Forskningstræning: Fra evidens til guidelines

4.-5. dec. 2008

Critical appraisal

" All scientific work is incomplete – whether it be observational or experimental. All scientific work is liable to be upset or modified by advancing knowledge. That does not confer upon us a freedom to ignore the knowledge we already have, or to postpone the action that it appears to demand at a given time…"

Hill

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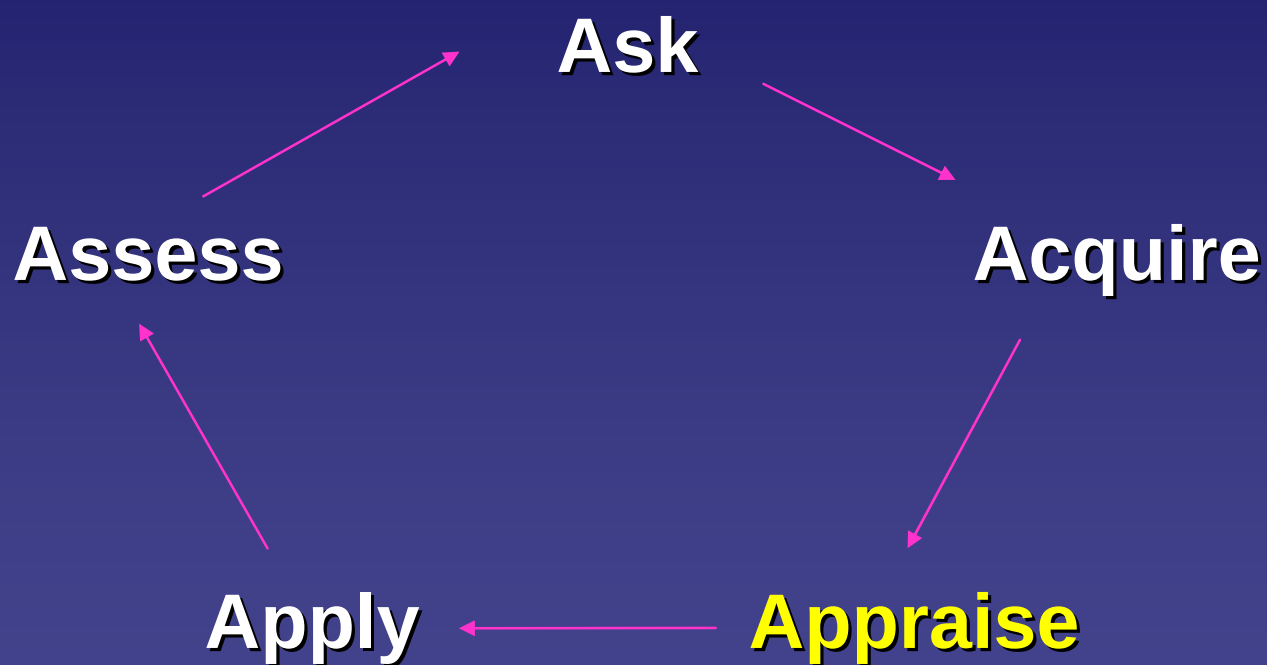
Evidence Based Practice



Vurdering af videnskabelige undersøgelser:

- undersøgelsens formål

- sammenhængen mellem formål og design

- undersøgelsens interne validitet

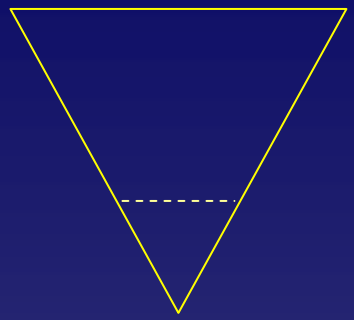
  -- undersøgelsens kvalitet

  -- gyldigheden af de sammenligninger der foretages

- undersøgelsens eksterne validitet

  -- undersøgelsens gyldighed i andre populationer

P



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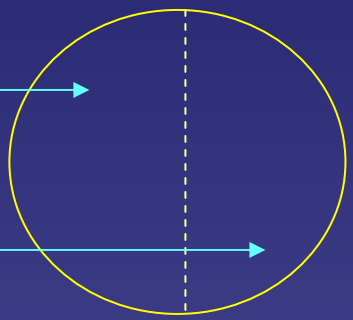

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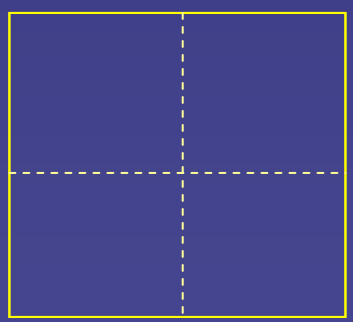


Rekruttering:

Er deltagerne repræsentative for målgruppen?

- udvalgt tilfældigt? Selektion?
- relevante inklusion/eksklusion kriterier?
- studie størrelse?

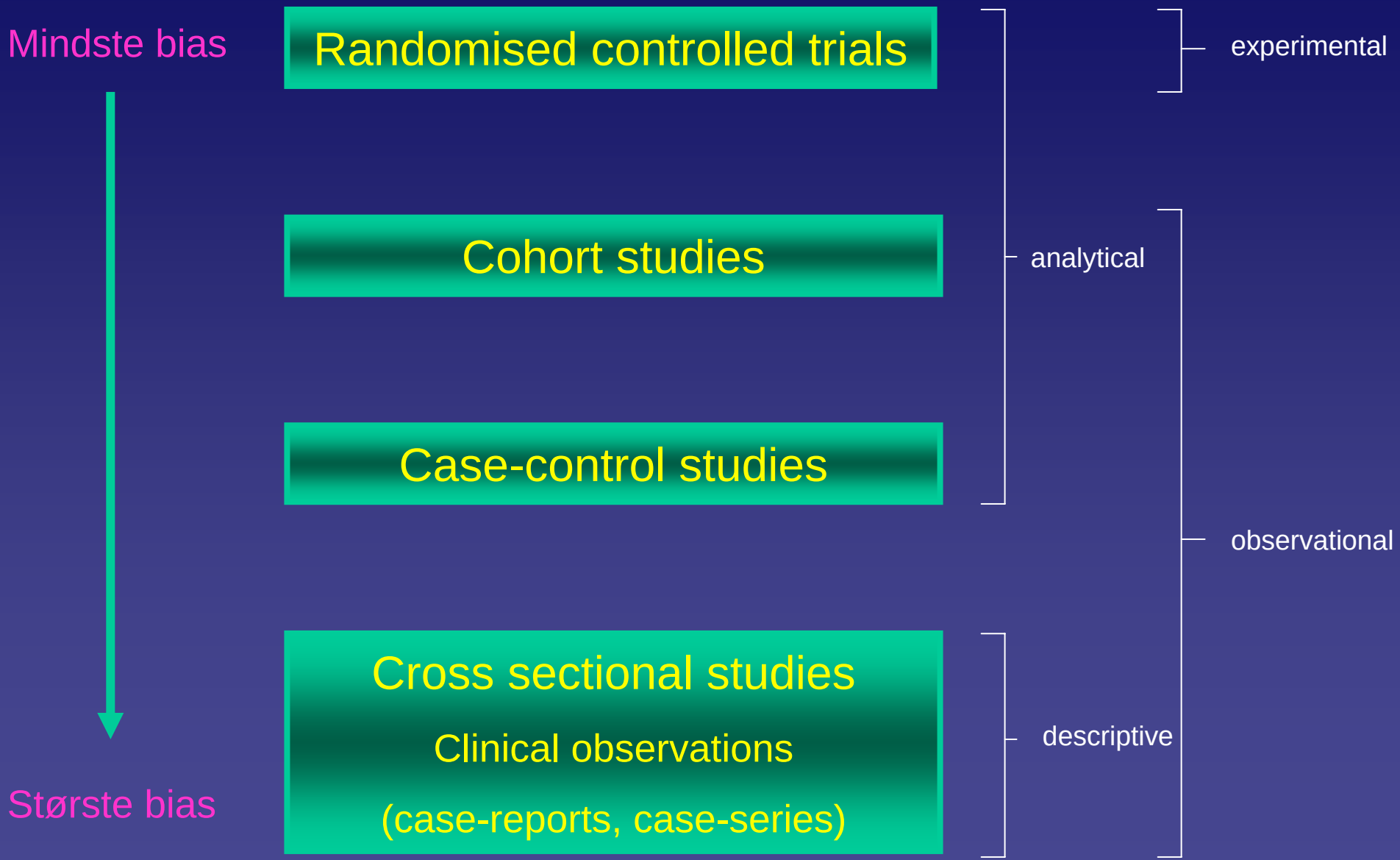
Allokering:

- sammenlignelige studiegrupper?
- vedligeholdelse af studiegrupperne?
- mulighed for confounding?

Målinger:

Valide og u-biased målinger?

- Blinding
- Objektive outcomes


Mindste bias
Største bias
Randomised controlled trials
Cohort studies
Case-control studies
Cross sectional studies
Clinical observations
(case-reports, case-series)
experimental
analytical
descriptive
observational

Publikationstype	Evidens	Styrke
• Meta-analyse. Systematisk oversigt over flere randomiserede forsøg. • Mindst et randomiseret klinisk forsøg	Ia Ib	A
• Kontrolleret, ikke-randomiseret studie • Observerende kohorteundersøgelse • Diagnostisk test (direkte diagn. metode)	IIa IIb	B
• Case-kontrol undersøgelse • Diagnostisk test (indirekte metode) • Deskriptiv undersøgelse	III	C
• Mindre serier. Kasuistikker • Lærebogskapitel • Traditionel oversigstartikel • Ekspertvurdering • Ledende artikel	IV	D
• Anbefalet klinisk praksis		✔

Hill's kriterier for kausalitet

1. **Strenght –** *strong associations are more likely to be causal than weak associations*
2. **Consistency –** *repeated observations of an association in different populations under different circumstances*
3. **Specificity –** *a cause lead to a single effect, not multiple effects*
4. **Temporality –** *the cause precede the effect in time*
5. **Biologic gradient –** *the precense of a dose-response curve*
6. **Plausibility –** *the biologic plausibility of the hypothesis*
7. **Coherence –** *a cause and effect interpretation for an association does not conflict with what is known of the natural history and biology of the disease*
8. **Experimental evidence –** *seldom available for human populations*
9. **Analogy –** *if one drug can cause birth defects, perhaps another one can also….*