



**Project Title:** An evaluation of an online clinical reasoning educational simulation tool (eCREST) to improve the clinical decision-making skills of medical students

Thank you for considering to take part in this study, **funded by the Department of Health and The Health Foundation.**

This study has been approved by the UCL Research Ethics Committee (Project ID Number): 9605/001, Barts and The London IHSE Peer Review Committee and the UEA Faculty of Medicine and Health Sciences Research Ethics Committee.

We would like to invite medical students in their **third or final year** of study to participate in this research project.

Please discuss the information below with others if you wish, or ask us if there is anything that is not clear or if you would like more information.

### Details of Study

*What is the purpose of the study?*

This research seeks to evaluate a newly developed online learning tool using patient simulations called eCREST. ECREST was developed by a multidisciplinary team including UCL medical school tutors, GP registrars, health psychologists and experts in public health; with input from medical students, experts in medical education, primary care diagnostics and health care evaluation. ECREST simulates real consultations between a junior doctor and a patient in General Practice, in which the 'patients' are presenting to their GP with respiratory symptoms. The overall aim of the project is to test whether using eCREST can improve clinical reasoning in this context. This study aims to test the feasibility of conducting a randomised controlled trial of eCREST.

*Why is it important?*

The reason this study is being conducted is to address the need for the development of more specific training on clinical reasoning in medical education. Clinical reasoning refers to the thought processes you use to make clinical decisions, such as making a diagnosis and a management plan. Training on clinical reasoning is being increasingly recognised as essential in reducing diagnostic errors, which affect around 5-10% of patients, and can have devastating consequences for patients (Graber et al., 2005; Singh et al., 2013).

*What do I have to do?*

All participants register to take part in the study which requires providing your name, email address, date of birth, and creating a username and password.

All participants will complete an online quiz about your knowledge and clinical reasoning skills, which will take approximately 15 minutes. All participants will then be randomised to one of two groups:



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1. The intervention group, will have **1 week to complete 3 patient cases online**. For each virtual patient case you will have opportunity to ask 'patients' questions using a drop down menu and receive their patient history. You will also be asked at several points throughout the consultation to provide a differential diagnosis and management plan. At the end of each case we will provide you with feedback on how a GP and GP Registrar would have managed the case and ask you to complete the 'My Learning' page after you've completed the 3 cases. Each patient case in eCREST will take approximately 20-30 minutes and should be completed individually. You can 'Exit' eCREST at any point and return by logging in using your username and password.
2. The control group, will complete the **online quizzes only** and get feedback. The control group will have access to the simulations after the study has ended if you wish.

Finally, all participants complete an **online quiz 1 week after** registration to receive a **£20 Amazon e-gift card**. An **extra £10** will be given if you complete another **online quiz 1 month later**.

### *What happens next?*

If you are willing to take part in the study, click on the 'I agree' button at the bottom of the sheet. You'll then be directed the registration page and after you register you can start the study.

### *Will anyone else (e.g. my tutors/UCL medical school) see my scores/performance?*

No. Only the researchers will have access to this data. Your data will only be used for research purposes and it will not contribute to your final grades, be used as an assessment, or shared with any third parties. You have the option however of printing all your responses as a pdf for your own record and/or to store in your e-portfolio.

### *Risks and benefits*

We don't anticipate there to be any risks by participating.

Participating in this research will help you to prepare for clinical practice by giving you the chance to practise making diagnostic decisions and apply your respiratory knowledge and General Practice training. You will also receive a certificate of completion, which you can add to your e-portfolio to show your involvement in research. If you complete the first 2 online quizzes you will receive an Amazon e-gift card worth £20 and if you complete the third online quiz as well, you will be given an extra £10.

### *Anonymity and confidentiality*

We will collect some personal information such as your name and email address when you register to take part in the study but your data will then be anonymised and only the researchers will have access to this data. All data will be collected and stored in accordance with the Data Protection Act



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1998. I may use some of the things you write in the free text responses as quotes but these will also be anonymised, with any identifying comments removed.

It is up to you to decide whether to take part or not; choosing not to take part will not disadvantage you in any way. If you do decide to take part, you are still free to withdraw at any time and without giving a reason.

### Consent

- I consent to take part in the study and confirm that I am over the age of 18 and understand what is required of me in this study.
- I understand that I can withdraw from the study at any time without giving a reason.
- I understand that any personal information will be treated as strictly confidential and handled in accordance with the provisions of the Data Protection Act 1998.
- I agree that the research project named above has been explained to me to my satisfaction.

I agree

If you have questions or concerns, please contact the:

**Student researcher:** Ruth Plackett; Department of Applied Health Research University College London 1-19 Torrington Place London WC1E 6BT; Tel. 020 3108 3242; [ruth.plackett.15@ucl.ac.uk](mailto:ruth.plackett.15@ucl.ac.uk).

**The staff researcher:** Dr Angelos Kassianos; Department of Applied Health Research University College London 1-19 Torrington Place London WC1E 6BT; [angelos.kassianos@ucl.ac.uk](mailto:angelos.kassianos@ucl.ac.uk); Tel. 020 7679 3291.

**If you don't get a satisfactory response from the researchers please contact The Chair of the UCL REC (Academic Services):** UCL Gower Street London WC1E 6BT; [ethics@ucl.ac.uk](mailto:ethics@ucl.ac.uk), or Professor William Fraser, Deputy Head of School (admin support: Dan Leeson [d.leeson@uea.ac.uk](mailto:d.leeson@uea.ac.uk))  
**Thank you for reading this information sheet and for considering taking part in this study.**



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