LABQUALITY

External Quality Assessment Scheme

Preanalytics, POCT
Round 1, 2023

Specimens
Samples are three case reports at LabScala (www.labscala.com). Case descriptions with answer choices also can be found at the end of this instruction letter.

Result reporting
There are same questions from each of the three cases. We ask you to identify preanalytical errors. If you do not find your answer from the drop-down menu, please describe your action or preanalytical error in the free text Comment field (in English). Please choose your profession from drop down menu. If you reply to this round as a group, then please choose group reply as a profession.

With one order you can return five results per case (5 results x 3 cases). To separate your five results, give a respondent name in the respondent field. There will be an own table from each of the results sent. If you want to send more than one result per case, press “Add response +”.

Cases
Case 1 (LQ779723011)
The patient is in the hospital receiving medical treatment. The biomedical scientist is analysing Point of Care- blood gas. However, an analytical error occurred during the actual testing process. An "error" appears on the monitor. The biomedical scientist will carry out the required maintenance activities. She analyses the patient blood sample and documents the results.

Did the nurse act correctly? (Yes / No /I do not know)
Which preanalytical errors did you find in this case?
Please select max five that are relevant to the cases presented here.

Case 2 (LQ779723012)
The child is suspected of having scarlet fever, The biomedical scientists take a throat swab both of the tonsillar arches. She had never performed a rapid strep test (RST). She will find RST work instruction and the RST kit at the workstation. At the first she will perform a positive control sample. She makes a quick throat sample according to the work instructions.

Did the nurse act correctly? (Yes / No /I do not know)
Which preanalytical errors did you find in this case?
Please select max five that are relevant to the cases presented here.

Case3 (LQ779723013)
Emergency department nurse asks the results of a urine dipstick test. The biomedical scientist replies that the patient has given the urine sample a few minutes ago. The test should be carried out at room temperature, so it takes 15 minutes to get the result.

Did the nurse act correctly? (Yes / No /I do not know)
Which preanalytical errors did you find in this case?
Please select max five that are relevant to the cases presented here.

2023-10-17

INSTRUCTIONS

Product no. 7804
LQ779723011-013/FI

The results should be reported no later than **November 16, 2023**.

Inquiries
EQA Coordinator
Pia Eloranta
pia.eloranta@labquality.fi

Labquality Oy
Kumpulantie 15
FI-00520 HELSINKI
Finland

Tel. + 358 9 8566 8200

info@labquality.fi
www.labquality.com

CASE 1	2	3	
☐	☐	☐	No errors
			Test order/requisition form
☐	☐	☐	Missing request
☐	☐	☐	Wrong request
☐	☐	☐	Too many requests
☐	☐	☐	The requests have changed
☐	☐	☐	Incorrect emergency requests ordered
☐	☐	☐	Insufficient information about the person requesting the analysis
☐	☐	☐	Important background information of the patient missing
			Patient/customer guidance/preliminary checks
☐	☐	☐	Insufficient/incorrect guidance to sample collection procedure
☐	☐	☐	Patient prepared incorrectly
☐	☐	☐	No fasting or fasting not confirmed
☐	☐	☐	Possible medication not confirmed
☐	☐	☐	Use of stimulants (alcohol, tobacco, drugs)
☐	☐	☐	Physical exercise
			Blood sampling procedure
☐	☐	☐	Insufficient/incorrect patient ID confirmation
☐	☐	☐	Incorrect timing for the sample or follow-up sample
☐	☐	☐	Wrong timing of the phlebotomy/sampling
☐	☐	☐	Incorrect/insufficient hand hygiene
☐	☐	☐	Phlebotomist had no disposable gloves
☐	☐	☐	Unrefined sampling site
☐	☐	☐	Inadequate or disordered equipment
☐	☐	☐	Patient’s arm supported poorly
☐	☐	☐	Incorrect tourniquet usage
☐	☐	☐	Wrong needle/lancet
☐	☐	☐	No adapter/holder used
☐	☐	☐	Wrong angle of puncture
☐	☐	☐	Punctured to a bruise/skin damage
☐	☐	☐	Unsuccessful puncture
☐	☐	☐	Cold puncture site
☐	☐	☐	Punctured too early
☐	☐	☐	Too tight squeeze
☐	☐	☐	Sample taken from the wrong drop
☐	☐	☐	Blood drop is dripping
☐	☐	☐	Incorrect sampling site
☐	☐	☐	Wrong order of draw/sampling
☐	☐	☐	Sample not mixed
☐	☐	☐	Too vigorous mixing of the sample
☐	☐	☐	The sample should not have been mixed
☐	☐	☐	Unsafe sharps disposal
☐	☐	☐	Risk of needlestick injury
☐	☐	☐	Patient safety risk
☐	☐	☐	Patient guided incorrectly after sampling
			Urine sample collection
☐	☐	☐	Incorrect washing of the genital area
☐	☐	☐	First portion of urine stream not discarded
☐	☐	☐	Bladder incubation time not confirmed/marked
☐	☐	☐	Too short bladder incubation time
			Sample handling/transport
☐	☐	☐	Centrifugated too soon after phlebotomy
☐	☐	☐	Incorrect centrifuge settings
☐	☐	☐	Too long lag time before handling the sample
☐	☐	☐	Insufficient clotting time
☐	☐	☐	Wrong secondary tube
☐	☐	☐	Wrong sample storage
☐	☐	☐	Wrong sample handling prior to transport
☐	☐	☐	The sample transferred/packed to transport container incorrectly
☐	☐	☐	Wrong sample transport container

☐ ☐ ☐ Faulty/defective transport container
☐ ☐ ☐ Expired transport container
☐ ☐ ☐ Wrong transportation temperature
☐ ☐ ☐ Too long transportation time
☐ ☐ ☐ Wrong means of sample transport

Sample quality

☐ ☐ ☐ Wrong sample collection
☐ ☐ ☐ Incorrect sample material/type
☐ ☐ ☐ Wrong primary tube/sample container
☐ ☐ ☐ Insufficient information about the sample composition
☐ ☐ ☐ Insufficient information about the sampling site
☐ ☐ ☐ Incorrect/insufficient sample marking/labeling
☐ ☐ ☐ Insufficient/contradictory information in the request, sample label or transport container
☐ ☐ ☐ Incorrect sample volume
☐ ☐ ☐ Reference serum for the requested analysis missing
☐ ☐ ☐ Discard tube not taken
☐ ☐ ☐ Tube date expired
☐ ☐ ☐ Sample should have been put to ice after phlebotomy/sampling
☐ ☐ ☐ Sample should not have been put to ice after phlebotomy/sampling
☐ ☐ ☐ Low quality sample
☐ ☐ ☐ Haemolysed sample
☐ ☐ ☐ Lipemic sample
☐ ☐ ☐ Icteric sample
☐ ☐ ☐ Blood in the sample
☐ ☐ ☐ Contaminated sample
☐ ☐ ☐ Wrong temperature of the sample
☐ ☐ ☐ Too old sample
☐ ☐ ☐ Destroyed sample (lost sample)
☐ ☐ ☐ Diluted sample
☐ ☐ ☐ Sample contains tissue fluid
☐ ☐ ☐ Sample has a strong colour
☐ ☐ ☐ Air bubbles in the tube
☐ ☐ ☐ Clot (micro) in sample

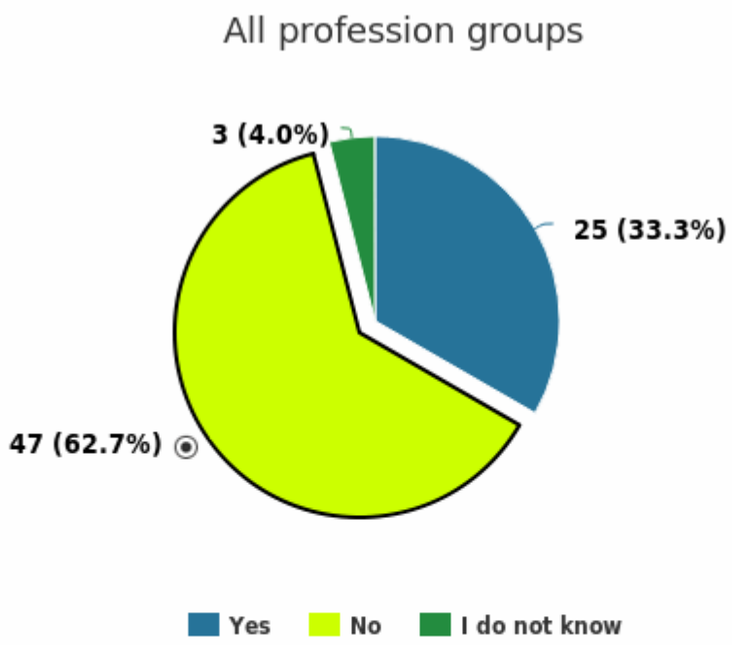
Sample analysis/performing the test

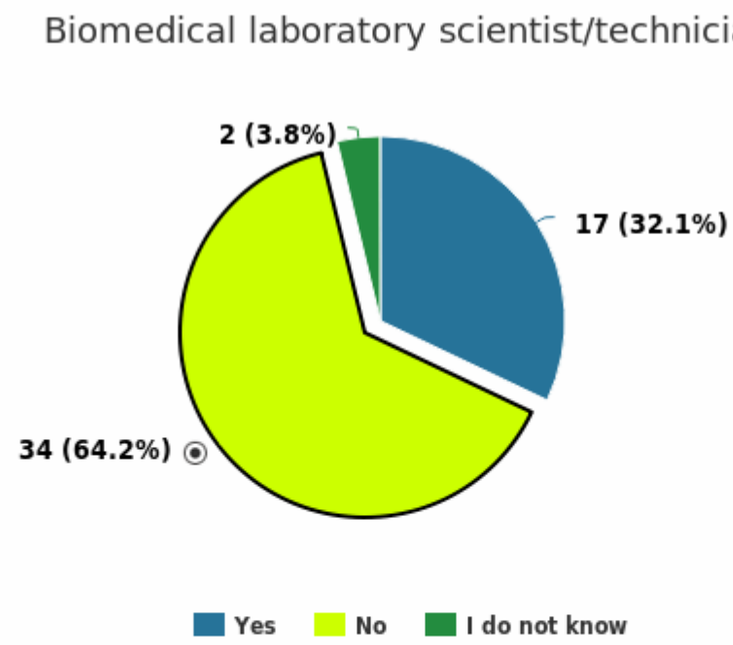
☐ ☐ ☐ Incorrect storage of test strips
☐ ☐ ☐ Too old test strips
☐ ☐ ☐ Cold test cassette
☐ ☐ ☐ Error when dipping the strip
☐ ☐ ☐ Incorrect usage of POC test
☐ ☐ ☐ Incorrectly functioning POC test
☐ ☐ ☐ Inadequate instructions/quality guidance of the (POC) test
☐ ☐ ☐ Poor lighting
☐ ☐ ☐ Suspicious result
☐ ☐ ☐ Analysis not repeated
☐ ☐ ☐ Incorrect sample analysis process

Result reporting

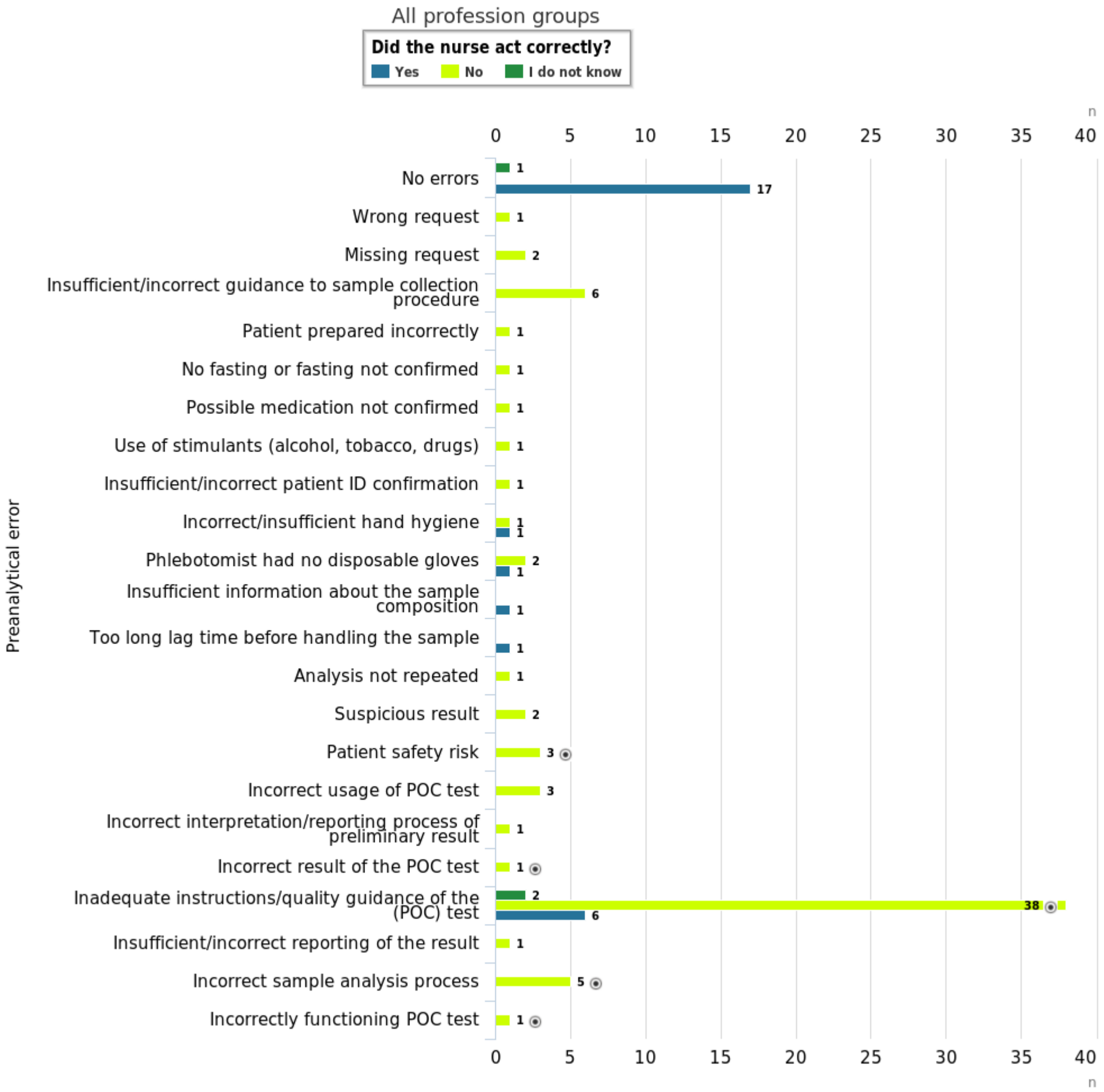
☐ ☐ ☐ Wrong timing for reading the result
☐ ☐ ☐ Insufficient/incorrect interpretation of the result/POC test
☐ ☐ ☐ Incorrect interpretation/reporting process of preliminary result
☐ ☐ ☐ Incorrect preliminary result
☐ ☐ ☐ Incorrect result of the POC test
☐ ☐ ☐ Insufficient/incorrect reporting of the result

Case 2|Did the nurse act correctly? |

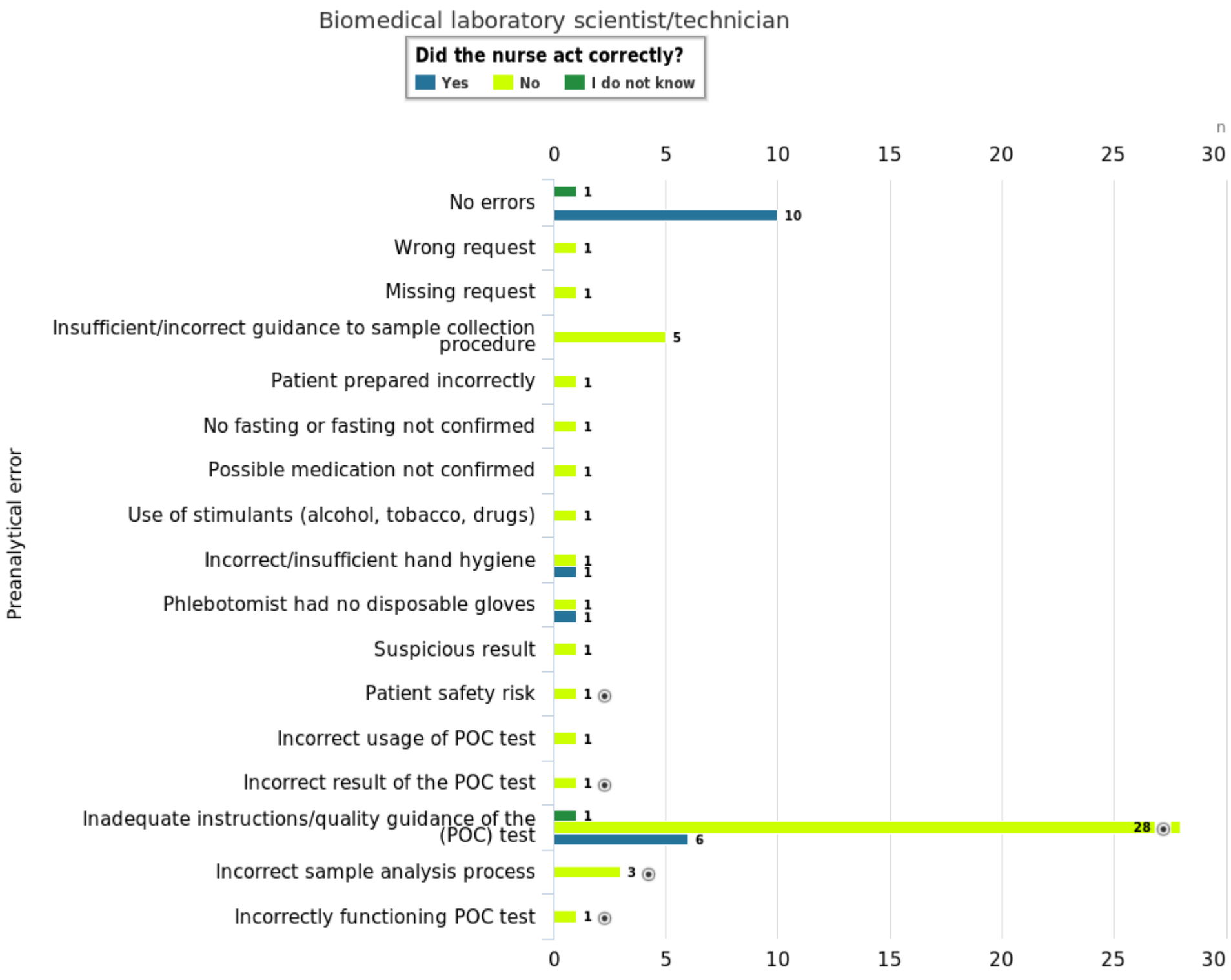




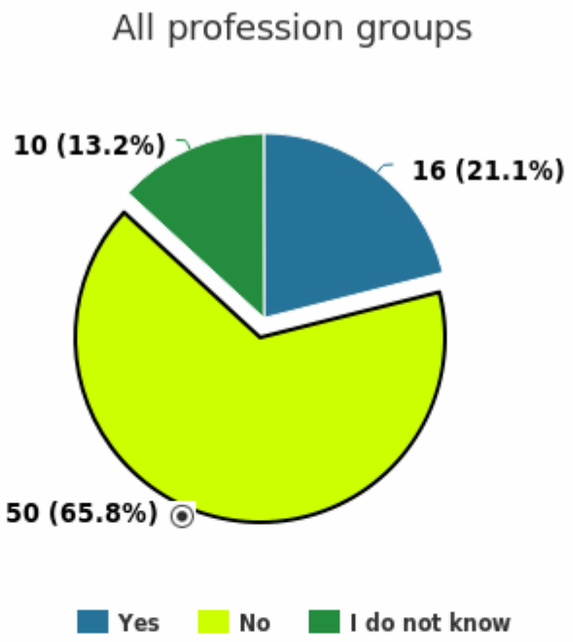
Case 2|Did the nurse act correctly? |All profession groups |

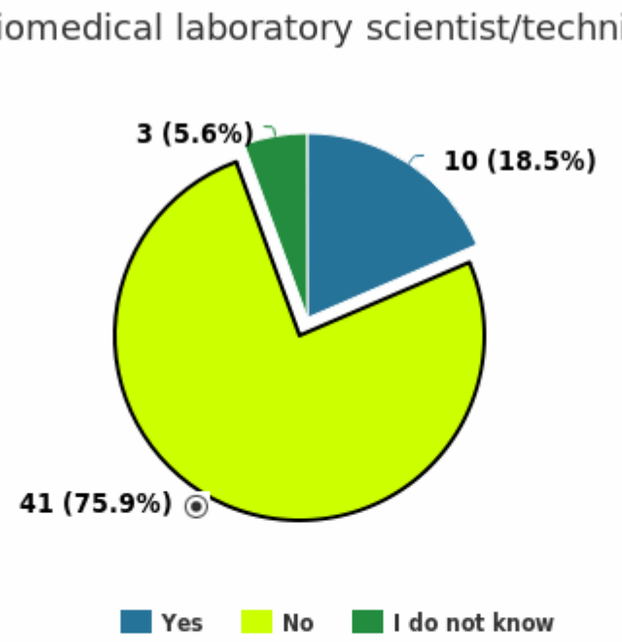


Case 2|Did the nurse act correctly? |Biomedical laboratory scientist/technician |

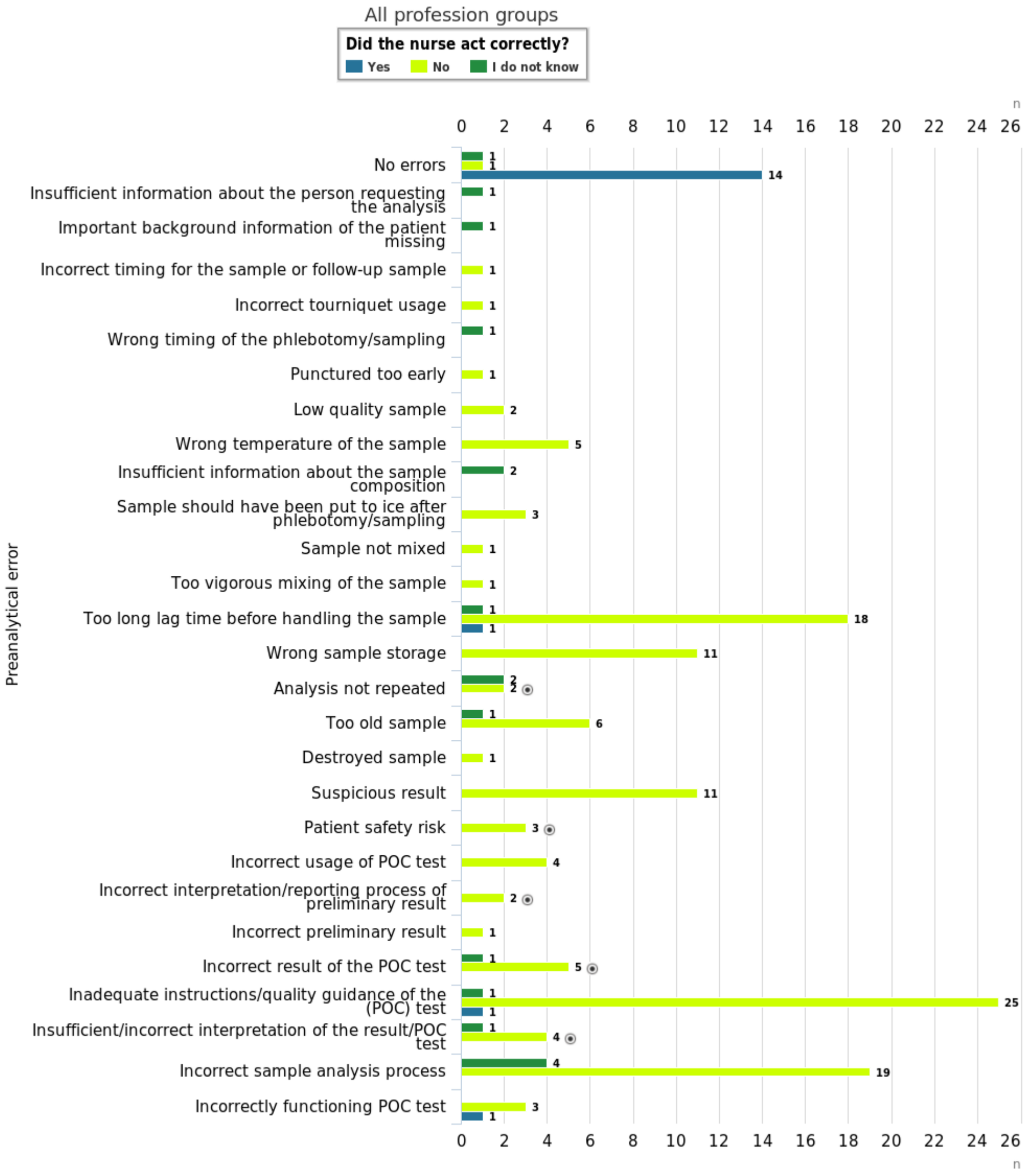


Case 1|Did the nurse act correctly? |

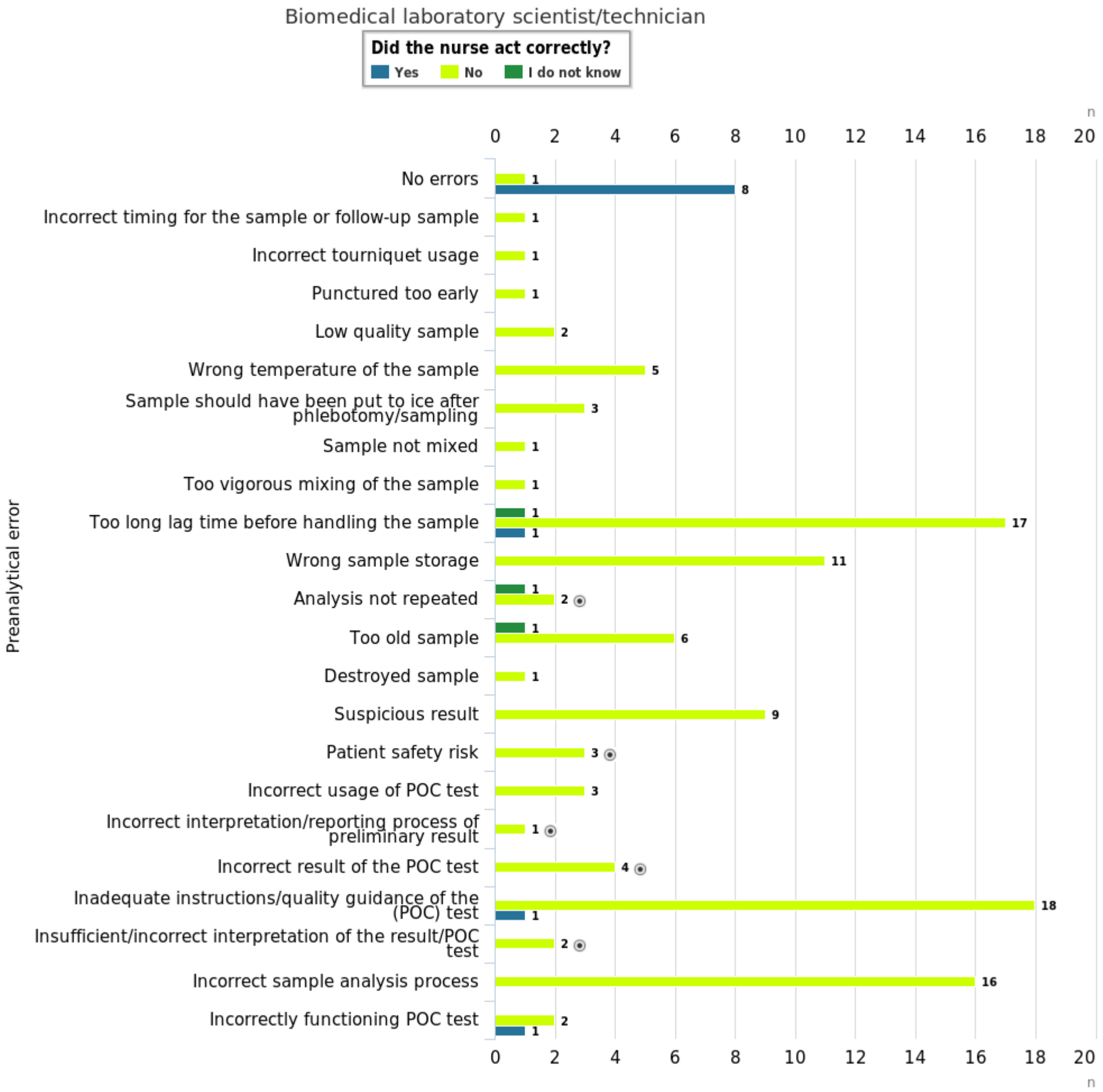




Case 1|Did the nurse act correctly? |All profession groups |

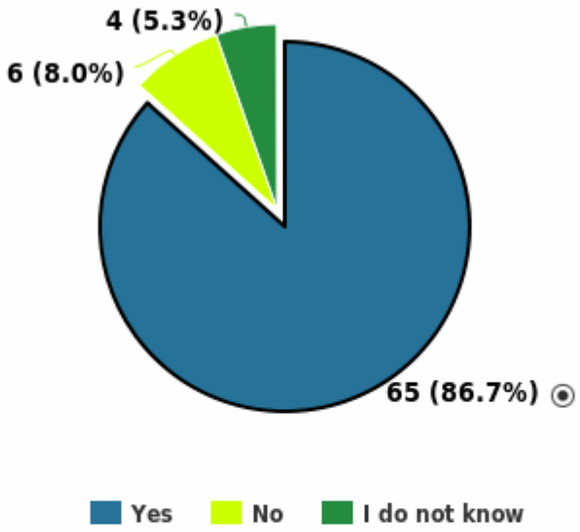


Case 1|Did the nurse act correctly? |Biomedical laboratory scientist/technician |



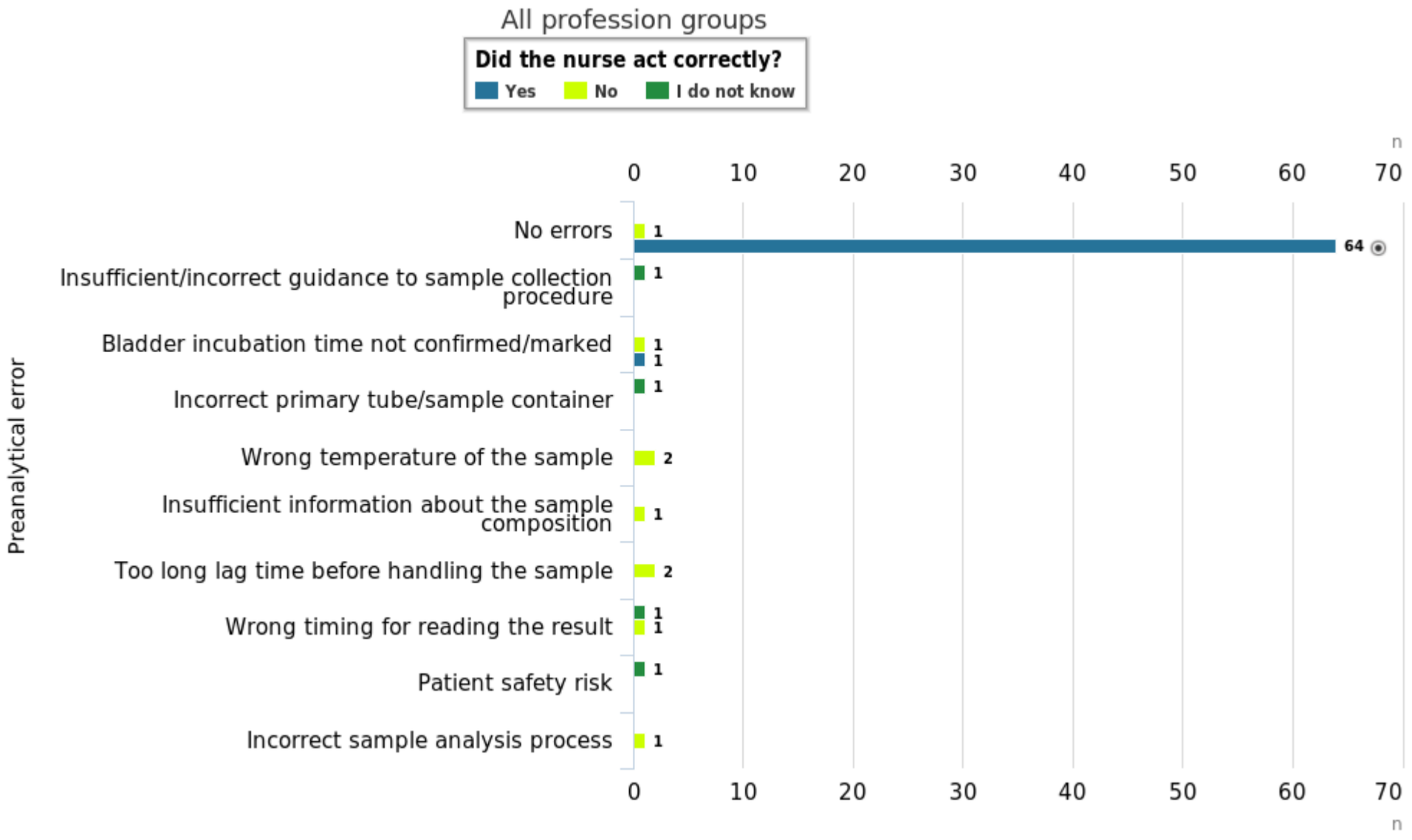
Case 3|Did the nurse act correctly? |

All profession groups

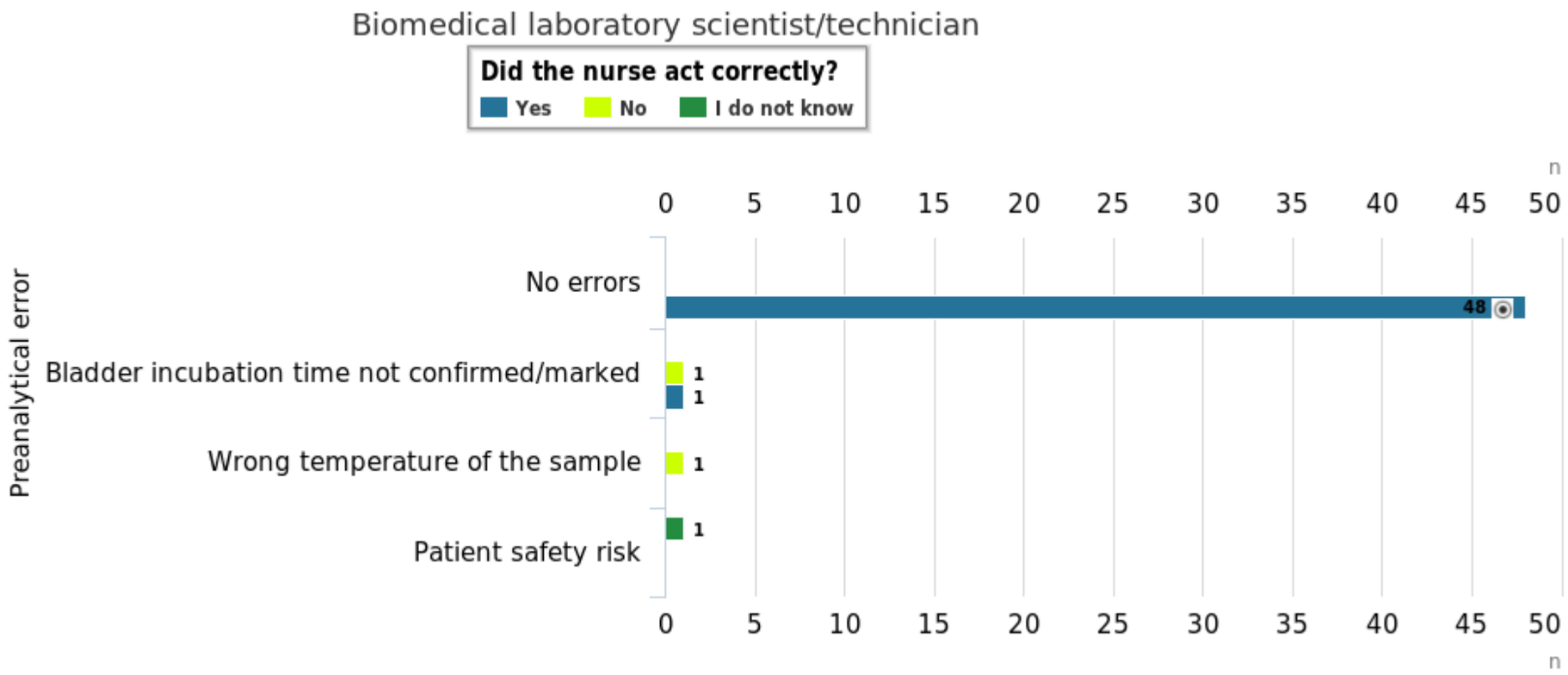


Biomedical laboratory scientist/technician

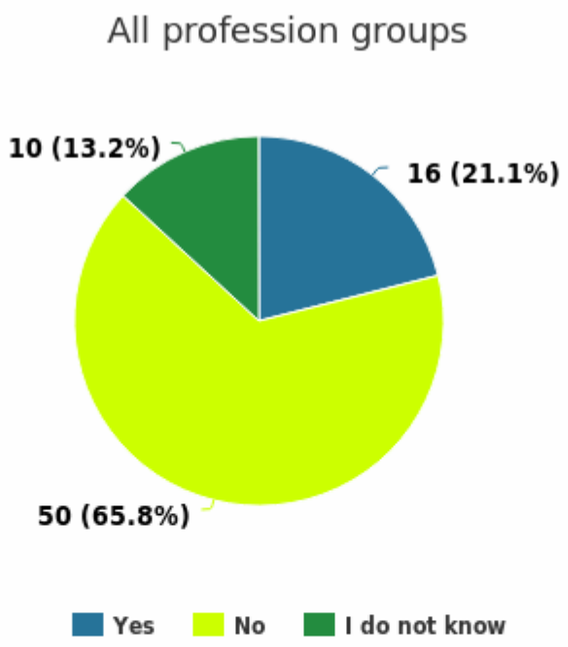
Case 3|Did the nurse act correctly? |All profession groups |

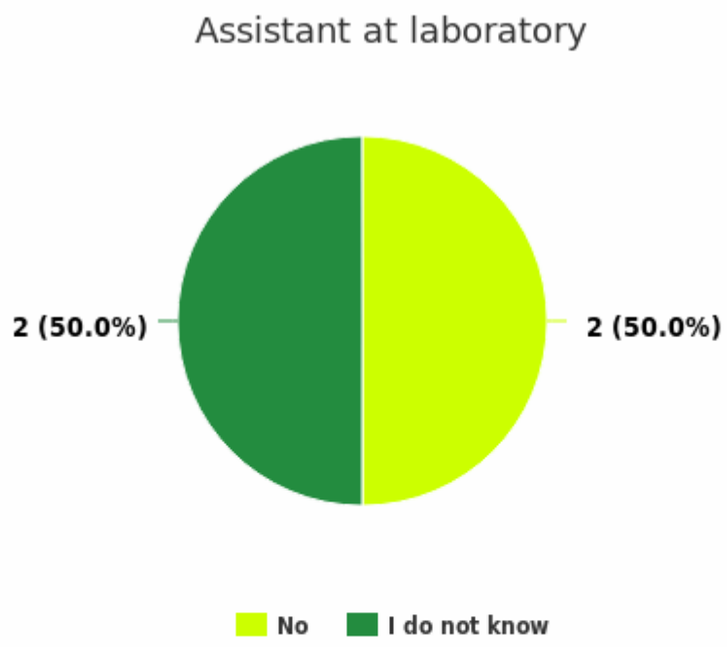


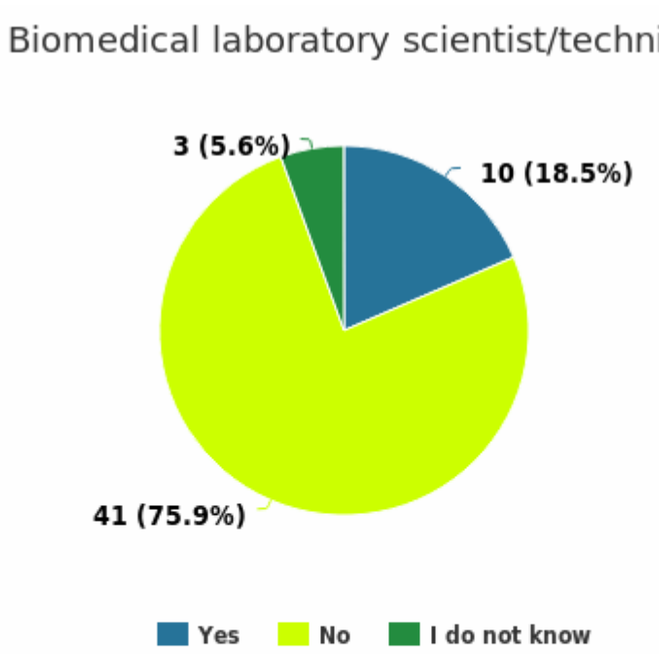
Case 3|Did the nurse act correctly? |Biomedical laboratory scientist/technician |

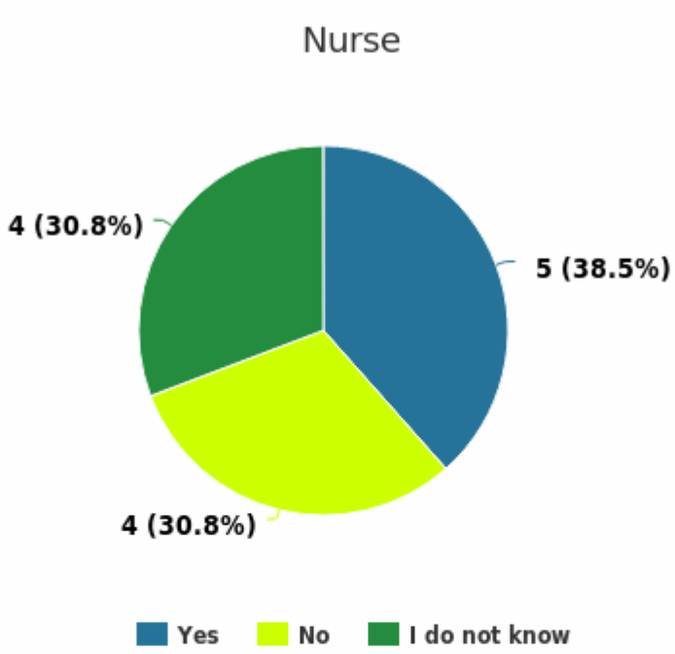


Case 1|Did the nurse act correctly?

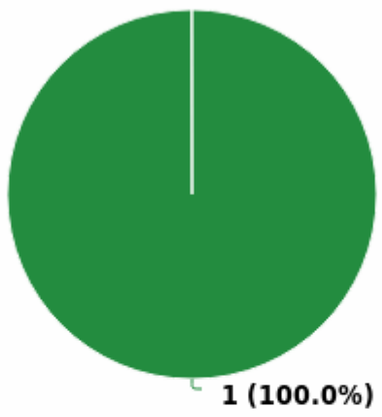




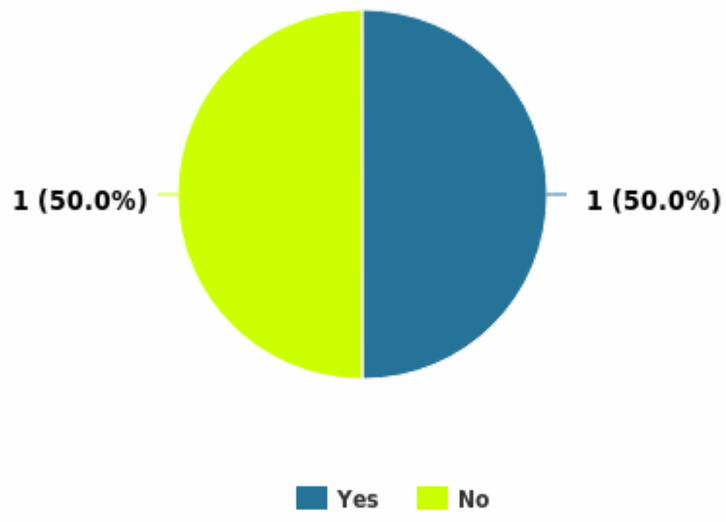




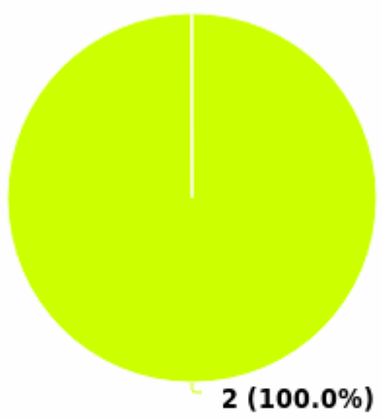
Other, what?



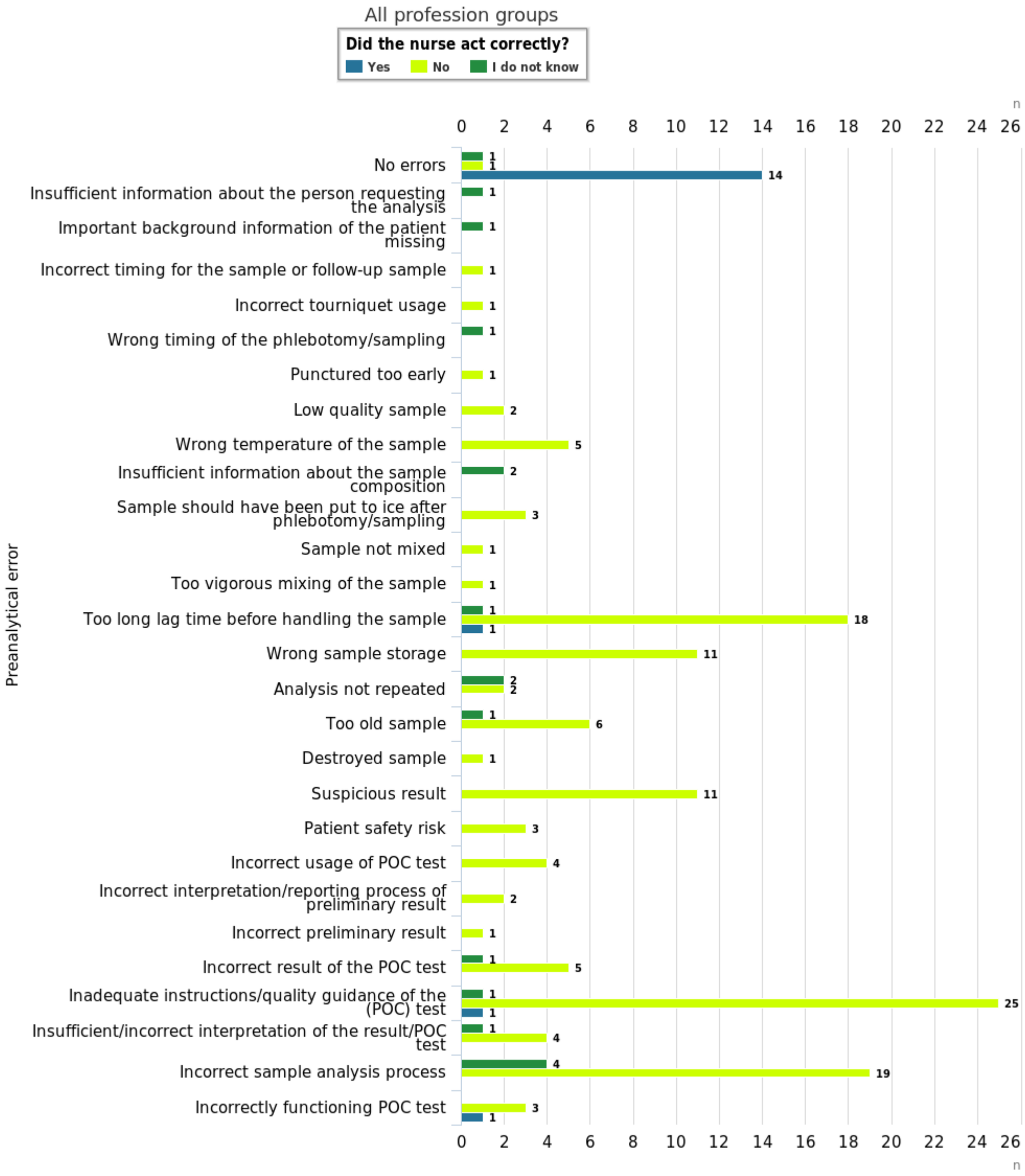
Phlebotomist



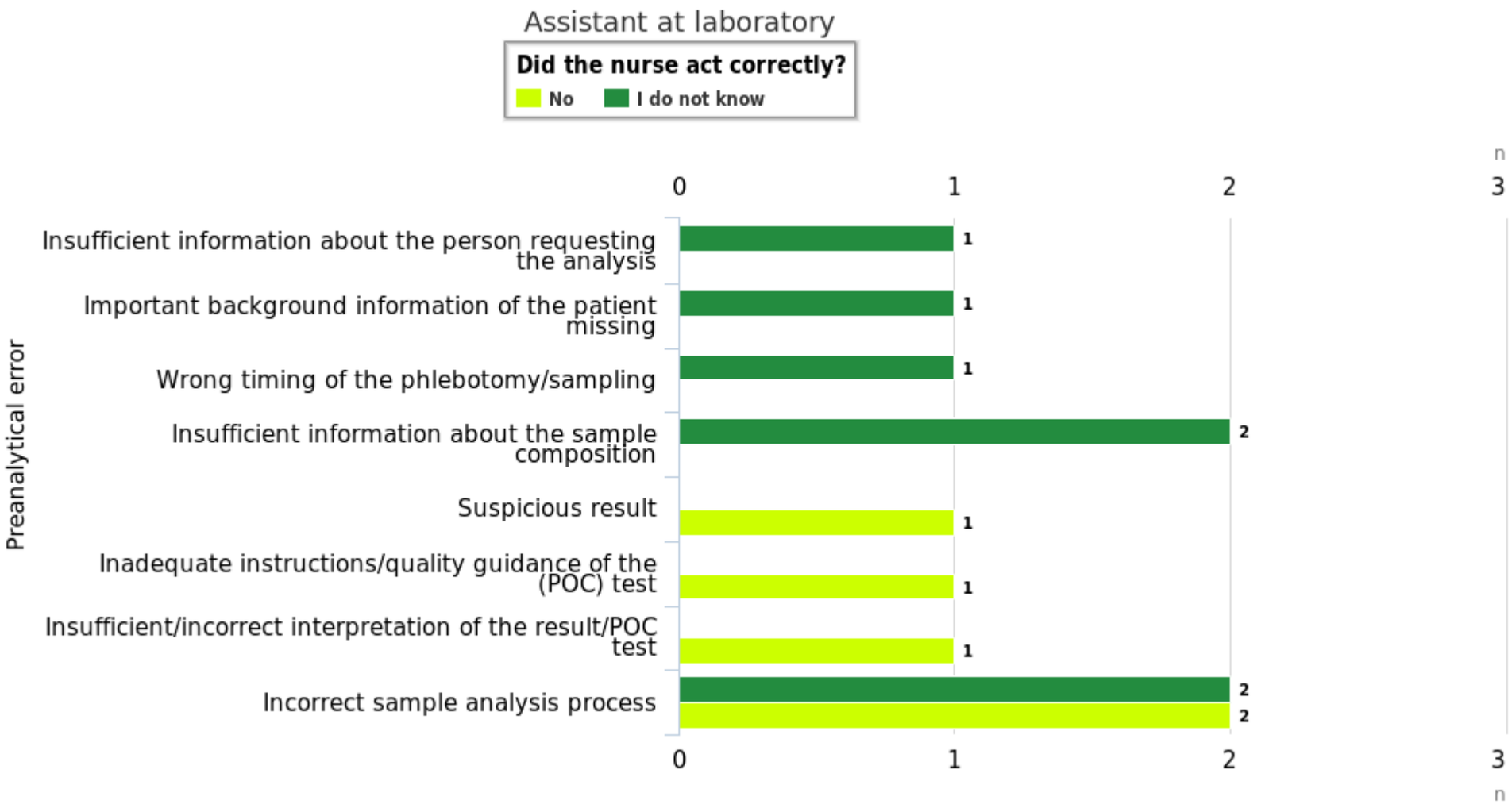
Student



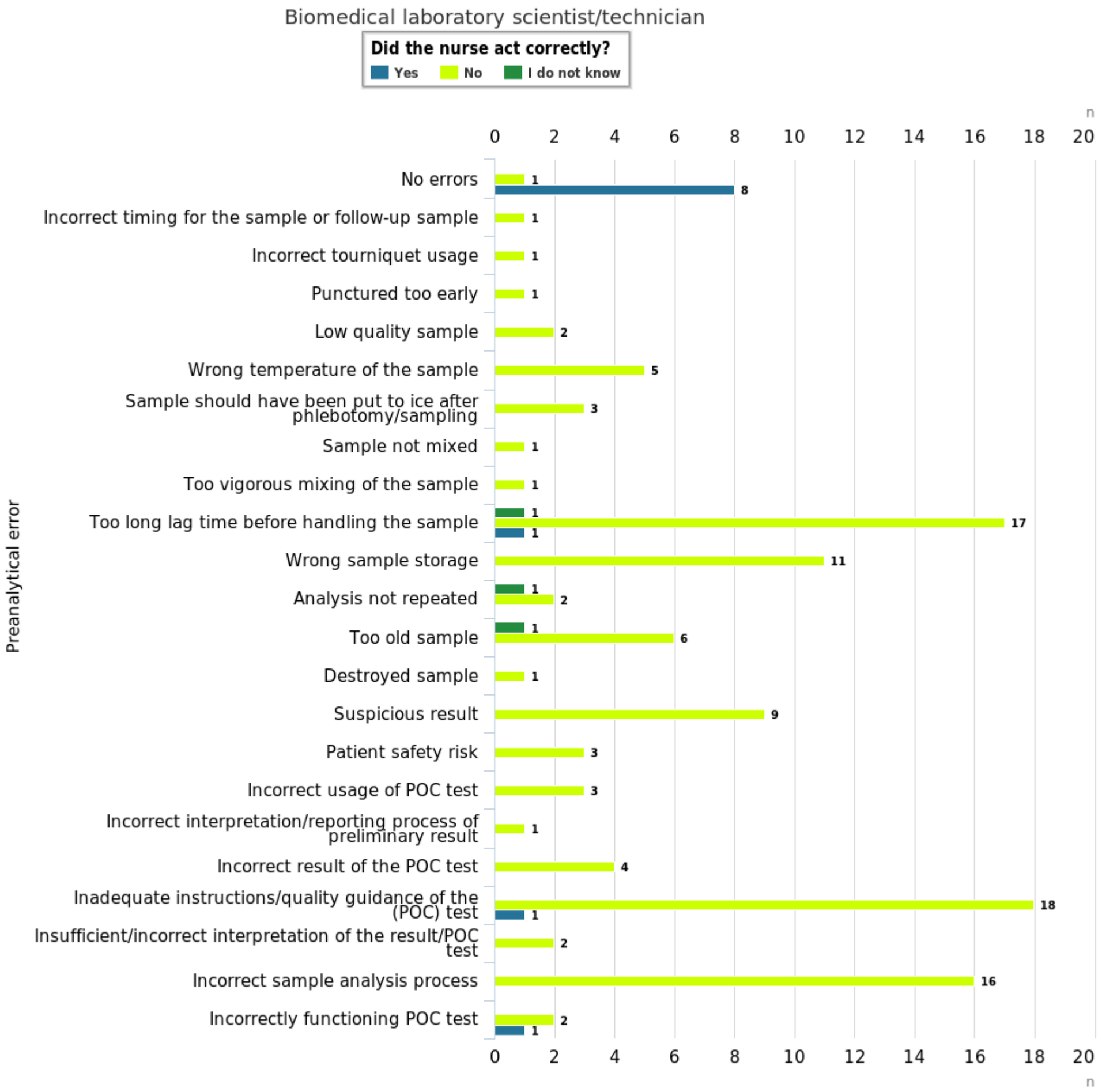
Case 1|Did the nurse act correctly? |All profession groups



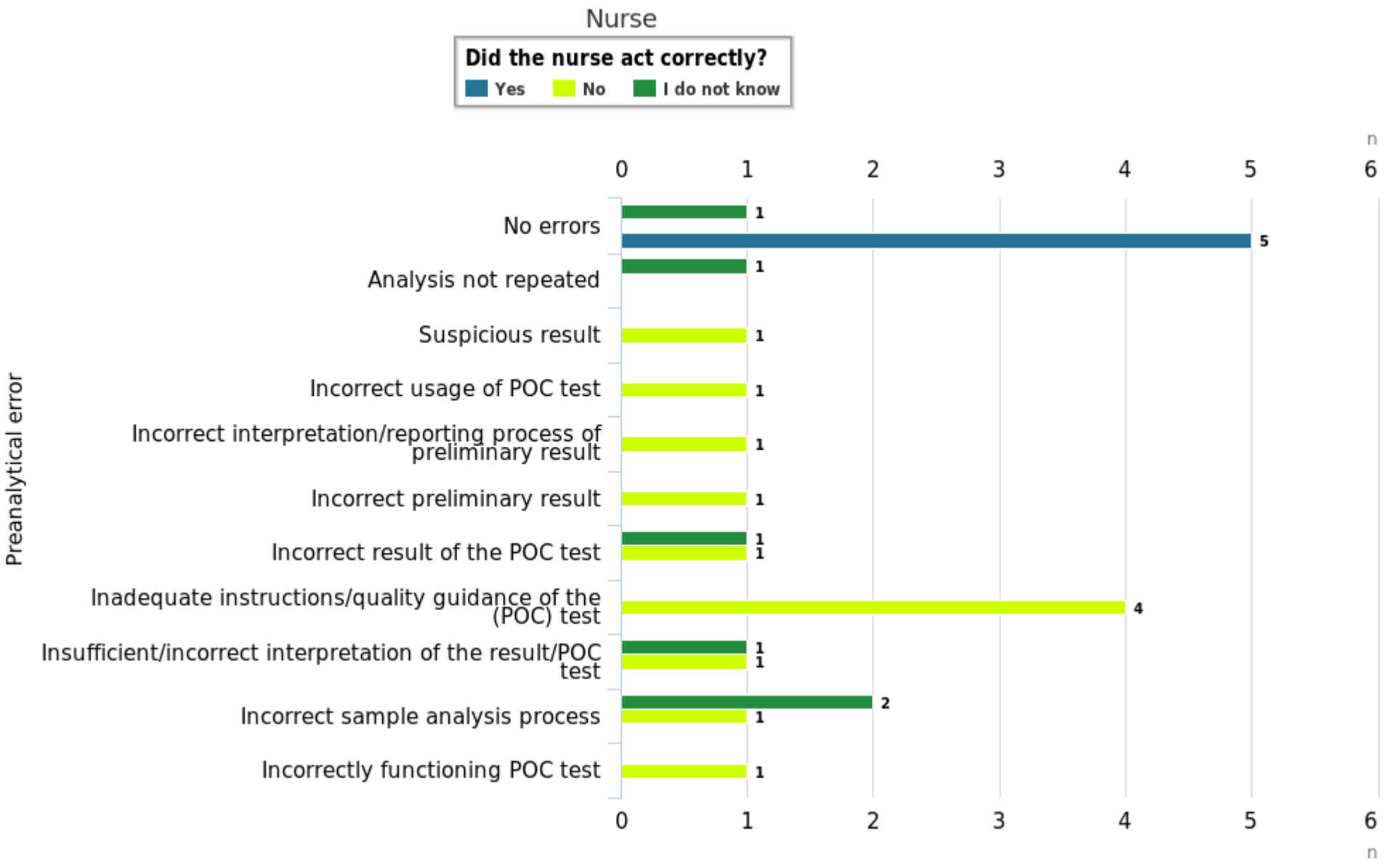
Case 1|Did the nurse act correctly? |Assistant at laboratory



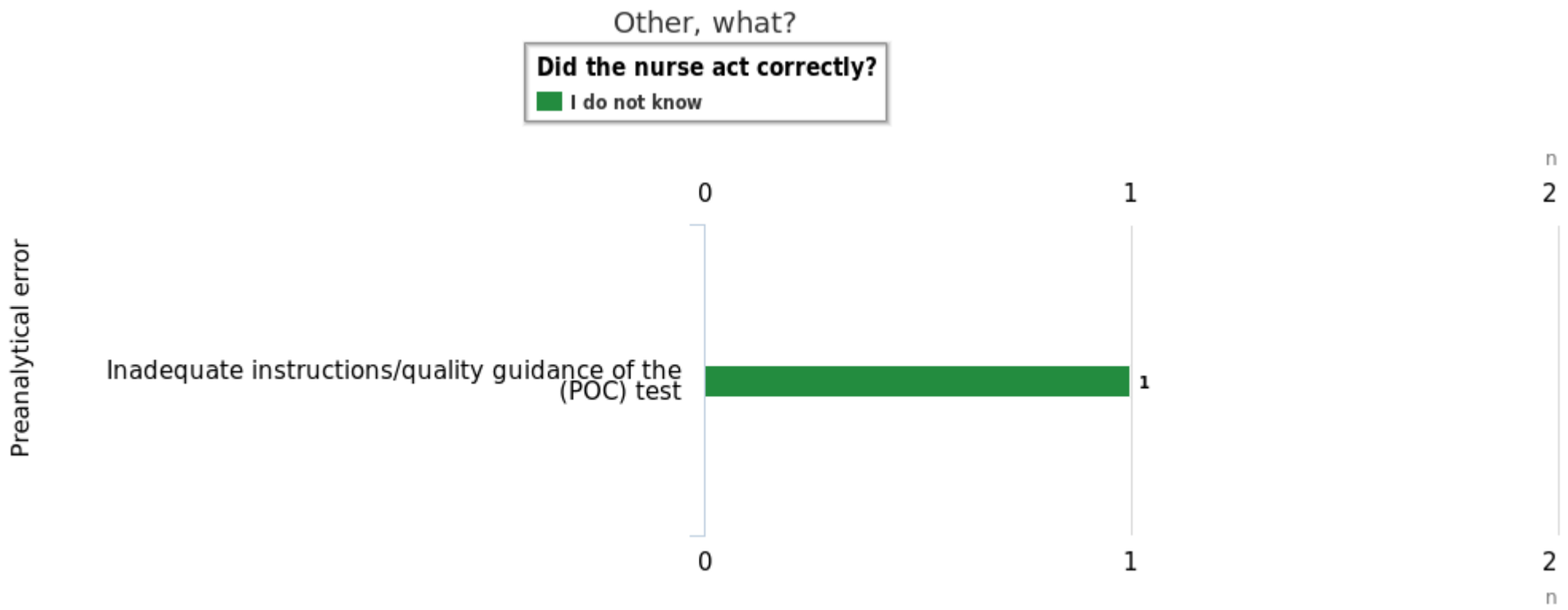
Case 1|Did the nurse act correctly? |Biomedical laboratory scientist/technician



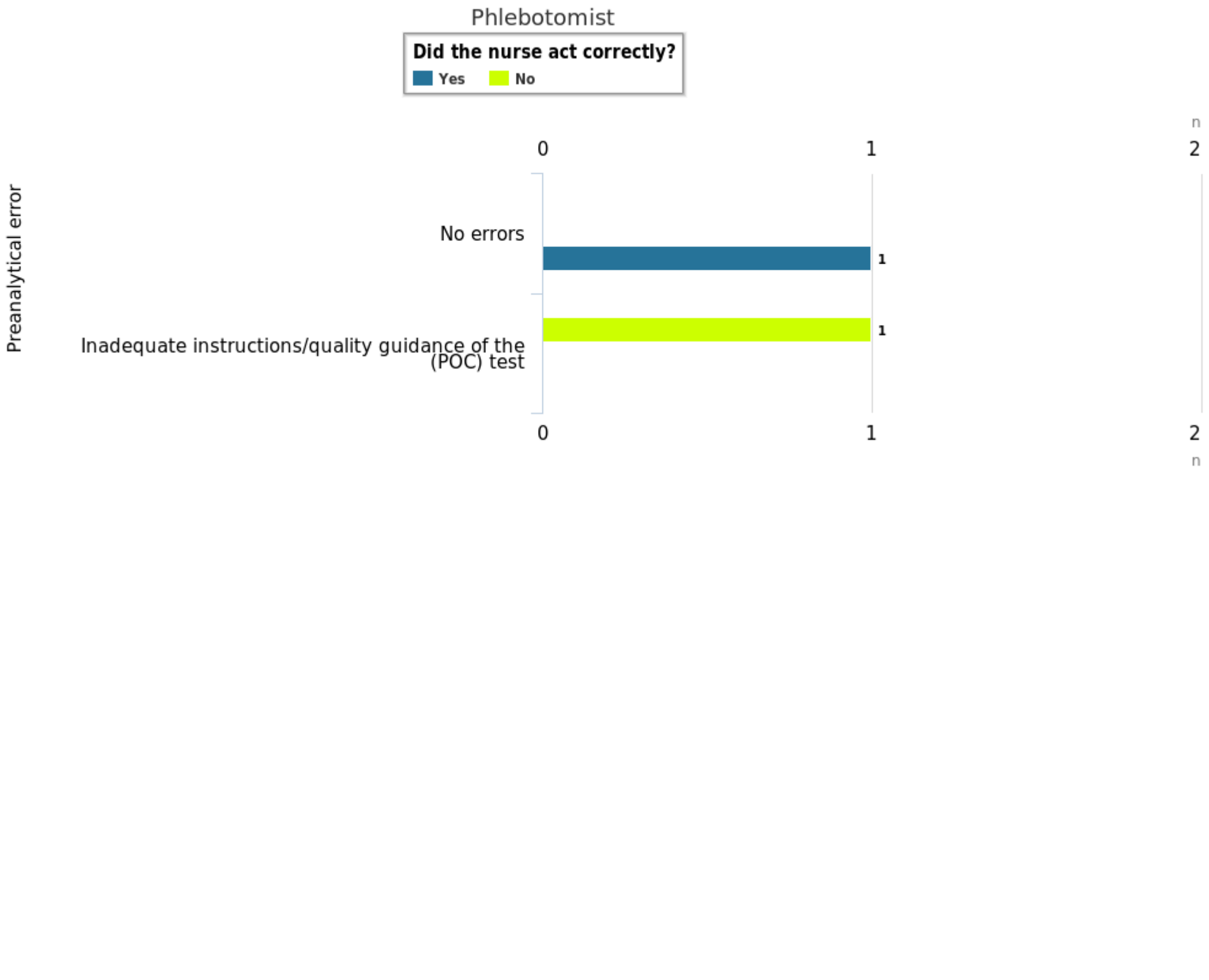
Case 1|Did the nurse act correctly? |Nurse



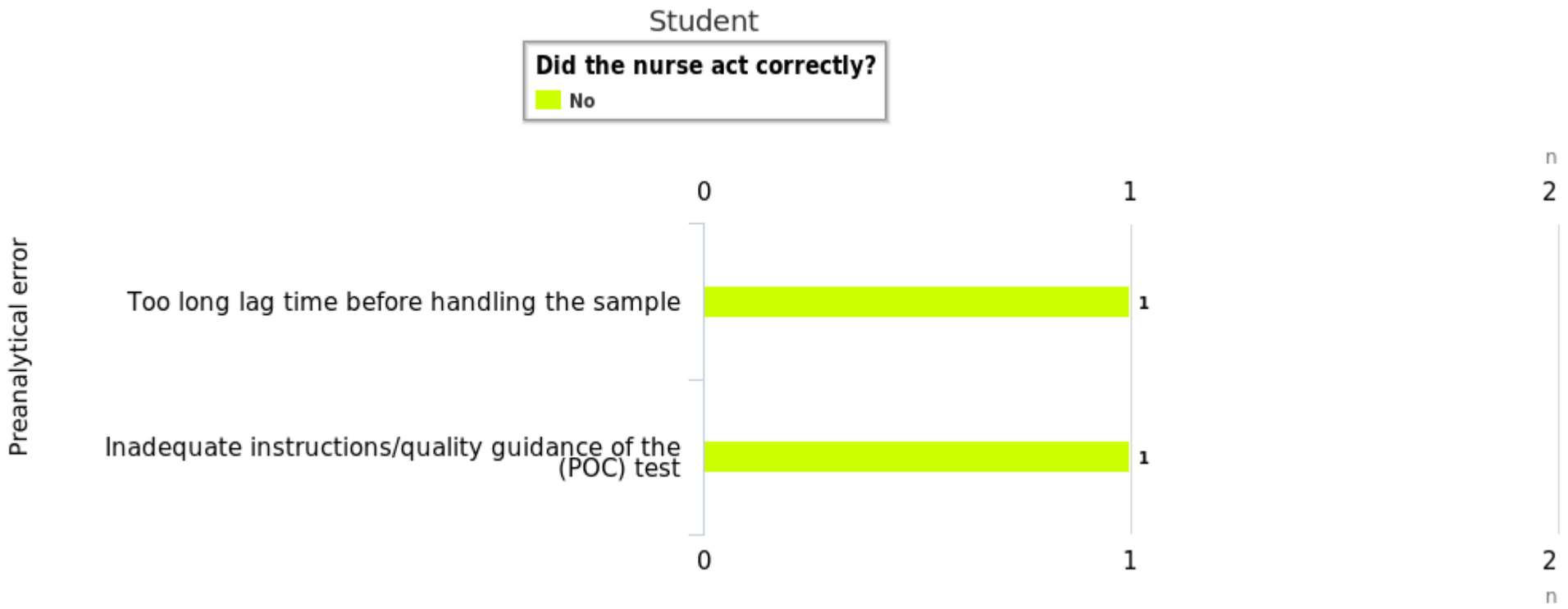
Case 1|Did the nurse act correctly? |Other, what?



Case 1|Did the nurse act correctly? |Phlebotomist

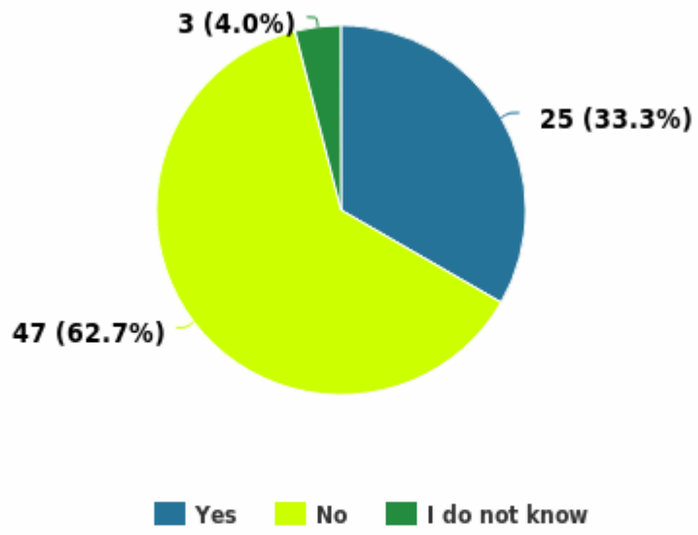


Case 1|Did the nurse act correctly? |Student

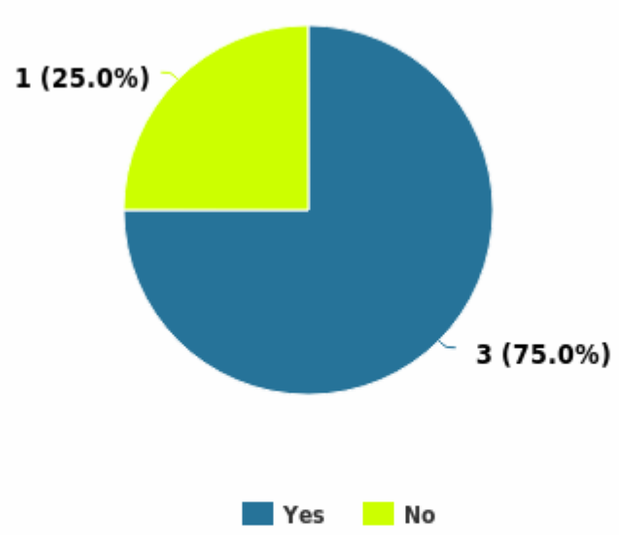


Case 2|Did the nurse act correctly?

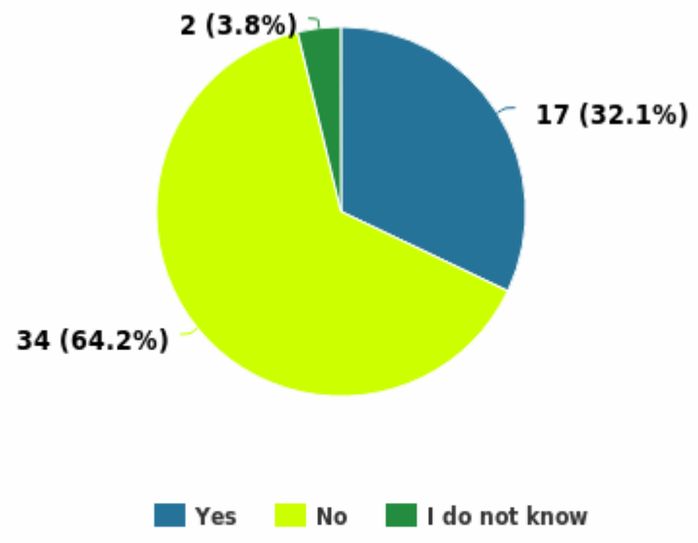
All profession groups



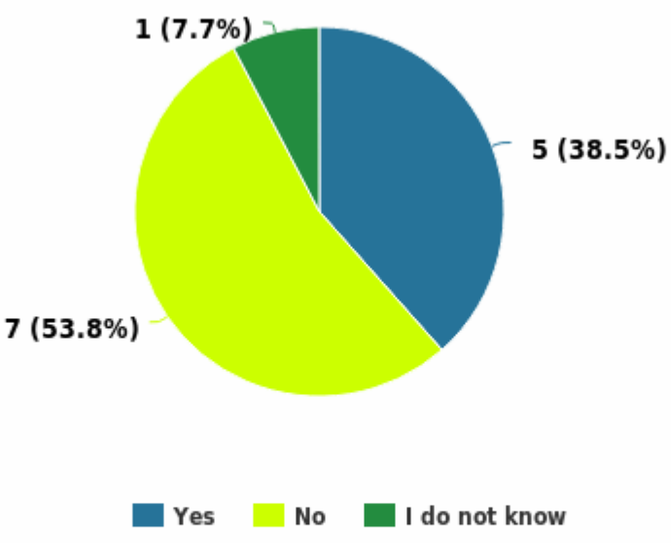
Assistant at laboratory



Biomedical laboratory scientist/technician

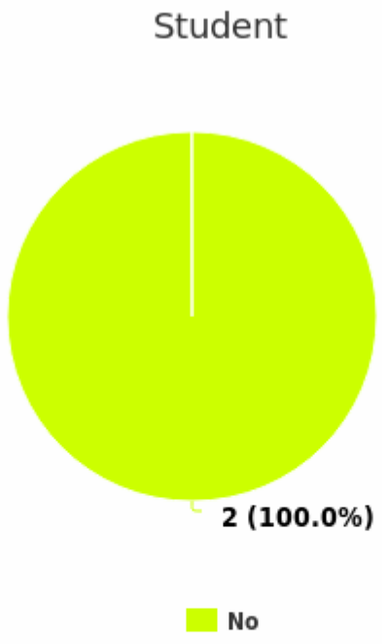


Nurse

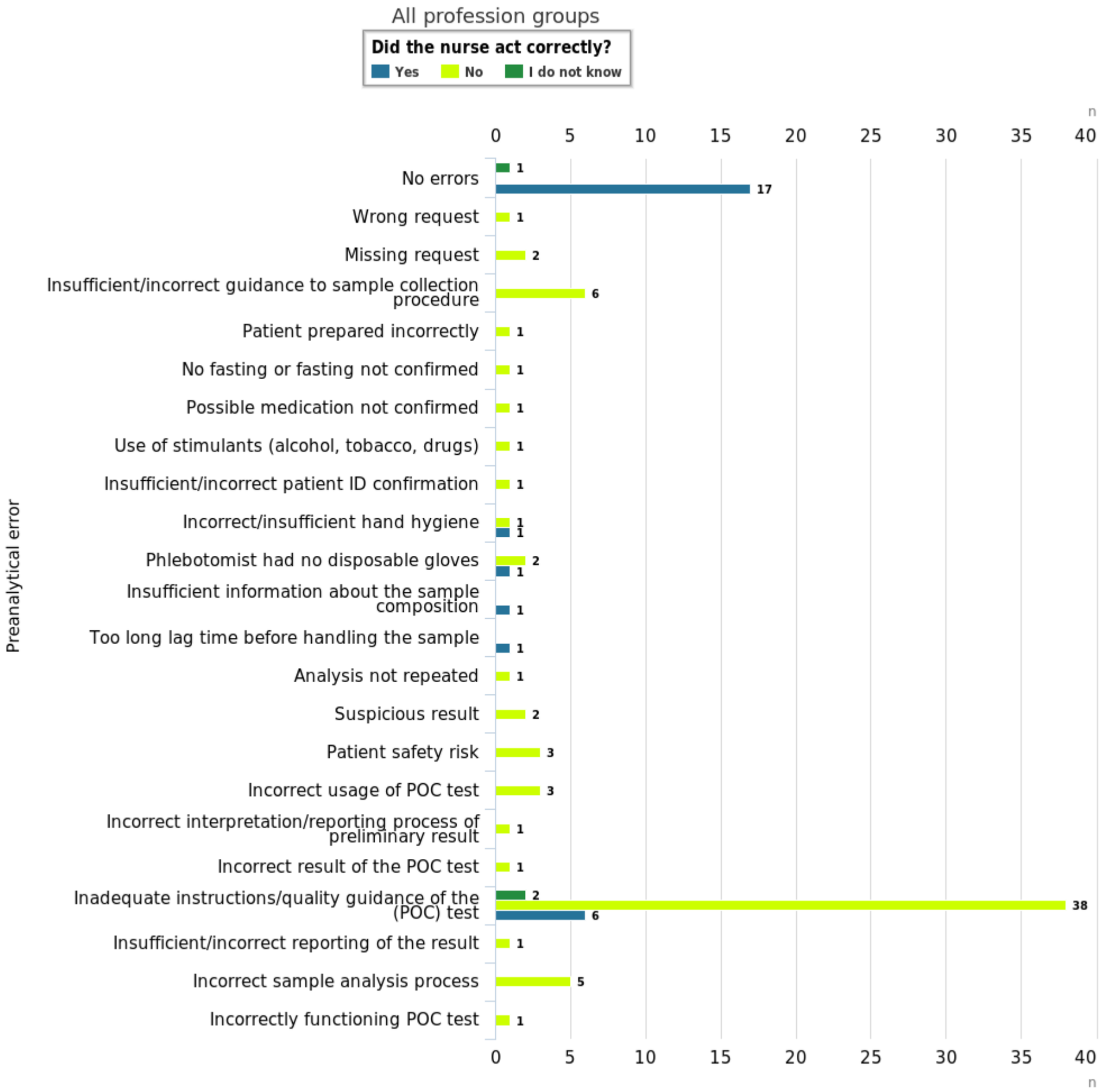


Other, what?

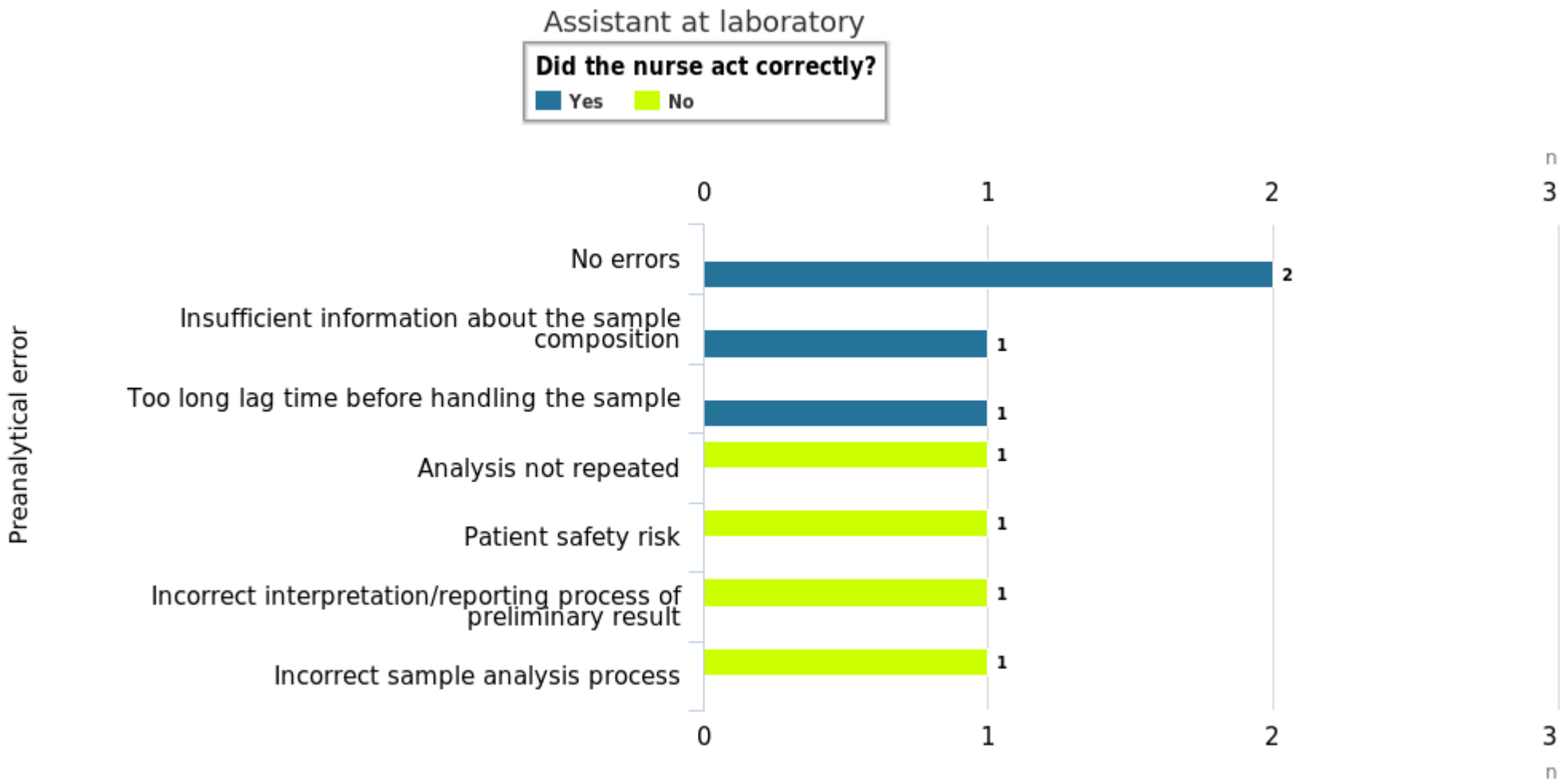
Phlebotomist



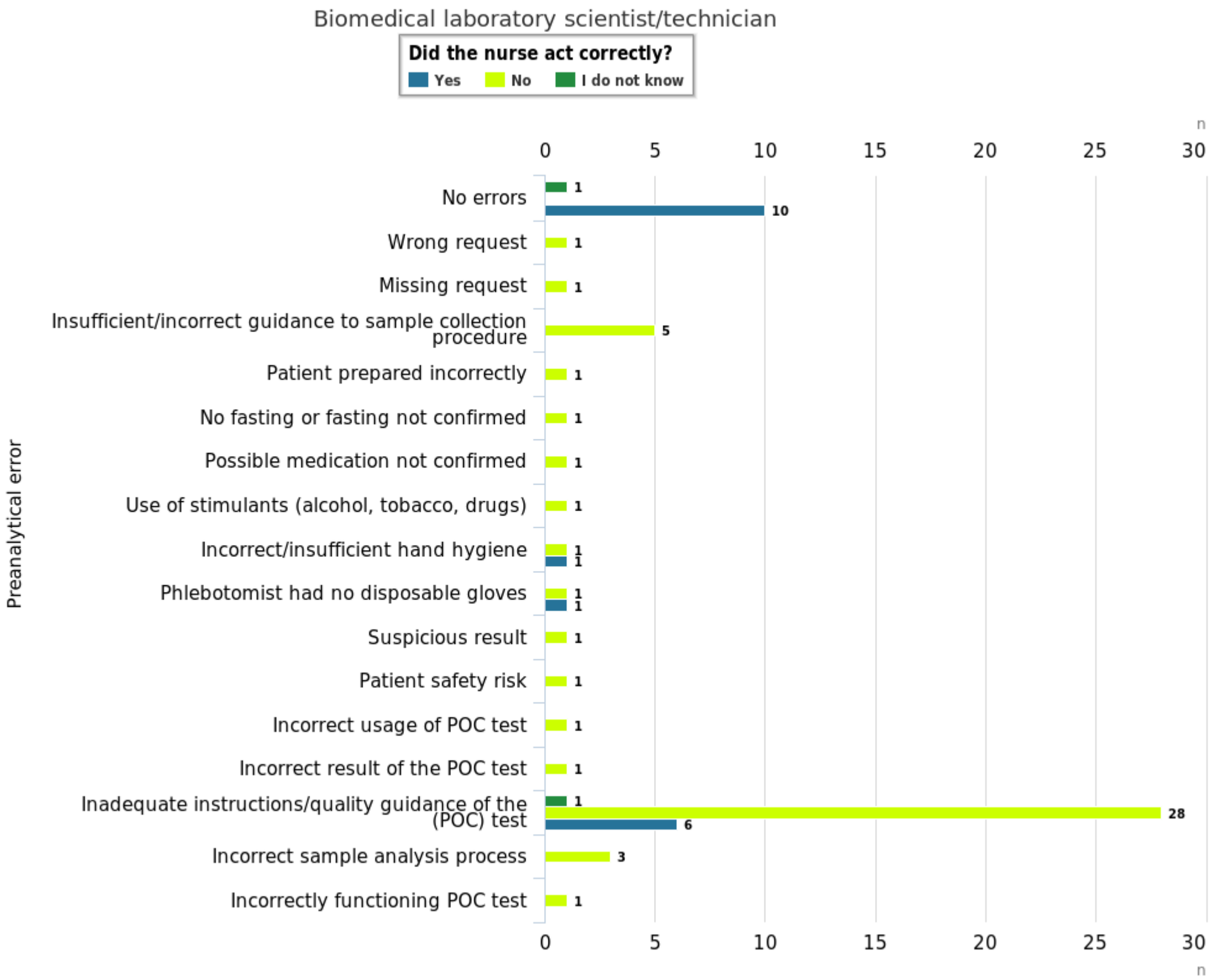
Case 2|Did the nurse act correctly? |All profession groups



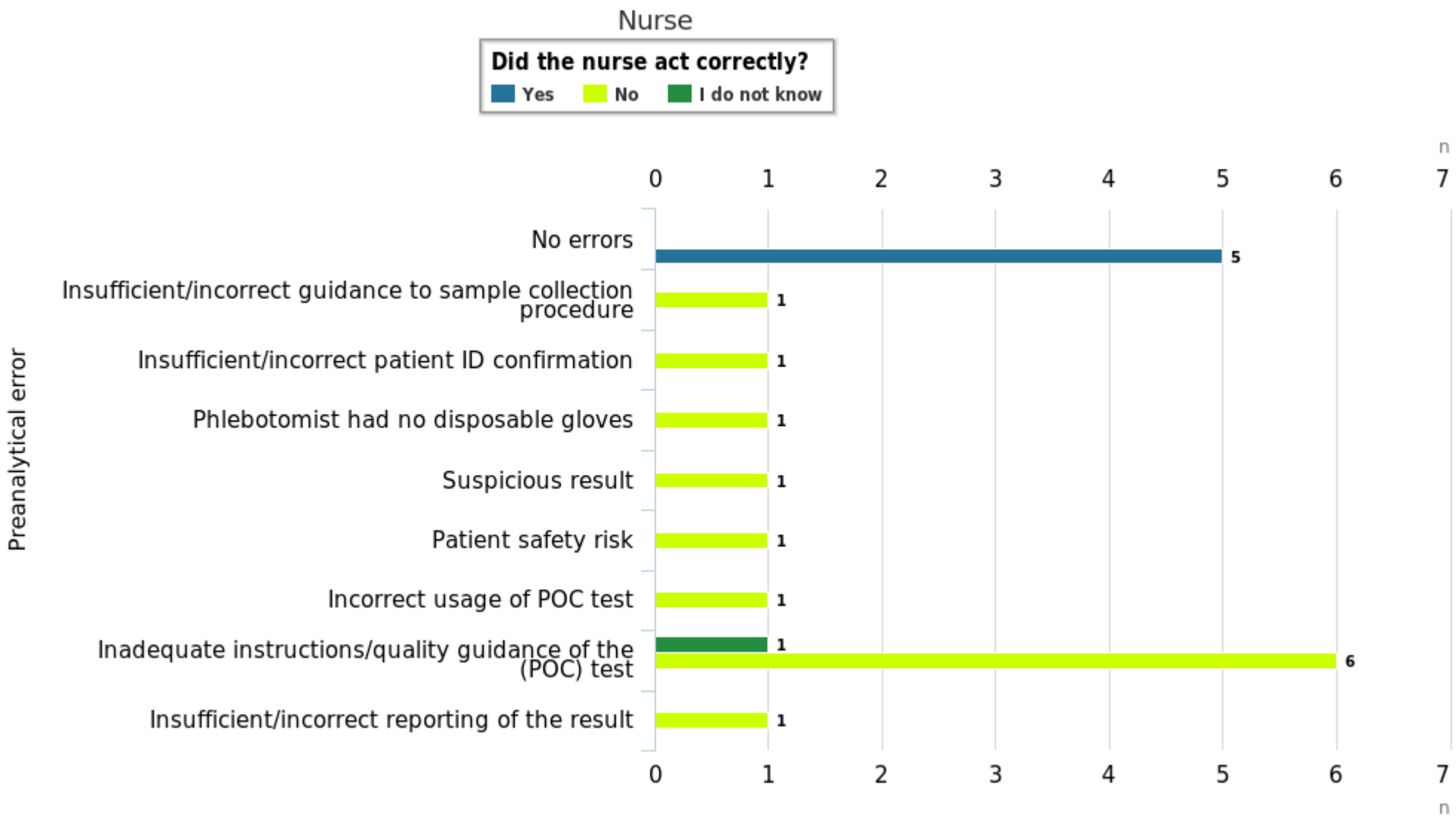
Case 2|Did the nurse act correctly? |Assistant at laboratory



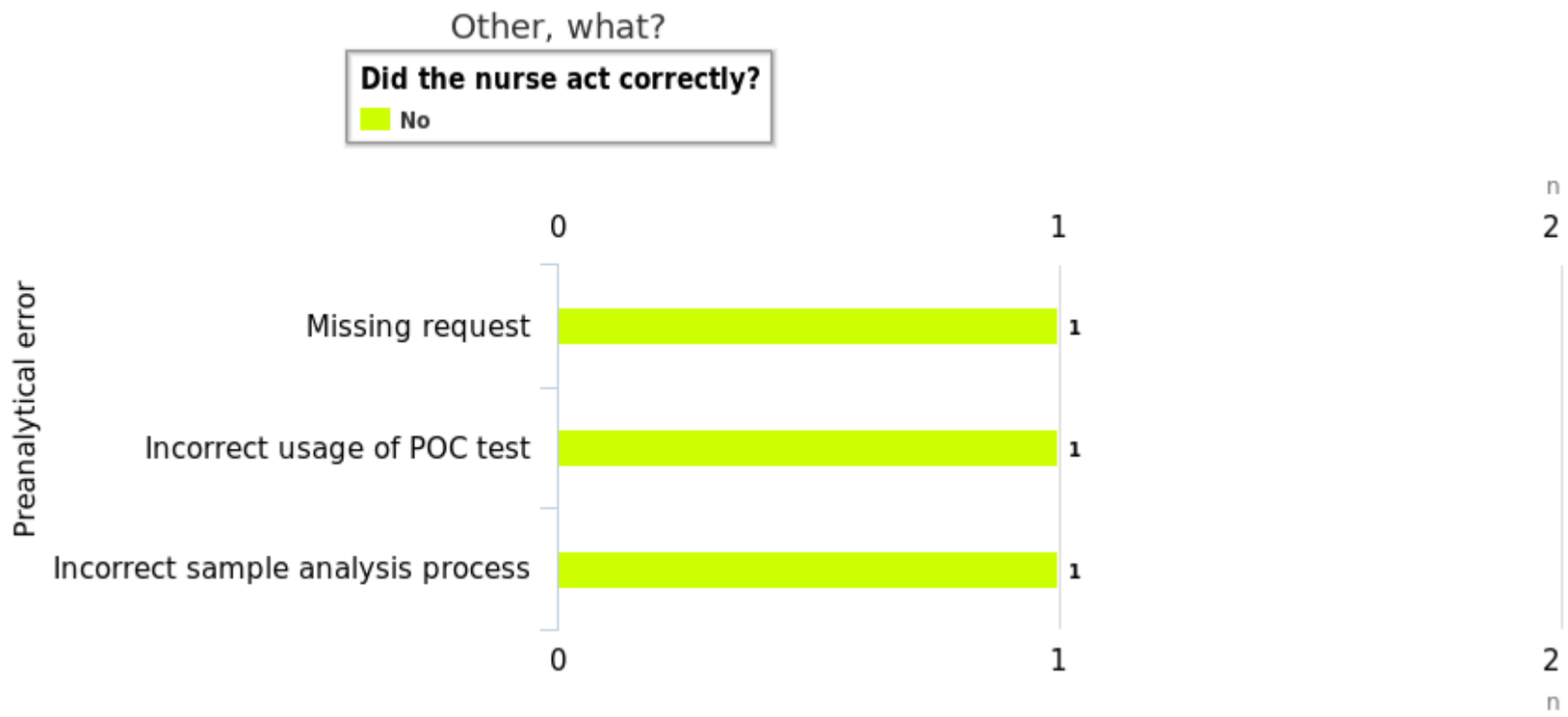
Case 2|Did the nurse act correctly? |Biomedical laboratory scientist/technician



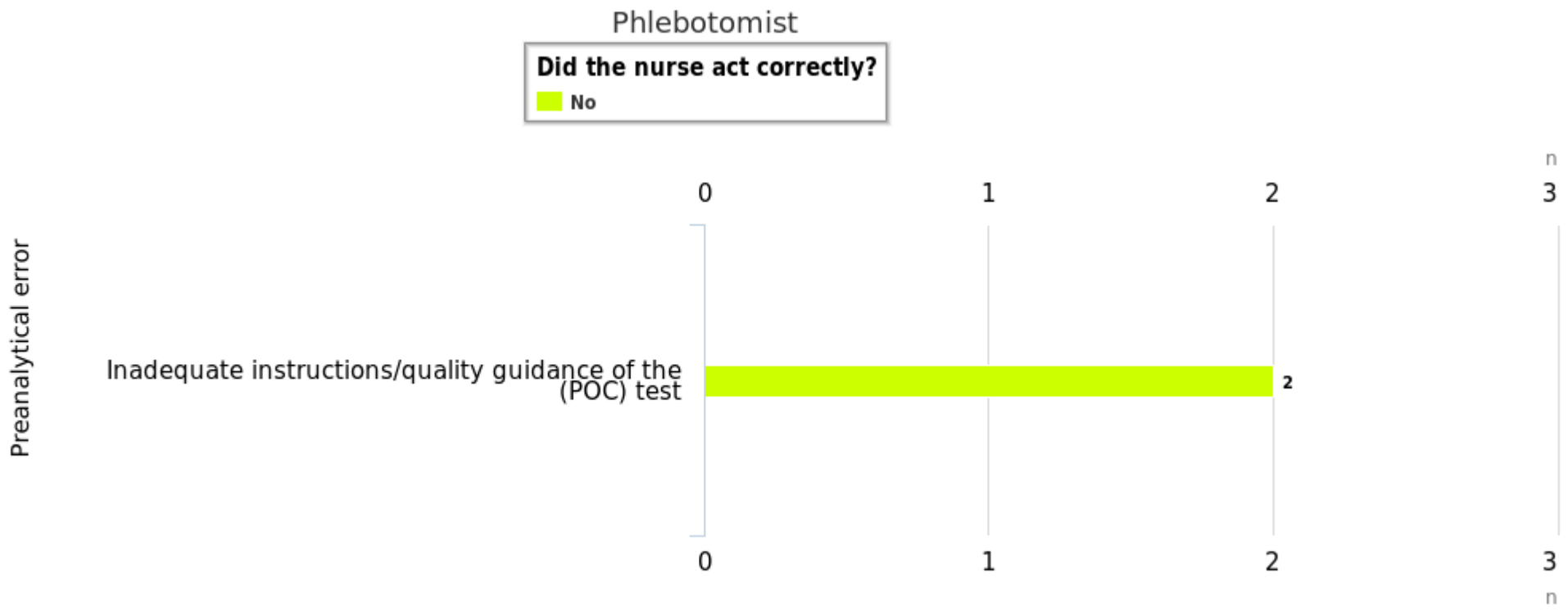
Case 2|Did the nurse act correctly? |Nurse



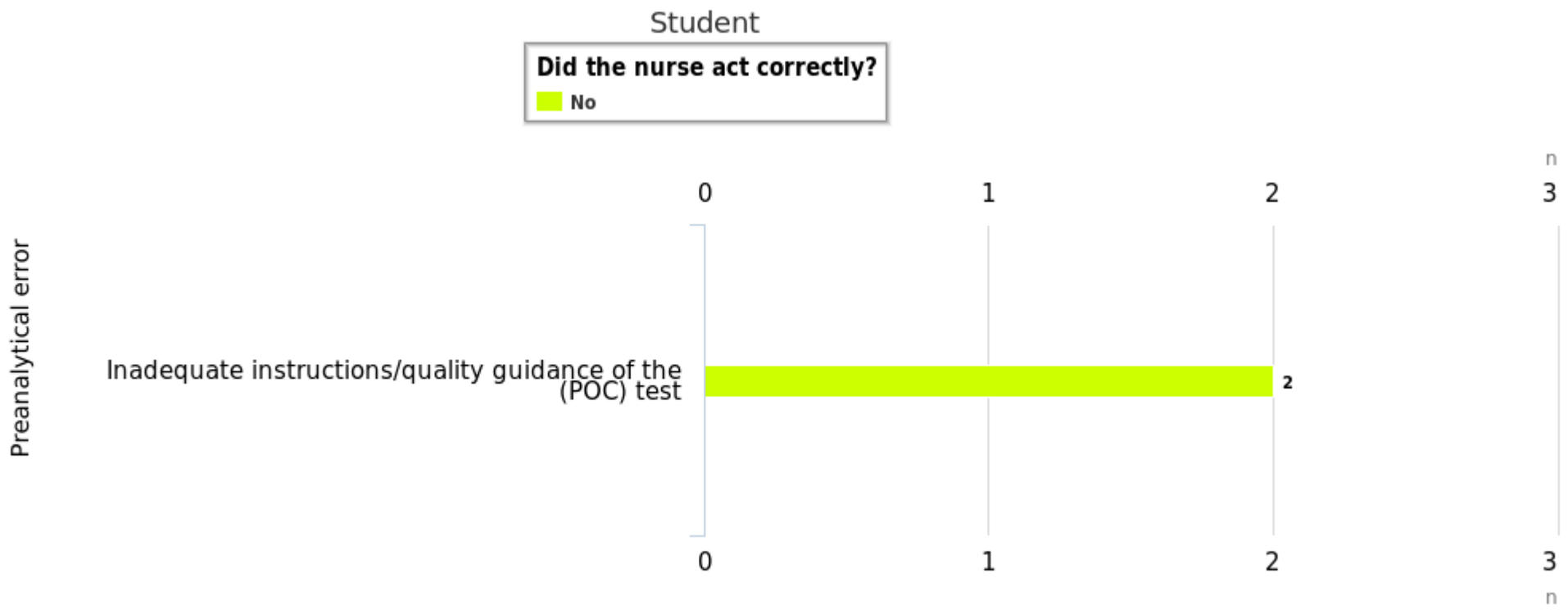
Case 2|Did the nurse act correctly? |Other, what?



Case 2|Did the nurse act correctly? |Phlebotomist

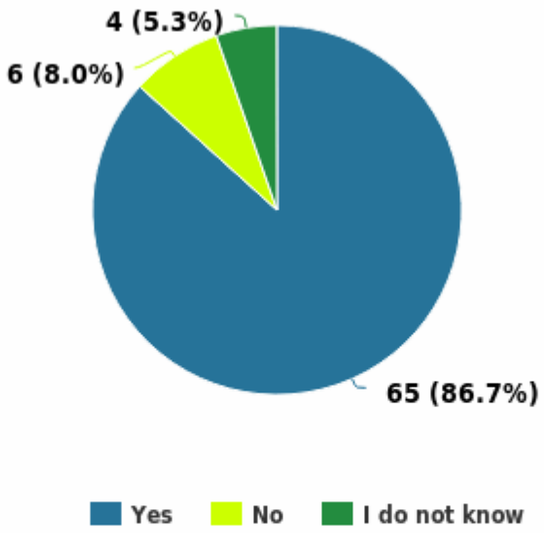


Case 2|Did the nurse act correctly? |Student

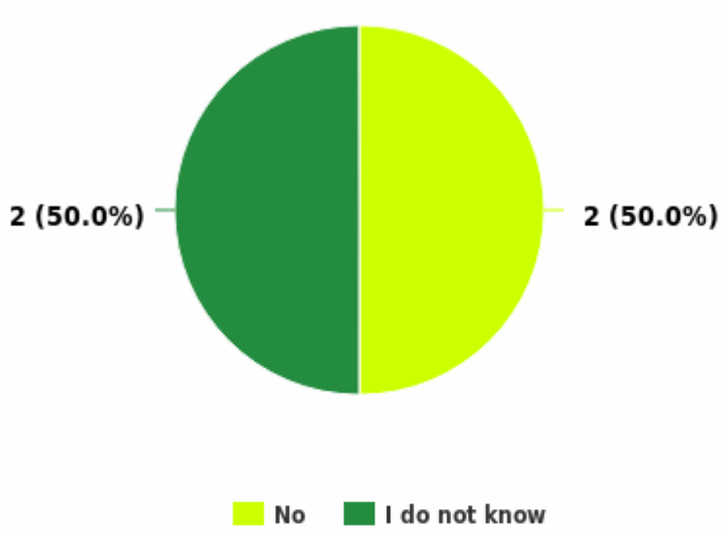


Case 3|Did the nurse act correctly?

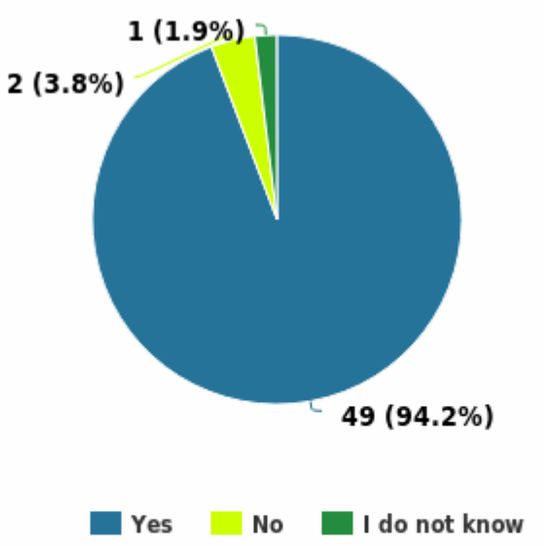
All profession groups



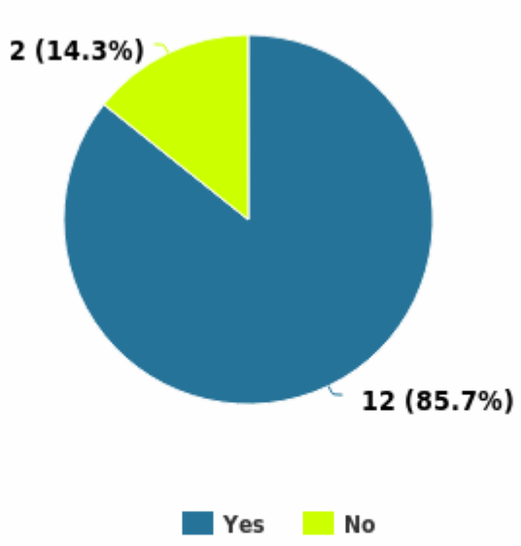
Assistant at laboratory



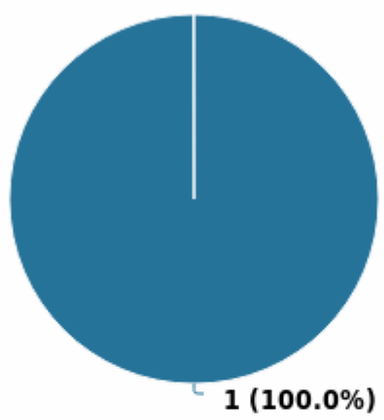
Biomedical laboratory scientist/technician



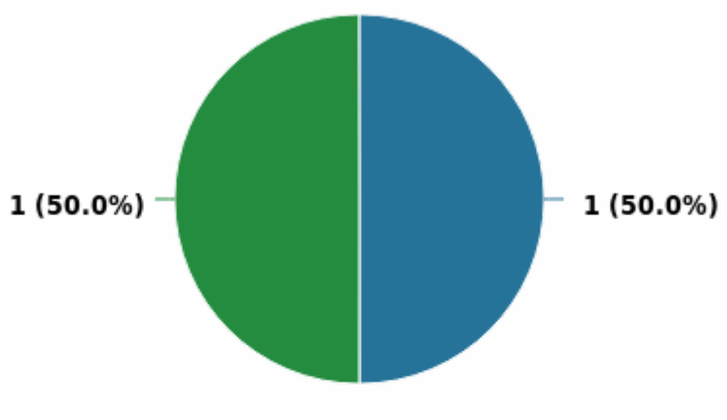
Nurse

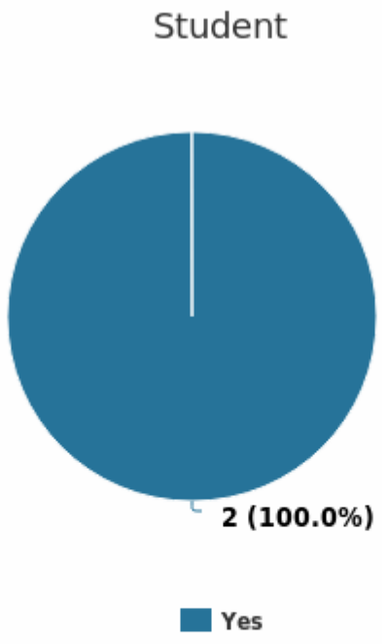


Other, what?

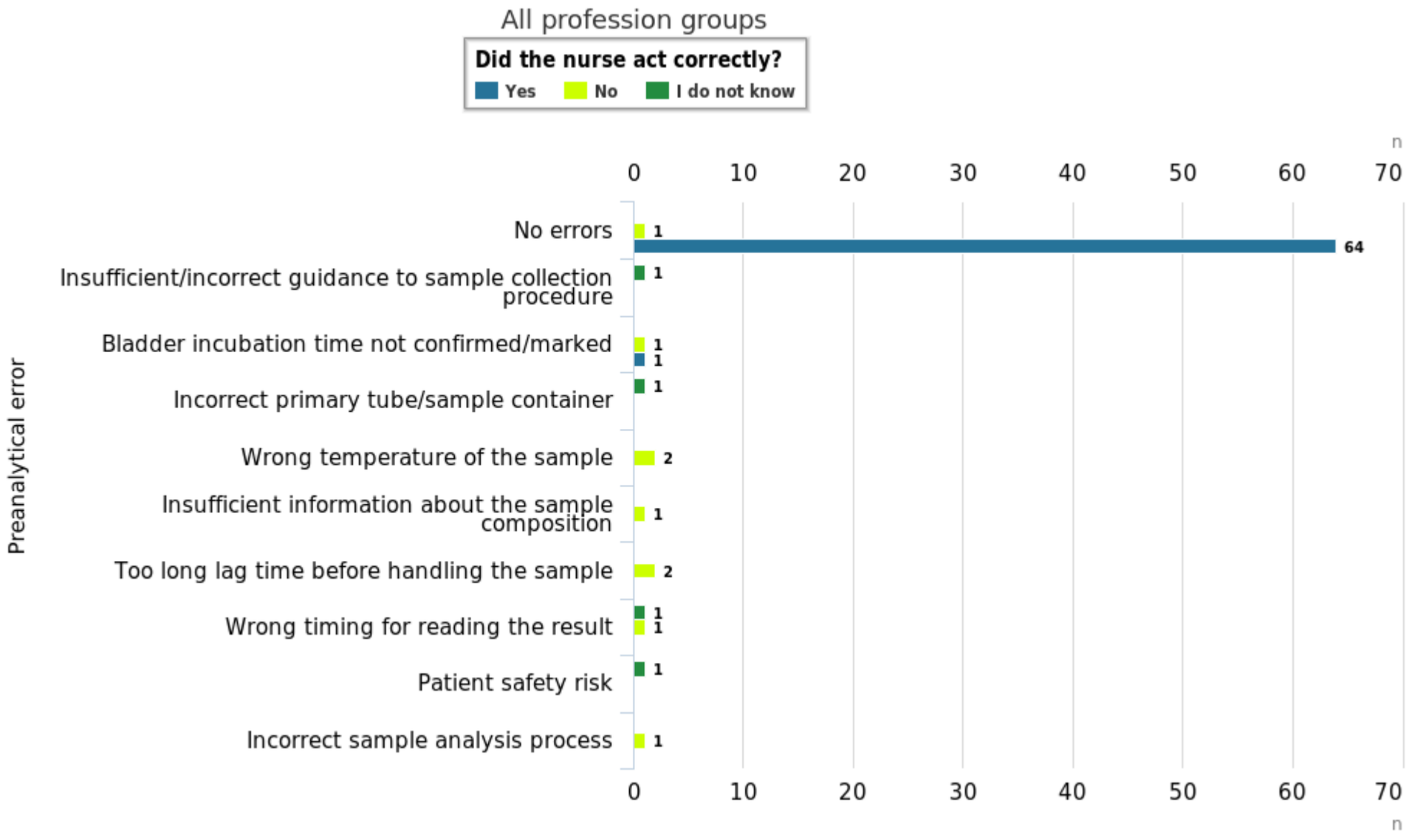


Phlebotomist

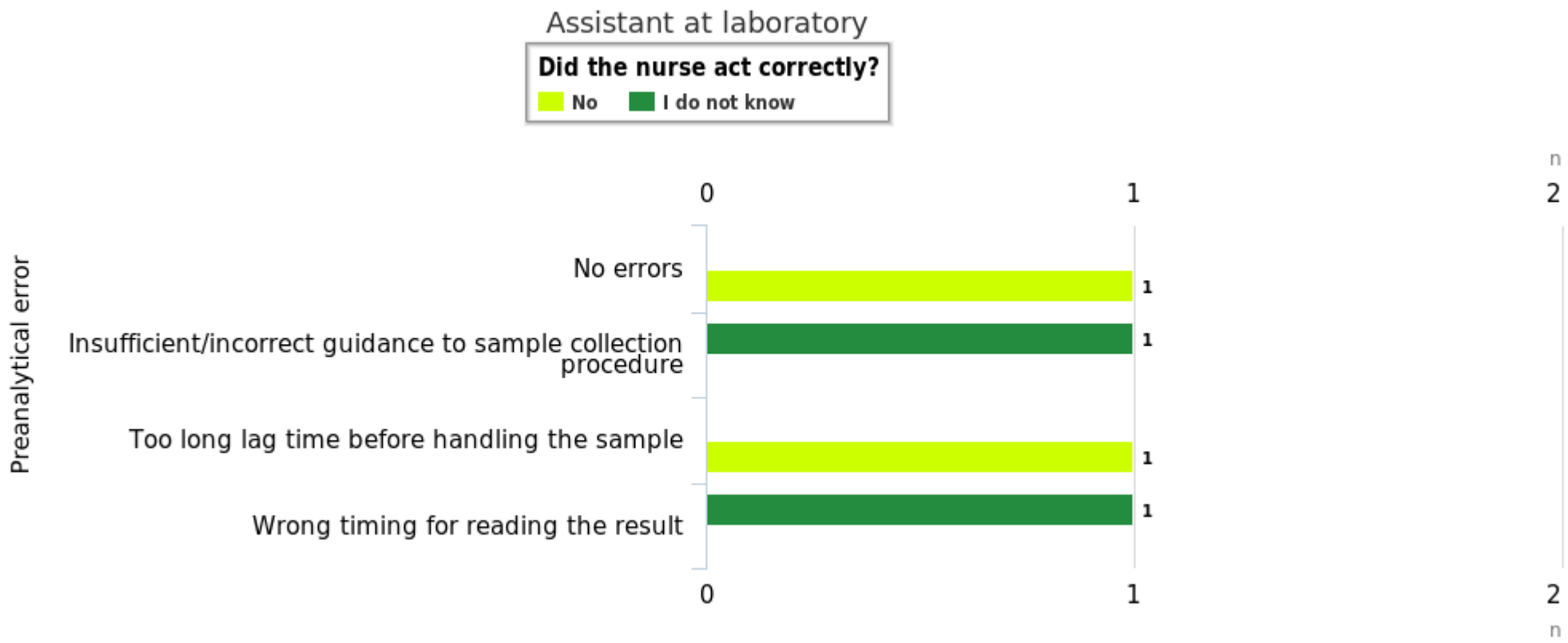




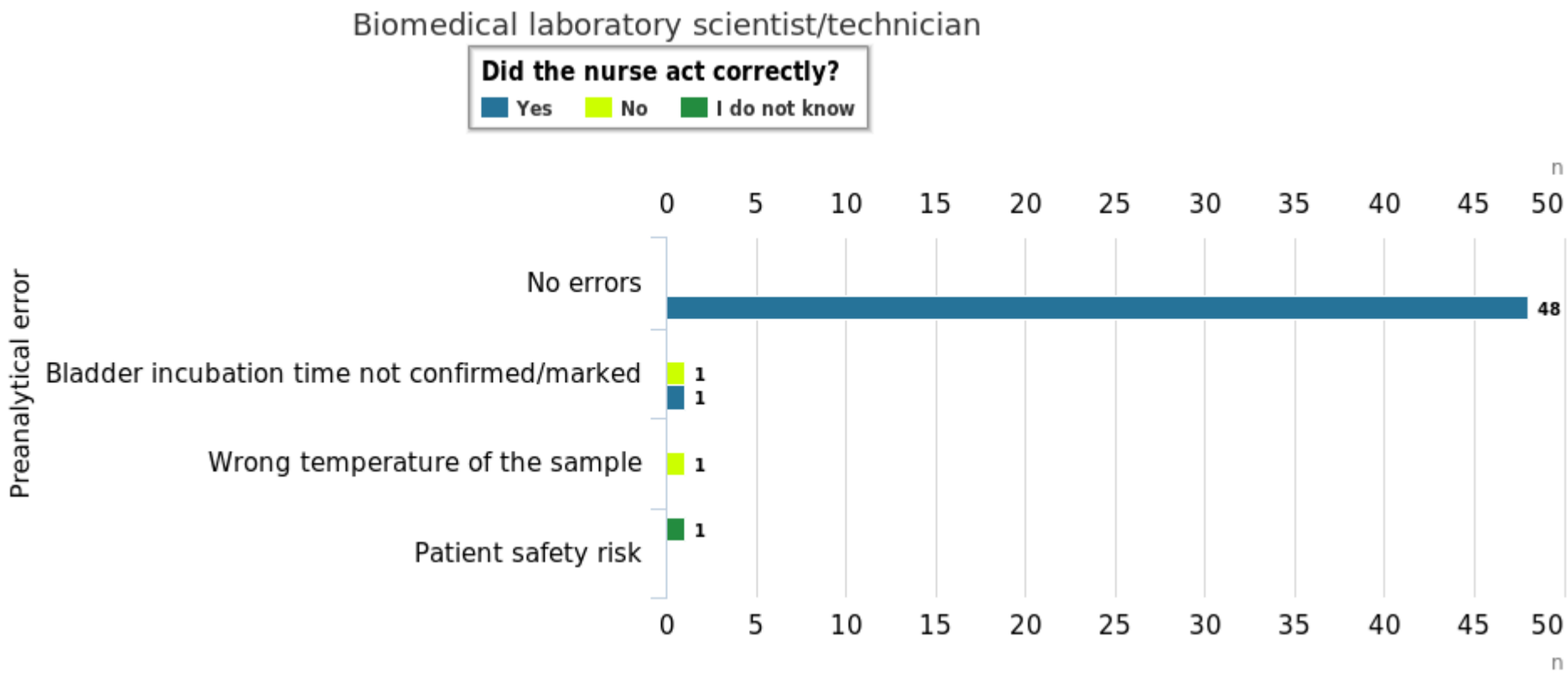
Case 3|Did the nurse act correctly? |All profession groups



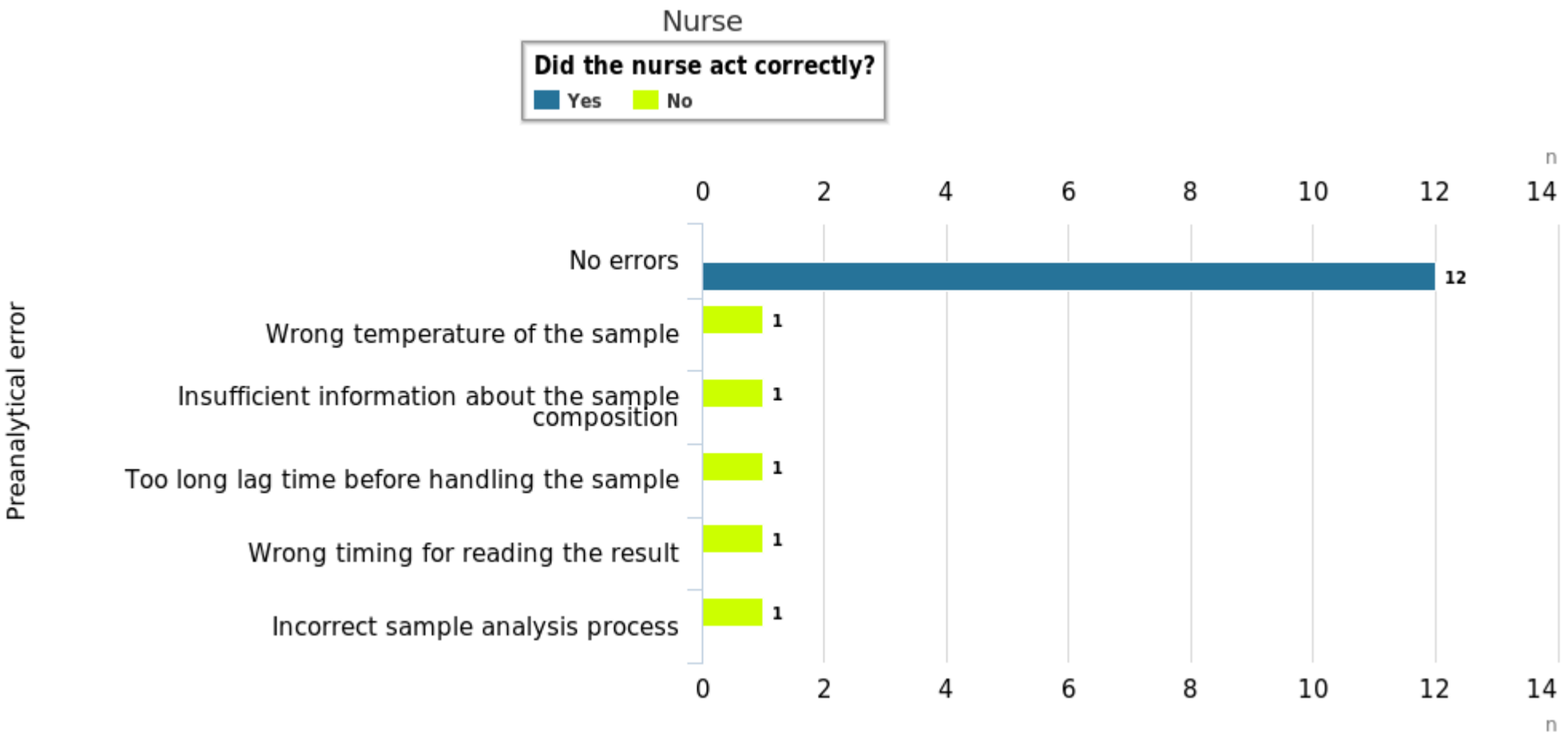
Case 3|Did the nurse act correctly? |Assistant at laboratory



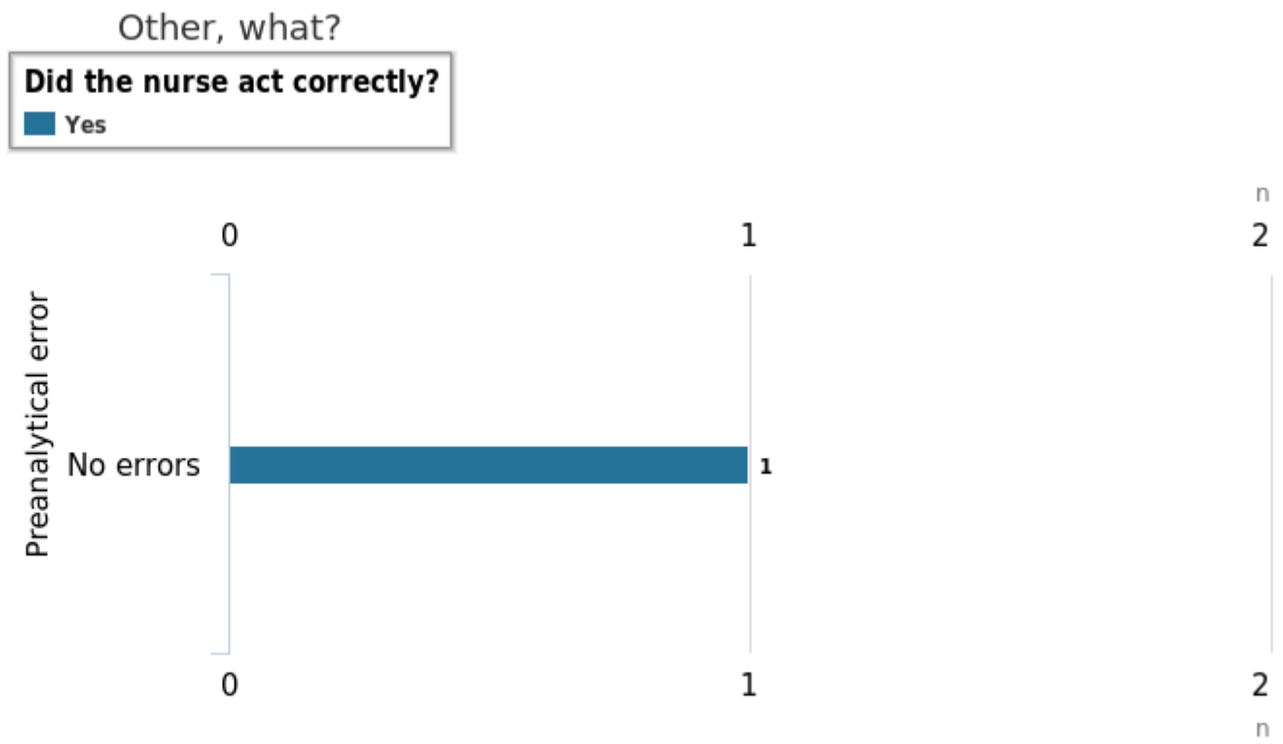
Case 3|Did the nurse act correctly? |Biomedical laboratory scientist/technician



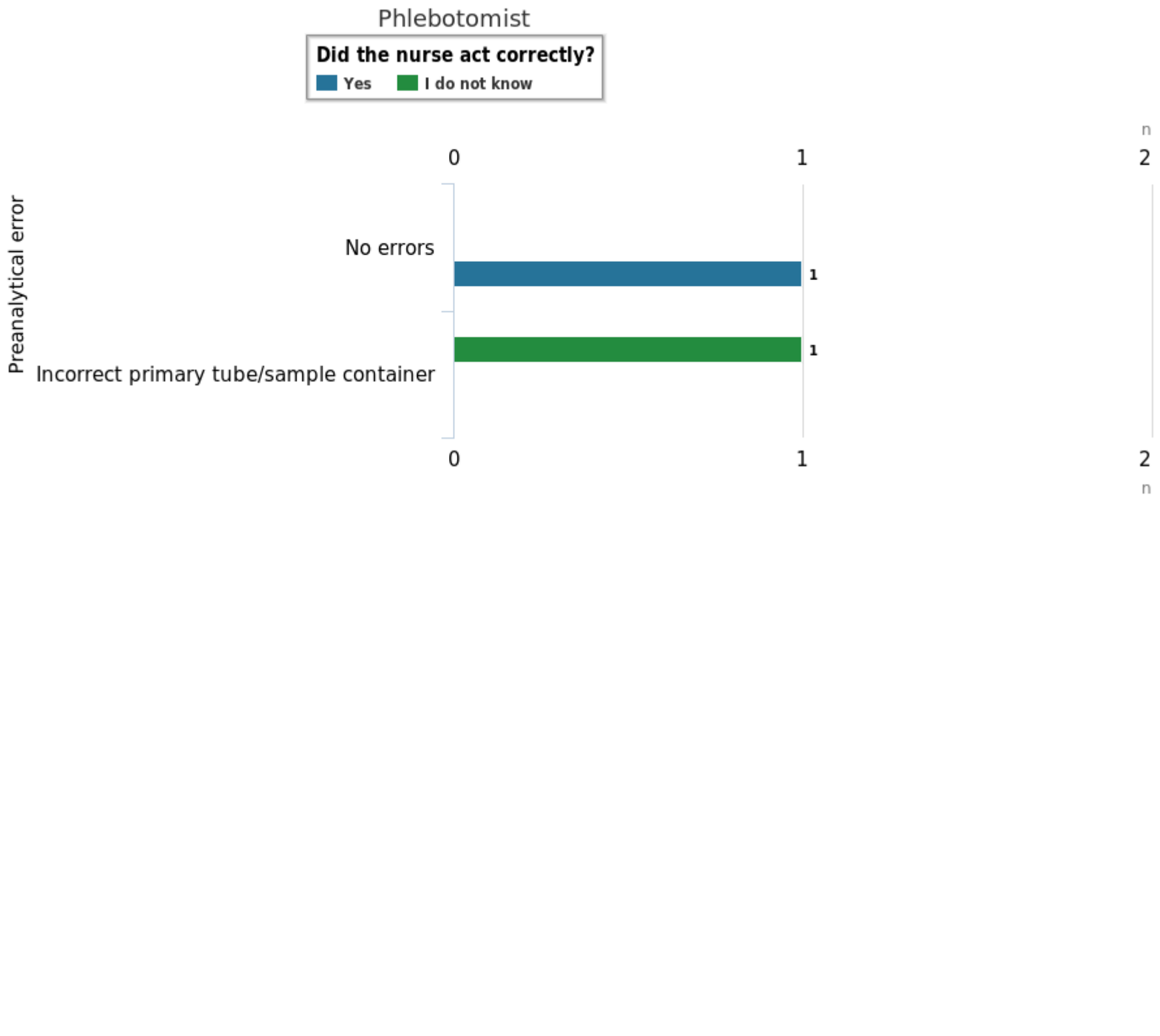
Case 3|Did the nurse act correctly? |Nurse



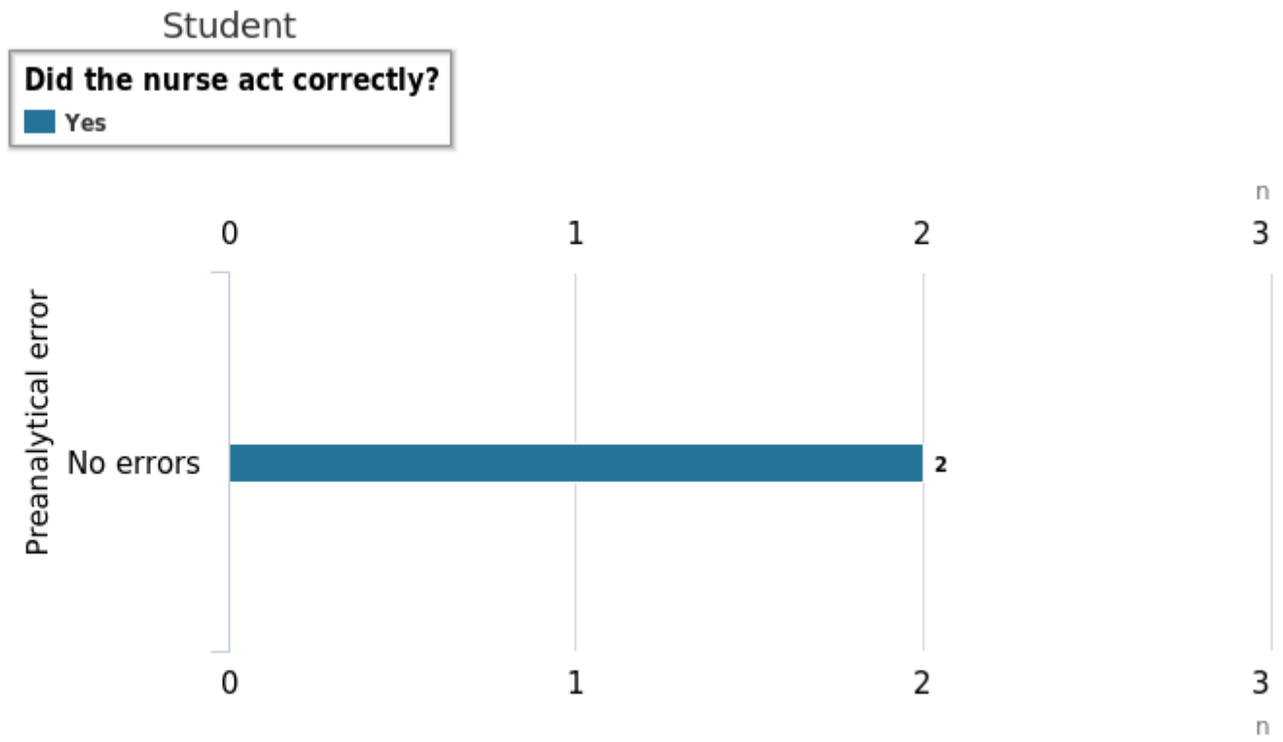
Case 3|Did the nurse act correctly? |Other, what?



Case 3|Did the nurse act correctly? |Phlebotomist



Case 3|Did the nurse act correctly? |Student



LABQUALITY

External Quality Assessment Scheme

Preanalytics, POCT units Round 1, 2023

Specimens
Sample S001-S003 (LQ779423011- LQ779423013) were case reports. In each case the participants were asked if the action was appropriate, and participants were also asked to identify potential preanalytical errors. It was possible to choose multiple errors per case.

Each case represented situations that occur in point of care testing units almost daily and simulated authentic situations where a decision needs to be made alongside other routine work.

Report info
Suggestions of what would be the correct action in every case are done based on general recommendations. There might be some differences between organizations and countries, and some other action might also be valid and correct. The idea of these rounds is to get the participants to think about their own laboratory's procedures from a preanalytical point of view.

Results are grouped according to the informed participants' profession. Reported actions are shown in pie diagrams as percentages. Bar charts represent action answers in different colours as counts and they are grouped by different preanalytical errors. Laboratory's own results are marked with a black radio button (⊙). If you have not reported any results, you will get a note: "You have not responded in time, only global report is available." In case you have any questions regarding the reports, please contact the EQA coordinator.

Comments – Expert
Case 1
The patient is in the hospital receiving medical treatment. The biomedical scientist is analysing a Point of Care- blood gas sample. However, an analytical error occurs during the actual testing process and an "error" appears on the monitor. The biomedical scientist carries out the required maintenance activities. She analyses the patient blood sample and documents the results.

66% (76% biomedical scientists) responded that the biomedical scientists acted incorrectly. This was the correct interpretation. Blood gas analyzers need the quality assurance to accurately measure. The laboratory defines the rules and criteria for a quality system concerned; control sample or calibration, or both for maintenance procedure. The operation of the blood gas analyzers must be tested before the actual analysis of the patient sample. Based on the responses the biomedical scientists understand the importance of the laboratory quality control.

Case 2
A child is suspected of having scarlet fever. The biomedical scientist takes a throat swab from both of the tonsillar arches. She has never performed a rapid strep test (RST). She finds the RST work instruction and the RST kit at the workstation. At first she performs a positive control sample. After that she performs the RST according to the work instructions.

63% responded that the biomedical scientists acted incorrectly. This was the correct interpretation. The biomedical scientist had not received orientation for the task, so it remained uncertain whether she made the rapid strep test correctly. Biomedical scientists must have clear and easy to read operating instructions written procedures and sufficient orientation to ensure the validity of the test results.

2023-12-27

FINAL REPORT

Product no. 7804

Samples sent	2023-10-17
Round closed	2023-11-16
Final report	2023-12-27

Request for correction
Typing errors in laboratory's result forms are on laboratory's responsibility. Labquality accepts responsibility only for result processing. Requests must be notified by writing within three weeks from the date of this letter.

Authorized by
EQA Coordinator
Pia Eloranta
pia.eloranta@labquality.fi

Expert
Tarja Friman
MHS, part-time teacher
TAMK, Finland

Labquality Oy
Kumpulantie 15
FI-00520 HELSINKI
Finland

Tel. + 358 9 8566 8200

info@labquality.fi
www.labquality.com

Case 3
Emergency department nurse asks the results of a urine dipstick test. The biomedical scientist replies that the patient has given the urine sample a few minutes ago. The test should be carried out at room temperature, so it takes 15 minutes to get the result.

87% (94% biomedical scientists) responded that the biomedical scientist worked correctly. This was the correct interpretation. It is important to always follow laboratory instructions. The good thing was that the biomedical scientist explained to the nurse why the urine sample could not be tested immediately.

End of report