

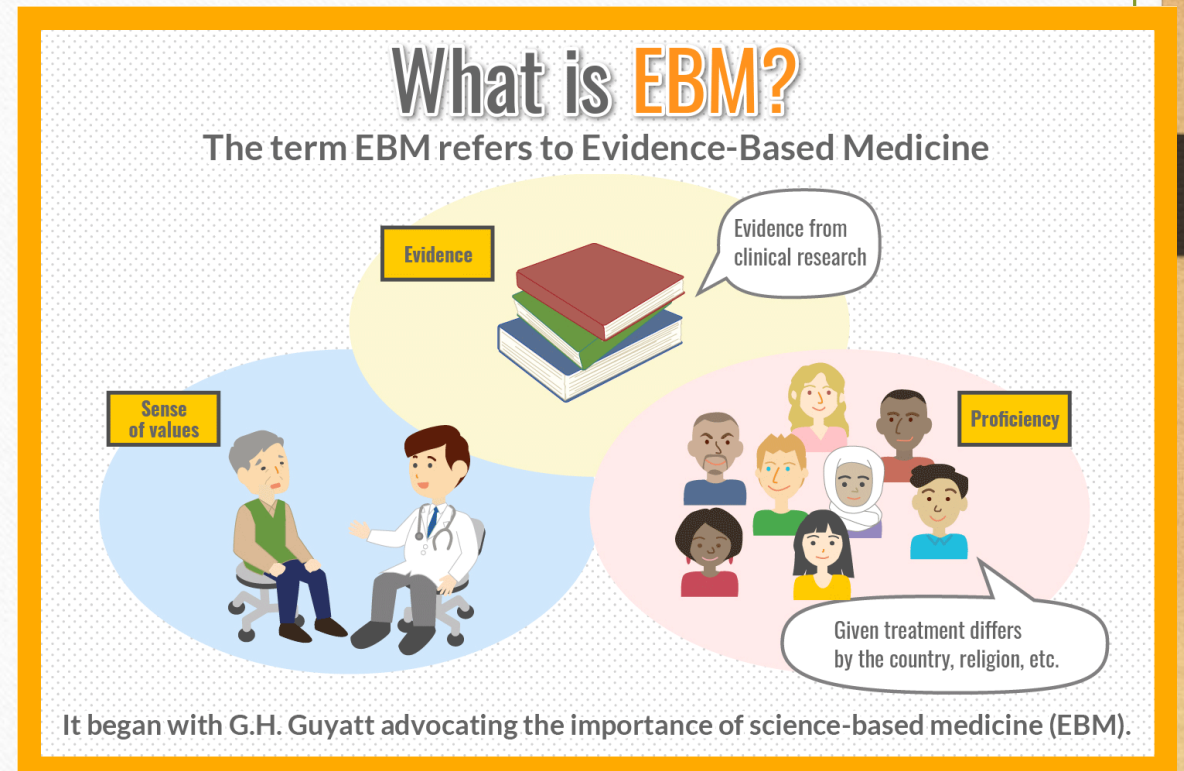
کلیات تصمیم گیری مبتنی بر شواهد و چالش های آن در ایران با تاکید بر مطالعات ثانویه

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Definition of “Evidence Based Medicine”

- Evidence based medicine is the conscientious, explicit, and judicious **use of current best evidence** in making decisions about the care of individual patients. (Sackett et al. *BMJ* 1996;312:311-2)



Why “Evidence Based Medicine”?

about 1/2 of ‘valid’
evidence today is out of
date in 5 years

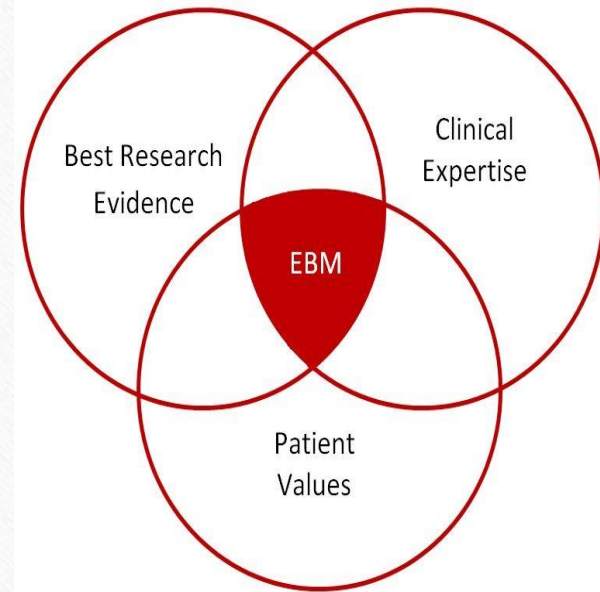
about 1/2 of valid
evidence is not
implemented



"...and, as you go out into the world, I predict that you will, gradually and imperceptibly, forget all you ever learned at this university."

Definition of “Evidence Based Practice”

- The practice of evidence based medicine means integrating individual clinical expertise with the best available external clinical evidence from systematic research. i.e. The use of the most appropriate information available, to make clinical decisions for individual patients...(Sackett et al. *BMJ* 1996;312:311-2)
- EBP is the integration of clinical expertise, patient values, and the best research evidence into the decision making process for patient care



Definition of “Evidence Based Practice”

- Clinical expertise- the clinician’s cumulated experience; education and clinical skills
- The best evidence is usually found in clinically relevant research that has been conducted using **sound methodology.**

EVIDENCE BASED DECISION MAKING

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5 Steps in EBP

EBP can be broken down into a 5 step process:

1. **Formulating** a searchable question (Asking the clinical question)
2. **Searching** the literature efficiently (Collecting the most relevant and best evidence)
3. **Appraising** the literature critically (Synthesizing the evidence)
4. **Applying the result** to clinical practice or patient (Integrating all evidence with personal expertise, patient preferences, to make practice decision or change)
5. **Evaluating the outcomes** of the applied evidence in your practice or patient



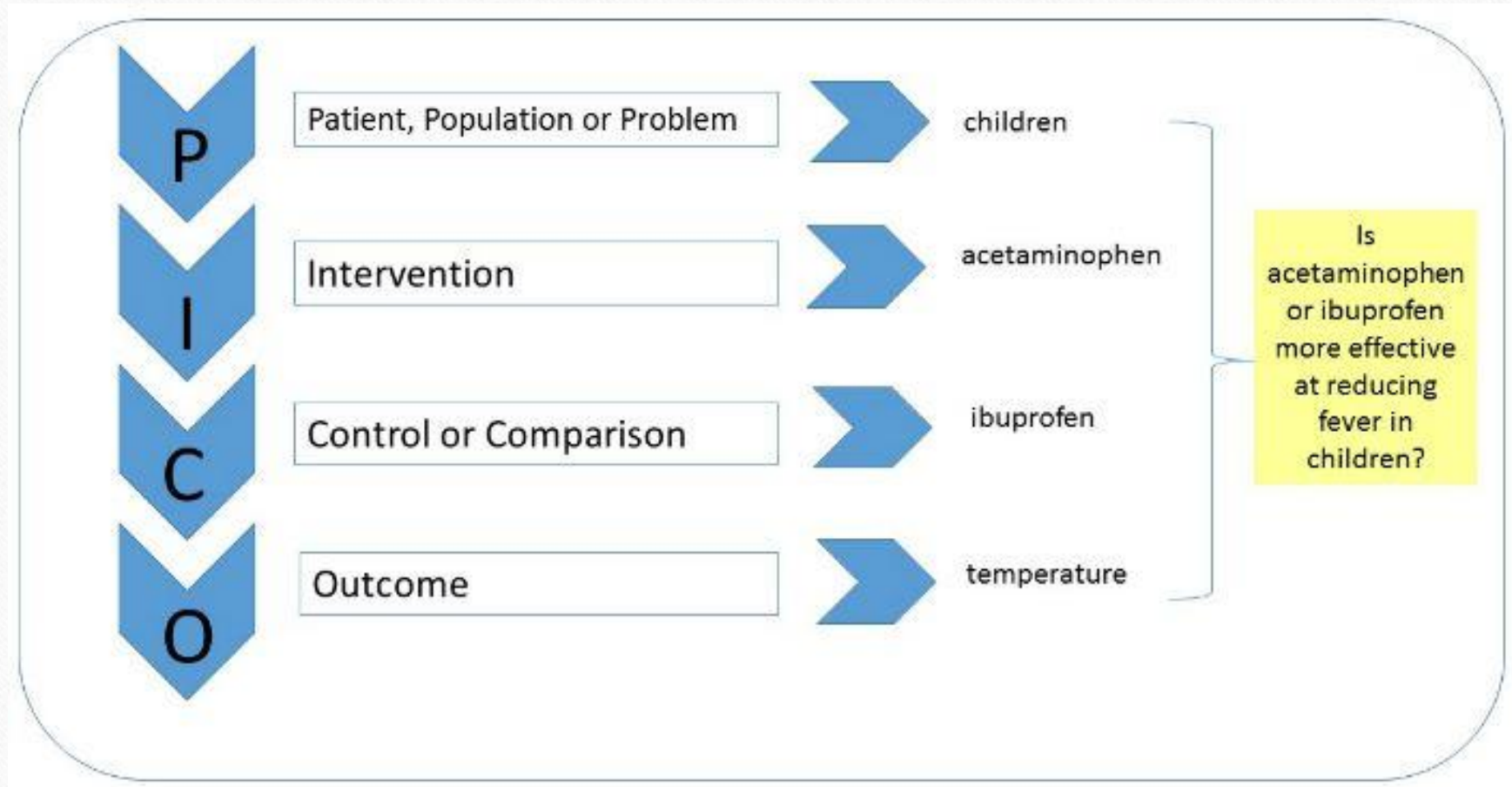
Clinical questioning in Evidence Based Medicine

- Remember PICO – contains components of a well focused question
- P = The patient or Problem
- I = Intervention, Prognostic Factors, Exposure
- C = Comparison
- O = Outcomes

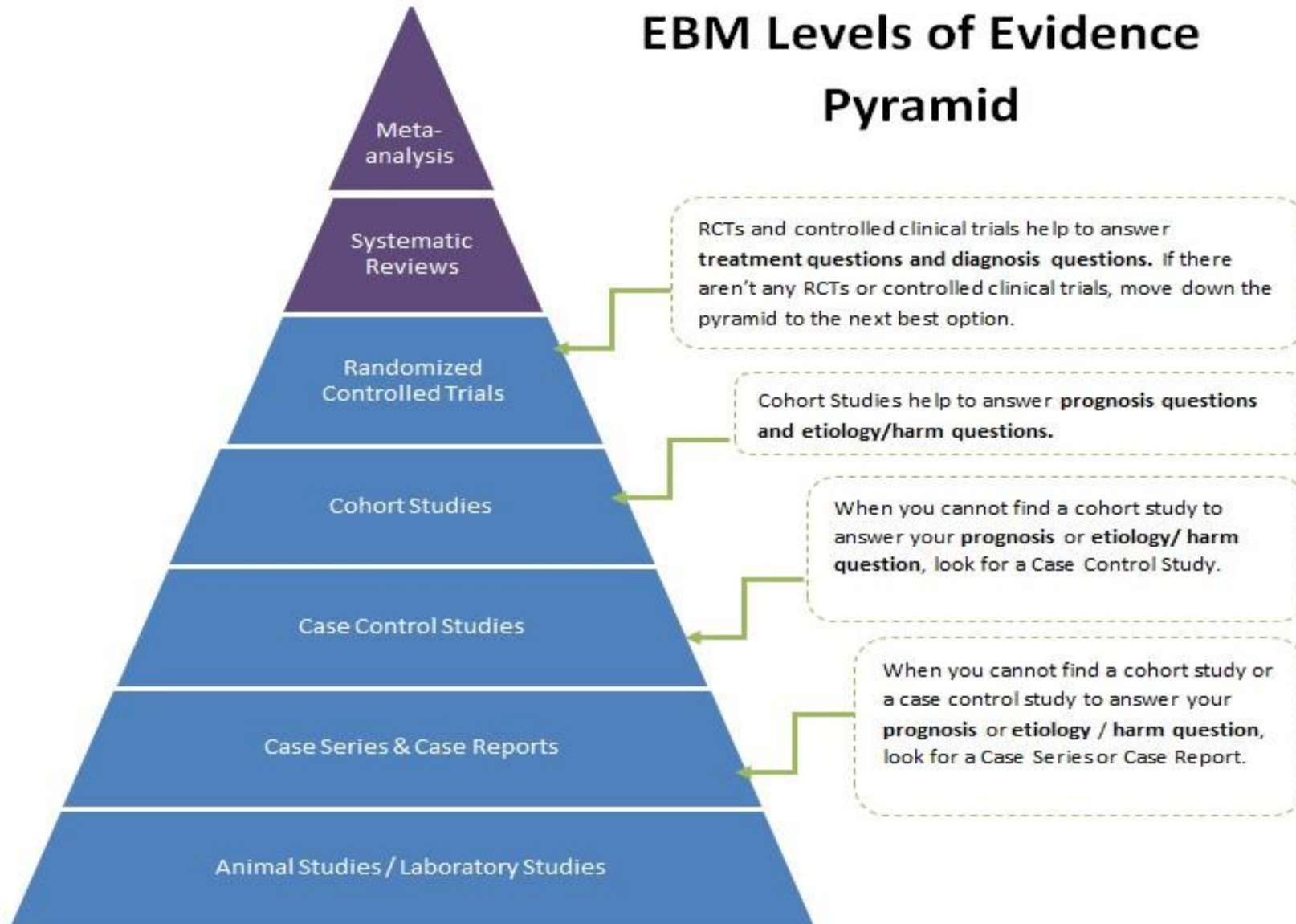
Constructing A Clinical Question

P	I	C	O
Population Patient Problem	Intervention Or Exposure	Comparison	Outcome
Who are the patients? What is the problem?	What do we do to them? What are they exposed to?	What do we compare the intervention with?	What happens? What is the outcome?

Example:



EBM Levels of Evidence Pyramid



Rating System for the Hierarchy of Evidence: Quantitative Questions

Level 1: Systematic review or meta-analysis of all relevant randomized controlled trials (RCTs), or evidence-based clinical practice guidelines based on systematic reviews of RCTs

Level 2: Evidence from at least one well-designed RCT

Level 3: Evidence from a well-designed controlled trial without randomization

Level 4: Evidence from well-designed case-control and cohort studies

Level 5: Evidence from systematic reviews of descriptive and qualitative studies

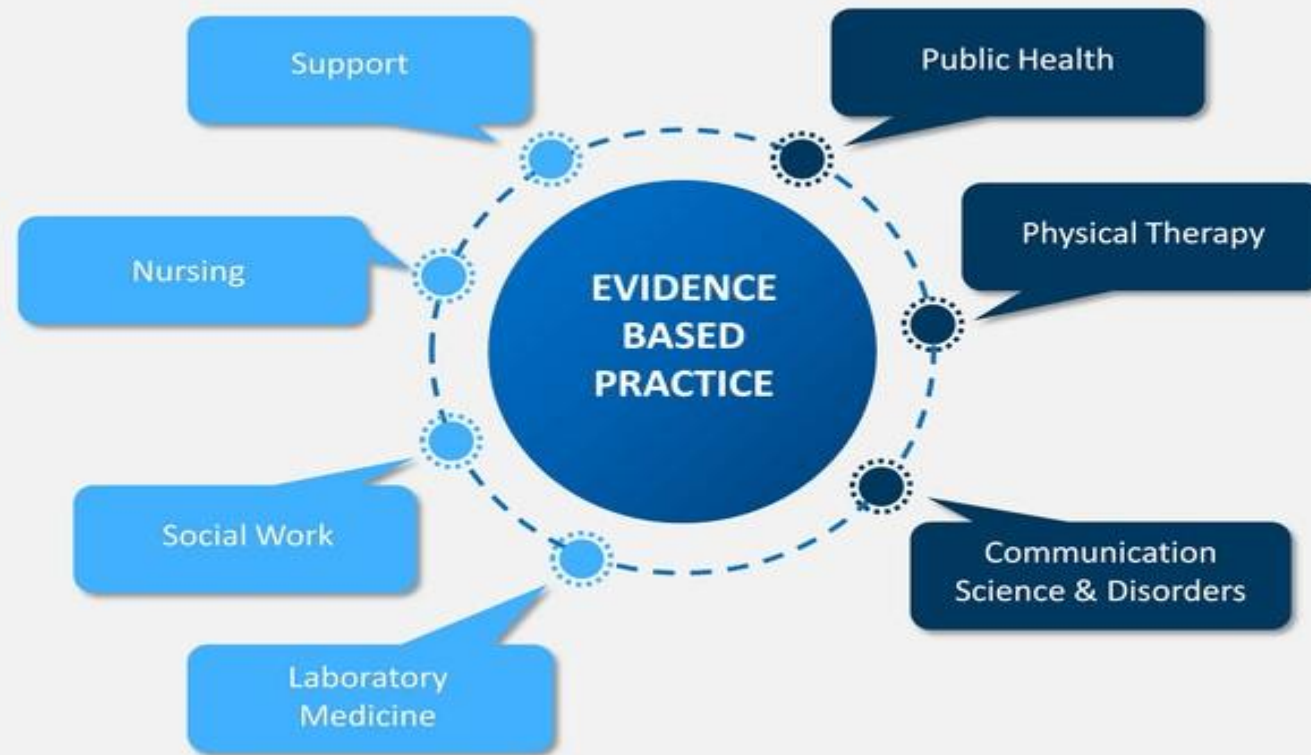
Level 6: Evidence from a single descriptive or qualitative study

Level 7: Evidence from the opinion of authorities and / or reports of expert committees

EBM fields and related factors

EVIDENCE BASED PRACTICE

Defining EBP Across the Professions



Definition: Evidence-based Public Health

- “The development, implementation, and evaluation of effective programs and policies in public health through application of principles of scientific reasoning, including systematic uses of data and information systems, and appropriate use of behavioral science theory and program planning models”

Source: Brownson, R.C. et al, Evidence-based public health, Oxford University Press, 2003.

When is EBPH used?

- When it's important to have scientific evidence to support decision making;
- When evaluating the effectiveness and cost benefits of health programs;
- When establishing new health programs;
- When policies are being implemented;

Steps in the EBPH Process

- 1) Formulating a clear question from a public health problem;
- 2) Searching the literature;
- 3) Appraising the evidence;
- 4) Selecting the best evidence for a public health decision;
- 5) Linking evidence with public health experience, knowledge, practice, and the community's values and preferences;
- 6) Implementing findings in public health practice and programs;
- 7) Evaluating results.

Source: Jenicek, Milos and Sylvie Stachenko. 2003. Evidence-based public health, community medicine, preventive care. Medical Science Monitor: 9(2): p, SR2

7 STAGES OF DECISION MAKING

Enter Your Sub Headline Here



EVIDENCE BASED PRACTICE

Evidence Based Practice Model



Why is EBPH important?

- **Provides assurance that decision making is based on scientific evidence** and effective practices;
- **Helps ensure the retrieval of up-to-date and reliable information** about what works and doesn't work for a particular public health question;
- **Provides assurance that one's time is being used most efficiently and productively in reviewing the “best of the best”** information available on the particular public health question.

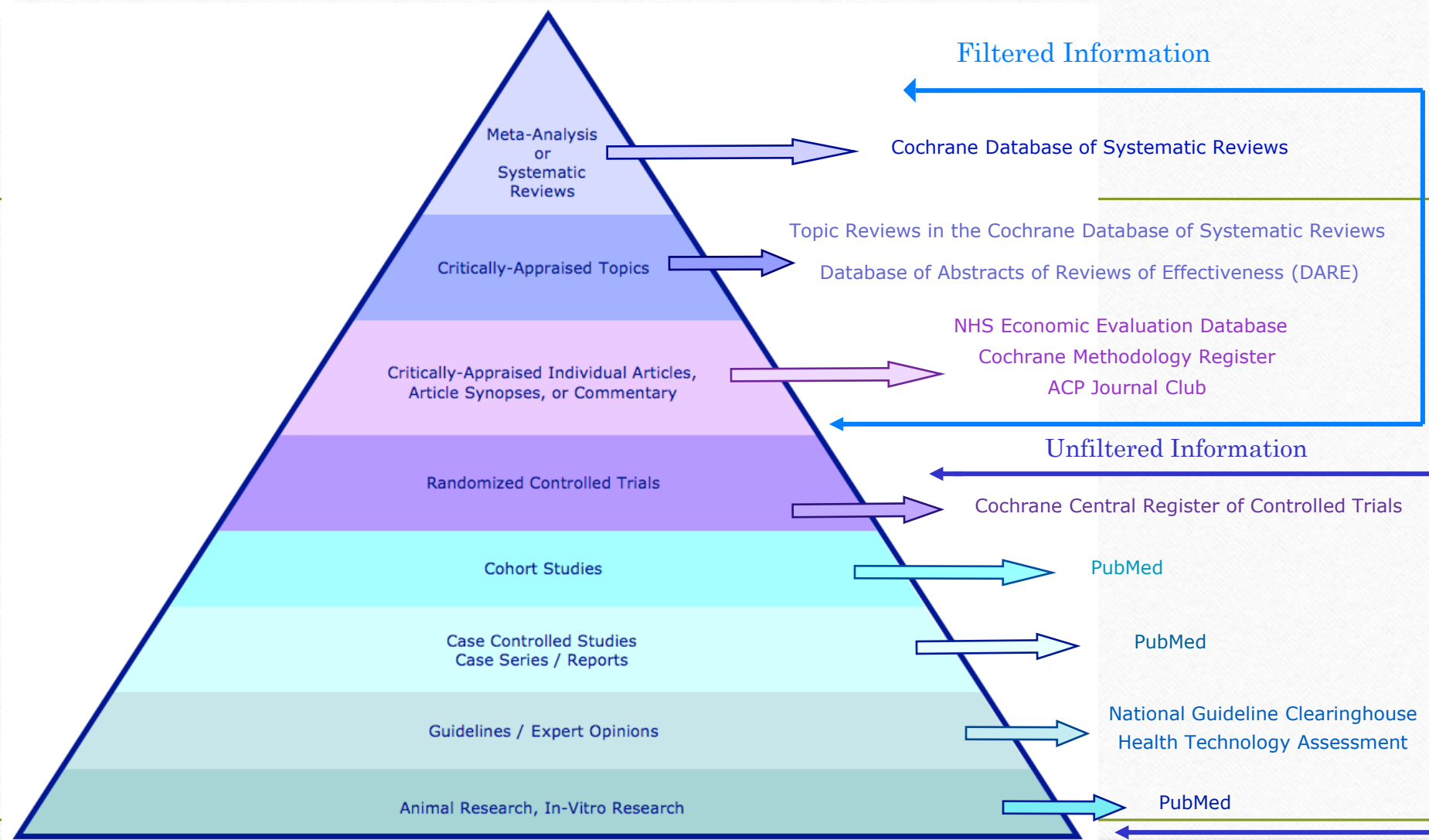
Types of Evidence in EBPH

- Systematic Review:
 - Meta-Analysis:
 - Risk Assessment:
 - Decision Analysis:
 - Economic Evaluation:
 - Economic Evaluation:
 - Expert Panels:
 - Practice Guidelines:
-
- Source: R.C. Brownson et al, Evidence-Based Public Health, Oxford: Oxford University, 2003.

Best Evidence Resources in EBM

- PubMed
- Cochrane Collaboration & Library
- TRIP Database
- NICHSR
- The Lamar Soutter Library: University of Massachusetts Medical School: Evidence-Based Practice for Public Health Project
- Partners in Information Access for the Public Health Workforce
- Guidelines:
 - Expert Consensus Guidelines
 - EBP Practice Guidelines

Hierarchy of Evidence and Corresponding Databases



what skills will you need to keep up to date with the best evidence?

Must be aware of their responsibility to maintain their knowledge and skills throughout their careers.

Students are expected to keep up to date and to apply knowledge necessary for good clinical care.

- To find the evidence more efficiently
- To appraise the quality of the evidence more effectively
- To use good quality evidence more systematically

Challenges:

- Thomas Huxley stated, “The great tragedy of Science is the slaying of a beautiful hypothesis by an ugly fact”

• تراژدی بزرگ علم، کشتن یک فرضیه زیبا توسط یک واقعیت زشت است.

Challenges:

EVIDENCE BASED PRACTICE

Enter your sub headline here



Barriers to EBP

Some of the barriers encountered by clinicians may include:

1. Lack skills to evaluate research
2. Lack of organizational support
3. Accessibility of research findings

Challenges

- One challenge is the gigantic amount of available data or “big data”, creating datasets for big data is a complex process, costs a lot of money and requires continuous maintenance and security. (more than thirty thousand published biomedical journals and more than seventeen thousand medical books, making it extremely challenging for clinicians with time and ability to cope, even in a specialist area).
- Using *EBM* for busy physicians requires new skills on the part of the clinicians such as efficient and frequent literature review searches and to critically use and establish rules to evaluate the clinical literatures.
- Translating the evidence research based medicine into a routine practice for everyday use is a major challenge, due to the gap between the routine patient care and the practice suggested by the *EBM*.

بعضی از چالش های تصمیم گیری مبتنی بر شواهد در علوم پزشکی در ایران

- حیطه فردی (عدم مهارت کافی برای اجرای مراقبت مبتنی بر شواهد، عدم آگاهی از مراقبتهای مبتنی بر شواهد)
 - حیطه مدیریتی (عدم آگاهی مدیران از ضرورت مراقبت مبتنی بر شواهد و عدم حمایت مدیران و همکاری با کارکنان در به کارگیری مراقبت بر شواهد،)
 - حیطه محیطی (موارد مرتبط با کارکنان و جامعه و سازمان)
- در مجموع عوامل فردی، سازمانی-مدیریتی، عوامل محیطی، عوامل آموزشی و عوامل پژوهشی مهمترین چالش های اجرای عملکرد مبتنی بر شواهد میباشد

بعضی از چالش های تصمیم گیری مبتنی بر شواهد در علوم پزشکی در ایران

- موانع مهارت علمی، موانع اجرایی، موانع فرهنگی
- عدم تسلط به مبانی روش تحقیق، زبان های علمی، عدم دسترسی آسان به شواهد پژوهشی و پایگاه های اطلاعاتی،
- سیاستگذار در مواردی شواهد قابل اطمینان را در موقع لزوم ندارد. شواهد در موقع لازم به دست سیاستگذار نمی رسد. (نبود شواهد مناسب، در زمان مناسب و به زبان مناسب)
- ناتوانایی در اجرای توصیه های پژوهش ها
- نبود ترجمان دانش مناسب و نداشتن افراد آموزش دیده برای چگونگی به کارگیری یافته های تحقیقی در امر مراقبت مبتنی بر شواهد
- نهادینه نشدن رویکرد مراقبت مبتنی بر شواهد و فقدان مهارت های لازم در کلیه موارد بکارگیری پزشکی مبتنی بر شواهد
- کم توجهی به استفاده از تحقیقات و اتکای عمده به تجربه در کارکنان بهداشتی در تصمیم گیری ها

علت عدم استفاده کاربردی از رویکرد مبتنی بر شواهد

- کمبود وقت، عدم حمایت مالی، افکار سنتی، کمبود دانش
- برخورداری از اعتماد به نفس کاذب به علت اتکای زیاد به دانش و مهارت زمینه ای
- وقت گیر بودن آموختن مهارت‌های جدید و متعدد
- نداشتن وقت کافی برای مطالعه، اجرای ایده و تحقیقات در حین کار، نداشتن توانایی برای تغییر شیوه مراقبتی بیماران، فقدان تجربه و ظرفیت استفاده از شواهد، نبود اعتماد متقابل و نگرش به نسبت به تغییر،
- عوامل بازدارنده بسیاری در روند آموزشی علوم پزشکی در راستای پذیرش و بکارگیری رویکردهای آموزشی کارآمد، نوین و موثر وجود دارد و این در کشورهای در حال توسعه شدیدتر و بیشتر می‌باشد.

چند نکته:

- مطالعات مرور سیستماتیک و متاآنالیز در بالاترین سطح برای تولید شواهد در علوم پزشکی دسته بندی می شوند.
- پایین ترین سطح شواهد نظرات شخصی و تجربیات فردی است.
- "گسترش آموزش پزشکی مبتنی بر بهترین شواهد" معادل Best Evidence Medical Education است.
- بهترین تعریف پزشکی مبتنی بر شواهد استفاده آگاهانه، صریح و خردمندانه از بهترین شواهد فعلی در تصمیم‌گیری در مورد مراقبت از هر بیمار است.
- پزشکی مبتنی بر شواهد توسط "گوردون گویات" برای اولین بار مطرح شد.
- UpToDate، کوکران، و پابمد از منابع پزشکی مبتنی بر شواهد هستند.



Thank you for your attention.
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