

M-D. GUILLEMIN¹, E. JEAN-BART¹, C. LE CORVAISIER¹, E. RENEBOU¹, N.HERMENT¹, J-L. BONNEFOUS¹
¹Pharmacy, Hospital Center Bourg en Bresse, Bourg en Bresse, France,

Background

An average of four drug compounding per week is prepared in our pharmacy, mostly pediatric dosage capsules and children suppositories. The pharmacy technicians' team is composed of 16 agents, who are polyvalent, serving in different positions of the hospital pharmacy.

Purpose

The aim of this study was to develop an evaluation of pharmacy technicians' professional practices for non-sterile compounding.



Material and methods

- An assessment grid and a procedure for the evaluator were created for the different stages of production.
- Two evaluators observed the preparation and each stage was graded: Mastered (M), Acquired (A), Being Acquired (BA), Not Acquired (NA)
- Draw: capsules or suppository
- In March 2014, pharmacy technicians were evaluated.

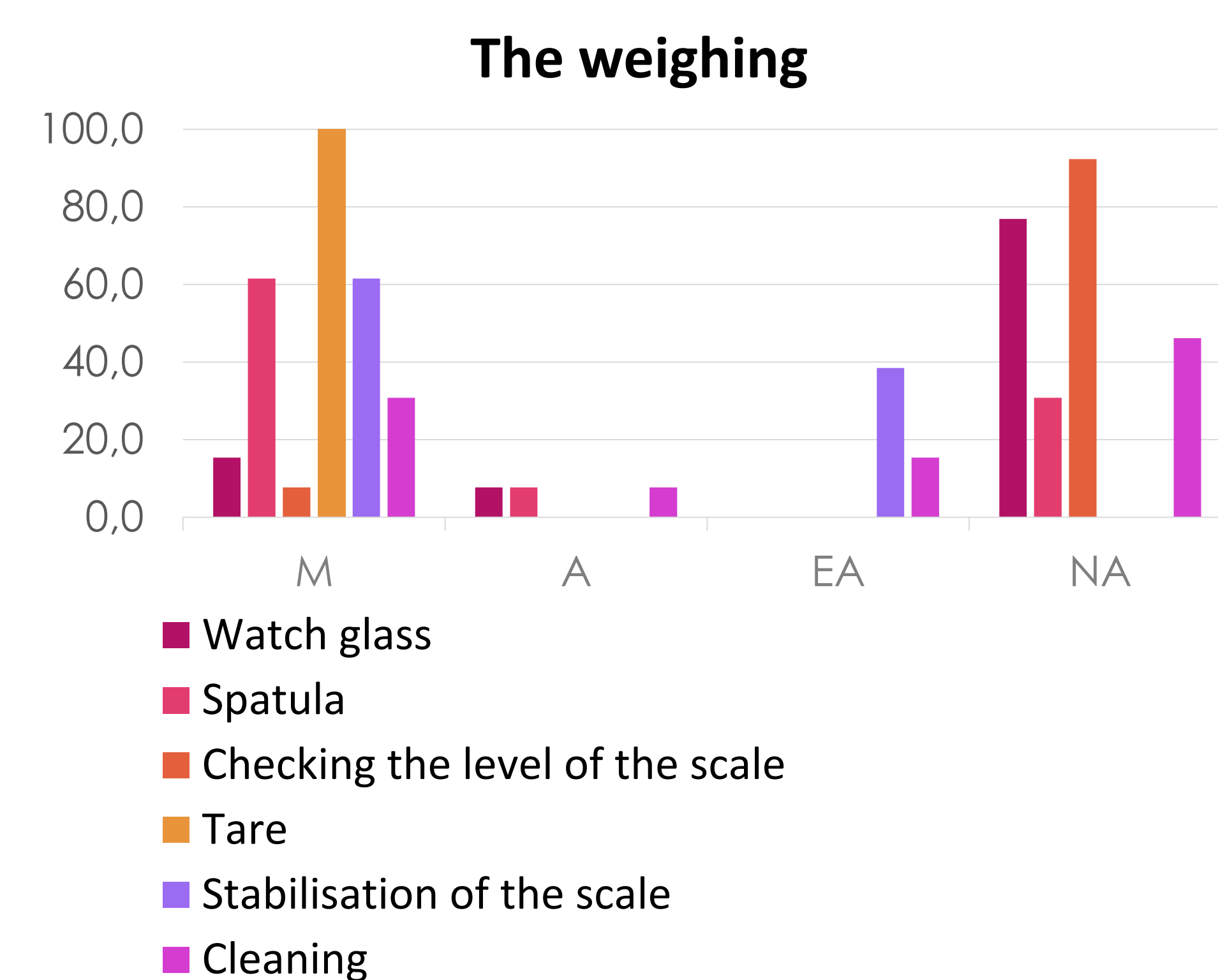
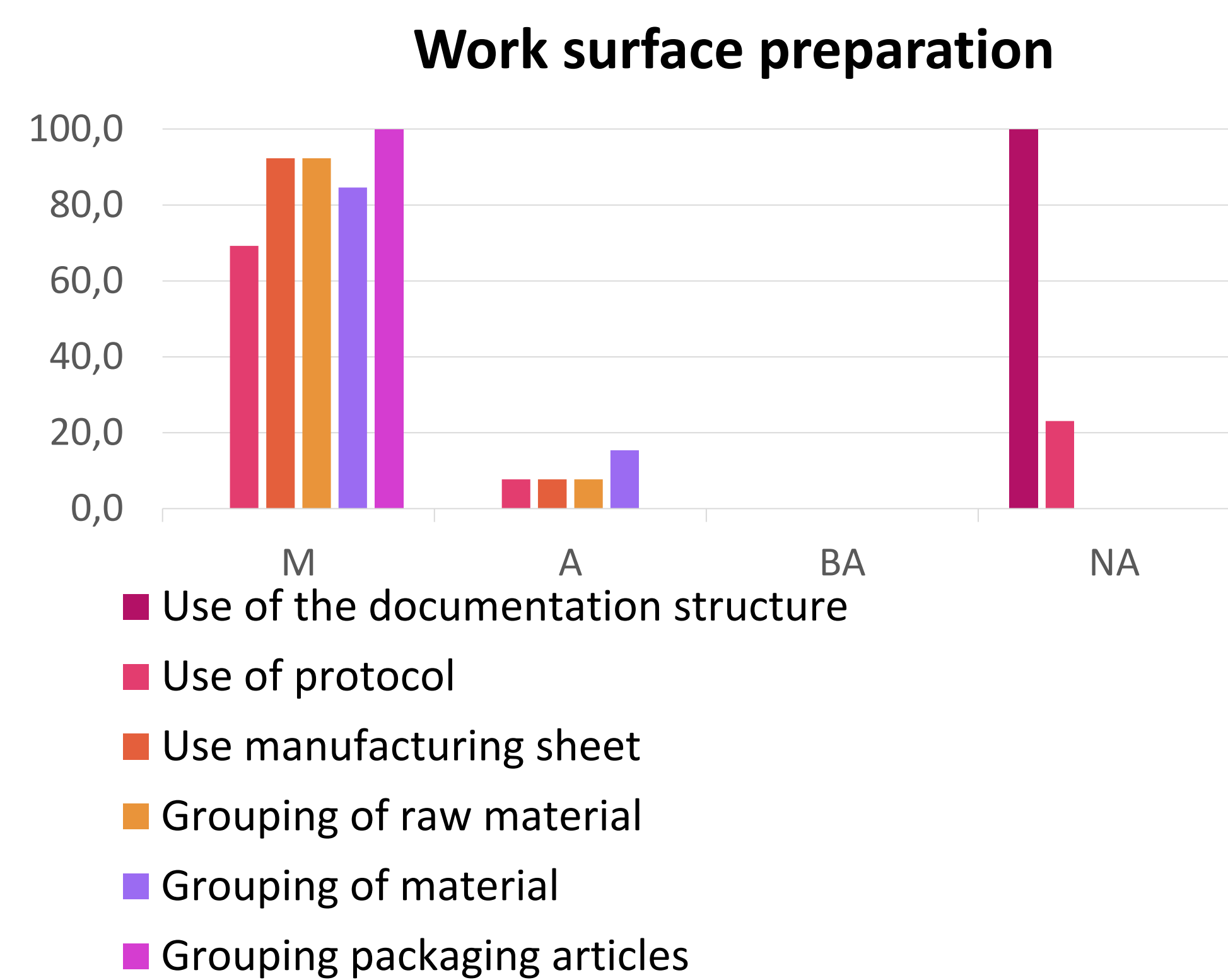
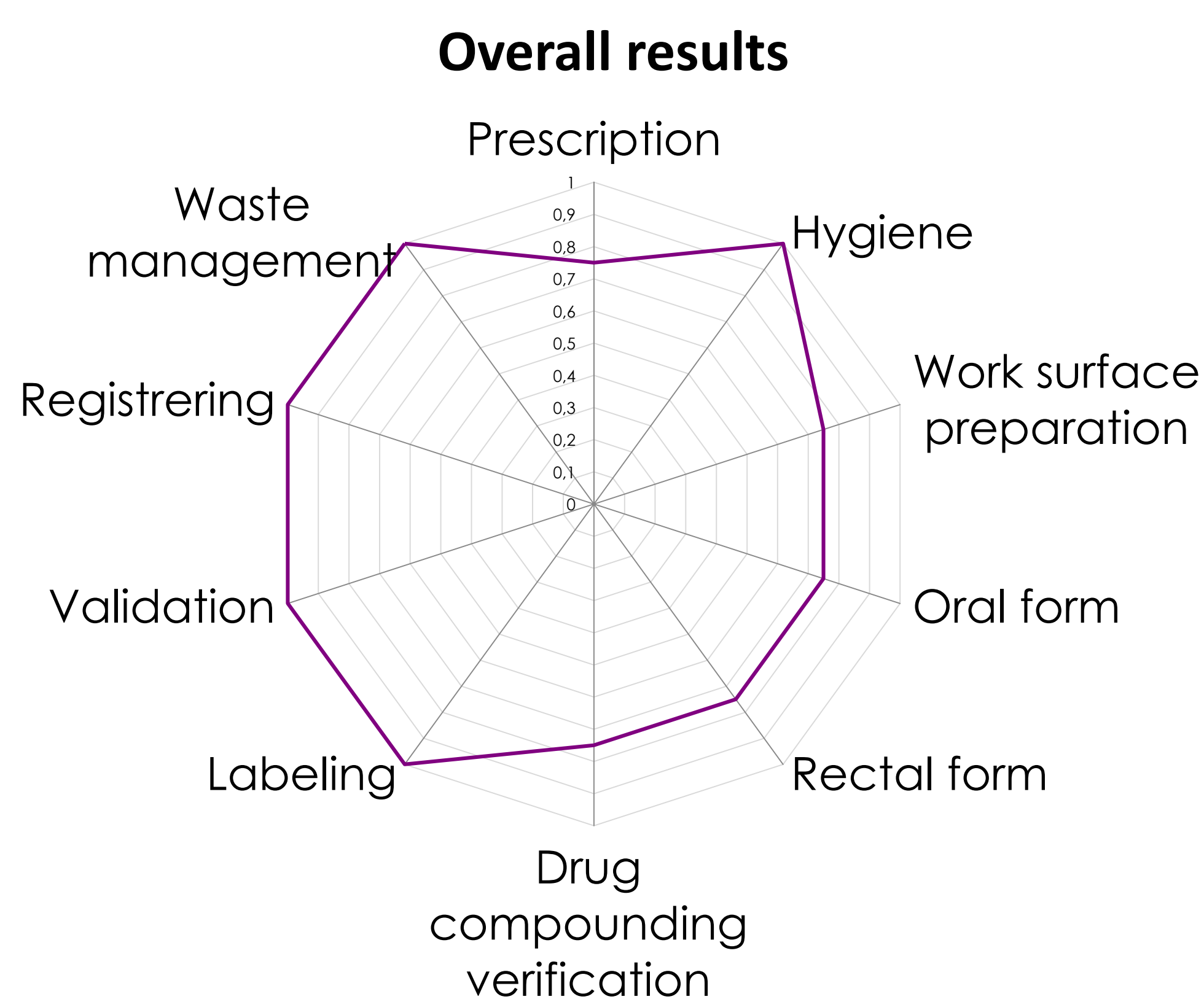
Stages	M	A	BA	NA	Observations
Prescription					
Conformity of prescription					
Hygiene					
Closing					
Wash the hands					
Disinfection of the work surface					
Work surface preparation					
Use of the documentation structure					
Grouping of raw materials					
Grouping of material					
Grouping packaging articles					
Drug compounding preparation					
1. Oral form					
Compliance of the protocol					
Use of mortar					
Weigh of powder					
Mixture of powder					
Calculation of excipient's volume					
Measure of volume					
Filling of capsule					
2. Rectal form					
Compliance of the protocol					
Weigh of powder					
Mixture					
Moulding					
Packaging					
Drug compounding verification					
Visual check					
Compliance of the protocol					
Calculation of the confidence interval					
Uniformity mass					
Labeling					
Conformity of labeling					
Readability					
Validation					
Pharmacist's validation					
Registrering					
Enregistrement on the book of preparation					
Manufacturing file					
Preservation of prescription					
Waste management					
Waste sorting					
Storage					
Elimination					

Assessment grid of pharmacy technician's evaluation

Results

- 13 pharmacy technicians were evaluated
 - 1 excluded
 - 2 maternity leaves
- 7 pentobarbital suppositories preparations 
- 6 pediatrics dosage capsules preparations 
- **The overall results** were satisfactory:

- **Prescription:** 83%, no analysis of dosage prescription
- **Hygiene:**
 - 70% disinfection of the work surface
 - 100% using alcohol
 - 7,7% (n=1) with nail polish
 - 15,4% (n=2) with jewels



- **Drug compounding preparation:**
 - Capsules:
 - Compliance of the protocol and use of motar : 100%M
 - Mixture of powder: 83%M
 - Suppositories: compliance of the protocol and moulding: 72%M

- **Drug compounding verification:**
 - Calculation of the confidence interval: 50% BA

Discussion

- Some issues were identified:
 - weighing procedures
 - compliance with procedures
 - the calculation of acceptance interval for capsules
- Procedures update and clarification process:
 - using a surface disinfectant
 - a better explanation of the uniformity mass test.

Conclusion

- Assessment of professional practices for non-sterile drug compounding.
- Ongoing training will be implemented taking.
- The evaluation must be regularly performed
 - to assess ongoing training implementation
 - for all new pharmacy technicians.