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Preparing medical students for drug-related clinical decisions: a study evaluating the impact of digital decision support training

Submission date 24/06/2026	**Recruitment status** No longer recruiting	[_] Prospectively registered [_] Protocol [_] Statistical analysis plan [_] Results [_] Individual participant data [X] Record updated in last year
Registration date 24/06/2026	**Overall study status** Completed	
Last Edited 24/06/2026	**Condition category** Other	

Plain English summary of protocol
Not provided at time of registration

Contact information

Type(s)
Public, Scientific, Principal investigator

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Study information

Scientific Title

Among preclinical medical students, does a structured pedagogical approach to Clinical Decision Support Systems training integrated into the medical curriculum, compared to no formal CDSS training, improve preparedness for drug-related clinical decisions, including confidence, digital literacy, and sustained evidence-based resource use during clinical rotations?

Acronym
CDSS-MED

Study objectives

Ethics approval required
Ethics approval required

Ethics approval(s)
Approved 05/12/2023, Ethics Committee for Non-Medical Human Research (Faculty of Natural Sciences, Medicine and Dentistry Hebrew University of Jerusalem Ein Karem, Jerusalem, 9112102, Israel; +972 (0)26586625; ethicmed@mail.huji.ac.il), ref: 05122023

Primary study design
Interventional

Allocation
Non-randomized controlled trial

Masking
Open (masking not used)

Control
Historical

Assignment
Parallel

Purpose
Educational intervention

Study type(s)

Health condition(s) or problem(s) studied
Medical education and clinical decision-making in pharmacology

Interventions
Preclinical medical students are invited to voluntarily enroll in an elective 'CDSS in Pharmacology' course integrating structured training in Clinical Decision Support Systems (CDSS), including UpToDate® and Micromedex®. The course combines guided instruction, case-based assignments, and supervised practice with evidence-based databases, enabling students to apply CDSS in clinically relevant drug-related scenarios. Students who choose to enroll complete anonymous voluntary surveys at three timepoints: before the course, at course completion, and during clinical rotations (longitudinal follow-up). A comparison group of clinical-year students who did not enroll in the course and a separate group of practicing physicians

complete equivalent surveys assessing CDSS use, confidence, and attitudes toward integrating CDSS training into medical curricula. Group assignment is non-randomized and determined by voluntary enrollment in the elective course.

Intervention Type
Behavioural

Primary outcome(s)
1. Student confidence in CDSS use measured using an anonymous voluntary survey (Likert scale) at before the course, at course completion, and during clinical rotations

2. Frequency and type of digital resource use measured using an anonymous voluntary survey (Likert scale) at before the course, at course completion, and during clinical rotations

3. Student competence in evidence-based clinical decision-making measured using an anonymous voluntary survey (Likert scale) at before the course, at course completion, and during clinical rotations

Key secondary outcome(s)
1. Attitudes toward CDSS integration in medical curricula measured using an anonymous voluntary survey (Likert scale) at a single timepoint (cross-sectional), measured separately in physicians and non-participant students

2. Frequency and type of digital resource use among non-participant students and physicians measured using an anonymous voluntary survey (Likert scale) at a single timepoint (cross-sectional)

Completion date
19/03/2024

Eligibility

Key inclusion criteria
1. Medical students enrolled in the Faculty of Medicine, Hebrew University of Jerusalem, in the final preclinical semester (intervention group) or clinical years (comparison group)
2. Licensed physicians practicing in Israel
3. Voluntary participation with informed consent

Healthy volunteers allowed
Yes

Age group
Mixed

Lower age limit
20 Years

Upper age limit
99 Years

Sex
All

Total final enrolment
200

Key exclusion criteria
1. Medical students who had previously completed the 'CDSS in Pharmacology'course (for the comparison group)
2. Non-medical students or non-physicians

Date of first enrolment
13/03/2019

Date of final enrolment
29/06/2023

Locations

Countries of recruitment
Israel

Sponsor information

Organisation
Hebrew University of Jerusalem

ROR
https://ror.org/03qxff017

Funder(s)

Funder type

Funder Name
Investigator initiated and funded

Results and Publications

Individual participant data (IPD) sharing plan

IPD sharing plan summary

Not expected to be made available