Training Assessment and Competency Tool (TACT)
Benchmarking Data
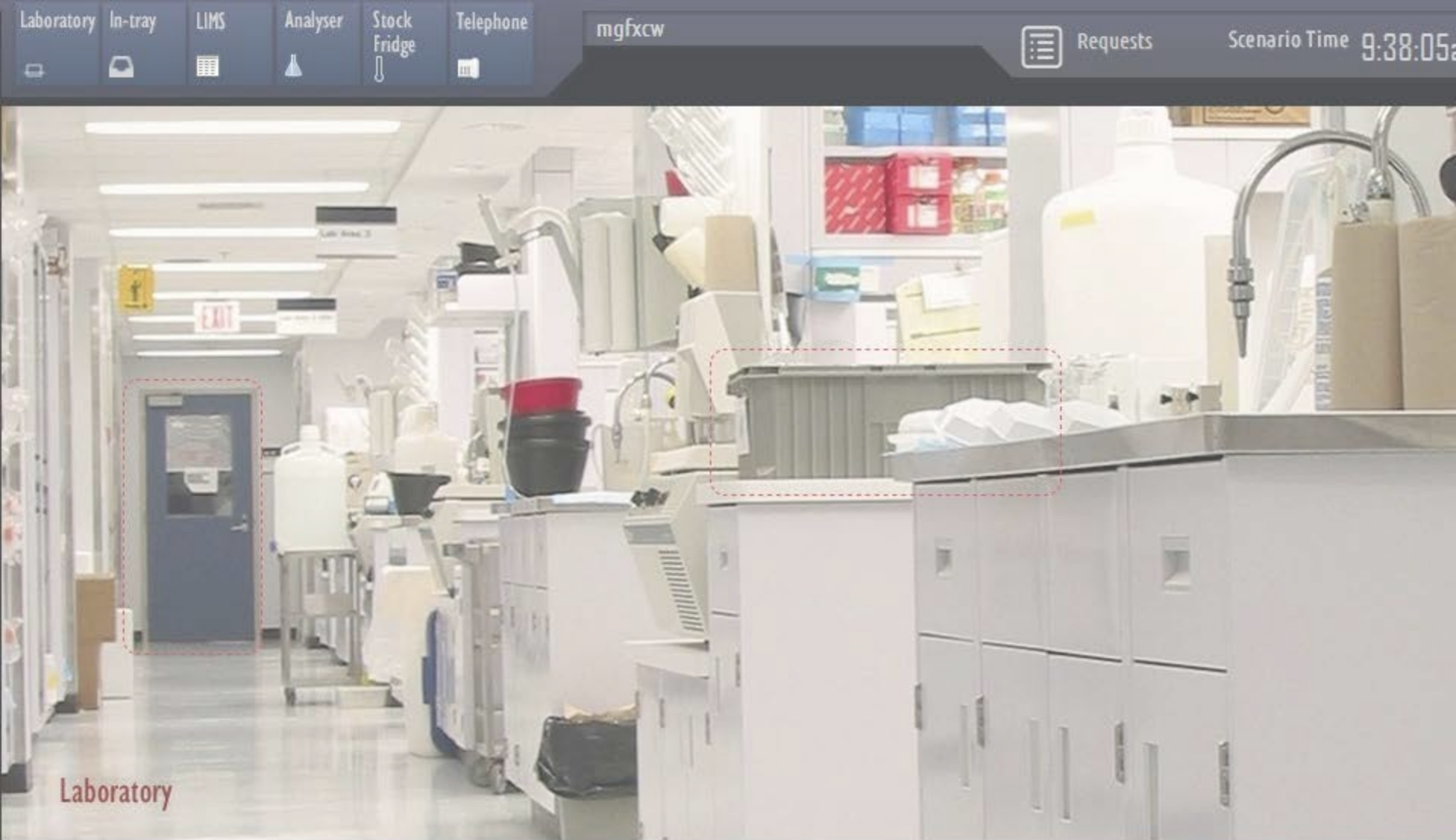### Claire Whitham / Jenny White

Enter

BTLP TACT

Certus Technology Associ
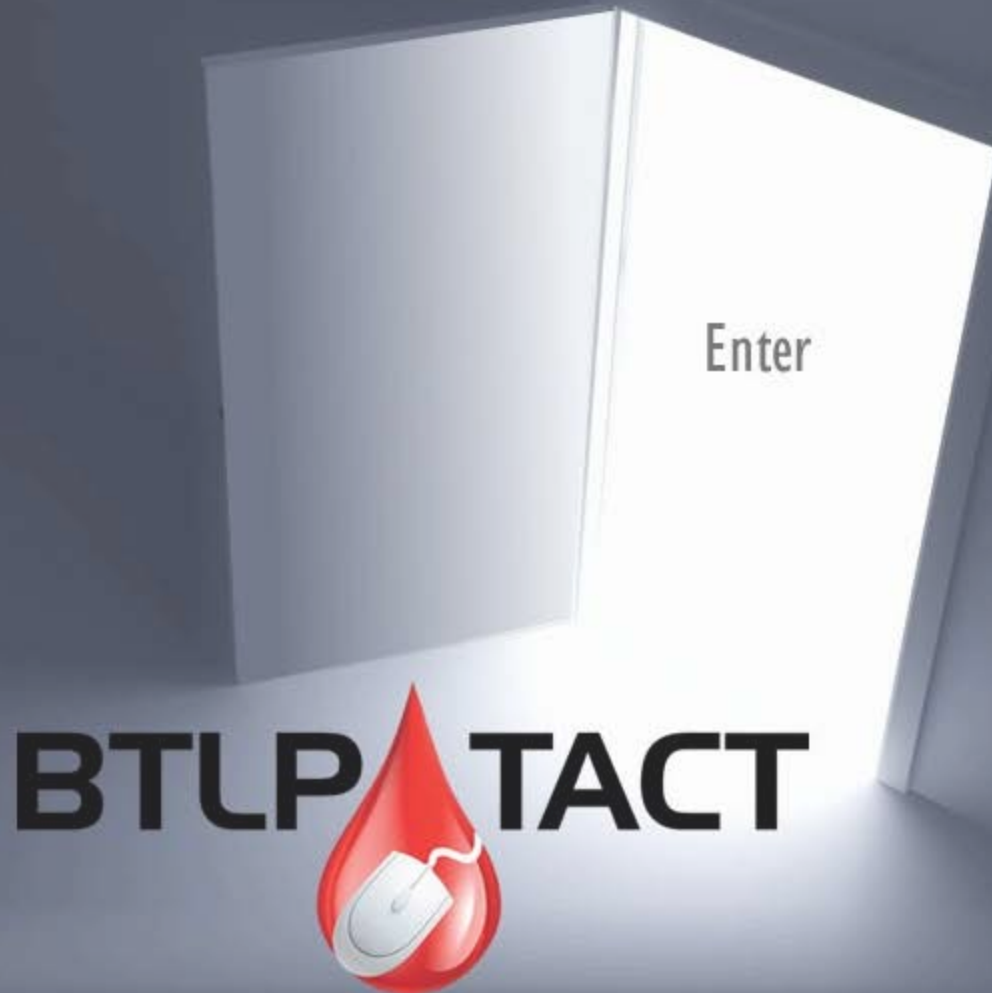
Introduction

- Developed by UK NEQAS with Certus Technology Associates
- Assesses knowledge based competency
- Complementary to local practical competency assessment

- Launched 2014
- Now reaching almost 30% of transfusion BMSs
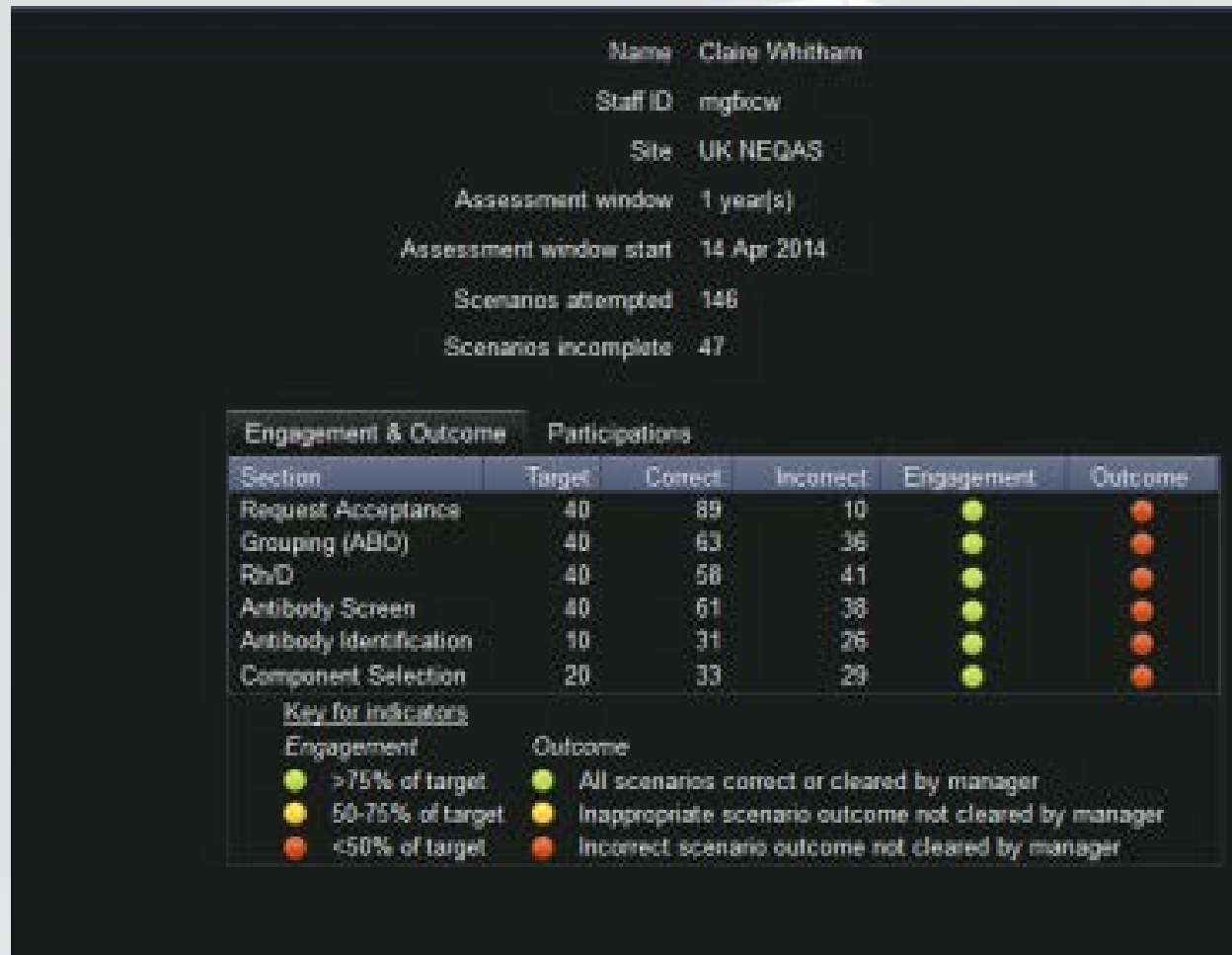
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The TACT virtual laboratory – open all hours!

On-line pre-transfusion testing scenario with controlled random generation of 'cases' - assessment based on BSH guidance

TACT data – Members' summary

	Name	Claire Whitham
	Staff ID	mgbxcw
	Site	UK NEQAS
	Assessment window	1 year(s)
	Assessment window start	14 Apr 2014
	Scenarios attempted	146
	Scenarios incomplete	47

Engagement & Outcome   **Participations**

Section	Target	Correct	Incorrect	Engagement	Outcome
Request Acceptance	40	89	10	🟢	🔴
Grouping (ABO)	40	63	36	🟢	🔴
RhD	40	58	41	🟢	🔴
Antibody Screen	40	61	38	🟢	🔴
Antibody Identification	10	31	26	🟢	🔴
Component Selection	20	33	29	🟢	🔴

Key for indicators

Engagement		Outcome	
🟢	>75% of target	🟢	All scenarios correct or cleared by manager
🟡	50-75% of target	🟡	Inappropriate scenario outcome not cleared by manager
🔴	<50% of target	🔴	Incorrect scenario outcome not cleared by manager

TACT data - Managers' overview

Benchmarking

- UK NEQAS cannot see data on named individuals or sites, but interested in using overall data to see…

  - Level and patterns of engagement with TACT and the overall error rate in participations

  - Comparison of TACT errors with EQA and SHOT data

  - Areas where training may be required at a national level

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Method

- Certus extracted data on all participations undertaken between 01/04/2015 and 31/03/2017

- This was used to determine
  - Number of participations started
  - Time of day for engagement
  - How many participations included an error
  - How many participations were reviewed by the manager

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TACT participation 2014-2017

Between 01/04/2015 and 30/09/2015, the ratio of participations to active members was 4:1; rising to 11:1 for the period 01/10/2016 to 31/03/2017.
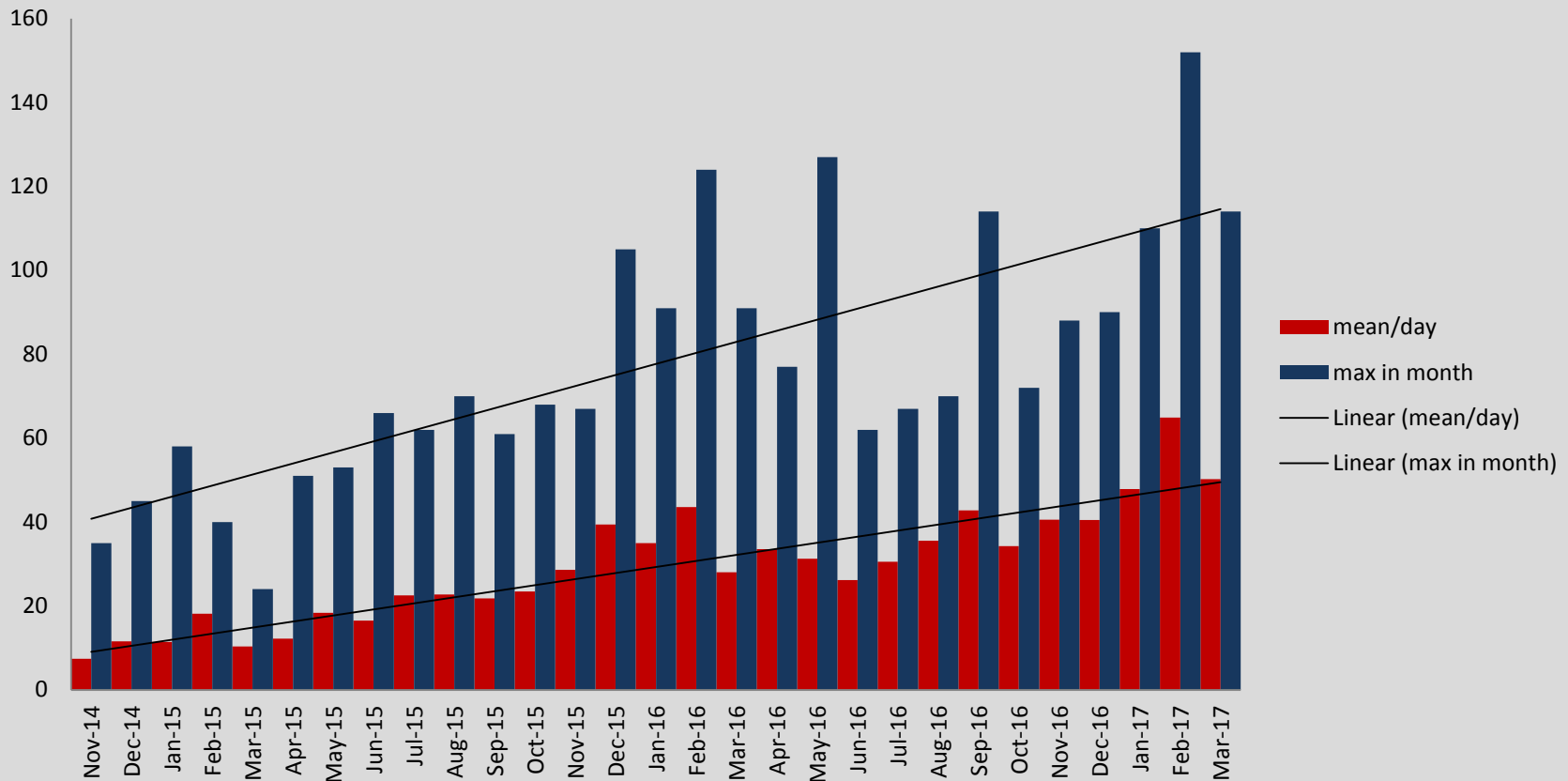
25952 participations completed
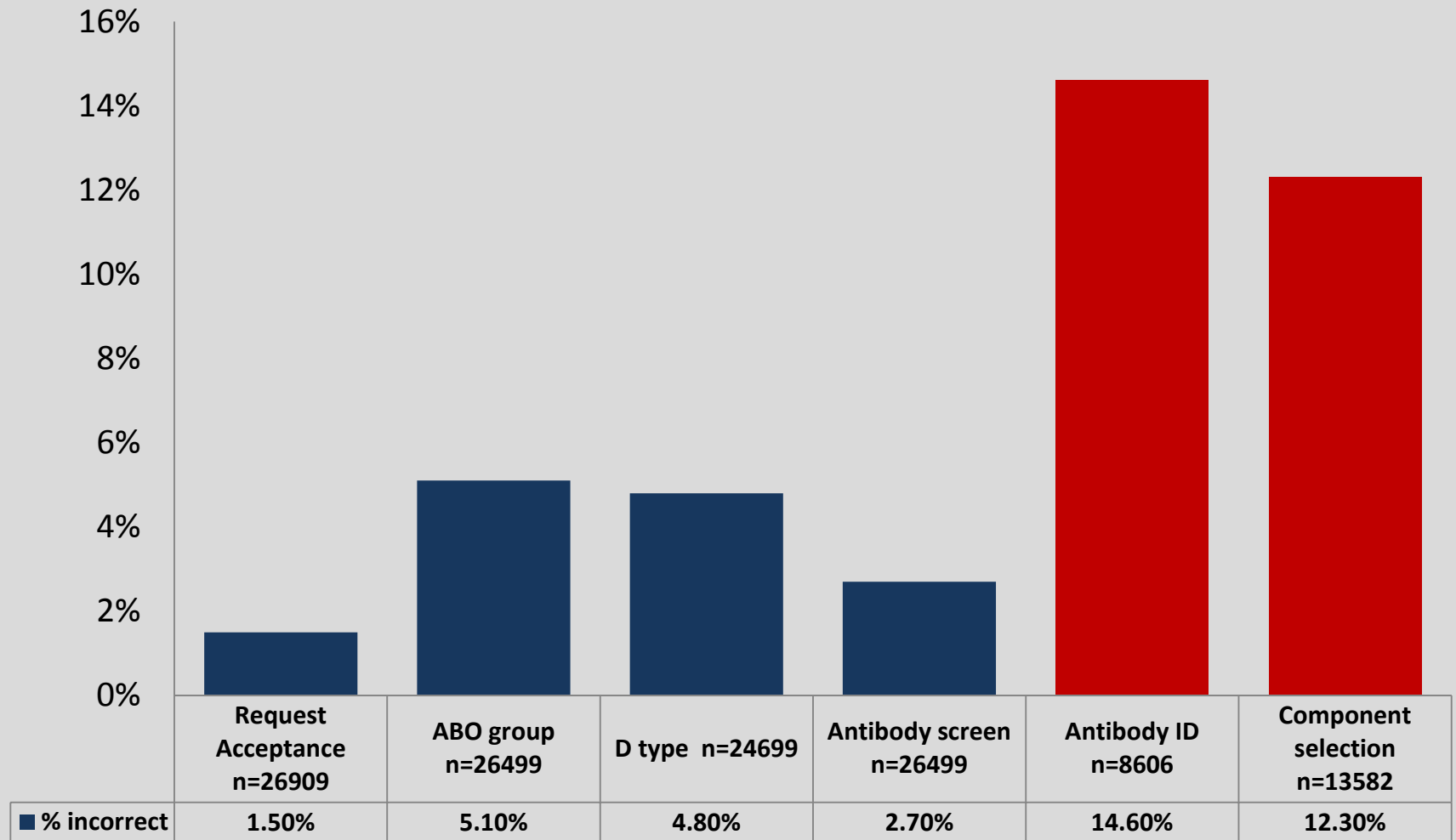
22120 (85.2%)

'core' hours (08:00 to 20:00)

3832 (14.8%)

'out-of-hours'.

Peak times for participations were 14:00 and 11:00

Error rates by test

| % incorrect	Request Acceptance n=26909	ABO group n=26499	D type n=24699	Antibody screen n=26499	Antibody ID n=8606	Component selection n=13582
	1.50%	5.10%	4.80%	2.70%	14.60%	12.30%

SHOT report 2016

IBCT Chapter Key Messages…. 'There has been a striking increase in laboratory errors over time resulting in specific requirements not met'

Figure 10.1b: Incorrect blood component transfused 2012 to 2016
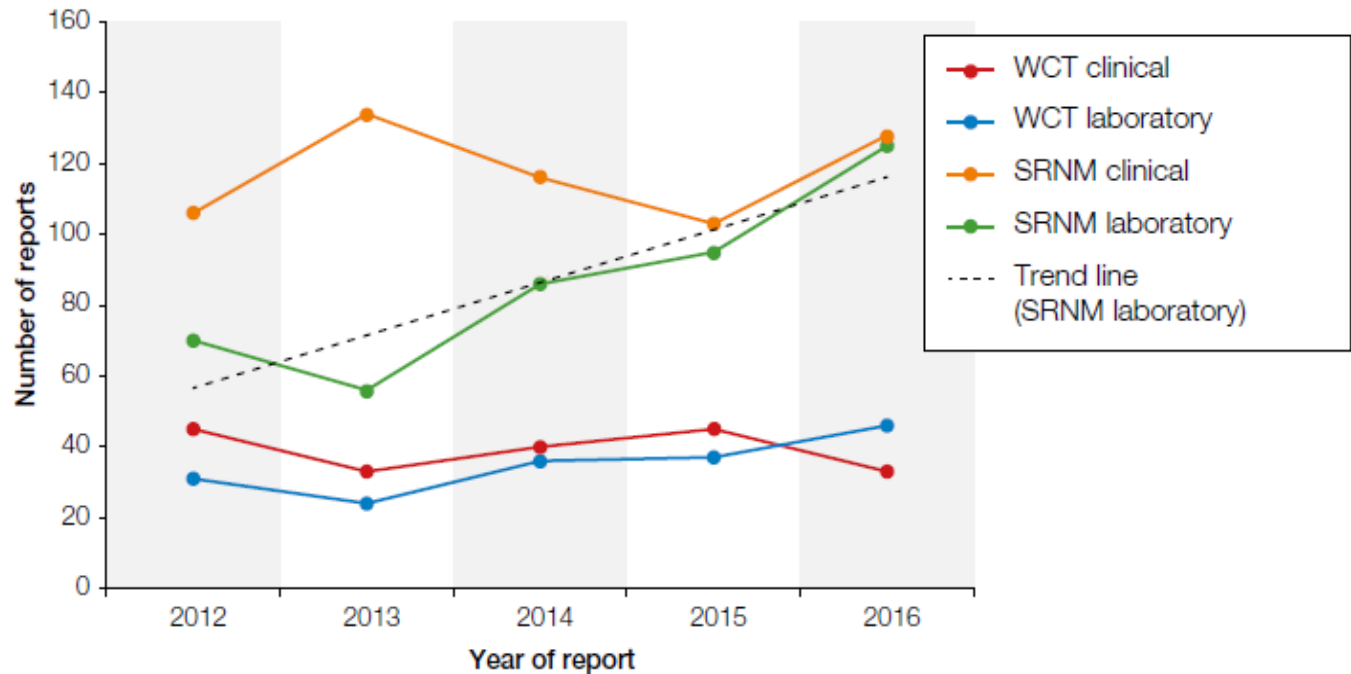
Antibody identification - EQA

- 39 antibody ID errors due to misinterpretation in the last 6 UK NEQAS (BTLP) exercises that included antibody mixtures (error rate 1.4%)

- EQA learning points consistently include processes for positive identification and exclusion of clinically significant antibodies

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Potential reasons for error

- Unfamiliarity with the system?

- Local variation in policy?

Managers' review

- 1108/19877 (5.6%) participations were reviewed by a manager, and outcomes may have been changed

- Opportunity for understanding knowledge gaps and individual training needs

Potential reasons for error

- Lack of background knowledge?

- Complexity of 'case' presented?

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Complex 'flag'

- Introduced 2017

- ABO/D
  - MF reaction(s)
  - Weak reaction(s) vs. anti-A, anti-B or anti-D
  - Positive reagent control

- Selection of blood
  - Red cells with 'special requirements'
  - Only O D negative blood is suitable

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Outcomes of complex participations ABO/D

Chart legend:
- Still active
- Abandoned
- Incorrect
- Correct

X-axis label: ABO and or D unintrepretable (n=284)
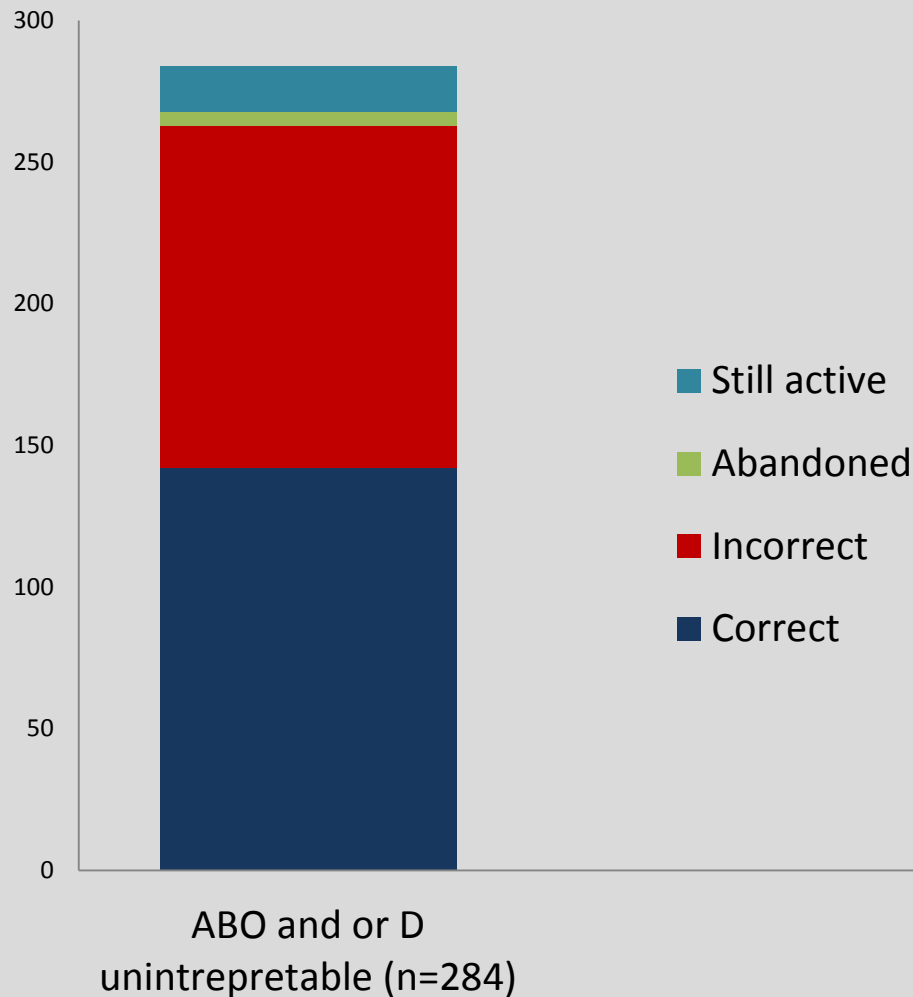
258/3341 (7.7%) non-complex participations had an ABO/D error compared to 121/268 (45.1%) for complex ABO/D

Outcome of 'complex' participations selection of blood
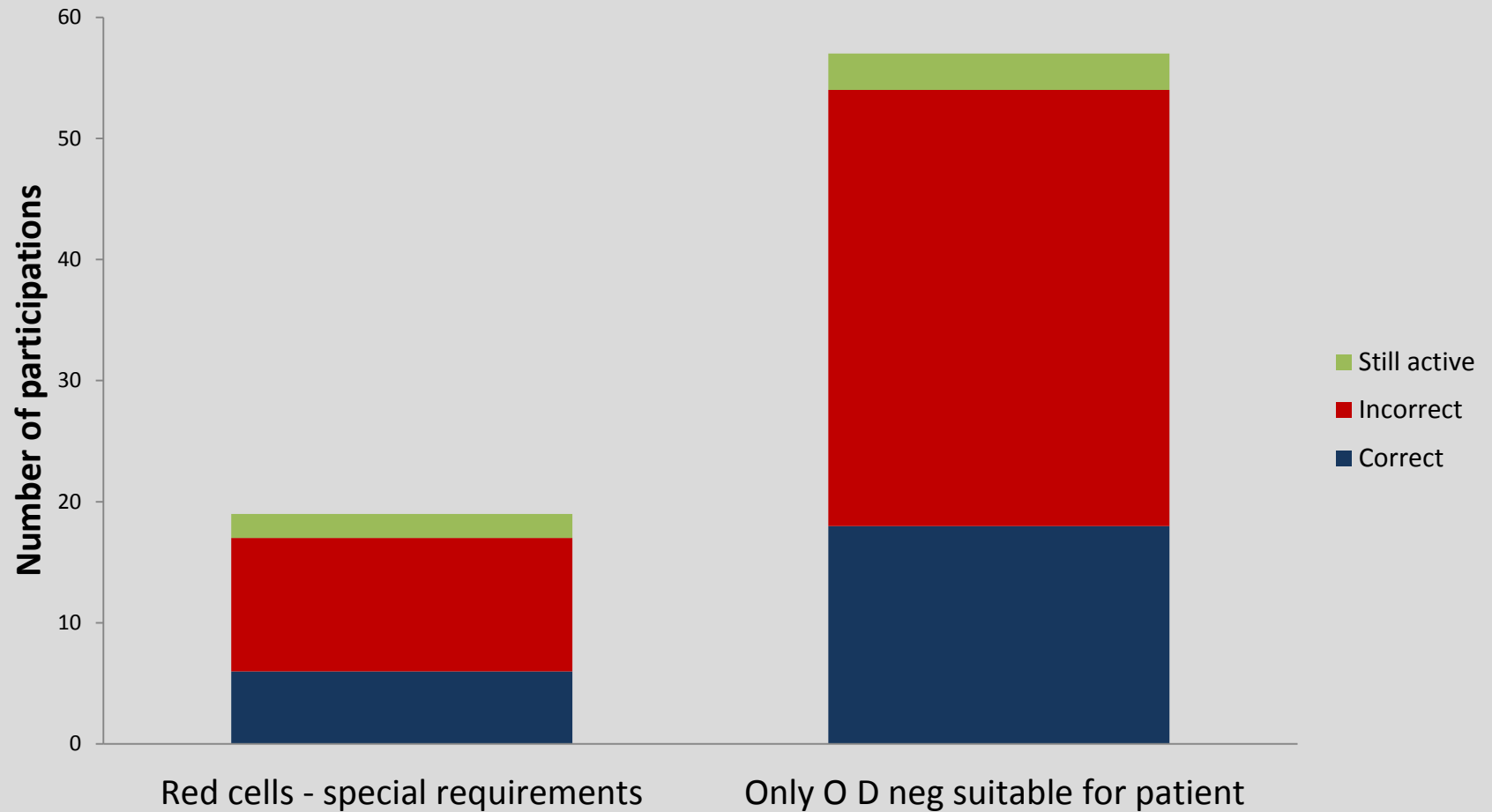
Conclusions

- TACT engagement has increased over the two years that the system has been live

- Highest error rate in antibody identification, component selection, and complex ABO/D typing

- A majority of participations are undertaken during core hours, but members are using the system 24/7

- Managers are reviewing individual participations with staff

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Coming soon…

- 'Wipe the dashboard' feature
- File a request when it is completed
- Redesign of the request form
- Re-engineering of the system
- Second sample
- Crossmatching and electronic issue

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Acknowledgements

- Certus Technology Associates

- TACT advisory group

- All the members!

- UK NEQAS (BTLP) team, especially Claire!

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