

Category: Pharmacokinetics and Pharmacodynamics.

# APPROPRIATENESS OF SAMPLING TIMES FOR DRUG MONITORING IN THE EMERGENCY DEPARTMENT.

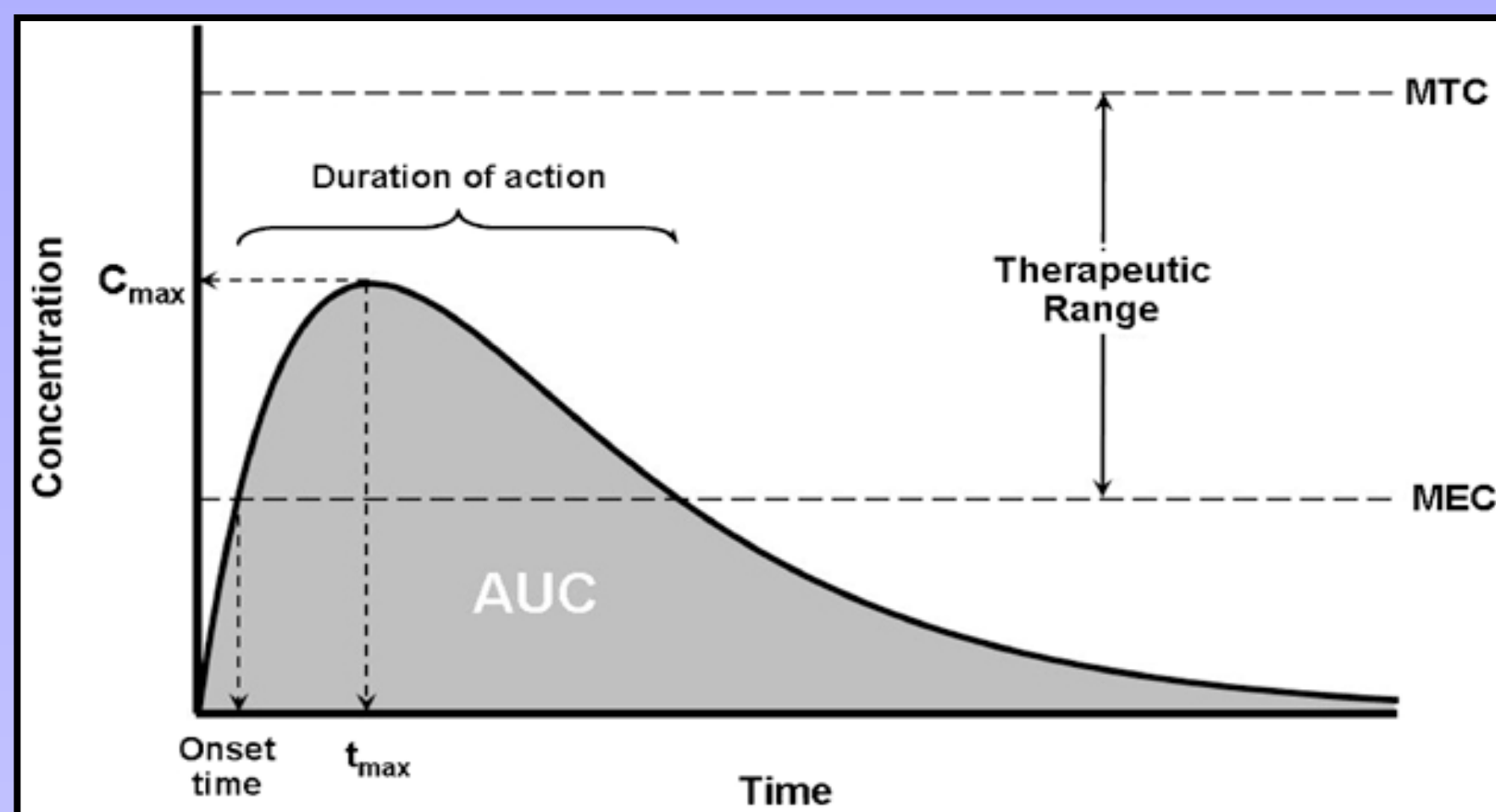
**Buendía-Bravo S, De Lorenzo-Pinto A, García-Sánchez R, Manzanares-Secades C.**

Pharmacy Department. Hospital General Universitario Gregorio Marañón, Madrid. Spain

## OBJETIVES

To evaluate the percentage of blood samples collected at the wrong times in the Emergency Department (ED) regarding time after drug administration.

## METHODS



DRUG	RECOLLECTION TIMES after administration
DIGOXIN oral	8 h
DIGOXIN iv	3 h
ACETAMINOPHEN poisoning	4 h
VALPROATE, PHENOBARBITAL, CARBAMAZEPINE and LITHIUM	Prior to next dose (trough level)

Prospective observational study. 20 days (June 2014)



- ✓ Age.
- ✓ Gender.
- ✓ Drug name.
- ✓ Time of drug administration.
- ✓ Time of sample collection.
- ✓ Number of drug levels requested per patient.

All patients who took medications that should be monitored were included.



## RESULTS

- 40 patients fulfilled the inclusion criteria
- 17 patients had plasma drug concentration measurements (65% were female and the median age was 65).
- The total number of drug measurements was 40 (1-5 measurements per patient)

### MEASUREMENTS COLLECTED AT THE WRONG TIMES



The most frequent collected at wrong time was **DIGOXINE.**



20% blood samples (8/40)

- a) digoxin: 5/17 (29%);
- b) acetaminophen: 2/11 (18%),
- c) valproate: 1/6 (17%),
- d) phenobarbital: 0/3 (0%);
- e) carbamazepine: 0/1 (0%);
- f) lithium: 0/2 (0%).

## CONCLUSIONS

A high percentage of drug levels are collected in the ED at the wrong times. A fact that could favour unnecessary sampling and data misinterpretation.

For this reason, **pharmacokinetics counseling provided by clinical pharmacists** prior to blood sampling should be mandatory.

20th Congress of the EAHP

Hamburg, Germany. 25 -27 March, 2015.