

Clinical Trial Protocol

Iranian Registry of Clinical Trials

13 Jul 2026

The effects of e-learning of preventing medication errors on knowledge, attitude and performance of nursing students internships in Pediatrics units

Protocol summary

Study aim

Determine the effects of e-learning of preventing medication errors on knowledge, attitude and performance of nursing students internships in Pediatrics units

Design

Clinical trials with community based and pragmatic control group, 40 randomized samples

Settings and conduct

The pediatric units of Motahari Hospital

Participants/Inclusion and exclusion criteria

Major reasons for entering the study before randomization: Choosing a child's apprenticeship unit. At least 1 unit of apprenticeship has been completed in the neonatal department. Major reasons for not entering the study before randomization: Do not attend e-learning at least 2 times. Do not tend to participate in this study.

Intervention groups

In the intervention group, E-learning medication errors and drug eradication guidelines were taken 3 weeks before the start of internship. E-learning intervention was conducted as 9 sessions of 60 minutes three times a week online, creating a training channel for group discussion and The exchange of comments and another channel was only for the presentation of teaching materials in the telegram. At the end of each session, the content of the forthcoming meeting was sent to students in PDF format and asked them to go to the channel and learn the content.

Main outcome variables

Knowledge, attitudes and performance of preventing drug errors in the pediatric units

General information

Reason for update

Acronym

IRCT registration information

IRCT registration number: **IRCT20181022041419N2**

Registration date: **2019-01-12, 1397/10/22**

Registration timing: **retrospective**

Last update: **2019-01-12, 1397/10/22**

Update count: **0**

Registration date

2019-01-12, 1397/10/22

Registrant information

Name

Sima Pourteimour

Name of organization / entity

Country

Iran (Islamic Republic of)

Phone

+98 44 3338 7708

Email address

simapure@yahoo.com

Recruitment status

Recruitment complete

Funding source

Expected recruitment start date

2016-01-21, 1394/11/01

Expected recruitment end date

2016-06-21, 1395/04/01

Actual recruitment start date

2016-01-21, 1394/11/01

Actual recruitment end date

2016-12-21, 1395/10/01

Trial completion date

2017-01-20, 1395/11/01

Scientific title

The effects of e-learning of preventing medication errors on knowledge, attitude and performance of nursing

students internships in Pediatrics units

Public title

The effects of e-learning of preventing medication errors on knowledge, attitude and performance of nursing students internships in Pediatrics units Faculty of Nursing and Midwifery in 2015

Purpose

Education/Guidance

Inclusion/Exclusion criteria

Inclusion criteria:

Choosing a child's apprenticeship unit At least 1 unit of apprenticeship has been completed in the neonatal department.

Exclusion criteria:

Do not attend e-learning at least 2 times Do not tend to participate in this study.

Age

No age limit

Gender

Both

Phase

N/A

Groups that have been masked

No information

Sample size

Target sample size: **40**

Actual sample size reached: **80**

Randomization (investigator's opinion)

Randomized

Randomization description

Random method and description of each method: simple randomization Random unit: Individual Randomization Tool: Like a random numbered table How to make a random sequence: The first two groups were randomized in the control group and the subsequent groups in the intervention group

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 Urmia University of Medical Sciences

Street address

Setad of Urmia university of medical science, Resalat Ave, Urmia city

City

Urmia

Province

West Azarbaijan

Postal code

5718673533

Approval date

2015-10-28, 1394/08/06

Ethics committee reference number

lr.umsu.rec.1394.242

Health conditions studied

1

Description of health condition studied

Drug errors in the pediatric units

ICD-10 code

ICD-10 code description

Primary outcomes

1

Description

Awareness survey is divided into three groups of weak, moderate and good, with grades 26 to 60 poor knowledge, 61 to 95 average knowledge, and 96-130 good knowledge.

Timepoint

Before internship, after internship

Method of measurement

Self-made knowledge questionnaire to determine the prevention of drug errors

2

Description

The attitude is divided into two groups of positive and negative attitude that the scores above 60 were positive attitudes and less than 60 negative attitudes were considered.

Timepoint

Before internship, after internship

Method of measurement

Self-made attitude questionnaire to determine the prevention of drug errors

3

Description

Performance is divided into three categories: Weak, Moderate, and Good, with grades 30 to 80, poor performance, grades 81 to 131, moderate performance and 132 to 150 good performance.

Timepoint

Before internship, after internship

Method of measurement

Self-made checklist to determine performance for preventing drug errors

Secondary outcomes

empty

Intervention groups

1

Description

Intervention group: In the intervention group, e-learning, drug errors and drug misuse prevention guidelines were performed 3 weeks before the beginning of the internship. E-learning intervention was conducted in 9 sessions of 60 minutes three times a week (Saturday, Monday and Wednesday) online with the creation of a training channel for group discussion and exchange of comments and another channel was only for providing training in the telegram. It should be noted that e-learning was conducted collectively (10 people) for each group of interns. Student attendance at each training session was reviewed and approved. To review the contents of the sessions in the first 15 minutes of each session, questions and answers were made and at the end of each session, the next meeting materials were sent to students in PDF format and asked them to go to the channel and learn the contents of the course. It should be noted that the answers to some of the questions related to the problems raised on the same day were also answered to the students. The contents of the training were collected from authored pharmacology books and the patient and nursing Guidelines for nursing and physicians approved by both physicians and nursing practitioners. The contents of the training were compiled from authored pharmacology books and nurse-patient safety guidelines approved by nursing doctors and physicians that include: at the first week: Definition of patient safety, drug error and its prevalence, types of drug errors, causes of drug misconduct, at the second week: Identifying high-risk drugs in the pediatric ward and the necessary notes on registration and enforcement, familiarity with the drug registration system, reporting in the event of a drug mistake, and at the third week: the recognition of common drugs in the pediatric ward based on their common illnesses (6 categories: Drugs for heart failure and respiratory problems, important antibiotics, electrolytes, corticosteroids and anti-inflammatory drugs tracks) and provide the necessary guidance on their applied nursing care.

Category

Prevention

2

Description

Control group: The routine trainings were received by the same trainer.

Category

Prevention

Recruitment centers

1

Recruitment center

Name of recruitment center

Shahid Motahari Hospital in Urmia

Full name of responsible person

Sima Pourteimour

Street address

Motahari Hospital, Kashani Ave, Urmia

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Sponsors / Funding sources

1

Sponsor

Name of organization / entity

Oroumia University of Medical Sciences

Full name of responsible person

Dr. Iraj Mohebi

Street address

Deputy Head of Research & Technology, Setad of Urmia university of medical sciences, end of emergency center, Resalat Blvd, Urmia.

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mohebbi_iraj@yahoo.com

Grant name

Grant code / Reference number

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

Yes

Title of funding source

Oroumia 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

Oroumia University of Medical Sciences

Full name of responsible person

Sima Pourteimour

Position

Instructor of Urmia faculty member

Latest degree

Master

Other areas of specialty/work

Nursery

Street address

Nazlou Campus Building Faculty of Nursing and
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Person responsible for scientific inquiries

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Full name of responsible person

Sima Pourteimour

Position

Instructor of faculty member

Latest degree

Master

Other areas of specialty/work

Nursery

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Person responsible for updating data

Contact

Name of organization / entity

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Full name of responsible person

Sima Pourteimour

Position

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Latest degree

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Other areas of specialty/work

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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

No - There is not a plan to make this available

Data Dictionary

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

Title and more details about the data/document

Individual data is shared by the participants, and only
part of the original outcome can be shared.

When the data will become available and for how long

Starting the access period from 2019

To whom data/document is available

Researchers working in academic and scientific
institutions

Under which criteria data/document could be used

Send a request for access to the data or documentation
via email

From where data/document is obtainable

Sima Pourteimour simapure@yahoo.com

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

At least a week

Comments