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BACKGROUND AND IMPORTANCE

- High-alert medications (HAMs) = medicines that have higher risks of harming patients
- To prevent this, our hospital pharmacy trained **147 healthcare professionals (HCPs)** on this topic using a fun educational tool in puzzle form: **PUzzle** (PUI is the French acronym for internal use pharmacy), which has **significantly improved short-term knowledge on HAMs**
- However, its impact on long-term knowledge retention is not known

To evaluate the impact of PUzzle on HCPs' knowledge retention and its contribution to professional practices

MATERIALS AND METHODS

- WHAT ?** A monocentric study
- WHERE ?** At a 300-bed hospital in Paris region (France)
- WHEN ?** Between January and August 2022

HOW ?

HCPs' knowledge was assessed with a self-questionnaire administered **3 weeks after the training (3WAT)** :

- The first part focused on **professional practices**
- The second part consisted of **five identical questions to the pre- and post-training knowledge questionnaire**, to compare the scores of the **pre-training (PrT)**, **post-training (PoT)** and **3WAT** questionnaires
- The third part added **five other questions on HAMs**

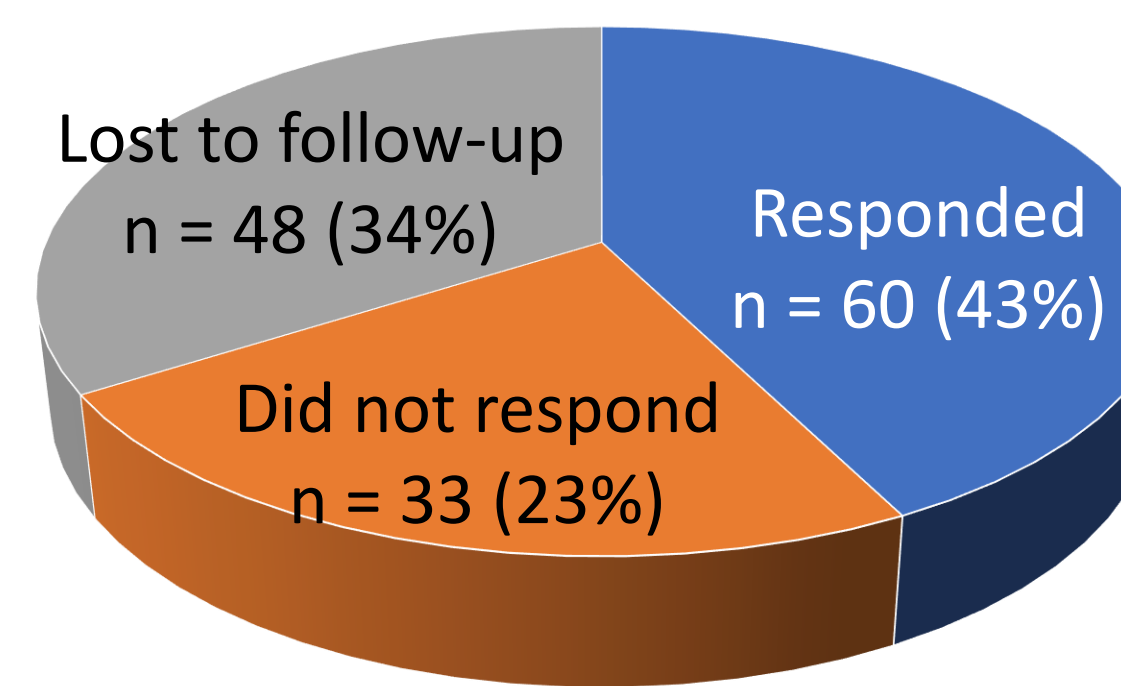
Participation was voluntary and anonymous
→ No ethical approval was requested

RESULTS

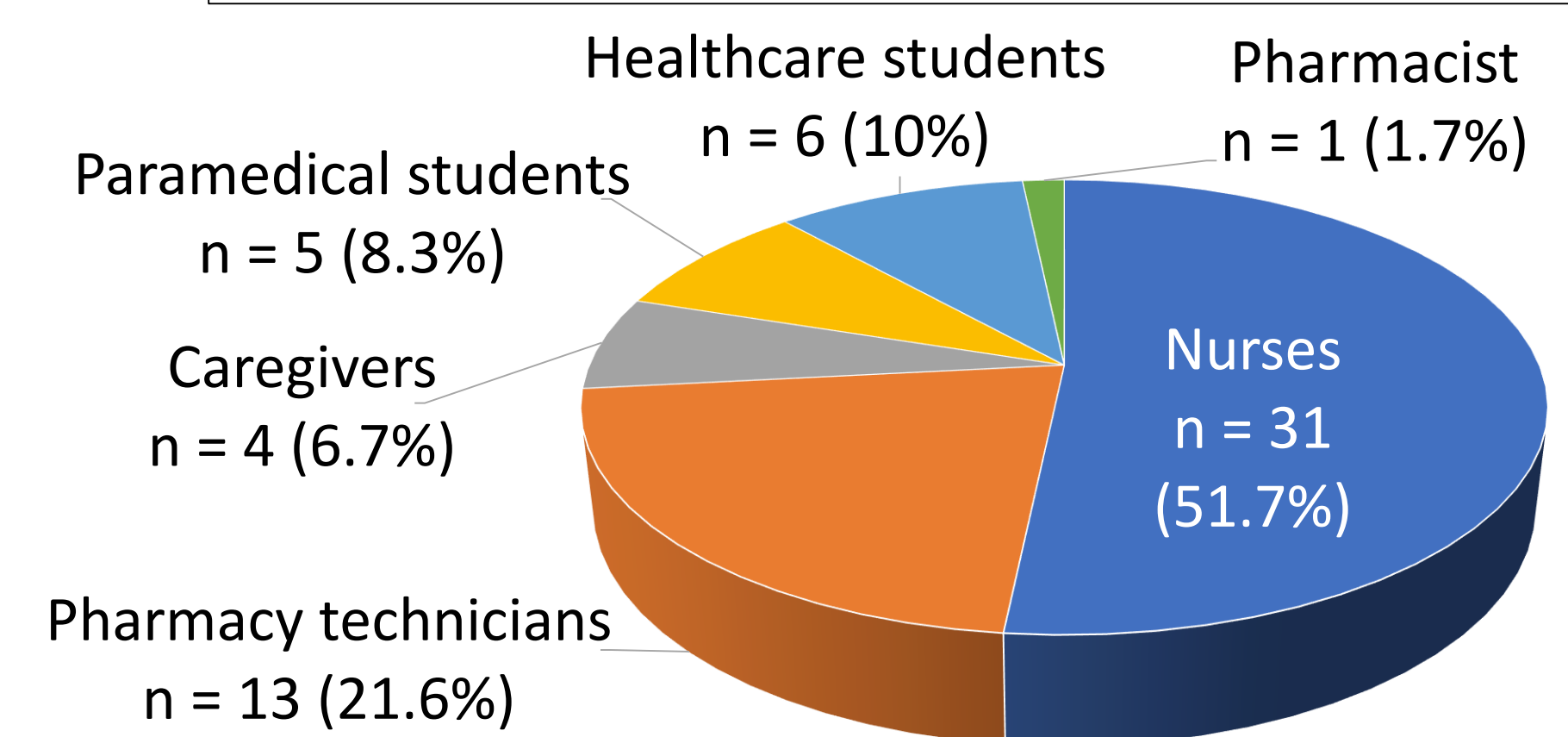
General information

- 141 HCPs were eligible to the 3WAT questionnaire
- 60 HCPs completed the 3WAT questionnaire
- On average 3.6 months later ($\sigma = 1.37$)

Response status of eligible HCPs to the 3WAT questionnaire (n = 141)



Occupational profile of participants who responded to the 3WAT questionnaire (n = 60)



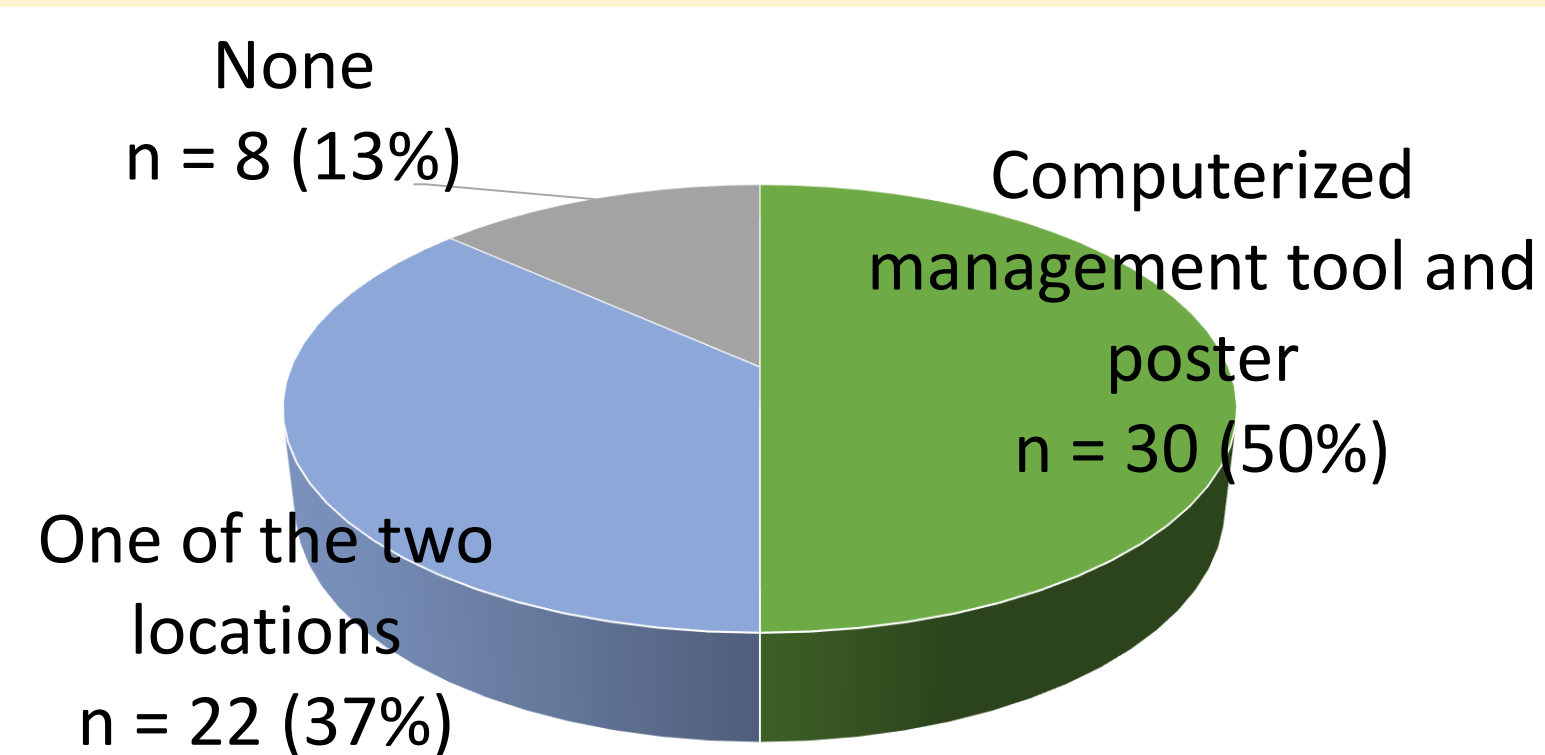
1 First part : Professional practices

- To elaborate a list of HAMs that meets local specificities

Securing the use of HAMs requires :

- That all HCPs know about this list (or at least where to find it)
- That all HCPs know how to identify HAMs

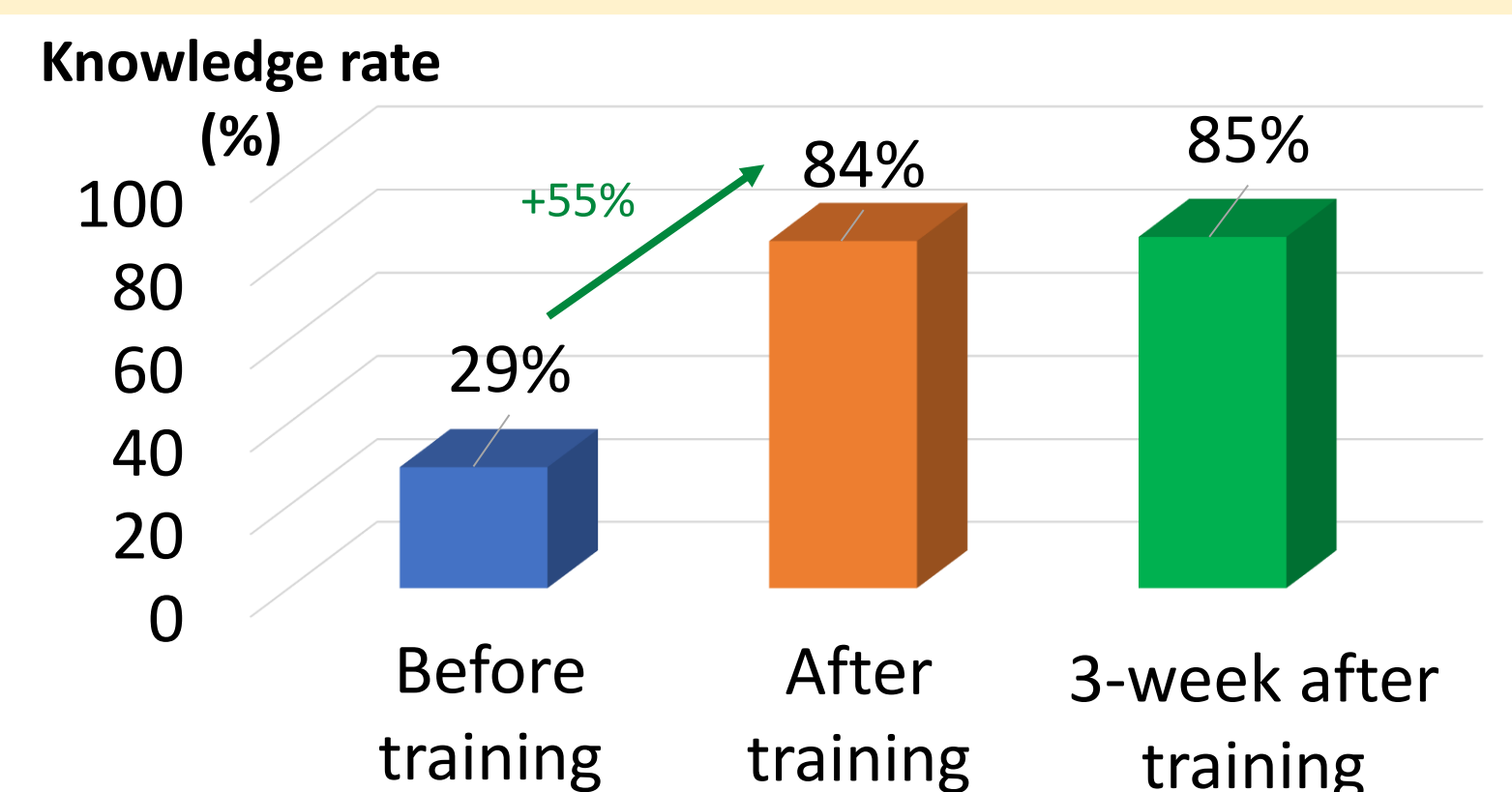
HCPs' knowledge on the locations of the list of HAMs



- Fifty-two (87%) HCPs could name one of the two locations of the list of HAMs

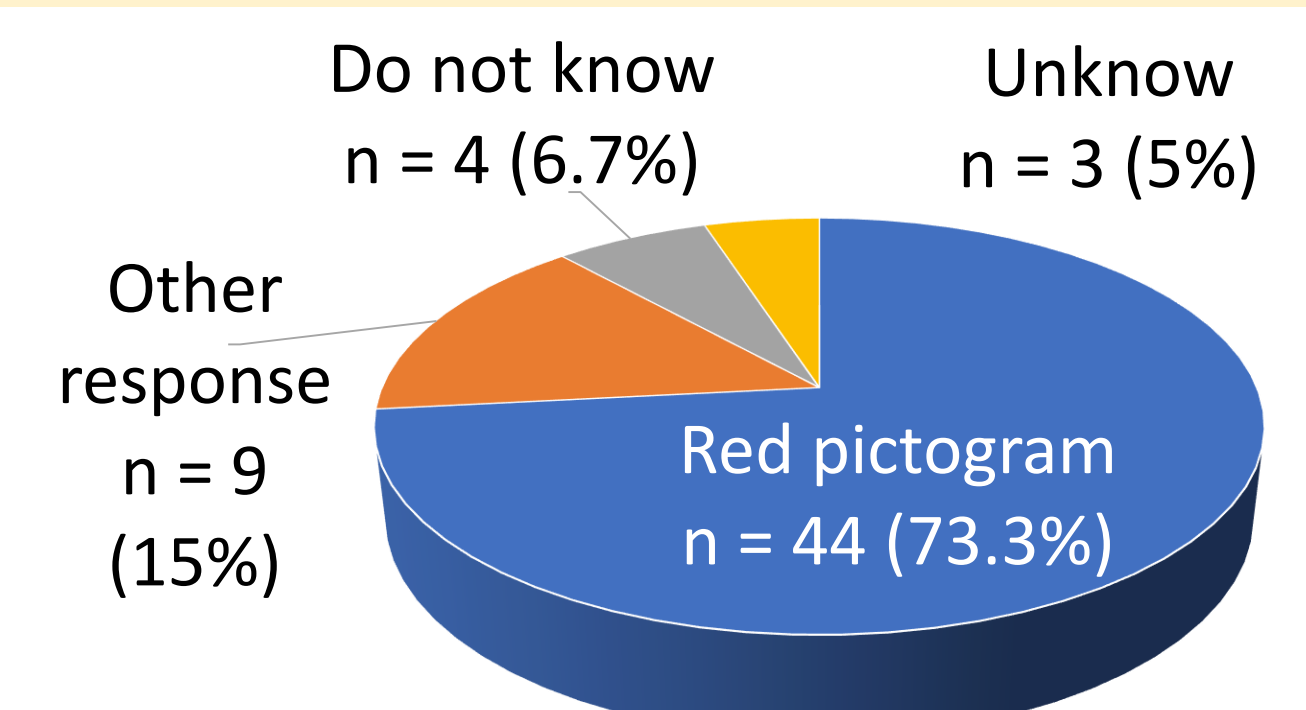
Most changes in practice were observed at the prescribing level (n = 31; 52%). HCPs declared being more attentive to HAMs' labeling

HCPs' knowledge of the drugs composing the list of HAMs



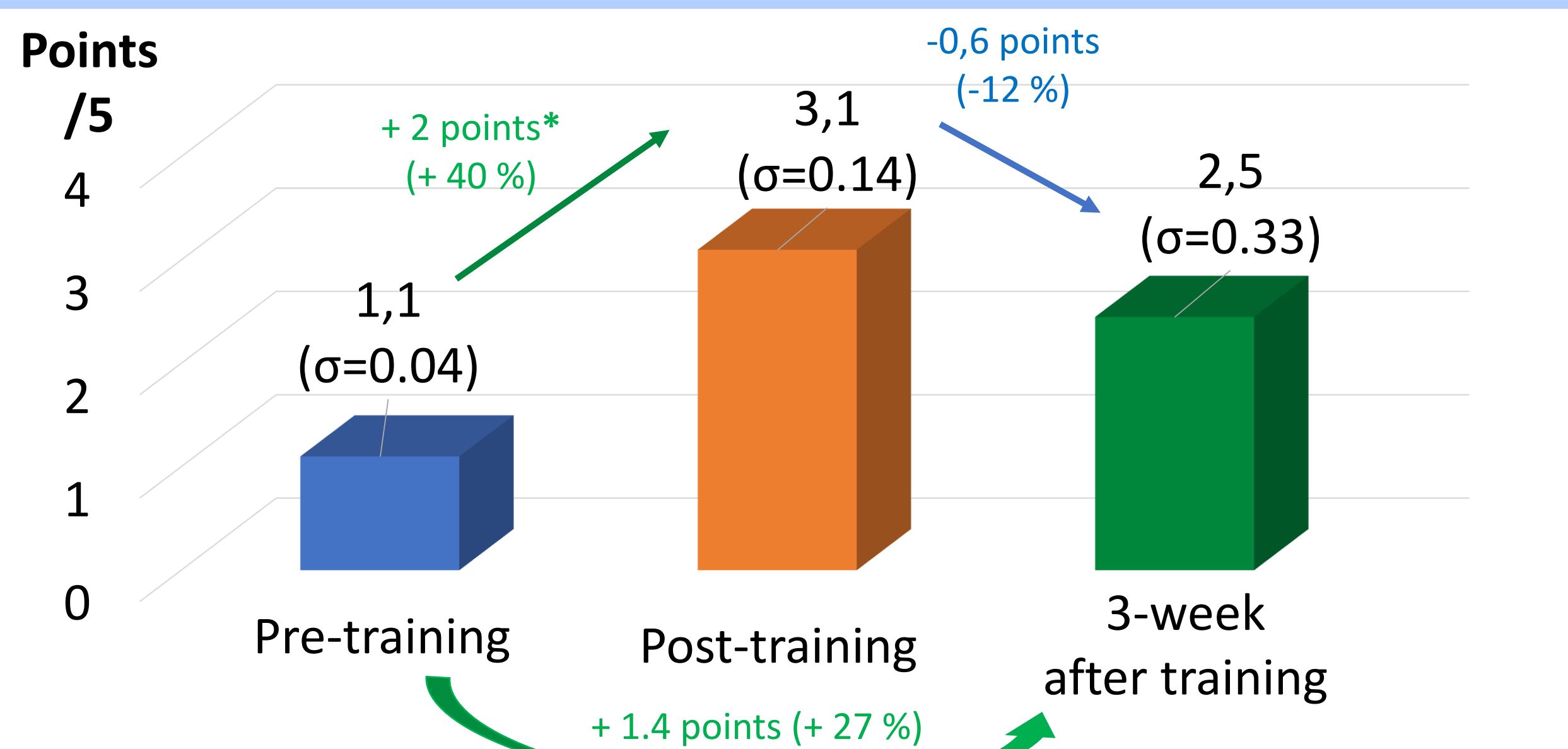
- HCPs' knowledge about HAMs increases greatly after training and is maintained over time

Identification of HAMs by HCPs on the prescription software



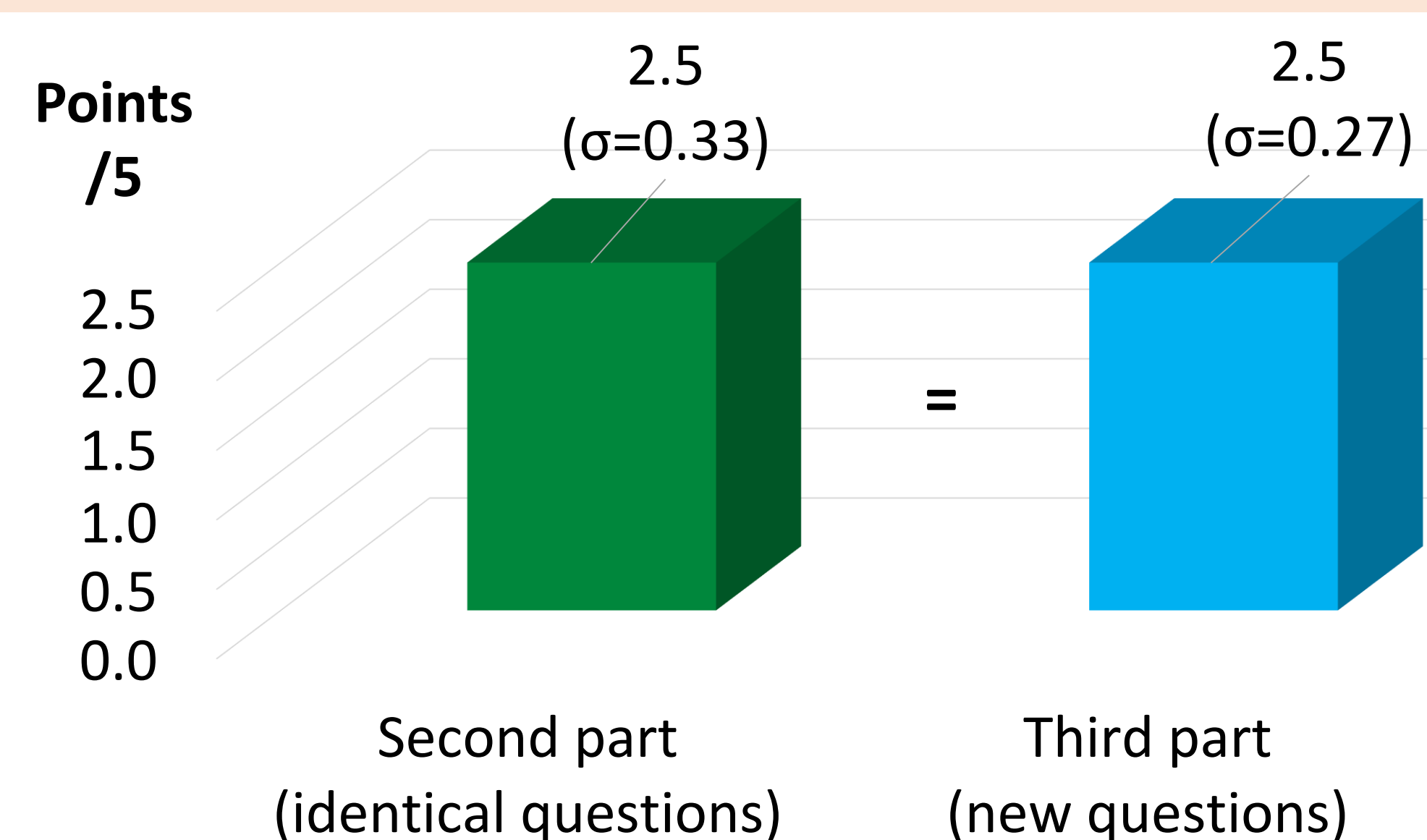
- Almost 75% of HCPs could identify HAMs on the prescription software

2 Second part : Identical questions to the PrT and PoT knowledge questionnaire



- Significant improvement between PrT and 3WAT ($p < 0.03$)*
- Non-statistical decrease between PoT and 3WAT ($p < 0.17$)
- Hypothesis: knowledge retention long after the HCPs training

3 Third part : Other questions on HAMs



- Overall, the average rate of correct answers is similar between the second and third parts of the 3WAT questionnaire

CONCLUSION AND RELEVANCE

The use of PUzzle improves healthcare professionals' practices and overall knowledge retention about high-alert medications. Therefore, our hospital will organize regular training sessions, and this training will be transposed into continuing professional education.