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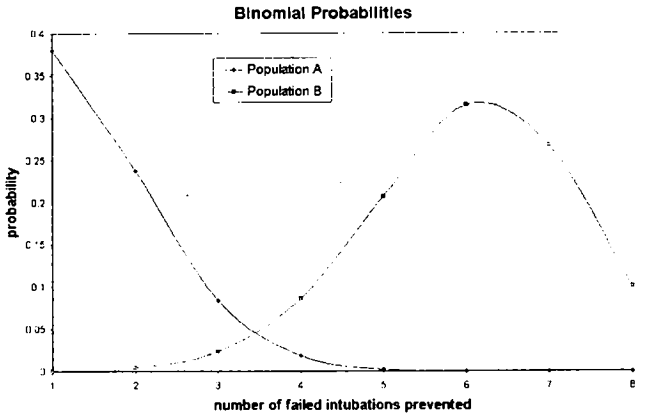
BEATING THE ODDS OF A FAILED INTUBATION: NUMBER NEEDED TO TREAT OR THE TRICK OF TURNING TO BINOMIAL TABLES *Glassenberg, R. Fredericksen, M. Anesthesiology, Northwestern University, Chicago, IL* Introduction: Over the past three decades, dramatic decreases in anesthetic related maternal mortality from regional anesthetics have not been met with similar changes in death rates from general anesthetics. The incidence of failed intubation remains at 1/250. What proportion of airways should be secured awake to significantly reduce this number? A statistical model is proposed and compared to clinical findings. It assumes two distributions: (A) the entire population is susceptible and (B) 75% of the failed intubations occur in 15% of the population with short-neck, receding mandible, or pharyngeal swelling. Methods: The following formulas were used: Number needed to treat = 1/(rate of risk reduction) = 286 for population A, 57 for population B. Binomial prob = (pxqn-x) n!/x!(n-x)! where: n= # of failed intubations prevented. X # of successes. p= probability of success. q= probability of failure.p=0.15 for population A, and 0.75 for population B. These probabilities were compared to the study population of 2100 patients who received general anesthesia for c-section. Following IRB approval in 1985, patients with affected airways were intubated fiberoptically prior to induction of anesthesia. Results: Fiberoptics were used in 16%(353/2100) of all general anesthetics. When analyzed by indication for c-section (abruption, cord prolapse, previa), there was no difference in cord gases, APGAR, or need for neonatal resuscitation between rapid sequence or fiberoptic groups. Conclusion: The incidence of failed intubation over the fifteen year study period fell from 1/250 to 1/2100, p<0.002. Odds ratio=8.47 The model correctly predicts that by targeting 15% of the population, 6-7 failed intubations were prevented.



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SUPPLEMENTARY OXYGEN IMPROVES UMBILICAL CORD BLOOD GASES IN OBESE MOTHERS UNDERGOING ELECTIVE CAESAREAN SECTION *Bullough, A.[2] Taylor, I.[1] Van Hamel, C.[1] Watters, M.[1]* 1. Anaesthesia, Princess Margaret Hospital, Swindon, United Kingdom; 2. Anesthesiology, University of Michigan, Ann Arbor, MI Supplementary oxygen therapy during spinal anaesthesia for elective lower segment caesarean section (LSCS) in women with body mass index (BMI)<29 is unnecessary[1]. Expectant mothers find facemask oxygen a discomfort. We have investigated whether women with BMI>29 need supplementary oxygen in the same situation. **Methods** Following ethics approval and patient consent, 35 women ASA 1 or 2, with BMI29, scheduled for elective LSCS with spinal anaesthesia, were allocated at random to receive oxygen 4L/min via Hudson mask, or room air. For patients allocated to receive oxygen, the oxygen mask was applied from completion of spinal injection until delivery of the fetus. Times were recorded from injection of spinal anaesthetic to delivery of fetus. Umbilical blood gases were measured, and APGAR scores at 1 and 5 minutes. Statistical analysis was with Students T-test for continuous data. **Results Table 1** The group allocated to room air had a lower BMI(p=0.025) and a lower umbilical venous oxygen tension (PUvO2, p=0.04) than the group receiving oxygen. APGAR scores were 9 or 10 in both groups **Conclusion** Supplementary oxygen increases umbilical vein oxygen tensions in obese patients having LSCS by spinal anaesthesia, although fetal wellbeing as measured by APGAR is unaffected. This improved oxygenation is not found in women with BMI<29 undergoing LSCS as previously reported[1]. From our evidence, we conclude that supplementary oxygen should be given to obese mothers undergoing LSCS with spinal anaesthesia, although further study is warranted. *Kelley MC. Fitzpatrick KTJ. Hill DA. Respiratory effects of spinal anaesthesia for Caesarean section. Anaesthesia 1996;51:1120-2*

	Supplementary O2 n=17	Room air n=18	p value
Age	30±6	31±4	ns
BMI	38±6	34±4	0.025
Time spinal-delivery	23±3	23±4	ns
Umbilical venous pH	7.34±0.03	7.31±0.09	ns
Umbilical venous PaO2	4.12±1.34	3.38±0.58	0.04
Uv-Ua PaO2	1.83±1.59	1.54±0.93	