(3PC-027) DIGITALIZATION SUPPORT SYSTEM FOR INTRAVENOUS MIXTURES ELABORATION IN A BIOLOGICAL SAFETY CABINET.

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BACKGROUND AND IMPORTANCE
An integrated with the electronic prescription system robot was already available in our hospital pharmacy for the automated preparation of intravenous mixtures. However, some of the preparations are not candidates for robotic processing. Manual preparations should provide similar traceability and security.

AIM AND OBJECTIVES
To describe the implementation of a digital support system (DSS) for the manual preparation in biological safety cabinet (BSC) of intravenous mixtures.

MATERIALS AND METHODS
Retrospective descriptive study of the digitalization of the manual preparation of intravenous mixtures in BSC (February-April 2021).
Implementation phase activities:
• Entering the drug density data.
• Updating drugs handling in the software.
• Staff training.
The material needed (weight scale with integrated camera, screen, keyboard, code reader and printer) is situated in a BSC for cytostatic preparations.
It was decided to use the system in the following cases:
• Syringe preparations.
• Vials that are non-compatible for robot handling due to their format.
• Lyophilized powder drugs.
• Non-scheduled or emergency treatments.
Verification of the precision obtained in the dosage was performed by gravimetric control based on the density of the drug. Although the pharmacopoeia allows a deviation of ± 10% in dosage, we limited it to the same tolerance already used in the robot: ± 4%.

RESULTS
90 drug presentations have been configured in the DSS.
In 3 first months, 1,472 preparations were elaborated (22.8%), with a mean error in drug dosage of 1.51% (standard deviation: 1.41). To meet the dosage criteria, 65 preparations were rectified.
DSS traces the entire process by taking pictures of the components, by recording the elaboration and by barcode verification or data-matrix of final container and drug used.

CONCLUSION AND RELEVANCE
The drug density database can be applied to any system employing gravimetric dosing control.
DSS represents a useful complementary tool whenever the use of robot system is limited, providing traceability and security to the process of manual preparation of intravenous mixtures as a substantial improvement in the quality of the circuit.

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