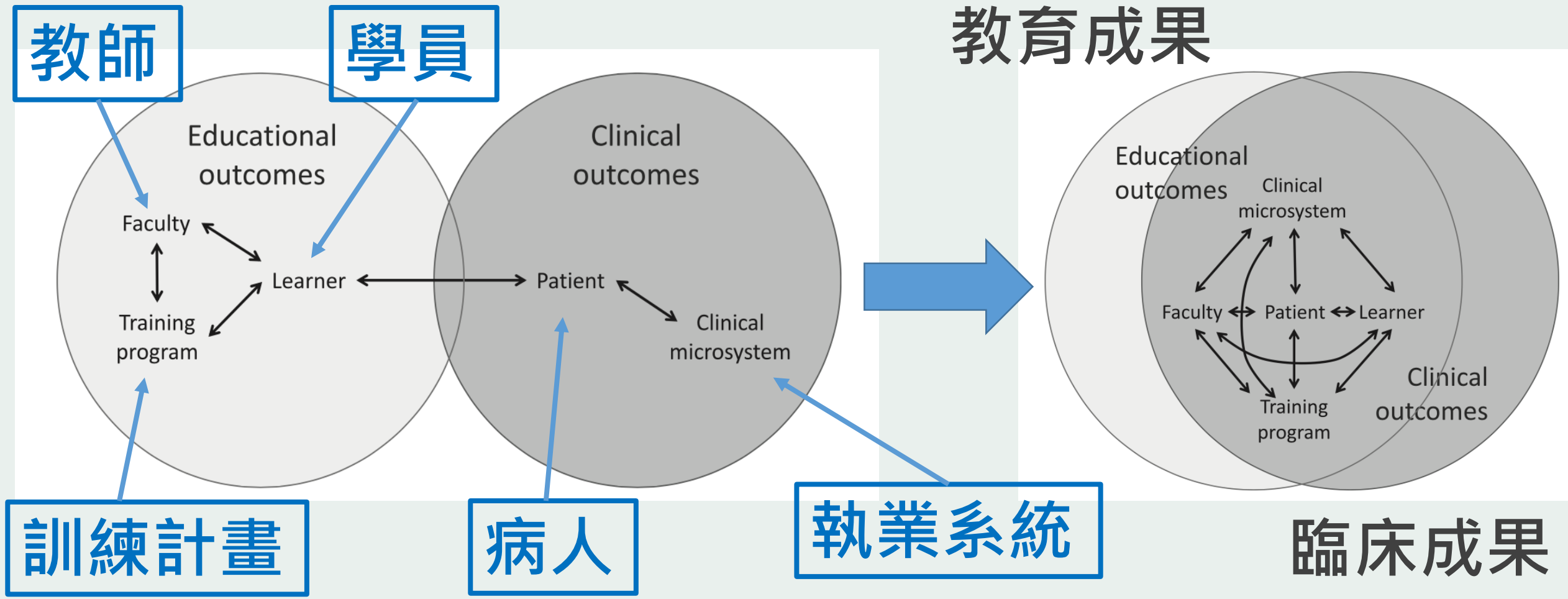
- ✓ 於課程納入安寧照護、病人自主權益及在宅醫療與遠距醫療之訓練

資料來源:摘自衛福部醫事司劉越萍司長於111年6月18日臺灣耳鼻喉頭頸外科醫學會-能力導向醫學教育Emyway整合式「可信賴專業活動」評量平台線上說明會 -台灣專科醫師訓練制度之規劃-演講簡報

二、專科醫師訓練制度改革



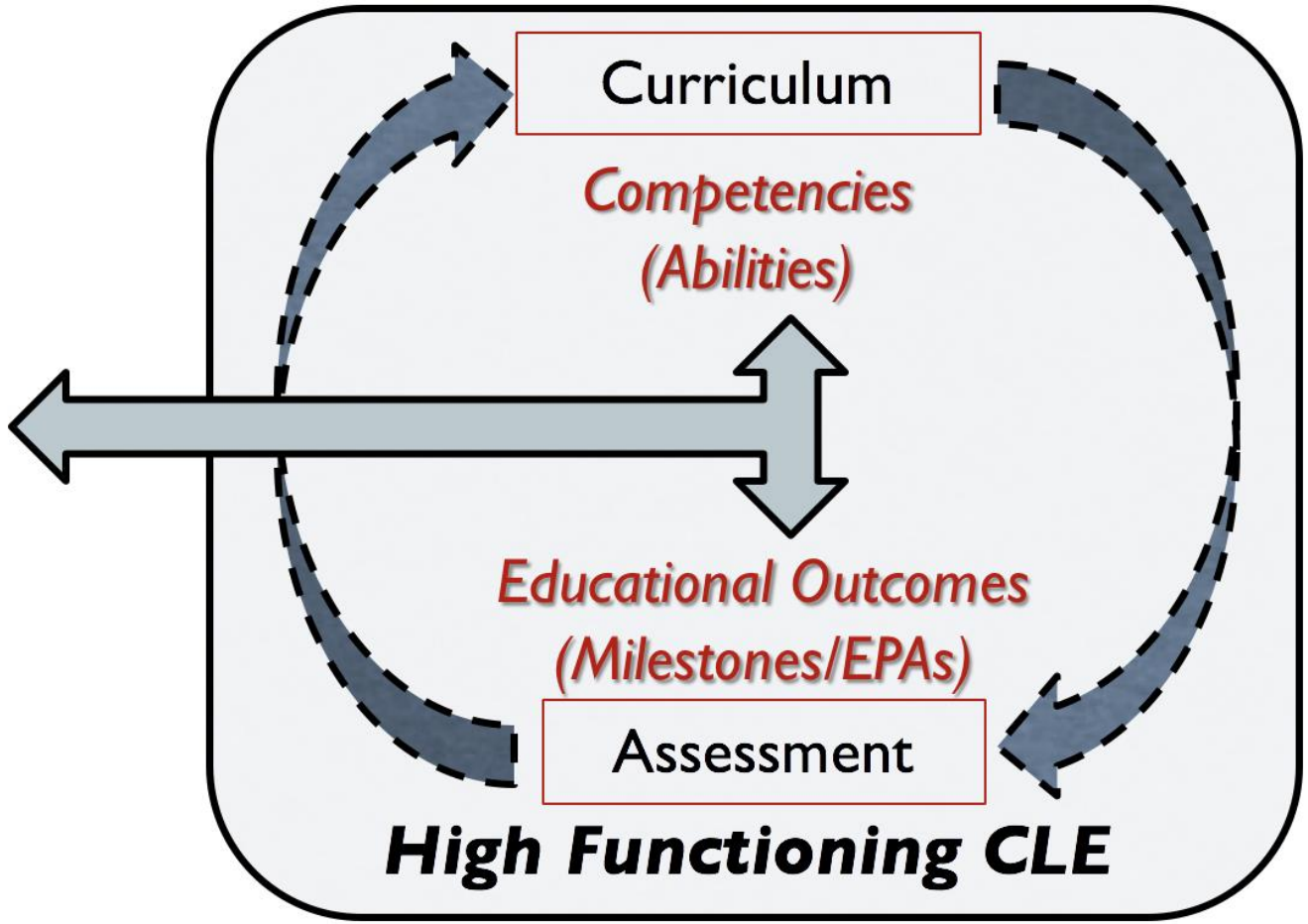
CBME的理想: 雙標的



(Lancet, 2010)

CBME的目的

Quadruple Aim



Starting with the end in mind

STARTING POINT:
"Quadruple Aim"

Curriculum/Assessment
"System Integration"

Curriculum

- *Objectives ?*
- *Teaching methods ?*
- *Learning experiences?*

⟺

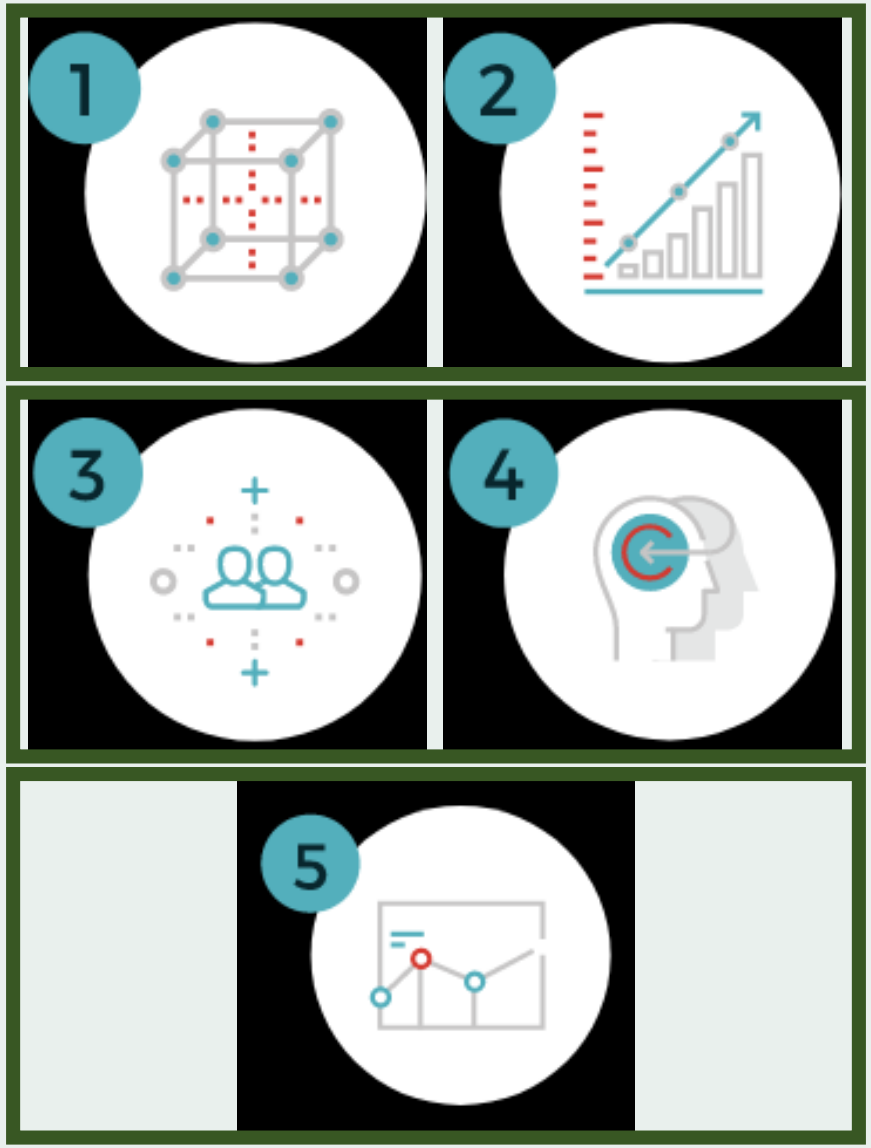
Assessment

- *Appropriate tools?*
- *Data organization?*
- *Data reports?*
- *CCC?*

→ *Ready for Unsupervised Practice & Safe/Effective Care*

Googleimages.com

CBME 推行三構面與定義五元素



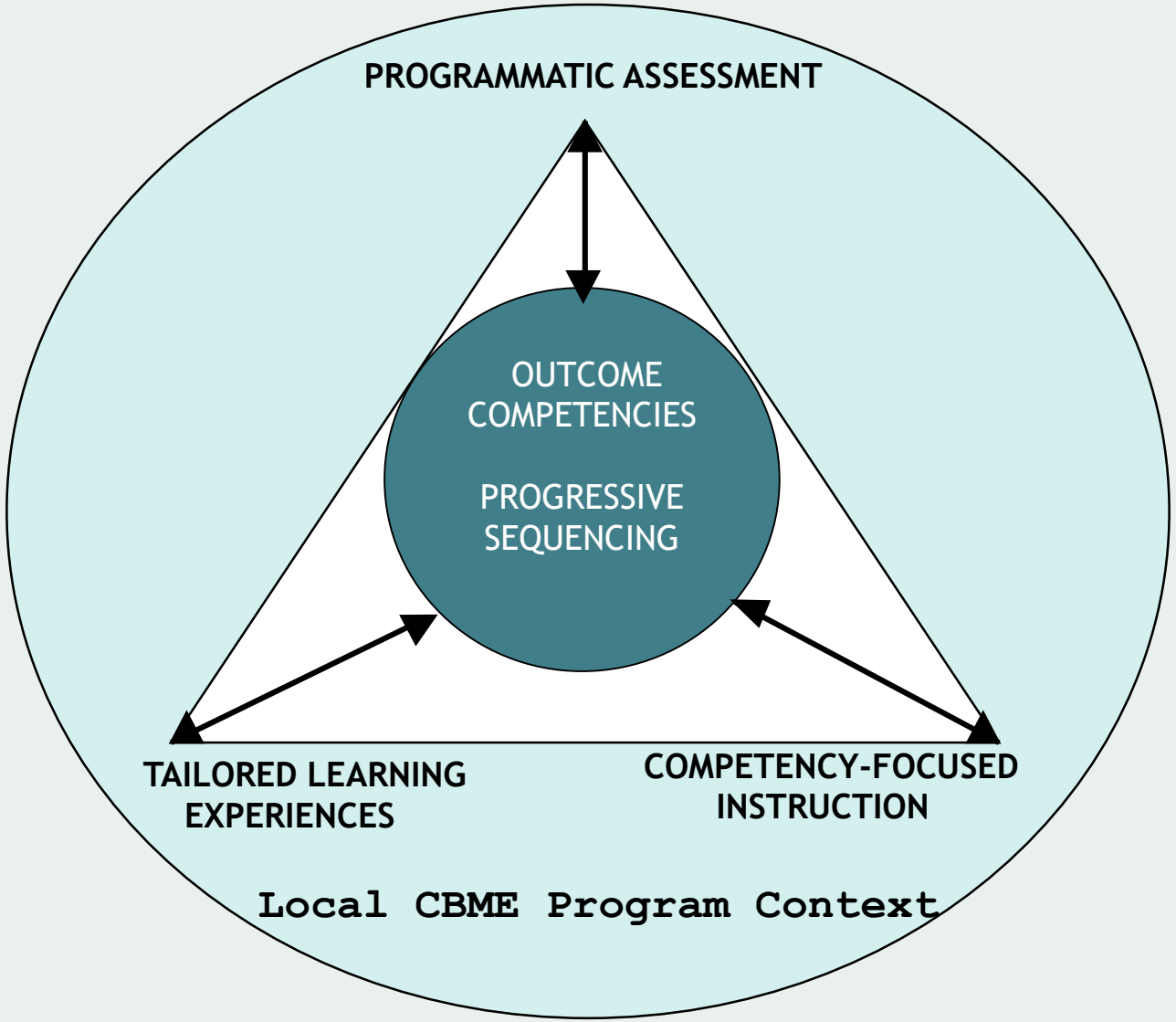
成果導向的能力進展架構

為勝任能力量身打造的
教學與學習經驗

計畫性、系統性的評量設計
與能力進展的評估

(van Melle, et. al., 2019; Chou, et. al., 2018) 製圖：李振威

CBME Requires an Integrated Approach



CBME 3 Dimensions

modified from 5 core components of CBME (Van Melle et al., 2019)

成果導向的能力進展架構

An outcomes-based competency framework with progressive sequencing of competencies

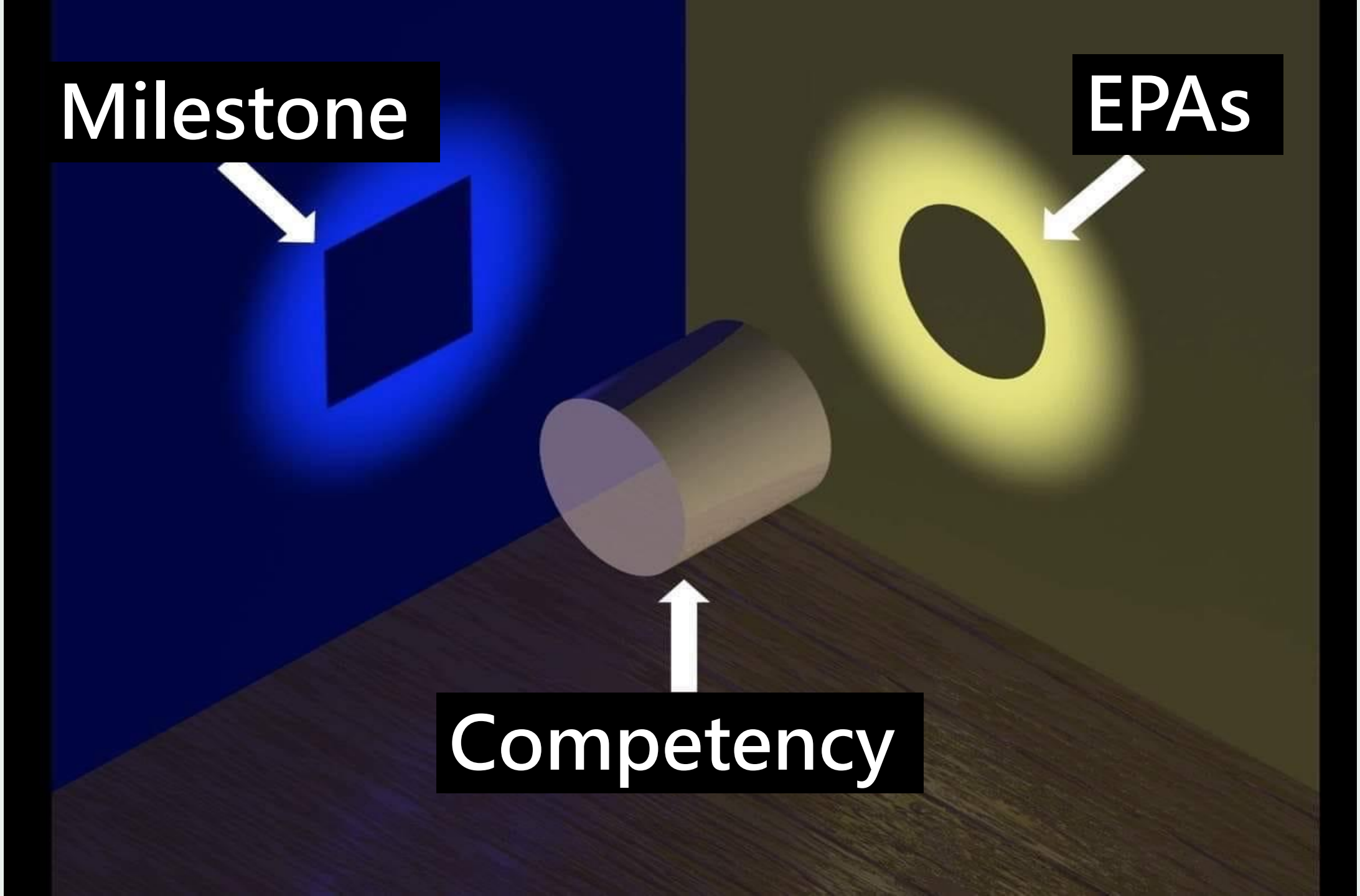
為勝任能力量身打造的教學與學習經驗

Learning experience and teaching tailored to competencies

計畫性、系統性的評量設計與能力進展評估

Programmatic assessment and group decision process for competencies progression

(Chou et. al., 2018)


Milestone
EPAs
Competency

Sequenced progression

- Milestones與 EPAs皆是操作型定義「能力進展」的方式
- Milestones 由描述「人的表現特質」之進展著手，每項能力的進展，可以由不同階層的milestones描述所用的形容中清楚看出
- EPAs則聚焦描述人所能「被信賴去做的事」，事即專業任務，客觀描述任務涵蓋內容不需多餘形容詞，其進展則由信賴程度發展的軌跡，以及不同階段期待達到不同複雜度的EPAs之信賴授權來表達。

台灣醫學教育學會電子報，2022九月教師心語
周致丞

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(Chou et. al., 2018)

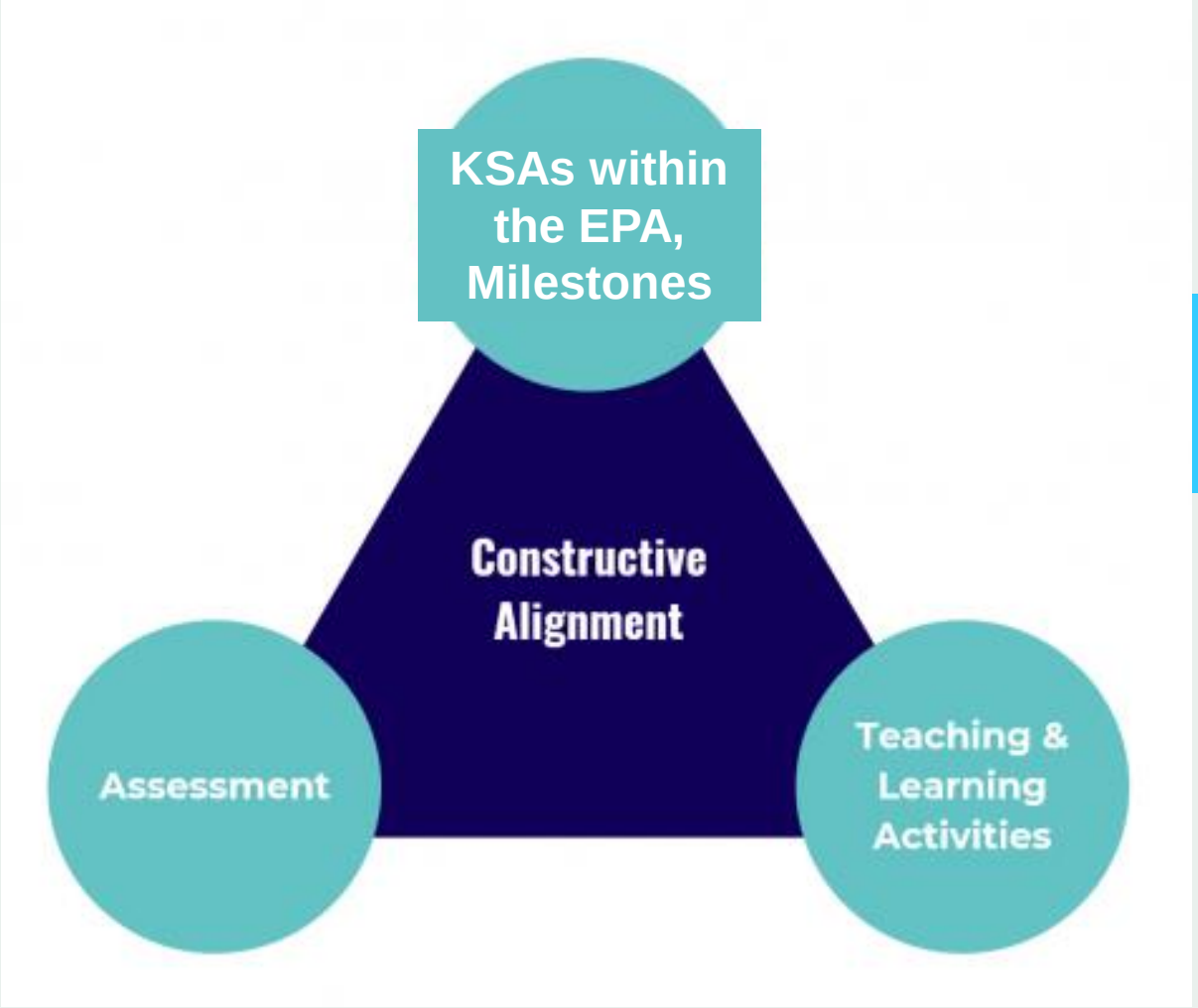
核心課程

完成訓練所需的教育背景及項目,培養核心能力

臨床課程

完成訓練所需的臨床工作經驗,培養情境能力

The Principle of Constructive Alignment (CA)



CA applied to EPAs or/and Milestones

Adapted from Biggs, (1999 and 2022)

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modified from 5 core components of CBME (Van Melle et al., 2019)

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Programmatic assessment and group decision process for competencies progression

(Chou et. al., 2018)

INVITED PAPER

A history of assessment in medical education

Lambert W. T. Schuwirth[1,2] · Cees P. M. van der Vleuten[1,2]

Assessment as

Measurement → Judgement → A system

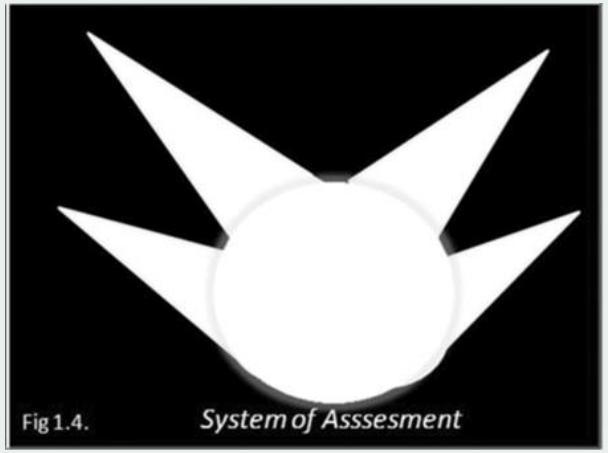
測量 → 評判 → 系統

(Schuwirth, & van der Vleuten, 2020)

CBME最終目的

訓練出有能力滿足當地醫療需求的醫師

如何知道
能力是否達標？



多元聚焦
的評量

『實務經驗』淬煉出來的能力，才能解決現實問題

「你要如何衡量你的人生」 Christensen Allworth Dillon 哈佛商學院

Programmatic Assessment

https://www.ceesvandervleuten.com/publications/Programmatic-assessment

Principles of Assessment

1) Any given assessment data point is flawed
2) Can improve validity of standardized assessments
3) Validity is primarily a function of the assessor not the instrument
4) Higher stakes vs. more assessment points
5) Assessment drives learning
6) Competence is complicated and requires expert raters

van der Vleuten et al, Med Teach 2012

Analogies with healthcare to understand programmatic assessment

Perspect Med Educ (2017) 6:211–215
DOI 10.1007/s40037-017-0345-1

COMMENTARY

What programmatic assessment in medical education can learn from healthcare

L. Schuwirth[1,2] · C. van der Vleuten[2] · S. J. Durning[1,3]

Published online: 10 April 2017

Analogies with healthcare to understand programmatic assessment

- A1: Like the concept ‘health’, the concept of competence may be difficult to define but it can be evaluated, promoted and improved
- A2: Merely using structured and standardized testing in assessment is like diagnosing a patient on lab-values alone
- A3: Testing alone is not enough to effectively lead to higher competence levels of learners like merely making a diagnosis is not enough to cure a patient
- A4: Like diagnosing a disease is not merely a tick box exercise ‘diagnosing’ dyscompetence using a tick box exercise does not work either
- A5: Healthcare and assessment systems both rely on expert practitioners that must be developed and nurtured

計畫性、系統性的評量設計與能力進展的評估

教與學的過程

每次的評估
(打開眼罩)

都是要讓自己
知道在哪裡

鑲嵌教與學的過程中順便收集

https://hokkfabrica.com/bird-box-book-film-differences/

Framework for Programmatic Assessment

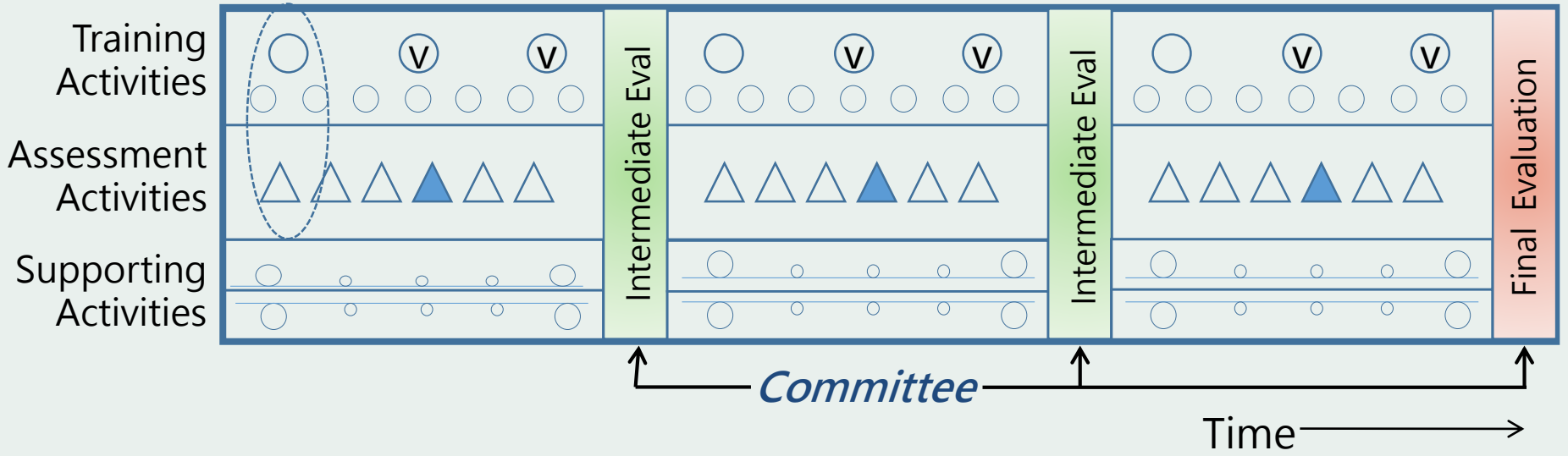
2012; 34: 205–214 MEDICAL TEACHER

A model for programmatic assessment fit for purpose

C. P. M. VAN DER VLEUTEN[1], L. W. T. SCHUWIRTH[2], E. W. DRIESSEN[1], J. DIJKSTRA[1], D. TIGELAAR[3], L. K. J. BAARTMAN[4] & J. VAN TARTWIJK[5]

[1]Maastricht University, The Netherlands, [2]Flinders Medical School, Australia, [3]Leiden University Graduate School of Teaching, The Netherlands, [4]Utrecht University of Applied Sciences, The Netherlands, [5]Utrecht University, The Netherlands

Model For Programmatic Assessment (CPM van der Vleuten)



= learning task
= learning artifact
= single assessment data-point
= single certification data point for mastery tasks
= learner reflection and planning
= social interaction around reflection (supervision)
= learning task being an assessment task also

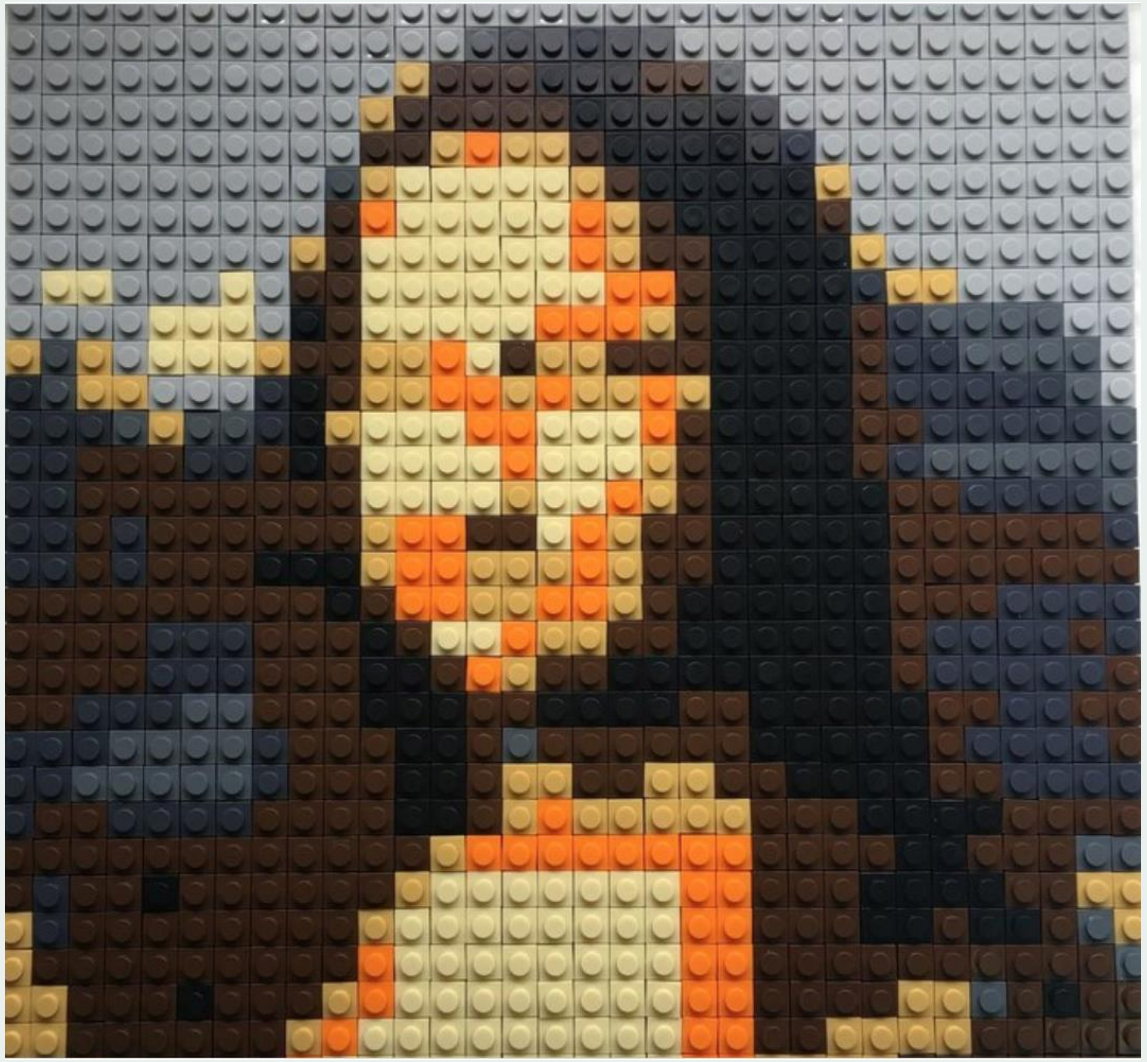
(van der Vleuten el. al., 2012) .

One measurement or even measurements

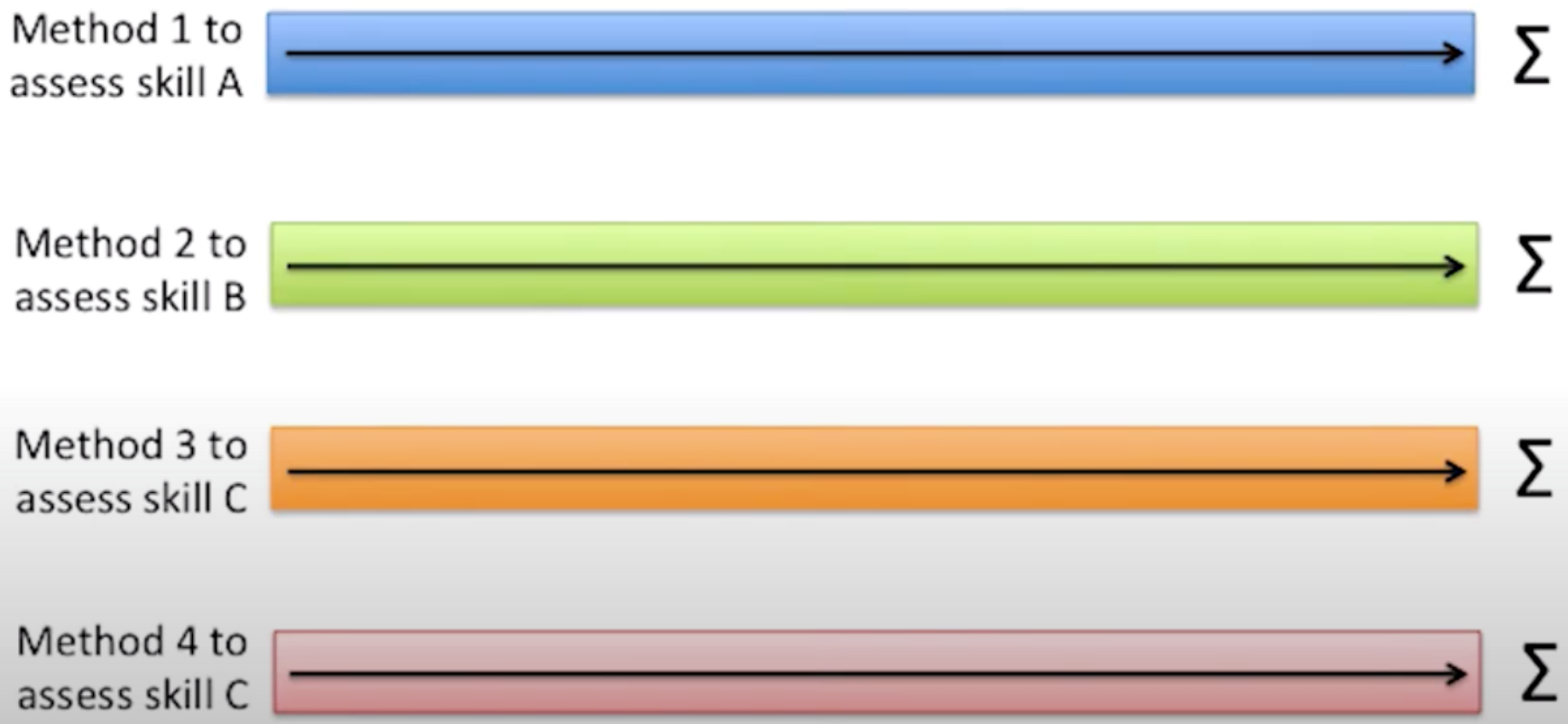
- A piece in a Jigsaw puzzle
- Pixels of a picture
- Building blocks of a Lego set

What is this?

What is this?

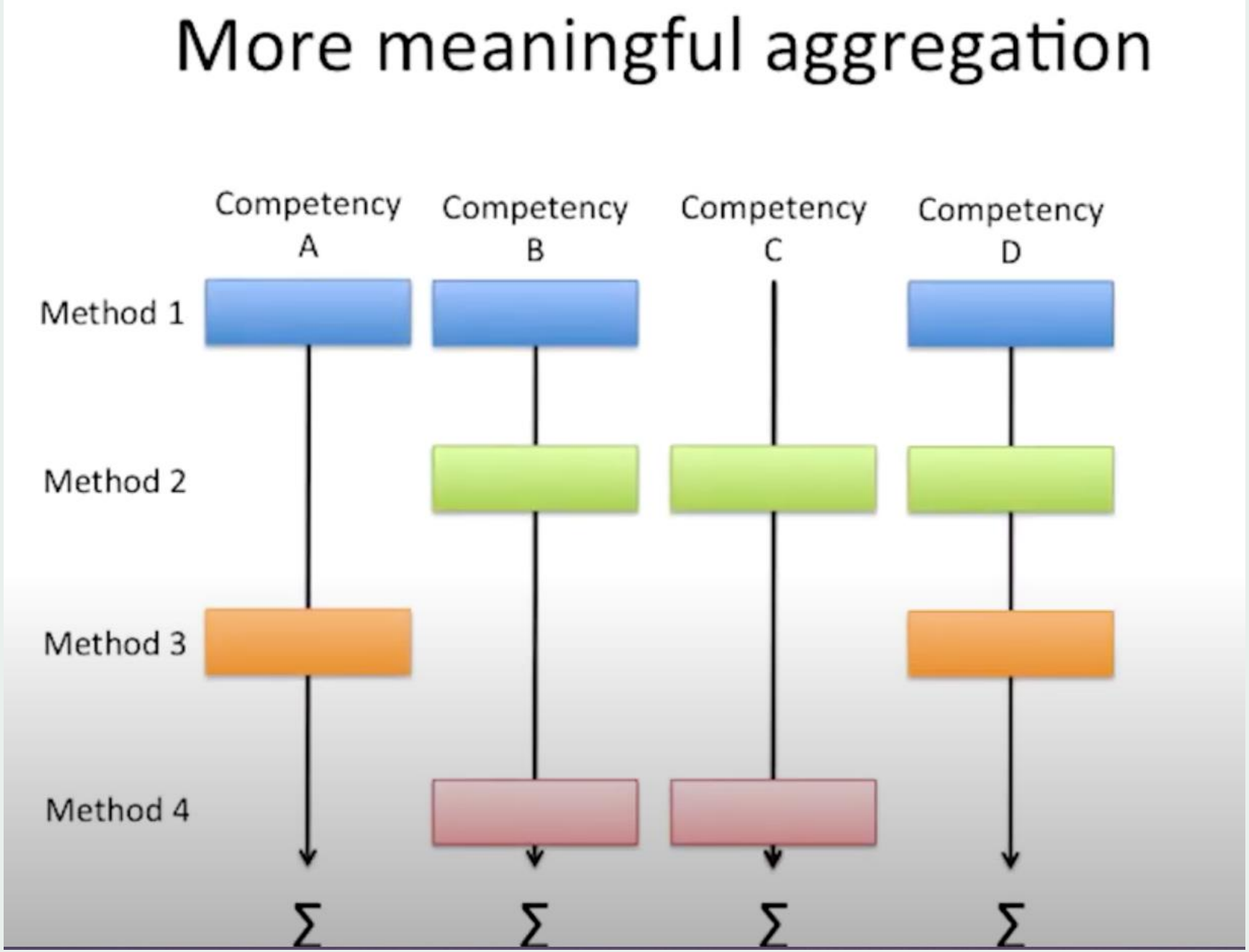


Classical approach to aggregation



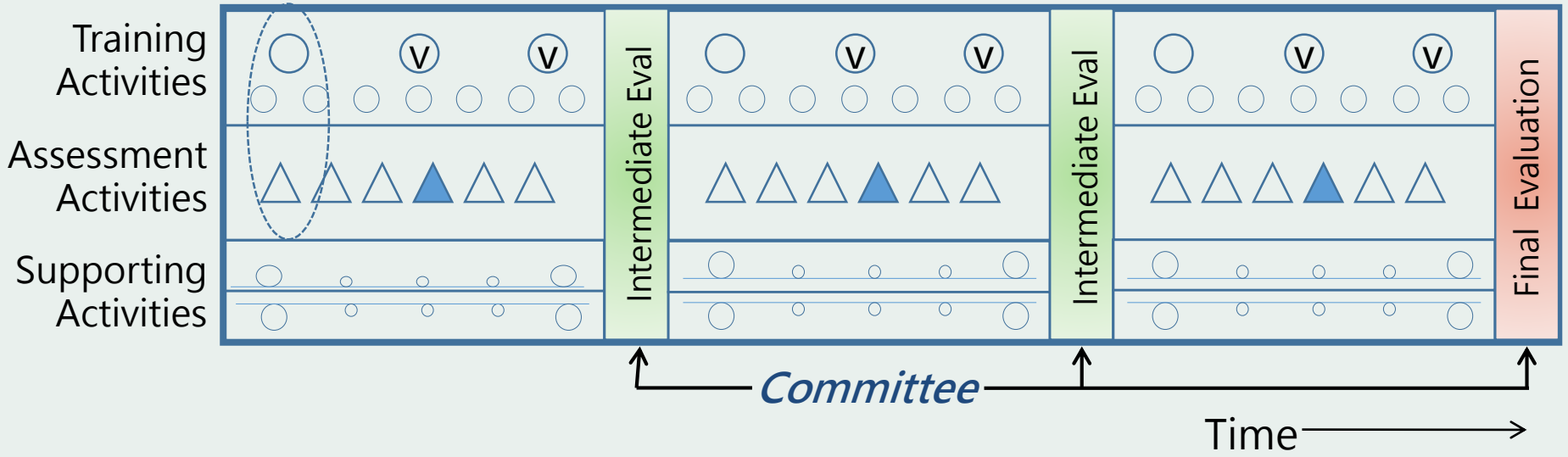
RACP Programmatic assessment forum- Professor Cees van der Vleuten
https://www.youtube.com/watch?v=Ja4RqxSKoaY&ab_channel=RACP

More meaningful aggregation



RACP Programmatic assessment forum- Professor Cees van der Vleuten
https://www.youtube.com/watch?v=Ja4RqxSKoaY&ab_channel=RACP

Model For Programmatic Assessment
(With permission from CPM van der Vleuten)



= learning task
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Assessment Mapping

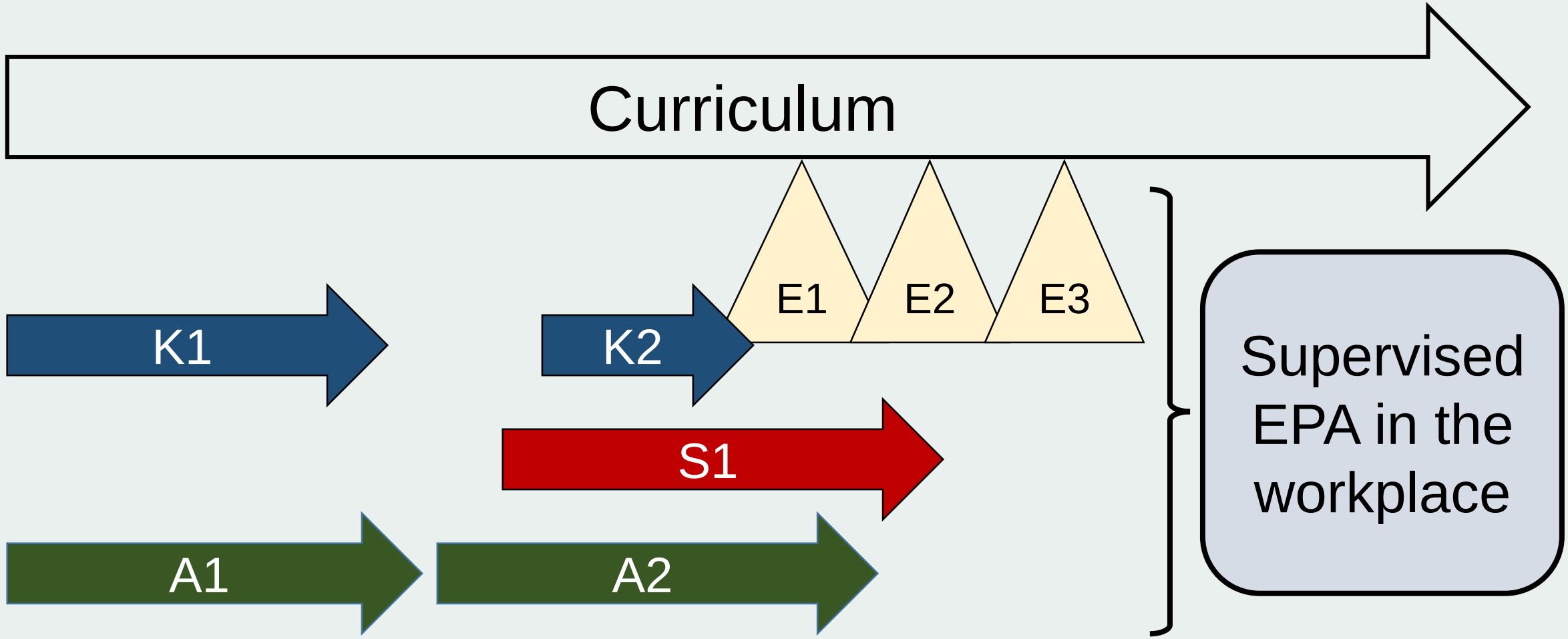
Mapping your program of assessment across the curriculum is essential, and will help to:

- Identify curricular and assessment gaps
- Linked to the competencies and milestones
- Promote efficiencies in assessment
- Help with faculty buy-in (i.e. assess what makes sense for the objectives and purpose of a curricular experience)

Milestone map

Milestones	Teaching Methods	Major Rotation/ Learning Experiences (Goals)	Assessment Methods & Tools (e.g.)							Questions, Reflections and Issues in Assessment for this Competency
			Direct Obs. Tools	Faculty Evals (Global Assmt)	Clinical Reasoning Assess (CSR)	Medical Record Audit and/or Review	Multisource Feedback (i.e. 360)	Simulation	Other	
Patient Care										
PC___										
PC___										
PC___										

KSAE – building curriculum that prepares learners to perform



CMUH EPA-based curriculum map

EPAs title					
Tasks specification					
KASEs	請貼上此EPA的KASEs並分項標列，建議K可以獨立，AS可以考慮合併，E可以分項(會有K1...，AS...，E...，可參考急診醫學會EPA KASEs之寫法)				
Program	Items	Activities and Contents	K	A	S
	Core curriculum (核心課程請於該教學後面註記對應之K或AS)	1.E-learning 自主學習3支影片	K1、K2		
		2.VAD護理評估影片教學(AS1)		A1	S1
		3.VAD護理評估示範演練工作坊(AS1、AS2)		A1、A2	S1、S2
	Clinical curriculum (臨床課程請於該訓練後面標記對應之E或AS)	1.床邊帶教(AS1、AS2、AS3為主、K1、K2為輔)		A3	S3
	Substantial learning experience	先備： 訓練中：			
	Assessments plan	1 . 影片後線上選擇題測驗(K1、K2)			
		2. DOPS(AS1、AS2)			
		3. Ad hoc EPA即時評量(AS1、AS2、AS3為主、K1、K2為輔)			

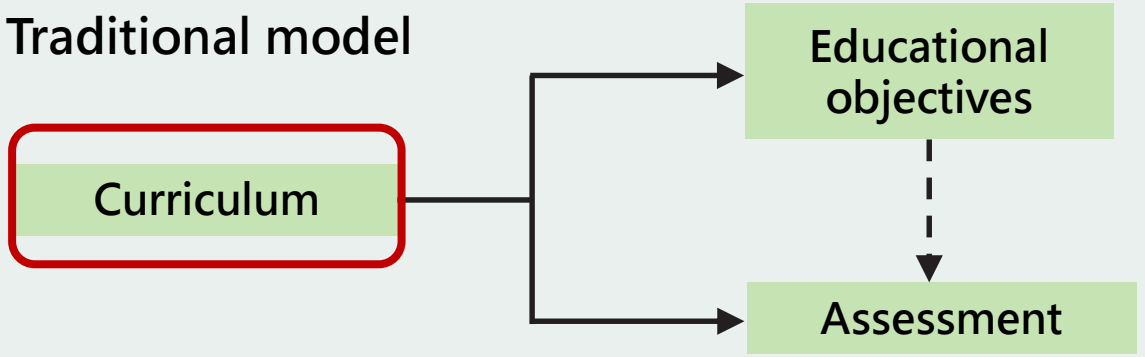
Example (draft under revision)

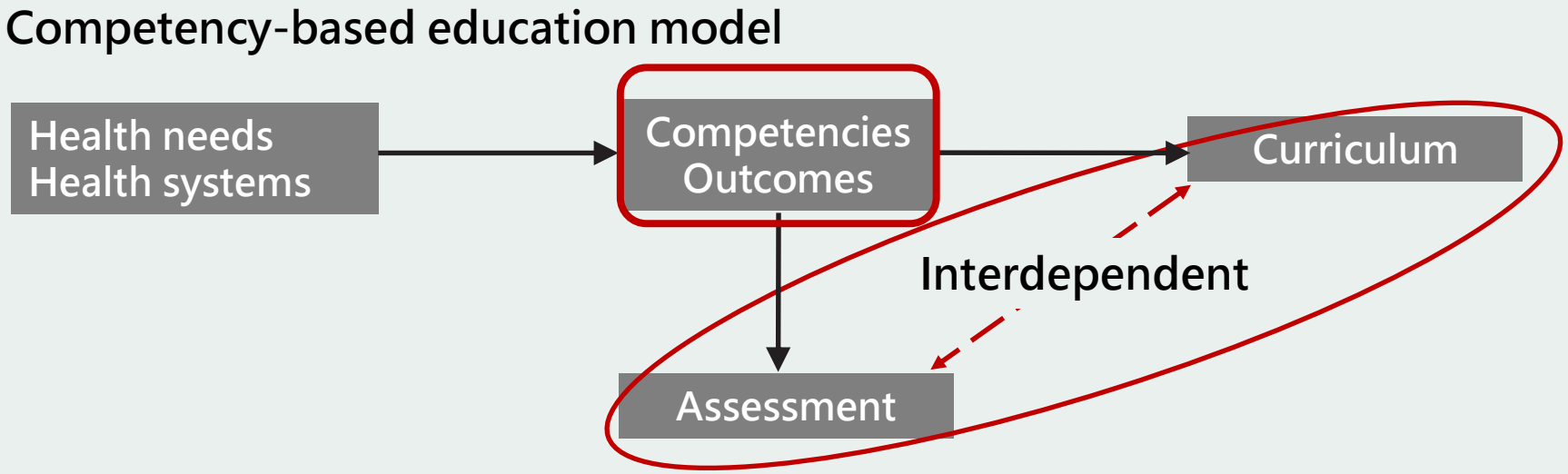
EPAs標題	血液抹片檢驗服務
任務描述	(1)檢視白血球數目並對正常及異常白血球計進行分類計數 (2)觀察紅血球大小分布、染色性，檢視是否有異常紅血球形態及紅血球包含體 (3)觀察血小板是否有聚集形成、血小板大小及顆粒分布 (4)預警通知醫師重大異常發現
KASEs	K1.檢體採集和保存 - 知道血液抹片應使用哪種抗凝劑，以及採檢完需盡快完成抹片製作。 K2.基礎血液學 - 了解血液疾病、CBC報告及血球形態之間的關聯性。 K3.正常血球形態判讀 - 要熟悉正常5大類白血球形態以及正常紅血球、血小板形態。 S1.異常白血球形態判讀 S2.異常紅血球(含形態及包含體)及血小板判讀 S3.血液抹片製作 - 要會手工推片及使用Liu’ s stain染出合格的抹片。 S4.能與醫師溝通病人檢驗報告相關問題 - 異常血球形態對各科醫師都有不同代表意義，遇到需與臨床溝通的狀況時學員要能清楚表達所看到的異常形態。 A1.懂得利用現有書籍及圖譜提升血球形態判讀能力。發現問題、自我問題解決 A2.發現無法判讀的血球時懂得尋求資深同仁協助。 E1.通過血液分析儀操作能力授權。 E2.通過自動閱片機操作授權。

學習課程地圖

	項目	內容	K	A	S
訓練計畫	核心課程 (核心課程請於該教學後面註記對應之K或AS)	1.簡報授課2堂	K1、K2		
		2.E-learning 自主學習3份簡報	K3	A1	S1、S2、S3
	臨床課程 (臨床課程請於該訓練後面標記對應之E或AS)	1.實際操作(S1、S2為主，A1、A2為輔)		A1、A2	S1、S2
		2.案例分析		A1	S1、S2、S4
	重要的學習體驗	先備：通過血液分析儀操作能力授權。 訓練中：自動閱片機操作授權			
	評量方法	1 .筆試：以外部能力試驗考試圖片為主設計考題評估學員是否熟悉血球細胞形態。	K3		S1、S2
		2.職場直接觀察評估(short-practice observation)：針對學員在職場上某一次(或某一班)任務執行的實際表現進行觀察與評估，以DOPS進行評估。	K3		S1、S2、S3
		3.盲測：隨機抽取10片病人檢體，評估學員與老師之間的相關性。	K3		S1、S2
		4.血液案例討論：請學員以1個實際案例透過血球形態與其他檢驗結果呈現一份案例討論報告。	K2、K3	A1、A2	S1、S2、S3、S4

Start with System Needs



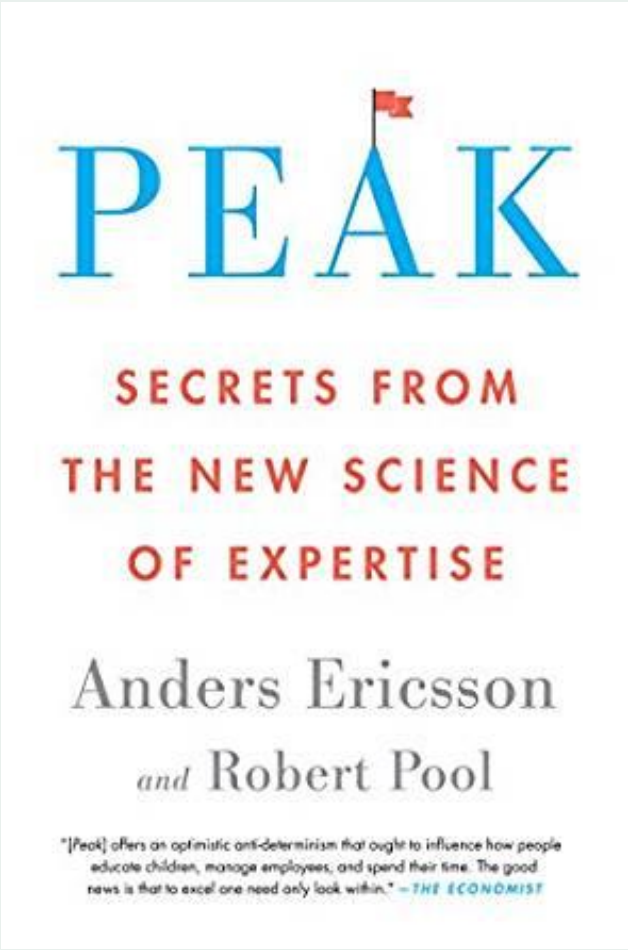


ACGME

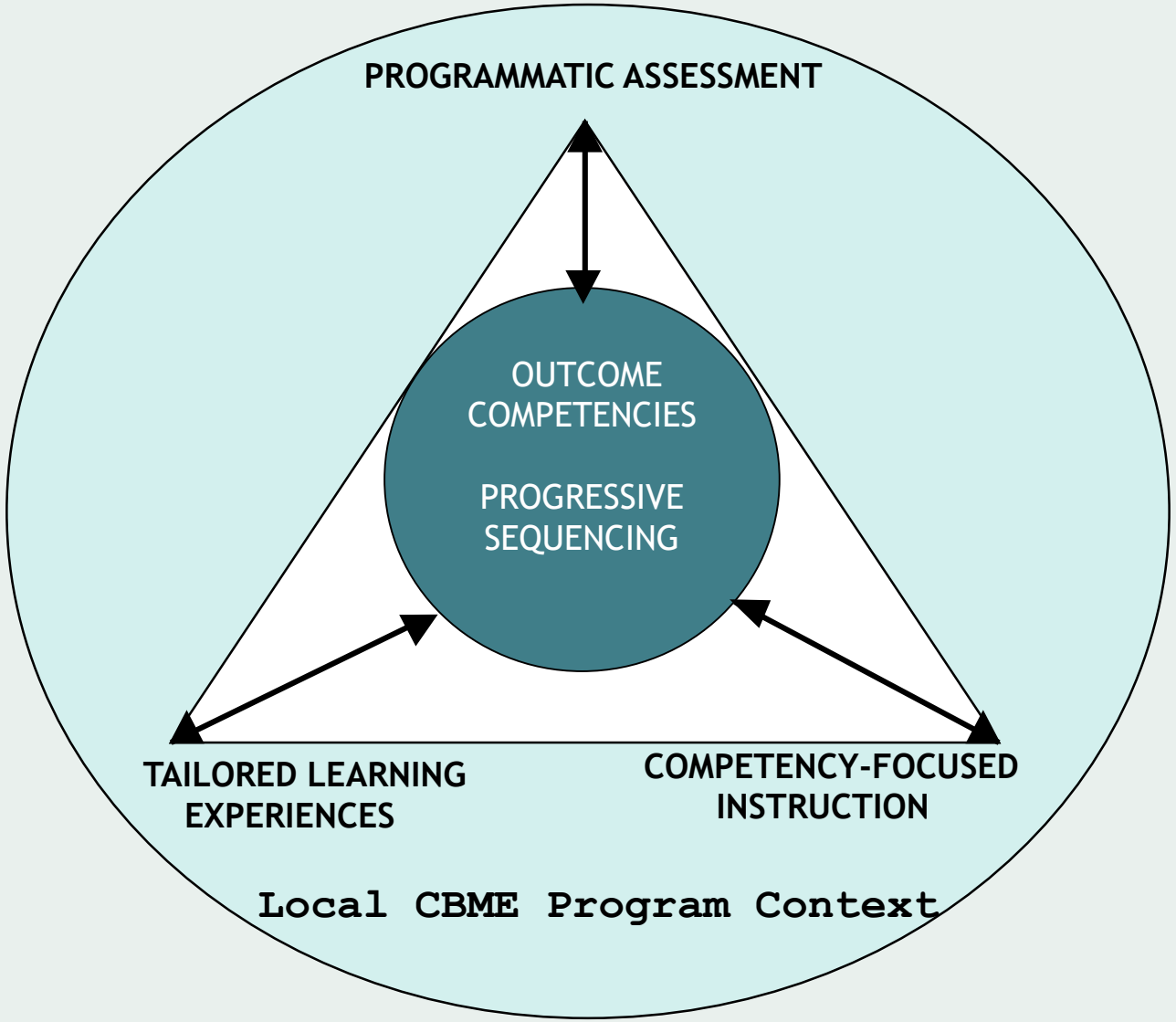
Frenk J, et al. Health professionals for a new century: transforming education to strengthen health systems in an interdependent world. Lancet. 2010

Deliberate Practice

- Requires a field that is reasonably well developed. Clear mental representations of the tasks of the field are essential.
- Requires a teacher who can provide practice activities that can help learners improve their performance.

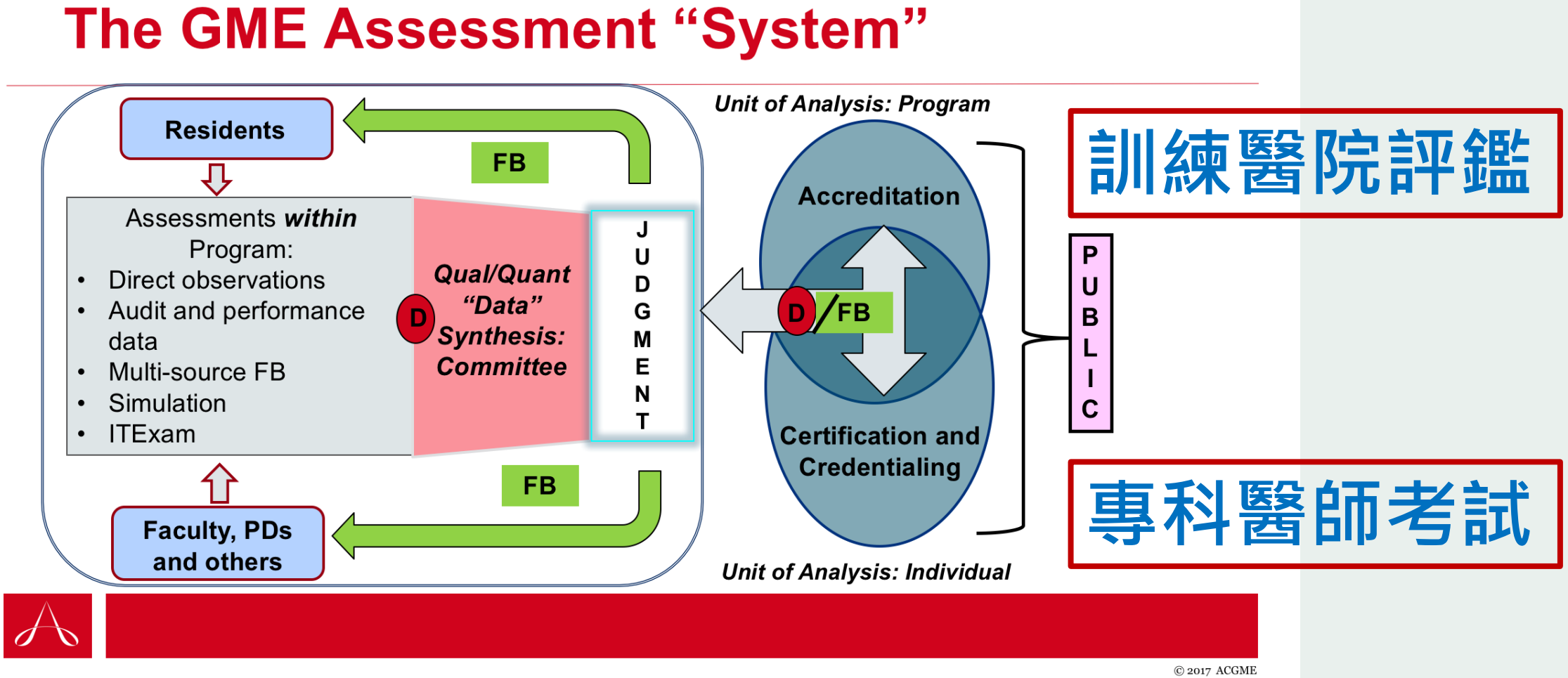


CBME Requires an Integrated Approach



美國ACGME評量系統

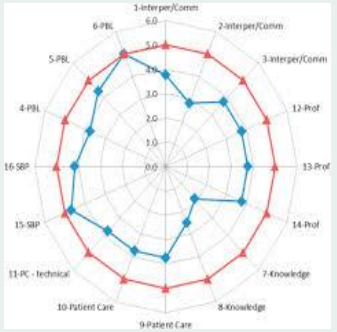
臨床能力委員會Clinical Competency Committees, 簡稱CCC



What is a Clinical Competency Committee (CCC)?

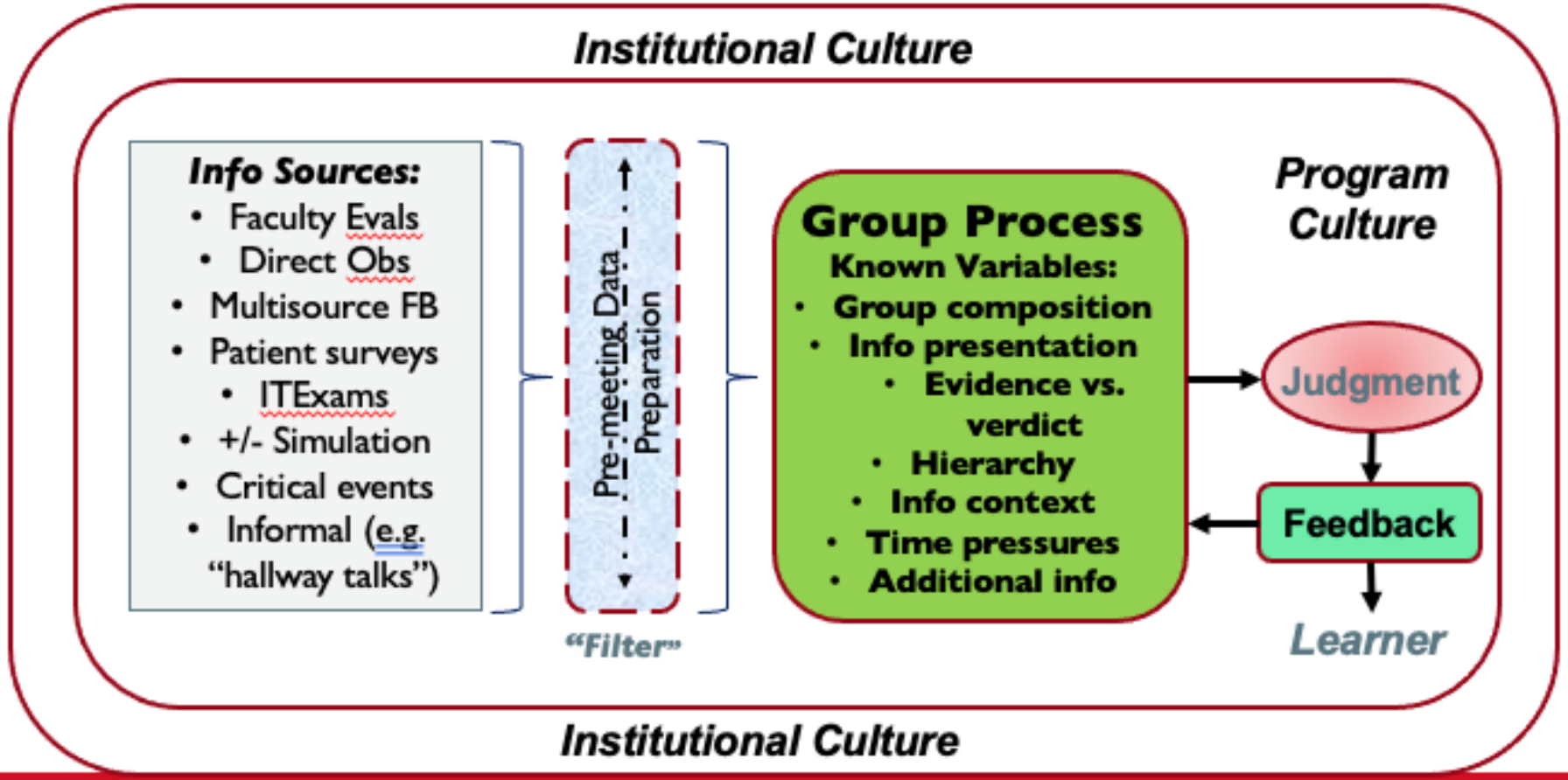
“A CCC is a required body comprising three or more members of the active teaching faculty who is advisory to the program director and reviews the progress of all residents in the program.”

(ACGME Glossary of Terms 7/1/2013)

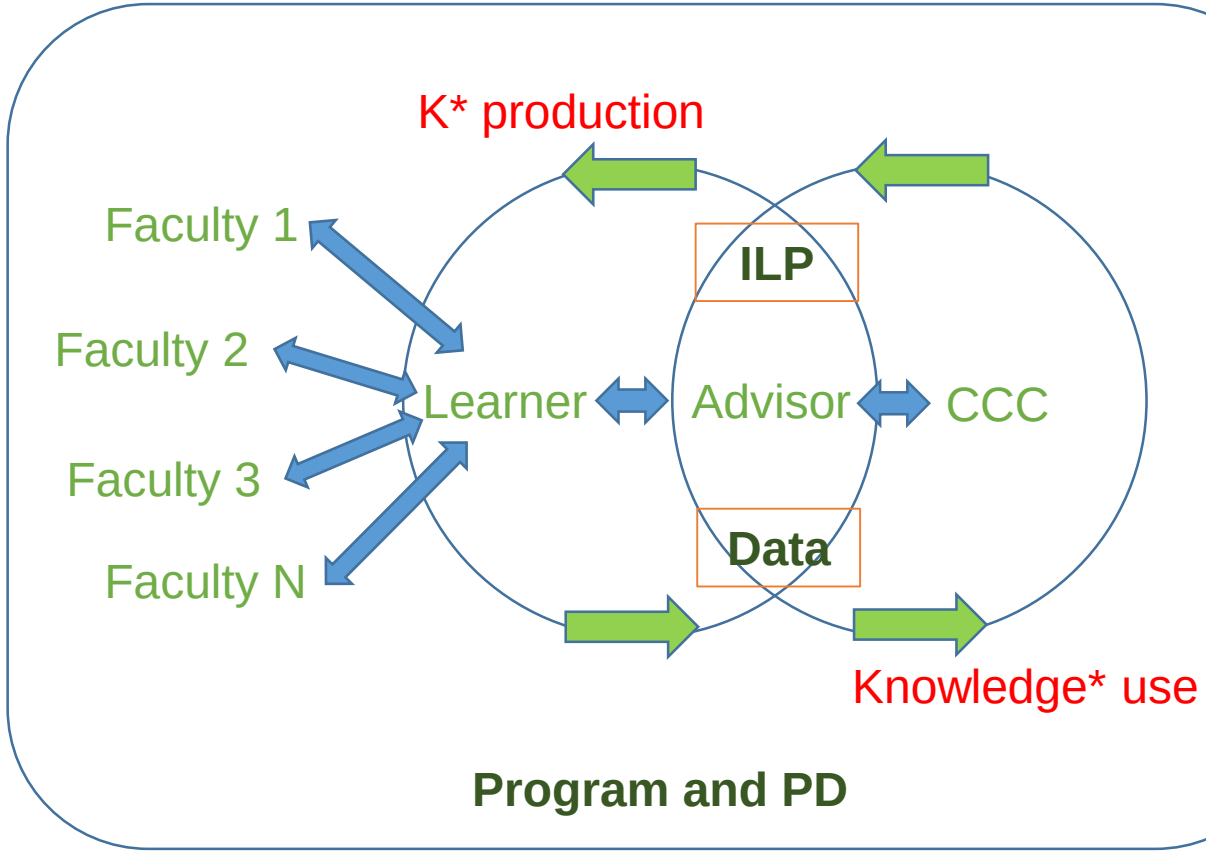


(Googleimages.com)

CCC Inputs and "Basic" Process



Resident, Advisors & CCCs



Advisors can serve as knowledge brokers between two communities who may not interact or communicate directly

ILP = Individualized learning plan

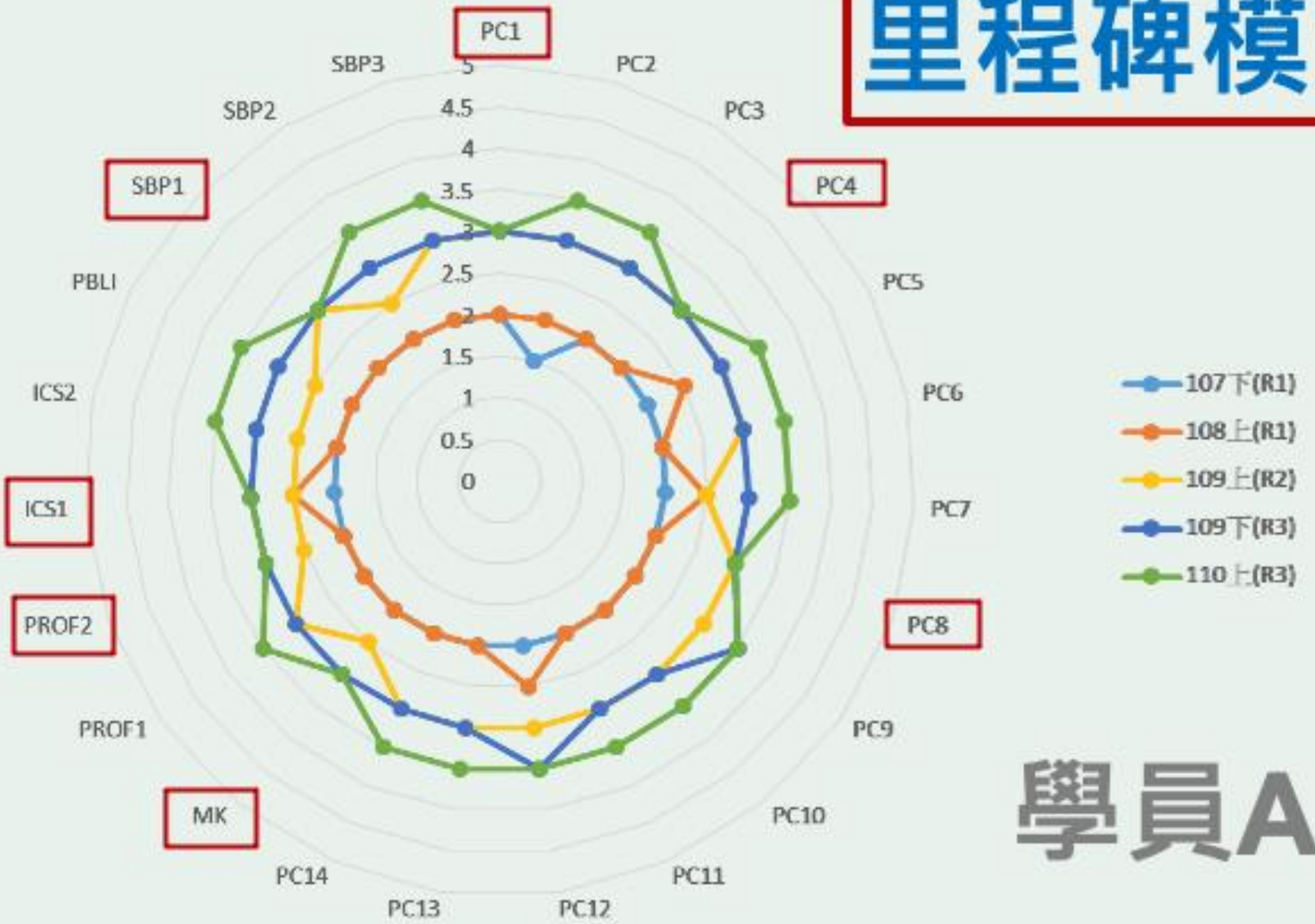
Adapted from Dr. Jessica Rich; Presented at CBME18 Meeting in Basel, Switzerland

Example

1. Patient Care 1(PC1). 緊急穩定處置 (Emergency Stabilization)

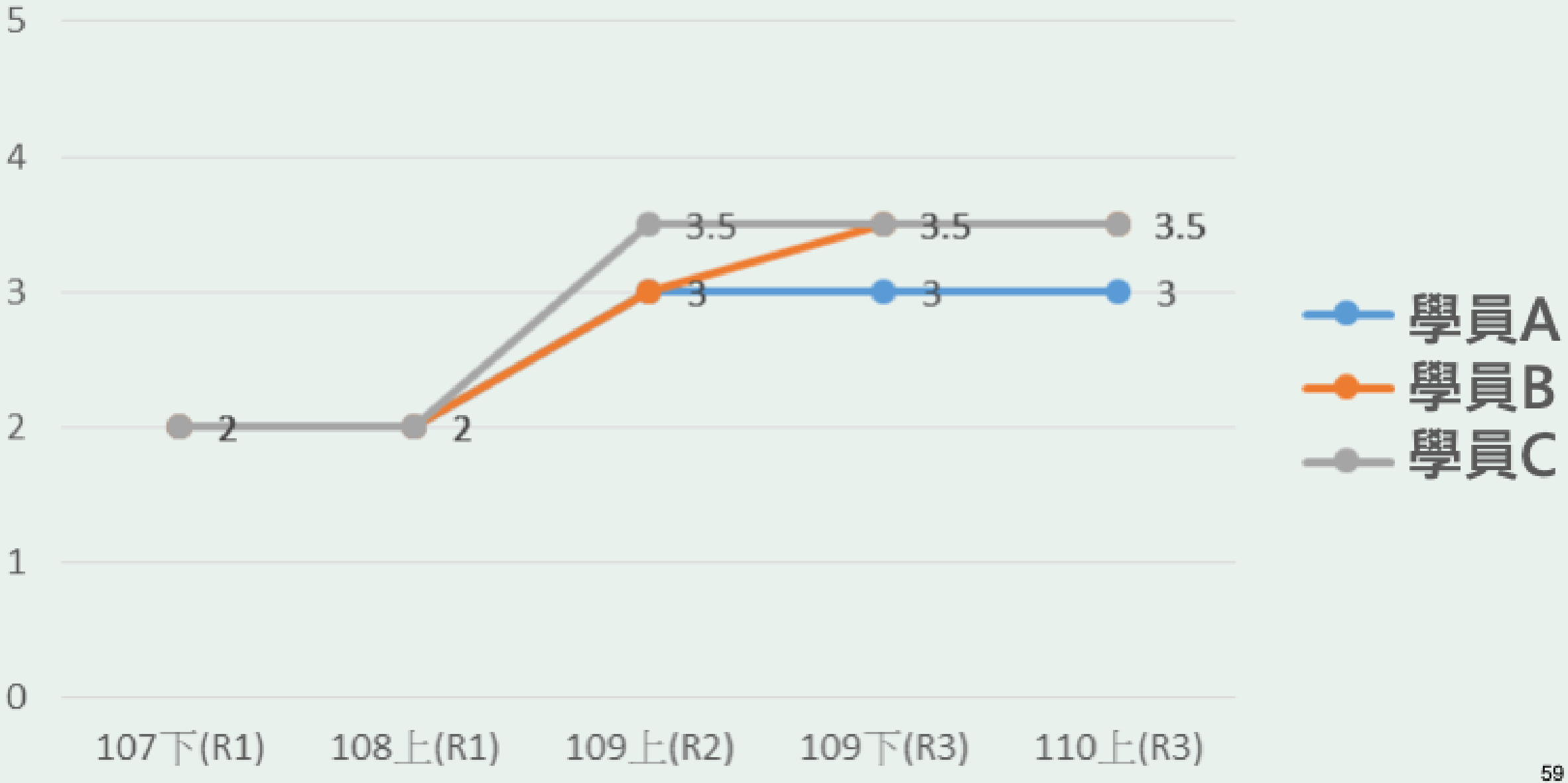
急救危急病人時，按優先次序進行初步穩定措施，並且整合運用醫院之支援服務，且在執行急救後再度評估。					
Has not Achieved Level 1	**Level 1**	**Level 2**	**Level 3**	**Level 4**	**Level 5**
	1. 辨識異常生命徵象。	2. 辨識病人的狀態是不穩定、需立即處理的。 3. 執行危急病人的初級評估(primary assessment)。 4. 辨別相關數據資料以形成初步診斷(diagnostic impression)和治療計畫。 5. 急救時判斷病人是否有預立不施行心肺復甦術(DNR)。	6. 處理及辨別危急病人的輕重緩急優先順序。 7. 急救危急病人時，優先進行關鍵的初步穩定措施。 8. 執行急救後，再次評估病況。 9. 評估 DNR 醫囑是否能有效適用於該次急救情境。	10. 當進一步的臨床處置沒有效益時能夠即時察覺。 11. 在困難的急救情境，能整合運用院內外相關支援資源。	12. 發展危急病人處置及轉送之策略與流程。
☐	☐	☐	☐	☐	☐
建　議：Case observation direct evaluation CODE/ case-based milestone direct observation/ simulation					

里程碑模式


PC1
PC2
PC3
PC4
PC5
PC6
PC7
PC8
PC9
PC10
PC11
PC12
PC13
PC14
MK
PROF1
PROF2
ICS1
ICS2
PBLI
SBP1
SBP2
SBP3
5
4.5
4
3.5
2.5
2
1.5
1
0.5
0
107下(R1)
108上(R1)
109上(R2)
109下(R3)
110上(R3)

學員A

PC1 緊急穩定處置


5
4
3
2
1
0
3.5
3.5
3.5
3
3
3
2
2
107下(R1)
108上(R1)
109上(R2)
109下(R3)
110上(R3)
學員A
學員B
學員C

EPA 5 急性胸痛病人處置

1.標題: 急性胸痛病人處置				
2.任務描述				
對急性胸痛病人： 1. 辨識高危險胸痛類型 2. 進行焦點式診察 3. 依鑑別診斷給予適當緊急治療與檢查及判斷動向 4. 妥善利用系統資源執行對應流程 5. 應用最新實證資料來照護病人	限制：無 完成訓練必需(不限於)觀察之臨床情境： 1.急性心肌梗塞 2.主動脈剝離 3.肺栓塞 4.氣胸			
3.任務失敗時可能造成的風險				
1.遺漏可避免的死亡及重要器官功能惡化 2.造成不必要的留觀與檢查等醫療資源浪費 3.醫療糾紛與訴訟的壓力				
4.對應之核心能力				
Patient Care PC1 緊急穩定處置 PC2 焦點式病史詢問及身體診察 PC3 診斷性檢查及檢驗 PC4 診斷 PC5 藥物治療 PC 7 照護轉移 PC 9操作型技能一般原則	Medical Knowledge MK 醫學知識	Interpersonal & Communication Skills ICS2 團隊管理	Practice-based learning and improvement PBLI 從工作中成長	System-based Practice SBP1 病人安全

EPA模式

信賴： Direct supervision

原因： 無法辨識高危險胸痛類型

無法進行焦點式診察

分析：

PC1 緊急穩定處置

PC2 焦點式病史詢問及身體診察

MK 醫學知識

EPA 5 對應的milestones

EPA 5急性胸痛病人處置	
次核心能力	里程碑描述
PC1緊急穩定處置	6.處理及辨別危急病人的輕重緩急優先順序。 7.急救危急病人時，優先進行關鍵的初步穩定措施。 11.在困難的急救情境，能整合運用院內外相關支援資源。
PC2焦點式病史詢問及身體診察	15.在急診受限或快速變動的情境下，優先獲取病史中必要之部分。 16. 在急診受限或快速變動的情境下，優先執行身體診察中必要之部分。 17.利用所有可能的訊息來源，整合出正確處理病人所需的必要資訊。
PC3診斷性檢查及檢驗	25.同時考慮疾病的發生機率，與檢查及檢驗結果影響醫療處置的可能性，來安排檢查及檢驗。 26.安排符合成本效益的診斷檢查。 27.了解偽陰性和偽陽性對檢查結果的影響(post-test probability)。
PC4診斷	35.善用現有資訊，縮小範圍、並衡量機率及後果嚴重度，來排序可能的鑑別診斷，並決定適當處置。

給建議的依據

要如何做好?

5|評估進展所需相關資訊

1. 筆試(knowledge test)：針對任務內涵設計具有效度之筆試，以確認執行「到院前心跳停止病人處置」之先備知識，題目設計應以理解、分析、判斷、應用之題型為主，以提升對「到院前心跳停止病人處置」評估之效度。
2. 情境模擬(simulation)：針對項目二任務描述設計具有效度之情境模擬測驗，測驗學員「情境下能力」。
3. 個案討論(case-based discussion)：測驗「到院前心跳停止病人處置」相關之臨床思維、推理判斷、處置邏輯、態度等能力，推薦的工具有CbD、EbD。
4. 職場直接觀察評估(short-practice observation)：針對學員在職場上某一次(或某一班)任務執行的實際表現進行觀察與評估，推薦的工具有ad-hoc EPA-based assessment、DOPS、shift-based milestone assessment、mini-CEX等。
5. 職場長期觀察評估(long-practice observation)：針對學員在職場上一段期間的實際表現進行觀察與評估，此觀察能避免職場短時間直接觀察評估的「霍桑效應(Hawthorne effect)」，並建議能夠透過「多源評估(multi-source feedback)」蒐集來自同儕、同仁、或病人的回饋以確認學員在當責、溝通、團隊合作、抗壓性等方面的表現。
6. 照護成果紀錄 (product evaluation)：病歷紀錄，學習歷程的紀錄，包含量性(例如:案例數、操作次數)與質性(學習自評、心得、反思)的內容，可做為學習經驗累積的參考，以及自我學習能力的展現，推薦的工具有ACLS證照、case log，case-report，死亡診斷書或司法相驗通報單。

CCCs Perceptions of their Role

Reviewing Residents' Competence: A Qualitative Study of the Role of Clinical Competency Committees in Performance Assessment

Karen E. Hauer, MD, Benjamin Chesluk, PhD, William Iobst, MD, Eric Holmboe, MD, Robert B. Baron, MD, Christy K. Boscardin, PhD, Olle ten Cate, PhD, and Patricia S. O'Sullivan, EdD

"Problem Identification" vs. "Developmental"

Hauer et al, Acad Med 2015

Key Players in the CCC

(Googleimages.com)

Program Director (PD)

- Appoints CCC members
- No strict rules about PD membership in the CCC
- *(except in anesthesiology- cannot be CCC chair)*
- If present at CCC meetings:
- Should ensure others voice their opinions
- Give members a chance to rate the trainees (on their own)
- Final arbiter of milestones ratings
- Reports ratings to ACGME semi-annually

Andolsek et al, ACGME CCC Guidebook

CCC Chairperson

- Who? (restrictions?)
- Expertise
- Develop a shared mental model for the group
- Understand best practices (group dynamics)
- Work with program coordinator
- e.g. schedule/document meetings

Andolsek et al, ACGME CCC Guidebook

French et al, J Surg Educ 2014

CCC members

- Understand the assessment process, milestones framework etc.
- Commit to faculty development
- Voice opinions
- Professional/ethical behavior

French et al, J Surg Educ 2014

Program Coordinators

- Not CCC members, *but* they play a huge role e.g.
- Data organization
- Schedule CCC meetings
- Provide multi-source feedback
- (professionalism/communication skills)
- Attending the meetings
- Take minutes
- Provide feedback about group dynamics

Andolsek et al, ACGME CCC Guidebook

Chief Residents

- Can be members *but*…
- Must be board eligible
- Must have completed their residency training

Andolsek et al, ACGME CCC Guidebook

CCC Membership- per ACGME

✓

- PD appoints members
- Other faculty or health professionals

("extensive contact & experience with programs' residents…")

- Chief residents – ***if…***

Completed training
Board eligible

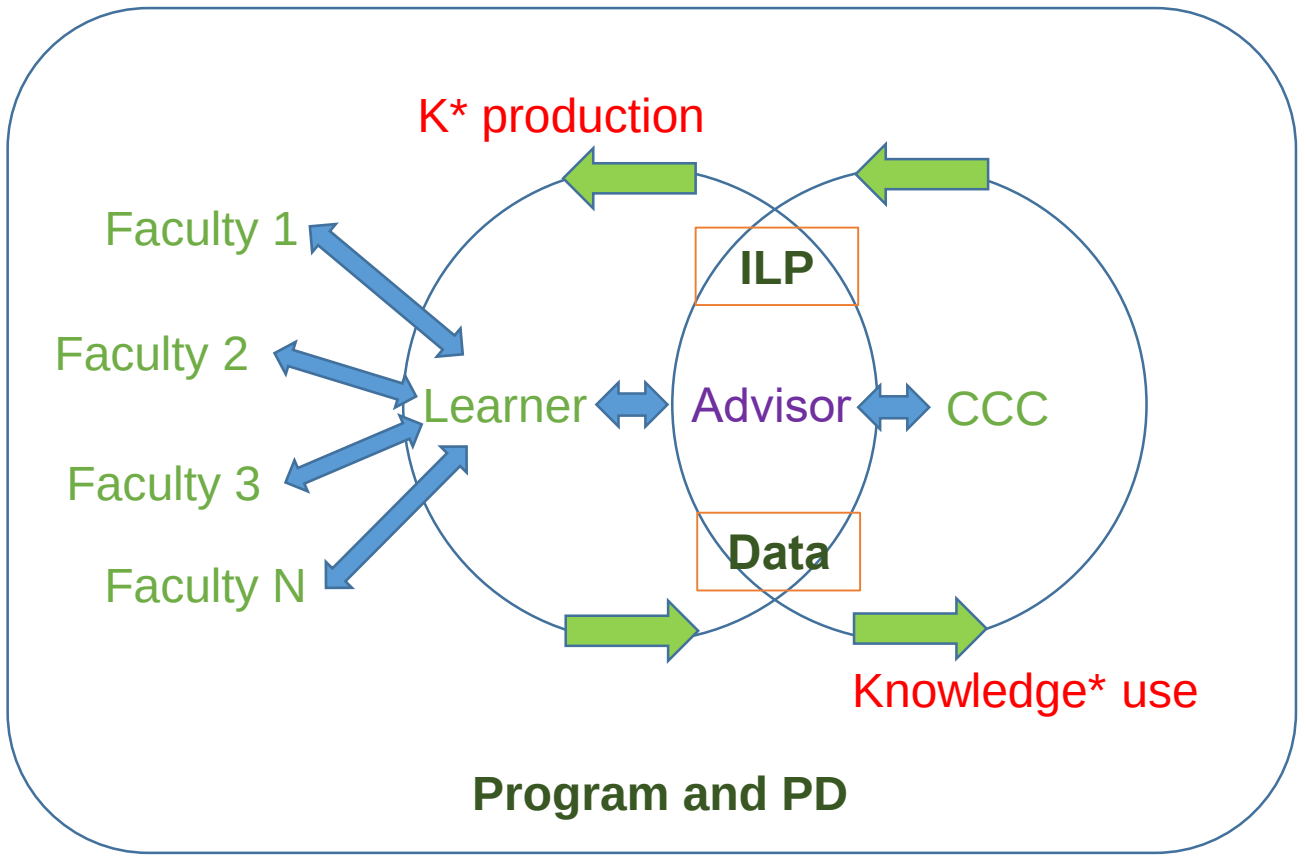
✗

- Residents
- Program coordinators- *BUT, they play a huge role*
- ? Advisors/Mentors

(Avoid conflict of being an advocate and a judge)

http://www.acgme.org/Portals/0/PFAssets/ProgramRequirements/140_internal_medicine_2016.pdf

Advisors



Advisors can serve as knowledge brokers between two communities who may not interact or communicate directly

ILP = Individualized learning plan

Adapted from Dr. Jessica Rich; Presented at CBME18 Meeting in Basel, Switzerland

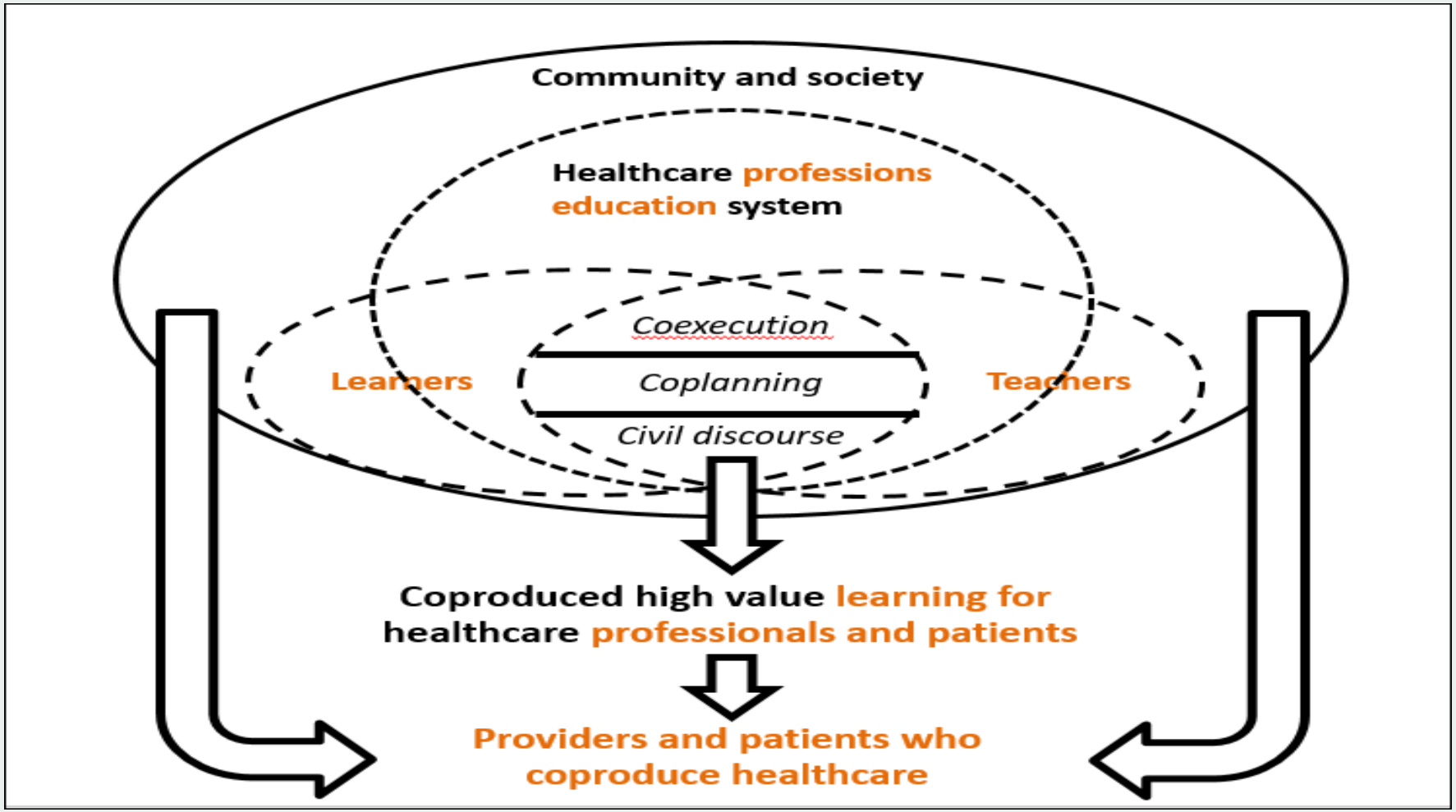
Trainees

- Not CCC members, *but* they should be part of the process

- How?
- Awareness of the CCC
- Self-assessment
- Learning plans
- Provide their opinions about their learning and assessment
- Role in curriculum/assessment

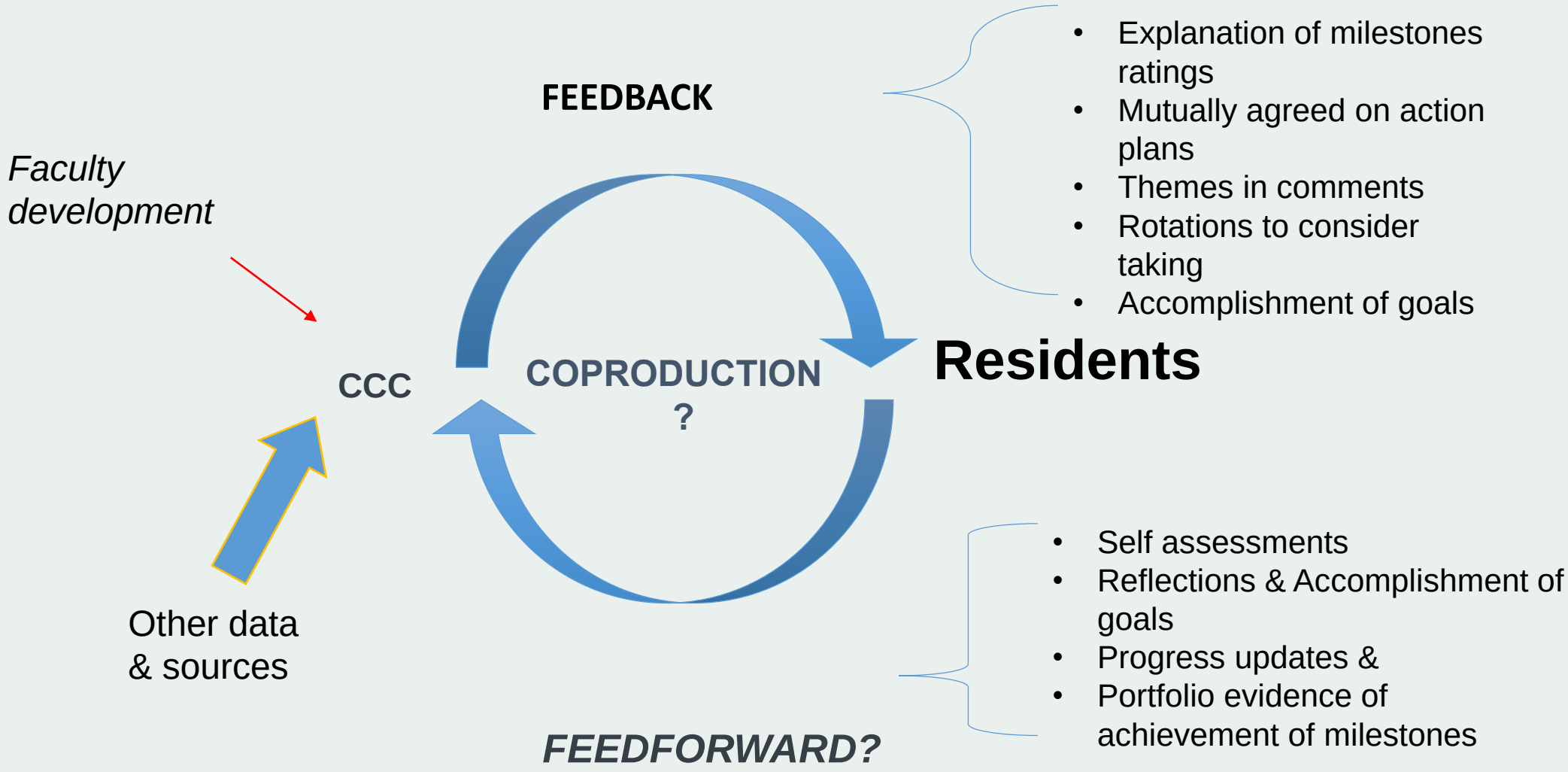
(Googleimages.com)

“Coproduction”



Batalden et al. BMJ Qual Saf 2016

Learner Engagement



CCC Group Composition- Hauer et al, JGME 2016

"Membership"

- ✓Importance of varied perspectives?
- ✓Expertise?
- ✓Enthusiasm/motivation?
- ✓Change in membership over time?
- ✓Physician/other allied professionals

DIVERSITY

"Group size"

Big enough for robust discussion

BUT

Avoid becoming unwieldy

(*Minimum- 3, ideally 5-10)*

CCC Group Process- Hauer et al, JGME 2016

- Clear sense of purpose
- Shared mental model
- Develop shared knowledge
- Influence of the leader
- Time pressures
- Avoid “Groupthink”- ”tendency towards harmony”
  - Is participation from all members encouraged?
    - *Be wary of hierarchy!*
    - *Do junior members present their ideas 1st?*
  - Willingness to voice contrary opinions?
  - All ideas explored before making decisions?

Googleimages.com

Biases During CCC: Dickey et al, JGME 2017

Cognitive Demands and Bias: Challenges Facing Clinical Competency Committees

Chandlee C. Dickey, MD
Christopher Thomas, MD
Usama Feroze, MD
Firas Nakshabandi, MD
Barbara Cannon, MD

Biases During CCC: Dickey et al, JGME 2017- *Examples*

“Anchoring”

- Maintaining initial impressions despite change in performance

”Confirmation”

- Only paying attention to data that “confirms” or supports your opinions and disregarding data that does not

“Visceral”

- Making decisions based on emotion instead of on performance data

“Availability”

- More importance placed on recent/first-hand or memorable data

Lessons Learned: Key Ingredients

- ✓Data management system
- ✓Faculty development
  - Program directors/CCC chairpersons
  - CCC faculty members
  - Core faculty
- ✓Learner engagement
- ✓Continuous quality improvement

Secret sauce
is
“Buy- in”

GOALS:

Trainees ready for unsupervised practice
Safe & effective patient care

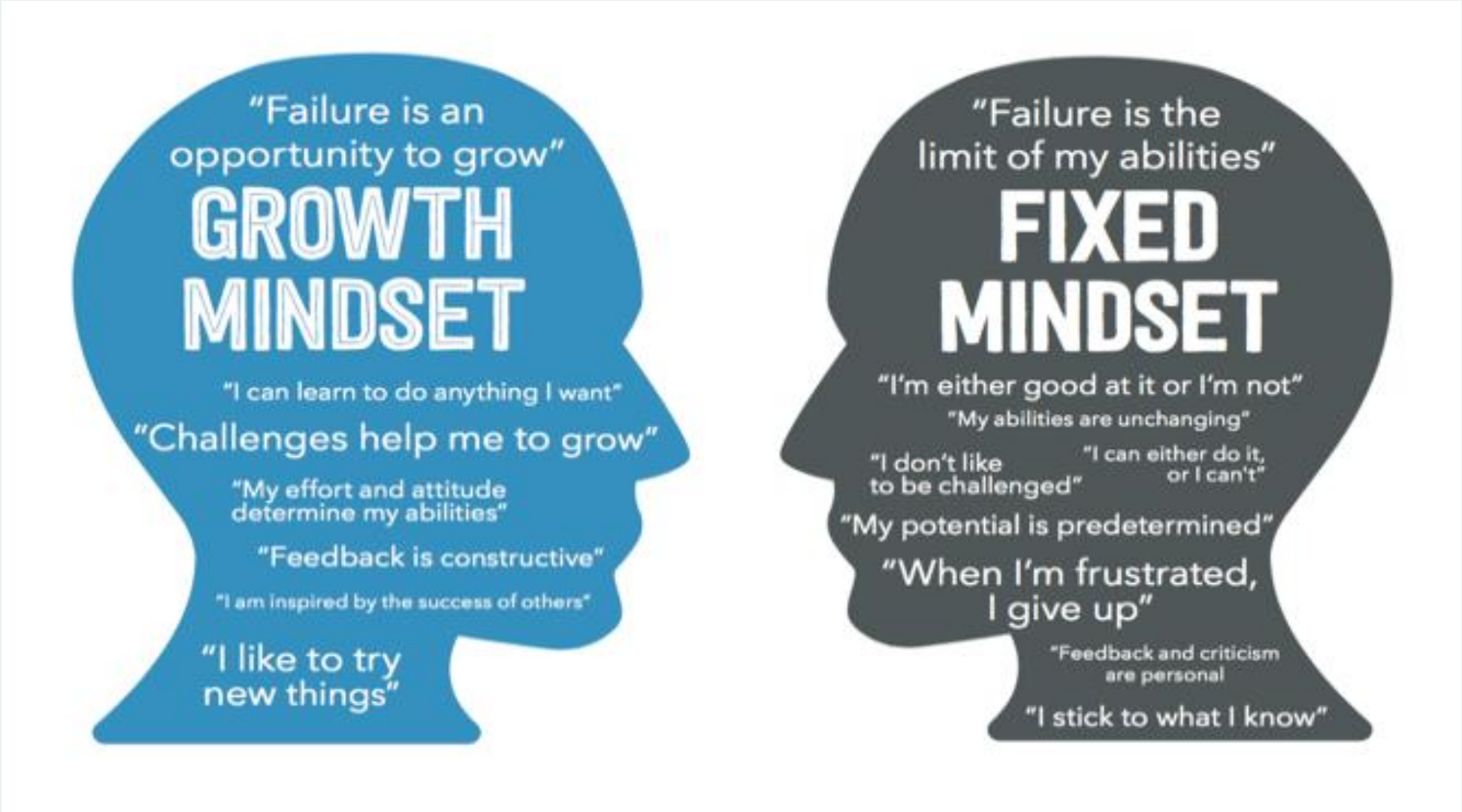
Other Potential CCC Roles

- Remediation
- Faculty development
- Feedback to stakeholders
  - Trainees
  - Program
  - Institution (GMEC)
- Quality improvement of the assessment system

ACGME

Andolsek et al. ACGME CCC Guidebook 3rd ed. 2020

Growth mindset vs. fixed mindset



Carol Dweck: The power of believing that you can improve
https://www.ted.com/talks/carol_dweck_the_power_of_believing_that_you_can_improve


https://www.flickr.com/photos/idisdao/49637632893

https://www.flickr.com/photos/ccm224/3031968786

https://pixabay.com/zh/photos/rock-climbing-extreme-outdoor-403487/

Mindset of assessing

- Pass or fail orientated vs. deliberate practice orientated
- Locus of your professional judgement will follow the frame of reference of the competency being observed or assessed, and the effort will be represented as a sophisticated feedback, not just stock into the result of pass or fail and stop at saying good or bad.

From assessment of learning to assessment for learning.

https://www.gq.com.tw/entertainment/content-38334383554?image=5dbc3664f104b700085c190a

CCC as a key for entering the room of programmatic assessment

UCSF Six Programmatic Principles

1. Centrally coordinated plan for assessment aligns with and supports a curricular vision
2. Multiple assessment tools used longitudinally generate multiple data points
3. Learners require ready access to information-rich feedback to promote reflection and informed self-assessment

UCSF Six Programmatic Principles

4. Coaching is essential to facilitate effective data use for reflection and learning planning
5. The program of assessment fosters self-regulated learning behaviors
6. Expert groups make summative decisions about grades and readiness for advancement

反思

- 無論milestones或EPAs，本質都是專業養成的藍圖，都可以啟發課程規劃與評量設計，其中milestone也能引導教師進行回饋，但本身都不是直接等同於評量工具。整體而言，推行CBME的第一面向，通常需仰賴領域專家團體，例如醫學會，共識規劃能力框架與進展描述。
- 而第二個面向，為培養勝任能力而量身打造的教與學（tailored learning experiences, competency-focused instruction）才是能力導向訓練的核心，這涉及如何進一步把對專業的描述與藍圖轉譯為可行的訓練規劃，真正產出「能力導向的訓練計畫」，第一面向的專業描述是為了產生第二面向的訓練計畫，推行CBME的變革，花了心力創造專業訓練藍圖的milestone或EPAs，卻沒有對應地重新設計訓練計畫，可謂是買櫝還珠，甚為可惜。

反思

- 常常出現一個現象，可能專業學會或機構，發展出milestones 或EPAs後，公佈實行，各訓練計畫便很直觀地於原本的訓練中開始收集milestones或EPAs的評量，沒有改變多少傳統的訓練安排與課程規劃。
- 1. 缺乏第二面向「為能力量身打造的教與學」，第一線師生對能力導向的訓練實質無感，抱怨徒增許多評量的文書作業，而沒感受到教與學的質變。
- 2. 誤解milestones或EPAs為評量工具與評量表單
- 3. 未理解CBME下評量與評估的邏輯與原理，「計畫性與系統性」說明了這是一個整合性的方式來設計評量計畫，目的在於整合學習功能、決策功能、訓練計畫的品保功能於整體的評量計畫中，評量計畫中的每個評量，必須對應於所要達到的學習或課程目標，且每個評量產生的資訊必須對學員具有學習的價值，評量是為了學習而存在（assessment for learning），必須能有意義的回饋給學員

台灣醫學教育學會電子報，2022九月教師心語
周致丞

Conclusions and Recommendations

- Programmatic assessment essential in medical education
- Use a systems-lens when implementing programs of assessment
- Patient outcomes linked to systems performance and professional development
- Group process, when done effectively, can assist in making better decisions about competence and progression
- Co-produce learning and assessment with learners – this will likely require a change in local assessment culture

方向對 慢慢走 快快到

Right Direction,
Walk Steady
Arrive Soon

From Competency-Based

Medical Education

To Competency-Based

Medical Practice

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