

Lessons from National Ammonia Audit – Time to be More Lenient



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INTRODUCTION

- Severe hyperammonaemia is often fatal if left untreated. Early recognition and treatment of such patients is required to prevent morbidity and mortality.
- Laboratories have a vital role in the rapid identification of hyperammonaemia and liaising with medical teams.
- However there is concern that samples that do not comply with stringent acceptance criteria are being rejected by laboratories.
- The recently revised MetBio.Net guidelines for the investigation of hyperammonaemia now recommend that all samples are accepted for ammonia analysis even if the quality of the sample is less than ideal.
- A national audit on ammonia analysis and reporting was carried in April 2019 in order to review current practice and raise awareness of these updated guidelines.
- The focus of the poster is compliance with the standard that ALL samples for ammonia analysis are accepted even if the quality of the sample is less than ideal

METHODS

- A questionnaire on ammonia analysis and reporting was emailed to senior Association for Clinical Biochemistry (ACB) members in April 2019 by the ACB Office following approval by the National ACB Audit Committee.
- The audit standards were based on the MetBio.Net Best Practice Guideline for the investigation of hyperammonaemia (2018).

Current MetBio.Net guidance:

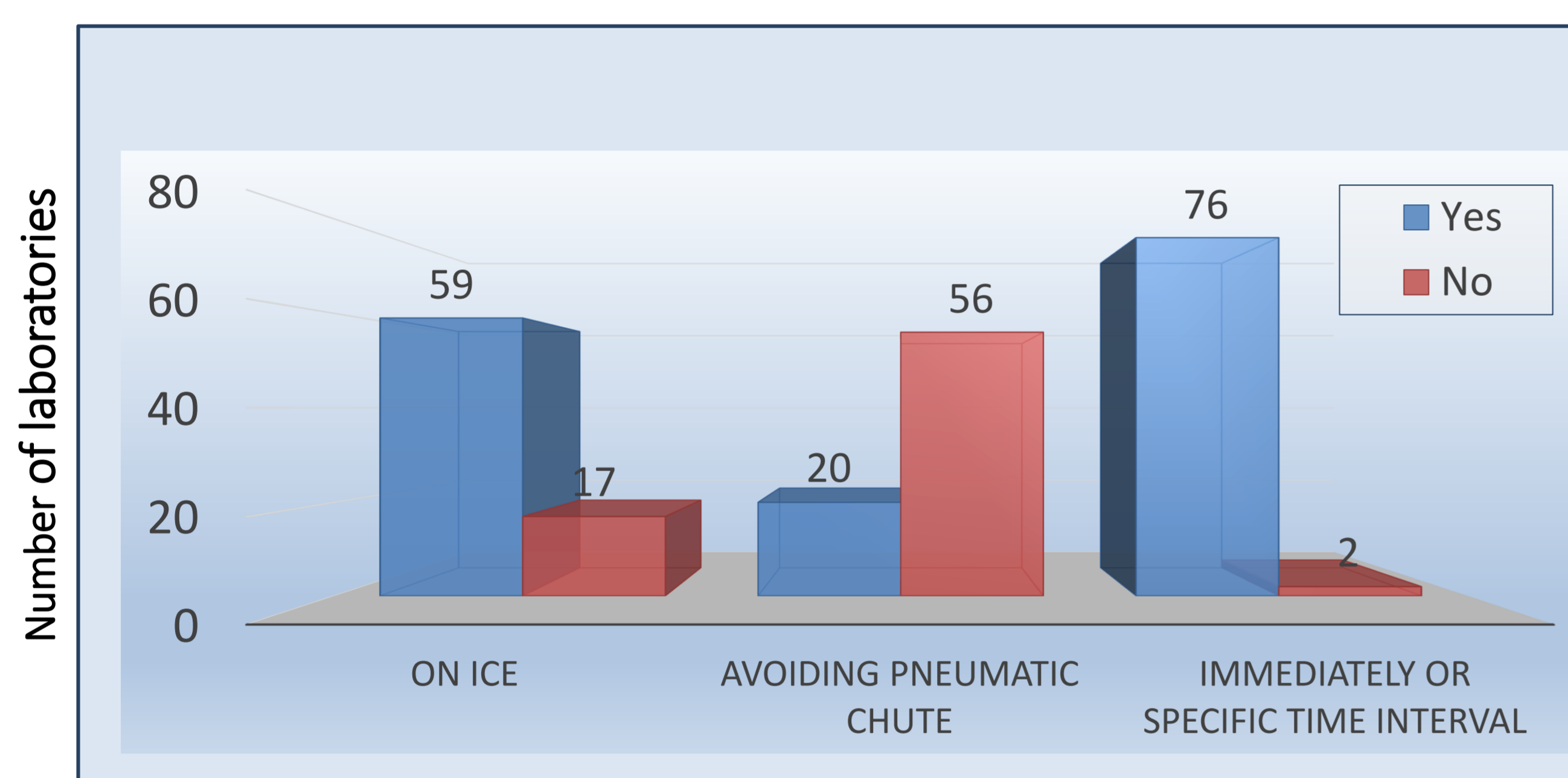
Guidelines for the investigation of Hyperammonaemia.

<http://www.metbio.net/docs/MetBio-Guideline-PERE918546-10-12-2018.pdf>

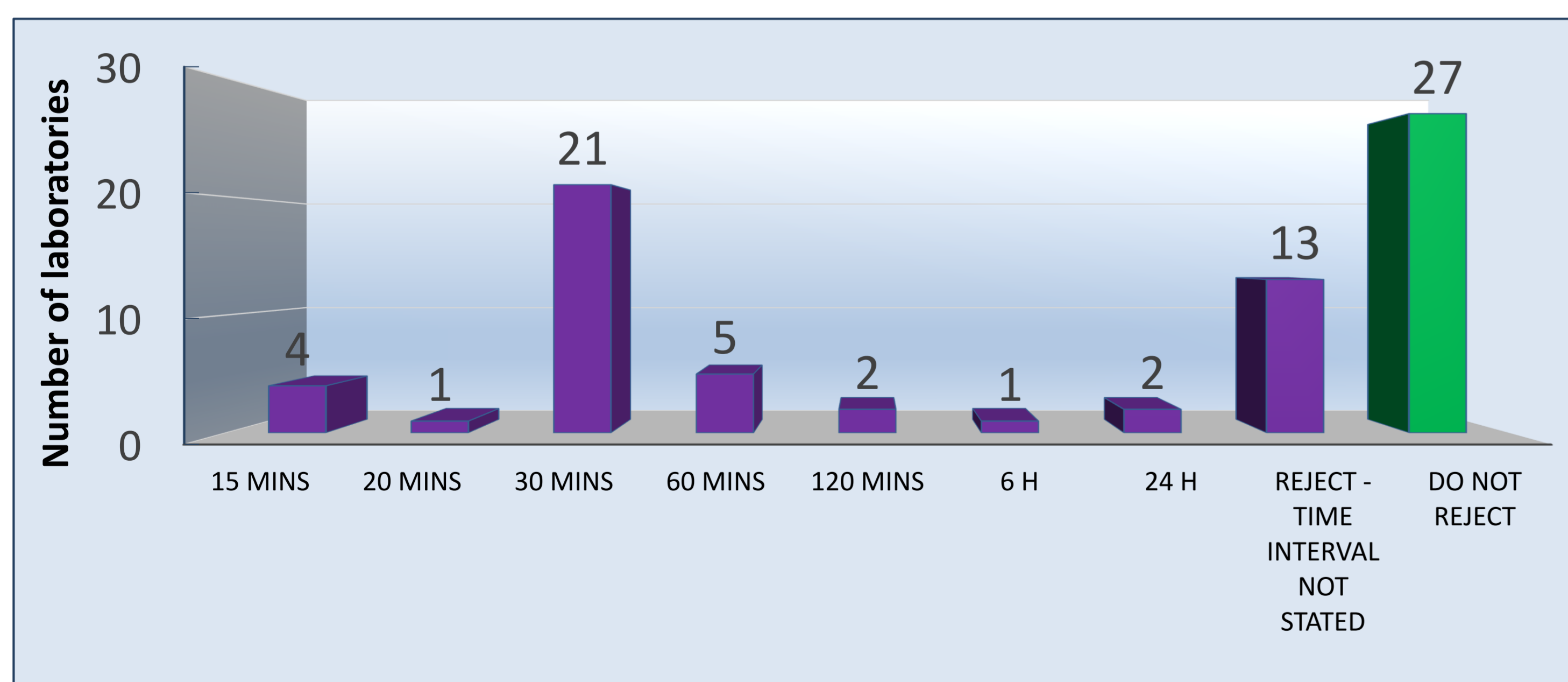
RESULTS

Seventy-six laboratories responded to the audit questionnaire.

Question: Do you advise that samples for ammonia analysis are delivered on ice, avoiding pneumatic chute, immediately or within a specific time interval?

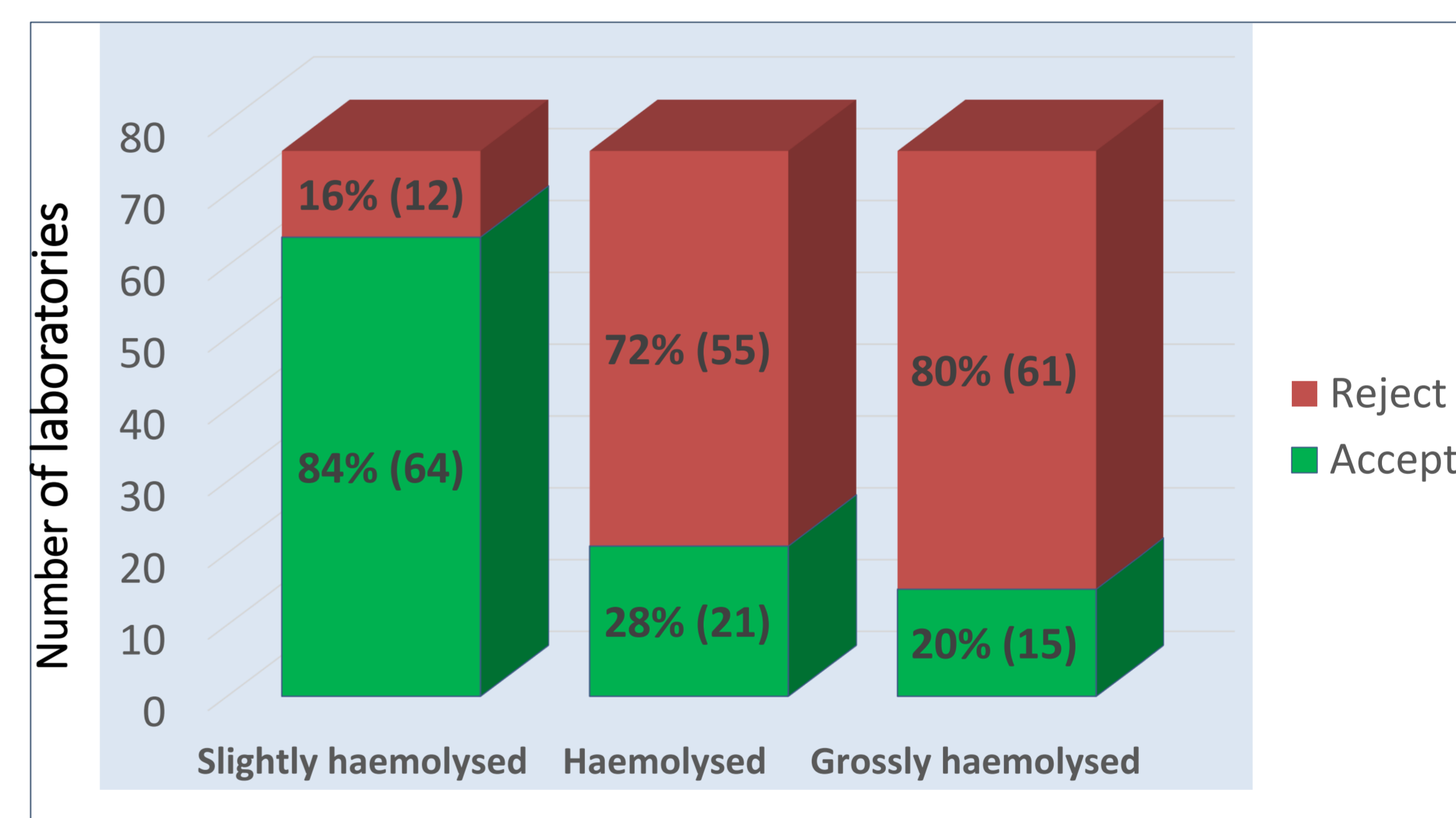


- The transport of samples on ice was recommended by 78% laboratories.
- 24% laboratories rejected samples not sent on ice.
- 55% laboratories reported ammonia results but with a comment (not sent on ice).
- Avoiding using a chute was recommended by 26% laboratories.
- All but two laboratories advised samples are sent immediately or within a specific time interval.
- 64% (49) laboratories rejected samples that they consider too old for analysis.



Audit Standard: Laboratories should accept all blood samples for ammonia analysis even if the quality of the sample is less than ideal.

Question: Do you reject samples for ammonia analysis that are slightly haemolysed, haemolysed, grossly haemolysed?



- 72% laboratories rejected samples which they consider to be haemolysed.
- 80% laboratories reject samples which they consider to be grossly haemolysed.

Audit Standard: Laboratories should accept all blood samples for ammonia analysis even if the quality of the sample is less than ideal.

CONCLUSIONS

- ❖ The national audit data shows that a proportion of samples sent to laboratories for ammonia analysis were rejected due to stringent acceptance criteria.
- ❖ Some laboratories had/have yet to adopt the MetBio.Net guidelines for the investigation of hyperammonaemia (2018) which now advise that ALL samples for ammonia analysis are accepted even if the quality of the sample is less than ideal.
- ❖ As a result, opportunities for identifying patients with significant hyperammonaemia may be missed which may lead to significant morbidity and even death.