

Evidence Based Dentistry

Formulating answerable clinical questions

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Bleeding, pain and swelling four hours after wisdom tooth removal in a 32 y female.

Use of analgetics, antifebriles, antibiotics?



A 66 year old woman comes to your clinic due to oral lichen planus. She wants to confer with you about a new treatment option described in the latest issue of 'Health & Fitness'



Tooth coloured materials are acceptable alternatives for amalgam.



Where do clinical questions arise from?

1. Clinical findings - Gather and interpret findings
2. Etiology - Identify causes for disease
3. Differential diagnosis - Causes of patients' problem
4. Diagnostic tests - Select and interpret diagnostic tests
5. Prognosis - estimate clinical course and complications
6. Therapy- treatments that do more good than harm
7. Prevention - reduce the chance of disease
8. Self-improvement - keep up to date, improve skills

Why questions should be clearly formulated

(Sackett et al. EBM, 2001)

1. Help us focus scarce learning time on evidence that is directly relevant to our patients' clinical needs.
2. Help us focus scarce learning time on evidence that directly addresses our particular knowledge needs, or those of our learners.
3. They can suggest high-yield search strategies
4. They suggest the forms that useful answers might take

Why questions should be clearly formulated (Sackett et al. EBM, 2001)

5. When sending or receiving a patient in referral, they can help us to communicate clearly with our colleagues.
6. When teaching, they can help our learners to better understand the content of what we teach, while also modeling some adaptive processes for lifelong learning.
7. When we answer our questions, our curiosity is reinforced, our cognitive resonance is restored, and we can become better, faster and happier as clinicians.

Example: Problem / hypothesis

“Tooth coloured materials are acceptable alternatives for amalgam in the posterior teeth”

What is being discussed?

- Caries / Replacement ?
 - primary/secondary?
 - large/small?
 - proximal / gingival / occlusal?
- Intraoral location:
 - premolars /molars?
- Patient:
 - adults/children
 - » deciduous/permanent?

"Tooth coloured materials "

- Composite resin (macrofill, microfill, hybrid, "flowables" ?)
- Composite resin with glassionomer addition?
- Composite resin, cemented inlay (clinic, laboratory?)
- Ceramic, cemented inlay (sintered, cast, grinded?)
- Glassionomer (metal-reinforced, conventional?)
- Glassionomer with resin?
- "Polyglass", "ceromer", "crystal polymer", "polymer ceramic"?
- Ormocer? - *"The flowable ceramic"*
- Doxadent? - *"The ceramic restoration that can be formed directly in the tooth"*

For adults with large primary
caries cavities in the occlusal
surface of molars is
xxxxxxxxxxxx an acceptable
alternative for amalgam

For adults with large primary caries cavities in the occlusal surface of molars is xxxxx an acceptable alternative for amalgam
For adults with small primary caries cavities in the occlusal surface of molars is xxxxx an acceptable alternative for amalgam
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For children.....

xxxxx: Composite resin , Composite resin with glassionomer addition, Composite resin, cemented inlay , Ceramic, cemented inlay, Glassionomer, Glassionomer with resin, "Polyglass", "ceromer", "crystal polymer", "polymer ceramic" , Ormocer, Doxadent

Formulating good and clinically relevant questions

... that can be answered by searching the literature...

1. Needs to be directly relevant for the actual problem;
2. Must be formulated in a way that facilitates the search for precise answers;
3. Should focus on and precisely describe four essential components

Four essential components

- 1. The patient and / or problem that is addressed:
How do I describe a patient group similar to mine?
- 2. The main intervention or exposure considered:
Which treatment, diagnostic test, prognosis-factor or exposure am I contemplating?
- 3. Comparable intervention, if relevant:
Which main alternative can be used for comparison with the intervention?
- 4. The clinical outcome(s) of interest:
What do I hope to achieve, measure, improve or influence?

Example: Problem / hypothesis

“Tooth coloured materials are acceptable alternatives for amalgam in the posterior teeth”

1. Patient or problem that is addressed?
2. Intervention considered?
3. Comparable intervention considered?
4. The clinical outcome of interest

Tooth coloured materials are acceptable alternatives for amalgam in the posterior teeth.



For adults with small primary caries cavities in the approximal surface of premolars are hybrid composite resins acceptable alternatives for amalgam

1. Patient or problem that is addressed
2. Intervention considered
3. Comparable intervention considered

Tooth coloured materials are acceptable alternatives for amalgam in the posterior teeth.



For adults with small primary caries cavities in the approximal surface of premolars are (hybrid) composite resins acceptable alternatives for amalgam

What is meant by “acceptable”?

Patient criteria?

Dentist criteria? / caries? / longevity? / fracture risk? / prognosis? / etc.

Tooth coloured materials are acceptable alternatives for amalgam in the posterior teeth.



For adults with small primary caries cavities in the approximal surface of premolars are (hybrid) composite resins acceptable alternatives for amalgam



For adults with small primary caries cavities in the approximal surface of premolars do (hybrid) composite resins show **comparable longevity** to amalgam

1. Patient or problem that is addressed
2. Intervention considered
3. Comparable intervention considered
4. The clinical outcome of interest