



Computerized registration of drug prescriptions in the operating room during cardiac surgery: simplicity and traceability

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What was done?

In 2019 a multidisciplinary group (doctors, nurses, pharmacists, computer scientists) created an electronic program dedicated to the Cardiac Operating Room of the Heart Hospital, Fondazione Monasterio (Italy), which allow the prompt registration of drug prescriptions and administrations. Furthermore this program guarantees traceability of the drugs administered by the nurses, in order to improve medication safety practice.



Why was it done?

This implementation was designed to provide a safe tool for the particular context of the operating room, in which prescription and administration are actions usually urgent and concomitant. The program suggests a rapid list of prescriptions standardized for adult patients (i.e. dose, diluent, bolus/drip) and allows to register any other drug or modify default information, respecting the rules for a clear prescription before registration. Our aim was to demonstrate the possibility to validate this program and prove its functionality.

How was it done?

This program was created into the electronic prescribing system available in Fondazione Monasterio. The standardized prescriptions already in use in the operating room were reviewed by a pharmacist, consulting the information in the SmPC, in the literature or by contacting the company that holds the MA.

For each discrepancies identified a solution was proposed and shared with the working group, in order to validate a definitive list.

The prescriptions extracted by the IT Systems unit 6 months before and after the implementation of the new program were therefore analyzed.



What has been achieved?

A list of 182 standardized prescriptions was validated and reported in the program. Among the 10,320 prescriptions made before the new program none had traceability of the drugs administered, while the 8,730 of the following period were complete and 99.6% of them fell within the standardized prescriptions, demonstrating the functionality and correct selection by the working group. The development of a program for the computerized registration of prescriptions made during the surgery, which respond to the requirements of drug safety and traceability, represents an example of good practice.

What next?

We have implemented this tool in the pediatric population, with particular precautions due to the weight variability (i.e. dose/kg). The next step could be integration with further assessments (e.g. kidney function evaluation) and the transfer to other settings.



Keywords:

Drug prescribing and dosing, Computer assisted prescribing (cpoe), Drug prescribing and dosing, Prescription appropriateness, Patient safety, Error-avoiding strategies.