

# Evaluating SMS to promote retention in and adherence to ART programs

<b>Submission date</b> 07/03/2016	<b>Recruitment status</b> No longer recruiting	<input type="checkbox"/> Prospectively registered <input checked="" type="checkbox"/> Protocol
<b>Registration date</b> 09/03/2016	<b>Overall study status</b> Completed	<input type="checkbox"/> Statistical analysis plan <input checked="" type="checkbox"/> Results
<b>Last Edited</b> 24/08/2022	<b>Condition category</b> Infections and Infestations	<input type="checkbox"/> Individual participant data

## Plain English summary of protocol

### Background and study aims

The rapid uptake of mobile phones across the developing world in recent years has inspired a host of innovative concepts for how they may be used to promote public health, including encouraging people to adopt healthy behaviours and help with delivering health services. Yet, to date, few rigorous evaluations have been done to see how good these “mobile health” (mHealth) programmes (or interventions) really are. This study will look at whether a short message service (SMS) reminder system can be used to support HIV/AIDS patients in Burkina Faso. In the midst of the country’s push to escalate access to antiretroviral therapy (ART), the fact that many people do not continue with their treatment program long term has been identified as a concern. This is a two year study using SMS texts to follow-up on patients and encourage them to stick with their treatment programme. Testing how well the SMS intervention works will be tested as part of the study.

### Who can participate?

Patients with HIV and currently being treated with antiretroviral. They should be at least 15 years old and have reliable access to a mobile phone.

### What does the study involve?

Participants are randomly allocated to one of five different groups. Those in group 1 are placed in the control group and do not receive any SMS texts. Those in group 2 are placed in the “treatment 1” group, and receive one SMS text a week. Those in group 3 are placed in the “treatment 2” group, and receive two SMS text a week. Those in group 4 are placed in the “treatment 3” group, and receive one SMS text and one ASCII image a week. Those in group 5 are placed in the “treatment 4” group, and receive one ASCII image a week. The messages received by all participants remind them to take their antiretroviral medications and refill their prescriptions and their content varies every week. All participants receive their usual standard of care throughout the study period. Support to help them stick with the treatment and additional counselling sessions may also be offered in the community. They are assessed using surveys and via their medical records at the start of the study, after 2 months, after 6 months and finally, after 1 year.

What are the possible benefits and risks of participating?

Benefits of participating include the patients being reminded of taking treatment and being provided with a form of long-distance psycho-social support. Possible risks include the patient stopping their treatment as soon as they stop receiving the reminder messages. There is also the risk of other people being able to take a participants mobile phone and scroll through it, revealing their HIV+ status.

Where is the study run from?

A number of hospitals in Burkina Faso.

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

November 2014 to November 2017

Who is funding the study?

The 3ie-International Impact Evaluation Initiative and Institute of Social Studies, Erasmus University Rotterdam.

Who is the main contact?

1. Professor Arjun Bedi (public)
2. Dr Natascha Wagner (scientific)

## Contact information

### Type(s)

Public

### Contact name

Prof Arjun Bedi

### Contact details

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Kortenaerkade 12  
The Hague  
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2518AX

### Type(s)

Scientific

### Contact name

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### Contact details

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The Hague  
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2518AX  
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## **Additional identifiers**

**Protocol serial number**  
QW4/1218

## **Study information**

### **Scientific Title**

Evaluating SMS to promote retention in and adherence to ART programs: a multi-center randomized controlled trial

### **Acronym**

sms-hiv-bf

### **Study objectives**

1. Do SMS reminders promote retention in HIV treatment programs and encourage adherence to antiretroviral regimens?
2. Are health outcomes improved as patients receive SMS reminders?
3. Are subjective health outcomes improved as patients receive SMS reminders?
4. Can message fatigue be observed in the medium to long-term?
5. Do the type (text versus picture) and the frequency (once a week versus twice a week) of the SMS have a differential impact?
6. Are patients receiving the SMS messages more likely to work?
7. Have patients receiving the messages a better nutritional status?

### **Ethics approval required**

Old ethics approval format

### **Ethics approval(s)**

Ministry of Health, Ministry of Scientific Research and Innovation, Ethics Committee for Health-Related Research, 03/12/2014, ref: 2014-12-141

### **Study design**

Multi-center randomized controlled trial

### **Primary study design**

Interventional

### **Study type(s)**

Quality of life

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

HIV (human immunodeficiency virus)

### **Interventions**

Participants are randomly allocated to one of five treatments:

Treatment 0: Control group

Treatment 1: SMS text with varying content, low frequency, one message per week

Treatment 2: SMS text with varying content, high frequency, two messages per week

Treatment 3: SMS text with varying content and ASCII image, two messages per week

Treatment 4: ASCII image, low frequency, one message per week

All groups will receive the standard of care. Along with periodic clinical check-ups and treatment counseling, this includes routine monitoring of patient CD4 cells and viral load as measures of disease progression. Adherence support and/or additional treatment counseling may also be provided at the community level. This will be assessed during follow-up surveys.

For groups 1-4, messages will be sent on a weekly basis. A total of 4-8 monthly text messages will thus be sent to each participant assigned to groups 1-4.

## **Intervention Type**

Other

## **Primary outcome(s)**

1. CD4 count, BMI: Retrieved from patient medical records and measured by the health personnel, measured at baseline (February-April 2015) and in all three follow-up surveys (April-May 2016, October-December 2016, October-December 2017)
2. Subjective wellbeing: Survey responses from patients (1-5 Likert scale), recorded by enumerators, who are part of HIV support associations; measured at baseline (February-April 2015) and in all three follow-up surveys (April-May 2016, October-December 2016, October-December 2017)
3. Pill taking: Survey responses from patients, recorded by enumerators, who are part of HIV support associations; measured at baseline (February-April 2015) and in all three follow-up surveys (April-May 2016, October-December 2016, October-December 2017)
4. For patients that are lost to follow up we identify the reason based on administrative data. This happens at any point in time and will be used to assess retention

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

1. Weekly monitoring data from the SMS platform is collected electronically starting from October 2015. This information allows us to assess whether all patients received the SMS messages
2. Whether a patient worked during the last month, how many days and the amount of pay : Survey responses from patients, recorded by enumerators, who are part of HIV support associations; measured at baseline (February-April 2015) and in all three follow-up surveys (April-May 2016, October-December 2016, October-December 2017)
3. Consumption module with detailed list of foods consumed in Burkina: Survey responses from patients, recorded by enumerators, who are part of HIV support associations; measured at baseline (February-April 2015) and in the second follow-up survey (October-December 2016)

## **Completion date**

30/11/2017

## **Eligibility**

### **Key inclusion criteria**

1. The patient must provide his/her informed consent to participate in the study
2. The patient must be at least 15 years
3. The patient must have reliable access to a mobile phone

**Participant type(s)**

Patient

**Healthy volunteers allowed**

No

**Age group**

Adult

**Sex**

All

**Key exclusion criteria**

1. No informed consent provided
2. Patient only makes use of the services of the health center once

**Date of first enrolment**

01/02/2015

**Date of final enrolment**

26/05/2015

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

Burkina Faso

**Study participating centre**

**Dédougou Regional Hospital (Centre Hospitalier Régional Dédougou)**

Dédougou

Burkina Faso

-

**Study participating centre**

**Boromo Medical Center (Centre Médical Boromo)**

Boromo

Burkina Faso

-

**Study participating centre**

**Nouna Medical Center (Centre Médical Nouna)**

Nouna  
Burkina Faso

-

**Study participating centre**

**Solenzo Medical Center (Centre Médical Solenzo)**

Solenzo  
Burkina Faso

-

**Study participating centre**

**Toma Medical Center (Centre Médical Toma)**

Toma  
Burkina Faso

-

**Study participating centre**

**Tougan Medical Center (Centre Médical Tougan)**

Tougan  
Burkina Faso

-

**Study participating centre**

**University Medical Center Banfora (Centre Médical Universitair Banfora)**

Banfora  
Burkina Faso

-

**Study participating centre**

**Banfora Regional Hospital (Centre Hospitalier Régional Banfora)**

Banfora  
Burkina Faso

-

**Study participating centre**

**Niangoloko Medical Center (Centre Médical Niangoloko)**

Niangoloko  
Burkina Faso

-

**Study participating centre**

**Samandin Medical Center (Centre Médical Samandin)**

Samandin  
Burkina Faso

-

**Study participating centre**

**Oasis Medical Center (Centre Médical Oasis)**

Laye  
Burkina Faso

-

**Study participating centre**

**Clinique OST**

Kadiogo  
Burkina Faso

-

**Study participating centre**

**Hope Medical Center and Life / Ouaga(Centre Médical Espoir et Vie/Ouaga)**

Ouagadougou  
Burkina Faso

-

**Study participating centre**

**30 Medical Center (Centre Médical 30)**

Ouagadougou  
Burkina Faso

-

**Study participating centre**

**Biomolecular Research Center Pietro Annigoni (Centre de Recherche Biomoléculaire Pietro Annigoni (CERBA))**

Ouagadougou

Burkina Faso

-

**Study participating centre**

**Saint Camille Medical Center (Centre Médical Saint Camille)**

Saint Camille

Burkina Faso

-

**Study participating centre**

**Pissy Medical Center (Centre Médical Pissy)**

Pissy

Burkina Faso

-

**Study participating centre**

**Youth Association for the Promotion of Orphans (Associations des Jeunes pour la Promotion des Orphelins (AJPO))**

Ouagadougou

Burkina Faso

-

**Study participating centre**

**URLBS**

Ouagadougou

Burkina Faso

-

**Study participating centre**

**Association of African Women Facing AIDS (Association des Femmes Africaines Face au Sida – (AFASI))**

Ouagadougou

Burkina Faso

-

**Study participating centre**



**Lamizana Medical Center (Centre Médical Lamizana)**

Lamizana  
Burkina Faso

-

**Study participating centre**

**Positive Living Medical Center (Centre Médical Vie positive)**

Ouagadougou  
Burkina Faso

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**Study participating centre**

**Schiphra Medical Center (Centre Médical Schiphra)**

Schiphra  
Burkina Faso

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**Study participating centre**

**Kossodo Medical Center (Centre Médical Kossodo)**

Kossodo  
Burkina Faso

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**Study participating centre**

**Paul VI Medical Center (Centre Médical Paul VI)**

Ouagadougou  
Burkina Faso

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**Study participating centre**

**Ouargaye Medical Center (Centre Médical Ouargaye)**

Ouargaye  
Burkina Faso

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**Study participating centre**

**Tenkodogo Regional Hospital (Centre Hospitalier Régional Tenkodogo)**

Tenkodogo  
Burkina Faso

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**Study participating centre**

**Garango Medical Center (Centre Médical Garango)**

Garango  
Burkina Faso

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**Study participating centre**

**Koupela Medical Center (Centre Médical Koupela)**

Koupela  
Burkina Faso

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**Study participating centre**

**Zabré Medical Center (Centre Médical Zabré)**

Zabré  
Burkina Faso

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**Study participating centre**

**Tenkodogo Medical Center (Centre Médical Tenkodogo)**

Tenkodogo  
Burkina Faso

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**Study participating centre**

**Bittou Medical Center (Centre Médical Bittou)**

Bittou  
Burkina Faso

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**Study participating centre**

**Pouytenga Medical Center (Centre Médical Pouytenga)**

Pouytenga  
Burkina Faso

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**Study participating centre**

**Kaya Regional Hospital (Centre Hospitalier Régional Kaya)**

Kaya  
Burkina Faso

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**Study participating centre**

**Kongoussi Medical Center (Centre Médical Kongoussi)**

Kongoussi  
Burkina Faso

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**Study participating centre**

**Kaya Medical Center (Centre Médical Kaya)**

Kaya  
Burkina Faso

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**Study participating centre**

**Bam District Medical Centre (Centre Médical District Bam)**

Bam  
Burkina Faso

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**Study participating centre**

**Boulsa Medical Center (Centre Médical Boulsa)**

Boulsa  
Burkina Faso

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**Study participating centre**

**Barsalogho Medical Center (Centre Médical Barsalogho)**

Barsalogho  
Burkina Faso

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**Study participating centre**

**Sapouy Medical Center (Centre Médical Sapouy)**

Sapouy  
Burkina Faso

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**Study participating centre**

**Réo Medical Center (Centre Médical Réo)**

Réo  
Burkina Faso

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**Study participating centre**

**Koudougou Regional Hospital (Centre Hospitalier Régional Koudougou)**

Koudougou  
Burkina Faso

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**Study participating centre**

**Kolbe Sabou Medical Center (Centre Médical Kolbe Sabou)**

Sabou  
Burkina Faso

-

**Study participating centre**

**Leo Medical Center (Centre Médical Léo)**

Léo  
Burkina Faso

-

**Study participating centre**

**Pô Medical Center (Centre Médical Pô)**

Pô

Burkina Faso

-

**Study participating centre**

**Kombissiri Medical Center ( Centre Médical Kombissiri)**

Kombissiri

Burkina Faso

-

**Study participating centre**

**Centre Médical Manga**

Manga

Burkina Faso

-

**Study participating centre**

**Saponé Medical Center (Centre Médical Saponé)**

Saponé

Burkina Faso

-

**Study participating centre**

**Fada Regional Hospital (Centre Hospitalier Régional Fada)**

Fada

Burkina Faso

-

**Study participating centre**

**Bogandé Medical Center (Centre Médical Bogandé)**

Bogandé

Burkina Faso

-

**Study participating centre**

**Diapaga Medical Center (Centre Médical Diapaga)**

Diapaga

Burkina Faso

-

**Study participating centre**

**Manni Medical Center (Centre Médical Manni)**

Manni

Burkina Faso

-

**Study participating centre**

**Pama Medical Center (Centre Médical Pama)**

Pama

Burkina Faso

-

**Study participating centre**

**Day hospital (Hôpital de Jour)**

Bobo-Dioulasso

Burkina Faso

-

**Study participating centre**

**Dafra Medical Center (Centre Médical Dafra)**

Dafra

Burkina Faso

-

**Study participating centre**

**OST Bobo**

Bobo-Dioulasso

Burkina Faso

-

**Study participating centre**

**Hope Medical Center and Life / Bobo (Centre Médical Espoir et Vie/Bobo)**

Bobo-Dioulasso

Burkina Faso

-

**Study participating centre**

**Dô Medical Center (Centre Médical Dô)**

Dô

Burkina Faso

-

**Study participating centre**

**Medical Center REVS+ (Centre Médical REVS+)**

Bobo-Dioulasso

Burkina Faso

-

**Study participating centre**

**Yèrêlon Medical Center (Centre Médical Yerelon)**

Yer

Burkina Faso

-

**Study participating centre**

**Houndé Medical Center (Centre Médical Houndé)**

Houndé

Burkina Faso

-

**Study participating centre**

**Orodara Medical Center (Centre Médical Orodara)**

Orodara

Burkina Faso

-

**Study participating centre**

**Ouahigouya Regional Hospital (Centre Hospitalier Régional Ouahigouya)**

Ouahigouya  
Burkina Faso

-

**Study participating centre**

**AMIE Medical Center (Centre Médical AMMIE)**

Burkina Faso

-

**Study participating centre**

**Gourcy Medical Center (Centre Médical Gourcy)**

Gourcy  
Burkina Faso

-

**Study participating centre**

**Séguénéga Medical Center (Centre Médical Seguénege)**

Seguénege  
Burkina Faso

-

**Study participating centre**

**Titao Medical Center (Centre Médical Titao)**

Titao  
Burkina Faso

-

**Study participating centre**

**Yako Medical Center (Centre Médical Yako)**

Yako  
Burkina Faso

-

**Study participating centre**

**Boussu Medical Center (Centre Médical Boussé)**

Boussé  
Burkina Faso

-



**Study participating centre**

**Ziniaré Medical Center (Centre Médical Ziniaré)**

Ziniaré

Burkina Faso

-

**Study participating centre**

**Zorgho Medical Center (Centre Médical Zorgho)**

Zorgho

Burkina Faso

-

**Study participating centre**

**Dori Regional Hospital (Centre Hospitalier Régional Dori)**

Dori

Burkina Faso

-

**Study participating centre**

**Djibo Medical Centre (Centre Médical Djibo)**

Djibo

Burkina Faso

-

**Study participating centre**

**Medical Center Gorom-Gorom (Centre Médical Gorom-Gorom)**

Gorom-Gorom

Burkina Faso

-

**Study participating centre**

**Sebba Medical Center (Centre Médical Sebba)**

Sebba

Burkina Faso

-

**Study participating centre****Dano Medical Center (Centre Médical Dano)**

Dano

Burkina Faso

-

**Study participating centre****Diébougou Medical Center (Centre Médical Diébougou)**

Diébougou

Burkina Faso

-

**Study participating centre****University Medical Center Gaoua (Centre Médical Universitair Gaoua)**

Gaoua

Burkina Faso

-

**Study participating centre****Gaoua Regional Hospital (Centre Hospitalier Régional Gaoua)**

Gaoua

Burkina Faso

-

**Study participating centre****Tiebele Medical Center (Centre Médical Tiebele)**

Tiebele

Burkina Faso

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**Sponsor information****Organisation**

Erasmus University Rotterdam

**ROR**<https://ror.org/057w15z03>

## Organisation

Polytechnic University of Bobo-Dioulasso (Université Polytechnique de Bobo-Dioulasso)

## Funder(s)

### Funder type

Research organisation

### Funder Name

3ie-International Impact Evaluation Initiative

### Funder Name

Erasmus Universiteit Rotterdam

### Alternative Name(s)

Erasmus University Rotterdam, Erasmus Universiteit, EUR

### Funding Body Type

Government organisation

### Funding Body Subtype

Universities (academic only)

### Location

Netherlands

## Results and Publications

### Individual participant data (IPD) sharing plan

-

### IPD sharing plan summary

Not expected to be made available

### Study outputs

Output type	Details	Date created	Date added	Peer reviewed?	Patient-facing?
<a href="#">Results article</a>		23/05/2022	24/08/2022	Yes	No
<a href="#">Results article</a>		09/01/2020	24/08/2022	Yes	No
<a href="#">Protocol article</a>		17/08/2016	24/08/2022	Yes	No
<a href="#">Participant information sheet</a>	Participant information sheet	11/11/2025	11/11/2025	No	Yes
<a href="#">Study website</a>	Study website	11/11/2025	11/11/2025	No	Yes