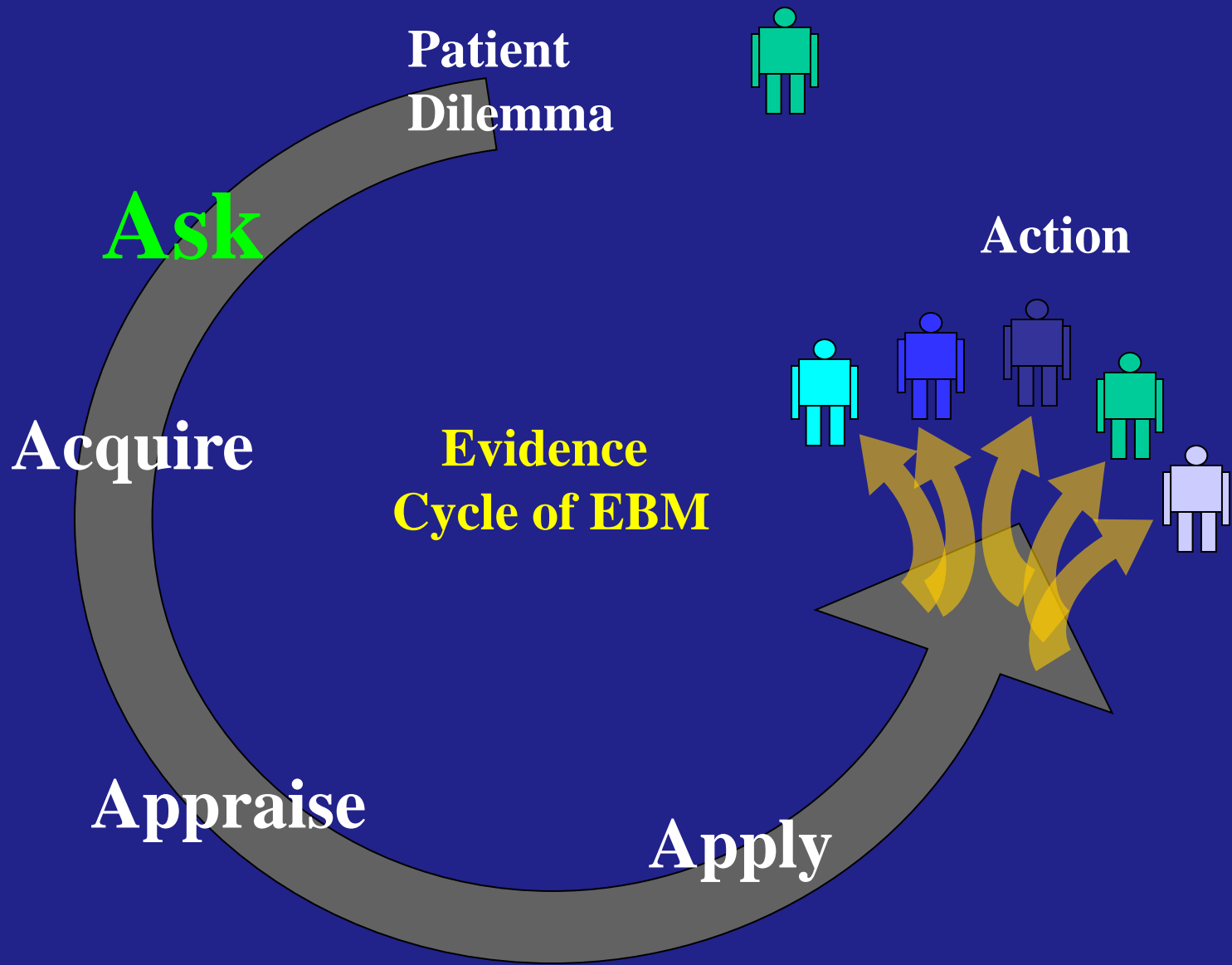


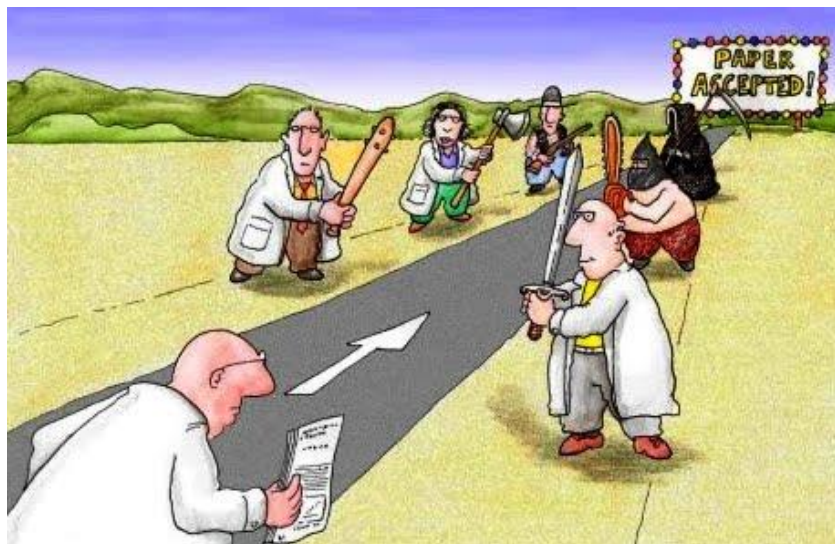
實證醫學的臨床應用

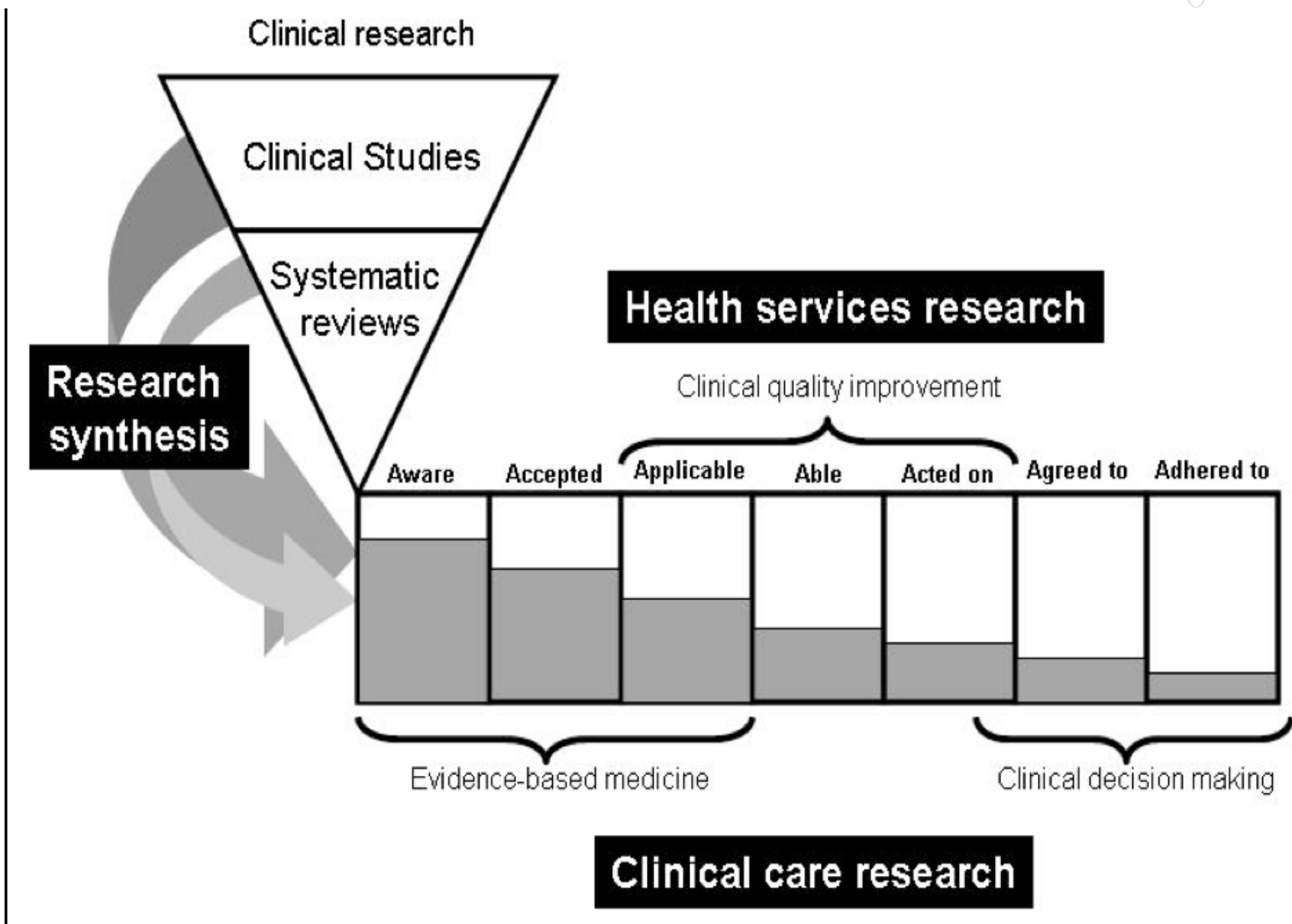
李宜恭醫師

參考何鴻鑿醫師資料



提昇醫療品質





Glasziou and Haynes ACP JC 2005

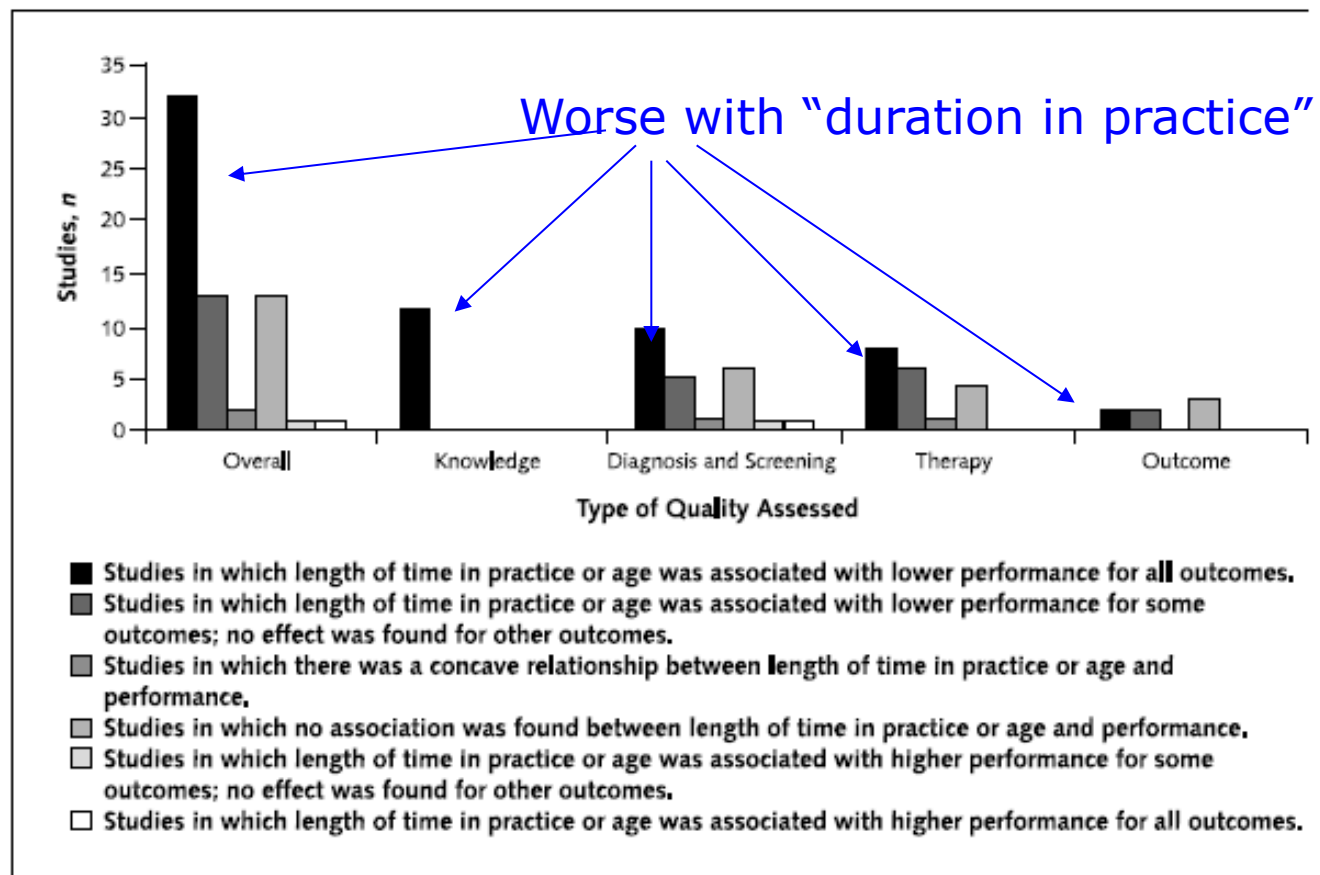
醫師執業之決策依據

- 第一個十年
 - 教科書與文獻
- 第二個十年
 - 臨床經驗
- 第三個十年
 - 習慣

Systematic Review: The Relationship between Clinical Experience and Quality of Health Care

Niteesh K. Choudhry, MD; Robert H. Fletcher, MD, MSc; and Stephen B. Soumerai, ScD

Figure 2. Distribution of study results relating physician age to clinical performance in various domains.



Application of Evidences → EBHC Application

Type	Randomized control trial	Cohort	Diagnostic	Systematic review
Screen	Did the study ask a clearly focused question?	Did the study address a clearly focused issue?	Was there a clear question for the study to address?	Did the review ask a clearly-focused question?
	Was this a randomised controlled trial (RCT) and was it appropriately so?	Did the authors use an appropriate method to answer their question?	Was there a comparison with an appropriate reference standard?	Did the review include the right type of study?
Validity	Were participants appropriately allocated to intervention and control groups?	Was the cohort recruited in an acceptable way?	Did all patients get the diagnostic test and the reference standard?	Did the reviewers try to identify all relevant studies?
	Were participants, staff and study personnel 'blind' to participants' study group?	Was the exposure accurately measured to minimize bias?	Could the results of the test of interest have been influenced by the results of the reference standard?	Did the reviewers assess the quality of the included studies?
	Were all of the participants who entered the trial accounted for at its conclusion?	Was the outcome accurately measured to minimize bias?	Is the disease status of the tested population clearly described?	If the results of the studies have been combined, was it reasonable to do so?
	Were the participants in all groups followed up and data collected in the same way?	A. Have the authors identified all important confounding factors? List the ones you think might be important, that the authors missed. B. Have they taken account of the confounding factors in the design and/or analysis?	Were the methods for performing the test described in sufficient detail?	How are the results presented and what is the main result?
	Did the study have enough participants to minimise the play of chance?	A. Was the follow up of subjects complete enough? B. Was the follow up of subjects long enough?	What are the results?	How precise are these results?
Results	How are the results presented and what is the main result?	What are the results of this study?	How sure are we about these results?	Can the results be applied to the local population?
	How precise are these results?	How precise are the results? How precise is the estimate of the risk?	Can the results be applied to your patients / the population of interest?	Were all important outcomes considered?
Application	Were all important outcomes considered so the results can be applied?	Do you believe the results?	Can the test be applied to your patient or population of interest?	Should policy or practice change as a result of the evidence contained in this review?
			Were all outcomes important to the individual or population considered?	
			What would be the impact of using this test on your patients/population?	

提昇院內心跳停止急救品質

大林慈濟醫院急診科、教學部

李宜恭醫師

拯救生命大作戰~
提升院內急救照護品質

What is(are) your
outcome(s)?

醫院內每天平均發生多少次？

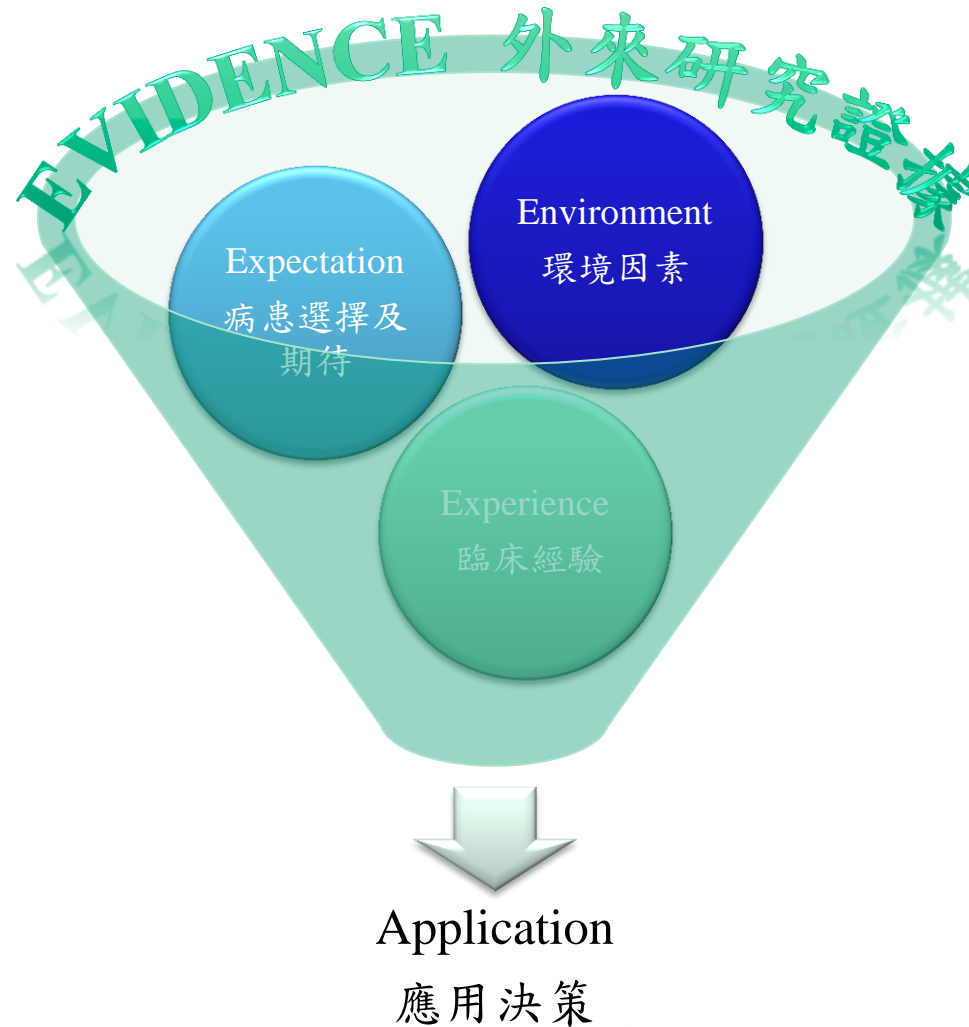
其結果/預後為何？

有改變的可能性嗎？

可能的介入方式？

代價為何？ 大林經驗

EBHC應用前的準備



期待性



可行性

適當性

EBHC應用前的準備

Evidence 研究的證據

- 研究的證據是否能應用在您的臨床案例?
- 研究的證據有無**國內外的差異**?是否能應用在國內類似的病人上?
- 是否考慮到**成本效益**?
- 根據此證據，不同臨床決策會對您要解決的臨床問題**醫療品質產生何種影響**?

Review

Systematic review

Meta-analysis

EBHC應用前的準備

Experience 臨床的經驗

- 研究的證據和我的臨床經驗有衝突嗎？
- 如何依循這些新證據來改變個人或其他醫療人員的診療習慣？

EBHC應用前的準備

Expectation 病患選擇及期待

- 一般病患對這個問題的看法？
- 使用這個證據解決病例病人的問題，病人可能支持或反對的理由？
- 如何以白話(適當語言)對病人解釋證據的意義？

EBHC應用前的準備

Environment 環境因素

- 改變時可能面臨的阻礙是甚麼?在同事間推動這個研究的證據有無困難?
- 針對已發現的障礙，我是否可以找到進行改善的策略呢?
- 如何建構環境，持續這些改變，並且評估改變的效應呢?

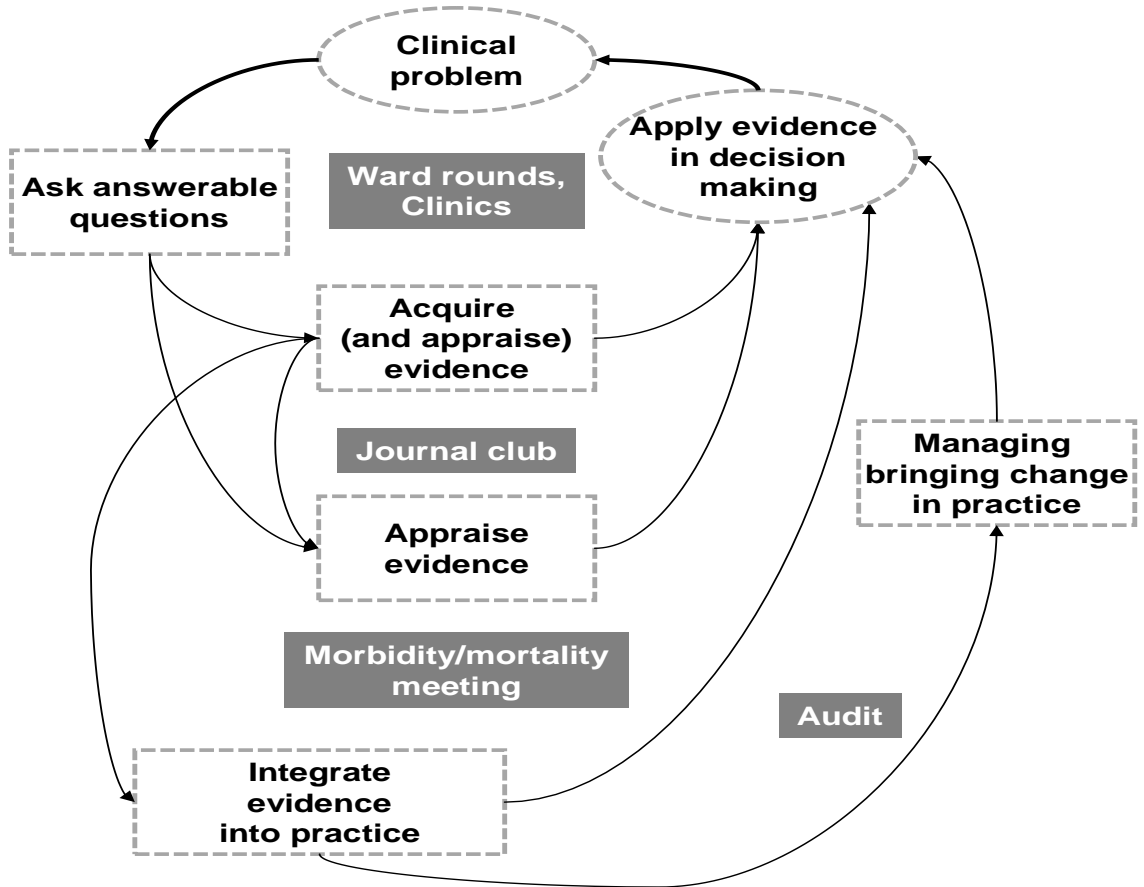
Clinical tools to teach various steps of EBM in different clinical settings

Traditional clinical teaching



Teaching tools: osmosis

EBM teaching and learning opportunities in a clinical setting



Teaching tools: educational prescriptions, assessments, portfolios

臨床應用



單一病患
醫療決策
知情同意書

臨床路徑、標準治療流程

醫療政策共識

Evidence-based Clinical Practice Guideline
實證基礎臨床治療指引

醫療決策Decision-Making : EBM 用於病人照顧

- 醫療決策取決於研究證據與病患個人資訊。
- 未來寄望於研究的進步、更好的實證總結、更方便獲得這些總結、以及更好的實證醫療執行系統。

Craig JC, Irwig LM, Stockler MR. Evidence-based medicine: useful tools for decision making. Med J Aust. 2001 Mar

5;174(5):214-5



醫療政策Policy：以病人為中心的醫療照護

我們致力的醫療照護系統必須是：

- 1) 安全 safe;
- 2) 有療效 effective;
- 3) 病人為中心 patient-centered;
- 4) 及時timely;
- 5) 有效率efficient; and
- 6) 公平合理 equitable.



ACGME 六大核心能力

- 病人照護 (Patient care)
- 醫學知識 (Medical knowledge)
- 從工作中學習及成長 (Practice-based learning and improving)
- 人際及溝通技能 (Interpersonal and communication skills)
- 制度下的臨床工作 (System-based practice)
- 專業素養 (Professionalism)

醫療品質 稱職能力	安全的醫療 SAFE 1	及時的服務 TIMELY 2	有用的處置 EFFECTIVE 3	效率的工作 EFFICIENT 4	平等的就醫 EQUITABLE 5	病人為中心 PATIENT- CENTERED 6
a 病人照護 (是/否) PATIENT CARE	1a	2a	3a	4a	5a	6a
照顧評估						
b 醫療知識技能 MEDICAL KNOWLEDGE and SKILLS (應該熟知的)	1b	2b	3b	4b	5b	6b
c 人際溝通技巧 INTERPERSONAL and COMMUNICATION SKILLS (應該表達的)	1c	2c	3c	4c	5c	6c
d 專業素養倫理 PROFESSIONALISM (應該做為的)	1d	2d	3d	4d	5d	6d
e 醫療體系行醫 SYSTEMS-BASED PRACTICE (應該支援的)	1e	2e	3e	4e	5e	6e
學習改進						
f 行醫導向之 學習改進 PRACTICE-BASED LEARNING and IMPROVEMENT	1f	2f	3f	4f	5f	6f

治療指引 Guidelines：影響醫療執行

- 強調構成臨床治療指引適當必要元素：
文獻系統性回顧、證據等級判斷與由適切多面向團體回顧審查製作。
- Guidelines vs Standards of Care

Keffer JH. Clin Chem 2001 Aug;47(8):1563-1572 Guidelines and algorithms: perceptions of why and when they are successful and how to improve them.

Clinical Guidelines and the Law

- Do doctors who deviate from guidelines place themselves at increased risk of being found liable in negligence if patients suffer injury as a result?
- Could compliance with guidelines protect health care workers from liability in such circumstances?

Hurwitz B. Clinical guidelines and the law: advice, guidance or regulation? *J Eval Clin Pract.* 1995 Sep;1(1):49-60.



一對希臘父母使用電腦風扇散熱片 代替退燒藥來幫孩子降溫

By Brian Briggs

Ann Arbor, MI — Geeks familiar with using technology to solve their problems have turned to advanced cooling solutions instead of pharmaceuticals to lower fevers in their children.



"I was working on my rig in the basement installing a new water-cooling system when my daughter came down with a 103 degree fever," said Fernando Ferringer of coolingyourkids.com. "I knew we didn't have any Tylenol, and that's when I had a 'Eureka' moment."

Ferringer connected the water-cooling system and a couple of heatsinks to his daughter and reduced her fever. "I figured the system cools down my processor which runs a lot hotter than my daughter. Why couldn't it cool her down? She did scream a bit when her hair got tangled in the fan, but we took care of that."

Now Ferringer regularly uses PC cooling technology to help his sick kids and set up his website to share his knowledge with others. "I'm always hoping my kids will get sick so I can try out something new," he said.



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Thank you!