Alert fatigue: System overload

KEY WORDS: ALERT, FATIGUE, SAFETY

BACKGROUND
Alert fatigue occurs when staff are exposed to large numbers of alerts, leading to desensitisation.

Staff then ignore critical alerts that warn of impending serious patient harm.

Between 2016-19 over 10% of SHOT reports stated the source of error was overriding alerts.

METHOD AND DISCUSSION
SHOT reports are assessed for IT involvement. SHOT has identified that excessive or inappropriate alerts can lead to significant number of errors in the transfusion process.

Integration of technology in healthcare has been encouraged and promoted for many years, with IT systems providing auditory and visual alarms to allow staff to act on unsafe situations. Failure to act upon alerts can lead to patient harm but excessive or inappropriate alerts can lead to ALERT FATIGUE. One source stated clinicians override alerts 49-96% of the time, and one study stated that over 300 alerts were needed to prevent one adverse drug event.

Alert fatigue is an issue in both clinical and laboratory areas.

RESULTS
An illustrative case from the 2020 Annual SHOT Report:

An antenatal patient with sickle cell disorder required red cell transfusion. Multiple alerts at point of issue for units: CMV neg, HbS neg, C- K-, <10 days old meant the BMS became alert fatigued. The unit issued was K+, leading to potential sensitisation to K antigen.

The BMS said: ‘too many boxes appear to acknowledge’ and the report stated that staff became desensitised to the numerous alerts and failed to pick up safety critical ones.

CONCLUSION
SHOT REPORTS INDICATE:

Alerts are only moderately effective
Alert fatigue is common
More alerts = higher potential for fatigue

REFERENCES

(1) S Narayan (Ed) D Poles et al on behalf of the Serious Hazards of Transfusion (SHOT) Steering Group. The 2016 - 2020 Annual SHOT Reports.
(2) https://psnet.ahrq.gov/primer/alert-fatigue

RECOMMENDATIONS

• LIMS alerts should only display when action is required
• Alerts should be tiered by relevance and reviewed regularly to remove redundant messages
• Alerts should be transformed into relevant and actionable intelligence
• Encourage a safety culture in which concerns are raised and assumptions reduced

ACKNOWLEDGEMENTS
Thanks to all SHOT reporters, blood donors, patients, everyone in the transfusion community, colleagues at MHRA and key SHOT stakeholders.