

Appendix 5. Baseline characteristics of children those with no previous exposure to virtual reality (intention-to-treat analysis)

| | Standard care (n=39) | VR intervention (n=40) |
|------------------------------|----------------------|------------------------|
| Age (months) | 48 [48–49] | 48 [48–49] |
| Female sex | 14 (35.9) | 23 (59) |
| Primary language – English | 37 (94.9) | 37 (92.5) |
| Needle apprehension | 2 [1–3] | 2 [1–2] |
| Vision concerns | 0 (0) | 0 (0) |
| Behavioural concerns | 1 (2.6) | 1 (2.5) |
| Developmental concerns | 1 (2.6) | 0 (0) |
| Medical history ^A | 4 (10.3) | 4 (10) |

Data are given as the median [interquartile range] or n (%).

Data regarding sex were missing for one child in the virtual reality (VR) group.

^AMedical history not given for reasons of anonymity.

Appendix 6. Pain, distress and enjoyment scores in those with no previous exposure to virtual reality (intention-to-treat analysis)

| | Standard care (n=39) | VR intervention (n=40) | P-value |
|---------------------------------------|----------------------|------------------------|---------|
| Child rating of pain/distress | | | |
| Faces Pain Scale – Revised | 2 [0–8] | 2 [0–6] | 0.08 |
| Poker chip tool | 2 [1–4] | 1 [1–2] | 0.11 |
| Observer ratings of pain/distress | | | |
| Parent rating of pain (VAS) | 23 [7–73] | 11.5 [1–28] | 0.019 |
| Parent rating of distress (VAS) | 27 [4–78] | 6.5 [0–30] | 0.004 |
| Practitioner rating of pain (VAS) | 23 [10–70] | 12 [3.5–21.5] | 0.007 |
| Practitioner rating of distress (VAS) | 23 [7–79] | 10 [0–22] | 0.004 |
| Enjoyment | 1 [1–2] | 2 [2–3] | <0.001 |

Unless indicated otherwise, data are presented as the median [interquartile range]. P-values were calculated using the Wilcoxon rank-sum test.

Enjoyment data were missing for eight children in the standard care group.

Poker chip tool data were missing for one child in the virtual reality (VR) group.