To assess the efficacy and safety of a virtual reality distraction for needle pain in 2 common hospital settings" Chan et al (2019).

Abstract:

OBJECTIVE: To assess the efficacy and safety of a virtual reality distraction for needle pain in 2 common hospital settings: the emergency department (ED) and outpatient pathology (ie, outpatient laboratory). The control was standard of care (SOC) practice.

STUDY DESIGN: In 2 clinical trials, we randomized children aged 4-11 years undergoing venous needle procedures to virtual reality or SOC at 2 tertiary Australian hospitals. In the first study, we enrolled children in the ED requiring intravenous cannulation or venipuncture. In the second, we enrolled children in outpatient pathology requiring venipuncture. In the ED, 64 children were assigned to virtual reality and 59 to SOC. In pathology, 63 children were assigned to virtual reality and 68 to SOC; 2 children withdrew assent in the SOC arm, leaving 66. The primary endpoint was change from baseline pain between virtual reality and SOC on child-rated Faces Pain Scale-Revised.

RESULTS: In the ED, there was no change in pain from baseline with SOC, whereas virtual reality produced a significant reduction in pain (between-group difference, -1.78; 95% CI, -3.24 to -0.317; P = .018). In pathology, both groups experienced an increase in pain from baseline, but this was significantly less in the virtual reality group (between-group difference, -1.39; 95% CI, -2.68 to -0.11; P = .034). Across both studies, 10 participants experienced

minor adverse events, equally distributed between virtual reality/SOC; none required pharmacotherapy.

CONCLUSIONS: In children aged 4-11 years of age undergoing intravenous cannulation or venipuncture, virtual reality was efficacious in decreasing pain and was safe.

TRIAL REGISTRATION: Australia and New Zealand Clinical Trial Registry: ACTRN12617000285358p.

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Reference:
Chan, E., Hovenden, M., Ramage, E., Ling, N., Pham, J.H., Rahim, A., Lam, C., Liu, L., Foster, S., Sambell, R., Jeyachanthiran, K., Crock, C., Stock, A., Hopper, S.M., Cohen, S., Davidson, A., Plummer, K., Mills, E., Craig, S.S., Deng, G. and Leong, P. (2019) Virtual Reality for Pediatric Needle Procedural Pain: Two Randomized Clinical Trials. The Journal of Pediatrics. April 13th. . doi: 10.1016/j.jpeds.2019.02.034.