



The knowledge of the doctor just formed on the approach to the airway and the importance of practical theoretical courses on this field.

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Background and Goal of Study

Cardiovascular events and external causes are important indicators of death among Brazilian population. In this context, mask ventilation and orotracheal intubation are considered life-saving procedures. However, the level of such knowledge is not satisfactory, even among the most qualified professionals, and in hospitals with medical residency programs, it is often the case that physicians in training are responsible for this first service. As for medical teaching, learning techniques with simulations of real situations are now used. The objective of this study was to apply simulation practice in airway management to residents' level one and to evaluate their outcome.

Materials and Methods

Newly graduated from medical school and current first year of internal medicine and general surgery residents were invited to the study. A theoretical pre-test was applied to all participants, followed by a theoretical lecture and theoretical post-test. After one month, the participants were distributed in groups and then submitted to a validated practical assessment, followed by a practical class with manikins. Then a reassessment of the practical and theoretical test was applied. The participant who scored a grade equal to or greater than 15 was defined as competent. In the theoretical test, a grade greater than or equal to 7 was considered satisfactory. For the analysis of the non-parametric data, the Wilcoxon flagged test and the Friedman ANOVA were used. The qualitative variables were analyzed using the McNemar test. The value of $p < 0.05$ was considered significant.

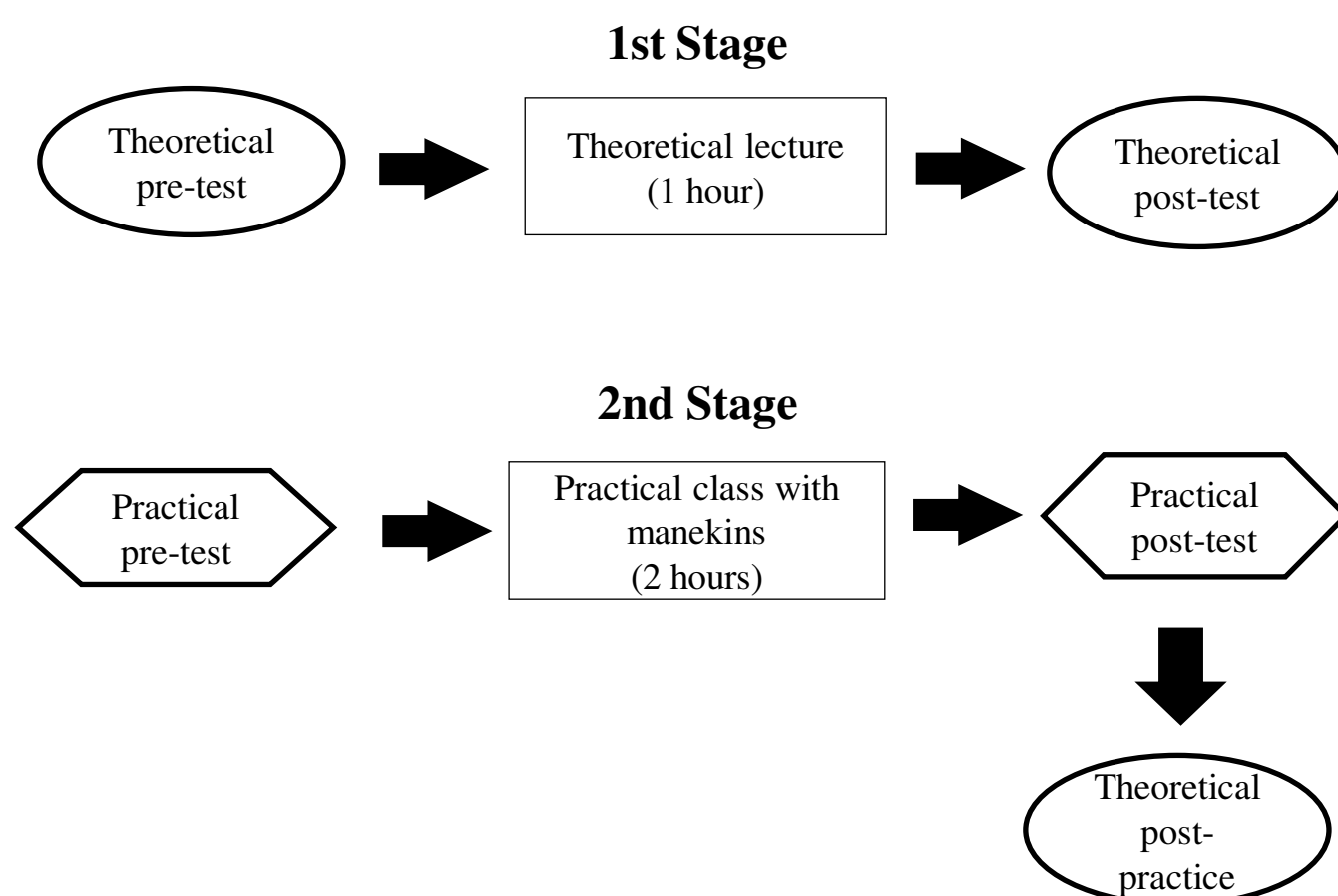


Figure 1: Study Method.

Results and Discussion

Of the 31 invited residents, 25 were accepted. Of these, 1 was excluded, 24 had the practical data analyzed and 22 the theoretical data. The competence of the professionals in the practical assessment increased from 20.8% to 87.5% at the end of the course ($p < 0.0001$), demonstrating the acquisition of knowledge and a significant and important improvement in the residents' performance. In the theoretical evaluation, the number of students with satisfactory results jumped from 13.6% to 63.8% between the pre- and post-test, in addition to the 68.1% in the test after the practice ($p < 0.0001$), suggesting not only the improvement of knowledge, but also its maintenance.

Practical test	Pos-test		Total (n/%)	
	NC (n/%)	C (n/%)		
Pre-test	NC (n/%)	3 / 12.5%	16 / 66.7%	19 / 79.2%
	C (n/%)	0 / 0%	5 / 20.8%	5 / 20.8%
Total (n/%)		3 / 12.5%	21 / 87.5%	24 / 100%

Table 1: Performance on the practical test. (C-competent; NC-not competent)

Conclusion

Our study demonstrated that the application of a theoretical and practical course of approach to airway for newly graduated medical school students improved their performance in this field.

References

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