هل هذا الكلام اي حطيناه قبل موجود في العالم وبيشتغلوه؟ نعم موجود و بيحلوه والمجموعات اي بتشتغل على ال

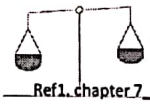
الادوية الرشيدة التي تستخدم في كل بلد ← Rational drug use

Strength of Recommendation

- strong recommendation
  - benefits clearly outweigh risks/hassle/cost
  - risk/hassle/cost clearly outweighs benefit

هاي السلايدات الجاي بتقروها لحالكم نا الدكتور ماجاب سيرتها

- what can downgrade strength?
- low confidence in estimates
- close balance between up and downsides



Risk/Benefit tradeoff

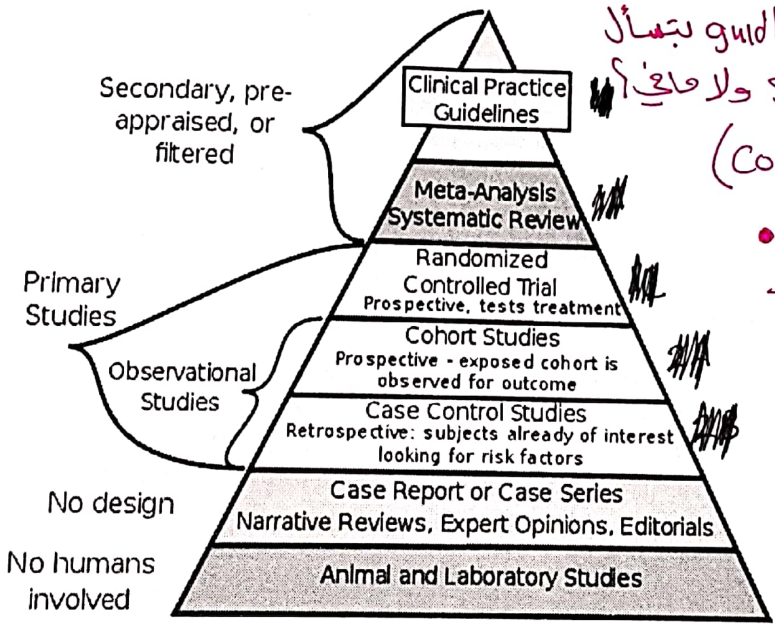
- aspirin after myocardial infarction
  - 25% reduction in relative risk
  - side effects minimal, cost minimal
  - benefit obviously much greater than risk/cost
- anticoagulants in low risk atrial fibrillation
  - anticoagulants reduce stroke vs ASA by 50%
  - but if risk only 1% per year, ARR (kept in reserve) 0.5%
  - increased bleeds by 1% per year

Strength of recommendations

Aspirin after MI – do it

Anticoagulants vs than ASA in low risk Afib
-- probably do it
-- probably don't do it

ال Clinical guidlines تعتبر اقوى من ال Systematic Review ليه؟
لانه ال guidlines زي beers critiria مثلاً لانها تجل Review لكل هاد
(قلنا انه ال guidlines بتسأل هل في Systematic Review ولا ماخذ؟
بجاوبو transparency و (CoI
+ هي explicit tools



6. Articulation of Recommendations

1. Articulate recommendations in a standardized form, detailing precisely what the recommended action is, and under what circumstances it should be performed.

2. Strong recommendations should be worded so that compliance can be evaluated.

7. External Review

1. External reviewers should comprise a full spectrum of relevant stakeholders, including scientific and clinical experts, organizations, agencies, patients, and representatives of the public.
2. The authorship of external reviews should be kept confidential unless that protection has been waived.
3. The GDG should consider all external reviewer comments and keep a written record of the rationale for modifying or not modifying a CPG in response to reviewers' comments.
4. A draft of the CPG prior to the final draft should be made available to the general public for comment.

8. Updating

1. The CPG publication date, date of systematic evidence review, and proposed date for future review should be documented in the CPG.
2. Literature should be monitored to identify the emergence of new, potentially relevant evidence and to evaluate the continued validity of the CPG.
3. CPGs should be updated when new evidence suggests the need.

New American Cancer Society Process for Creating Trustworthy Cancer Screening Guidelines JAMA (12/14/2011)

Standards for Clinical Practice Guidelines: Institute of Medicine (IOM) Recommendations and American Cancer Society (ACS) Process

Standards	IOM Recommendations	New ACS Process for Cancer Screening Guideline Development
Transparency	The process and funding of guideline development should be completely specified	The article defines the new ACS process, and all ongoing an planned work in cancer screening guideline production and revision will be posted on the ACS website
Conflicts of interest	Conflicts of interest include commercial, institutional, professional, and intellectual conflicts, all of which must be openly declared. Members should divest conflicting financial relationships.	ACS guideline developers will publicly declare financial and institutional conflicts, and all will be expect generalists to avoid the appearance of professional conflicts
Group composition	The guideline group should include multidisciplinary methodological experts, clinicians, and patient advocates.	Guidelines will be developed by a 12-person panel of multidisciplinary experts in clinical screening, including a patient advocate
Systematic review of evidence	The guidelines should be based on systematic literature review that meets the standards set by the IOM.	ACS will commission high quality and independent systematic evidence reviews to serve as the basis for all guidelines
Grading strength of recommendations	For each recommendation, the text should explain the evidence and the reasoning, explain the balance of benefits and harms, an indicate the level of confidence in the recommendation.	ACS will be explicit about harms, as well as benefits, and will develop a grading scheme to rate confidence in recommendations that will be consistent with methods used by other organizations
Articulation of recommendations	Recommendations should be clearly stated and actionable.	ACS guidelines will be written for audiences of primary care clinicians, the general public, and policy makers
External review	The draft guidelines should be posted for public comment, and the final guidelines should be revised as appropriate before peer review.	Before publication, all draft guidelines will be vetted by relevant experts, organizations and societies, and any differences will be explicitly discussed in the published guideline.
Updating	Guidelines should be updated when new evidence should result in modifying the recommendations	ACS guidelines will be briefly updated as needed, and at a minimum at least annually online with relevant new studies, and rewritten every 5 years

Guideline Evaluation Tools

AGREE II Instrument Clinical practice guidelines

- The purpose of the AGREE II, is to provide a framework to:

1. assess the quality of guidelines
2. provide a methodological strategy for the development of guidelines
3. inform what information and how information ought to be reported in guidelines.

- The AGREE II replaces the original instrument as the preferred tool and can be used as part of an overall quality mandate aimed to improve health care.

Table 1. Comparison of original AGREE and AGREE II items.

Original AGREE Item	AGREE II Item
Domain 1. Scope and Purpose	
1. The overall objective(s) of the guideline is (are) specifically described.	No change
2. The clinical question(s) covered by the guideline is (are) specifically described.	The health question(s) covered by the guideline is (are) specifically described.
3. The patients to whom the guideline is meant to apply are specifically described.	The population (patients, public, etc.) to whom the guideline is meant to apply is specifically described.
Domain 2. Stakeholder Involvement	
4. The guideline development group includes individuals from all the relevant professional groups.	No change
5. The patients' views and preferences have been sought.	The views and preferences of the target population (patients, public, etc.) have been sought.
6. The target users of the guideline are clearly defined.	No change
7. The guideline has been piloted among end users.	Delete item. Incorporated into user guide description of item 19.
Domain 3. Rigour of Development	
8. Systematic methods were used to search for evidence.	No change in item. Renumber to 7.
9. The criteria for selecting the evidence are clearly described.	No change in item. Renumber to 8.
	NEW Item 9. The strengths and limitations of the body of evidence are clearly described.
10. The methods for formulating the recommendations are clearly described.	No change
11. The health benefits, side effects, and risks have been considered in formulating the recommendations.	No change

Original AGREE Item	AGREE II Item
12. There is an explicit link between the recommendations and the supporting evidence.	No change
13. The guideline has been externally reviewed by experts prior to its publication.	No change
14. A procedure for updating the guideline is provided.	No change
Domain 4. Clarity of Presentation	
15. The recommendations are specific and unambiguous.	No change
16. The different options for management of the condition are clearly presented.	The different options for management of the condition or health issue are clearly presented
17. Key recommendations are easily identifiable.	No change
Domain 5. Applicability	
18. The guideline is supported with tools for application.	The guideline provides advice and/or tools on how the recommendations can be put into practice. AND Change in domain (from Clarity of Presentation) AND renumber to 19
19. The potential organizational barriers in applying the recommendations have been discussed.	The guideline describes facilitators and barriers to its application. AND change in order – renumber to 18
20. The potential cost implications of applying the recommendations have been considered.	The potential resource implications of applying the recommendations have been considered.
21. The guideline presents key review criteria for monitoring and/ or audit purposes.	The guideline presents monitoring and/ or auditing criteria.
Domain 6. Editorial Independence	
22. The guideline is editorially independent from the funding body.	The views of the funding body have not influenced the content of the guideline.
23. Conflicts of interest of guideline development members have been recorded.	Competing interests of guideline development group members have been recorded and addressed.

i) Rating Scale

All AGREE II items are rated on the following 7-point scale:

1 Strongly Disagree	2	3	4	5	6	7 Strongly Agree

Score of 1 (*Strongly Disagree*). A score of 1 should be given when there is no information that is relevant to the AGREE II item or if the concept is very poorly reported.

Score of 7 (*Strongly Agree*). A score of 7 should be given if the quality of reporting is exceptional and where the full criteria and considerations articulated in the User's Manual have been met.

Scores between 2 and 6. A score between 2 and 6 is assigned when the reporting of the AGREE II item does not meet the full criteria or considerations. A score is assigned depending on the completeness and quality of reporting. Scores increase as more criteria are met and considerations addressed. The "How to Rate" section for each item includes details about assessment criteria and considerations specific to the item.

Computerized guidelines

- Computerized guidelines encode evidence-based recommendations for and can automatically generate recommendations about what medical procedures to perform tailored for an individual patient.

- Computerized guidelines offer benefits over and above those offered by paper-based guidelines:

•They offer a readily accessible reference, providing selective access to guideline knowledge.
•They help reveal errors in the content of a guideline;
•They help improve the clarity of a guideline, e.g. in decision criteria and clinical recommendations;
•They help offer better descriptions of patient states;
•They can automatically propose timely, patient-specific decision support and reminders.

Sources of Clinical Practice Guidelines

- National and international clinical guidelines organizations:

http://www.guideline.gov
http://www.openclinical.org/guidelines.html#comput

e-Guidelines

- Clinical guideline applications for handheld devices [OC]

- Canadian Diabetes Association e-guidelines (2003) (web-browsable)

Evidence-based practice involves

Integration of:

- **Best research evidence:** Clinically relevant research that has involved patients
- **Clinical expertise:** Using clinical skills and past experience
- **Patient values:** Unique preferences, concerns, expectations

To support clinical / therapeutic decisions.

With the aim to ensure optimal outcomes for the patients.

Levels of Evidence for Therapeutic Studies *

- **Level Type of evidence**

1A Systematic review (with homogeneity) of RCTs
1B Individual RCT (with narrow confidence intervals)
1C All or none study
2A Systematic review (with homogeneity) of cohort studies
2B Individual Cohort study (including low quality RCT, e.g. <80% follow-up)
2C "Outcomes" research; Ecological studies
3A Systematic review (with homogeneity) of case-control studies
3B Individual Case-control study
4 Case series (and poor quality cohort and case-control study
5 Expert opinion without explicit critical appraisal or based on physiology bench research or "first principles"

سؤال امتحان
RCT اقوى من systematic review
systematic review من cohort studies

Ref1. chapter 7_Thank you

No: ---------- Date: ----------

١٣

لحد الان كل الي شرحنا كان على evidence based quality

احنا كل يلي بنحكيه على Grade system في الاوقة ثانية مستخدمين نظام ثاني Quality

← في عنا بـ Grade نظام Quality
سلايد (46

1A → systematic Review with homogenesity (اقوى . Quality في العلم)
1B → RCT with narrow confidence interval (Precise عشان يكون)
1C → All or non studies (هاي ما شرحناها ....
2A ← زي احنا شمينا غاز سيلنا كلنا شعور
2B بالفرح (معناها العلاقة بين الغاز وشعور
2C الفرح مشبة قهوجية او العطر الها
3 وكان حالي بسبب القهوجية
4
5

2A ⇐ *
systematic Review لـ
Cohort study لل with homogenisity

(~~[illegible]~~)

Scanned by CamScanner

No: ---------- Date: ----------

individual cohort studies ← 2B

(low quality ~~Cohort~~ RCT)

Follow up ← ٪80 مثال عليها اقل من

Per Protocol ← Follow up ضبط ال ~~ضبط~~ وخيار

Intention to treat

ecological study ← 2C (ما شرحناها برموز IC)

← ~~كل~~ كل اي دراسة قبل بتعلق بأفراد (بنيما هاي متعلقة ~~بدراسات~~ بدراسات جماعية) زي تلوث الهواء، (تلوث المياه)،

دراسات بتمشي على مجموعات كبيرة من الناس عايشة

تحليل individual (اذا فيها individual بتصير

Ecological study: Case Control

أو: Cohort studies

يعني مثلاً سكنا بالتلوث، بعدين سنة سكان الها شغلية قديش منهم صار عندهم سرطان رئة.

Ecological Cohort ← هاي

No: ---------- Date: ----------

رقم 5 ← expert opinion ← يعني انه expert
لكنه رقم 5 ليش؟ لانه لو عنده evidence
ومستند على دراسة كان حطاها وصار ترتيبه
فوق (يعني هو بيفضل رأي) no-evidence

هل كل الكواضيح بنفع اعملها RCT؟ لأ
معناها كيف هاد ال system رح يمشي على
هاي الشغلات؟
في Prognostic studies لل hereditary
اي اشي ما بيمر له RCT بتروح الـ evidence
تاعته لل Prognostic studies
زي ايش؟
Cohort studies ← ال Prospective اقوى من
ال Retrospective
high quality Prospective Cohort studies يعني
R.R و O.R large effect ← يعني ← high quality

(47 صفحة)

Levels of Evidence for Prognostic Studies *

- **Level Type of evidence**

I High quality prospective cohort study with adequate power or systematic review of these studies

II Lesser quality prospective cohort, retrospective cohort study, untreated controls from an RCT, or systematic review of these studies

III Case-control study or systematic review of these studies

IV Case series

V Expert opinion; case report or clinical example; or evidence based on physiology, bench research or "first principles"

ماخذين هاد GRADe

ال System بعطي نار تأشين يوخذ system تاني

لكن بكل الاحوال محتوى التصنيف نفسه

6S herichary في نظام جديد لتصنيف القوى تاعت الدراسات الي هو

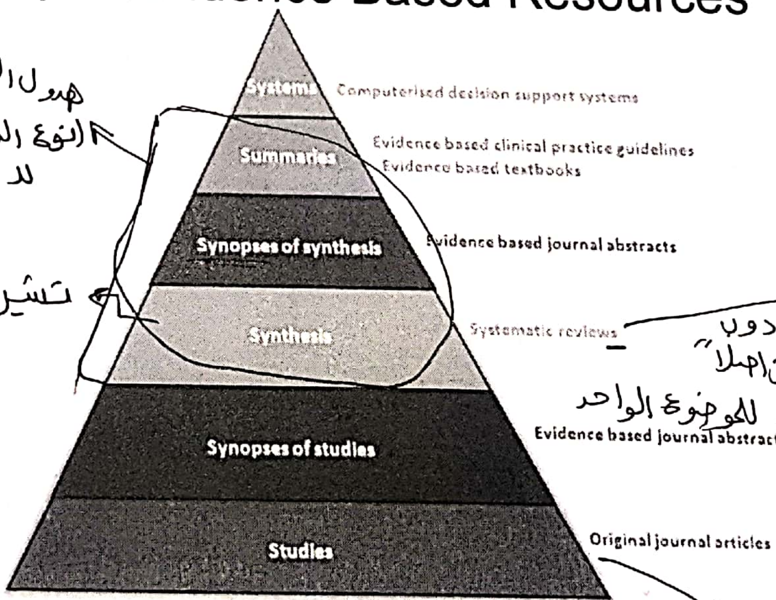
Most Recent update of the Evidences, The 6S Hierarchy of Evidence Based Resources

umbrella Review هو ال 3 هاد ال

Review انوع الدراسات الي بتحل (systematic Review لل

تشير الى ال systematic Reviews

synopses معناها abstract زي (تلخيص)



زمان كنت تلاقي بالموضوع الواحد يادوب "وحدة وحطي ما تلاقي اصلا" systematic Review لكن الآن بتلاقي 4 او 5 او 6 للموضوع الواحد

هاد هو كل الدراسات الي اخذناها مبارح اللبنة الاساسية

Examples of summaries include

- *Clinical Evidence* (www.clinicalevidence.com),
- the Physicians' Information and Education Resource (http://pier.acponline.org),
- Dynamed (www.ebscohost.com/dynamed/default.php),
- UpToDate (www.uptodate.com).
- Another source of summary-level data are clinical practice guidelines (CPGs).
- National and international clinical guidelines organizations:

http://www.guideline.gov
http://www.openclinical.org/guidelines.html#comput
e-Guidelines
- Clinical guideline applications for handheld devices [OC]
- Canadian Diabetes Association e-guidelines (2003) (web-browsable)

SYNOPSES OF SYNTHESES

generally one-page, concise, user-friendly assessment, and summary of the evidence.

This type of article is generally published in evidence based abstraction journals such as *Evidence Based Nursing* , *International Journal of Evidence-Based Healthcare* , *Evidence-Based Mental Health* , and *ACP Journal Club* .

بعد ال Umbrella Review بيجي عنا ال Systems

شو بيعملو بال systems ؟

1 بيجيو

input variable (زي ↓)
- Age
- education (اكي اخذناهم)
- demographic بال factors
- sex
- disease

Processing
Regression
(Sensitivity analysis)

output في 2 levels
1. Parameters:-
   - death
   - readmition
   - drug Related problems (DRP)
2. treatment options

ال Readmition هو دخول المريض للمشفى زي لما تقوله للمريض ارجعلي بعد شهر بس هو بعد اسبوع يرجع عالمشفى بسبب مضاعفات او بسبب خطأ طبي

No: ---------- Date: ----------

بدخلو البيانات ويطلع معاهم مثلاً" انه نسبة ال death
٪57

واحتمالية ال Readmition ← ٪90 ، واحتمالة ال dRP
هي ٪80

← هون بيصير شغل احترافي highly Professional

يعني واحد متوقع وفاته ٪90 هل يحتاج جهد زي
اي احتمال وفاته ٪10 (فهيك الاحترافي بيعمل خطوة
لوين لازم يوجه جهده)

يعني واحد احتمالية ال dRP ← ٪99
هاد محتاج لاحترافي يشتغل معه
واللي عنده احتمالية Readmition عالية بدو يركز حدا
يشتغل معه.

* اما ال Process اللي بالنص بيعملها واحد من
اثنين ← ① Health Care Provider
② I T

No: ---------- Date: ----------

* هاي الجزئية إي جاي مهمة جداً:-

Regression بيحلو اشي اسمه

← شو معنى الـ Regression :-

① Association ② Correlation بيشوفا شغليين

بين الـ input variables و الـ output variables

③ بيحل Prediction :- يعني بيدخل بيانات (تنبؤ)

بيتنبأ لصاحب هاي البيانات وفاة بنسبة 70٪

هاد الـ Prediction كيف التأكد هو صحيح

ولا خطأ بيحل اشي اسمه Sensitivity analysis

① True Positives ← اكتشفوا فيها

② True negative

* لنفترض انه توقع انه 70٪ من الركاب حيموتو

اي ماتو كانو فعلا 70٪ فال True Positive

رح يكون ١٠٠٪

No: ---------- Date: ----------

لو قال 70٪ بدهم يموتو واي فاق 35٪
معناها الـ True Positive هي 50٪

الـ true negative :-
هلا هو قال 70٪ يموتو معناها الـ 30
الباقين هدول اسمهم negative
لنفرض انهم كانو فعلاً معناها الـ true
negative هي 100٪

بناءً على تكرار الـ + و - مع true
الـ Regression بيضل تعديل الارقام والمخرجات
لحتى بتطلع

الـ output الثانية من الـ level
هي الـ treatment options

(يعني انت بيجيلك مريض بتظهر كل البيانات

No: ---------- Date: ----------

(هنذهم، الادوية لي بوخذها ، السكر ....)
بعدين هو بيطلع البرنامج تاع المريض ، انه مثلاً
يوخذ هاي الادوية بهاي الاوقات وهيك...

هاد ال level لسة ما تفعل بشكل قوي

* طبعاً ال Parameters في الها عامل زمني
مثلاً ال Readmition خلال 7 ايام او ٣ اسابيع

* اللي صار انه ال input variable صارت كثيرة اكثر من
40 variable فصاروا يبحثوا عن variables تؤخذ مجموعات
(قبل ما يوخذوا age و gender يوخذوا
عامل (age a gender) ← اشي يجمعهم.

* فال drug purdon index بجمع متعلقات الدوا تاعيت
المريض.

المهم لاني حتى لو ما عرف يحل عمليات ال Processing
لازم عالاقل يعرف يقرأ المخرجات

No: ---------- Date: ----------

قصة طالب الماجستير اللي بده يعمل رسالة الدكتوراه
اللي بده يعمل system عشان يتنبأ ال Cost يشوف
مين المرضى ال overcosted (مرض علاجه ٨٠ دينار
لكن صار يعطوه بس ٤٠) لكن صار وجه مشكلة
لانه شركة التأمين كل اشي عندها ورقي
ولما اجى بده يحول من ورقي للالكتروني الشركة
ما رضيت.

+ ذكرنا الدكتور بمعادلة التحويل (معادلة التغيير)

في بريطانيا صيادلة وضمن الوظيفي ←
(1) Medication Review
(2) " Reconsideration
(3) " Managment

(يعني زي كانك موظف ١٣ اشخاص واحد يحول الدوا
عن الرف واحد بالنص يوصل الدوا و واحد ثالث يعطي
الدوا للمرضى) :.
هاد الاشي وفر مصاري كثير ← لانه
فكرة انك تعين صيدلاني مختص بال DRP بيوفر عليك
مصاري

No: ---------- Date: ----------

* ال intention to treat ← هو شي بيحاكي الواقع

ال theory منه ال Per Protocol .

* هاي ال systems صعب تمشي عالادوية كما هي ← احنا بنستخدم codes تدل على الادوية والامراض رح نحكي عنهم لقدام .