

Is the pain experienced by infants during immunisation affected by method of administration? A Randomised Controlled Trial

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Background

A belief held by nurses is that giving two injections at the same time is less painful than giving one injection after another. There is a need for more evidence to inform best practice and aid clinicians.

Research Question

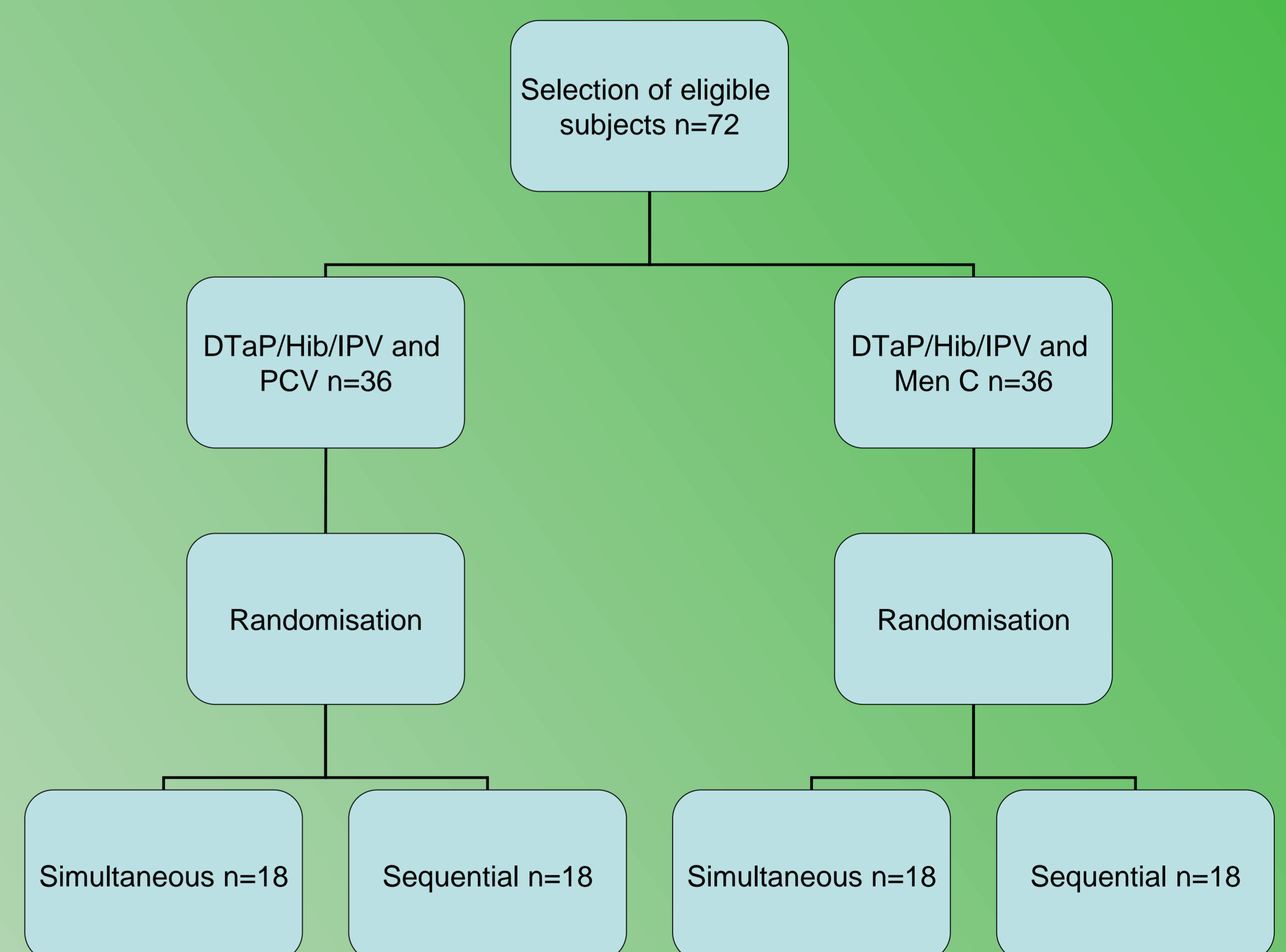
Are behavioural manifestations of pain reduced when immunisations are given to infants aged 2 to 6 months simultaneously compared with sequentially?

Method and Outcome Measures

We are conducting a randomised controlled trial of infants receiving their primary immunisations in primary care clinics in Gwent (Figure 1).

- The process will be videotaped so that independent paediatric nurses can review and code the tapes using a modified behaviour pain scale (MBPS) ¹
- Pain scores between the groups will be compared and their statistical significance measured.
- Parental perception of distress will be assessed before and after using a Visual Analogue Scale ²
- Observed duration of distress will be compared between the groups and analysed using the t-test

Figure 1 Recruitment and randomisation



Sample

Inclusion criteria ~ aged 2 to 6 months, fit and well and due 2 immunisations on the day with parental consent.

Exclusion criteria ~ infants with known physical or psychological conditions, infants who have been hospitalised, infants whose parents are needle phobic, parents who decline to participate



Impact of the Study

- The feasibility study will provide the basis for future research
- Testing the interventions for evidence of significant impact
- Testing the methodology for a larger multi-centre RCT
- By the time a child reaches 15 months of age s/he should have received 10 immunisation injections, any interventions that reduce pain are important for parents and infants and may contribute to improved uptakes

References

¹ Ipp, M et al (2007) Vaccine related pain: randomised controlled trial of two injection techniques.
Arch Dis Child 92:pp. 1105-8

² Weivers, ME. & Lowe, NK. (1990). A critical review of visual analogue scales in the measurement of clinical phenomena.
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