**Decision-support tools to manage drug incompatibilities: evaluation by nurses**

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**INTRODUCTION**

Preventing drug incompatibilities has a high impact on the safety of drug therapy. Although there are no international guidelines to manage drug incompatibilities, different decision-support tools such as handbooks, cross-tables and databases are available. In a previous study, two decision-support tools have been pre-selected by pharmacists as fitting nurses’ needs on the wards. The objective of this study was to have these both tools evaluated by nurses to determine which would be the most suitable for their daily practice.

**RESULTS**

- The rate of correct answers was above 90% for both tools (cross-table: 96.2% vs colour-table: 92.5%, p > 0.05).
- The ergonomics (fig.3) and the applicability (fig.4) were higher for the cross-table [7.1 (IQR: 4.0, IQR: 8.0) vs 5.0 (IQR: 2.7 - 7.0), resp. 8.3 (IQR: 7.4 - 9.2) vs 7.6 (IQR: 5.9 - 8.6)].
- The design (fig.5) of the colour-table was judged significantly better [4.6 (IQR: 2.9 - 7.1) vs 7.1 (IQR: 6.4 - 8.4)].
- No significant difference was observed in terms of reliability (fig.6) [7.3 (IQR: 6.5 - 8.4) vs 6.7 (IQR: 5.0 - 6.6)].
- The cross-table was globally preferred by 65% of the nurses (fig.7) and 68% would like to have this decision-support tool available for their daily practice.

**MATERIALS & METHODS**

Assessment of two tools (fig.2) by 48 nurses in 5 units (PICU, adult and geriatric intensive care, surgery, onco-hematology) using a standardized form.

- **Scientific accuracy**
- **Ergonomics**
- **Applicability**
- **Design**
- **Reliability**

Evaluation by determining the compatibility of five drugs pairs (fig.2): rate of correct answers according to the Trissel’s Handbook on Injectable Drugs 15th ed, chi-square test.

Evaluation using visual analogue scales (VAS 0-10; 0 = null, 10 = excellent). Results are expressed as the median and interquartile range (IQR) for 25% and 75% (Wilcoxon rank sum test).

**CONCLUSION**

Both tools showed the same accuracy to assess drug compatibility. In terms of ergonomics and applicability the cross-table was better than the colour-table, and was preferred by the nurses for their daily practice. The cross-table will be implemented in our hospital as decision-support tool to help nurses to manage drug incompatibilities.

**Fig.2: Drugs pairs and tools assessed**

**Fig.3: Ergonomics**

**Fig.4: Applicability**

**Fig.5: Design**

**Fig.6: Reliability**


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