

Clinical Trial Protocol

Iranian Registry of Clinical Trials

09 Jun 2026

Designing and Evaluation of Feedbacks Based on Decision Support System on Frequency of Drug-Drug Interactions among Prescriptions in Mashhad

Protocol summary

Summary

The incidence rate of potential drug-drug interactions in physicians' prescriptions is relatively high. Drug utilization review programs can retrospectively detect these medication errors in prescriptions and provide performance feedback for physicians. Information technology-based feedback interventions providing performance indicators for physicians have potential to improve prescribing behavior. The trial evaluates the impact of multiple information technology-based feedback designs on the rate of co-prescription of interacting medications. The study is a 6-month, single-blinded, randomized controlled trial which will be conducted in four outpatient clinics in Mashhad, Iran. The target population is physicians who practice in predetermined clinics. The physicians whose contact information (including mobile number and email address) is not accessible will be excluded. Sample size is equal to the population size contains 200 physicians, which will be randomized to one of the four arms and the research outcome will be analyzed at physicians' prescriptions level. During the study, participants in three intervention arms will receive feedbacks containing rate of potential drug-drug interactions in their own prescriptions via either short message, electronic mail, or a web-based system. Physicians in the control group will not receive feedback. The primary outcome is the rate of potential drug-drug interactions that will be detected in physicians' prescriptions before and after interventions. Researchers expect that the proposed information technology-based feedback interventions are able to reduce the rate of potential drug-drug interactions in physicians' prescriptions.

General information

Acronym

ITDDI

IRCT registration information

IRCT registration number: **IRCT2014082318900N1**

Registration date: **2015-03-10, 1393/12/19**

Registration timing: **registered_while_recruiting**

Last update:

Update count: **0**

Registration date

2015-03-10, 1393/12/19

Registrant information

Name

Ehsan Nabovati

Name of organization / entity

Mashhad University of Medical Sciences

Country

Iran (Islamic Republic of)

Phone

+98 51 3800 2429

Email address

nabovatie891@mums.ac.ir

Recruitment status

Recruitment complete

Funding source

Vice Chancellor for Research of Mashhad University of Medical Sciences

Expected recruitment start date

2014-08-23, 1393/06/01

Expected recruitment end date

2015-03-20, 1393/12/29

Actual recruitment start date

empty

Actual recruitment end date

empty

Trial completion date

empty

Scientific title

Designing and Evaluation of Feedbacks Based on Decision Support System on Frequency of Drug-Drug Interactions among Prescriptions in Mashhad

Public title

The effect of Information Technology in Reducing Potential Drug-drug Interactions in Physicians' Prescriptions

Purpose

Health service research

Inclusion/Exclusion criteria

Inclusion Criteria: Practicing in one of the predetermined clinics Exclusion Criteria: Inaccessibility of contact information (including mobile number and email address); Reluctance to receive feedback

Age

No age limit

Gender

Both

Phase

N/A

Groups that have been masked

No information

Sample size

Target sample size: 200

Randomization (investigator's opinion)

Randomized

Randomization description

Blinding (investigator's opinion)

Single 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 Mashhad University of Medical Sciences

Street address

Daneshgah Ave. Ghoreishi Building

City

Mashhad

Postal code

Approval date

2014-06-28, 1393/04/07

Ethics committee reference number

921174

Health conditions studied

1

Description of health condition studied

Drug prescription indicators

ICD-10 code

Z74.9

ICD-10 code description

Problem related to care-provider dependency, unspecified

Primary outcomes

1

Description

Proportion of prescriptions containing potential drug-drug interactions

Timepoint

Before and after the intervention

Method of measurement

Calculate the number of prescriptions containing potential drug-drug interactions

Secondary outcomes

empty

Intervention groups

1

Description

Intervention group 2: Sending electronic mail to physician containing information about potential drug-drug interactions in her/his own prescriptions

Category

Behavior

2

Description

Intervention group 3: Physician access to a web-based system to view information about potential drug-drug interactions in her/his own prescriptions

Category

Behavior

3

Description

Intervention group 1: Sending short message to physician containing information about potential drug-drug interactions in her/his own prescriptions

Category

Behavior

4

Description

Control Group: Physicians in the control group will not

receive feedback.

Category

N/A

Recruitment centers

1

Recruitment center

Name of recruitment center

Rational use of drug committee, Vice-Chancellor for food and drug

Full name of responsible person

Fereshteh Ghaffari

Street address

Vice-Chancellor for food and drug, Shahrake-Danesh Salamat, Fakouri Blvd.

City

Mashhad

Sponsors / Funding sources

1

Sponsor

Name of organization / entity

Vice Chancellor for Research of Mashhad University of Medical Sciences

Full name of responsible person

Mohsen Tafaghodi

Street address

Ghoreyshi Building, Daneshgah Ave.

City

Mashhad

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 of Mashhad University of Medical Sciences

Proportion provided by this source

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

2

Sponsor

Name of organization / entity

Mashhad University of Medical Sciences

Full name of responsible person

Saeid Eslami

Street address

MUMS Department of Medical Informatics, Faculty of

Medicine, Pardis Daneshgah, Park Square

City

Mashhad

Grant name

Grant code / Reference number

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

Yes

Title of funding source

Mashhad University of Medical Sciences

Proportion provided by this source

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

3

Sponsor

Name of organization / entity

Pharmaceutical Research Center, Mashhad University of Medical Sciences

Full name of responsible person

Mohammad Ramezani

Street address

BuAli Research Institute, BuAli SQ, Ferdowsi Blvd

City

Mashhad

Grant name

Grant code / Reference number

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

Yes

Title of funding source

Pharmaceutical Research Center, Mashhad University of Medical Sciences

Proportion provided by this source

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

Mashhad University of Medical Sciences

Full name of responsible person

Ehsan Nabovati

Position

PhD Candidate

Other areas of specialty/work

Street address

MUMS Department of Medical Informatics, Faculty of
Medicine, Pardis Daneshgah, Park Square

City

Mashhad

Postal code

917-7948-564

Phone

+98 51 3800 2429

Fax

+98 51 3800 2445

Email

NabovatiE891@mums.ac.ir; Nabovati77@yahoo.com;
ENabovati@gmail.com

Web page address

<http://www.mums.ac.ir/dbmi>

Person responsible for scientific inquiries**Contact****Name of organization / entity**

Mashhad University of Medical Sciences

Full name of responsible person

Saeid Eslami

Position

Ph.D; Pharmacotherapy/Medical Informatics

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

MUMS Department of of Medical Informatics, Faculty
of Medicine, Pardis Daneshgah, Park Square

City

Mashhad

Postal code

917-7948-564

Phone

+98 51 3800 2429

Fax

+98 51 3800 2445

Email

EslamiS@mums.ac.ir; S.Eslami.H@gmail.com

Web page address

<http://www.mums.ac.ir/dbmi/>

Person responsible for updating data**Contact****Name of organization / entity**

Mashhad University of Medical Sciences

Full name of responsible person

Ehsan Nabovati

Position

PhD Candidate

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

MUMS Department of Medical Informatics, Faculty of
Medicine, Padris Daneshgah, Park Square

City

Mashhad

Postal code

917-7948-564

Phone

+98 51 3800 2429

Fax

+98 51 3800 2445

Email

NabovatiE@mums.ac.ir; Nabovati77@yahoo.com;
ENabovat@gmail.com

Web page address

<http://www.mums.ac.ir/dbmi/>

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