UK NEQAS Pre-and Post-Analytical Quality Monitoring Service
Use of regular on-line Audit to promote best practice by using clinical scenarios

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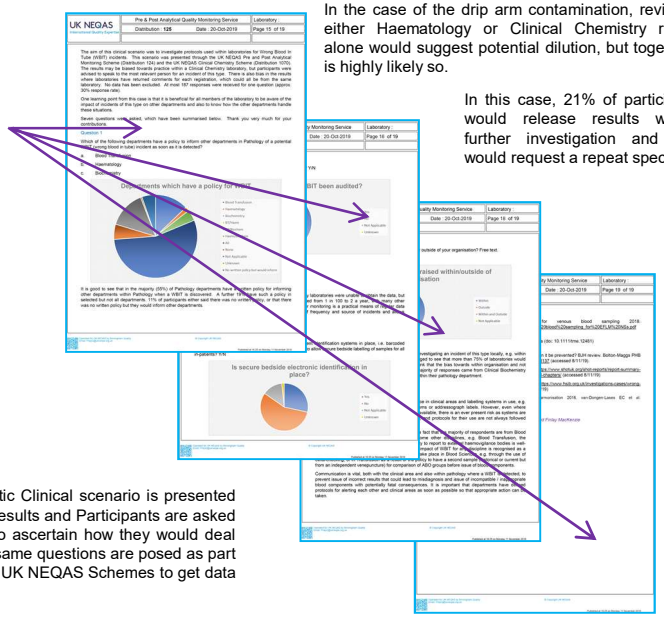
Aim

In 2019, the pan-discipline UK NEQAS Pre & Post Analytical Quality Monitoring Service [PrepQ] started a quarterly series of clinical scenarios auditing the practice in Laboratory Medicine of handling different pre- and post-analytical scenarios. The aim was educational to raise awareness of the differences in handling of clinical requests and to share best practice with laboratories.

Method

Every Quarter, a realistic Clinical scenario is presented with some Laboratory results and Participants are asked a series of questions to ascertain how they would deal with the situation. The same questions are posed as part of the regular 'numeric' UK NEQAS Schemes to get data from more participants.

After the usual numerical statistics pages we publish a Commentary describing the findings from the Case Study



Results

Recent examples have highlighted 'Drip arm contamination' from a Clinical Chemistry standpoint, 'Wrong Blood in Tube' [WBIT] from a Transfusion viewpoint and 'Out of Date blood collection tubes' from Coagulation. Typically findings include 11% of participants not having a written policy for handling, and 44% of participants had not audited the incidence, of WBIT.

In the case of the drip arm contamination, review of either Haematology or Clinical Chemistry results alone would suggest potential dilution, but together it is highly likely so.

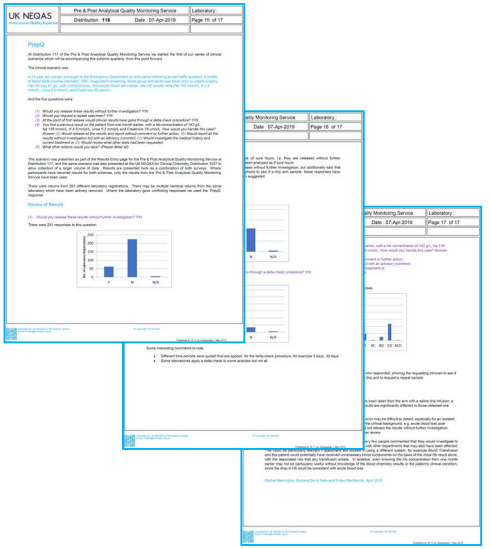
In this case, 21% of participants would release results without further investigation and 60% would request a repeat specimen.

Conclusion from a second example case

The risk of WBIT will vary dependent on local practice in clinical areas and labelling systems in use, e.g. use of electronic bedside patient identification systems or addressograph labels. However, even where electronic bedside patient identification systems are available, there is an ever present risk as systems are not always used, especially in emergency situations, and protocols for their use are not always followed due to human factors.

The responses received to this scenario reflected the fact that the majority of respondents are from Blood Sciences / Clinical Chemistry departments. In some other disciplines, e.g. Blood Transfusion, the responses may have been different and the necessity to report to external haemovigilance bodies is well-developed. We were encouraged that the adverse impact of WBIT for any discipline is recognised as a serious hazard. The recognition of WBIT may first take place in Blood Sciences, e.g. through the use of delta-checking, or in Transfusion as a result of the policy to have a second sample (historical or current but from an independent venepuncture) for comparison of ABO groups before issue of blood components.

Communication is vital, both with the clinical area and also within pathology where a WBIT is detected, to prevent issue of incorrect results that could lead to misdiagnosis and issue of incompatible / inappropriate blood components with potentially fatal consequences. It is important that departments have defined protocols for alerting each other and clinical areas as soon as possible so that appropriate action can be taken.



Conclusions on our approach generally

Though superficially each case has a particular primary discipline in mind, our findings strongly suggest that communication is vital, both within the clinical area and also across pathology. It is important that departments have defined protocols for alerting each other and alerting clinical areas as soon as possible so that appropriate action can be taken.

Full commentaries are provided to all participants and it is hoped that these clinical scenario type audits will lead to a review of practice across pathology and so help to develop best practice guidance.

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