

Connection between the hospital prescription program and the parenteral nutrition compounding program

R.M. Romero Jiménez, I. Yeste Gómez, B. Marzal Alfaro, S. Pernía López, I. Marquínez Alonso, V. Escudero Vilaplana, A. de Lorenzo Pinto, A. Ribed Sánchez, M.N. Sánchez Fresneda, M. Sanjurjo Sáez.
Pharmacy Department
Hospital General Universitario Gregorio Marañón, Madrid, Spain

BACKGROUND

During the parenteral nutrition (PN) compounding process, medical prescriptions must be transcribed in the pharmacy department, where there is an increased risk of medication errors.

PURPOSE

To describe the implementation of the connection between the hospital prescription program and the PN compounding program.

METHODS

From November to December 2010, an explanatory document was prepared to cover all the products used in the preparation of PN for adult and pediatric patients and the calculations performed to convert the medical prescription in the units of volume for the PN preparation.

A second document was developed to collect the data issued by the electronic prescription program (Prescriplant®):

- Patient information: history number, name, service, bed, and weight (kg).
- Prescription information: date, time, service, prescribing physician.
- Information on PN:

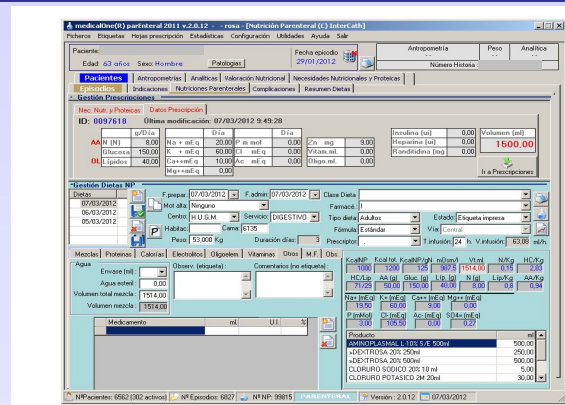
Total volume (ml), nitrogen (g), glucose (g), lipids (g), sodium (mEq), potassium (mEq), phosphorus (mmol), magnesium (mEq), calcium (mEq), chloride (mEq), acetate (mEq), trace elements (ml), vitamins (ml), ranitidine (ml), insulin (ml) and heparin (UI).

From January to February 2011, an external provider (Intercath) entered this information in the PN program of the MedicalOne® parenteral database and made the necessary adjustments so that the program could automatically calculate PN.

RESULTS

The Prescriplant® program was connected with the MedicalOne® parenteral program. The PN was generated automatically in the MedicalOne® parenteral program using the information obtained from the Prescriplant® program according to previous indications.

Tests were performed over a month to validate the calculations made by the program, both for adult and pediatric patients. The necessary adjustments were made, and the calculations that the program did not perform well were corrected.



CONCLUSIONS

Connection of the Prescriplant® program with the MedicalOne® parenteral program avoids manual transcription of the hospital pharmacist and simplifies the PN compounding process.