

#### 彰化基督教醫院 社區醫學部 賴鈺嘉醫師 2005.11.10.台灣醫學會

### Worksheets

- Different kinds of research are :
  - different in terms of methodological validity
  - how they present their results
  - how they translate to an individual patient
- http://www.cebm.net/critical\_appraisal.asp
  - At CEBM : <u>http://www.cebm.net/index.asp</u>
  - You can access worksheets by clicking the links, or you can download the whole lot as a PDF

### Different kinds of research

- Primary Studies
  - Therapy
  - Diagnosis
  - Prognosis
  - Harm / Etiology
  - Systematic Reviews
    - <u>http://intmedweb.wfu</u>
      <u>bmc.edu/mwilson\_pro</u>
      <u>ducts/critical/index.ht</u>
      <u>ml</u>

- Primary Studies
  - Systematic Review
  - Decision Analysis
  - Practice Guidelines
  - Economic Analysis
  - Health Services Research
  - Clinical Utilization Review

## CASP

- Critical appraisal is the process of deciding whether a piece of research can help you in answering your clinical question
- There are three questions you need to ask about any kind of research:
  - Is it valid?
  - Is it important?
  - Is it applicable to the patient?

## Diagnosis

- Did the study include an independent blinded comparison with gold standard?
- Did the patient sample include an appropriate spectrum of patients similar to those found in the general practice?
- Was the gold standard applied to all case?
- What are the results?
  - Can you calculate the LR+, LR-?

## Therapy

- Were the assignment of patients to treatment groups randomized?
- Were all enrolled patients accounted for at the conclusion of the study?
- Intention-to-treat analysis: yes/no?
- Was the study double-blinded: yes/no?
- Were the treatment groups similar at the start of the study?
- What are the results?
  - Can you calculate the NNT, NNH?
  - What is the relative risk, odds ratio?
  - How precise are these estimates (CI)?

## Harm

- Was exposures and outcomes measured similarly in the groups compared?
- Were the comparison groups similar in outcome in all respects except for the variable studied?
- Was the follow-up adequate?
- Was there a temporal and dose relationship?
- What are the results?
  - What is the relative risk, odds ratio?
  - How precise are these estimates (CI)?

## Prognosis

- Was the patient sample representative at a well-defined point in the course of the disease or disorder?
- Was the length of follow-up adequate?
- Was the follow-up complete?
- What are the results
  - <u>http://evidence.ahc.umn.edu/fundamentals\_of\_ebhc\_practice.htm</u>

## 例: Systematic Reviews 3-1

## Are the results of this systematic review valid?

- Did this review address a focused clinical question?
- Were the criteria for article inclusion appropriate?
- Is it unlikely that relevant studies were missed?
- Was the validity of the included studies appraised?
- Was the assessments of studies reproducible?
- Were the results similar from study to study?

## 何: Systematic Reviews 3-2

# What Are the Results?

- What are the overall results of the review?
- How precise are the results?

## 何: Systematic Reviews 3-3

- Will the Results Help Me In My Patient Care?
  - Can the results be applied to my patients?
  - Were all clinically important outcomes considered?
  - Are the benefits worth the harms and costs?

## 結論: Based on the JAMA User Guides series

