Implementation of a tool for the management of compatibilities between Y infused products in an intensive care unit (ICU)

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Background and Objective:

Simultaneous infusion of multiple drugs is frequent in ICU. Access to compatibility data is therefore crucial. Pharmaceutical tools are too complex to use or too restrictive regarding the clinical practice. A table was developed by a team of physicians, nurses and clinical pharmacists to overcome this problem. This tool and its impact on practice are presented.

Design:

Compatibilities between pairs of 33 Y infused products are displayed (green = compatible, red = non compatible, orange = intermediate, white = no data available) in a two-dimensional table (fig. 2). When a combination is classified as intermediate, specific forms give detailed compatibility conditions (fig. 3). Nurses were trained about the principles of incompatibilities and the use of the tool. Three months after release, the table was evaluated through a questionnaire addressed to nurses.

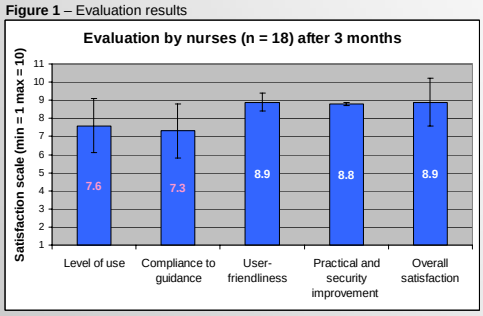
Setting:

ICU in a public hospital, 11 beds, nurses staff: 36.

Main outcome measures:

Level of use, user-friendliness, impact on practice and overall satisfaction of the tool were evaluated based on a ten points scale (minimum = 1; maximum = 10).

Figure 1 – Evaluation results



Results (fig.1):

18 questionnaires were collected. Mean use level of the tool was 7.6. Mean value was 8.9 for user-friendliness, 8.8 for practical and security improvement and 8.9 for overall satisfaction. However nurse's compliance to guidance of table was only 7.3. Nurses consider that physicians were more aware of the number of routes needed to infuse the drugs. They mentioned also the complexity of this topic and the time needed to perform compatibility analyses which preclude a systematic use of the tool.

Figure 2 – Main table

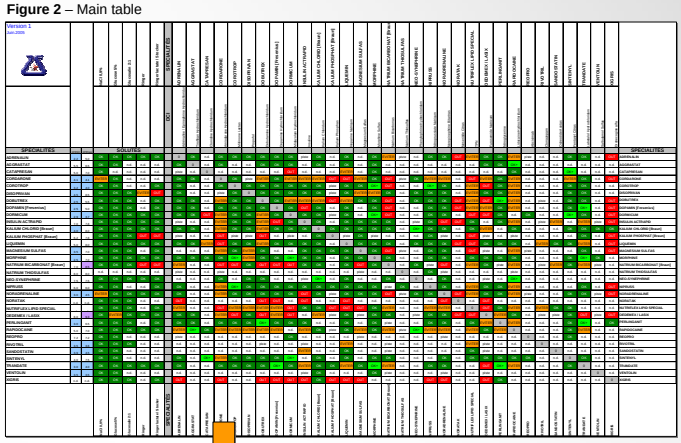
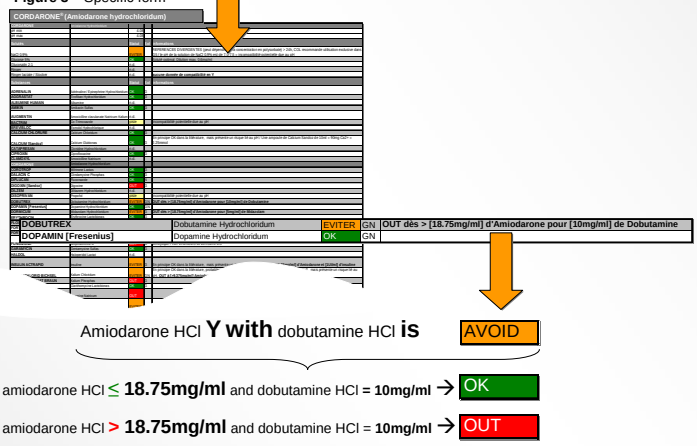


Figure 3 – Specific form



Conclusions:

This multidisciplinary project allowed the development of a handy compatibility tool. Periodic teaching, reinforcement and further work are needed to promote and optimize its use. Ways to shorten the time for analysis and to optimize the use of all routes are our next objectives.