



Abstract O-067 Figure 3 Centile charts for heart rate for all signals and no-SyM signals 10th, 25th, 50th, 75th, and 90th centile for heart rate for all signals in red and for signals without system message (no-SyM) in green

O-068 VISUAL INTERVAL TIMER SIGNIFICANTLY IMPROVES ACCURACY OF HEART RATE ASSESSMENT DURING NEWBORN RESUSCITATION SIMULATIONS: A RANDOMISED STUDY

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Introduction Heart rate (HR) assessment, performed using a stethoscope, is the most useful measure of the need for and effectiveness of newborn resuscitation. However, it is incorrect in approximately 30% of cases (Voogdt 2010). We hypothesised a 6 second flashing device would increase HR accuracy during simulated newborn resuscitation.

Methods Newborn Life Support (NLS) qualified healthcare professionals undertook simulated newborn resuscitation. Using a

randomised crossover design, participants were allocated to calculate random HRs with a stethoscope using either their own preferred method or a 6 second flashing timer (count HR multiple by 10). Accuracy (within 10 bpm) and assessment time were compared. Ethical approval was granted.

Results 44 NLS trained participants performed 440 HR assessments. HR accuracy improved significantly from 16.2 bpm (own method, 95% CI 13.7–18.7) to 10.7 bpm (timer, 95% CI 8.2–13.2) (see Table). HR assessment time decreased significantly from 22.6 s (own method) to 14.7 s (timer) ($p < 0.0001$). When categorising the HR into NLS categories (HR >100, 60–100 and <60 bpm) participants were incorrect using their own method 31% of the time compared to 16% with the timer ($p < 0.0001$). When resuscitating the baby for 5 cycles of the recommended algorithm only 4 (9%) participants did this without error using their own method compared to 23 (52%) using the timer.

Conclusions Use of a simple 6 second visual timer significantly increases accuracy of HR assessment during newborn resuscitation simulations and reduces overall time of assessment. Integration of such a timer into the stethoscope head or resuscitaire could be a simple and inexpensive method to improve newborn resuscitation.

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Heart Rate	Own method n (%)	6s Timer n (%)	n	P value
50	4 (9%)	2 (5%)	44	NS
70	14 (32%)	6 (14%)	44	P=0.04
90	41 (47%)	18 (21%)	88	P=0.0004
110	16 (36%)	6 (14%)	44	P=0.03
Total	75 (34%)	32 (15%)	220	P<0.0001

O-069 MASK VENTILATION WITH TWO DIFFERENT FACEMASKS DURING POSITIVE PRESSURE VENTILATION IN THE DELIVERY ROOM: A RANDOMISED CONTROLLED TRIAL

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