

NHS BLOOD AND TRANSPLANT

CARDIOTHORACIC ADVISORY GROUP

SUMMARY OF CUSUM MONITORING OF OUTCOMES FOLLOWING LUNG TRANSPLANTATION

INTRODUCTION

- 1 NHSBT monitors short-term patient outcomes following organ transplantation through centre specific cumulative sum (CUSUM) analyses. These are undertaken monthly for cardiothoracic 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.
- 2 The methods used in the analysis are based on CUSUM monitoring and compare current outcome rates with an expected rate.
- 3 Each month, CUSUM monitoring reports on 90-day mortality following lung transplantation are produced and sent to each centre. This paper summarises the results of these reports for the six month period since the last Cardiothoracic Advisory Group meeting. Where signals have occurred, actions that were taken and lessons learnt are noted.
- 4 In October 2014, it was decided that heart-lung block transplants would be excluded from the lung transplant CUSUM monitoring reports.

RESULTS

- 5 **Table 1** shows that over the six month period since the last Cardiothoracic Advisory Group meeting there has been one signal in lung transplantation CUSUM reporting.

Month CUSUM report issued	No. reports issued	No. signals	No. signals requiring investigation	No. investigations outstanding
October 2016	5	1	1	1
November 2016	5	0	0	0
December 2016	5	0	0	0
January 2017	5	0	0	0
February 2017	5	0	0	0
March 2017	5	0	0	0
Total	30	1	1	1

- 6 A signal in the CUSUM monitoring of 90 day mortality following lung transplantation was identified at Newcastle Freeman hospital following a transplant performed in May 2016. An investigation was undertaken with an external review completed. Associate Medical Director and the chair of CTAG were happy with the actions. This signal can be closed after the completion of shared learning.

CONCLUSION

- 7 Over the six month period since the last Cardiothoracic Advisory Group meeting there has been one signal in lung transplantation CUSUM reporting. Outcomes of signal investigation have not yet been confirmed but are in progress.