P1799

# Do you know what happens in your PTS?

## EQA Scheme highlights Needs for Continuous Monitoring and Recommendations for Sample Transportation Using Pneumatic Tube Systems

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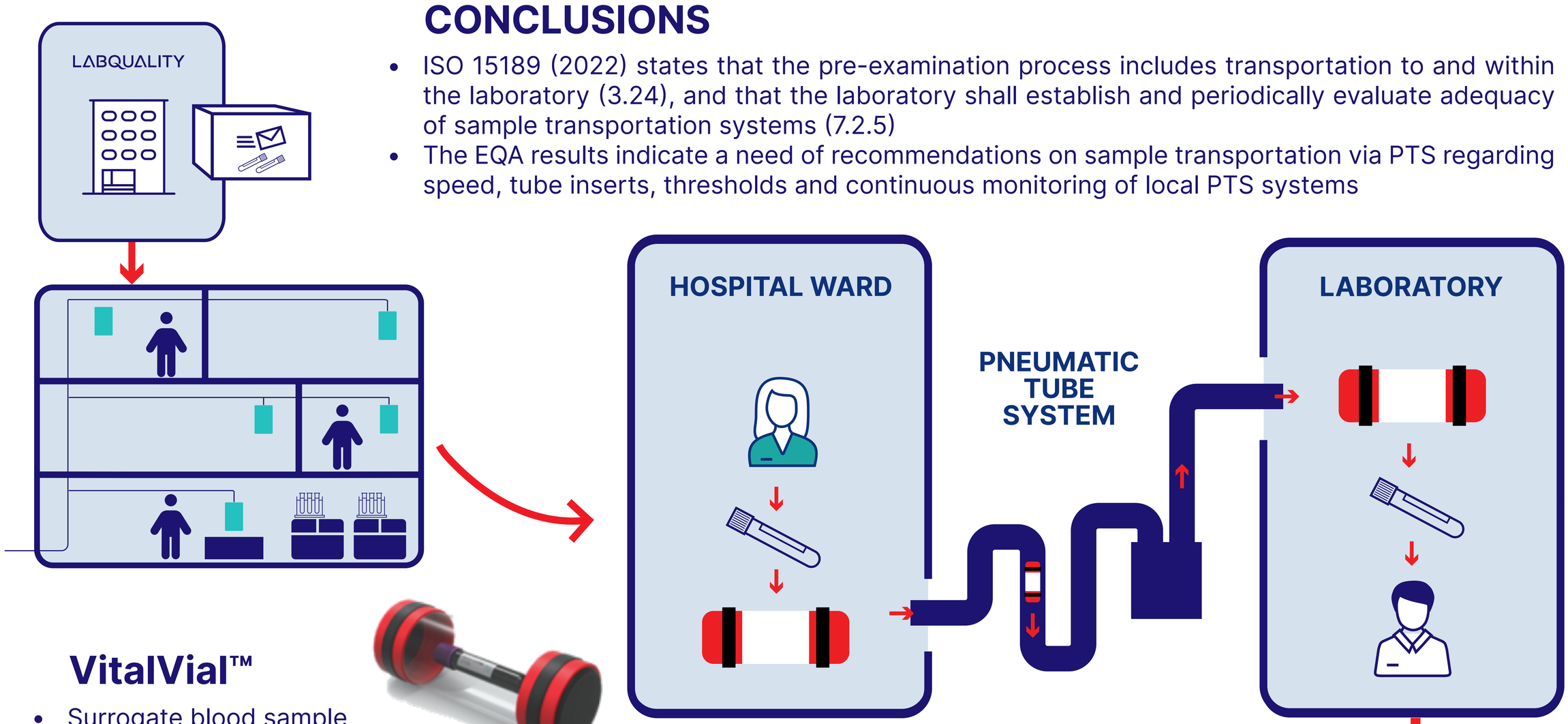
Pneumatic tube systems (PTS) are frequently used for sample transit but often lack quality control processes. Labquality, a Finnish external quality assessment (EQA) provider, aimed to fill that void by introducing an EQA scheme for PTS transport, including varying preanalytical questions on local habits related to sample transportation.

## CONCLUSIONS

- ISO 15189 (2022) states that the pre-examination process includes transportation to and within the laboratory (3.24), and that the laboratory shall establish and periodically evaluate adequacy of sample transportation systems (7.2.5)
- The EQA results indicate a need of recommendations on sample transportation via PTS regarding speed, tube inserts, thresholds and continuous monitoring of local PTS systems



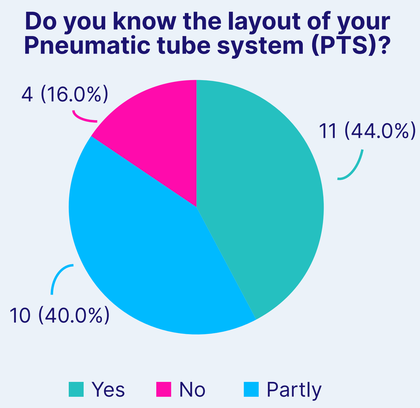

### VitalVial™

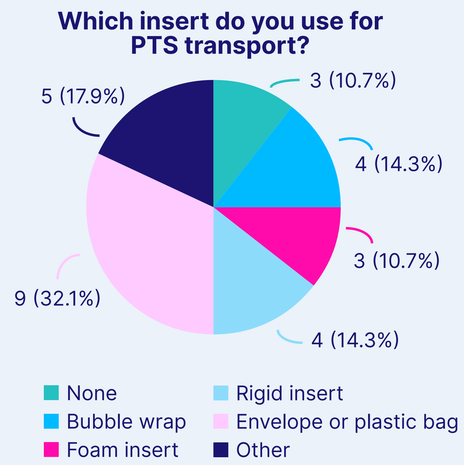
- Surrogate blood sample
- 3-axis acceleration recorder
- Cumulative vibration level during PTS transportation + analyte specific hemolysis index (HI) cutoffs = Prediction of rejection probabilities for LDH, ASAT and K

## MAIN FINDINGS

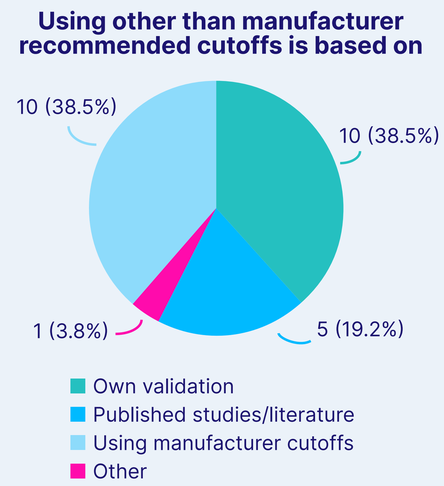
| Results from Round 1, 2022 | | Overall median (n=70) | Discussion |
|---|---|---|---|
| Recorded with VitalVial™ | Speed (m/s) | 1.7m/s (0.7-7.5m/s) | Large heterogeneity detected → Urgent harmonization is clearly needed for all parameters included in the EQA scheme |
| Reported by laboratory | HI cutoffs (mg/dL) | LDH: 35 (9-100)<br>ASAT: 50 (12-100)<br>K: 90 (19-125) | |
| Calculated | Rejection probability (%) | LDH: 10 (1-51)<br>ASAT: 6 (1-27)<br>K: 2 (1-27) | |

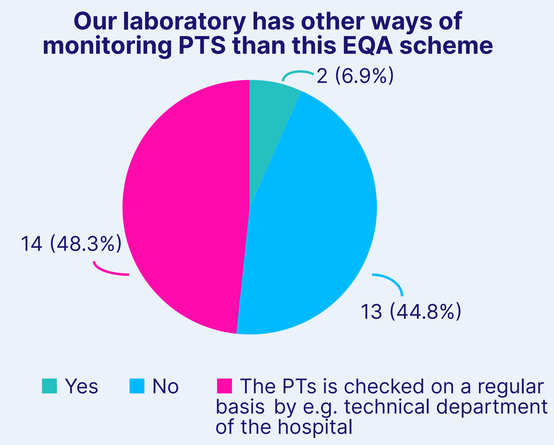
## PREANALYTICAL QUESTIONS 2022




## PREANALYTICAL QUESTIONS 2021

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