

NHS BLOOD AND TRANSPLANT

LIVER ADVISORY GROUP

SUMMARY OF CUSUM MONITORING OF OUTCOMES FOLLOWING LIVER TRANSPLANTATION

INTRODUCTION

1. NHSBT monitors short-term patient outcomes following organ transplantation through centre specific cumulative sum (CUSUM) analyses. These are undertaken monthly for liver transplantation. These 'within centre' analyses enable prompt detection of any changes in mortality rates, providing external assurance and enabling centres to compare current outcomes with their own past performance to assist in internal auditing. CUSUM monitoring compares current outcome rates with an expected rate.
2. Each month, CUSUM monitoring reports on 90-day mortality following liver transplantation are produced and sent to each centre. This paper summarises the results of these reports for the six-month period since the last CUSUM monitoring update in November 2018. Where signals have occurred, actions that were taken and lessons learnt are noted.

RESULTS

3. **Table 1** shows that there was one signal in December 2018 for paediatric transplants against the national specific rate. The transplant centre also signalled twice in January 2018 against the national-specific rate for adult elective transplantation. All signals were investigated and a closure letters were sent.
4. There was one signal in March 2019 and the centre responded to confirm that the signal would be thoroughly investigated. NHSBT have not yet received a final report detailing actions that were taken.

Month CUSUM report issued	No. reports issues	No. signals	No. signals requiring investigation	No. investigations outstanding
November 2018	7	0	0	0
December 2018	7	1 ¹	1	0
January 2019	7	2 ²	2	0
February 2019	7	0	0	0
March 2019	7	1 ³	1	1
April 2019	7	0	0	0
Total	42	4	4	1

CONCLUSION

5. Over the last six months, there has been 3 signals in liver transplantation CUSUM reporting for adult elective liver transplantation, and 1 signal for paediatric elective liver transplantation.
6. NHSBT have received reports detailing actions that were taken after three of the four CUSUM signals.