

## **BEST PRACTICE GUIDANCE FOR SUCCESSFUL PARTICIPATION**

### **PREPQ – a UK NEQAS benefit of participation**

UK NEQAS has developed a secure, online system that allows participants to review and monitor the incidence of untoward events occurring in the pre and post analytical phases. This service extends quality surveillance beyond the analytical phase, providing a baseline of data against which users will be able to benchmark their performance and meet the requirements of ISO15189 (1).

The service is entirely web based and entails recording the number of failures or rejections, together with the total number of eligible patient requests, specimens or reports, for a range of up to 11 indicators including patient identification, specimen labelling and specimen collection errors, which align with those described by the Association of Clinical Biochemistry pre-analytics working group (2) plus additional categories in the post-analytical phase. These indicators may be expanded, refined or reported in greater detail in future depending upon demand from service users. Data is analysed using Sigma metrics according to whether the participating site numbers tests by request or by specimen, allowing a 'like-for-like' comparison of performance in the personalised report.

The service is open to any laboratory in the UK or Republic of Ireland participating in UK NEQAS services, as a benefit of membership. A new exercise is open every month but participants may submit data for any period and at any frequency convenient to the laboratory.

Further information about the PREPQ service can be obtained by emailing [prepq@ukneqas.org.uk](mailto:prepq@ukneqas.org.uk).

### **Gathering data**

1. You may **submit data by organisation, site/network or by department**, e.g. blood sciences, haematology/chemistry (combined or separately), automated laboratory, microbiology, immunology, depending on your pattern of service. Each reporting site will need a separate registration and identifier. You are encouraged to discuss registration with other departments within your organisation, to ensure that you register in the pattern most convenient to you.
2. **You are not required to make a return for all indicators.** Our previous exercises indicated that laboratories experienced greater difficulties in accessing and extracting information relating to reports than information relating to requests and specimens. If you submit a number of failures for any indicator, you must also submit the relevant total figure. **If you have no data for any indicator, please leave the box blank rather than trying to enter a zero.**
3. You may submit data **for any time period**, though a month appeared favoured at the previous stages. You must state the time period covered by the data but if it suits you better to submit 3 months' data every third exercise, this will be processed. You are expected to make **at least one submission** covering a period of at least one month or 30 days **during each year** to maintain your registration.

## What do the quality indicators mean? – a glossary of terms

### 1. Patient identification failures

*The number of requests rejected due to errors concerning patient identification, detected either before or after the release of results. These may be defined as a 'wrong blood in tube' incidents and are not the same as a sample identification failures.*

### 2. Sample identification failures

*The number of samples rejected due to inadequate sample labelling.*

### 3. Sample collection failures

*The number of samples rejected due to:*

- *inappropriate biological material being selected for the required test, e.g. blood taken from an incorrect site or at an incorrect time of day*
- *incorrect patient preparation, e.g. patient not fasting where this is a requirement for the test*
- *collection in an inappropriate container / sample tube type*

### 4. Sample volume failures

*The number of samples rejected due to insufficient volume of material supplied for testing*

### 5. Storage and transport failures

*The number of samples rejected due to:*

- *damaged or leaking sample container*
- *transportation at an inappropriate time for testing*
- *transportation at an inappropriate temperature*
- *any other improper storage conditions during transportation*
- *sample lost / not received*

### 6. Sample suitability failures – blood sciences

*The number of blood sciences (haematology/chemistry/immunology) samples rejected as a result of failure to reach the laboratory's minimum quality standards, including:*

- *inadequate sample:anticoagulant ratio*
- *haemolysed samples*
- *clotted samples*
- *lipaemic samples*

### 7. Sample suitability failures – microbiology

*The number of microbiology samples rejected as a result of failure to reach the laboratory's minimum quality standards*

### 8. Blood culture failures – microbiology

*The number of blood culture samples rejected as a result of contamination*

### 9. Turnaround time failures

*The number of failures to meet a locally agreed, stated period for analysing a sample and providing a valid hardcopy or electronic report to the requesting healthcare professional.*

### 10. Corrected reports

*The number of reports amended after the original has been made available to the requesting healthcare professional.*

### 11. Critical result reporting failures

*The number of critical results (results significantly outside acceptable values and requiring immediate action) reported more than 1 hour after validation.*

## Registering for the PREPQ service

This registration process is applicable to any UK NEQAS participant laboratory in the UK and Republic of Ireland; other laboratories wishing to register should email [prepq@ukneqas.org.uk](mailto:prepq@ukneqas.org.uk) giving details of their request.

Firstly decide on what basis you wish to submit data – you may register as a department (eg Haematology or Immunology), as Blood Sciences, on a pan-Pathology basis, or as a Network comprising several laboratory sites.

Then select an appropriate UK NEQAS laboratory code ('labcode' or 'participant reference number') for this registration. Most laboratories have several UK NEQAS codes, and for example to submit data as Blood Sciences either your Chemistry or Haematology code would be appropriate whereas Microbiology would not. Please talk to your colleagues to avoid duplication, e.g. Chemistry and Haematology both registering separately to submit Blood Sciences data.

All communications (eg opening of exercises and publication of reports) will be electronic, so deciding who will be your primary contact is important – any registrations without a primary email address will be rejected.

The on-line registration form is available via <http://birminghamquality.org.uk/prepq/sign-up>.

Complete the form, ensuring that you indicate how your laboratory counts requests (by request card or by specimen tube) – we shall be analysing data separately so that you can compare your data with the appropriate 'method'.

## Web access instructions

- Go to <http://birminghamquality.org.uk> and click on the orange **Login to Results and Reports** icon
- Enter your **UK NEQAS laboratory code** under which you registered as user name together with the **password** notified to you.
  - *the result submission screens and the report screens use the HTTPS secure encrypted web protocol to protect your data. This conforms to normal best practice. Secure Web connections from the NHSnet to the Internet are in line with NHS Information Authority policy.*
  - *as part of the HTTPS mechanism, all secure Web servers must have identity certificates. All major web browsers are supplied pre-loaded with the identities of some "Certifying Authorities" and will complain each time they encounter a certificate that is issued by an unknown authority.*
- Click on **Yes** to proceed if this "Security Alert" screen appears before the login screen.
- The first page displayed allows you to select results entry or report download
- Select **Result** entry by clicking on the **Result** button
- The **Results Entry** page for the lab code entered will appear
- Enter each data item into the appropriate field. Use the **Tab** key to move to the next field or click into it with the mouse
  - *avoid using the **Return** or **Enter** key to move between fields as this may submit an incomplete set of results.)*
- If you are unable to submit data, please use the free text **specific question Q1** below the result entry section to explain your reasons
- A free-text **comment area** is also provided – **please use this to provide feedback and suggestions!**
- When you are happy that all data items, responses and comments have been entered correctly, click on the **Submit** button. Note that **only** those data sent with the **Submit** button will be transmitted to UK NEQAS
  - **if you exit the page without Submitting with the **Submit** button, your results will be lost**
- Next to the **Submit** button is the **Reset** button. This restores all the fields to those retrieved from the server when you clicked on the **Result** button.
- If Submit is successful, you will see a page that confirms submission. If you have made an error (eg implausible data items or failure to submit a relevant total) this will be highlighted in red and an error message given. Correct the error and re-Submit your data by pressing the **Submit** button again.
- If you do not wish to or are unable to Submit a full set of data, you may Submit what you have to hand. If you are able to add the remaining data items before the closing date, these may be Submitted on subsequent visits. When you click on the **Result** button, the previously saved data will be displayed and you may then make the necessary additions and/or amendments before Submitting the data again with the **Submit** button.
- To access **reports**, click on the **Report** button; the latest report available will be displayed; to return, select the dropdown under your browser's Back button and select **Results and Reports**
- After the closing date you may Submit **additional or late data**, or **request amendment** of your original submission. When you click on the **Result** button, the previously saved data will be displayed and you may then make the necessary additions and/or before Submitting the data again with the **Submit** button - if requesting amendments please enter the reasons in the free text comments box.

## References

1. Cornes MP, Atherton J, Pourmahram G *et al.* Monitoring and reporting of preanalytical errors in laboratory medicine: the UK situation. *Ann Clin Biochem* 2016, **53 (3)**: 279-284
2. West J, Atherton J, Costelloe SJ *et al.* Preanalytical errors in medical laboratories: a review of the available methodologies of data collection and analysis. *Ann Clin Biochem* 2017, **54 (1)**: 14-19