

PROLONGED TIME WITHOUT VENTILATION DURING INTUBATION ATTEMPTS IN NEONATAL RESUSCITATION

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Background: Lane (2004) and O'Donnell (2006) found that success rates for neonatal intubation were 41-62% and that duration (from insertion to removal of the laryngoscope blade) of successful attempts was usually greater than the 20 seconds recommended in older guidelines. We compared the duration ventilation was interrupted for successful, failed and abandoned intubation attempts.

Methods: Intubation attempts were time-marked in 31 recorded resuscitations. Attempts were defined as; Successful; subsequent ventilation via endotracheal tube (ETT), Failed; ETT removed soon after attempted ventilation, Abandoned; ETT not inserted. Durations were; Intubation; time from insertion to removal of laryngoscope, Not ventilated - total; time from ceasing previous ventilation method to first ventilation via ETT (successful), or mask (failed/abandoned attempts) and Not ventilated after intubation; time from removal of laryngoscope to commencing ventilation (as for Not ventilated - total).

Results:	Count (%) n=59	Duration as mean (SD) [range] in seconds		
		Intubation	Not ventilated - total	Not ventilated after intubation*
Successful	29 (49.2)	45 (26) [12-149]	61 (29) [31-163]	7 (5) [2-21]
Failed	15 (25.4)	38 (12) [21-67]	75 (24) [48-120]	31 (14) [17-56]
Abandoned	15 (25.4)	51 (24) [16-114]	69 (27) [39-136]	7 (9) [2-38]

* p<0.001, one-way ANOVA for Failed vs. Successful and Abandoned attempts

Conclusions: Interruption of ventilation is often much longer than the intubation attempt, especially for failed intubation. This duration might be affected by teamwork and remedies could include more effective training in both individual skills and teamwork. Improved mask ventilation techniques may reduce the number of the intubation attempts.