Background

- PIVCs are ubiquitous in modern healthcare but around half fail before treatment is delivered; painful and costly resites are common
- Effective securement reduces failure but optimal methods to achieve this are unclear
- Medical adhesive tapes are widely-used but not evidenced-based

Primary aim: Feasibility of conducting a definitive trial
Secondary aims: PIVC failure; dwell time; and adverse skin events

Methods

- Adults requiring a PIVC were eligible; those with current blood stream infection or prone to skin tears were excluded
- Two evidence-based securement bundles were tested against standard care (Figure 1)

Results

- 104 participants were included in the analysis
- All feasibility criteria were met, except the eligibility criteria indicating changes to screening processes are needed
- No statistically significant differences in PIVC failure or dwell time were found between groups in this small pilot RCT
- 13% of participants had adverse skin events

CONCLUSIONS

An adequately-powered RCT testing evidence-based securement bundles to reduce PIVC failure is feasible, safe and should be pursued.

Innovative solutions are urgently required to address the unresolved issue of unacceptably high rates of PIVC failure.