

# A study investigating cocoa powder as an additional treatment for coronavirus patients and its effect on complications associated with COVID-19

<b>Submission date</b> 21/12/2021	<b>Recruitment status</b> No longer recruiting	<input checked="" type="checkbox"/> Prospectively registered <input type="checkbox"/> Protocol
<b>Registration date</b> 24/12/2021	<b>Overall study status</b> Completed	<input type="checkbox"/> Statistical analysis plan <input type="checkbox"/> Results
<b>Last Edited</b> 20/06/2022	<b>Condition category</b> Infections and Infestations	<input type="checkbox"/> Individual participant data <input type="checkbox"/> Record updated in last year

## Plain English summary of protocol

### Background and study aims

A new disease (COVID-19), caused by a germ (virus) called the coronavirus (SARS-CoV-2), is spreading around the world (this is called a pandemic). The illness is usually mild, but it can cause a severe chest infection (pneumonia) and other complications and result in hospitalization in some people. It has been found that a high percentage of COVID-19 patients experience disturbances related to the ability of their blood to form clots appropriately. It has also been found out that these disturbances in clotting are related to the function of a portion in the lining layer in all blood vessels (endothelial layer), and which regulates the exchange of important nutrients between the blood and its surroundings. It has been noted that certain compounds called polyphenols, which are found in certain plants including cocoa, are able to 'repair' damage to the blood vessel lining.

Polyphenol-rich cocoa is a strong anti-oxidant with reported benefits in improving endothelial function. By administering polyphenol-rich cocoa powder in addition to standard treatment to patients affected by COVID-19 it is thought that complications of COVID-19 could be less severe.

### Who can participate?

All patients with confirmed COVID-19 (using a swab of the nose and throat on hospital admission) seeking care at Ga East Municipal Hospital.

### What does the study involve?

Participants invited to take part in this study will be invited to read and sign a consent form indicating their willingness to be enrolled in the study. The scientists and investigators running the study will ask further questions to confirm that this study is appropriate for participants.

The study has two different groups: one group will receive the natural cocoa beverage twice a day over 14 days (or until discharge from hospital) in addition to standard COVID-19 treatment and the other group will receive the standard treatment only. Participants will be placed into

one of 2 treatment groups in a similar way to flipping a coin, they have an equal chance of being put in either of the groups. Participants will not be able to choose which group you are placed in. Participants will be assessed as part of their stay in hospital and this information will be used to understand the effect of the natural cocoa beverage in addition to standard COVID-19 treatment.

What are the possible benefits and risks of participating?

Unwanted effects are not anticipated as cocoa is used widely by most people as a beverage. The study team will record if any unanticipated effects do occur when the cocoa beverage is used as a beverage during COVID-19 treatment.

The information collected as part of his study will be used to assess the suitability of the addition of cocoa on recovery or otherwise from COVID-19.

Where is the study run from?

Ghana Cocoa Board (Ghana)

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

January 2022 to September 2022

Who is funding the study?

Ghana Cocoa Board (Ghana)

Who is the main contact?

Dr Edward Amporful

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## Contact information

### Type(s)

Scientific

### Contact name

Dr Edward Amporful

### Contact details

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## Additional identifiers

### Clinical Trials Information System (CTIS)

Nil known

### ClinicalTrials.gov (NCT)

Nil known

**Protocol serial number**

Nil known

## Study information

**Scientific Title**

Polyphenol-rich cocoa powder as adjuvant therapy in patients with COVID-19

**Study objectives**

Polyphenol-rich cocoa powder as adjuvant therapy in patients with COVID-19 reduces complications associated with COVID-19

**Ethics approval required**

Old ethics approval format

**Ethics approval(s)**

Approved 08/10/2021, Research & Development Division, Ghana Health Service (P. O. Box MB 190, Accra, Ghana; + 233-302-681109; ethics.research@ghsml.org), ref: GHS-ERC:012/09/21

**Study design**

Interventional randomized controlled trial

**Primary study design**

Interventional

**Study type(s)**

Prevention

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

COVID-19 (SARS-CoV-2 infection)

**Interventions**

A total of 126 consenting participants will be recruited and randomly assigned in a 1:1 ratio to one of two groups as follows:

1. The treated group will, in addition to standard treatment for COVID-19, receive 10 g of polyphenol-rich natural cocoa powder pre-(packed in plastic dispensing envelopes) twice daily for 14 days or until discharge. The powder will be dissolved in 200 ml of boiling water, stirred, allowed to cool, and then administered at a temperature tolerable to the patient, 1 h before meals.
2. The comparison group will receive only the standard treatment for COVID-19

Participants will be randomized through consecutive allocation of study subject numbers and an enrolment log prepared in advance by the study statistician.

Vital signs and other clinical information will be assessed twice daily 14 days or until discharge for all recruited participants.

**Intervention Type**

Supplement

### **Primary outcome(s)**

1. COVID-19 symptoms measured using clinical assessment twice daily between baseline and 14 days, or until discharge
2. Coagulation measured using laboratory assessment of blood samples collected twice daily between baseline and 14 days, or until discharge

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

1. SARS-CoV-2 viral load measured using RT-PCR at baseline and 96 h
2. Duration of hospital admission measured using from patient records between baseline and hospital discharge
3. Time to clinical recovery measured using from patient records between baseline and hospital discharge
4. Final clinical prognosis measured using measured from patient records at 14 days or hospital discharge
5. Need for ICU management measured from patient records between baseline and hospital discharge
6. Endothelial function measured using biomarkers of coagulation on laboratory assessment and improvement in symptoms on clinical assessment twice daily between baseline and 14 days, or until discharge

### **Completion date**

21/09/2022

## **Eligibility**

### **Key inclusion criteria**

1. Confirmed COVID-19 at admission (real-time RT-PCR-documented SARS-CoV2-carriage in nasopharyngeal sample) and seeking care at the study sites
2. Can tolerate oral medication and oral food intake
3. Able to sign a written informed consent form (or assent and parental consent in the case of those below 18 years of age)

### **Participant type(s)**

Patient

### **Healthy volunteers allowed**

No

### **Age group**

All

### **Sex**

All

### **Total final enrolment**

126

### **Key exclusion criteria**

1. Unable to swallow/receive oral medication
2. Requiring ICU care on screening

3. Pregnant or lactating, based on their declaration and pregnancy test results when required
4. Self-reported known allergies or intolerance to natural cocoa
5. Inability or unwillingness to be followed up for the trial period

**Date of first enrolment**

21/06/2022

**Date of final enrolment**

15/09/2022

## Locations

**Countries of recruitment**

Ghana

**Study participating centre****Ga East Municipal Hospital**

Ghana Infectious Disease Centre

Accra

Ghana

0302

## Sponsor information

**Organisation**

Ghana Cocoa Board

## Funder(s)

**Funder type**

Other

**Funder Name**

Ghana Cocoa Board

## 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 Prof. George Obeng Adjei (goadjei@yahoo.com).

## IPD sharing plan summary

Available on request

### Study outputs

Output type	Details	Date created	Date added	Peer reviewed?	Patient-facing?
<a href="#">Participant information sheet</a>	Participant information sheet	11/11/2025	11/11/2025	No	Yes