

# Patient mobile application for peritoneal dialysis patients: a pilot study

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<b>Registration date</b> 29/04/2022	<b>Overall study status</b> Completed	<input type="checkbox"/> Statistical analysis plan <input type="checkbox"/> Results
<b>Last Edited</b> 23/01/2023	<b>Condition category</b> Urological and Genital Diseases	<input type="checkbox"/> Individual participant data <input type="checkbox"/> Record updated in last year

## Plain English summary of protocol

### Background and study aims

Peritoneal dialysis (PD) is a type of dialysis which uses the peritoneum in a person's abdomen as the membrane through which fluid and dissolved substances are exchanged with the blood. It is used to remove excess fluid, correct electrolyte problems, and remove toxins in those with kidney failure.

In peritoneal dialysis supported by remote monitoring programs, there are no tools for mobile applications, properly evaluated and validated, so a project that undertakes these tasks is very relevant.

The primary objective of this trial is to assess the impact on patient treatment engagement of a remote monitoring program based on a patient mobile application (PMA) compared to standard health care without the mobile application.

### Who can participate?

Peritoneal dialysis (PD) patients aged between 18 and 84 years.

### What does the study involve?

Participants will be randomly allocated to use the Patient Mobile Application (PMA) or receive standard care.

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

The expected benefits come from the fact that having more data on what is happening with the treatment at the patient's home could improve their health outcomes.

The intervention in this study, which is the use of the application for mobile devices, does not imply any risk for the patient.

### Where is the study run from?

Baxter Healthcare Corporation (Colombia)

### When is the study starting and how long is it expected to run for?

November 2021 to August 2023

Who is funding the study?  
Baxter Healthcare Corporation (USA)

Who is the main contact?  
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## Additional identifiers

**EudraCT/CTIS number**  
Nil Known

**IRAS number**

**ClinicalTrials.gov number**  
Nil Known

## Secondary identifying numbers

RCS2021-003

# Study information

## Scientific Title

Multicenter, open-label, randomized controlled clinical trial of prevalent peritoneal dialysis (PD) patients using the Patient Mobile Application (PMA) versus a standard care group: A pilot study.

## Acronym

My PD

## Study objectives

There is a difference in the degree of patient engagement in treatment with a remote monitoring program based on an application for mobile devices, compared to patients with standard care without the application for mobile devices.

## Ethics approval required

Old ethics approval format

## Ethics approval(s)

Approved 09/02/2022, Ethics research committee Fundación Cardioinfantil-La Cardio (Bogotá DC, Colombia; Calle 163A numero 13B 60; +57 6672727; [eticainvestigacion@cardioinfantil.org](mailto:eticainvestigacion@cardioinfantil.org)), ref: CEIC-0028-2022

## Study design

Multicenter open-label randomized controlled pilot study

## Primary study design

Interventional

## Secondary study design

Randomised controlled trial

## Study setting(s)

Home

## Study type(s)

Other

## Participant information sheet

Not available in web format, please use contact details to request a participant information sheet.

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

Remote monitoring program based on mobile application for patients on peritoneal dialysis.

## Interventions

The trial contemplates a 24-week follow-up. Patients will be randomly assigned to the program with remote monitoring based on an application for mobile devices (PMA) or to standard health care (without PMA).

Patients belonging to the renal clinics selected for the study who meet the inclusion criteria and do not meet the exclusion criteria will be invited to participate in the experiment, under a rigorous informed consent process. Once the patient accepts the invitation to participate, compliance with the participation criteria will be evaluated in detail, and he/she will then be randomly assigned to one of the two arms of the study. Patients assigned to the intervention arm (remote monitoring program based on a mobile device application) will be trained in the use of the application, and in the adjustments to the care plan that will be made within the remote monitoring program. Baseline assessments will be performed in both groups and follow-up will be initiated for up to 24 weeks.

Randomization is performed using an online tool based on REDCap (Research Electronic Data Capture).

### **Intervention Type**

Device

### **Phase**

Phase IV

### **Drug/device/biological/vaccine name(s)**

My PD Remote Monitoring APP

### **Primary outcome measure**

Patient/renal clinical interaction, assessed by:

1. Number of changes in dialysis prescription per patient on follow-up from the start of follow-up for up to 24 weeks.
2. Documented frequency of patient-clinic and clinic-patient communications from start of follow-up for up to 24 weeks; and
3. Number of preventive visits to the renal clinic at six (6) months follow-up. These visits are defined as those that are not the regular monthly scheduled visits, that are cited by the clinical staff, and that are intended to proactively intervene in any condition detected in the patient, will be recorded from the start of follow-up for up to 24 weeks.

### **Secondary outcome measures**

Impact on clinical interventions, measured as:

1. Changes in the number of antihypertensives prescribed per patient at 24-week follow-up.
2. Number of emergency department visits per patient at six-month follow-up.
3. Number of hospitalizations per patient at six-month follow-up.
4. Health-related quality of life measured at baseline and at six months (week 24), measured with the KDQoL-36 and PROMIS-29 profile v2.1 instruments.
5. Evaluation of the usability of the cell phone application assessed with the mHealth App Interactive Usability Questionnaire (MAUQ) instrument for patients and health professionals. This evaluation will be performed in week 4 of use and only for the arm randomized to the cell phone application.

### **Overall study start date**

01/11/2021

**Completion date**

31/08/2023

## Eligibility

**Key inclusion criteria**

1. Patient  $\geq 18$  and  $\leq 85$  years of age.
2. Being diagnosed with chronic kidney disease with renal failure.
3. Being a prevalent PD patient (having reached day 90 in a chronic PD program)
4. Having a smart phone (patient or caregiver) that meets the conditions for installing the application (App).

**Participant type(s)**

Patient

**Age group**

Adult

**Lower age limit**

18 Years

**Sex**

Both

**Target number of participants**

168

**Key exclusion criteria**

1. A patient who does not provide informed consent to participate in the study.
2. If the patient is female, pregnancy status.
3. Patients with a prescription for peritoneal dialysis due to a non-renal cause (e.g., cardiorenal).
4. Patients with cirrhosis or hepatic cancer.
5. A patient who is currently participating or has participated in a clinical trial within the last 30 days.
6. Patients with a sensory or cognitive compromise that prevents adequate interaction with the mobile device app.

**Date of first enrolment**

15/09/2022

**Date of final enrolment**

31/03/2023

## Locations

**Countries of recruitment**

Colombia

**Study participating centre**  
**RTS Instituto Nacional del Riñon**  
Calle 43 No. 25-61  
Bogota DC  
Colombia  
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**Study participating centre**  
**RTS Agencia Cardio Infantil**  
Carrera 14a No. 163a-98  
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**Study participating centre**  
**RTS Agencia Universidad Nacional**  
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**Study participating centre**  
**RTS Agencia la Calleja**  
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**Study participating centre**  
**RTS Sucursal Bucaramanga**  
Transversal 93 No. 34-99  
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**Study participating centre**  
**RTS Servicios de Terapia Renal del Valle**  
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**Study participating centre**  
**RTS Sucursal Medellin**  
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## **Sponsor information**

### **Organisation**

Baxter Healthcare Corporation

### **Sponsor details**

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### **Sponsor type**

Industry

## **Funder(s)**

### **Funder type**

Industry

### **Funder Name**

Baxter Healthcare Corporation

### **Alternative Name(s)**

### **Funding Body Type**

Private sector organisation

### **Funding Body Subtype**

For-profit companies (industry)

### **Location**

United States of America

# Results and Publications

## **Publication and dissemination plan**

The results of this study will be published in the form of a poster and a scientific article.

## **Intention to publish date**

30/11/2023

## **Individual participant data (IPD) sharing plan**

The datasets generated during and/or analysed during the current study are not expected to be made available due to the patients give inform consent only for investigators of our study.

## **IPD sharing plan summary**

Not expected to be made available