

### Appendix 7. Baseline characteristics of children with a high level of needle apprehension (intention-to-treat analysis)

	Standard care (n=16)	VR intervention (n=9)
Age (months)	48.5 [48–49.5]	48 [48–49]
Female sex	10 (62.5)	7 (87.5)
Primary language – English	14 (87.5)	9 (100)
Needle apprehension	3 (18.8)	0 (0)
Vision concerns	0 (0)	0 (0)
Behavioural concerns	0 (0)	1 (11.1)
Developmental concerns	1 (6.3)	0 (0)
Medical history <sup>A</sup>	3 (18.8)	1 (11.1)

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

VR, virtual reality.

<sup>A</sup>Medical history included asthma, tympanostomy tubes, liver transplant, meningitis.

### Appendix 8. Pain, distress and enjoyment scores for those with a high level of needle apprehension (intention-to-treat analysis)

	Standard care (n=45)	VR intervention (n=40)	P-value
Child rating of pain/distress			
Faces Pain Scale – Revised	9 [5–10]	2 [0–6]	0.02
Poker chip tool	2.5 [1–4]	1 [1–3]	0.17
Observer ratings of pain/distress			
Parent rating of pain (VAS)	70 [51.5–84]	18 [4–38]	<0.01
Parent rating of distress (VAS)	84.5 [66–93]	21 [0–47]	<0.01
Practitioner rating of pain (VAS)	67.5 [34–87]	16 [7–45]	<0.01
Practitioner rating of distress (VAS)	82.5 [67.5–94]	17 [10–39]	0.01
Enjoyment	1 [1–1]	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 three children in the standard care group.

VAS, visual analogue scale; VR, virtual reality.