

Clinical Trial Protocol

Iranian Registry of Clinical Trials

28 Sep 2026

The effect of computer-based simulator on basic clinical psychomotor skill performance and patients preparation for intubation and laryngoscopy by undergraduate anesthetist students in Tehran University of Medical Sciences

Protocol summary

Study aim

Determine the impact of using a computer-based simulator on students' functional error in performing laryngoscopy skills.

Design

The experimental study, with two groups of control and intervention, is a blinded one on 26 second semester undergraduate students of Anesthesiology, University of Tehran, in the 96-97 academic year.

Settings and conduct

Students in Tehran University of Medical Sciences are randomly assigned to two groups of control and intervention. A control group without any intervention in the skill lab performed by an experienced anesthetist and through a checklist (based on the Objective Structured Assessment of Technical Skills) are evaluated. The simulation content intervention group plus video pictures with descriptions, and animations to emphasize important points, and students will be able to view the content as desired before entering Skill Lab. It is then evaluated in an skill lab by an experienced anesthetist and through a checklist (compiled on the OSATS checklist). The evaluator will not be aware of belonging to any group. The scores obtained from both groups are compared to determine the effectiveness of using multimedia content and the number of errors in the patient's preparation is also observed and compared to the two groups.

Participants/Inclusion and exclusion criteria

All second semester students of Anesthesiology who have completed compulsory and routine course on airway management training through lectures and participating in Skill lab at Tehran University of Medical Sciences and have informed consent to participate in the project.

Intervention groups

A control group that is evaluated without any intervention, and an intervention group giving simulated content plus video images with descriptions, and animations to emphasize important points. Students can view this content as often as they like before entering the Skill Lab.

Main outcome variables

Functional error

General information

Reason for update

Acronym

IRCT registration information

IRCT registration number: **IRCT20090127001599N26**

Registration date: **2018-02-14, 1396/11/25**

Registration timing: **prospective**

Last update: **2018-02-14, 1396/11/25**

Update count: **0**

Registration date

2018-02-14, 1396/11/25

Registrant information

Name

Mitra Zolfaghari

Name of organization / entity

Tehran University of Medical Sciences and Health Services

Country

Iran (Islamic Republic of)

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zolfaghm@tums.ac.ir

Recruitment status

Recruitment complete

Funding source

Expected recruitment start date

2018-04-04, 1397/01/15

Expected recruitment end date

2018-05-05, 1397/02/15

Actual recruitment start date

empty

Actual recruitment end date

empty

Trial completion date

empty

Scientific title

The effect of computer-based simulator on basic clinical psychomotor skill performance and patients preparation for intubation and laryngoscopy by undergraduate anesthetist students in Tehran University of Medical Sciences

Public title

The effect of computer-based simulator on basic clinical psychomotor skill performance and patients preparation for intubation and laryngoscopy by undergraduate anesthetist students in Tehran University of Medical Sciences

Purpose

Other

Inclusion/Exclusion criteria

Inclusion criteria:

Participants are second semester undergraduate students who have completed standard and routine airway management training through lectures and a two-hour Skill Lab session at Tehran University of Medical Sciences.

Exclusion criteria:

lack of consent to participate in the project

Age

No age limit

Gender

Both

Phase

N/A

Groups that have been masked

- Outcome assessor

Sample size

Target sample size: 26

Randomization (investigator's opinion)

Randomized

Randomization description

The names of the students who are willing to participate in the project are tabulated and divided using random numbers into two groups of intervention and control.

Blinding (investigator's opinion)

Single blinded

Blinding description

In this study, the control group without intervention and the intervention group after intervention received a separate assessment. In both stages, the evaluator is unaware of whether or not they have received the intervention.

Placebo

Not used

Assignment

Other

Other design features

Secondary Ids

empty

Ethics committees

1

Ethics committee

Name of ethics committee

Ethics Committee, Vice-Chancellor for Research, Tehran University of Medical Sciences

Street address

Qods St, Keshavarz Blvd.Tehran,

City

Tehran

Province

Tehran

Postal code

1417653761

Approval date

2017-12-10, 1396/09/19

Ethics committee reference number

IR.TUMS.VCR.REC.1396.4180

Health conditions studied

1

Description of health condition studied

Functional error

ICD-10 code

ICD-10 code description

Primary outcomes

1

Description

Functional error

Timepoint

A week after receiving the simulator

Method of measurement

Using the OSATS (Objective Structured Assessment of Technical Skills)

Secondary outcomes

empty

Intervention groups

1

Description

The control group is evaluated without an intervention in

the skill lab by an experienced anesthetist and through a checklist (developed according to the OSATS checklist). This assessment involves preparing the patient, choosing the correct equipment for

Category

Other

2

Description

The intervention group is provided with simulated content, and students can view the content as often as they wish before entering the Skill Lab. (Submission of this content to the intervention group after the evaluation of the control group is performed

Category

Other

Recruitment centers

1

Recruitment center

Name of recruitment center

Tehran university of medical science

Full name of responsible person

Saba Abbasi

Street address

Qods St, Keshavarz Blvd, Tehran

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Sponsors / Funding sources

1

Sponsor

Name of organization / entity

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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

Tehran 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

Tehran University of Medical Sciences

Full name of responsible person

Saba Abbasi

Position

Student

Latest degree

Bachelor

Other areas of specialty/work

Anesthesiology

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Person responsible for updating data

Contact

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Sharing plan

Deidentified Individual Participant Data Set (IPD)

Undecided - It is not yet known if there will be a plan to make this available

Study Protocol

Undecided - It is not yet known if there will be a plan to make this available

Statistical Analysis Plan

Undecided - It is not yet known if there will be a plan to make this available

Informed Consent Form

Undecided - It is not yet known if there will be a plan to make this available

Clinical Study Report

Undecided - It is not yet known if there will be a plan to make this available

Analytic Code

Undecided - It is not yet known if there will be a plan to make this available

Data Dictionary

Undecided - It is not yet known if there will be a plan to make this available