

# Clinical Trial Protocol

## Iranian Registry of Clinical Trials

18 Jul 2026

### Comparison the Effectiveness of Diabetic Updates Training by Electronic Learning and Booklet on Knowledge and Satisfaction of Nurses

#### Protocol summary

##### Summary

The purpose of this study is to compare the effect of “E-learning” and “Educational Booklet” methods of Diabetes Updates on knowledge and satisfaction of nurses. This is a Quasi-experimental study. Three selected hospitals affiliated to Tehran University of Medical Sciences will be randomly assigned to the e-learning and Booklet and control groups. These hospitals are similar in recruitment aspects and nursing performance. One hundred and twenty nurses who work in these hospitals (in Endocrinology and Internal wards) will be participated in this study by convenience sampling. Inclusion Criteria: Having Bachelor's or higher degree in nursing and working at least for a year in Endocrinology or Internal wards . They should have internet accessibility at home and work. Exclusion criteria: Not willing to continue or transferring to other wards. At first nurses' knowledge in Diabetes Updates will be evaluated by the Diabetes Updates Knowledge Questionnaire (DUKQ). A user name and password will be given to the e-learning group, the web address of “Continuing Medical Education” platform (CME): <http://cme.tums.ac.ir> will be introduced and participants will be taught how to log-on and use the program. Booklet of educational material about Diabetes Updates will be given to the booklet group. In control group, without any intervention, just nurses will complete the Diabetes Updates Knowledge Questionnaire (DUKQ) a week before, one week and one month after intervention. All three groups' knowledge in Diabetes Updates will be evaluated by the Diabetes Updates Knowledge Questionnaire (DUKQ) a week before, one week and one month later. A nurse satisfaction questionnaire about educational method will be completed at the end of the fourth week by the Booklet and E-learning groups. Finally all three groups reports will be compared.

#### General information

##### Acronym

Diabetes Updates

##### IRCT registration information

IRCT registration number: **IRCT201208251599N19**

Registration date: **2013-03-22, 1392/01/02**

Registration timing: **registered\_while\_recruiting**

Last update:

Update count: **0**

##### Registration date

2013-03-22, 1392/01/02

##### Registrant information

###### Name

Mitra Zolfaghari

###### Name of organization / entity

Tehran University of Medical Sciences and Health Services

###### Country

Iran (Islamic Republic of)

###### Phone

+98 21 6692 7171

###### Email address

[zolfaghm@tums.ac.ir](mailto:zolfaghm@tums.ac.ir)

##### Recruitment status

###### Recruitment complete

##### Funding source

Tehran University of Medical Sciences- Research deputy

##### Expected recruitment start date

2013-01-20, 1391/11/01

##### Expected recruitment end date

2013-04-21, 1392/02/01

##### Actual recruitment start date

empty

##### Actual recruitment end date

empty

##### Trial completion date

empty

**Scientific title**  
Comparison the Effectiveness of Diabetic Updates Training by Electronic Learning and Booklet on Knowledge and Satisfaction of Nurses

**Public title**  
Comparison of Training by Electronic Learning and Booklet for Diabetic Updates

**Purpose**  
Prevention

**Inclusion/Exclusion criteria**  
Inclusion Criteria: Bachelor's degree or higher and having at least 1 year of work experience in Endocrinology or Internal wards and having access to internet at home and workplace. Exclusion criteria: Not willing to continue participation in study or transferring to other wards.

**Age**  
From **20 years** old to **50 years** old

**Gender**  
Both

**Phase**  
N/A

**Groups that have been masked**  
*No information*

**Sample size**  
Target sample size: **120**

**Randomization (investigator's opinion)**  
Randomized

**Randomization description**

**Blinding (investigator's opinion)**  
Not blinded

**Blinding description**

**Placebo**  
Not used

**Assignment**  
Parallel

**Other design features**  
Three selected hospitals affiliated to Tehran University of Medical Sciences will be randomly assigned to the e-learning and Booklet and control groups. These hospitals have equal aspects for recruitment and have similar nursing performance. One hundred and twenty nurses who are working in these hospitals (in Endocrinology and Internal wards) will be participated in this study by convenience sampling.

## Secondary Ids

empty

## Ethics committees

### 1

#### Ethics committee

##### Name of ethics committee

Ethic Committee-Tehran University of Medical Sciences

##### Street address

Ghods St. Keshavarz Blv. Central building of Tehran

University of Medical Sciences, 6th floor  
**City**  
Tehran  
**Postal code**  
**Approval date**  
2012-09-22, 1391/07/01  
**Ethics committee reference number**  
1054/130/91/5

## Health conditions studied

### 1

#### Description of health condition studied

Diabetes

#### ICD-10 code

E10, E11,

#### ICD-10 code description

Diabetes mellitus

## Primary outcomes

### 1

#### Description

Knowledge

#### Timepoint

Before intervention, one week and one month after intervention

#### Method of measurement

Diabetes Updates Knowledge Questionnaire that consisting 30 questions.

### 2

#### Description

Satisfaction

#### Timepoint

One Month after intervention

#### Method of measurement

Questionnaire consists of 26 close-ended questions using five-point Likert scale and one open-ended question about strengths and weaknesses of the educational method.

## Secondary outcomes

### 1

#### Description

Knowledge Retention

#### Timepoint

One month after intervention

#### Method of measurement

Diabetes Updates Knowledge Questionnaire

## Intervention groups

### 1

#### Description

For e-learning group education will be given via "Continuing Medical Education" platform (CME): <http://cme.tums.ac.ir>. The content is designed as interactive scenarios. Participants have access to this content 24 hours a day. In each scenario the first episode is a patient introduction. The rest of the content will be taught using multiple choice questions. At the end of each test, to ensure reading content, participants have to pass a quiz.

#### Category

Prevention

### 2

#### Description

Educational booklet will be given to the Booklet group. The booklet contains 12 pages information about diabetes updates with color images.

#### Category

Prevention

### 3

#### Description

For the control group, no intervention is performed, only Diabetes Updates Knowledge Questionnaires will be completed in three phases.

#### Category

N/A

## Recruitment centers

### 1

#### Recruitment center

##### Name of recruitment center

Imam Khomeini Hospital

##### Full name of responsible person

Mahmud Badiei

##### Street address

Dr Gharib St.

##### City

Tehran

### 2

#### Recruitment center

##### Name of recruitment center

Shariati Hospital

##### Full name of responsible person

Mahmud Badiei

##### Street address

Jalal Ale Ahmad St.

##### City

Tehran

### 3

#### Recruitment center

##### Name of recruitment center

Rasoul Hospital

##### Full name of responsible person

Mahmud Badiei

#### Street address

Niayesh St. Sattarkhan St.

#### City

Tehran

## Sponsors / Funding sources

### 1

#### Sponsor

##### Name of organization / entity

Vice Chancellor for Research, Tehran University of Medical Science

##### Full name of responsible person

Akbar Fotouhi

##### Street address

Vice Chancellor for Research, Tehran University of Medical Sciences. Ghods St. Keshavarz Bv.

##### City

Tehran

#### Grant name

#### Grant code / Reference number

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

Yes

#### Title of funding source

Vice Chancellor for Research, Tehran University of Medical Science

#### Proportion provided by this source

100

#### Public or private sector

empty

#### Domestic or foreign origin

empty

#### Category of foreign source of funding

empty

#### Country of origin

#### Type of organization providing the funding

empty

## Person responsible for general inquiries

#### Contact

##### Name of organization / entity

School of Nursing and Midwifery

##### Full name of responsible person

Mahmud Badiei

##### Position

MS Student of Nursing

##### Other areas of specialty/work

##### Street address

School of Nursing and Midwifery, Tohid Sq.

##### City

Tehran

##### Postal code

Iran

##### Phone

+98 21 6105 4402

##### Fax

##### Email

mahmudbadiei@gmail.com

##### Web page address

## Person responsible for scientific inquiries

### Contact

**Name of organization / entity**

Tehran University of Medical Sciences

**Full name of responsible person**

Mitra Zolfaghari

**Position**

Instructor

**Other areas of specialty/work****Street address**

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**Web page address**

## Person responsible for updating data

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**Full name of responsible person**

Mahmud Badiei

**Position**

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**Other areas of specialty/work****Street address**

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**City**

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**Fax****Email**

mahmudbadiei@gmail.com

**Web page address**

## Sharing plan

**Deidentified Individual Participant Data Set (IPD)**

*empty*

**Study Protocol**

*empty*

**Statistical Analysis Plan**

*empty*

**Informed Consent Form**

*empty*

**Clinical Study Report**

*empty*

**Analytic Code**

*empty*

**Data Dictionary**

*empty*