ePRaSE

ELECTRONIC PRESCRIBING RISK AND SAFETY EVALUATION

" Helping us optimise our systems"

User Guide

For the ePrescribing Risk and Safety Evaluation Tool
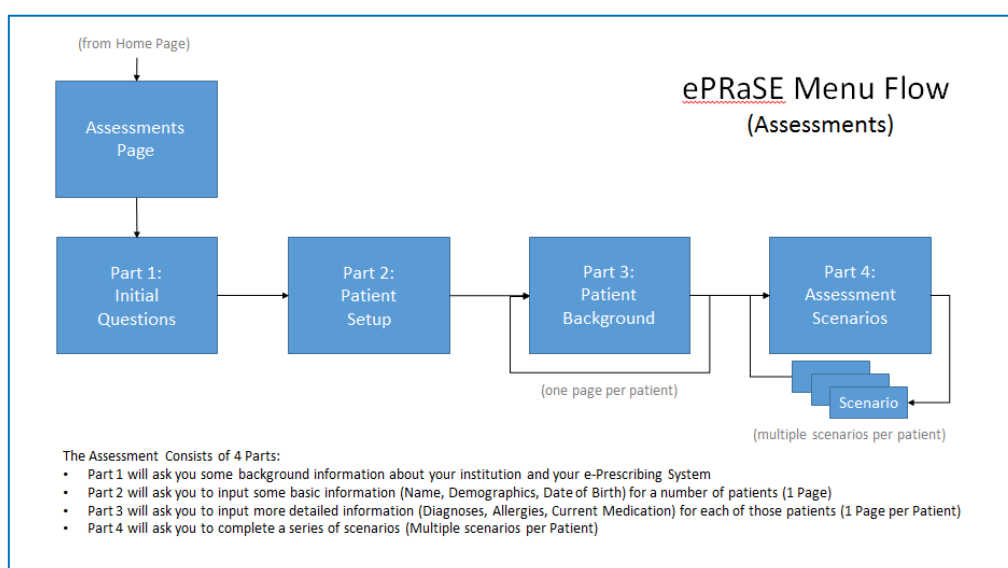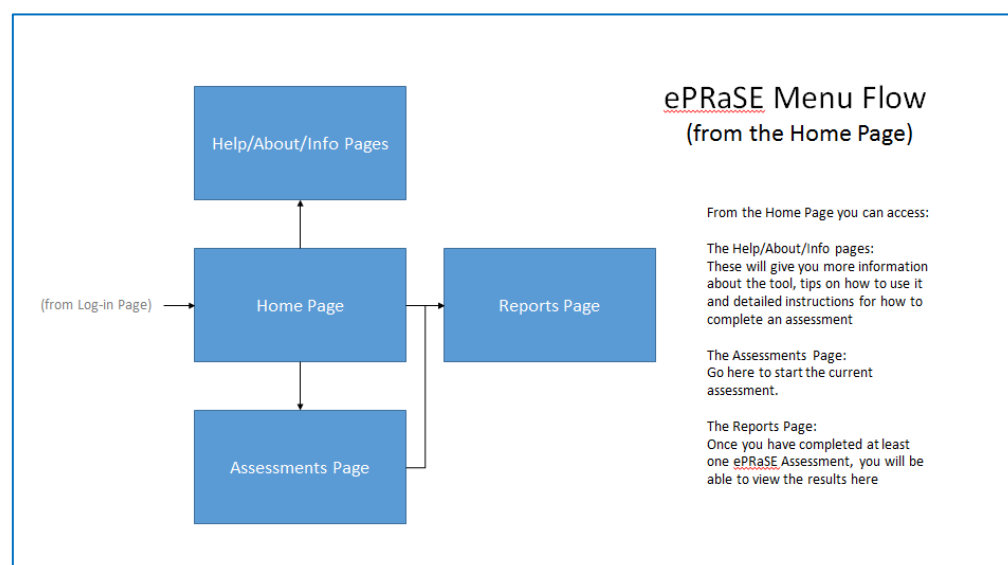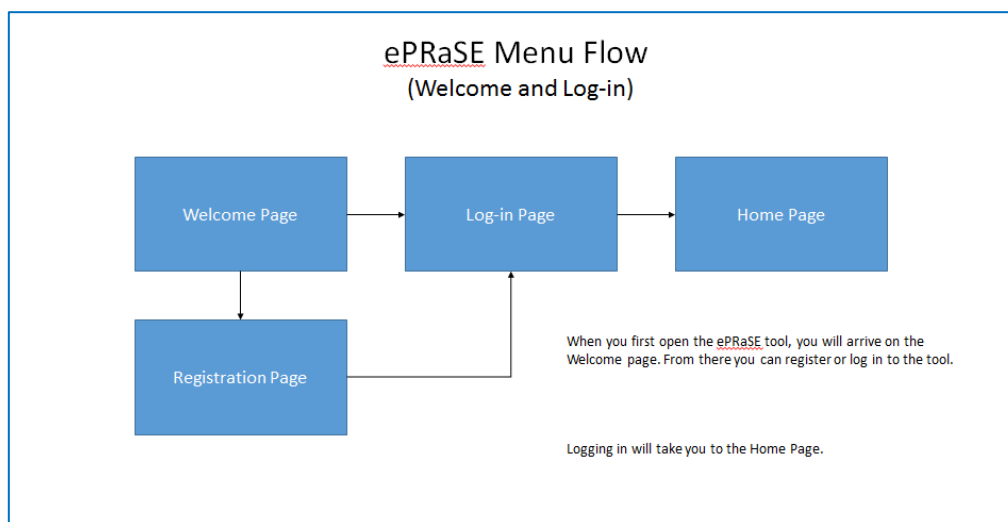
Introduction

ePRaSE is a web based tool intended to help NHS Hospital sites assess and evaluate their e-prescribing systems to support optimisation and reduce harm caused by adverse drug events, ultimately improving medication safety.

The tool provides a set of 'fictional' patients which users set up in their live or test prescribing environments and then provides a set of randomised prescribing scenarios to challenge their system responses to risk. The performance of the prescribing system to the risk scenarios are provided in real time with scores and advice. This is intended to guide and assist e-prescribing system users and new implementers in the optimisation of their systems.

Version 2019 is suitable for all sites actively using electronic prescribing systems for **adult inpatients**. Version 2020 will include a wide range of both adult and paediatric assessments. Knowledge gained from your comments from this first iteration, will also be used to improve the tool content and operation of Version 2020.

ePRaSE Tool Version 2019 is accessible to registered users with nhs.uk or nhs.net email accounts via EPRASE.nhs.uk.

Tool Flow Diagrams

ePRaSE Menu Flow
(Welcome and Log-in)

Welcome Page → Log-in Page → Home Page

Welcome Page → Registration Page → Log-in Page

When you first open the ePRaSE tool, you will arrive on the Welcome page. From there you can register or log in to the tool.

Logging in will take you to the Home Page.

ePRaSE Menu Flow
(from the Home Page)

Help/About/Info Pages

(from Log-in Page) → Home Page → Reports Page

Home Page → Assessments Page

From the Home Page you can access:

The Help/About/Info pages:
These will give you more information about the tool, tips on how to use it and detailed instructions for how to complete an assessment

The Assessments Page:
Go here to start the current assessment.

The Reports Page:
Once you have completed at least one ePRaSE Assessment, you will be able to view the results here

ePRaSE Menu Flow
(Assessments)

(from Home Page)

Assessments Page → Part 1: Initial Questions → Part 2: Patient Setup → Part 3: Patient Background → Part 4: Assessment Scenarios

(one page per patient)

Scenario

(multiple scenarios per patient)

The Assessment Consists of 4 Parts:
- Part 1 will ask you some background information about your institution and your e-Prescribing System
- Part 2 will ask you to input some basic information (Name, Demographics, Date of Birth) for a number of patients (1 Page)
- Part 3 will ask you to input more detailed information (Diagnoses, Allergies, Current Medication) for each of those patients (1 Page per Patient)
- Part 4 will ask you to complete a series of scenarios (Multiple scenarios per Patient)

Preparing to use the tool

Before beginning the assessments please read this User Guide completely and have it available for reference throughout.

To set up the test we recommend:

✓ You use dual screens with access to all necessary systems to make the set up and execution of assessments more efficient.

✓ Set up patients on day 1 – do the assessments on day 2

✓ You are able to access the admissions system linked to your prescribing system to build basic patient demographic and clinical information into your live / test environment. If you are unable to do this yourself please seek appropriate help from your organisation. If your system doesn't have this functionality, please build as much as you are able and use prompts and comments boxes in part 1 of the assessment set up to tell us about this.

To ensure results accurately reflect your system configuration

✓ Carefully read and follow exactly all aspects of the sample patient build and completion of the assessments in your test environment.

✓ Please don't change, substitute or add other medicines information into the scenarios unless the set up specifies that this is acceptable

✓ Please don't second guess the aim of individual scenarios.

✓ Remember that this is a learning resource to assess & evaluate the configuration of the installed electronic prescribing system *not* the user & their knowledge!

You will need to register to use the Tool the first time.

There are four parts of the tool to work through, some parts take longer than others; below is a guide to the time limits and steps required to give you an idea.

| Assessment set up & steps	Time guide
Part 1 Initial questions about your electronic prescribing system	less than 5 minutes *(Day 1)*
Part 2 Assessment preparation admit test patients Here enter basic patient details into your hospitals 'patient admission system' (or test environment that mirrors your live system exactly)	5-10 minutes per patient *(Day 1)*
Part 3 Enter test patient information Enter provided clinical and medication history into the relevant hospitals electronic patient system.	10 minutes per patient *(Day 1)*
Part 4 Prescribe the test medication on your e-prescribing system and record what happens in the ePRaSE Tool	Step 4 – less than 5 minutes per test *(Day 2)*

Note:

- If you have to leave the tool at any stage during set up or test phases you will be returned to the same point when logging back into the system. Your data up to that point will be saved.

- Help in using the tool is available through the HELP tab.

Accessing ePRaSE and registering for the first time:

The Web based ePRaSE APP is compatible with all Internet browsers (Microsoft Internet Explorer (version 9 and above), Google. Chrome, Mozilla Firefox, Opera and Safari and Microsoft Edge) and is accessible to users with nhs.uk or nhs.net email accounts via EPRASE.nhs.uk.
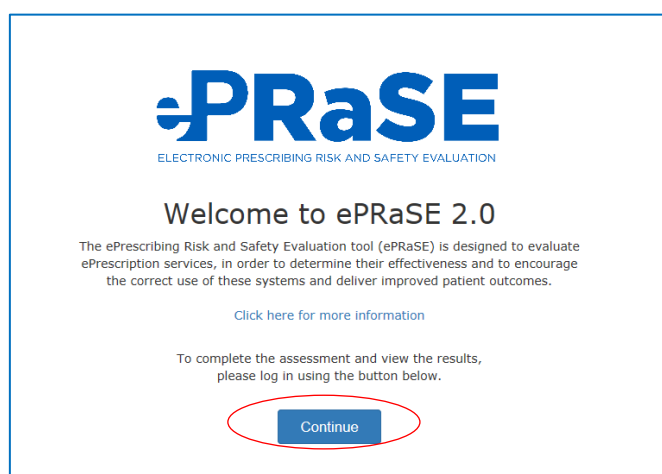
Click the **continue** button to access the log in page and **registration** button. If you are registering for the first time click **Register** button, otherwise enter your log in details that will take you directly to the **ePRaSE Home** page.
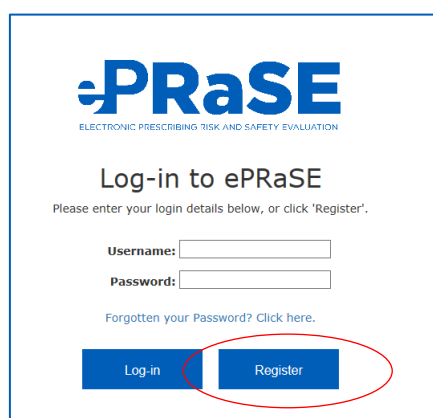
Clicking **'Register'** opens the full user registration page.

Please enter your NHS email address, select your organisation and e-prescribing system from the drop down lists. Enter your contact telephone number and create your personal password. Click 'Register' to confirm. Logging in will give access the ePRaSE Home page.

Click on the **'Assessments'** button to access ePRaSE assessment page.

Click **Begin assessment** button to access the Assessment Home page and instructions.

There are four parts to be completed. Start by clicking **Begin Assessment**.

Part 1 Enter your user information and click next when completed.

Part 2 Admit Patients – enter basic patient demographic details into your hospitals 'patient admission system' (or test environment that mirrors your live system exactly).

ePRaSE Assessment

Part 2 - Assessment Preparation

In preparation for the assessment, please complete the following tasks:

Patient Data

Please admit the following test patients into your hospital's patient admissions system (or a test environment).

Populate any other mandatory fields with appropriate self-generated information. When you are done, click **Next** to continue.

Name	Date of Birth	Gender
Perry zzzCox	18/05/1951	male
Carla zzzEspinosa	29/10/1970	male
Margaret zzzHoulihan	27/06/1954	female
Drake zzzRamoray	28/09/1964	male

Please note any difficulties or interventions from the system that you encountered when completing this task using the box below.

Enter notes here...

When all of the patients have been admitted to your ePrescription System, click **Next**.

Exit   Next

Do this step a day ahead of the actual assessments.

You may need assistance from other individuals to create / add patients in your admission system

Please read & carefully enter all information presented exactly

Check *everything has been entered correctly before moving on.*

Record any system alerts or difficulties you experience when completing this stage

Step 3 Patient information – For each patient enter the provided clinical and current medication list into the relevant hospitals electronic patient system. If you are unable, because of system configuration or access restrictions to upload some of the data, please enter what you can and document what parts you can't with reasons in the box provided.

Please note any system alerts or difficulties you experience when completing this stage in the box provided.

Please click **DONE** when all the basic test patient information has successfully been entered into your test environment.

This will take you through to a 'Thank you' page with a countdown timer. When the timer reaches 00:00:00 you may click 'Next' to proceed to part 4.

ePRaSE

ePRaSE Assessment

Thank You

You have completed the initial phase of the assessment.

You can continue on to the next phase of the assessment in:

00:59:49

Next

Step 4 Prescribe test scenario – You are presented with a specified patient name from the previously set up group of patients. Select the appropriate patient from your test environment and prescribe the medication as detailed in the *Test Scenario presented*. Record the relevant advice or information that you receive whilst entering the *Test Scenarios*. Once you have clicked next you will not be able to return to this page again.

ePRaSE

ePRaSE Assessment

Part 4 - Assessment Scenarios

Please follow the instructions for each scenario.

Test 1 of 20

Prescribe the following medication to the specified patient using your normal prescribing practice below.

Patient: Perry zzzCox

Drug	Dose	Route	Frequency	Duration
Furosemide	40 mg	Orally	Once Daily	

Questions

What of the following best describes the response from the system when you attempted to prescribe the specified drug?   Select a Response...

Note any intervention from the system using the box below.

Enter notes here...

Exit   Next

Always check you have selected the correct patient

Prescribe the medicine 'exactly' as stated, following your normal processes.

Record your observations, using the comments boxes and drop down options provided.

Recording observations

The initial response can be selected from three options **No intervention, Intervention** and **Unable to initiate order.**

Test 1 of 20

Prescribe the following medication to the specified patient using your normal prescribing practice, then answer the questions below.

Patient: Perry zzzCox

Drug	Dose	Route	Frequency	Duration
Furosemide	40 mg	Orally	Once Daily	

Questions

What of the following best describes the response from the system when you attempted to prescribe the specified drug?

Select a Response...
No Intervention
Intervention
Unable to Initiate Order

Select your system response

Note any intervention from the system using the box below.

Enter notes here...

Record any system alerts or difficulties you experience when completing this stage

Exit   Next

Selecting **No Intervention** or **Unable to initiate order** will take you to completion of that test and you may click next to go onto the next patient *Test Scenario.*

If your hospital system generates an **intervention** then you will be provided with a range of options to help collect more information on what has happened. Please click **ALL** descriptions that apply to the systems response. A glossary of terms (appendix 1) can be used to explain the options available here.

Questions

What of the following best describes the response from the system when you attempted to prescribe the specified drug?

Intervention

What was the stated reason for the intervention?

Please tick ALL intervention categories observed on the system

Advice on Contraindication ☐
Advice on Dose ☑
Advice on Interaction ☐
Advice on Therapeutic Duplication ☐
Advice on Lab Results/TDM ☐
Advice on Route ☐
Advice on Age ☐
Advice on Frequency ☐
Advice on Formulary ☐
Alternative Order Suggested ☐
Advice on Allergy ☐
Other Please Specify ☐
Other: ☐

Were you given any option to override and complete the prescription?

[Select a Response]
Unable to Override
Override with Change to Order
Override with reason, No Change to Order

Select your systems final response

Note any intervention from the system using the box below.

Record any system alerts or difficulties you experience when completing this stage

Exit   Next

You will then be asked for additional information on how the hospital system allows you to proceed.

Please select the appropriate response and complete this test by clicking **Next**. Move onto the next patient scenario, checking that you select the correct patient name from your system.

There will be some random **free format** questions appearing in the assessment sequence. These are simple yes or no answered questions. Please respond appropriately before moving onto the next patient scenario.

Note: The tool includes some '*deception analysis*' which checks for false positives e.g., orders that should not have generated any warning or alerts in the hospital's EP system.

Continue to work through the test until all are completed, indicated by the **Done** button appearing.

Click **Done** to continue to the **Assessment Complete** page.
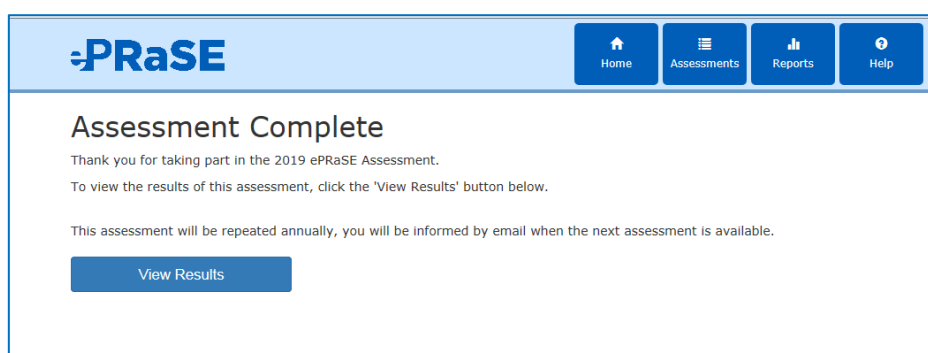
Results of the test are immediately scored and displayed through the **View Results** button, which takes you to the **Reports Home** page**.**
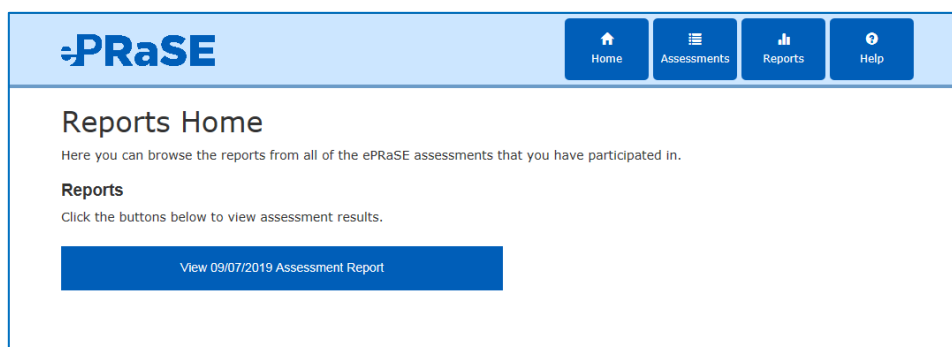
Click on **view the assessment report** to access your summary, displayed with general lines of advice.

Exit this page by clicking **Home**.

Previous results can be viewed and accessed by clicking the **Reports Home** button and selecting the appropriate report year.

The test can only be taken **once** a year. You will have access to your organisation's test data only.

Future version will provide summary charts to allow users to compare their system results with those of other anonymised organisations.

Disclaimer: The ePRaSE Tool is intended to provide users with guidance about its implementation of electronic prescribing systems. It is not intended nor should it be considered by hospitals, other NHS agencies, patients, or any other users of the test results as a comprehensive audit or verification of the prescribing system.

The tool is offered on an as-is basis and the Newcastle upon Tyne Hospitals NHS Foundation Trust and Newcastle University do not warrant or guarantee the accuracy or rigor of the protocols or implementation of the Tool or its use by hospitals and testers.

Appendix 1 Glossary of terms

Tool Assessment Response	Definition
EP system response / behaviour to tests	
No intervention	The EP system allows uninterrupted prescribing of the test medicine
Intervention	The EP system displays a pop up message that interrupts the prescribing of the test medicine, requires a response from the user and then allows the user to continue.
Unable to initiate order	The EP system displays a pop message that stops the test medicines being prescribed at all.
Unable to override	The EP system does not allow the intervention alert to be overridden so the medicine cannot be prescribed
Override with change to order	The EP system allows the intervention / advice alert to be overridden only if there is an appropriate change to the medicine prescription
Override with reason, No change to order	The EP system allows the intervention to be overridden and the medicine to be prescribed as originally stated.
Intervention advice categories	
Advice on contraindication	Alerts a contraindication to the prescribed medication for this medicine to this patient. e.g., Warfarin prescribed for a patient with a bleeding disorder.
Advice on dose	Alerts that the medication prescribed exceeds the safe range or is sub-therapeutic and gives appropriate advice. E.g., overdose of paracetamol
Advice on interaction	Alerts that there is a known potentially harmful interaction when the medication prescribed is used in combination with existing medication; e.g., Concurrent linezolid and sumatriptan.
Advice on therapeutic Duplication	Alerts that medication combinations overlap therapeutically e.g., Using clonazepam and lorazepam together
Advice on results /Therapeutic Drug Monitoring	Alerts that a medication is contraindicated based on documented laboratory results or that it is a medication that requires subsequent monitoring of drug levels to avoid harm. e.g., aminoglycosides require dosing according to renal function and prompt monitoring of drug levels.
Advice on route	Alert that the specified rout of administration is inappropriate and potentially harmful e.g., Vitamin K intramuscularly
Advice on age	Alerts that medicine has not been prescribed in an appropriate manner for the age of the patient.
Advice on frequency	Alerts that the specified frequency of administration of the medicine results in a daily dose that exceeds the safe range for the total daily dose.
Advice on formulary	Alerts that the prescribed medication is against formulary guidance for the documented clinical indication/diagnosis of the patient.
Alternative order suggested	Alerts a contraindication to the prescribed medication and suggests an alternative medicine or order set be prescribed.
Advice on allergy	Alerts that the prescribed medication (or medication class) is one for which a patient allergy has been documented. E.g., Penicillin prescribed for a patient with documented penicillin allergy.