Constructing a Well-Built Clinical Question (WBCQ)

Clinical Example – Diagnosis

Scenario
You are doing a weekend locum at a travel medicine practice. A university student presents with fevers, myalgia, sweats and malaise. He returned 4 weeks ago from backpacking in Tanzania. You wonder about the possibility of malaria and the clinic had urine dipstick rapid tests for malaria in the cupboard. Having not come across these before, you are concerned about how reliable they are in diagnosing malaria. You construct a WBCQ before going to your electronic resources to find out.

Teaching point
Questions of diagnosis can be readily put into the PICO format. Remember that your ‘Comparator’ is likely to be the current ‘gold standard’ against which you want to compare the new test (which becomes the ‘Intervention’). Ensure you clarify whether the new test is in addition to, or instead of, the previous gold standard. Sometimes a new test may add to the sensitivity and specificity of the previous gold standard, without replacing it. In this case, ‘I’ will become ‘C’ + ‘new test’.

PICO

<table>
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<tr>
<th>P</th>
<th>Returned travelers from malaria endemic areas</th>
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<tbody>
<tr>
<td>I</td>
<td>Rapid urine dipstick testing</td>
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<tr>
<td>C</td>
<td>Conventional testing (thick an think films, PCR testing)</td>
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<td>O</td>
<td>Sensitivity, specificity, positive and negative predictive value</td>
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Clinical Question
In returned travelers from endemic malaria areas, what is the sensitivity, specificity, positive and negative predictive values of rapid urine dipstick malaria tests as compared with conventional testing (think and thin films, PCR testing).

Evidence
Now think about what type of study would be best to answer this question?

Ideal study type: a prospective, blinded comparison between the current gold standard test and the new test in patients suspected of the diagnosis.

A meta-analysis of more than one study with this design would be better still.