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# MEDICATION LABEL DESIGN AND PATIENT SAFETY: AN INTERACTIVE COMPARISON TEST

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## **OBJECTIVES**

As part of the institutional risk management strategy, labels for hospital compounded preparations were redesigned by a multidisciplinary team. Colour coded route of administration was included.

**OBJECTIVES:** To develop a computer test for label design testing. To compare the previous and new labels by assessing probability of data misinterpretation and satisfaction.

### METHODS

An interactive test was developed with Adobe Captivate<sup>®</sup> 8. Pictures of pharmacy compounded parenteral bags and oral syringes labelled with the old and new designes were shown for 6s each. Then, participants answered questions about the composition and route of administration of the preparations. A satisfaction survey was also carried out. Answers were analysed using STATA<sup>®</sup> 13. Differences between the percentage of correct answers with the two labelling systems were assessed with the  $\chi^2$  test (p<0.05 was considered statistically significant).

# RESULTS

#### 1. Patients characteristics

Professional category	n	%
Pharmacists	21	43.75
Nurses	9	18.75
Technicians	18	37.5

# 2. Administration route: percentage of correct answers

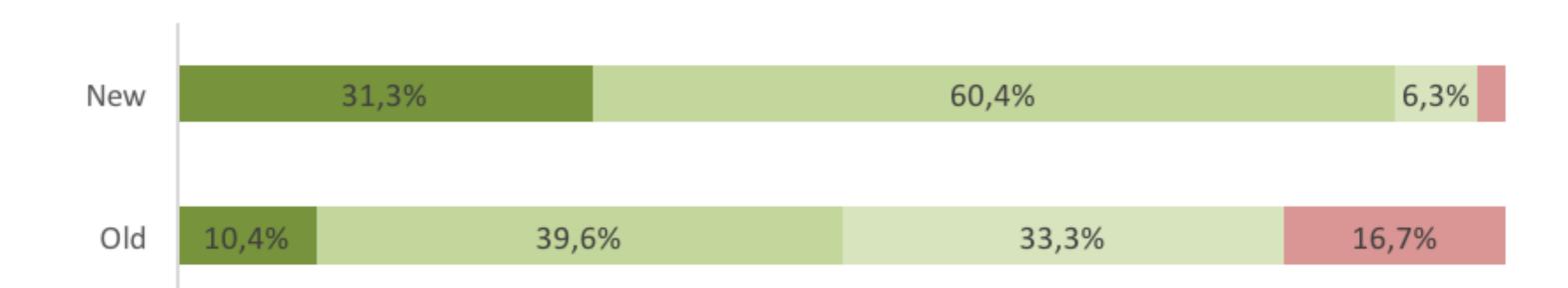
	Old labels	New labels	
Professional category	%	%	p
Pharmacists	95.5	98.2	NS
Nurses	95	97.5	NS
Technicians	86.7	97.8	<i>p</i> <0.05
Overall	88.8	97.9	NS

# 3. Composition: percentage of correct answers

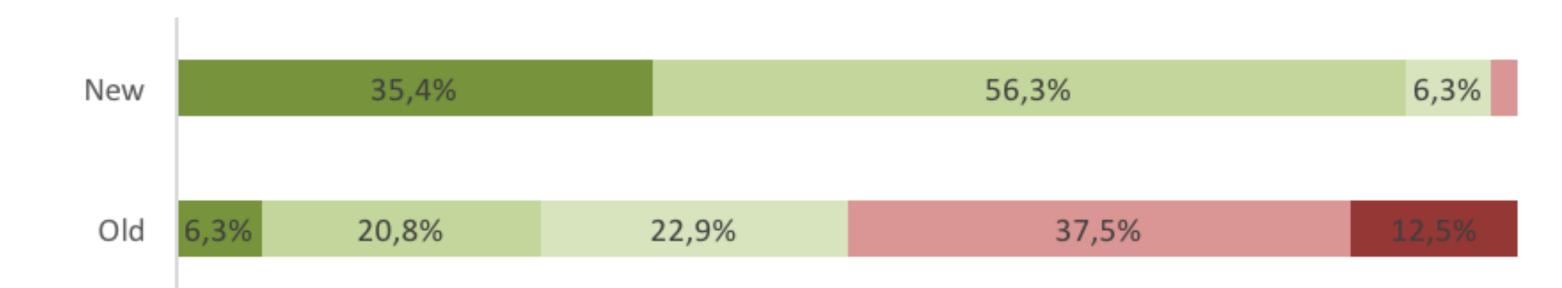
	Old labels	New labels	
	%	%	p
Overall	72.1	86.7	p=0.00

#### 4. Satisfaction survey

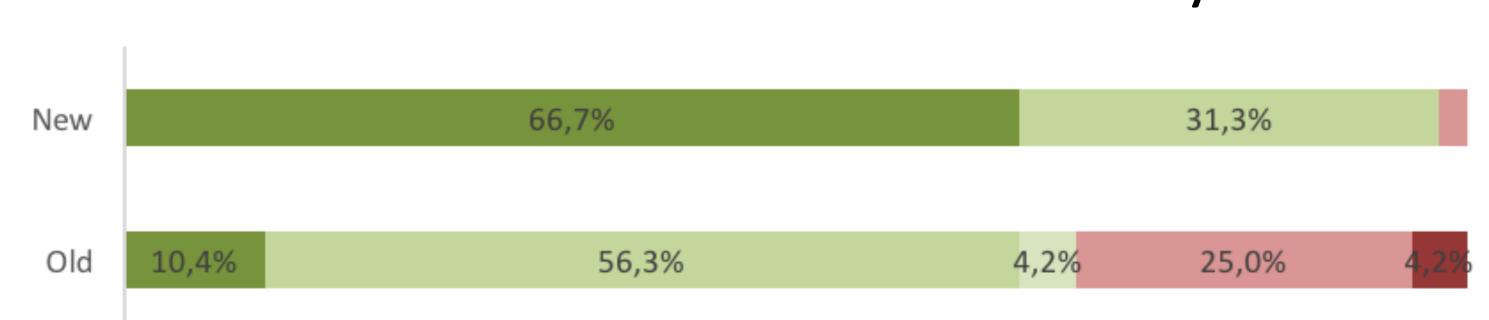
Statement 1: Composition is easily understood



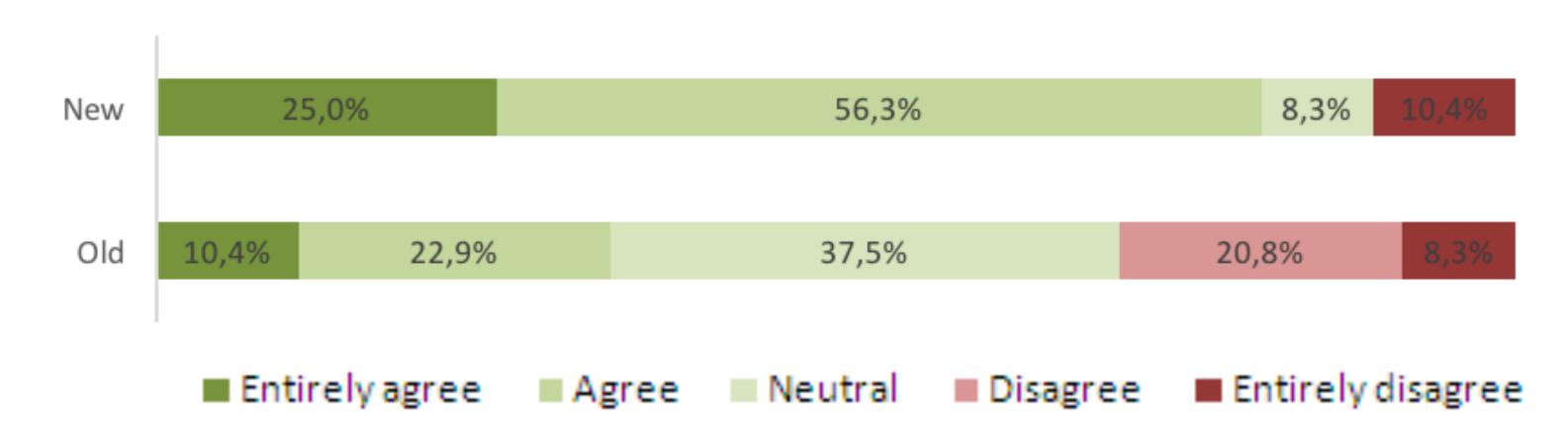
# Statement 2: Labels are easy to read



Statement 3: Administration route is easy to find



Statement 4: Labels clearly identify the preparation



## CONCLUSIONS

Changes in label design proved able to facilitate identification of both administration route and composition of the preparations. The survey showed an improvement in satisfaction with the labelling system. The computer test was useful to assess label readability and enhance medication safety.



