



SYMPOSIUM

Large-Scale Multi-centre Trials in Sleep Disorders: Sleep Apnea

Doug McEvoy

WorldSleep07

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Large Scale Multicentre Trials in Sleep Apnea

- Why *RCT's*, why *large scale*, why *multicentre*?
- Important unresolved questions in sleep apnea
- Methodological issues
- Current international trends
- Can capacity for RCTs be enhanced?

Important unresolved questions in OBSTRUCTIVE SLEEP APNEA

- Does OSA cause cardiovascular disease?
- Does OSA cause learning difficulties in children?
- Does treatment of OSA reduce accidents?
- Does OSA cause mental illness?
- Is mild OSA worth treating and with what?
- Are ambulatory models of care as effective as current models of hospital-based care?

The rationale for large, multicentre RCTs in sleep apnea

- **RCTs establish**
 - Causal relationships (eg OSA *versus* CVD, depression)
 - Level of benefit expected from treatment
- **OSA highly prevalent, chronic disorder**
 - Treatment effects likely small, yet potentially important
 - Therefore large sample size
- **Multi-centre, multi-national, multi-ethnic trials**
 - Increase generalizability of findings

Methodological issues

- Measuring the disease accurately
 - should the AHI be laid to rest?
- Will poor long-term adherence to treatments (eg CPAP, oral appliances) sink long-term trials?
- Should symptomatic patients be randomized to placebo or no active treatment?
- Is sham CPAP an appropriate placebo? Do all trials need a placebo?

“Large-scale” multi-centre RCTs planned or in progress

- **Neurobehavioural**

- APPLES (USA; n= 1,000)
- CATNAP (USA; n= 270)

- **Cardiovascular**

- MOSAIC (UK, n= 400)
- CANPAP II (Canada, n= 400)
- SAVE (Australia-China; n= 4000)
- Atrial Fibrillation (USA; n=250)
- Spanish trial (n=700)

- **Clinical Management**

- VA trial (USA; n=260)
- SMOSA (Australia; n=200)
- Spanish trial (n= 200?)

How can the capacity for large-scale RCTs in sleep apnea be increased?

- National networks
- International co-operation
 - Meta-analyses
 - ***International networks***

National Sleep Research Networks

- The Spanish Sleep Disordered Breathing Network
- The Australasian Sleep Trials Network
- The European Sleep Apnea Network
- The CANPAP network

International Networks

- Capacity for Mega-RCT(s) $n = 10,000 +$
 - Cardiovascular/ metabolic health
 - Psycho-social health
 - Mental health
 - Accident prevention
 - Productivity/ employment
 - Health Care utilization

