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Date: 2015-03-13

Question: Should sitting up vs lying supine be used for reducing vaccine injection pain in children over 3 years and adults?¹

Settings: hospital clinic

Bibliography: Lacey 2008

Quality assessment							No of patients		Effect		Quality	Importance
No of studies	Design	Risk of bias	Inconsistency	Indirectness	Imprecision	Other considerations	Sitting up	Lying supine	Relative (95% CI)	Absolute		
Fear Pre-procedure ² (measured with: validated tool (Visual Analog Scale Fearometer 1-10) by child ^{3,4} ; Better indicated by lower values)												
1	randomised trials	serious ⁵	no serious inconsistency	no serious indirectness	serious ⁶	none	52	55	-	SMD 0.39 lower (0.77 to 0.01 lower) ²	⊕⊕⊕⊕ LOW	CRITICAL
Pain (measured with: validated tool (Wong & Baker FACES scale 0-10) by child ³ ; Better indicated by lower values)												
1	randomised trials	serious ⁵	no serious inconsistency	no serious indirectness	serious ⁷	none	52	55	-	SMD 0.07 higher (0.31 lower to 0.45 higher)	⊕⊕⊕⊕ LOW	CRITICAL
Distress Pre-procedure (assessed with: validated tool (cry yes/no) by researcher ^{3,8})												
1	randomised trials	serious ⁵	no serious inconsistency	no serious indirectness	serious ⁶	none	22/53 (41.5%)	36/55 (65.5%)	RR 0.63 (0.44 to 0.92)	242 fewer per 1000 (from 52 fewer to 367 fewer)	⊕⊕⊕⊕ LOW	IMPORTANT
								0%		-		
Distress Acute + Recovery ² (measured with: validated tool (cry duration using stopwatch) by researcher ³ ; Better indicated by lower values)												
1	randomised trials	serious ⁵	no serious inconsistency	no serious indirectness	serious ⁷	none	52	55	-	SMD 10.3 lower (20.18 to 0.42 lower) ²	⊕⊕⊕⊕ LOW	IMPORTANT
Procedure Outcomes ² (measured with: validated tool (procedure duration using stopwatch) by researcher ³ ; Better indicated by lower values)												
1	randomised trials	serious ⁵	no serious inconsistency	no serious indirectness	serious ⁷	none	52	55	-	SMD 0.20 lower (0.58 lower to 0.18 higher) ²	⊕⊕⊕⊕ LOW	IMPORTANT

Parent Fear, Use of Intervention, Vaccine Compliance, Memory, Preference, Satisfaction (assessed with: no data were identified for these important outcomes)												
0	No evidence available					none	-	-	-	-		IMPORTANT
								0%		-		

¹ During recruitment 9 parents declined participation because they preferred the sitting up position. Authors also noted that participation was declined for some participants (number not reported) after randomization to lying supine position.

² Data from 1 study (Lacey 2008) included without standardization of scores to the same scale

³ Additional study details and data provided by author (Lacey 2008)

⁴ Fear was assessed AFTER intervention (i.e., positioning) and BEFORE procedure

⁵ Participants, parents, immunizers and study personnel not blinded; outcome assessor not blinded

⁶ Sample size was below the recommended optimum information size (OIS) of 400 for an effect size of 0.2

⁷ Confidence interval crosses line of nonsignificance and sample size was below the recommended optimum information size (OIS) of 400 for an effect size of 0.2

⁸ Distress was assessed AFTER intervention (i.e., positioning) and BEFORE procedure