



Classification of people with back pain – a clinical and scientific perspective

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January 2012



Overview

- Why classify?
- How classification systems are developed
 - How do we know if they work?
 - Decision-making in uncertainty

Why classify?

Specific back pain

- Serious pathology
- Neurocompression

Nonspecific back pain

- Most back pain in primary care

Medical model

Symptoms & signs model

Is nonspecific back pain
more one condition?

Clinicians: 94% say yes

Kent & Keating. Do primary-care clinicians think that non-specific low back pain is one condition?
Spine 2004 29(9) p1022-1031

Is nonspecific back pain more one condition?

Clinicians: 94% say yes

Researchers: 79% say yes

Kent & Keating. Do primary-care clinicians think that non-specific low back pain is one condition?
Spine 2004 29(9) p1022-1031
Kent et al. Searching for a conceptual framework for nonspecific low back pain.
Manual Therapy 2009 14(4) p387-396

Holy grail questions

- What is the likely prognosis of this patient?
- What treatment is best for this patient?

Useful terms

- Predictors of outcome regardless of treatment = *prognostic factors*

Childs & Cleland. Development and application of clinical prediction rules to improve decision making in physical therapy practice. *Physical Therapy* 2009, 86(1) p122-131
Hancock et al. A guide to interpretation of studies investigating subgroups of responders to physical therapy interventions. *Physical Therapy* 2009, 89(7) p698-704

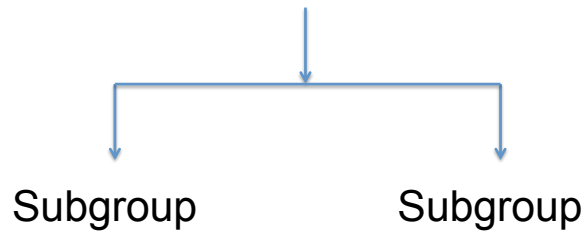
Useful terms

- Predictors of outcome regardless of treatment = *prognostic factors*
- Predictors of treatment response = *treatment effect modifiers*

Childs & Cleland. Development and application of clinical prediction rules to improve decision making in physical therapy practice. *Physical Therapy* 2009, 86(1) p122-131
Hancock et al. A guide to interpretation of studies investigating subgroups of responders to physical therapy interventions. *Physical Therapy* 2009, 89(7) p698-704

Useful terms

Classification system



How are
classification systems developed?

Types of classification systems

- Pathoanatomy-based
 - Prognosis-based
 - Treatment-based
 - Hybrid systems

Methods to form subgroups

- Subgroups based on clinical impression
- Subgroups based on experimental constructs
 - Subgroups that are 'data-driven'

Classification development

Derivation studies



Classification development

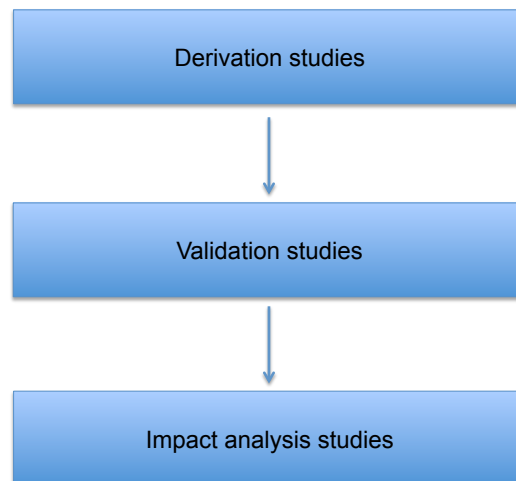
Derivation studies



Validation studies



Classification development



How do we know if
classification systems work?

Evidence

- Reliability
- Validity
- Efficacy

Efficacy

- Are *patient outcomes* better when using this classification system?
- Are *health system outcomes* better when using this classification system?

Cohort studies (single-group)

- Ideal for identifying prognostic factors

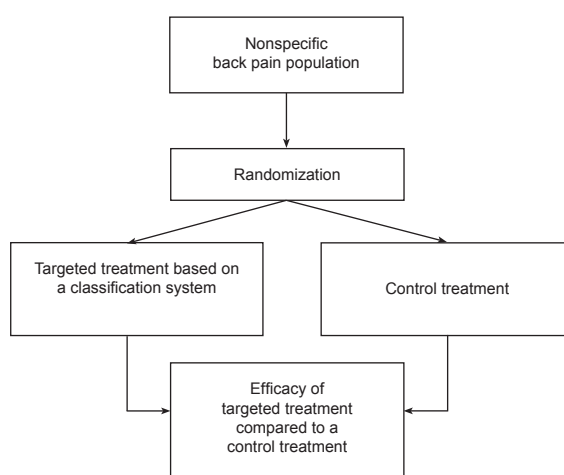
Cohort studies (single-group)

- Ideal for identifying prognostic factors
- Maybe develop very tentative hypotheses
about treatment modifier effects

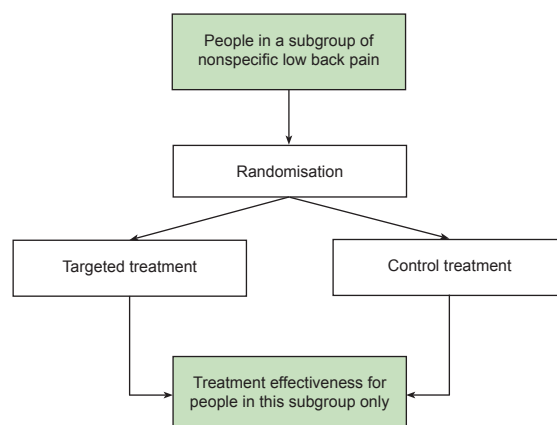
Randomised Controlled Trials (RCTs of 2 or more groups)

- Only RCTs can separate prognostic effects from treatment modifier effects

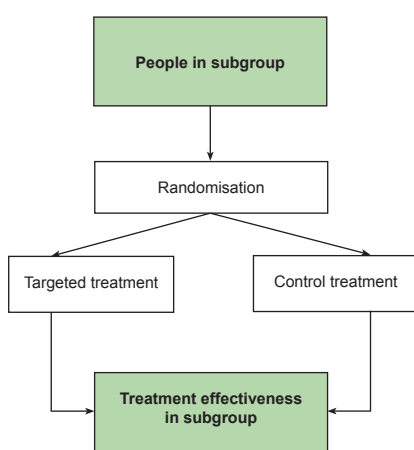
Classification system RCT



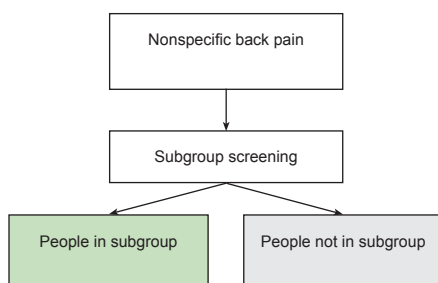
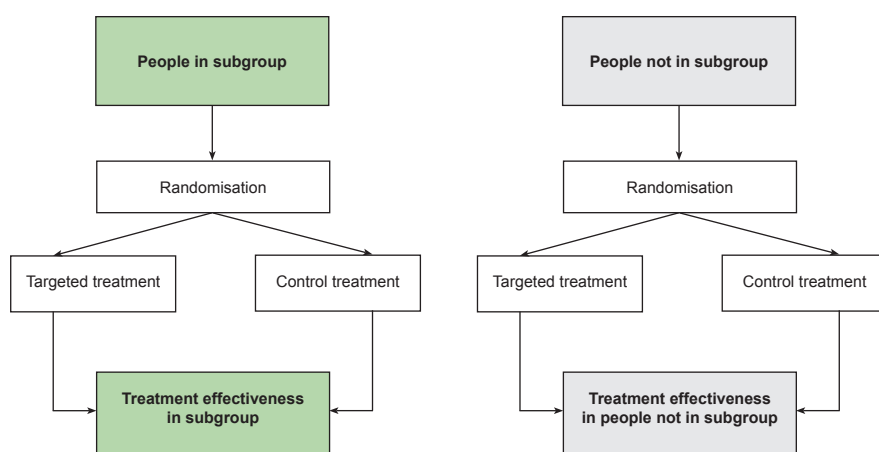
Single-subgroup RCT

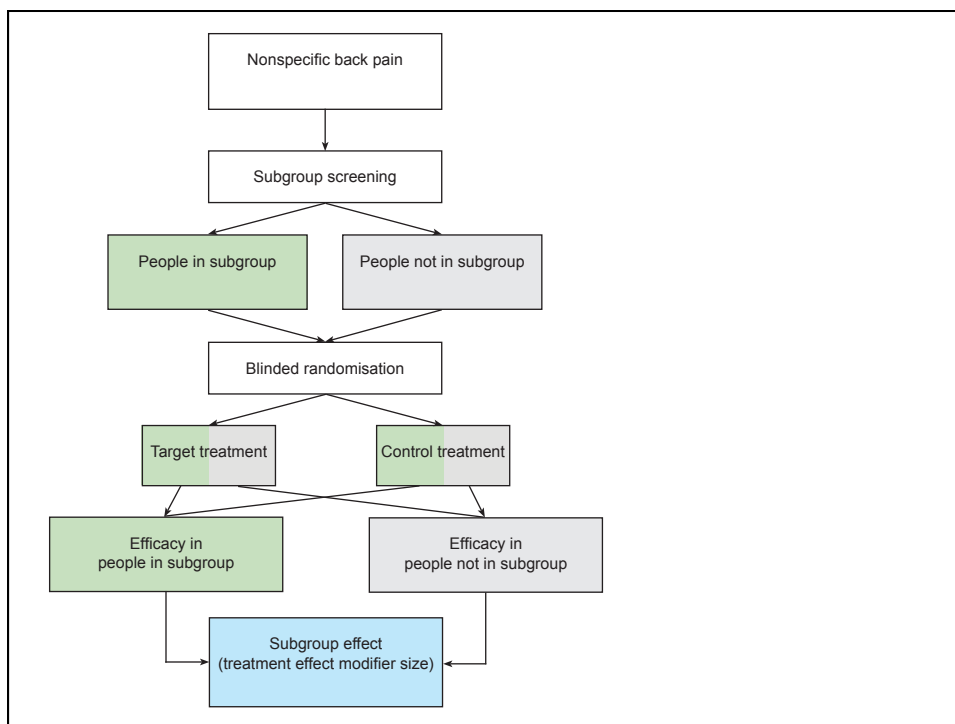
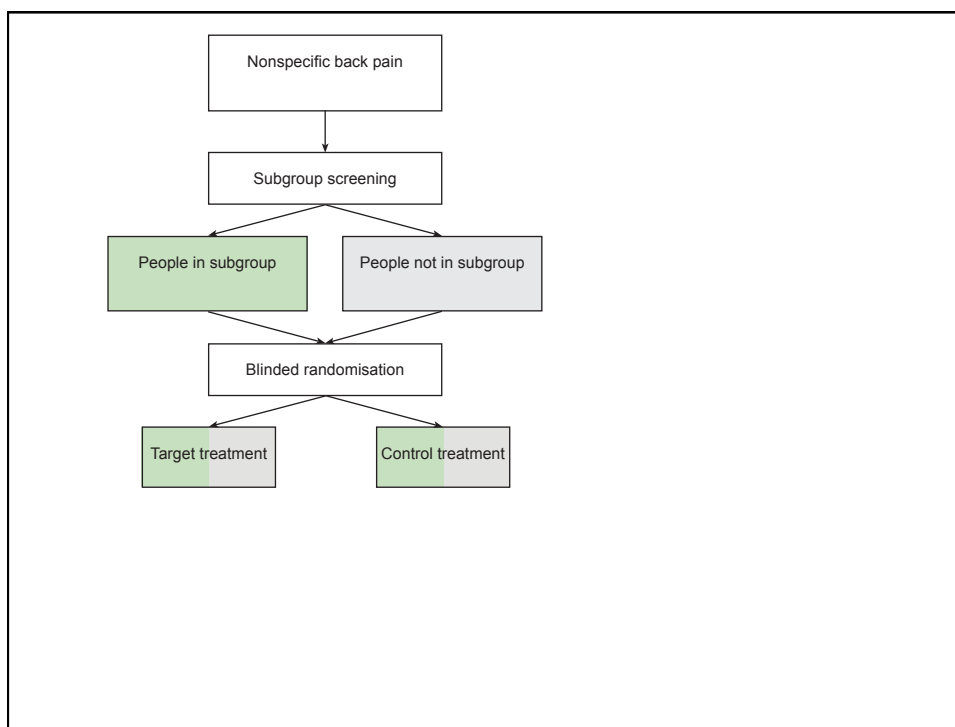


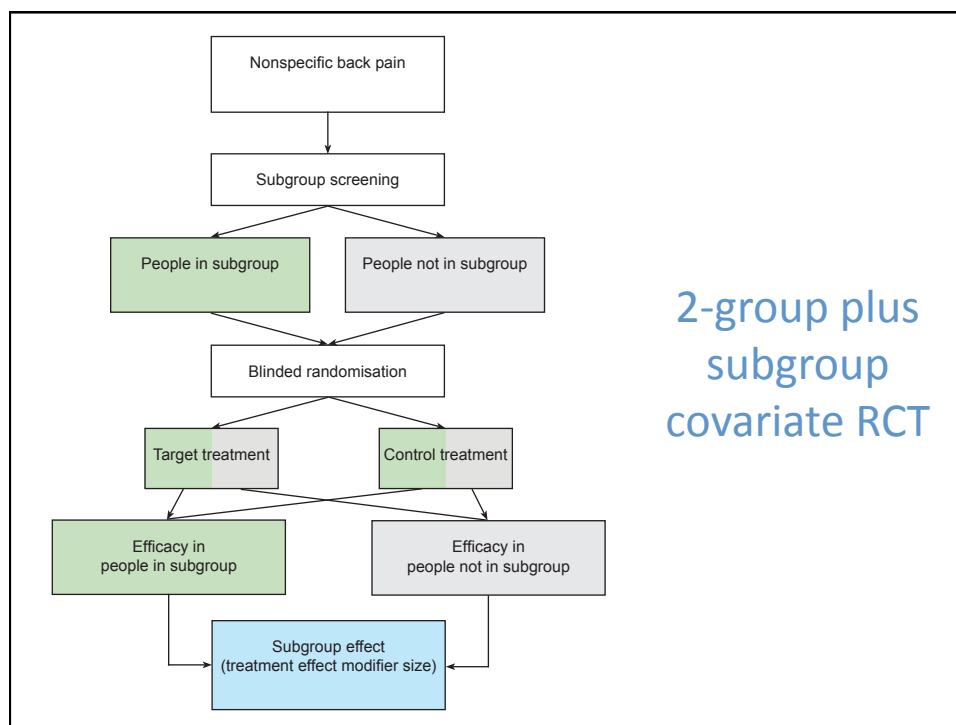
Conceptually we need two RCTs



Conceptually we need two RCTs







Decision-making in clinical uncertainty

The research mindset

The clinical mindset

Evidence based care



Sackett 1991

Questions

