

Clinical Trial Protocol

Iranian Registry of Clinical Trials

16 Sep 2026

Investigating the effect of case-based learning on the learning of medical students in the internship stage

Protocol summary

Study aim

Investigating the learning rate of interns in the field of emergency medicine using a patient-based learning method / Examining the level of satisfaction of emergency medicine interns with the patient-based learning method

Design

control group: In this group, just theoretical topics are conducted in face-to-face classes based on lectures and on the basis of predetermined curriculum.

Settings and conduct

Hospitals affiliated with Iran University of Medical Sciences, where interns spend a month in the emergency department. First, before the intervention, a pre-test is taken from both groups. Then, in each group, the corresponding action described in the previous sections is performed. Next, in order to evaluate the effect of the training, a post test is taken and the questionnaire of satisfaction level from the educational method is given to them. Finally, the results of these cases are compared in two groups.

Participants/Inclusion and exclusion criteria

The inclusion criteria is medical students in the internship stage, and the exclusion criteria is not agreeing to participate in the study.

Intervention groups

In this group, we will provide an educational package to the medical students of the internship stage at the beginning of the one-month emergency medicine course. This package aims to provide case-based learning on important emergency topics, including topics prepared in text, PowerPoint with audio, and podcasts, as well as printed reports from patients in reputable medical journals. Also, in this group, like other students, theoretical topics are conducted in face-to-face classes based on lectures and on the basis of predetermined curriculum.

Main outcome variables

Pre-test result - Post-test result - Student satisfaction

level from the educational method

General information

Reason for update

Acronym

IRCT registration information

IRCT registration number: **IRCT20230307057653N1**

Registration date: **2023-03-29, 1402/01/09**

Registration timing: **prospective**

Last update: **2023-03-29, 1402/01/09**

Update count: **0**

Registration date

2023-03-29, 1402/01/09

Registrant information

Name

omidreza malekpour

Name of organization / entity

Country

Iran (Islamic Republic of)

Phone

+98 21 86701

Email address

malekpouro@yahoo.com

Recruitment status

Recruitment complete

Funding source

Expected recruitment start date

2023-04-04, 1402/01/15

Expected recruitment end date

2023-07-06, 1402/04/15

Actual recruitment start date

empty

Actual recruitment end date

empty

Trial completion date

empty

Scientific title
Investigating the effect of case-based learning on the learning of medical students in the internship stage

Public title
Effect of case-based learning on the learning of medical students

Purpose
Education/Guidance

Inclusion/Exclusion criteria
Inclusion criteria:
Medical students in the internship stage
Exclusion criteria:
Lack of consent to participate in the study

Age
From **20 years** old to **30 years** old

Gender
Both

Phase
N/A

Groups that have been masked
No information

Sample size
Target sample size: **240**

Randomization (investigator's opinion)
Randomized

Randomization description
Students are randomly divided into two main groups. Students with odd number in the list are included in to group 1 and patients with even number are included in group 2.

Blinding (investigator's opinion)
Not blinded

Blinding description

Placebo
Not used

Assignment
Parallel

Other design features

Secondary Ids

empty

Ethics committees

1

Ethics committee
Name of ethics committee
Ethics committee of Iran University of Medical Sciences
Street address
Iran University of Medical Sciences, Hemmat Highway, Tehran
City
Tehran
Province
Tehran
Postal code

۱۴۴۹۶۱۴۵۳۵

Approval date
2023-02-01, 1401/11/12

Ethics committee reference number
IR.IUMS.REC.1401.898

Health conditions studied

1

Description of health condition studied
Learning of medical students
ICD-10 code
ICD-10 code description

Primary outcomes

1

Description
The result of the pre-test
Timepoint
before holding classes and receiving training
Method of measurement
Questionnaire

2

Description
The result of the post-test
Timepoint
After holding classes and receiving training
Method of measurement
Questionnaire

3

Description
Level of satisfaction with the educational method
Timepoint
After holding classes and receiving training
Method of measurement
Questionnaire

Secondary outcomes

empty

Intervention groups

1

Description
Intervention group: We will provide the educational package to the medical students of the internship stage at the beginning of the one-month emergency medicine course. This package aims to provide case-based learning on important emergency topics, including topics prepared in text, PowerPoint with audio, and podcasts, as well as printed reports from patients in common medical journals. Also, like other students, the teaching of theoretical topics is done in face-to-face classes on the

basis of lectures and on the basis of a predetermined curriculum.

Category

Behavior

2

Description

Control group: In this group of medical students in the internship stage who will undergo a one-month in the emergency department, only theoretical topics are taught in face-to-face classes based on lectures and based on a pre-specified curriculum.

Category

Behavior

Recruitment centers

1

Recruitment center

Name of recruitment center

Iran University of Medical Sciences

Full name of responsible person

Omidreza Malekpour

Street address

Iran University of Medical Sciences, Hemmat Highway, Tehran

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Web page address

Sponsors / Funding sources

1

Sponsor

Name of organization / entity

Iran University of Medical Sciences

Full name of responsible person

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Grant name

Grant code / Reference number

Is the source of funding the same sponsor organization/entity?

Yes

Title of funding source

Iran University of Medical Sciences

Proportion provided by this source

100

Public or private sector

Public

Domestic or foreign origin

Domestic

Category of foreign source of funding

empty

Country of origin

Type of organization providing the funding

Academic

Person responsible for general inquiries

Contact

Name of organization / entity

Iran University of Medical Sciences

Full name of responsible person

Omidreza Malekpour

Position

Medical Student

Latest degree

A Level or less

Other areas of specialty/work

Medical Education

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Latest degree

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Person responsible for updating data

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Full name of responsible person

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Latest degree

A Level or less

Other areas of specialty/work

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Phone

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Email

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Sharing plan

Deidentified Individual Participant Data Set (IPD)

Yes - There is a plan to make this available

Study Protocol

Yes - There is a plan to make this available

Statistical Analysis Plan

Yes - There is a plan to make this available

Informed Consent Form

Yes - There is a plan to make this available

Clinical Study Report

Yes - There is a plan to make this available

Analytic Code

Yes - There is a plan to make this available

Data Dictionary

Yes - There is a plan to make this available

Title and more details about the data/document

All potential data can be shared after publication of
result

**When the data will become available and for how
long**

At the end of data collection period until the publication
of results

To whom data/document is available

Only doctors and medical students

Under which criteria data/document could be used

Only when people intend to research about this topic

From where data/document is obtainable

To the scientific and executive members of the project

**What processes are involved for a request to access
data/document**

Communicate with the scientific and executive
authorities of the project - Submitting their official letter
from research centers -using the patient's information
only at designated center - Submitting their final report
obtained by information.

Comments