

# Clinical Trial Protocol

## Iranian Registry of Clinical Trials

25 Jun 2026

### The effect of three counting chest compression methods on quality of CPR and rescuer fatigue

#### Protocol summary

##### Summary

This study a clinical trial aimed to make comparison of the effectiveness of Three methods of counting chest compressions the quality of cardiopulmonary resuscitation and the rescuers fatigue at Mashhad Ghaem Hospital by the CPR team was performed on patients with .cardiopulmonary arrest Inclusion and exclusion criteria include: the rescuers is to possess at least 6 months membership in CPR team; Patient must have advanced aerial pathways such as trachea duct; hesitation of continuing the CPR program and failing to perform the correct 2minutes CPR cycles. The volume of 90 Patients specimens has been calculated. With enouncing the code 99 associated with the patient arrest, the CPR process get commenced . Looking for intubating the patient, Capnography sensor is connected to the endotracheal tube. At the end every 2 minutes, the ETCo2 value is read by the researcher via monitor and registered in the patient CPR assessment checklist. Generally, every rescuer in every CPR performs 4 min chest compression For two cycles of 2 minutes with wash out 2minute. The number of massages which is calculated by cronometer is registered in patient CPR checklist. The rescuer fatigue before starting the CPR is measured upon the self -reported form (evaluation instrument 0-10) and get registered on the basis of observational criterion of severity of fatigue. The specimens will be done in 2 months and the CPR quality, numbers of massage per minute and the rescuers fatigue are investigate

#### General information

##### Acronym

##### IRCT registration information

IRCT registration number: **IRCT2016092129908N1**

Registration date: **2016-11-27, 1395/09/07**

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

Last update:

Update count: **0**

##### Registration date

2016-11-27, 1395/09/07

##### Registrant information

###### Name

Mohammad Rasouly Sangany

###### Name of organization / entity

Mashhad University of Medical Sciences

###### Country

Iran (Islamic Republic of)

###### Phone

+98 52538319

###### Email address

rasoulym1@mums.ac.ir

##### Recruitment status

**Recruitment complete**

##### Funding source

Mashhad University of Medical Sciences - School of Nursing and Midwifery

##### Expected recruitment start date

2016-10-22, 1395/08/01

##### Expected recruitment end date

2016-12-20, 1395/09/30

##### Actual recruitment start date

empty

##### Actual recruitment end date

empty

##### Trial completion date

empty

##### Scientific title

The effect of three counting chest compression methods on quality of CPR and rescuer fatigue

##### Public title

The effect of the number of massage in cardiopulmonary resuscitation

##### Purpose

Diagnostic

### **Inclusion/Exclusion criteria**

Inclusion criteria ; Revivers should be intended to participate in the study ; Must hold a Bachelor certificate or higher education(nursery or anesthesia) ; Minimum of 6 month work experience in reviving team is obligate ; participating in explanatory program before commencing the program interfering ; The patient must have advanced Aerial pathways such as Trachea duct. Exclusion criteria ; Hesitation of continuing the program ; Failing in perfect performing of 2 minutes CPR (cardio massage and Giving artificial breath) ; Refusing to participate in at least one of the methods ; Failing to perform the reviving process according to AHA protocol.

### **Age**

From **18 years** old to **75 years** old

### **Gender**

Both

### **Phase**

N/A

### **Groups that have been masked**

*No information*

### **Sample size**

Target sample size: **90**

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

N/A

### **Randomization description**

### **Blinding (investigator's opinion)**

Not blinded

### **Blinding description**

### **Placebo**

Not used

### **Assignment**

Crossover

### **Other design features**

## **Secondary Ids**

empty

## **Ethics committees**

### 1

#### **Ethics committee**

##### **Name of ethics committee**

Mashhad University of Medical Sciences

##### **Street address**

Research and Technology Mashhad University of Medical Sciences, next to the Cinema Hovazeh, University Street , Mashhad

##### **City**

MASHHAD

##### **Postal code**

#### **Approval date**

2015-12-21, 1394/09/30

#### **Ethics committee reference number**

IR.MUMS.REC.1394.567

## **Health conditions studied**

### 1

#### **Description of health condition studied**

Cardiopulmonary resuscitation

#### **ICD-10 code**

E26, E28

#### **ICD-10 code description**

Pulmonary heart disease and diseases of pulmonary circulation

## **Primary outcomes**

### 1

#### **Description**

The number of massage

#### **Timepoint**

Immediately after two minutes of cardiac massage

#### **Method of measurement**

Stopwatch, Observation

### 2

#### **Description**

rescuer fatigue

#### **Timepoint**

Before and after two minutes of cardiac massage

#### **Method of measurement**

Visual Analog Scale.

### 3

#### **Description**

end-tidal CO2

#### **Timepoint**

Immediately after two minutes of cardiac massage

#### **Method of measurement**

Capnography device

## **Secondary outcomes**

### 1

#### **Description**

number ventilation

#### **Timepoint**

after two minutes of cardiac massage

#### **Method of measurement**

Observation

## **Intervention groups**

### 1

#### **Description**

Alternate Method (1-10): Counting massage by Rescuer From 1 to 10 done. again Massage counting starts from one. Total Count 2 minute massage is done by researcher. Generally, every rescuer in every CPR performs 4 min chest compression For two cycles of 2 minutes with wash out 2minute. quality of CPR and rescuer fatigue will be evaluated.

**Category**

Other

**2****Description**

common method (Without counting): rescuer Performed of Chest compressions without counting for 2 minutes and total Count 2 minute massage is done by researcher. . Generally, every rescuer in every CPR performs 4 min chest compression For two cycles of 2 minutes with wash out 2minute. quality of CPR and rescuer fatigue will be evaluated.

**Category**

Other

**3****Description**

Continuous method (1-100): Rescuer Counts cardiac massage form one to hundred and counting again Repeats form one to hundred. Total Count 2 minute massage is done by researcher. Generally, every rescuer in every CPR performs 4 min chest compression For two cycles of 2 minutes with wash out 2minute. quality of CPR and rescuer fatigue will be evaluated.

**Category**

Other

**Recruitment centers****1****Recruitment center****Name of recruitment center**

Quaem Hospital

**Full name of responsible person**

Mohammad Rasouli Sangan

**Street address**

Primary Street Ahmed abad, Doctor Ali Shariati square , Mashhad

**City**

Mashhad

**Sponsors / Funding sources****1****Sponsor****Name of organization / entity**

Mashhad University of Medical Sciences

**Full name of responsible person**

Zahra Sadat Manzary

**Street address**

School of Nursing and Midwifery, Taghi Abad, Mashhad

**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**

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**

Mashhad University of Medical Sciences

**Full name of responsible person**

Seyyed Reza MAZLUM

**Position**

Nursing Ph.D.

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

Research and Technology Mashhad University of Medical Sciences, next to the Cinema Hovazeh, University Street , Mashhad

**City**

MASHHAD

**Postal code****Phone**

+98 51 3841 1538

**Fax****Email**

mazlomr@mums.ac.ir

**Web page address**

WWW.MUMS.AC.IR

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

Mashhad University of Medical Sciences

**Full name of responsible person**

JAVAD Malekzade

**Position**

Master of Nursing

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

Research and Technology Mashhad University of Medical Sciences, next to the Cinema Hovazeh, University Street , Mashhad

**City**

MASHHAD

**Postal code**

99191-91778

**Phone**

+95 1838411538

**Fax**

+98 51 3843 0249

**Email**

malekzadehj@mums.ac.ir

**Web page address**

WWW.MUMS.AC.IR

## Person responsible for updating data

### Contact

**Name of organization / entity**

Mashhad University of Medical Sciences

**Full name of responsible person**

Mohammad Rasouli Sangan

**Position**

bachelor degree

**Other areas of specialty/work**

**Street address**

Research and Technology Mashhad University of  
Medical Sciences, next to the Cinema Hovazeh,  
University Street , Mashhad

**City**

Mashhad

**Postal code**

**Phone**

+98 51 3841 1538

**Fax**

+98 51 3843 0249

**Email**

rasoulym1@mums.ac.ir

**Web page address**

WWW.MUMS.AC.IR

## 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*