

# Role of pharmacist in diabetes management at community pharmacy

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<b>Registration date</b> 16/05/2017	<b>Overall study status</b> Completed	<input type="checkbox"/> Protocol
<b>Last Edited</b> 15/06/2023	<b>Condition category</b> Nutritional, Metabolic, Endocrine	<input type="checkbox"/> Statistical analysis plan
		<input checked="" type="checkbox"/> Results
		<input type="checkbox"/> Individual participant data

## Plain English summary of protocol

### Background and study aims

Diabetes is a lifelong condition that causes a person's blood sugar level to become too high. About 415 million people suffered from diabetes in 2014 and it is expected that this will increase to 642 million by 2040. In Pakistan, about 6.9% of the adults suffered from diabetes in 2015 and it is estimated that this will increase up to 8.2% by 2040. Presently, in Pakistan, most people visit public and private sector hospitals for the management and treatment of diabetes, but since the doctors are extremely overburdened in most healthcare settings, they cannot give ample consultation time to the patients. In Pakistan, one doctor caters to the healthcare needs of almost 1073 patients, which represents a very low doctor to patient ratio. The problem can be dealt effectively if community pharmacists play a role in controlling and managing diabetes. Community pharmacists have ample medical knowledge and can provide both the appropriate information as well as sufficient time for controlling and managing diabetes. To date, very few studies from Pakistan have explored the role of pharmacists in diabetes management, specifically in community pharmacies. The aim of this study is to assess the impact of pharmacist-led interventions on blood sugar control and patient satisfaction in diabetes management at a community pharmacy.

### Who can participate?

Patients aged 18-70 with type 2 diabetes

### What does the study involve?

Participants are randomly allocated to either the control or the experimental group. The control group receive routine medications and diet plan. The experimental group receive interventions about self-management, quality of life, medication adherence, blood sugar control and knowledge about the disease. Information is provided through a diet chart, a foot care chart, and a low and high blood sugar chart, and the importance of exercise and medication by conversation with the participants. All participants are followed up 1 month later to check their blood sugar and their satisfaction with the services provided during this study.

### What are the possible benefits and risks of participating?

The study may help the patient to control and manage their diabetes. There are no direct risks associated with participating in this study.

Where is the study run from?  
Well Plus Community Pharmacy (Pakistan)

When is the study starting and how long is it expected to run for?  
December 2016 to August 2017

Who is funding the study?  
Investigator initiated and funded (Pakistan)

Who is the main contact?  
Mr Muhammad Abubakar

## Contact information

**Type(s)**  
Scientific

**Contact name**  
Mr Muhammad Abubakar

**ORCID ID**  
<https://orcid.org/0000-0003-4129-1572>

**Contact details**  
Khawaja Farid campus  
Railway Rd  
Bahawalpur  
Pakistan  
63100

## Additional identifiers

**Protocol serial number**  
1

## Study information

**Scientific Title**  
Patient satisfaction with pharmacist-led interventions in diabetes management at a community pharmacy: a randomised controlled trial

**Study objectives**  
Pharmacist-led interventions have a positive impact on diabetes-related knowledge of patient, perception of self-management of the disease, quality of life of patient, medication adherence, glycemetic control and patient satisfaction about the services provided at community pharmacy during the trial.

**Ethics approval required**  
Old ethics approval format

## **Ethics approval(s)**

Pharmacy and Research Ethics Committee (PREC) at the Department of Pharmacy, the Islamia University of Bahawalpur, 22/12/2016, ref: 43-2016/PREC

## **Study design**

Randomised controlled trial

## **Primary study design**

Interventional

## **Study type(s)**

Other

## **Health condition(s) or problem(s) studied**

Type 2 diabetes mellitus

## **Interventions**

Simple random sampling was used for the participants. There are different intervention strategies for the control and the experimental group:

1. The control group received routine medications and dietary plan and no intervention was applied.
2. The experimental group received interventions about self-management, quality of life, medication adherence, glycemic control and knowledge about the disease. Intervention related information was provided through a diet chart, a foot care chart, and a hypo- and hyper-glycemic chart, and the importance of exercise and medication by verbal conversation with the participants.

The total duration of intervention and follow-up was up to 1 month from the date of registration into the trial.

## **Intervention Type**

Other

## **Primary outcome(s)**

1. Glycemic control, measured using the strip method Accu check performa meter at baseline and after the completion of 1 month of intervention
2. Patient satisfaction about the services provided during trial, measured using the DDSM-Q after the completion of 1 month of intervention

## **Key secondary outcome(s)**

1. Perception of self-management of diabetes, measured using the DDSM-Q
  2. Disease state knowledge, measured using the DDSM-Q
  3. Quality of life, measured using the EQ-5D-3L
  4. Medication adherence, measured using the MMAS
- Measured at baseline and after completion of 1 month of intervention

## **Completion date**

30/08/2017

## **Eligibility**

**Key inclusion criteria**

1. Patients with type 2 diabetes mellitus (T2DM) diagnosed by a registered medical practitioner
2. Minimum one year T2DM history
3. Age 18-70 years
4. On anti-diabetes therapy
5. Co-morbidity may or may not be present
6. Minimum two follow-up visits within one month period from the date of registration in trial
7. Both male and female

**Participant type(s)**

Patient

**Healthy volunteers allowed**

No

**Age group**

Adult

**Lower age limit**

18 years

**Upper age limit**

70 years

**Sex**

All

**Key exclusion criteria**

1. Type 1 diabetes
2. Diabetes insipidus
3. Gestational diabetes and other forms of diabetes
4. Age <18 and >70
5. Not on anti-diabetic therapy
6. Less than two follow-up visits within one month period from the date of registration in trial

**Date of first enrolment**

01/12/2016

**Date of final enrolment**

30/05/2017

**Locations****Countries of recruitment**

Pakistan

**Study participating centre**

**Well Plus Community Pharmacy**  
Rafi Qamar road, One unit chowk  
Bahawalpur  
Pakistan  
63100

## Sponsor information

### Organisation

The Islamia University of Bahawalpur

### ROR

<https://ror.org/002rc4w13>

## Funder(s)

### Funder type

Other

### Funder Name

Investigator initiated and funded

## Results and Publications

### Individual participant data (IPD) sharing plan

The datasets generated during and/or analysed during the current study are/will be available upon request from Mr Muhammad Abubakar.

### IPD sharing plan summary

Available on request

### Study outputs

Output type	Details	Date created	Date added	Peer reviewed?	Patient-facing?
<a href="#">Results article</a>		31/08/2021	15/06/2023	Yes	No
<a href="#">Participant information sheet</a>	Participant information sheet	11/11/2025	11/11/2025	No	Yes