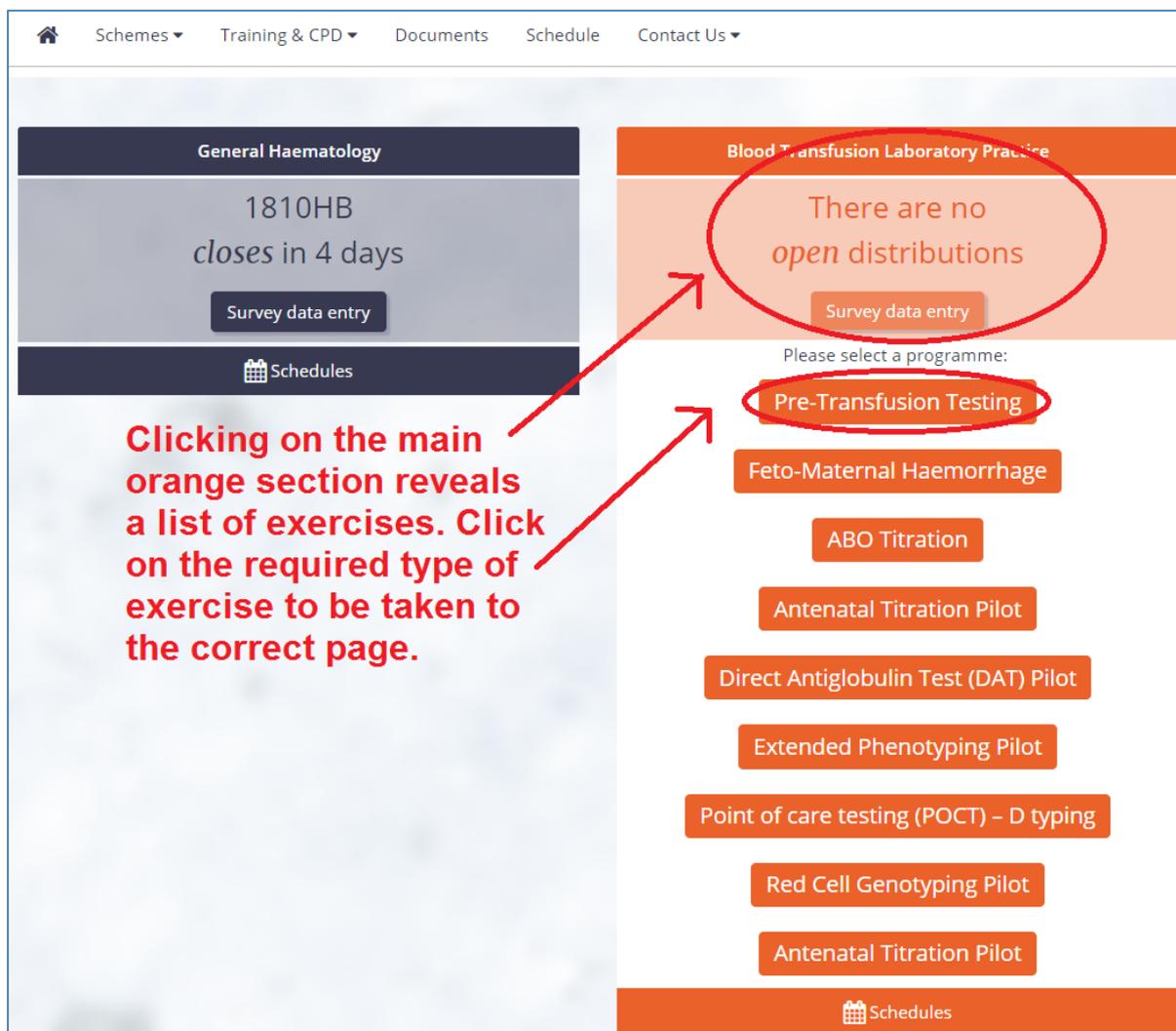


Pre-Transfusion Testing (PTT) - Web return of results

Logging on

Go to <http://www.ukneqasbtlp.org> and click on the main orange section of the page as shown in figure 1. A list of exercise types will be shown, click on the appropriate exercise to be taken to the correct login screen.

Figure 1 – Accessing the data entry login screen



Enter the PRN (Lab Code), Identity and Password and click on the 'Log in' button as shown in figure 2. It is also possible to login with an email address and password if an account has been set up.

Figure 2 – Logging in

The screenshot shows the UK NEQAS login form. At the top, it says 'UK NEQAS Haematology and Transfusion'. Below this are three input fields: 'Lab Code', 'Identity', and 'Password'. Underneath the fields is a note: 'Please be advised that the password field is now case sensitive. If you are having trouble logging in, please enter your Lab Code and Identity, then click Forgotten Password'. At the bottom of the form are two buttons: 'Log in' and 'Forgotten Password'.

Please note that the Reset your password link will send an email to the registered contact. If that person is unavailable to reset the password, contact UK NEQAS for assistance.

Pre-Transfusion Testing (PTT) - Web return of results

Navigating the web page

Select 'Blood Transfusion Laboratory Practice' from the drop-down list of Schemes as shown in figure 3, and then click on the distribution required (e.g. 19Res) from the list displayed. If there is a questionnaire associated with the exercise, this will be indicated in with a tick in the 'questionnaire' column as below.

Figure 3 – Accessing the Exercise

Dist. No	Date	Completed	Dist. Closed	Report	Questionnaire
18E4	23/04/2018				✓
22R22	17/04/2018				
18E3	26/03/2018	✓	✓	✓	
18R2	19/02/2018		✓	✓	

Questionnaires can be accessed by clicking on the orange box (see figure 4, blue circle). The exercise instructions will indicate which groups of participants are requested to complete a questionnaire if it is not intended for all, e.g. laboratories in the UK only. The other buttons at the top of the page can be used to access the blank data entry form and this document (red circle), to send us an email using Outlook (green circle), or to access the exercise instructions on line (purple circle). Paper copies of exercise instructions will be phased out in 2018.

Figure 4 – Accessing the questionnaire and other links

Exercise Questionnaire Back to List Summary Save Submit Data entry form and instructions Email scheme Exercise Instructions

Pre-Transfusion Testing

Distribution Number: 22R22 Participant: 26000 Issued: 17/04/2018 Closing: 30/04/2018 Received Date (dd/mm/yyyy): 13/02/2018 Analysed Date (dd/mm/yyyy): 16/02/2018

Sample Quality Technologies Patient 1 Patient 2 Patient 3 Phenotyping 18/04/2018

The date received and date processed should be completed using the following format: dd/mm/yyyy.

Testing results are split by Patient and are accessed by clicking on the appropriate tab apart from phenotyping which is the last tab.

Mandatory results

The data which is used for scoring is mandatory. This only applies to laboratories which are registered for each test.

- Interpretation of ABO group for each patient (R exercises only)
- Interpretation of D type for each patient (R exercises only)
- Interpretation of antibody screen for each patient
- Method of crossmatching for each donor vs each patient (R exercises only)
- Interpretation of crossmatching for each donor vs each patient (R exercises only)
- Phenotyping results for each antigen for each patient (R exercises only)
- Completion of all tick boxes in the UI portal **if** UI is selected at antibody identification (see page 5)

The antibody identification section is NOT mandatory on the web site, but **is assessed**. Please ensure that all information is inputted.

An option of 'Unable to test' is available to enable submission of results where samples cannot be tested due to unsatisfactory sample quality.

Pre-Transfusion Testing (PTT) - Web return of results

Data Entry

Sample Quality

The default response for sample quality is 'Satisfactory'. If the samples are not satisfactory, select 'Unsatisfactory' from the drop down list, and then the reason. If the reason is not listed, select Other and then type the reason in the last box as shown in figure 5.

Please note that if results are submitted, they will be scored even if 'Unsatisfactory' has been selected. Please make decisions on whether to submit results as per the local testing protocol.

Figure 5 – Sample Quality

Sample Quality	Technologies	Patient 1	Patient 2	Patient 3	Phenotyping	09/04/2018
Sample Quality						
Sample	Quality	Reason			Other Reason	
19Test1P1 - Plasma/Serum	Satisfactory	-- Select --				
19Test1P1 - Whole Blood / Red Cells	Satisfactory	-- Select --				
19Test1P2 - Plasma/Serum	Satisfactory	-- Select --				
19Test1P2 - Whole Blood / Red Cells	Satisfactory	-- Select --				
19Test1P3 - Plasma/Serum	Satisfactory	-- Select --				
19Test1P3 - Whole Blood / Red Cells	Satisfactory	-- Select --				
19Test1DW	Satisfactory	-- Select --				
19Test1DY	Unsatisfactory	Insufficient				
19Test1DZ	Unsatisfactory	Other			Type other reason here	

Technologies (previously Techniques)

The drop down fields in the Technologies tab are yellow when nothing has been selected, and green once an option has been chosen, see figure 6. If the same technology and automation method has been used for all 3 patients, it is possible to carry over the responses for Group and Screen only. Click Save to activate this function. If multiple technologies are used, indicate this using the right hand side of the page.

Figure 6 - Technologies

Sample Quality	Technologies	Patient 1	Patient 2	Patient 3	Phenotyping
<p>The ABO/D and IAT antibody screening responses selected for Patient 1 will be used to automatically populate Patients 2 and 3; however, it is possible to edit these responses before submission. Click Save to activate this function. Responses for IAT antibody identification and IAT crossmatching should be entered for each patient.</p>					
Technologies - Patient 1					
Test	Primary Testing		Additional Testing (if required to make an interpretation)		
	Technology	Automated / Manual	Technology	Automated / Manual	
ABO/D	DiaMed	Manual	-- Select --		-- Select --
IAT Antibody Screen	Biovue	Semi-Automated	-- Select --		-- Select --
IAT Antibody ID	-- Select --	-- Select --	-- Select --		-- Select --
IAT Crossmatch	-- Select --	-- Select --	-- Select --		-- Select --
Technologies - Patient 2					
Test	Primary Testing		Additional Testing (if required to make an interpretation)		
	Technology	Automated / Manual	Technology	Automated / Manual	
ABO/D	-- Select --	-- Select --	-- Select --		-- Select --
IAT Antibody Screen	-- Select --	-- Select --	-- Select --		-- Select --
IAT Antibody ID	-- Select --	-- Select --	-- Select --		-- Select --
IAT Crossmatch	-- Select --	-- Select --	-- Select --		-- Select --
Technologies - Patient 3					
Test	Primary Testing		Additional Testing (if required to make an interpretation)		
	Technology	Automated / Manual	Technology	Automated / Manual	
ABO/D	-- Select --	-- Select --	-- Select --		-- Select --
IAT Antibody Screen	-- Select --	-- Select --	-- Select --		-- Select --
IAT Antibody ID	-- Select --	-- Select --	-- Select --		-- Select --
IAT Crossmatch	-- Select --	-- Select --	-- Select --		-- Select --

Pre-Transfusion Testing (PTT) - Web return of results

Instrument details

A section has been added at the bottom of the Technologies tab allowing details of instrument/user used can be added. Any details entered will be shown at the bottom of the submission summary, this information is entirely optional and for laboratory use only; this information will not be assessed or used by UK NEQAS.

Optional - Instrument details

For testing laboratory use only; not mandatory. This information will appear on the submission summary, but will not be analysed or reported by UK NEQAS.

ABO/D typing

ABO and D reaction grades and interpretations can be selected using drop-down, as shown in figure 7. 'UI' should be selected when a result would not be issued on a clinical sample. The reaction grade options now have numbered grades instead of 'weak' or 'strong'.

Figure 7 – ABO and D results

Patient 2 - ABO/D Typing						
anti-A	anti-B	anti-D1	Reaction grade vs. anti-D2	Ctrl	A Cells	B Cells
Not Stated	Not Stated	Not Stated	Not Stated	Not Stated	Not Stated	Not Stated
Not Stated	ABO Interpretation	B	D Interpretation	Neg		
0		Not Stated		Not Stated		
weak		O		Pos		
1		A		Neg		
2		B		Dvariant		
3		AB		UI		
4		UI		Unable to Test		
mixed field		Unable to Test				

Direct Antiglobulin Test (DAT)

The DAT in this context is for noting whether a DAT would be performed on a clinical sample based on results obtained. See figure 8 below. Results for the DAT pilot scheme are entered on a different system.

Figure 8 - DAT

Patient 2 - Direct Antiglobulin Test (DAT)

DAT with a polyspecific AHG reagent

Not Stated
 Positive
 Negative

If you participate in the UK NEQAS DAT Pilot scheme, **do not enter results for DAT Pilot samples in this section. Separate data entry is detailed in the instructions.**

Antibody screening

It is possible to enter results for up to three tests for antibody screening, IAT, enzyme, and another. If Other is used, add details in the Technologies tab. When entering a reaction grade for IAT testing, the interpretation will be autocompleted, see figure 9. This can then be modified if required. The 'Enzyme' and 'Other' drop down boxes will not automatically affect the interpretation. The reaction grade options now have numbered grades instead of 'weak' or 'strong'.

Figure 9 – Antibody screening

Patient 2 - Antibody Screening		
Reaction Grades	Antibody Screening Interpretation	Notes
IAT: 1 Enzyme: -- Select IAT -- not performed Other: 0 weak Select the strong: 2 3 4	<input type="radio"/> Not stated <input type="radio"/> No specific antibody detected <input checked="" type="radio"/> Antibody present <input type="radio"/> Unable to test ¹	¹ Unable to test is only to be used where the sample is unsuitable for testing and a repeat sample cannot be obtained before the closing date, or where reagents are not available

Pre-Transfusion Testing (PTT) - Web return of results

Antibody identification

If the antibody screen is positive, laboratories registered for antibody identification should report their findings in this section. The section on the left is for antibodies which have been positively identified. Once ticked, these appear in the middle of the screen as shown in figure 10. A maximum of 2 antibodies will be in a sample, so if 2 antibodies have been positively identified it is not necessary to exclude others.

If it is not possible to complete the antibody investigation with a definitive result i.e. unable to positively identify, and/or unable to exclude clinically significant antibodies unless 2 have been positively identified already, the UI box should be ticked. This will open up a new section of the page where comments and scans of panel sheets can be uploaded. Details of the UI section can be found at the link below. <http://www.ukneqash.org/downloads/ptt%20ui%20instructions.pdf> There is a link to this document in the UI section of the web page, and a link in the UI portal.

Since there is no requirement to exclude anti-E in the presence of anti-c (or anti-C in the presence of anti-e) in routine pre-transfusion testing, options are provided for anti-c±E and anti-e±C, and these are counted as a single specificity for the purposes of EQA and it is not necessary to enter the second antibody in the 'cannot be excluded' section which would result in a UI submission being required.

UK NEQAS BTLP uses BSH guidelines on compatibility testing for scoring antibody identification.

Figure 10 – Antibody identification

Patient 2 - Antibody Identification			
Antibody specificities positively identified (currently a maximum of 2 in any sample)	Positively identified	Specificities that cannot be excluded	Cannot exclude
<input checked="" type="checkbox"/> D <input type="checkbox"/> C <input type="checkbox"/> c+/-E <input checked="" type="checkbox"/> E <input type="checkbox"/> e+/-C <input type="checkbox"/> C ^w <input type="checkbox"/> M <input type="checkbox"/> N <input type="checkbox"/> S <input type="checkbox"/> s <input type="checkbox"/> P ₁ <input type="checkbox"/> Lu ^a <input type="checkbox"/> K <input type="checkbox"/> k <input type="checkbox"/> Kp ^a <input type="checkbox"/> Le ^a <input type="checkbox"/> Le ^b <input type="checkbox"/> Fy ^a <input type="checkbox"/> Fy ^b <input type="checkbox"/> Jk ^a <input type="checkbox"/> Jk ^b <input type="checkbox"/> Wf ^a <input type="checkbox"/> Enz non-specific <input checked="" type="checkbox"/> UI 1	<div style="border: 2px solid red; border-radius: 50%; padding: 5px; display: inline-block;"> D E </div>	<input type="checkbox"/> D <input type="checkbox"/> C <input type="checkbox"/> c+/-E <input type="checkbox"/> E <input type="checkbox"/> e+/-C <input type="checkbox"/> M <input type="checkbox"/> S <input type="checkbox"/> s <input type="checkbox"/> K <input type="checkbox"/> Fy ^a <input type="checkbox"/> Fy ^b <input type="checkbox"/> Jk ^a <input type="checkbox"/> Jk ^b	
<small>¹ UI = Unable to interpret</small> <small>Please note that if you have positively identified 2 specificities there is no need to make a UI submission as UK NEQAS samples currently do not contain more than two. Anti-c+/-E is counted as a single specificity for the purposes of EQA, as is anti-e+/-C.</small>		<small>You may indicate commonly encountered antibodies of potential clinical significance that cannot be positively identified but might be present (cannot be excluded) based on your testing and the phenotype provided.</small>	

The three questions in the additional information section shown in figure 11 need only be completed for samples that have undergone antibody identification. N.B. the number of reagent cells used is the total number on the screening and identification panel(s) used by IAT (e.g. one x 3-cell screen, a first line panel of 11 cells panel and a second line panel of 10 cells = 3+11+10=24 cells, regardless of whether enzyme treated cells were used at any stage).

Figure 11 – Antibody identification additional questions

Additional Information		
Number of reagent red cells used - by IAT (including screening cells)	Enzyme panel used?	Would refer for confirmation?
<input type="radio"/> Not Stated <input type="radio"/> <15 <input checked="" type="radio"/> 15-25 <input type="radio"/> >25	<input type="radio"/> Not Stated <input checked="" type="radio"/> Yes <input type="radio"/> No	<input type="radio"/> Not Stated <input type="radio"/> Yes <input checked="" type="radio"/> No

Pre-Transfusion Testing (PTT) - Web return of results

Crossmatching

There are three crossmatching methods available from the drop down list. Theoretical Compatibility was previously called “Electronic Issue” but has been renamed as UK NEQAS exercises do not assess LIMS and therefore do not assess Electronic Issue. Selecting Theoretical Compatibility will automatically complete the Interpretation as Compatible and will auto-complete ‘Would you transfuse?’ as Yes, see donor W in figure 12.

Theoretical Deselection should be used when a unit would not be considered for issue due to the blood group (e.g. the patient is group O and the donor is group A). Selecting Theoretical Deselection will auto-complete the Interpretation as Incompatible, and ‘Would you transfuse?’ as No, see Donor Y in figure 12.

The last option is Serological Crossmatch, selecting this option will not auto-complete the interpretation until a reaction grade is entered for IAT testing. Selecting ‘0’ as a reaction grade for IAT will automatically change the Interpretation to compatible and ‘Would you transfuse?’ to Yes. Selecting a positive reaction grade for IAT will auto-complete the Interpretation as Incompatible and the ‘Would you transfuse?’ as No. See Donor Z in figure 12.

The question “If compatible, would you transfuse?” can be modified at any time and allows laboratories to record that the unit would not be issued under local policy, e.g. as there is only one sample, if a samples would be referred for antibody confirmation prior to issue of blood etc...

Figure 12 – Crossmatching result options

Patient 2 - Crossmatching					
Donor W		Donor Y		Donor Z	
Method: Theoretical Compatibility		Method: Theoretical Deselection		Method: Serological Crossmatch	
Serological crossmatch reactions	Interpretation	Serological crossmatch reactions	Interpretation	Serological crossmatch reactions	Interpretation
DRT -- Select -- IAT -- Select -- Other -- Select --	<input type="radio"/> Not Stated <input checked="" type="radio"/> Compatible ¹ <input type="radio"/> Incompatible ² <input type="radio"/> Unable to test ³	DRT -- Select -- IAT -- Select -- Other -- Select --	<input type="radio"/> Not Stated <input type="radio"/> Compatible ¹ <input checked="" type="radio"/> Incompatible ² <input type="radio"/> Unable to test ³	DRT -- Select -- IAT 2 Other -- Select -- not performed 0 1 2 3 4	<input type="radio"/> Not Stated <input type="radio"/> Compatible ¹ <input checked="" type="radio"/> Incompatible ² <input type="radio"/> Unable to test ³
If compatible, would you transfuse? ⁴	<input type="radio"/> Not Stated <input checked="" type="radio"/> Yes <input type="radio"/> No	If compatible, would you transfuse? ⁴	<input type="radio"/> Not Stated <input type="radio"/> Yes <input checked="" type="radio"/> No	If co	<input type="radio"/> Not Stated <input type="radio"/> Yes <input checked="" type="radio"/> No
Notes					
¹ Compatible includes where compatibility established by serological or theoretical means. ² Incompatible includes where units are de-selected due to theoretical incompatibility, see exercise instructions for details. ³ Unable to test is only to be used where a sample is unsuitable for testing and a repeat cannot be obtained before the closing date. ⁴ Allows you to tell us that a unit, although found serologically compatible, would not be issued according to local policy – this is not taken into account for scoring.					

Phenotyping

For each donor and each phenotype there are list of possible options. It is now possible to report that testing was not performed as no reagent was available, see Figure 13.

An Rh Interpretation field is available, this is not mandatory and is not scored.

Figure 13 - Phenotyping

Phenotyping						Rh Interpretation (where applicable)	
Patient	Antigens					Patient	Interpretation (optional)
	C	c	E	e	K		
Patient 1	<input type="radio"/> Not Stated <input type="radio"/> Positive <input checked="" type="radio"/> Negative <input type="radio"/> Unable to test	<input type="radio"/> Not Stated <input type="radio"/> Positive <input checked="" type="radio"/> Negative <input type="radio"/> Unable to test	<input type="radio"/> Not Stated <input type="radio"/> Positive <input checked="" type="radio"/> Negative <input type="radio"/> Unable to test	<input type="radio"/> Not Stated <input type="radio"/> Positive <input checked="" type="radio"/> Negative <input type="radio"/> Unable to test	<input type="radio"/> Not Stated <input type="radio"/> Positive <input checked="" type="radio"/> Negative <input type="radio"/> Unable to test	Patient 1	rr
Patient 2	<input type="radio"/> Not Stated <input checked="" type="radio"/> Positive <input type="radio"/> Negative <input type="radio"/> Unable to test	<input type="radio"/> Not Stated <input checked="" type="radio"/> Positive <input type="radio"/> Negative <input type="radio"/> Unable to test	<input type="radio"/> Not Stated <input type="radio"/> Positive <input checked="" type="radio"/> Negative <input type="radio"/> Unable to test	<input type="radio"/> Not Stated <input type="radio"/> Positive <input checked="" type="radio"/> Negative <input type="radio"/> Unable to test	<input type="radio"/> Not Stated <input type="radio"/> Positive <input checked="" type="radio"/> Negative <input type="radio"/> Unable to test <input type="radio"/> No Reagent	Patient 2	R1r
Patient 3	<input type="radio"/> Not Stated <input checked="" type="radio"/> Positive <input type="radio"/> Negative <input type="radio"/> Unable to test	<input type="radio"/> Not Stated <input checked="" type="radio"/> Positive <input type="radio"/> Negative <input type="radio"/> Unable to test	<input type="radio"/> Not Stated <input type="radio"/> Positive <input checked="" type="radio"/> Negative <input type="radio"/> Unable to test	<input type="radio"/> Not Stated <input type="radio"/> Positive <input checked="" type="radio"/> Negative <input type="radio"/> Unable to test	<input type="radio"/> Not Stated <input type="radio"/> Positive <input checked="" type="radio"/> Negative <input type="radio"/> Unable to test	Patient 3	R1R2

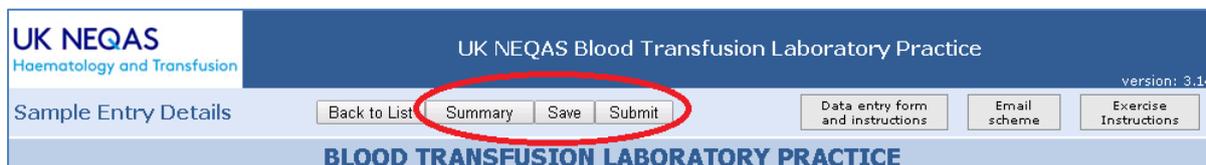
Pre-Transfusion Testing (PTT) - Web return of results

Saving, Submitting, and producing a Summary

Saving

At any point, the data entered can be saved by clicking on the Save button, see figure 14. Clicking the Save button will also carry over any Technology data for Grouping and Screening in Patient 1 to the other patients if the data fields for the other patients are they are not yet complete. If the data is subsequently changed for Patient 1 and Save is clicked again, the data for Patients 2+ will not be changed. It is possible to manually alter the technology data at any time prior to submitting.

Figure 14 – Summary, Save, Submit buttons



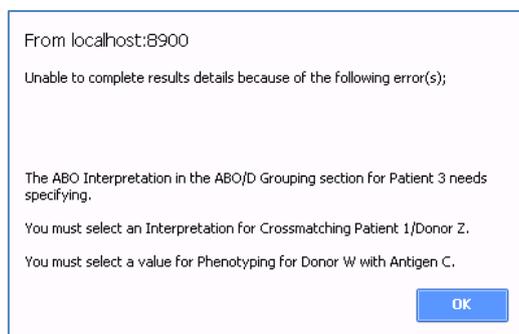
Submitting

Clicking Submit will lock the data and it cannot be edited, however it is possible for UK NEQAS to unlock the website to allow amendments to be made. If this is required, call the phone number on page 1 of this document, and ask for a “web reset”. It is not possible to edit the website after the exercise has closed.

After the exercise is closed, data which has been saved but not submitted on the website is collected and processed as per submitted data.

If mandatory fields have not been completed when Submit is clicked, a message will appear with a list of fields which require completion, see figure 15. It is not possible to submit until these fields have been completed.

Figure 15 – Error message when submitting without completing all mandatory fields



Summary

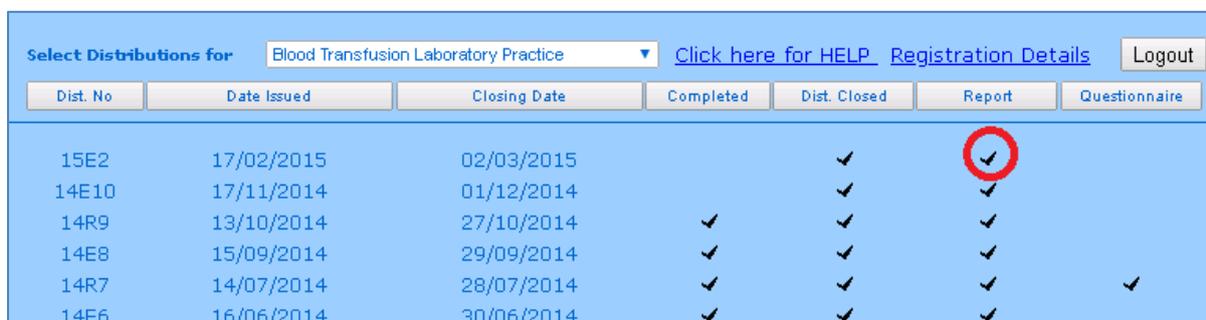
After submitting, a pop up box should appear containing a summary of all results submitted. It is highly recommended that this is printed or saved, as this can be used for investigating discrepancies. It is possible to create a summary of results which have been saved, prior to submitting by clicking on the Summary button. See Figure 16 for an example of a summary

Pre-Transfusion Testing (PTT) - Web return of results

Accessing Reports

Log onto the system as shown on Pages 1 and 2. Exercises for which the report is ready have a tick in the 'Report' column, see figure 17. The Save and Submit buttons are not available after submission of results, the Reports button is only available after reports have been made available.

Figure 17 – Report available



Dist. No	Date Issued	Closing Date	Completed	Dist. Closed	Report	Questionnaire
15E2	17/02/2015	02/03/2015		✓	✓	
14E10	17/11/2014	01/12/2014		✓	✓	
14R9	13/10/2014	27/10/2014	✓	✓	✓	
14E8	15/09/2014	29/09/2014	✓	✓	✓	
14R7	14/07/2014	28/07/2014	✓	✓	✓	✓
14E6	16/06/2014	30/06/2014	✓	✓	✓	

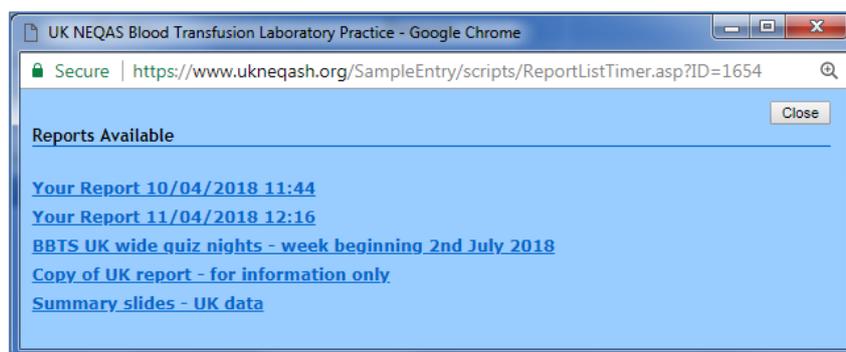
Click on the reports button as shown in figure 18.

Figure 18 – Accessing reports



A pop up window will open showing all available reports and other documents as shown on figure 19. Click on the links to open the required document.

Figure 19 – Variety of reports available



Where an amended report has been issued, there will be two links starting with "Your report...". The link with the latest date and time will be the latest version of the report.

Summary slides are usually included with each report, and other documents for distribution will also be included, e.g. flyers, supplementary reports...

Documents can be printed or saved as required.

PDF copies of reports will remain on the website for at least six months, after which time they may be archived to off-line storage

Logging Off

To Log off, click on the 'Back to List' button (see figure 4) and then click on the 'Logout' button (see figure 3) or exit the browser.