Medication errors occuring in hospital: experience of Ibn Sina hospital

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Introduction

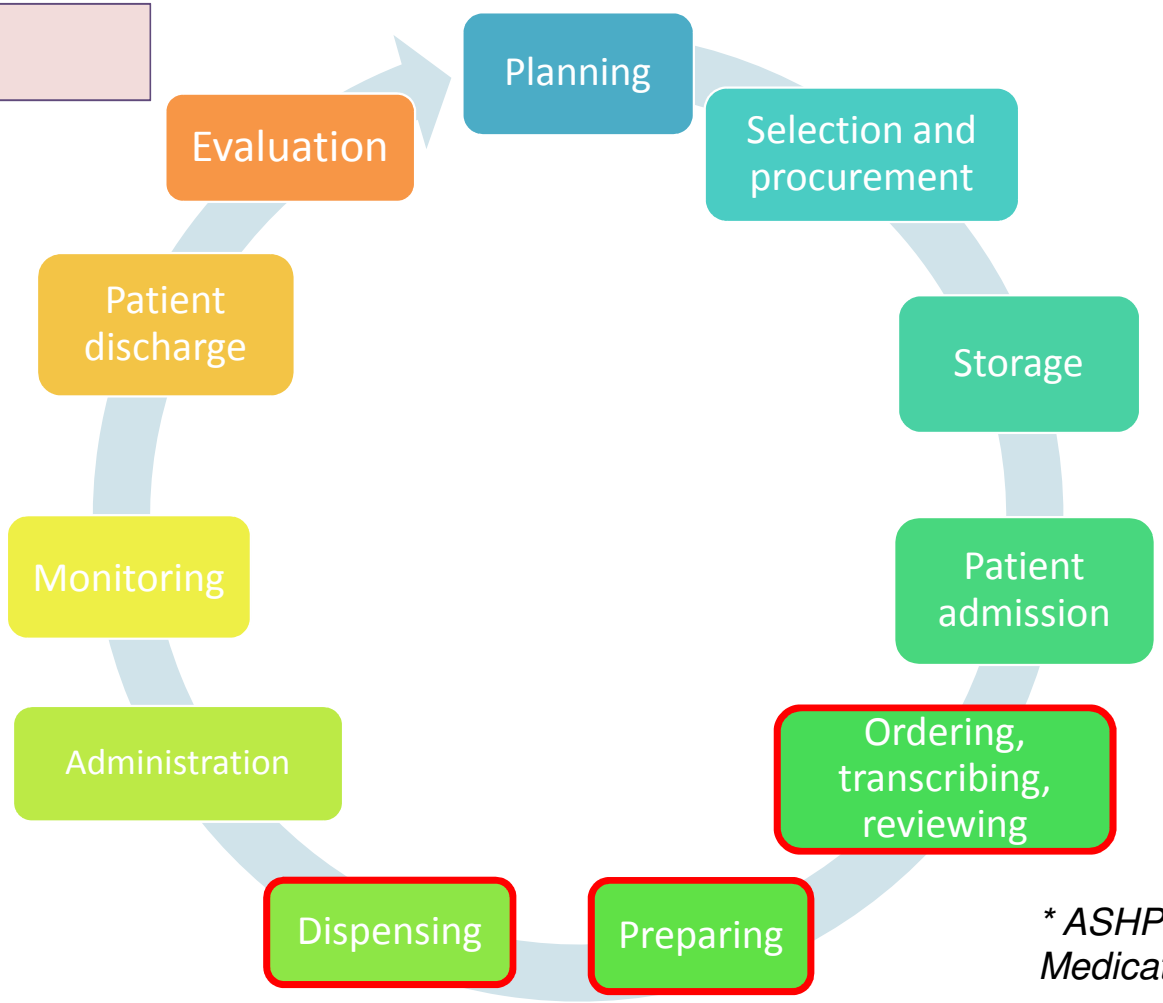
- **Definition**: failure in the treatment process that leads to, or has the potential to lead to, harm to the patient.

- Although medication errors can occasionally be serious, they are not often trivial.

- it is important to detect them, as failures in process (prescription, preparation, ...) that may result in minor errors that can subsequently lead to serious damage (harm).

Introduction

Causes of ME:



** ASHP Guidelines on Preventing Medication Errors in Hospitals*

Aim:

- role of hospital pharmacist in the interception of medication errors
- show the experience of the Ibn Sina hospital pharmacy

METHODS:

Ibn Sina Hospital

✓ Is part Of 10 hospitals that compose the University Hospital ibn sina of Rabat-salé

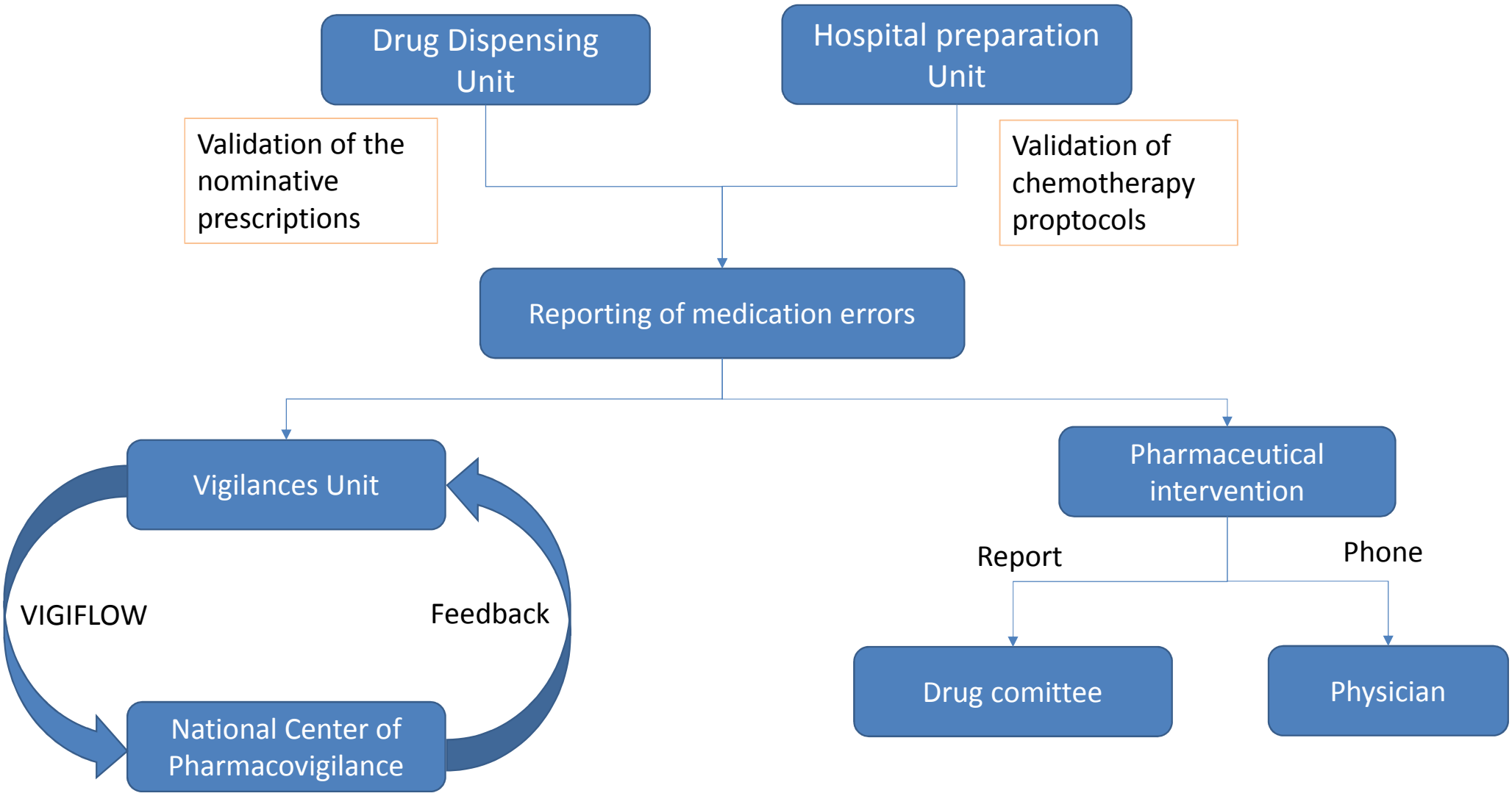
✓ Number of beds : 950

- 24 medical and surgical services
- 32 operating rooms
- 2 radiology services
- 2 emergency services
- 01 hemodialysis service
- 01 pharmacy

✓ 1600 staff including 224 medical and 850 nurses.

Organisation of the pharmacy

- Location: basement of the hospital
- five pharmacists
- 4 units :
  - Drugs dispensing Unit
  - Medical Devices Unit
  - Chemotherapy preparation unit
  - Vigilance Unit (2016)



Management of Medication Errors at HIS

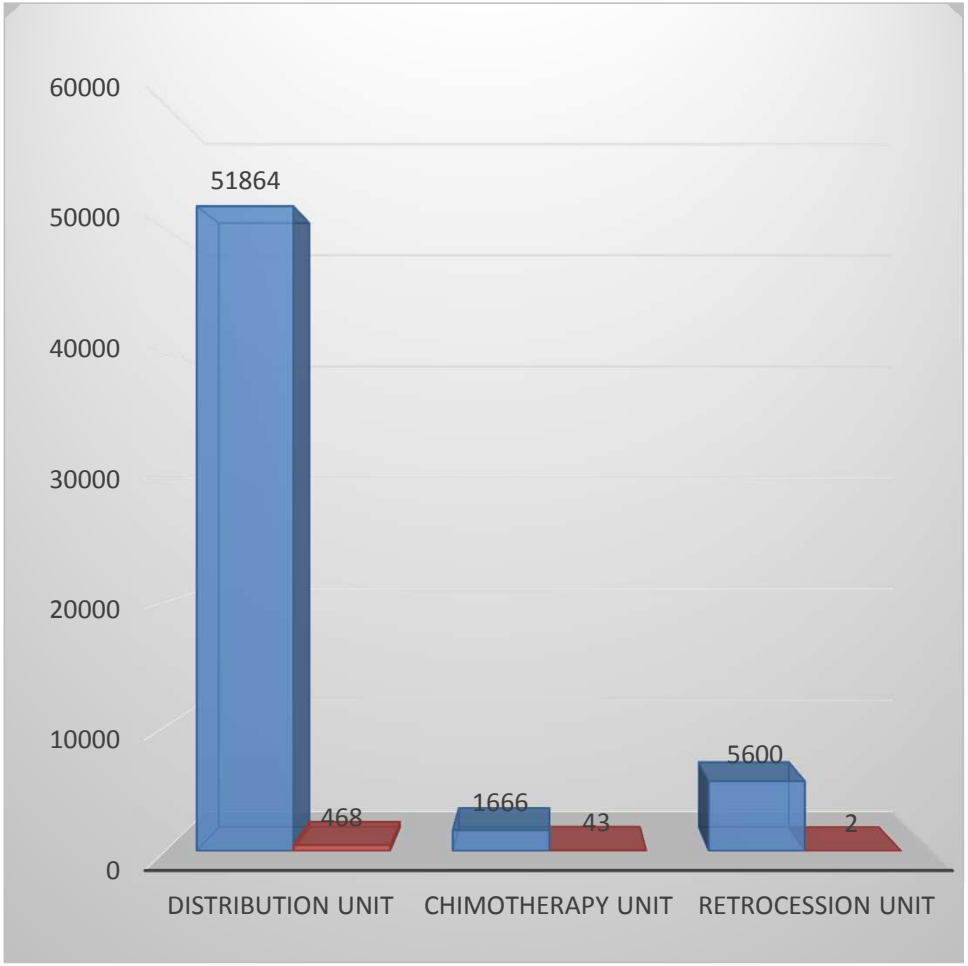
Report of Medication Errors in 2019

- Retrospective study
- We reported all drug errors detected in the pharmacy between january and september 2019.
- All errors were reported to the National Center of pharmacovigilance

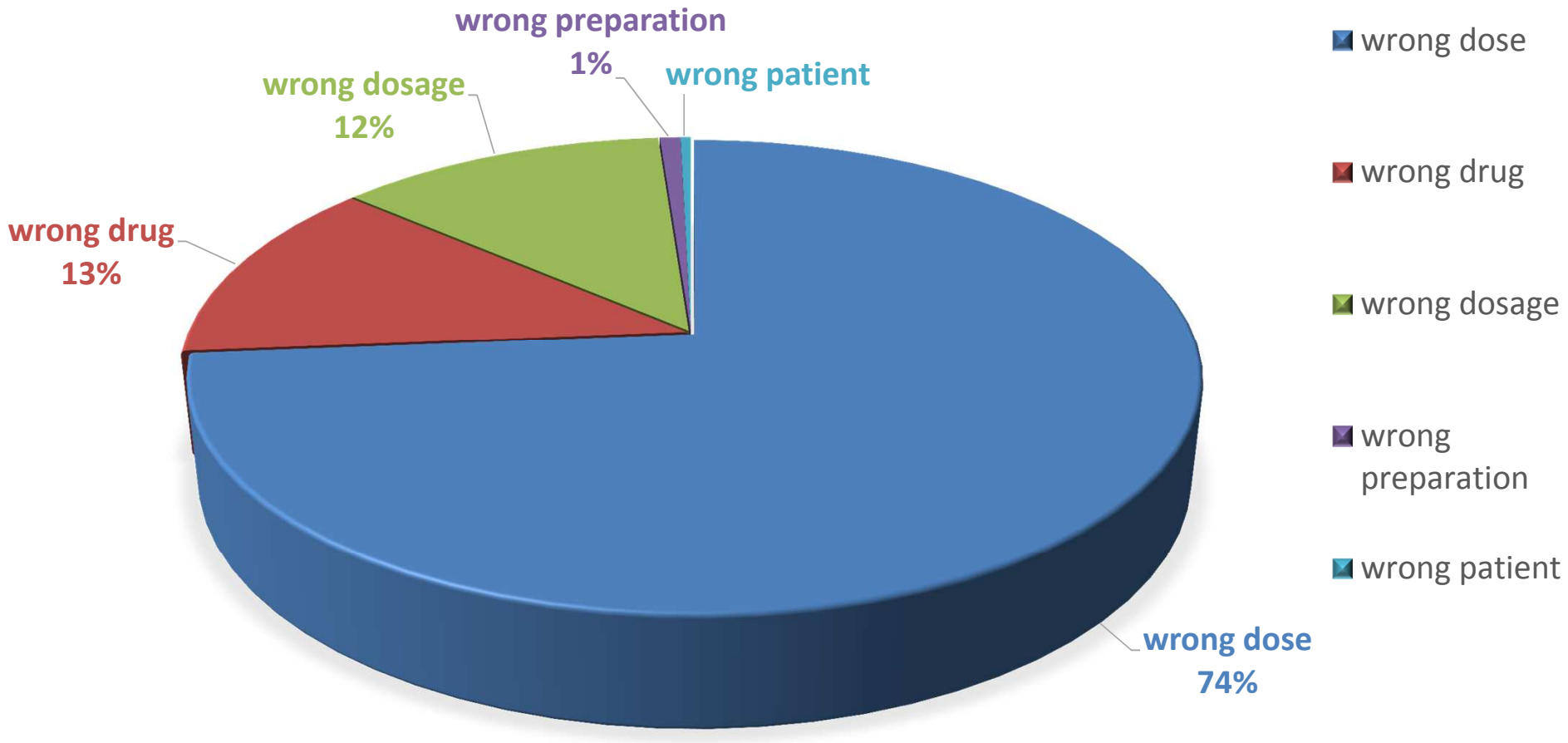
RESULTS AND DISCUSSION:

	Total prescription	Total Errors	%
Dispensing unit	51864	468	91.23
Chimotherapy preparation unit	1666	43	8.38
Retrocession	5600	2	0.39
Total	59130	513	

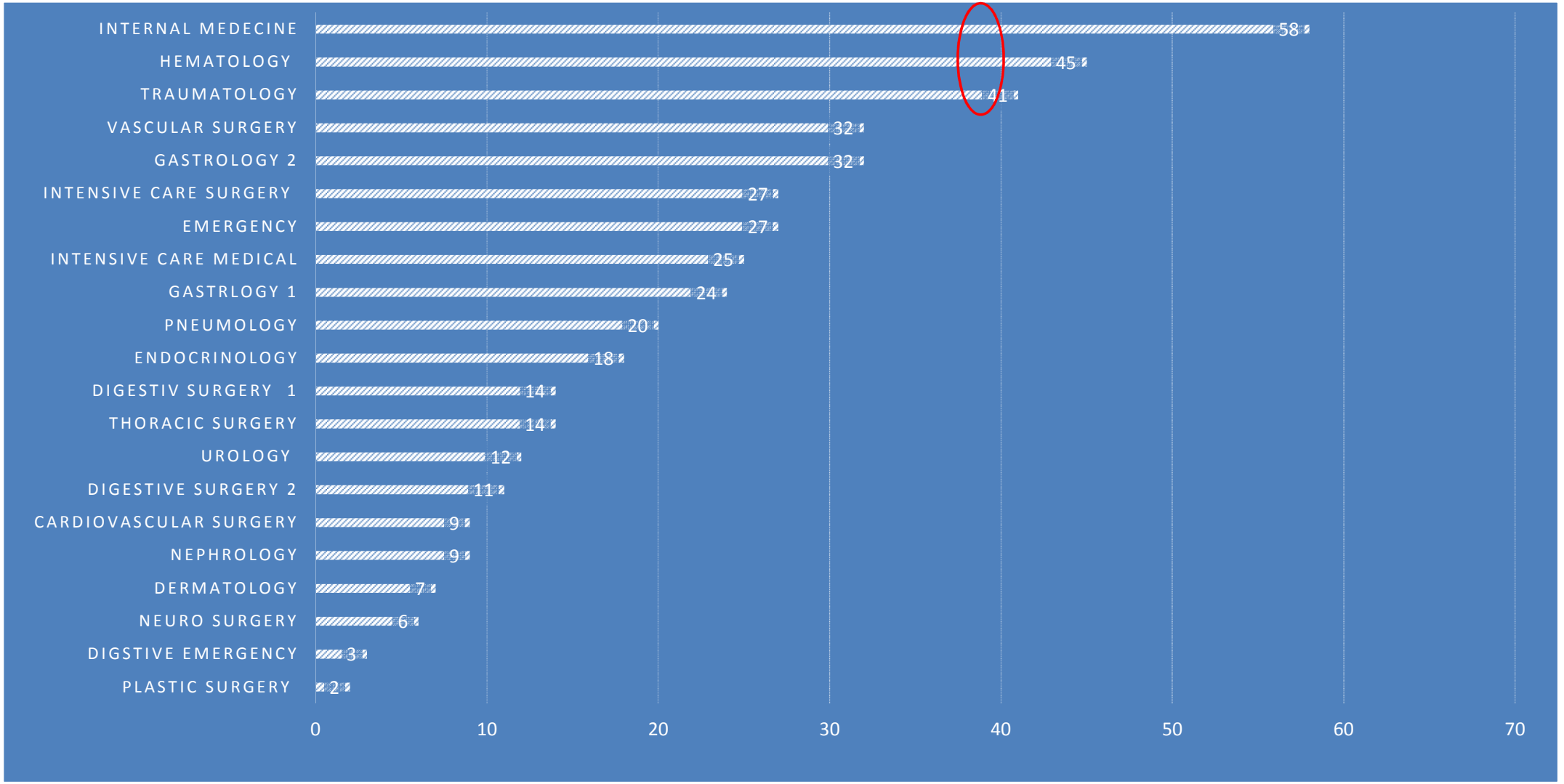
Percentage of Errors : 0.87%



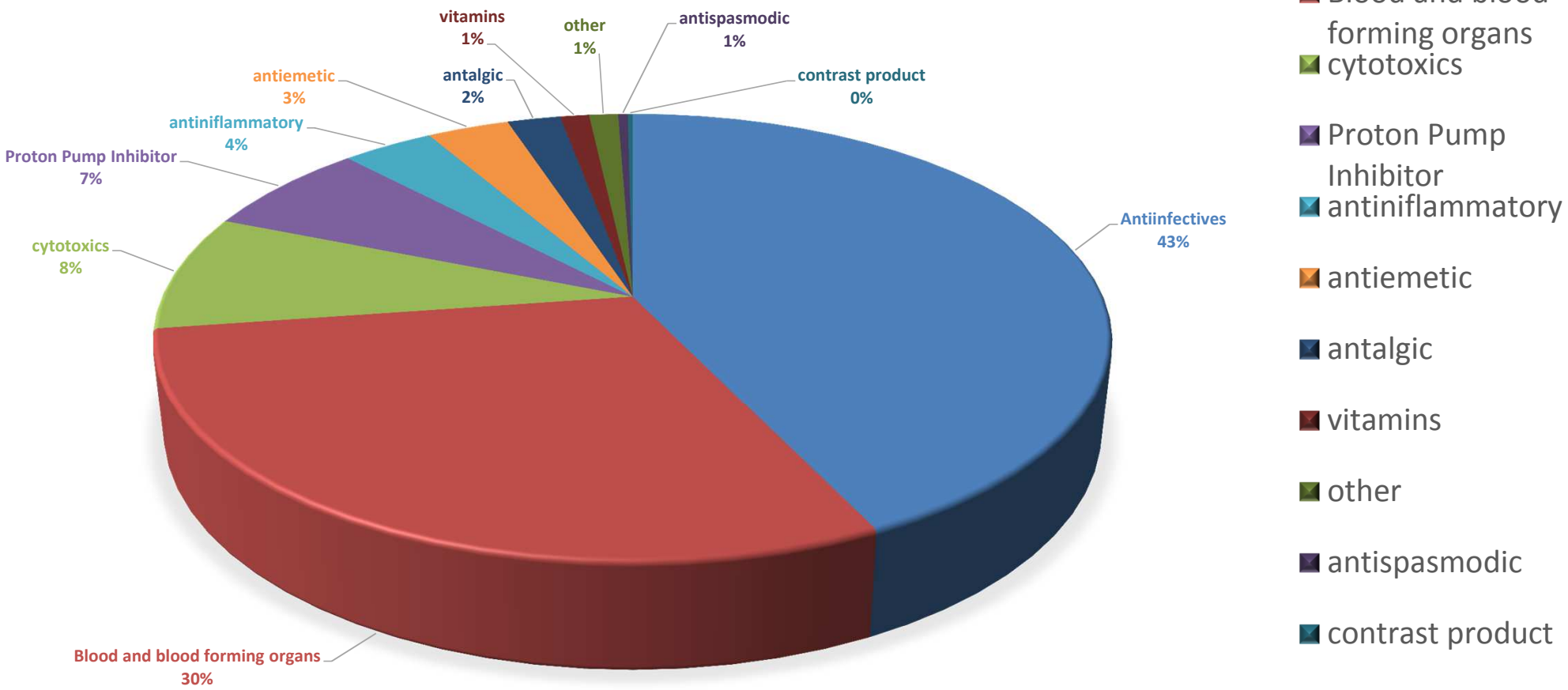
Type of Medication Errors



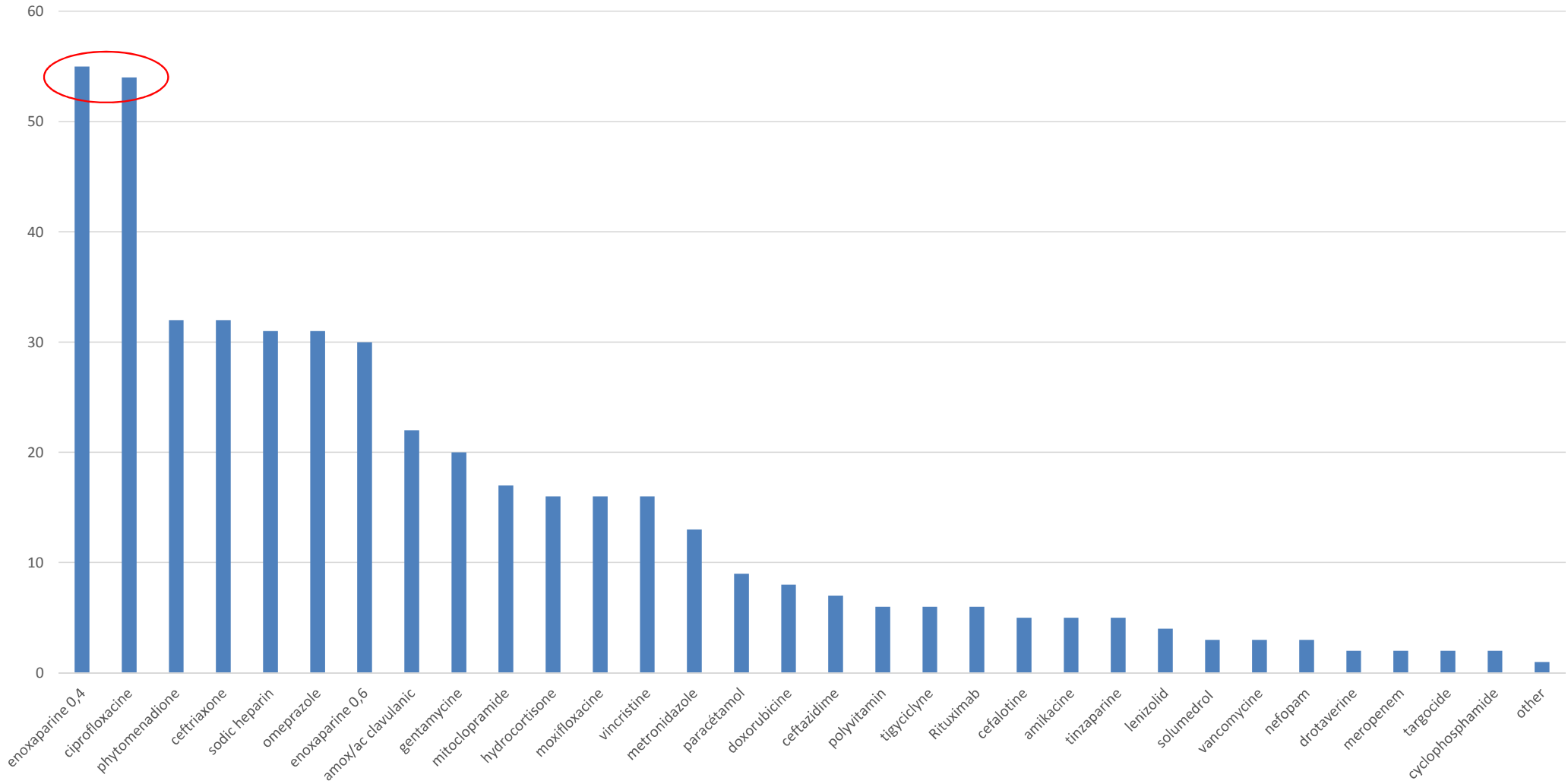
Medications Errors by ward



Class of Drugs involved in Medication Errors



Drugs involved in Medication Errors



- Ciprofloxacin: most recovered, followed by amoxicillin / ac clavulanic, ceftriaxone, amikacin.

  → most used drugs and especially in probabilistic treatment.

- Ciprofloxacin / pharmacovigilance note on the risk of aneuvrysm increased pharmacists' vigilance with regard to the prescription of this product. And several cases of substitution have been proposed to physicians, some of them have been accepted.

Our cases of MEs can be classified as follow :

- Knowledge-based (errors through lack of knowledge)

Eg :

- Prescribing **sodium** heparin at a dose of 0,4ml → confusion between sodium heparin HMWH and split low-molecular-weight heparin LMWH

- Tinzaparin 14000 UI , 3 times per day.

- Memory based

- Forgetting to specify a maximum daily dose for an ‘as required’ drug → drug toxicity

➢ Errors due to poor service organization

Eg :

- Prescribing Augmentin at a dose of 1g per day →the physician prescribed the dose to be administered while on duty.

And then absence of communication with the following team.

➢ Errors due to poor monitoring

Eg:

- Prescribing vancomycine 500 mg 3 times per day for a septic shock,

we audited and found:

  - No blood culture performed
  - Antibiogram (Antibiotic susceptibility test) showed E coli and proteus not sensible to vancomycine

Comparison

Eléments of comparison	Our study	Alshaikh M et al 2017 (Saudi Arabia)	Ali S et al 2017 (Saudi Arabia)
Study design	prospective, 8 months	1-year period	Retrospective on 1-year period
Setting	950 -beds University teaching hospital	1000- beds University teaching hospital	Tertiary hospital
Number of prescription	59130	240,000	912,500
Prevalence of ME (prescription and dispensing)	0,87 %	0,4 %	1,5 %

The limites of ME detection process

- Lack of essential patient information when validating prescriptions
  → quality and the number of pharmaceutical analyses performed
  → claims resulted often in lost of time

  ** Computerization project on Patient records is ongoing and we hope that it will be useful.*

- Lack of involvement of physicians in the prevention and correction of detected ME

  ** the role of the local drug committee !*

- Less visibility on the administration stage → administration errors, incompatibilities, compliance problems...

  **Clinical pharmacy has been set up since August 2018, few services covered*

CONCLUSION:

- The pharmacist is expected to play an important role in the detection and management of MEs.
- their prevention should be based on the involvement and collaboration of all health professionals involved in the drug circuit
- *MEs* are the major cause of patient morbidity and mortality, increased length of hospital stay and substantial extra treatment costs.

THANK YOU
FOR
YOUR ATTENTION