

MRCPsych Paper B Critical Review ± Evidence-Based Practice Syllabic Content

Outcome: To make the optimal use of current best evidence in making decisions about the care of patients

1. Translation of clinical uncertainty into an answerable question

- 1.1. formulates clinical questions using the PECO(t) formula (Patient, exposure/intervention, comparison, outcome, time)
- 1.2. recognises and formulates different types of clinical questions:
 - 1.2.1. therapy
 - 1.2.2. harm
 - 1.2.3. aetiology
 - 1.2.4. prognosis
 - 1.2.5. diagnosis
 - 1.2.6. economic
 - 1.2.7. qualitative

2. Systematic retrieval of the best available evidence

- 2.1. Knows the different sources of evidence
- 2.2. Describes

2.6.2. The Cochrane Library.

3. Critical appraisal of the evidence

3.1. Basic epidemiology

- 3.1.1. Describes what is meant by
 - 3.1.1.1. Systematic error (selection and measurement bias)
 - 3.1.1.2. Random error (chance)
 - 3.1.1.3. Internal validity and external validity
- 3.1.2. Describes sources of bias and strategies to overcome them
- 3.1.3. Describes what is meant by reliability, specifically:
 - 3.1.3.1. inter-rater reliability
 - 3.1.3.2. test-retest reliability
- 3.1.4. Describes what is meant by validity, specifically:
 - 3.1.4.1. construct validity
 - 3.1.4.2. content validity
 - 3.1.4.3. face validity
 - 3.1.4.4. criterion validity (concurrent and predictive validity)
- 3.1.5. Describes different approaches to sampling:
 - 3.1.5.1. simple random
 - 3.1.5.2. stratified random
 - 3.1.5.3. systematic
 - 3.1.5.4. cluster
- 3.1.6. Describes confounding and strategies to reduce the risk of confounding:
 - 3.1.6.1. Randomisation
 - 3.1.6.2. Restriction
 - 3.1.6.3. Matching
 - 3.1.6.4. adjustment using stratification or multivariable regression models
- 3.1.7. Describes allocation concealment and methods of randomization:
 - 3.1.7.1. Stratification
 - 3.1.7.2. Minimization
 - 3.1.7.3. Cluster
 - 3.1.7.4. Block
- 3.1.8. Knows how blinding can reduce measurement bias
- 3.1.9. Describes approaches for arguing a cause and effect relationship (Koch, Hill, Rothman, Susser)
- 3.1.10. Knows the benefits and weah05--E11

3.1.10.6. ecological survey

3.1.10.7.

- . 3.2.11.1. crude death rate, death rate, mortality rate
- 3.2.11.2. age adjusted death rate
- 3.2.11.3. standardized mortality ratio
- 3.2.11.4.
- 3.2.12. Calculates and interprets measures of treatment impact:
 - 3.2.12.1. odds ratios
 - 3.2.12.2.

- 3.2.21.2. multiple
- 3.2.21.3. logistic
- 3.2.22. Knows what is meant by Intention to Treat Analysis and understand different ways of handling missing data:
 - 3.2.22.1. Last observation carried forward
 - 3.2.22.2. sensitivity analysis
 - 3.2.22.3. multiple imputation
 - 3.2.22.4. best case analysis
 - 3.2.22.5. worst case analysis
- 3.2.23. Describes the role and limitations of meta-analysis to improve power and robustness of research
- 3.2.24. Describes the difference between fixed and random effect models
- 3.2.25. Recognise statistical heterogeneity:
 - 3.2.25.1. visual inspection of forest plots
 - 3.2.25.2. chi-square test
 - 3.2.25.3. Galbraith plot
- 3.2.26. Describes the role of sensitivity analysis in metaanalysis.

3.3. Basic Health Economics

- 3.3.1. Describes the basic differences between direct and indirect costs and the ways in which they can be estimated
- 3.3.2. Knows what is meant by:
 - 3.3.2.1. cost-effectiveness
 - 3.3.2.2. cost-utility analysis
 - 3.3.2.3. cost-benefit analysis
 - 3.3.2.4. cost-minimisation
- 3.3.3. Knows what is meant by a quality or disability adjusted life year and the rationale for using these measures
- 3.3.4. Describes opportunity cost
- 3.3.5. Describes different approaches to discounting
- 3.3.6. Knows what is meant by the term „sensitivity analysis“ in the context of an economic evaluation

3.4. Qualitative Methods

- 3.4.1. Knows when to apply qualitative research methodologies:
 - 3.4.1.1. grounded theory
 - 3.4.1.2. phenomenological
 - 3.4.1.3. ethnographic
- 3.4.2.

- 3.4.3.2. interviews
- 3.4.4. Describes the role of qualitative methodologies in instrument (i.e. screening, diagnostic, outcome measure) development
- 3.4.5. Describes methods for validating qualitative data:
 - 3.4.5.1. triangulation
 - 3.4.5.2. member checking
- 3.4.6. Describes methods for minimising bias:
 - 3.4.6.1. reflexivity
 - 3.4.6.2. bracketing
- 3.4.7. Describes methods of analyzing data
 - 3.4.7.1. content analysis
 - 3.4.7.2. constant comparison
- 3.4.8. Describes data saturation

3.5. Guideline and protocol development

- 3.5.1. Describes the process for developing NICE and SIGN guidelines
- 3.5.2. Describes the advantages and limitations of guidelines and protocols

3.6. Critical appraisal

- 3.6.1. Diagnostic questions
 - 3.6.1.1. Describes the STARD statement for reporting studies of diagnostic accuracy
 - 3.6.1.2. Critically appraises cross-sectional studies as used to address questions of prevalence and diagnostic accuracy.
- 3.6.2. Prognosis questions
 - 3.6.2.1. Critically appraise cohort studies as used to address prognostic questions
- 3.6.3. Therapy, harm and aetiology questions
 - 3.6.3.1. Describes the CONSORT statement: recommendations for improving the quality of reports of parallel-group randomized trials.
 - 3.6.3.2. Critically appraises randomised controlled trials, cohort and case control studies as used to address therapy, harm and aetiology questions.
- 3.6.4. Economic evaluations
 - 3.6.4.1. Critically appraises economic evaluations
- 3.6.5. Qualitative analysis
 - 3.6.5.1. Critically appraises qualitative research
 - 3.6.5.2. Critically appraises mixed methods research
- 3.6.6. Systematic reviews and meta-analysis

3.6.6.1. Describes the QUORUM statement for Improving the quality of reports of meta-analyses of randomized controlled trials

3.6.6.2. Critically appraises a systematic review

3.6.7. Guidelines and protocols

3.6.7.1. Critically appraises clinical practice guidelines

4. Application of the results in practice

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