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Patients as educators versus standard clinical faculty in undergraduate medical education: A systematic review of randomised controlled trials

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ADMINISTRATIVE INFORMATION

Support - None.

Review Stage at time of this submission - Preliminary searches.

Conflicts of interest - None declared.

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Amendments - This protocol was registered with the International Platform of Registered Systematic Review and Meta-Analysis Protocols (INPLASY) on 20 April 2025 and was last updated on 20 April 2025.

INTRODUCTION

Review question / Objective What is the impact of trained/guided patients on educational outcomes within undergraduate medical education, when compared to educational content delivered by standard faculty? How do these interventions impact on the participating medical students? Is there a reciprocal impact of these interventions on the participating patients?

Rationale Real patients have the potential to play active roles in the delivery of medical education. Rather than being passive in the educational process, these patients can be given training and guidance to act as tutors/guides for medical students, with the aim of enhancing the learning process. This can be of key benefit in the development of certain non-clinical skills (so called "soft skills") like communication, empathy and respect. This can make patients feel that they are real participants in the training of future doctors, and that their voices are being heard.

There is mixed evidence on the impact of the use of trained patients in undergraduate medical education. The aim of this study is to systematically review and synthesise data from randomised controlled trials, to identify if trained patients perform as well as clinicians/student peers in medical education.

The primary outcomes will be based on the identified impact of such patient-led educational interventions on learners' satisfaction/confidence ratings; their clinical and non-clinical skills, measured using tests/exams; and the impact on learners' real-life practice within the clinical setting.

The secondary outcome measures will focus on the identified reciprocal impact of these educational interventions on the participating patients. This can be assessed via patient feedback surveys, focused groups and interviews.

Condition being studied Patient educators, patients as educators or patient tutors are real-life patients who have been given some form of guidance or brief training by clinicians, on what is expected of medical students during the patient-

student interaction. These patients will be guided on how to provide both real-time and delayed feedback to these students after the clinical encounter. For example, a trained patient with knee osteoarthritis may have their knee examined by a medical student, with the patient providing immediate formal feedback on the demonstration of empathy, handling skills and listening skills. This process can be repeated for the same or different domains and can feed into formative and/or summative assessments within a clinical trial, with the control group being standard faculty using untrained or simulated patients to teach the same knee examination.

METHODS

Search strategy Databases/registers to be searched: PubMed; Medline and Embase via Ovid; Clinicaltrials.gov; and the Cochrane register of clinical trials.

The search terms to be utilised are:
patient* teachers
patient* voice*
patient* tutor*
patient* instructor
undergraduate
medical student
medical education
These will be combined using the Boolean terms "OR", "AND"
The detailed search strategy for each database will be published in the appendix section of the final manuscript.

Participant or population Medical students within undergraduate medical education. A medical student in this case is someone who is studying towards an MBBS, MBChB, DM, or similar degree. Such a person must be pre-registration and must be in a formal educational programme.

Intervention Tutoring and formal feedback from real-life trained patients within formal educational programmes. These patients will have received some form of structured training and/or guidance on what is expected during the teaching session. For example, a trained patient having their knee examined by medical students, and providing immediate structured feedback to the students on how to improve on empathy, communication and eliciting certain clinical signs ("active patient").

Comparator Studies using teaching and feedback from standard faculty (doctors) as the control group. These comparative interventions may include simulated patients or untrained patients for delivering the educational content. For example, chest examination teaching in clinic delivered by a consultant using a real patient, with the patient not being directly involved in delivering the educational content ("passive patient").

Study designs to be included Randomised controlled trials that meet the PICO inclusion criteria.

Eligibility criteria Exclusion criteria: Non-randomised studies (non-randomised clinical trials, observational studies, case series); studies using only simulated patients, with no comparison with real patients; studies using online videos only, with no direct real-life student-patient interactions; studies that do not include any doctors as teaching faculty in the control/comparative group; studies that do not assess the impacts of the educational interventions on medical students; studies involving only postgraduate students/ residents or non-medical students.

Information sources PubMed; Medline and Embase via Ovid; Clinicaltrials.gov; and the Cochrane register of clinical trials will be searched from inception till the date of the final search, which will be uniform across all the databases/ registers. Citation searching of the identified papers will also be performed where relevant, to identify any additional papers that meet the inclusion criteria.

Main outcome(s) The impact of the interventions on the learners, measured using learner satisfaction ratings.
The direct impact of the educational interventions on learners' clinical and non-clinical skills, using tests, exams, focused groups and behavioural changes in real-life clinical practice (for example, using workplace based assessments).

Additional outcome(s) The impact of the educational interventions on the participating trained patients. This can be analysed using patient feedback surveys, focused groups and test scores.

Data management The authors will utilise the Rayyan systematic review software to manage (screen and select) the identified abstracts if a large volume of abstracts are identified from the initial search.

Quality assessment / Risk of bias analysis Quality appraisal/risk of bias analysis for the included studies will be performed using the Cochrane risk of bias tool for randomised trials

(Rob-2) and will be presented using the rob-vis tool. This will be performed independently by the two authors and any disagreements will be settled by repeating the analysis for that particular domain. If further disagreements persist, these will be settled by consensus discussion.

Strategy of data synthesis The study methodology will align with the preferred reporting items for systematic reviews and meta-analyses (PRISMA). Two authors will independently run the search strategy for each database. The two authors will independently scrutinise all titles and abstracts identified from the initial search to assess their eligibility for inclusion. Identified titles and abstracts from the initial search will then screened and the full text articles of the eligible manuscripts will be obtained. Any discrepancies with collected data will be resolved by consensus discussion between the two authors. After all eligible full text manuscripts had been evaluated for inclusion criteria eligibility, data extraction will be conducted by the first author. The outcome measures will be analysed and presented using tables where relevant. Any identified themes from the included studies will also be presented. The authors anticipate that different outcome tools within different medical/surgical specialties will be utilised in the included studies. The authors also anticipate that most of the included studies will have varying degrees of qualitative, quantitative and mixed-methods data. Therefore, a formal meta-analysis with presentation of results using forest plots may not be feasible, if this is the case. In such a scenario, a descriptive synthesis approach for data synthesis will likely be the most appropriate method for pooling data from the included studies. This descriptive synthesis may utilise identified themes that revolve around the primary and secondary outcomes.

Subgroup analysis The authors do not anticipate that any subgroup analysis will be performed.

Sensitivity analysis The authors do not anticipate that any sensitivity analysis will be performed.

Language restriction There will be no language restrictions for the initial search. However, only abstracts with available full text English articles will be selected for final inclusion.

Country(ies) involved United Kingdom.

Keywords Patient educator; patients as educators; patients' voices; patient tutor; undergraduate medical education; medical students; systematic review; randomised controlled trials.

Dissemination plans
National and international poster/oral presentations
Social media
Publication in a peer-reviewed journal.

Contributions of each author
Author 1 - Fitzgerald Anazor - Conceptualisation; methodology-design of the search strategy; methodology-conducting the searches for each database; methodology-screening and selection of the articles; methodology-risk of bias analysis; writing-data analysis; writing-preparing the original draft of the manuscript; writing-editing the manuscript; writing-review of the final draft of the manuscript.
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