



EVALUATING PATIENT PREPARATION PRACTICES FOR BLOOD TESTS AMONG HEALTHCARE PROFESSIONALS IN LITHUANIA: A CROSS-SECTIONAL STUDY



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Background

Accurate laboratory test results strongly depend on proper patient preparation, an often-underestimated aspect of diagnostics. Consistent and clear instructions from healthcare professionals are crucial for maintaining the quality of laboratory testing. Various guidelines address patient preparation and its importance for venous blood sampling, such as the GP41 guideline issued by the Clinical Laboratory Standards Institute (CLSI) and the blood collection guidelines published by the World Health Organisation (1,2). Recommendations provided by national societies or international organisations in the field of radiology, such as The Contrast Media Safety Committee of the European Society of Urogenital Radiology, or in the field of laboratory medicine, such as the Working Group for Preanalytical Phase (WG-PRE) of the European Federation of Clinical Chemistry and Laboratory Medicine (EFLM) and the Latin American Working Group for Preanalytical Phase (WG-PRE-LATAM) of the Latin American Confederation of Clinical Biochemistry (COLABIOCLI), also guide this practice (3,4).

This study aims to assess the practices of physicians and nurses in Lithuania regarding patient preparation for blood tests. The objective is to identify variations in practices and propose enhancements to improve the accuracy of laboratory results.

Materials and Methods

To evaluate the general practice of patient preparation, we conducted a survey involving non-laboratory healthcare professionals, specifically nurses and physicians. This survey took place over a span from February 2023 to October 2023. The research employed a self-designed anonymous questionnaire, which was prepared by laboratory medicine professionals. The questionnaire was distributed electronically using Google Forms to 141 public healthcare institutions in Lithuania. The results are presented as frequencies and percentages of respondents' answers, providing a clear and accessible overview of the data.

Results

Among 113 respondents (75 nurses, 38 physicians), 58% of physicians and 71% of nurses adhered to laboratory-prepared guidelines (Figure 1). Verbal instructions were given by 56% of physicians and 51% of nurses, with limited use of written materials (Figure 2). Fasting recommendations included a 12-hour period before blood sampling, supported by 73% of physicians and 84% of nurses. For caffeine, 67% of physicians and 77% of nurses advised against intake before collection, while 55% of physicians and 77% of nurses recommended 24-hour alcohol abstinence. Additionally, 42% of physicians and 63% of nurses advised refraining from smoking for an hour before sampling. Recommendation against non-essential medications was provided by 55% of physicians and 74% of nurses. Physical activity recommendations were conservative, with only 15% of physicians and 26% of nurses advising against vigorous exercise the night before testing. Notably, 45% of nurses and 42% of physicians emphasized the importance of patients informing blood collection staff about the day of their menstrual cycle, especially during hormone testing. Additionally, 58% of physicians and 52% of nurses advised scheduling blood tests before radiological procedures involving contrast agents. Finally, 18% of nurses and 12% of physicians recommended refraining from water intake before sampling. All these results are presented in Figure 3.

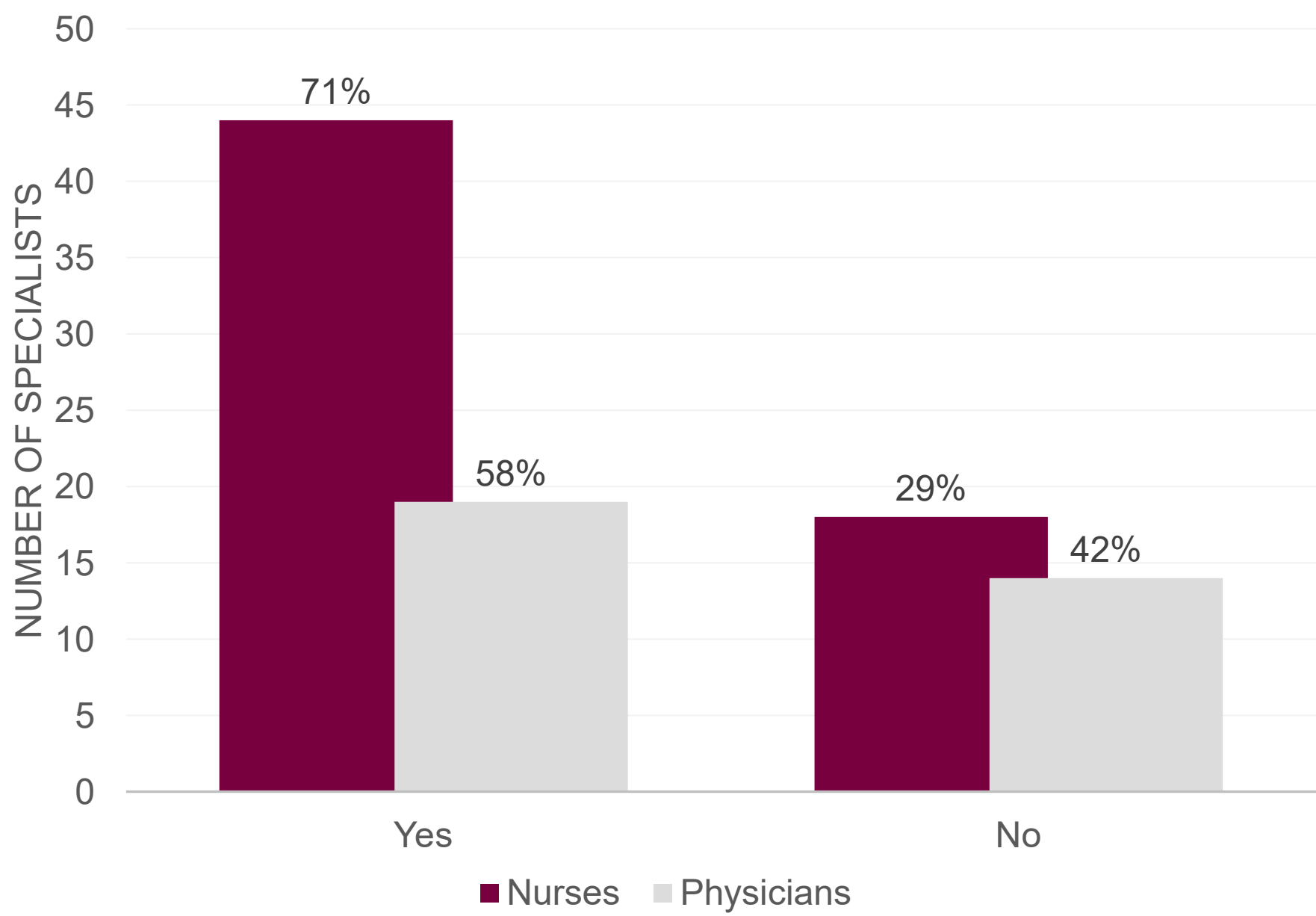


Figure 1. Information provision according to laboratory guidelines as per professional qualifications.

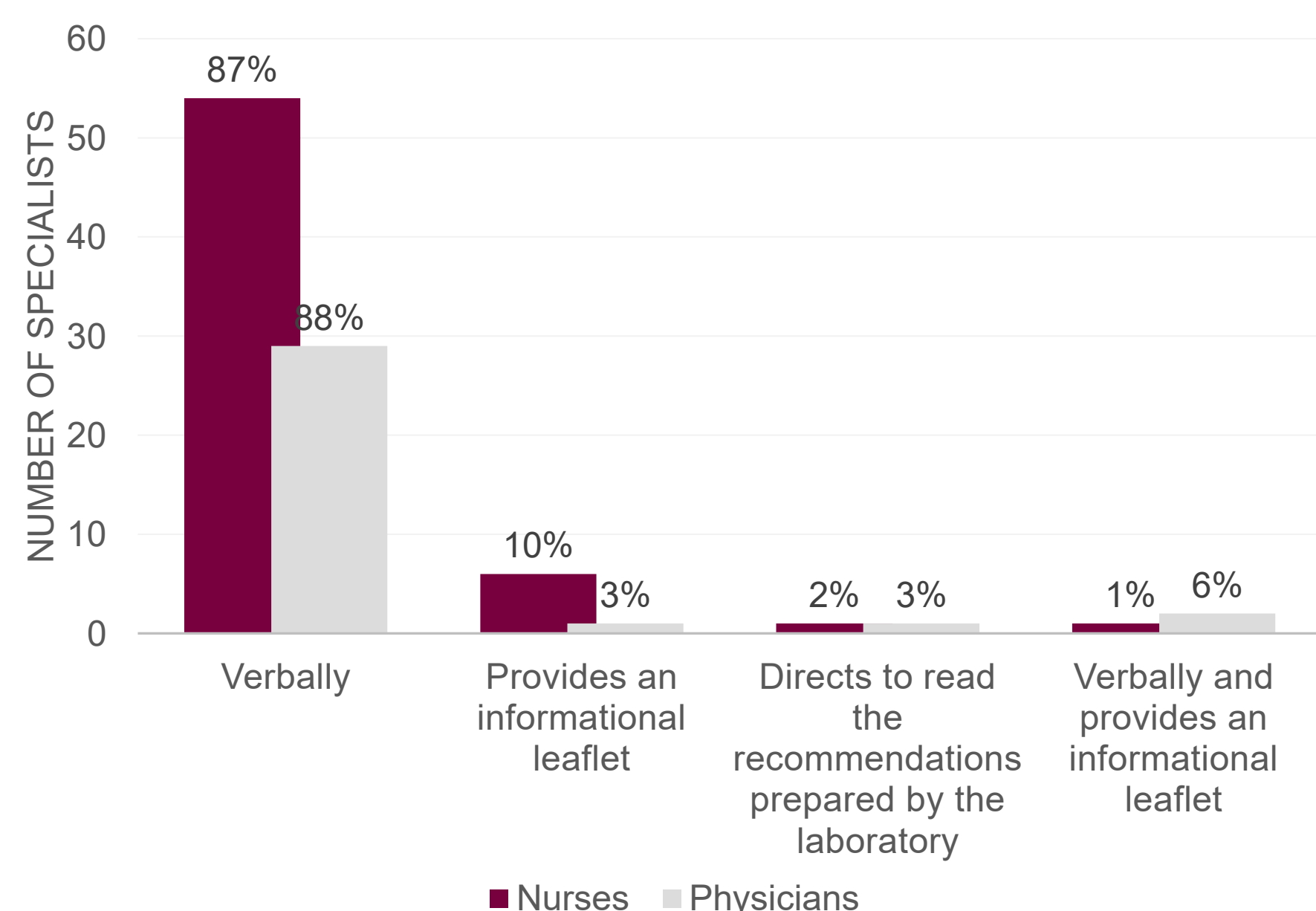


Figure 2. Differences in methods of providing information to patients, considering professional qualifications.

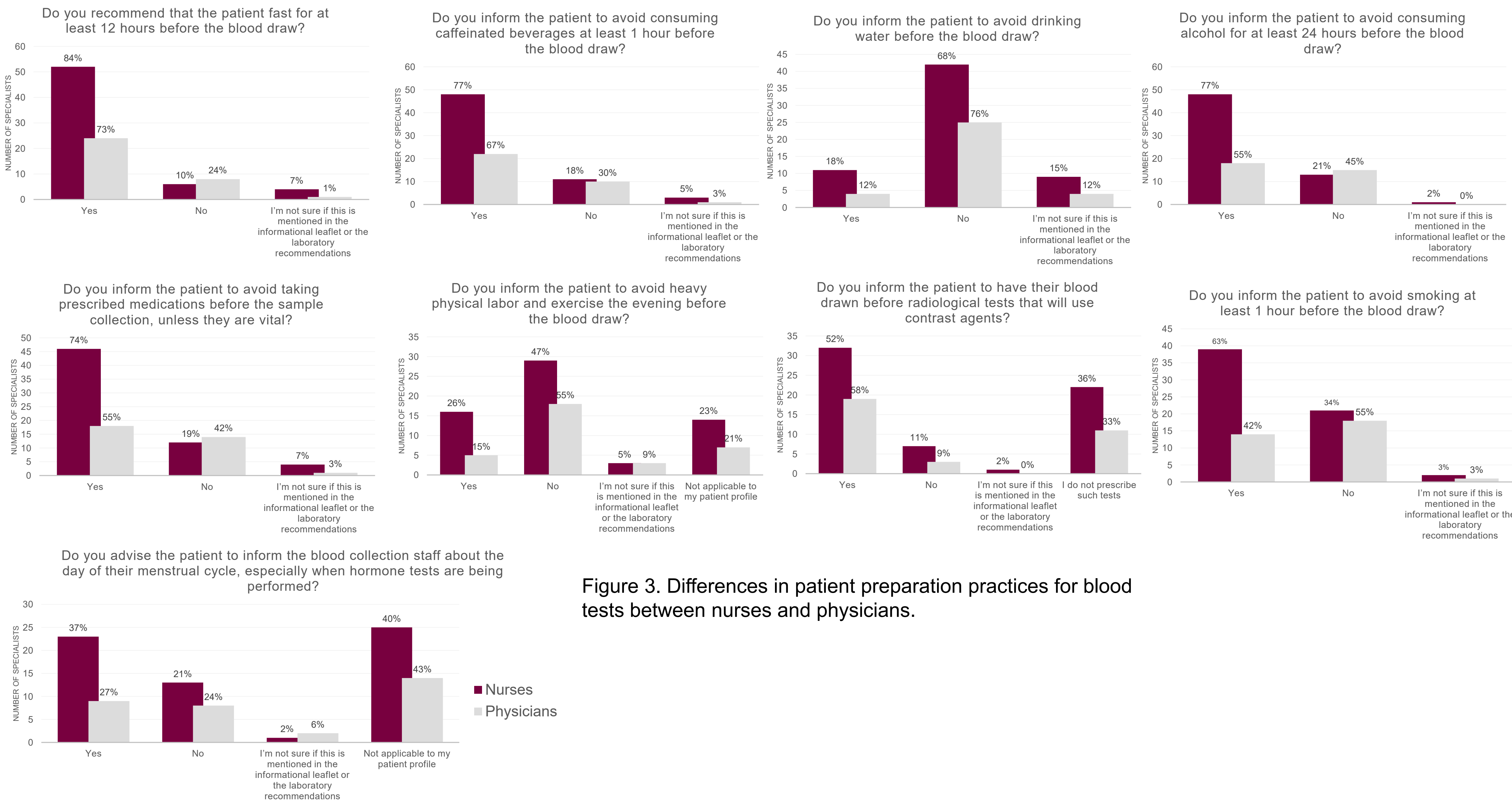


Figure 3. Differences in patient preparation practices for blood tests between nurses and physicians.

Conclusions

The study revealed that while a significant majority (73.5 %) of healthcare professionals in Lithuania provide patients with instructions on how to prepare for routine blood laboratory tests, there is a notable gap in practice based on specialisation. This finding underscores the need for standardized training across all levels of experience to ensure consistent patient education. Furthermore, although most healthcare providers do inform patients about proper preparation, research indicates that over half of the patients across various countries (5), including Lithuania (6), are often inadequately prepared for laboratory tests. This discrepancy may stem from the method of information delivery, predominantly verbal communication, which may not be as effective as needed. The study also highlights inconsistencies in specific recommendations, such as fasting and alcohol consumption prior to blood sampling. Notably, nurses were more likely than doctors to advise against alcohol consumption. Additionally, the occasional recommendation to avoid drinking water before blood tests contradicts international guidelines (3), indicating a need for clearer and more consistent messaging.

In conclusion, the findings reveals disparities in patient preparation practices between physicians and nurses. While adherence to guidelines is generally observed, variations, especially concerning alcohol intake and medication guidance, are evident. Standardization of patient preparation practices could improve the accuracy of laboratory outcomes.

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