

OSCE 7

Peter

Candidate Instructions

You are a junior FACEM. Your director has asked you to develop a protocol for the management of epistaxis in your emergency department. She has also asked you to look specific elements such as icepack to the neck, which packing to use and use of topical medications.

1. Outline the important parts that must be included in the protocol (75%)
2. Outline your approach to critically appraising the literature(25%)

Domains tested:

- Medical Expertise
- Scholarship and Teaching

Appraising a Study- without a template

- What is the question being asked ?
 - Is it an Effectiveness of Treatment?
 - Frequency of Events question?
 - Does the study test a hypothesis ie is the research question stated?
 - Beware post-hoc(testing associations not pre-specified) analyses
 - Prone to false-positives
- Is it relevant to Emergency Medicine?
- Will it add anything to what is already there?
 - It may not be new knowledge- it may be validation

What's the question being asked? Is it relevant to EM and will it add anything to the knowledge base?

Appraising a Study- without a template

- What was the study design and was it appropriate?

The Study Design

Types of Study Design

- Meta analysis or RCTs
- RCTs
- Non RCTs
- Cohort Studies
- Case Control Studies
- Observational Studies

BEST TRIALS



NOT SO GREAT TRIALS

REMEMBER that RCTs are not always appropriate or ethical ie in surgical procedure trials etc.

Study Method and Data

- Was there a clear study method
- Does the method make sense?
 - Eg compare like for like ie dosages
- Was all data included?
 - ie no data omitted?

Is there deviation from the original protocol?

- Did they recruit the numbers they said they would?
- Were there changes to inclusion/exclusion criteria?

Did they do what they said they were going to do?

Is there Bias?

- Have the results of the study “deviated from the truth”
 - This is not intentional on the part of the authors
- What are the causes of bias?
 - Chance ie random error
 - It affects the precision of the study, rather than the direction of the study
 - Systematic Bias (due to study design)
 - Over/Underestimates the truth
 - Look in the following places for systematic bias
 - How participants selected
 - How data collected
 - Through the interpretation of the data

Do the conclusions make sense?

- Looking at the data, do the conclusions make sense?
 - Results may be statistically significant, but make no clinical sense
 - Are statistically insignificant results, that show large differences ignored
 - This is usually due to sample size.
 - Can the conclusions drawn apply to broader groups of patients?

Conflicts or potential conflicts of interest

Conclusion

- **What is the question asked?**
 - It is relevant to my field?
 - Will it add anything new to my knowledge?
- **Is it a high quality study- or highest quality I can get?**
 - Meta analysis, RCT, case study?
- **Does it appear well conducted and make sense?**
 - Proposed the question and makes sense
 - Like comparing 10mg of Droperidol to 1mg Midazolam is not sensible
 - Stuck to methods
- **Is there bias or conflicts of interest or anything that will affect the results**
- **Is it validated outside its own center and population?**
- **Can I/Would I use the results?**