

Augmented reality in undergraduate surgical education in final year medical students in the UK

Submission date 20/04/2023	Recruitment status No longer recruiting	<input type="checkbox"/> Prospectively registered <input type="checkbox"/> Protocol
Registration date 21/04/2023	Overall study status Completed	<input type="checkbox"/> Statistical analysis plan <input type="checkbox"/> Results
Last Edited 21/04/2023	Condition category Surgery	<input type="checkbox"/> Individual participant data <input type="checkbox"/> Record updated in last year

Plain English summary of protocol

Background and study aims

The study is about testing whether using augmented reality (AR) technology can improve the way medical students learn about surgery. They will compare how well students learn with augmented reality technology versus traditional teaching methods.

Who can participate?

Final-year medical students aged 22 years and over from all medical schools in the UK

What does the study involve?

Participants will be randomly split into two groups. One group will receive augmented reality teaching on top of their normal undergraduate teaching. The other group will only receive their normal undergraduate teaching.

What are the possible benefits and risks of participating?

The study is expected to benefit participants by improving their learning experiences, and there are no expected risks to participating.

Where is the study run from?

University College London (UCL) (UK)

When is the study starting and how long is it expected to run for?

March 2022 to August 2023

Who is funding the study?

1. Royal College of Surgeons of England (UK)
2. B. Braun Medical (USA)

Who is the main contact?

Kien Hang, zchamkh@ucl.ac.uk

Contact information

Type(s)

Principal Investigator

Contact name

Mr Arjun Nathan

ORCID ID

<http://orcid.org/0000-0002-8572-2832>

Contact details

Gower St
London
United Kingdom
WC1E 6BT
+44 (0)7595 189982
arjun.nathan@ucl.ac.uk

Additional identifiers

EudraCT/CTIS number

Nil known

IRAS number

ClinicalTrials.gov number

Nil known

Secondary identifying numbers

19683/002

Study information

Scientific Title

Augmented reality in undergraduate surgical education in final year medical students in the UK

Acronym

AUGMENT

Study objectives

Augmented reality in undergraduate surgical education improves student SBA performance

Ethics approval required

Old ethics approval format

Ethics approval(s)

Approved 16/08/2022, UCL Research Ethics Service (2 Taviton Street, London, WC1H 0BT, UK; +44 (0)20 7679 8717, Extension: 28717; ethics@ucl.ac.uk), ref: 19683/002

Study design

Interventional randomized controlled trial

Primary study design

Interventional

Secondary study design

Randomised controlled trial

Study setting(s)

University/medical school/dental school

Study type(s)

Other

Participant information sheet

See study outputs table

Health condition(s) or problem(s) studied

Augmented reality in undergraduate surgical teaching

Interventions

Method of randomization: block randomization

Control arm: current national undergraduate university curriculum

Intervention arm: additional teaching comprising three virtual surgeries through the Proximie platform

Intervention Type

Other

Primary outcome measure

Student performance in Short Based Answer (SBA) questions using MRCS-based Part A questions, measured at baseline (pre-intervention) and post-intervention.

Secondary outcome measures

1. Student perception and confidence measured using a five-point Likert score at baseline (pre-intervention) and post-intervention
2. Cost-benefit analysis. The cost-benefit of the intervention will be assessed compared to traditional surgical teaching. The cost-benefit analysis will be conducted after the intervention is completed.

Overall study start date

08/03/2022

Completion date

01/08/2023

Eligibility

Key inclusion criteria

Final-year medical students in the UK

Participant type(s)

Other

Age group

Adult

Sex

Both

Target number of participants

84

Key exclusion criteria

Students who are not final-year medical students in the UK

Date of first enrolment

01/01/2023

Date of final enrolment

01/06/2023

Locations**Countries of recruitment**

England

United Kingdom

Study participating centre

University College London

Gower St

London

United Kingdom

WC1E 6BT

Sponsor information**Organisation**

Royal College of Surgeons of England

Sponsor details

38-43 Lincoln's Inn Fields
London
England
United Kingdom
WC2A 3PE
+44 (0)20 7405 3474
RMartin@rcseng.ac.uk

Sponsor type

Research council

Website

<https://www.rcseng.ac.uk/>

ROR

<https://ror.org/02qrg5a24>

Funder(s)

Funder type

Industry

Funder Name

B. Braun Medical

Alternative Name(s)

B. Braun Medical Inc., B. Braun

Funding Body Type

Private sector organisation

Funding Body Subtype

For-profit companies (industry)

Location

United States of America

Funder Name

Royal College of Surgeons of England

Alternative Name(s)

RCS

Funding Body Type

Private sector organisation

Funding Body Subtype

Associations and societies (private and public)

Location

United Kingdom

Results and Publications

Publication and dissemination plan

Planned publication in a high-impact peer-reviewed journal

Intention to publish date

01/01/2024

Individual participant data (IPD) sharing plan

The datasets generated during and/or analysed during the current study will be stored in a non-publicly available repository, the UCL Safe Haven (<https://www.ucl.ac.uk/isd/services/file-storage-sharing/data-safe-haven-dsh>). A persistent weblink to the dataset will be provided once the data is ready for sharing. The type of data stored includes demographic information, questionnaire responses, and test scores. The process for requesting access to the data is through the UCL Safe Haven. Requests for access will be reviewed by the data custodian and granted on a case-by-case basis. The dates of availability are not currently known but will be added to the study record at a later date. Consent from participants was obtained for the storage and use of their data in this study. The participant data will be anonymized before it is stored in the repository to protect the confidentiality of participants. There are no ethical or legal restrictions on the use of the data in this study.

IPD sharing plan summary

Stored in non-publicly available repository

Study outputs

Output type	Details	Date created	Date added	Peer reviewed?	Patient-facing?
Participant information sheet			21/04/2023	No	Yes