

UK Transfusion Laboratory Collaborative Survey 2017 Key Findings

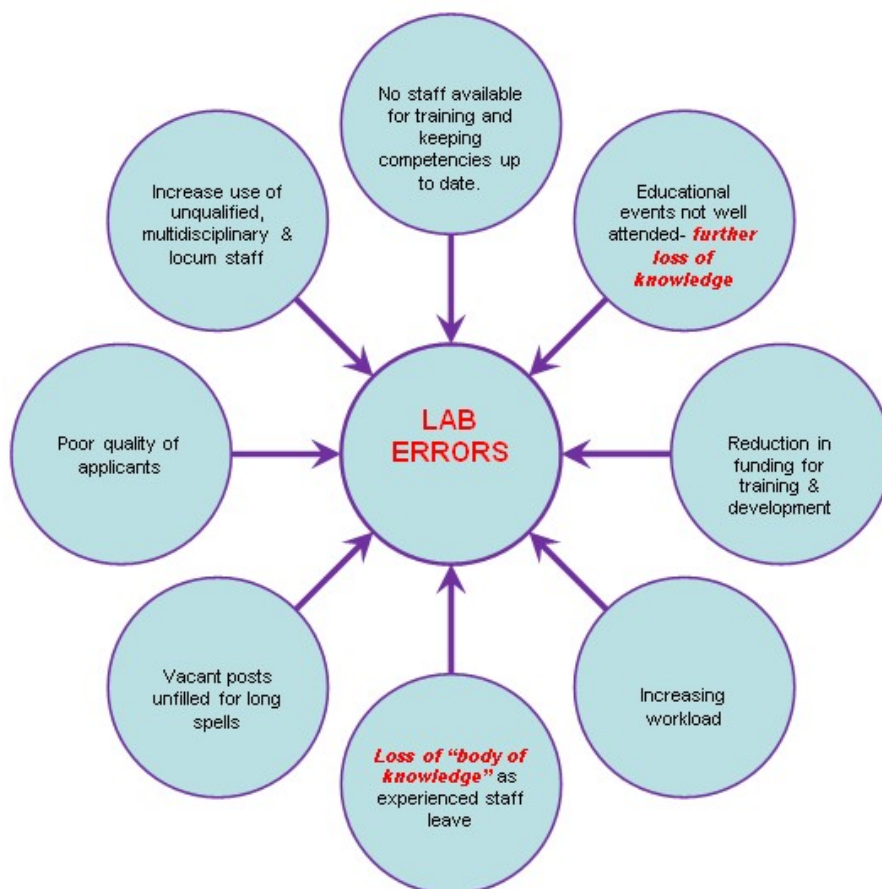
Hema Mistry, Paula Bolton-Maggs, Rashmi Rook

BACKGROUND:

The UK Transfusion Laboratory Collaborative: Minimum standards for staff qualifications, training, competency and the use of information technology in hospital transfusion laboratories (Chaffe et al, 2014), were designed to promote best practice to help reduce errors leading to blood related patient safety incidents, as monitored by SHOT and the MHRA via the respective haemovigilance systems. The UKTLC standards are mapped against the Blood Safety & Quality Regulations Act 2005, as amended and are supported by both UKAS and the MHRA during their inspections

The reduction of errors within the transfusion laboratory environment is dependent on staffing levels knowledge, training and working conditions being appropriately set. This survey was performed as part of routine 2 yearly monitoring of the standards to check compliance by senior hospital management in supporting their transfusion laboratory staff to meet acceptable patient safety standards.

Figure 1 Overview of 2017 UK TLC survey and inter-relationship to lab errors.



METHOD:

The survey was distributed from the National External Quality Assessment Scheme, Blood Transfusion Laboratory Practice (NEQAS-BTLP) to 302 UK transfusion laboratories to be answered on Wednesday 15th March 2017 in order to give a snapshot of one day in a hospital laboratory, in line with the format of earlier UKTLC surveys for comparison. The 2017 survey consisted of 51 questions compare to 90 questions in 2015. To avoid duplication UKTLC accepted results from the UK NEQAS survey on IT related questions that was sent out in May 2017.

An alert email was sent to Laboratory Managers ahead of the survey distribution to ensure that reporters had all the relevant data to hand as previous, and additionally a notice of the survey was posted on Facebook (BTLP), Twitter (SHOT) and on the MHRA Blood Forum, which may account for the improved response rate

Figure 2: Total number of responses for UKTLC Surveys 2011-2017

Survey	Survey Replies / Total Labs	Response
2017	245/302	81.1%
2015	204/327	62.4%
2013	188/304	61.8%
2011	162/322	50.3%

There is a reduction in responses being submitted by the technical Lead compared to previous surveys:

- 2017: 183/245 (75%)
- 2015: 157/204 (77%)
- 2013: 151/188 (80%)
- 2011: 144/162 (89%)

SUMMARY

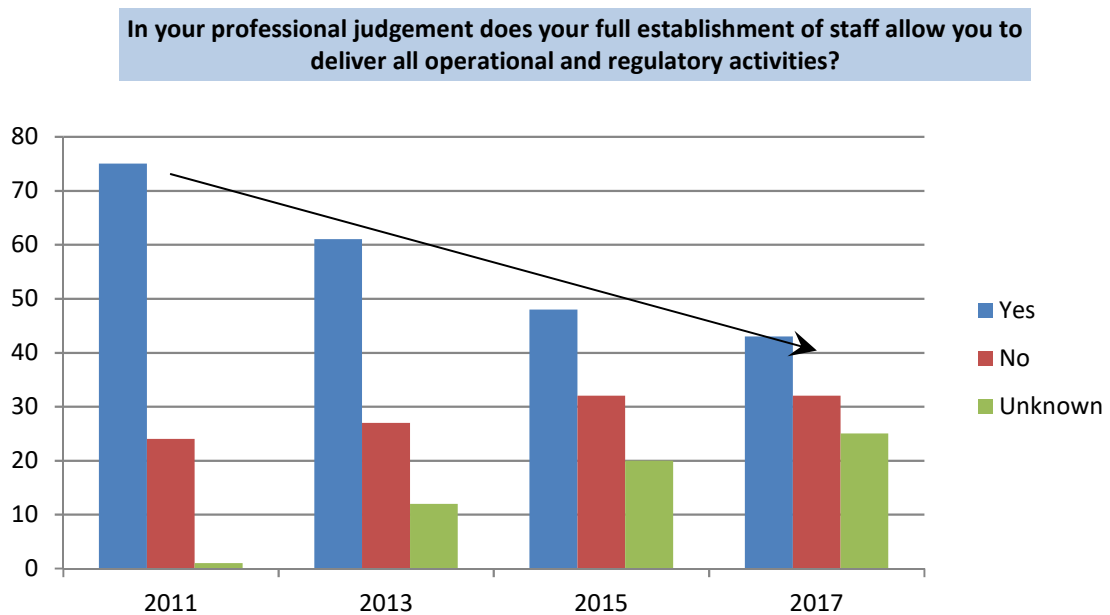
1.0 Staffing.

Ref: UKTLC Standards, 2014 1, 1.1

- Staffing issues have still not been addressed with staff levels either remaining the same or having decreased (*Appendix: Fig 3*).
- Qualified staff are leaving NHS posts for posts in other organisations at the same grade (indicating dissatisfaction with working conditions), and others are taking early retirement. (*Appendix Fig 4*).
- The number of vacancies is increasing and in some laboratories these have been unfilled for extended periods of time. The largest number of vacancies is for Band 6 biomedical scientists (BMS) posts with many for 2 or more years. The calibre of applicants is still an on-going issue (*Appendix Fig 5, 6 and 7, 8*).

- There is dependence on locum and agency staff and the staffing mix is showing an increase use of multidisciplinary staff. (*Appendix fig 9 and 10.*)
- There has been an increase in the number of technical leads spending between >5<25 hours performing bench work. it is unclear if this is to comply with the standards or through necessity due to short staffing levels. (*Appendix Fig 11*).
- Age profile of laboratory staff is balanced There are equal numbers of 18-29 year olds with 50-59 year olds. (*Appendix Fig. 12*).
- 55% of laboratories do not have an agreed staffing capacity plan to cover core hours (*Appendix Figure 13*).
- There is a negative trend of laboratory managers judging whether their current full establishment allows a delivery of both operational and regulatory activities. This indicates that staffing levels are not correctly set and capacity plans not being fulfilled. (**Graph 1**)

Graph 1

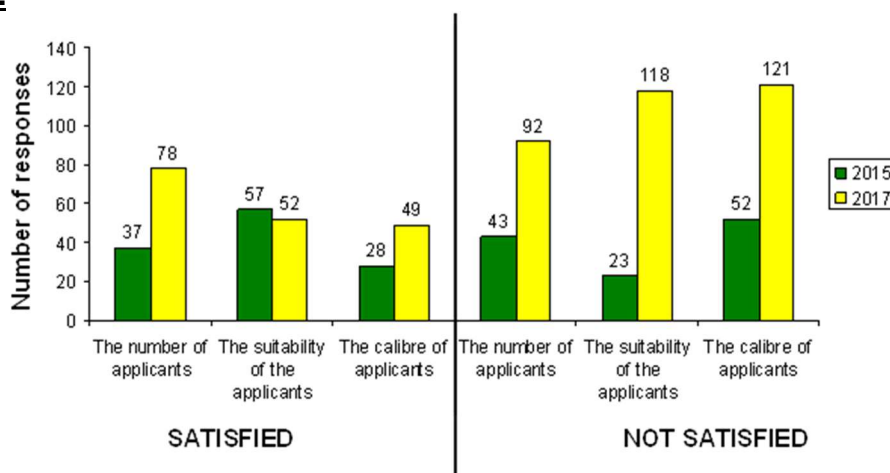


2.0 KNOWLEDGE & SKILLS

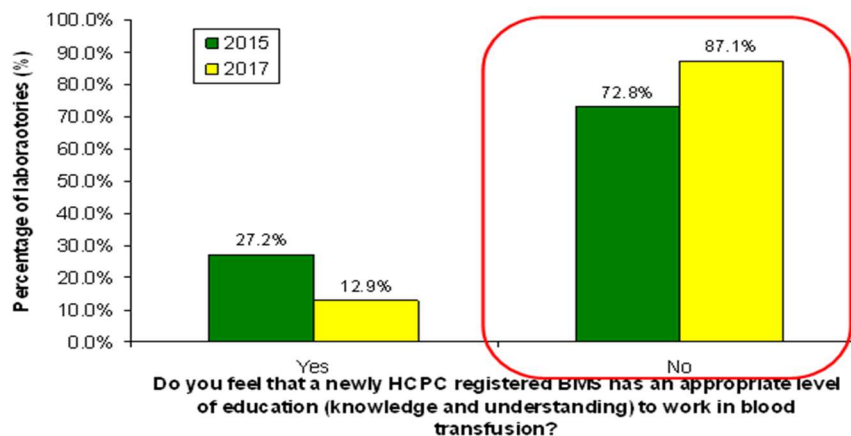
Ref: UKTLC standards, 2014: 3, 3.1; 3.2

- The calibre and suitability of applicants for vacancies is not satisfactory. **(Graph 2).**
- This is associated with a decrease in qualified staff and increase in unqualified staff. *(Appendix Fig 14).*
- Many laboratories felt that newly registered HCPC BMS do not have the appropriate knowledge and skills to work in blood transfusion. **(Graph 3).**
- There is a positive and significant increase in specialist BMS advice support out of core hours. **(Graph 4).** This may indicate that laboratories are trying to comply with the UKTLC standards.
- There is also a positive increase in staff obtaining the BBTS Specialist Certificate in Transfusion Practice, as recommended to meet some of the standards. *(Appendix Fig 14).*

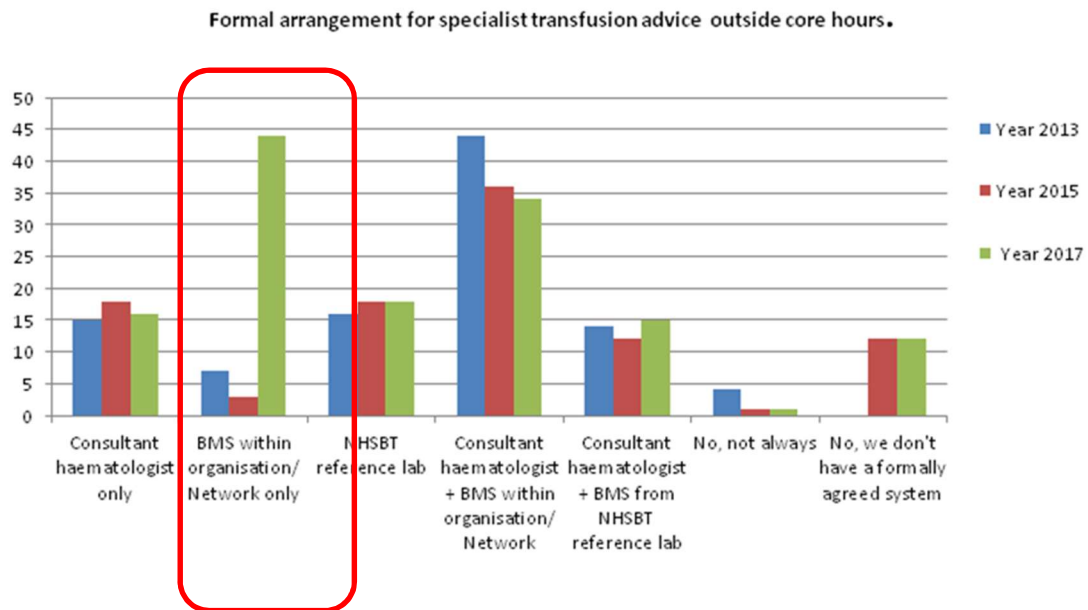
Graph 2



Graph 3



Graph 4

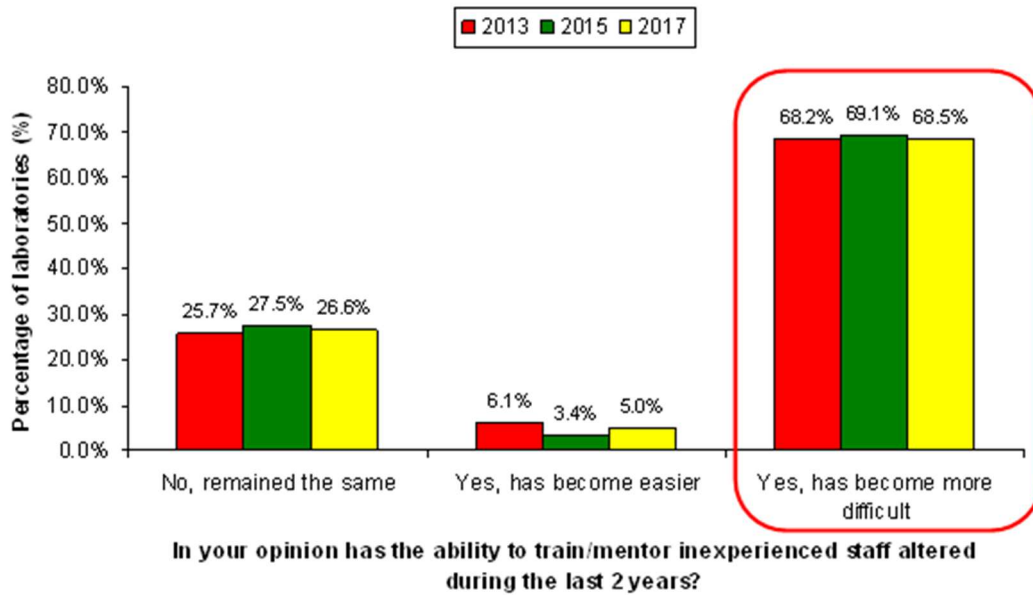


3.0 TRAINING & DEVELOPMENT

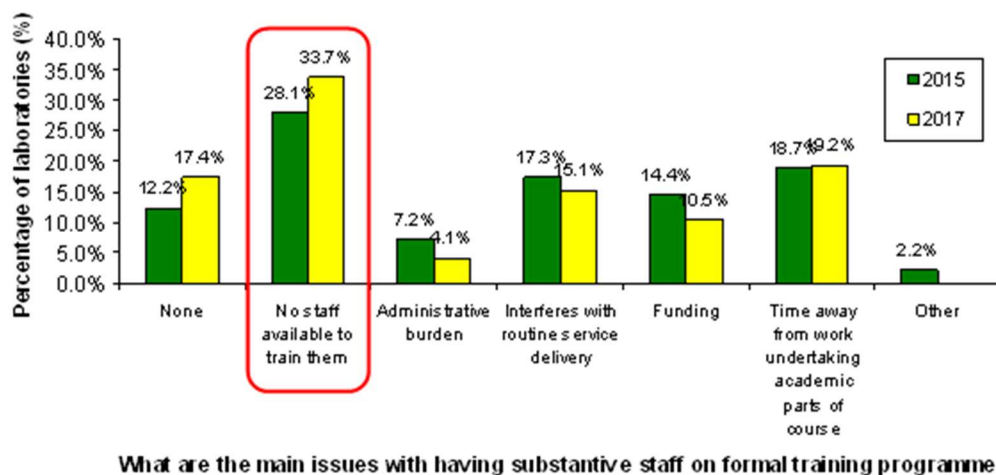
Ref: UKTLC Standards, 2014: 3, 3.4

- Training and mentoring of staff is still a significant problem within the laboratories (**Graph 5**).
- Training and development budgets are reducing (*Appendix Fig 15*).
- Staff are unable to attend educational events unless they are so-called 'free' to attend i.e. regional transfusion committee education days (RTC).
- Staff are not available to train inexperienced staff. (Workload is increasing in many cases by >50%). (**Graph 6**).
- There is no significant change to attendance at professional meetings which is a good indicator, but there needs to be increase participation to improve overall current knowledge (*Appendix Fig 16*)

Graph 5



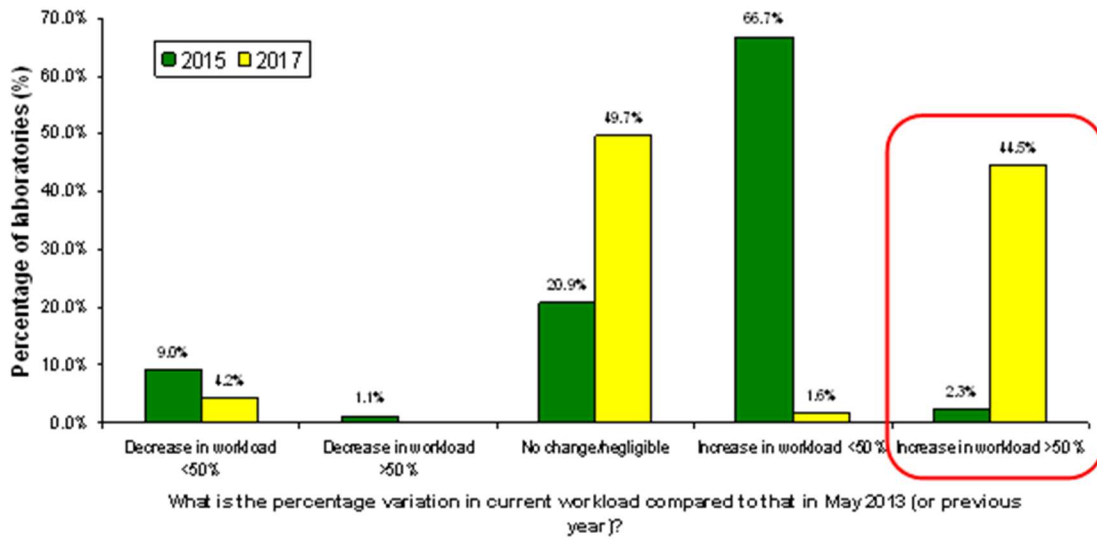
Graph 6



4.0 IT

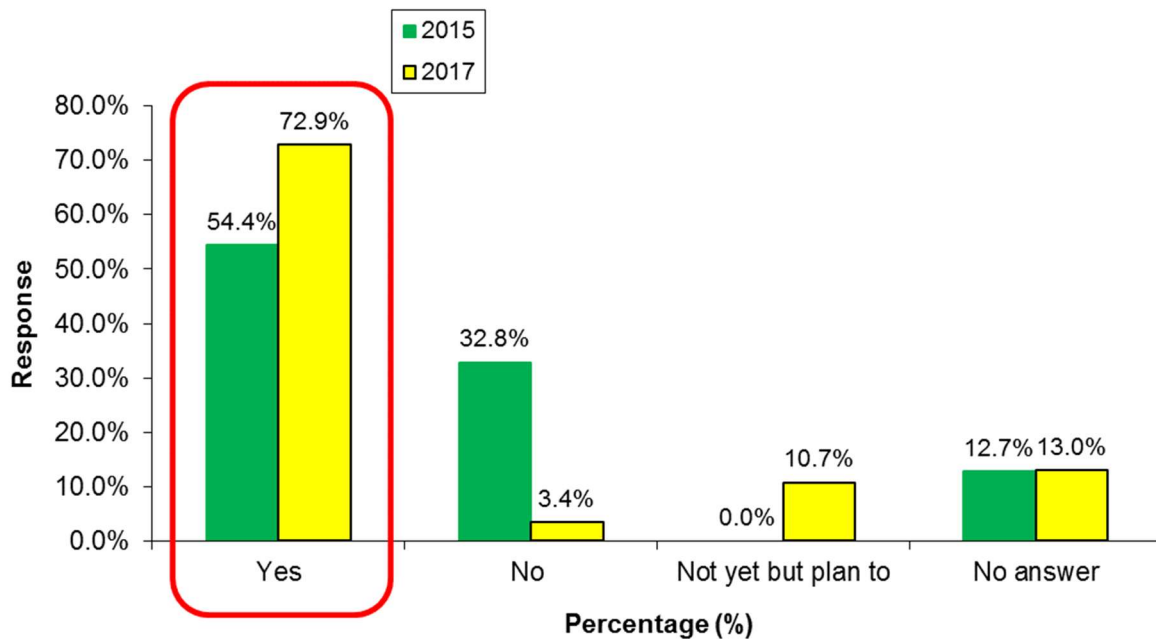
- Most laboratories in 2017 stated that their workload had remained the same or had increased with many 85/191 (44.5%) saying the increase was >50%. (**Graphs 7 & 8**). The reason for this increase is unclear however a survey by NEQAS identified that the number of laboratories that have implemented the 2-sample policy has increased from 111/204 (54.4%) in 2015 to 129/177 (72.9%) in 2017.

Graph 7



Graph 8

Has your laboratory implemented the 2 sample rule?



- Many laboratories 145/177 (81.9%) do use full automation for routine group and save during core hours in 2017, with 139/145 (81.9%) of these saying that it is in use 24/7. 152/177 (85.9%) laboratories do have a formal contingency plan for equipment downtime. 77.4% laboratories in 2017 have automation interfaced to LIMS with 56.9% bi-directional.

5.0 COMMENTS

The comments section of the survey is subject to individual bias, but it must be noted that many comments have recurring themes and show the amount of pressures and strain that are facing the laboratory managers. Within a health service that is in the process of establishing the principles of compassionate care, then it is important that these comments are also noted.

As the technical transfusion lead I struggle to keep up with workload within my core 37.5 hours, and regularly work additional hours. Lack of resource and support leads me to feel stressed and under considerable pressure regularly, and the only aspect that keeps me in this profession is my personal interest in the subject

Rotation of staff due to shift systems means less continuity.

Quality of service is suffering due to increased numbers of very inexperienced staff and the inability to recruit anyone with BT experience.

6.0 CONCLUSION:

The blood transfusion laboratories are still undergoing organisational changes to optimise provision of blood transfusion services in a climate where workload is becoming increasingly demanding and morale is becoming low. This re-organisation may also be a contributing factor to some of the main findings.

Finance is a key pressure in many Trusts/organisations. No laboratories reported an increase in funding for education in 2017. Lack of funding could result in: fewer resources available for training and education, which may be resulting in reduced numbers of staff with current competency assessments.

From review of the survey, it can be seen that together with lack of appropriate levels of staff, skill mix, and training, the pressures on the transfusion teams are still significant and have been increasing. This is a high-risk situation and patient safety errors will continue being made within this area until there is improved stability and adherence by senior hospital managers to the UK TLC standards

The survey also identified that terminology used for some of the questions requires changing particularly with qualifications. Additionally, the Transfusion Practitioner and Quality Manager roles are also not clearly defined within the standards, and these are also pivotal in transfusion discipline.

7.0 RECOMMENDATIONS

7.1 Escalate the survey findings through the UKTLC representative organisations for further actions.

7.2 Format simple template for Capacity planning, to include the role of TP and QM.

7.3 Discuss findings at SHOT meeting 2017 and other professional meetings.

8.0 ACKNOWLEDGEMENTS

The UKTLC appreciates the help of the transfusion laboratory teams with completing the 2017 survey. There is good indication that you are trying to adhere to the standards but currently there are system-wide problems both within and external to your organisations that is preventing your being able to fulfil these requirements.

9.0 APPENDIX

Figure 3

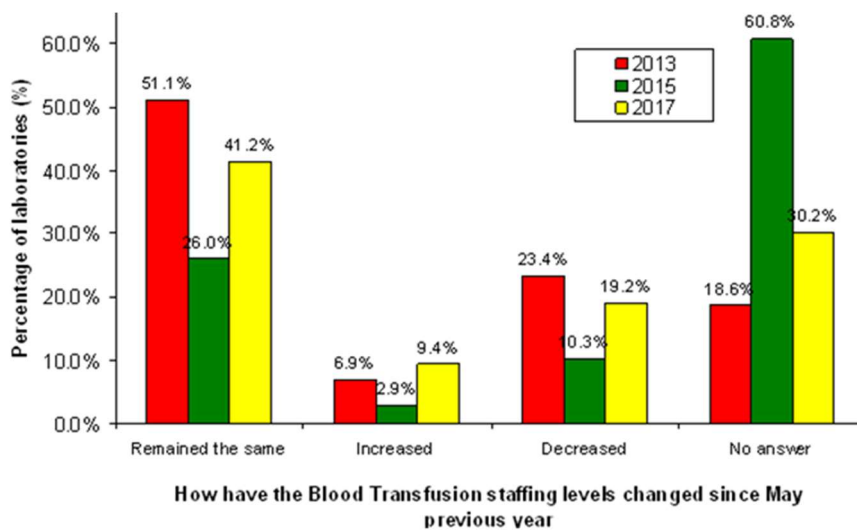


Figure 4:

Fig 24: How has the skill mix of the staff changed since May previous year?

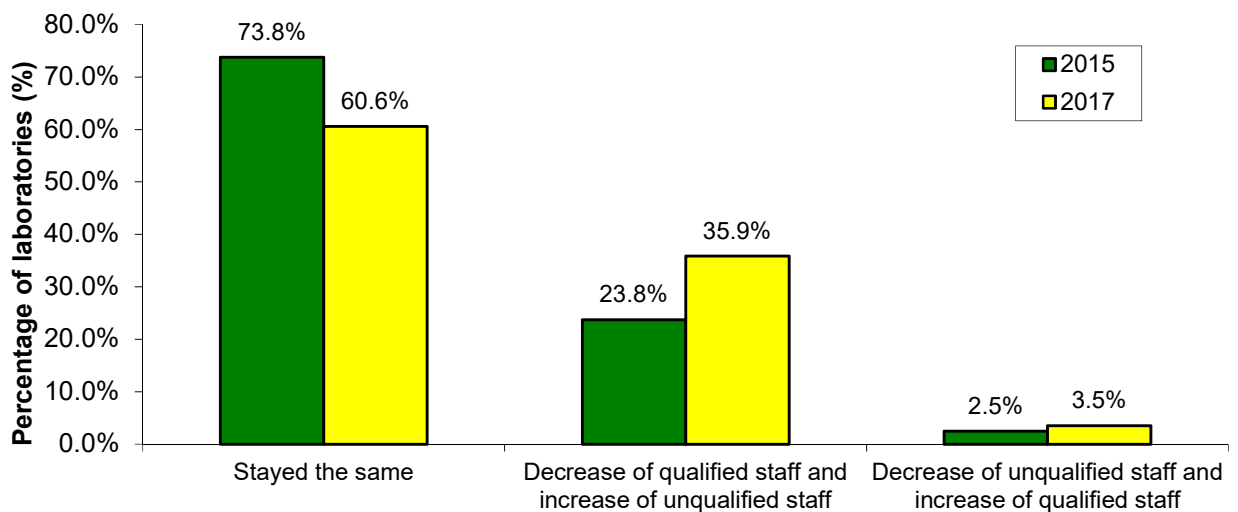


Figure 5

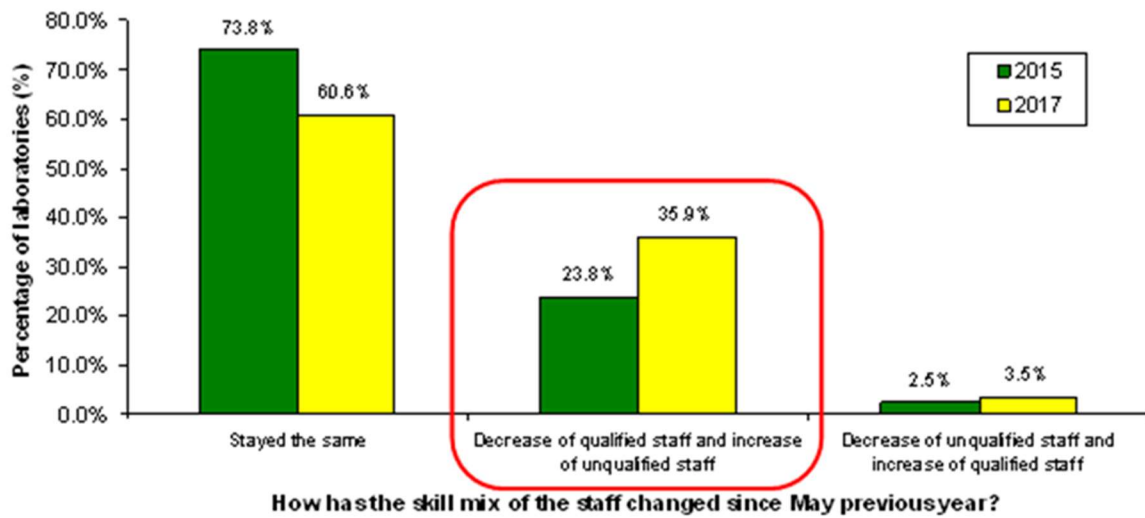


Figure 6

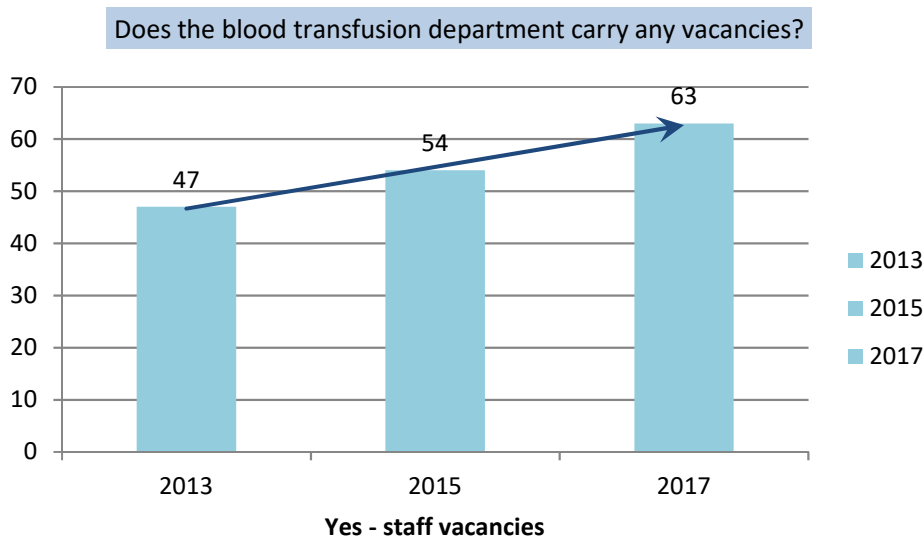


Figure 7

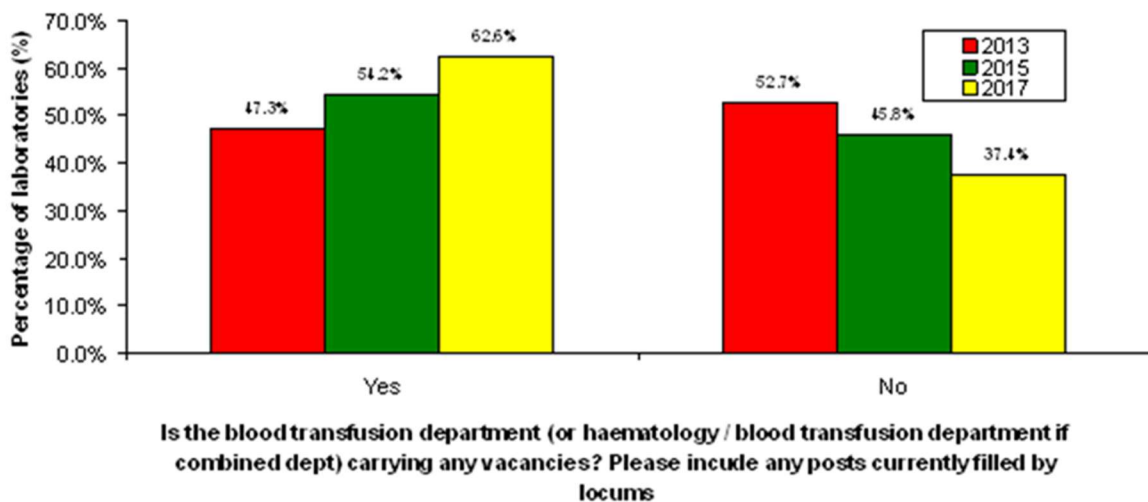


Figure 8

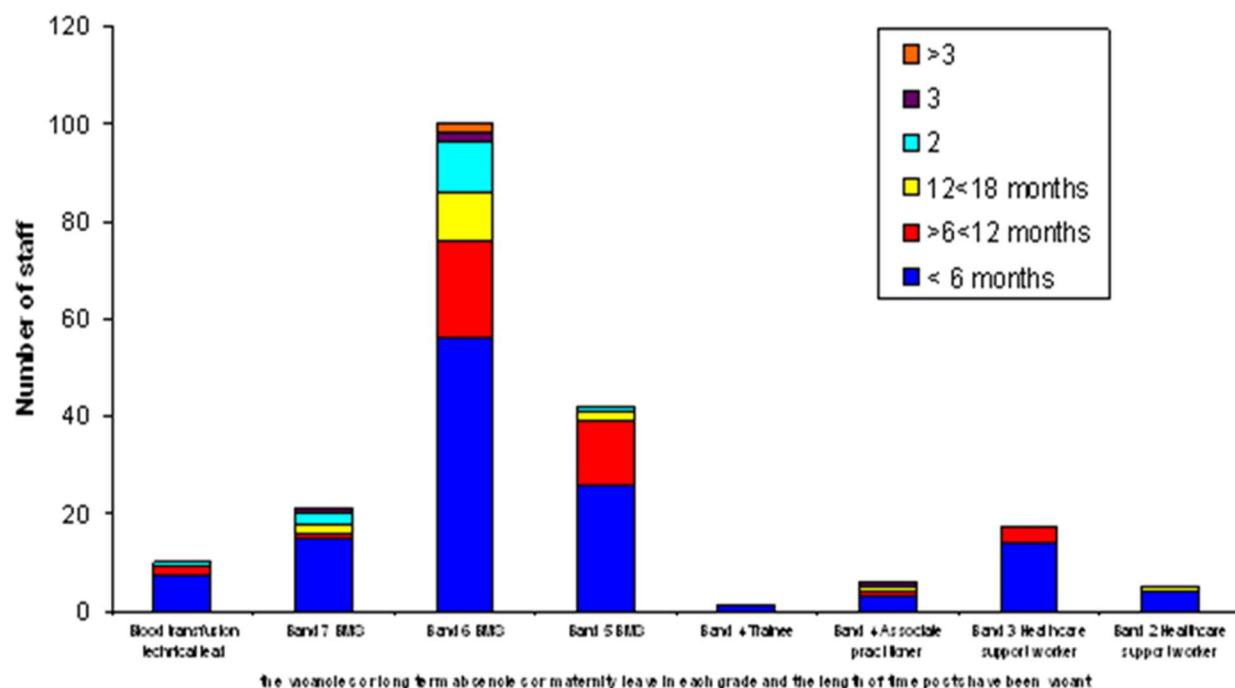


Figure 9

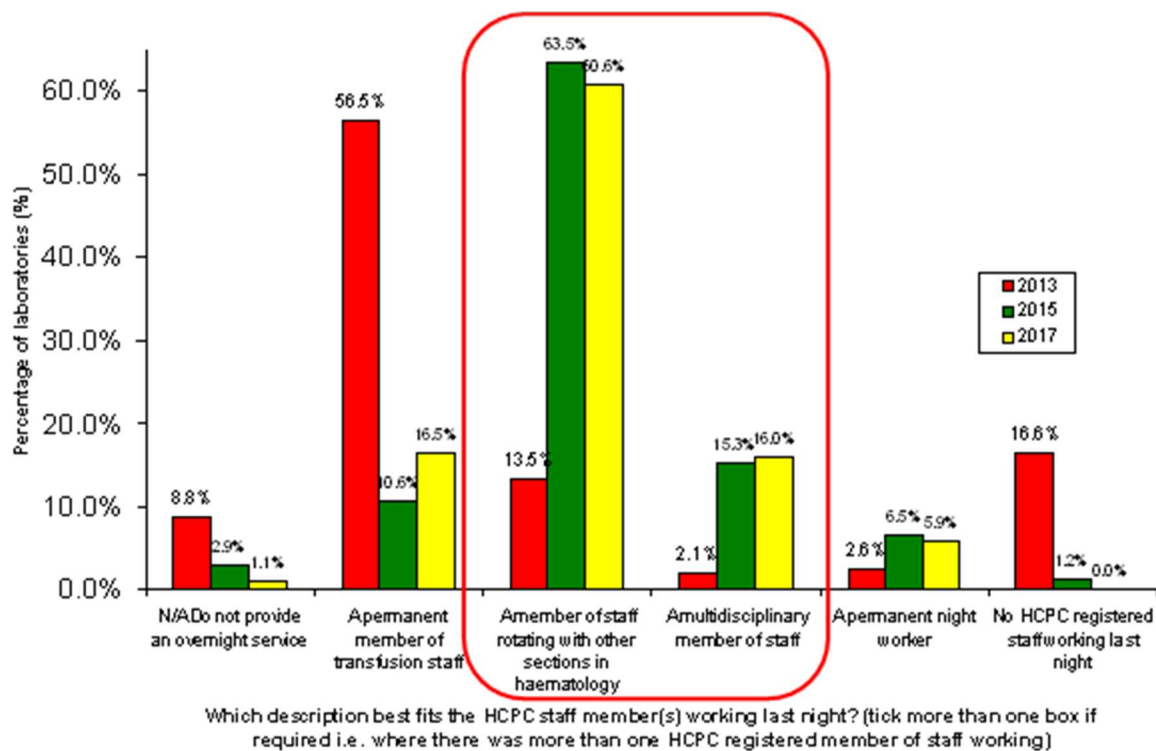


Figure 10

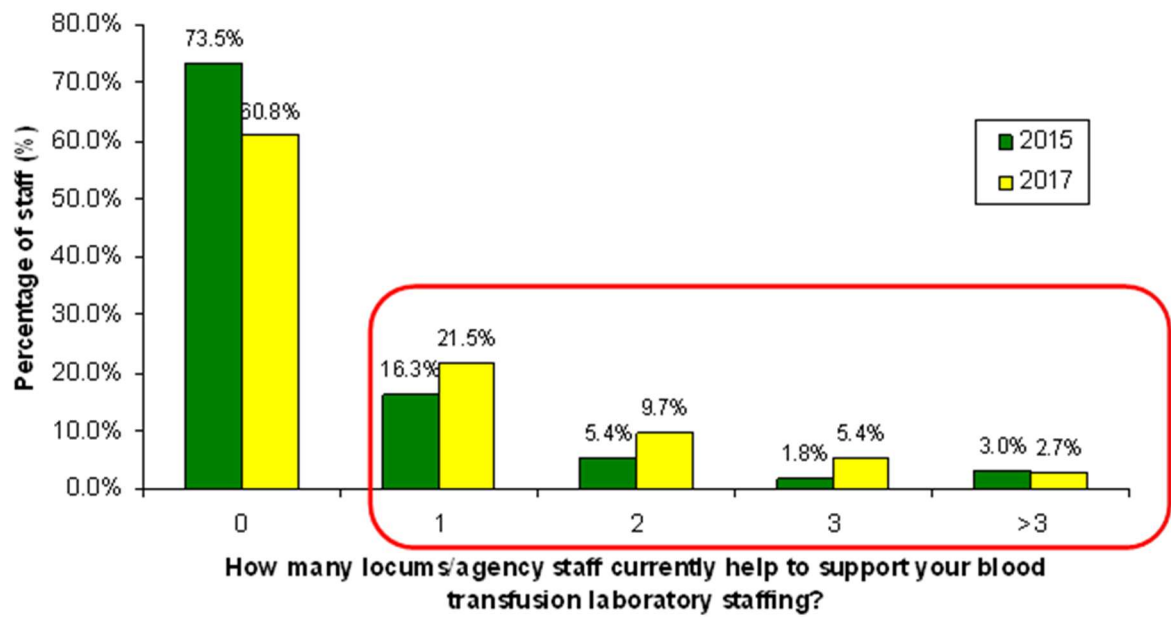


Figure 11

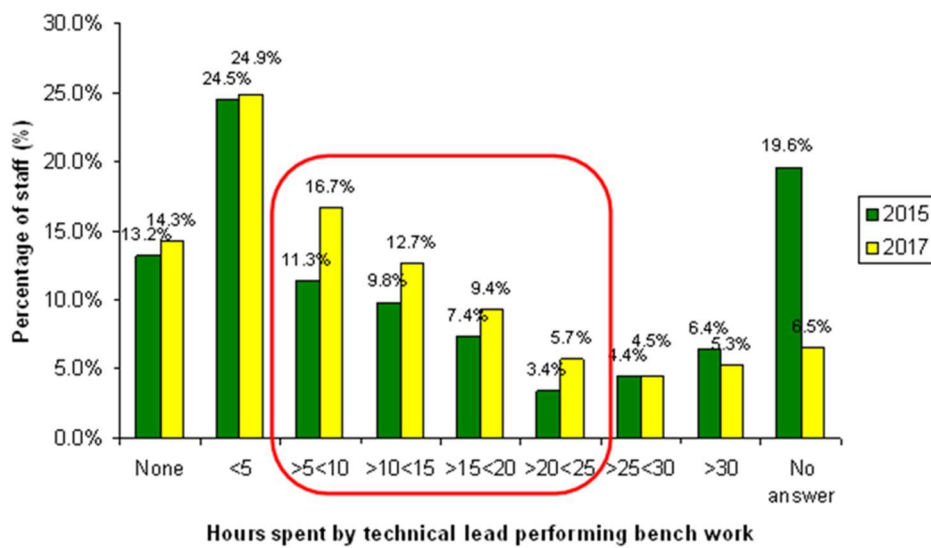


Figure 12

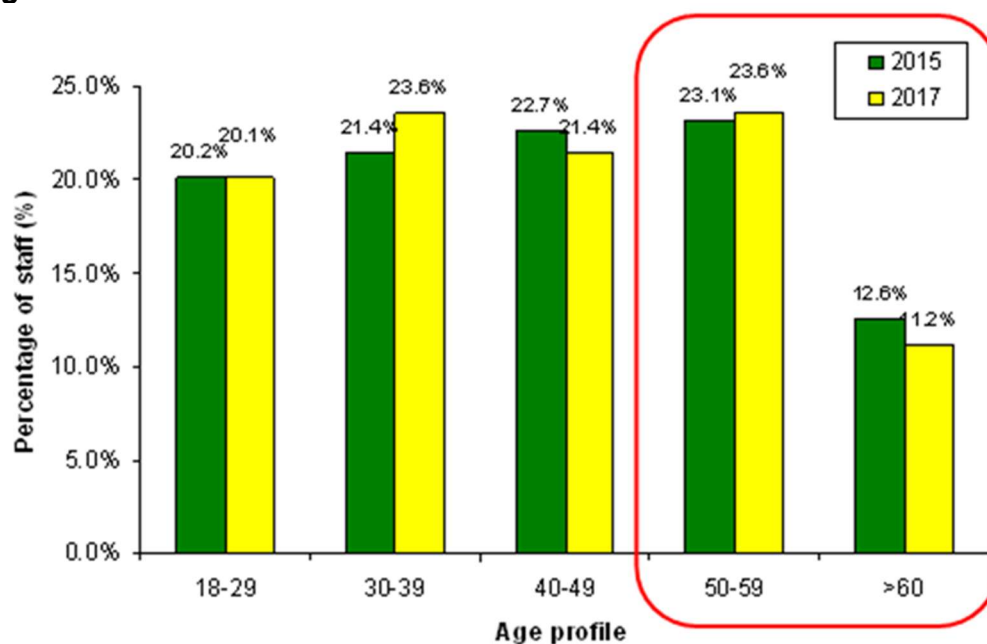


Figure 13

Q15. Within the service model selected does this transfusion laboratory have an agreed staffing capacity plan?	2017
Yes, in core hours	163
Yes, out of hours	153
No, in core hours	26
No, out of hours	18
No answer	
TOTAL	360

Figure 14

Q9. As the member of staff completing this survey please indicate what transfusion qualification(s) you possess? Please tick all that apply.	2011	2013	2015	2017
FIBMS by examination (Special Exam, 2-part Fellowship or Higher Specialist Diploma in Blood Transfusion)			65	63
MSc or FIBMS in another discipline in conjunction with an IBMS HSD in Transfusion Science			12	27
MSc in Transfusion and Transplantation accredited by the IBMS	48	55	11	15
IBMS accredited MSc with a transfusion specialism of at least 120 level 7 CAT points (60 taught, 60 practical / project)			25	31

Registration via either CPSM or IBMS log book in haematology and hospital based transfusion practice			67	78
Registration via CPSM or IBMS log book in blood transfusion			15	32
BBTS Specialist certificate in transfusion science practice	2	13	27	39
IBMS Specialist diploma in haematology and hospital transfusion practice	2	6	5	8
IBMS Specialist diploma in transfusion science		7		4
Other (please specify)			52	70

Figure 15

Qu 28. Does your laboratory have a training and development budget ?

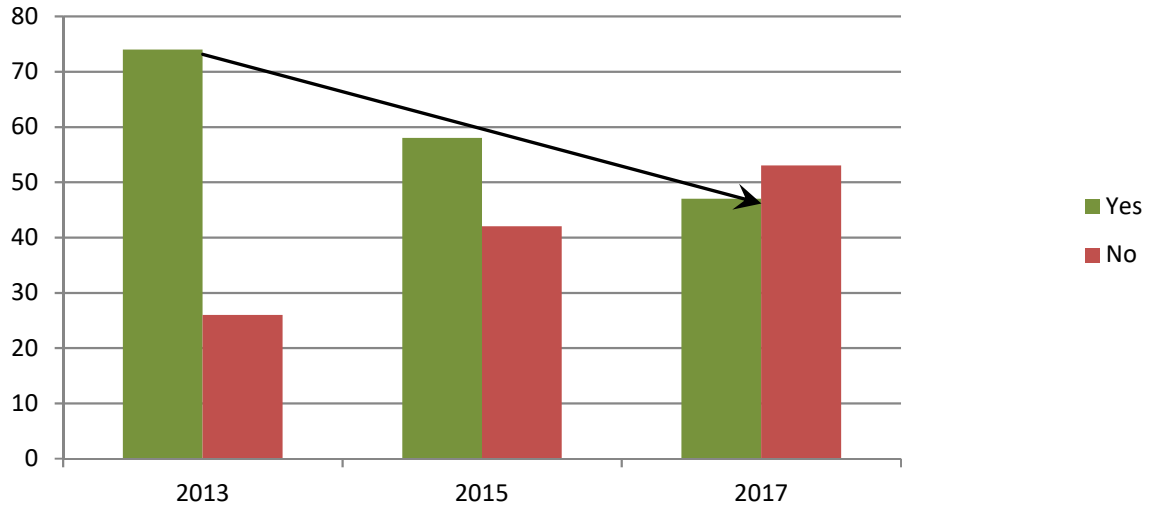


Figure 16

