# Community-based communication interventions for increasing the blood donor pool in Ghana: a pilot randomized controlled trial

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Protocol

Version: 1.0

Date: 26 April 2021

Statistical analysis plan: pages 28-29

Participant information sheet: Appendix 4
Signature page of consent: Appendix 5

# Protocol Title

**Community-based communication interventions for increasing the blood donor pool in Ghana: a pilot randomized controlled trial**

## Short Title:

Community-based communication approaches for blood donation in Ghana – Pilot Study

Version: 1.0

Date: 26 April 2021


Name of PI

Dr Lucy Asamoah- Akuoko

Institution of PI

National Blood Service Ghana

Name of MPI

Dr Yvonne Dei- Adomakoh

Institution of MPI

University of Ghana Medical School



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**List of Abbreviations**

| | |
|---|---|
| "PRECEDE" | Predisposing, Reinforcing and Enabling Constructs in Educational Diagnosis and Evaluation. |
| "PROCEED" | Policy, Regulatory, and Organizational Constructs in Educational and Environmental Development |
| **AE** | **Adverse Event** |
| BCI | Blood Collection Index |
| **Co-I** | **Co-Investigator** |
| **CRFs** | **Case Report Forms** |
| DCC | Data Coordinating Center. |
| DSMB | Data Safety Monitoring Board |
| **EU** | **European Union** |
| FRD | Family/Replacement Blood Donors |
| GCP | Good Clinical Practice |
| ICF | Informed Consent Form |
| **ICH** | **International Council for Harmonization** |
| **IRB** | **Institutional Review Board** |
| LMICs | Low- and Middle-Income Countries |
| MICE | Multiple Imputation Via Chained Equations |
| NBSG | National Blood Service Ghana |
| **NIH** | **National Institutes of Health** |
| NHLBI | National Heart, Lung, and Blood Institute |
| OHRP | US Office for Human Research Protections |
| **PI** | **Principal Investigator** |
| QSR | Qualitative Software and Research |
| **R** | **R Project for Statistical Computing** |
| RCT | Randomized Controlled Trial |
| **SAE** | **Serious Adverse Event** |

| | |
|---|---|
| **SOP** | **Standard Operation Procedure** |
| SSA | Sub-Saharan Africa |
| **SU** | **Syracuse University** |
| SZBC | Southern Zonal Blood Centre |
| TAM | Technology Acceptance Model |
| TPB | theory of planned behaviour |
| **UG3** | **Exploratory/Developmental Cooperative Agreement Phase I** |
| **UH3** | **Exploratory/Developmental Cooperative Agreement Phase II** |
| UP | **Unanticipated Problem** |
| **US** | **United States of America** |
| VNRBD | Voluntary Non-Remunerated Blood Donors |
| **WHO** | **World Health Organisation** |

**General Information**

**Study title:** Community-based communication interventions for increasing the blood donor pool in Ghana: a pilot randomized controlled trial

**Funder:** The National Heart, Lung, and Blood Institute (NHLBI), United States

**Address of Funder:** 6701 Rockledge Drive, Building II, Suite 10118, Bethesda, MD 20892

**Project Investigators/Co-Investigators**

| Investigator | Role | Responsibilities | Contact Information |
|---|---|---|---|
| Dr. Lucy Asamoah-Akuoko | Principal Investigator | Study oversight, liaising with funder and lead awardee institution, overall responsibility for protocol development and implementation, design of data collection tools, input into all data collection (training, tools) and analysis, overall design of larger study, support to staff, liaising with key stakeholders, leading write-up of findings, facilitate National Blood Service Ghana support to project implementation | National Blood Service Ghana<br>Head, Research and Development<br>National Blood Service Ghana<br>Korle-Bu, Accra<br>Tel: +233 206 301006<br>Ext: 339<br>Email: lucyasamoah@yahoo.com |
| Dr. Yvonne Dei-Adomakoh | Co-Investigator | Lead institution PI, contribute to administrative leadership and will also contribute to protocol writing, data analysis and publication, facilitate University of Ghana support to the project. | Department of Hematology<br>College of Health Sciences<br>Korle-Bu, Accra<br>Tel: +233243550980<br>Email: yadei-adomakoh@ug.edu.gh |
| Dr. Bernard Appiah | Co-investigator | Protocol development, design, implementation and evaluation of interventions to promote recruitment and retention of blood donors. Facilitating training workshops to build local capacity. Dissemination of findings to key audiences | Department of Public Health<br>Falk College, Syracuse University<br>435A White Hall Syracuse, NY 13244<br>Tel: +1-315443152<br>email: beappiah@syr.edu |

| | | | |
|---|---|---|---|
| | | including policymakers, media professionals and researchers | |
| Dr. Tara Tancred | Co-Investigator | Contribute to design, implementation and evaluation of study, development of study manuals, manuscripts, abstracts, presentations. Facilitate training workshops with local research staff to build local capacity in implementation research. | The Centre for Capacity Research<br>Liverpool School of Tropical Medicine Pembroke Place, Liverpool, United Kingdom<br>Tel: +44(0)7597640371<br>email: tara.tancred@lstmed.ac.uk |
| Prof. Philip Adongo | Co-investigator | Provide research and implementation support, particularly in the area of qualitative research. | Department of Social & Behavioural Sciences<br>School of Public Health<br>University of Ghana<br>Tel: +233244806015<br>Email: adongophilip@yahoo.com |
| Dr. Seth Adu-Afarwuah | Co-Investigator | Contribute to protocol development, provide support for study design and statistical analysis, contribute to development of manuals of operation. | The Centre for Capacity Research<br>Liverpool School of Tropical Medicine Pembroke Place, Liverpool, United Kingdom<br>Tel: +44(0)7597640371<br>email: tara.tancred@lstmed.ac.uk |
| Prof. Alfred Yawson | Co-investigator | Technical research support to data collection.<br>Project Monitoring and Data Management. | Department of Community Health, College of Health Sciences, Korle-Bu, Accra<br>Tel: +233244662711<br>email: aeyawson@yahoo.com |
| Prof. Edeghonghon Olayemi | Co-Investigator | Contribute to development of manuals of operation, review of protocol, reports and manuscripts. | Department of Hematology College of Health Sciences, Korle-Bu, Accra<br>Tel: +233246968211<br>email: eolayemi@ug.edu.gh |
| Dr. Michael Acquah | Co-Investigator | Review of developed protocol and manuals of operation. | National Blood Service, Korle-Bu, Accra<br>Tel: +233206301106 |

| | | | |
|---|---|---|---|
| | | | Email: michael.e.acquah@gmail.com |
| Dr. Amma Benneh - Akwasi Kuma | Co-Investigator | Contribute towards finalization of standard operation procedures (SOPs) and case report forms (CRFs). Contribute to analysis, interpretation and write-up of research findings. | Department of Hematology College of Health Sciences, Korle-Bu, Accra Tel: +233208305555 email: animabenneh@yahoo.com |
| Dr. Catherine Segbefia | Co-Investigator | Review of SOPs and study protocol. | Department of Child Health, College of Health Sciences, Korle Bu, Accra. Tel: +233302 665406/+23320 888 7888 email: csegbefia@chs.edu.gh |
| Prof. Cavan Reilly | Co-Investigator | Provide advice on study implementation. Generation of randomization schedules. Oversee data management. | Coordinating Centers for Biometric Research Division of Biostatistics University of Minnesota, Twin Cities Tel: +1 612-624-9644 Email: cavanr@ccbr.umn.edu |
| Prof. Haitao Chu | Co-investigator | Statistical collaborator including statistical design and data analysis, reporting and manuscript drafting and editing. | Department of Biostatistics School of Public Health University of Minnesota Twin Cities Tel: +1 612-219-7180 Email: chux0051@umn.edu |
| Susan Telke | Co-investigator | Masters level statistical collaborator on study design, reports to support implementation, analysis and manuscript preparation. Generation of reports for DSMB review. | Coordinating Centers for Biometric Research Division of Biostatistics University of Minnesota, Twin Cities Tel: +1 612-626-8887 Email: telke001@umn.edu |

**Name(s) and address(es) of the clinical laboratory(ies) and other medical and/or technical department(s) and/or institutions involved in the research**: None

**Project Summary**

This pilot study utilizes a mixed-methods approach to develop a novel docu-drama communication strategy, design WhatsApp intervention, evaluate the feasibility of a larger pragmatic randomized controlled trial (RCT) of the two communication strategies and assess acceptability of the communication strategies aimed to increase blood donation among first-time blood donors within the catchment areas of the Southern Zonal Blood Centre (SZBC) in Ghana.

The pilot study has four components: 1) a qualitative component (a workshop) will be used to design a docu-drama (to be incorporated into the larger study), 2) key informant interviews to guide intervention development, 3) a simultaneous randomized pilot trial will evaluate the feasibility of the larger trial design of communication interventions using WhatsApp compared to control, and 4) a final mixed-methods (quantitative survey and focus groups) assessment of participant views of acceptability, effectiveness, feasibility and cultural appropriateness of the two proposed communication interventions

The three objectives of this pilot study are the careful design of a novel docu-drama communication intervention and WhatsApp intervention, evaluation of the feasibility of a larger randomised controlled trial (RCT) of communication strategies, and assessment of participant views of the two proposed communication interventions (i.e., docu-drama, WhatsApp) and control among first time blood donors within the catchment areas of the SZBC.

The design of the docu-drama will engage designers and hold a drama design workshop for 2 days. To later assess acceptability among blood donors in Southern Zonal Blood Center (SZBC) of the National Blood Service Ghana (NBSG), the resulting proposed docu-drama design will be followed by a small-scale test-run with blood donors. The pilot RCT with WhatsApp and control has a duration of 12 months with a maximum of 6 months to achieve enrollment goals to allow for 6 months of communication intervention with follow-up for the last individual enrolled.

**Rationale & Background Information**

Culturally appropriate interventions are urgently needed to increase blood donation in Ghana and other countries in Sub-Saharan Africa (SSA) given the region's low blood donation rates. Such interventions need to be evidence-based. However, the lack of implementation research for promoting adequate blood supply has been identified as a challenge in SSA (Custer et al., 2018). For example, a review of the interventions to promote blood donation globally did not identify a single study from SSA (Godin et al., 2012). The review identified mobile phone-based interventions including the use of mobile phone calls and text messages for promoting blood donation. A subsequent but related review globally focusing on the retention of first-time blood donors, did not identify a single study in Sub-Saharan Africa (Bagot et al., 2016).

Several health services interventions in SSA have included the use of drama (Joronen et al., 2008), mobile phones (Aranda-Jan et al., 2014) and community groups to promote health behaviours with promising findings. However, scientific research on the effectiveness of such interventions aimed to promote blood donation is lacking.

This project aims to use social media (WhatsApp) and audio-visual docu-drama interventions to increase awareness of the need, advantages, and opportunities for voluntary blood donations as a collective resource to significantly increase the retention of first-time blood donors in Ghana. **A docu-drama is a form of a communication programming that has drama of actual events re-enacted in addition to a brief documentary to explain those events. Docu-dramas tend to have the entertainment appeal of drama while also having factual information often created in documentaries. As participants watch and listen to docu-dramas, they are likely to be engaged in blood donation issues in an entertaining manner, with factual data that could have the potential to make them to become repeat blood donors.**

Our scientific premise for the use of community-based interventions for promoting the availability of safe blood donation in Ghana is based on the PRECEDE-PROCEED framework (Figure 3). The acronym "PRECEDE" stands for Predisposing, Reinforcing and Enabling Constructs in Educational Diagnosis and Evaluation. "PROCEED" stands for Policy, Regulatory, and Organizational Constructs in Educational and Environmental Development. Predisposing factors exist at the cognitive level and include factors such as attitudes, and beliefs that influence behaviours (Green & Kreuter, 1999). Reinforcing factors relate to actions that

help to maintain a behaviour. Such factors include providing rewards and praising individuals for maintaining particular behaviours (Green & Kreuter, 1999). Enabling factors represent the suitable conditions that must exist for a given behaviour to occur. For example, in blood donation, this could include attitudes of blood donation staff or the availability of mobile blood donation drives (Appiah, 2013). Policy, regulatory, and organizational constructs in educational and environmental development describe factors that could influence the implementation and process, impact and outcome evaluations of interventions (Green & Kreuter, 1999).

The study also uses the technology acceptance model (TAM) and the theory of planned behaviour (TPB) to help explain factors that serve us mediators for aiding blood donation. Our choice of integrating these models is to help us identify socio-behavioural, environmental, and societal barriers to safe blood donation in communities and to assess the extent to which new mobile health communicating strategy involving WhatsApp and other communication strategies could be useful for promoting blood donation in Ghana. According to the TAM, the actual use of technology is influence by the intention to use, which is also influenced by perceived usefulness and perceived ease of use of the technology (Venkatesh & Bala, 2008). The theory of planned behaviour indicates that factors such as attitude, subject norms, and perceived behavioural control influence an individual's behavioural intentions and behaviours and has been examined in first-time blood donors (Masser et al., 2012).

The PRECEDE-PROCEED model can be used as a planning tool for health programs (Green & Kreuter, 1999), including blood donation. Despite the utility of the PRECEDE-PROCEED model, it has largely not been used for community-based blood donation studies in SSA. One study that did apply this model to community-focused studies on blood donation in SSA found it to be helpful for identifying deterrents to and motivators for blood donation in the region (Appiah, 2013). However, the study did not specifically target its use for testing the efficacy of interventions for promoting blood donation.

Moreover, there is a lack of evidence for using interventions such as audio-visual docu-dramas in community settings (Godin et al., 2012) and WhatsApp applications for attracting and retaining blood donors in SSA. For example, a WhatsApp intervention in Brazil was “not effective at increasing the blood donors’ return rates” (Rodrigues Lucena et al., 2020). However, the intervention used WhatsApp as a text messaging platform and did not assess the utility of WhatsApp as a social networking–based relatedness intervention among blood

donors. There is a critical need for an evidence-based determination of how to establish the use of culturally appropriate communication interventions, including the use of WhatsApp and audio-visual docu-dramas to attract and retain new blood donors, especially in SSA.

This project aims to test if social media interaction (WhatsApp) and audio-visual docu-drama interventions aimed to increase awareness of the need, advantages, and opportunities for voluntary blood donations as a collective resource will successfully retain both first-time voluntary non-remunerated blood donors (VNRBD) and family/replacement blood donors (FRD) as repeat donors. The implementation research endpoints of acceptability, feasibility, and cultural appropriateness of these interventions will also be evaluated.

**Background**

Blood mobilization and collection agencies worldwide are increasingly challenged with blood donor recruitment and retention. Despite having about 84% of the world's population, LMICs contribute only about 60% of the 118.5 million donations of blood collected annually worldwide (WHO, 2020). This translates into a gap between national blood needs and supply, which is largest in low- and middle-income countries (LMICs) (Roberts et al., 2019).

In many SSA countries, blood donation is mainly from two types of donors: voluntary non-remunerated blood donors (VNRBD) and family/replacement donors (FRDs). Family replacement donations serve as either an alternative for or a supplement to insufficient numbers of VNRBDs in many SSA countries. FRDs, who donate blood only in response to the need of their own family or acquaintances fill the gap between demand and supply. However, the FRD system places an undue burden on patients because the family of the patient bears the responsibility of recruiting blood donors. The transfusion of patients or their discharge from wards may also be delayed until friends and/or family can be mobilized to 'donate' equivalent numbers of units required or transfused. Because of the time lag in organizing family of friends to donate blood when the need arises, reliance on replacement donations accounts for inadequate blood for emergencies such as obstetric hemorrhage and severe anemia in children due to malaria.

In Ghana, there is about a 40% deficit in blood requirements annually. Based on the estimated population of Ghana, the estimated minimum annual blood requirement for Ghana for 2019 was 300,000 units and the Blood Collection Index (BCI) was about 6. The percentage of blood collected from voluntary blood donors was about 34% in 2019 (NBS Ghana, 2020). Studies on

blood donor motivation have identified several global and locally relevant factors that influence blood donation. Such factors include prosocial motivation, including altruism (donating blood to help others), collectivism (donating blood for family and/or friends), reciprocity (donating blood in response to or in anticipation of a kind act); education, and educational talks on blood donation; incentives, and awareness of the need for blood (Asamoah-Akuoko, 2018; Asenso-Mensah, 2014). These findings are in agreement with studies in other SSA countries (Duboz et al 2010; Muthivhi et al., 2015). The studies also identified that interventions that are likely to increase repeat blood donation among first-time donors include those with a focus on education, information, addressing fears, and regular communication with blood donors (Asamoah-Akuoko et al., 2020; Asenso-Mensah et al., 2014).

In a study in Ghana, only 3.1% (Asamoah-Akuoko, 2018) of first-time donors (voluntary non-remunerated and family replacement donors) returned to donate blood. In SSA, several factors including negative perceptions and beliefs deter people from donating blood (Asamoah-Akuoko et al., 2017). Factors such as fear, attitudes and misperceptions contribute to low blood donation rates (Asamoah-Akuoko et al., 2017). Thus, socio-behavioural interventions are urgently needed to retain first-time donors.

**Study Location**

**Ghana**

Ghana is situated on the south-central coast of West Africa and covers an area of about 238,537 square kilometers. The country is bound north by Burkina Faso, east by Togo, west by Cote d'Ivoire, and south by the Atlantic Ocean. Administratively, Ghana is divided into 16 regions and 216 districts. Ghana had a population of 24.6 million in the 2010 census (Ghana Statistical Service, 2012), a figure projected to be about 30 million in 2019 (Ghana Statistical Service, 2019.).

The agency of the Ministry of Health responsible for the provision of blood services in Ghana is the NBSG. The NBSG coordinates the activities of one stand-alone blood center, the SZBC, which is located in Accra in the southern zone of Ghana, and another 153 hospital-based blood collection sites (NBS Ghana, 2011). The hospital-based blood collection sites are located in teaching, regional and district hospitals, and operate their respective hospital-based transfusion facilities. The SZBC is responsible for procuring and supplying blood and blood components to hospitals and clinics that transfuse blood in the five southern administrative regions of Ghana with a total population of about 16.5 million but is only able to provide blood mainly for three

of the regions. Since the SZBC is not able to meet the blood requirements of all health facilities, some health facilities in the catchment area collect and test blood for use, to supplement the blood supplied by the SZBC.

**The Southern Zonal Blood Centre**

**The study will take place in the catchment area of the SZBC of NBSG.** Currently, the SZBC (Figure 1) provides services for health facilities in the Greater Accra Region, and parts of the Eastern and Central Regions with a total population of about 10.7 million (Ghana Statistical Services, 2019), and collected about 33,000 (NBS Ghana, 2020) units of blood in 2019. About 70.5% of the total blood collected was from first-time donations, and 47% was from voluntary non-remunerated blood donors. The estimated minimum blood requirement for the three regions is about 100,000 units per annum based on the World Health Organisation (WHO) formula of 1% of the population.

**Data collection will occur at blood donation sessions conducted by the SZBC.** The Centre has six fixed blood collection sites. Five of these are located in various health facilities: Korle-Bu Blood Bank, Korle-Bu Maternity Site, Pentecost Hospital, LEKMA Hospital, and the Maamobi Polyclinic. Blood collection at these sites is predominantly from family replacement donors (FRDs). The sixth site is located at the Accra Shopping Mall, and blood collection is from voluntary non-remunerated blood donors (VNRBDs). Mobile blood collection sessions are scheduled on a weekly basis and are planned to be easily accessible to groups of individuals or organizations such as churches and mosques, schools, corporate organizations, social and community groups. Such sites could be located in the city or in the peri-urban parts of the catchment area. Four blood collection teams collect blood from mobile blood collection sites and the fixed sites.

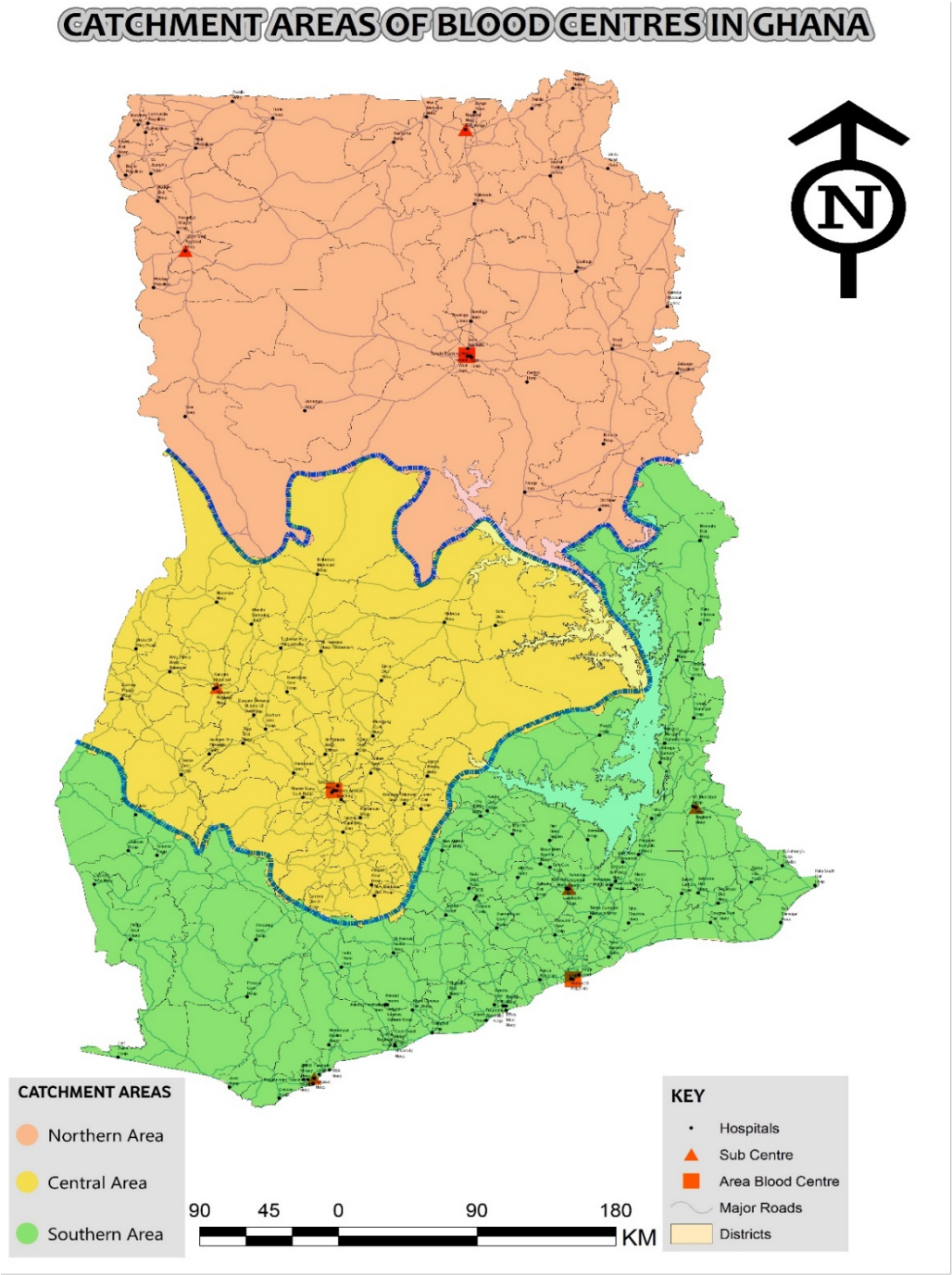



***Figure 1: Catchments areas of Zonal Centers of the National Blood Service Ghana***

## Study Goals and Objectives

The study has a main goal of creating and testing the feasibility of using communication interventions to make first-time blood donors become repeat donors.

## Primary Objectives

The three objectives of this pilot study are the careful design of a novel docu-drama communication intervention and WhatsApp intervention, evaluation of the feasibility of a larger RCT of communication strategies, and assessment of participant views of the two proposed communication interventions (i.e., docu-drama, WhatsApp) and control) among first time blood donors within the catchment areas of the Southern Zonal Blood Centre:

1. Development of the Docu-drama will involve a drama workshop with blood donors and non-blood donors who are > 18 years with the aid of drama and communication professionals. Key informant interviews will guide the development of WhatsApp intervention.
2. Feasibility of recruitment, enrollment, retention and adherence with a two-arm pilot RCT (WhatsApp and control). A target retention rate of at least 90% completing the pilot trial is sought. Retention will be measured by the proportion of participants who will remain in the study by the end of the follow-up period. If we are unable to achieve this target, alternative strategies will be considered for the UH3 phase. One of the primary objectives is to estimate the proportion of successful return blood donation for planning the programmatic randomized clinical trial in the UH3 phase.
3. Acceptability will be assessed with quantitative surveys and participant focus groups to understand the opinions and perspectives of acceptability, effectiveness, feasibility and cultural appropriateness of the docu-drama, WhatsApp and control communication interventions.

## Secondary Objectives

To design culturally appropriate communication interventions: docu-drama and WhatsApp groups for retaining first-time blood donors using the PRECEDE-PROCEED framework.

To examine intervention-specific increases in knowledge, attitudes, beliefs, motivations, intention, and relatedness as potential mediators of intention to donate among first-time blood donors. Evaluate the reliability of new or modified outcome measurement instruments.

## Study Design

The pilot study utilizes a mixed-methods approach to develop a novel docu-drama communication strategy, evaluate the feasibility of a larger pragmatic randomized controlled trial (RCT) of a WhatsApp based communication strategy and assess acceptability of the communication strategy aimed to increase blood donation among first time blood donors within the catchment areas of the SZBC.

There are two communication interventions: docu-drama and WhatsApp. However, because the development of the docu-drama takes more time, it will not be feasible to include the docu-drama intervention in the pilot RCT, recruit 100% participants, follow up for 6-months for the primary outcome and evaluate the secondary outcomes, considering the duration the UG3 phase. Therefore, only the WhatsApp intervention will be piloted in the RCT. The docu-drama intervention will be designed and test-run in preparation for an RCT in the UH3 phase.

In sequence, this pilot study and larger RCT are grounded in the PRECEDE-PROCEED implementation science framework. This study has four components 1) a qualitative component (workshop) will be used to design a docu-drama (to be incorporated into the larger study), 2) Key informant interviews to guide intervention development 3) a simultaneous pilot RCT will evaluate the feasibility and the proportion of successful return blood donation for planning the larger trial design of the communication interventions using WhatsApp and control, and 4) a final mixed-methods (quantitative survey and focus groups) assessment of participant views of acceptability, effectiveness, feasibility and cultural appropriateness of all of the proposed communication interventions intended for the larger UH3 RCT to be administered after completion of the pilot trial prior to the UH3 phase.

The PRECEDE-PROCEED framework planning tool will be used to develop and evaluate the three strategies (Figure 3) and will incorporate the Theory of Planned Behaviour (Figure 4) and Technology Acceptance Model (Figure 5).

## PRECEDE-PROCEED Framework

PRECEDE provides a planning approach to help create our interventions whereas PROCEED, aids the implementation and evaluation of the interventions to be designed in the PRECEDE part of the model.

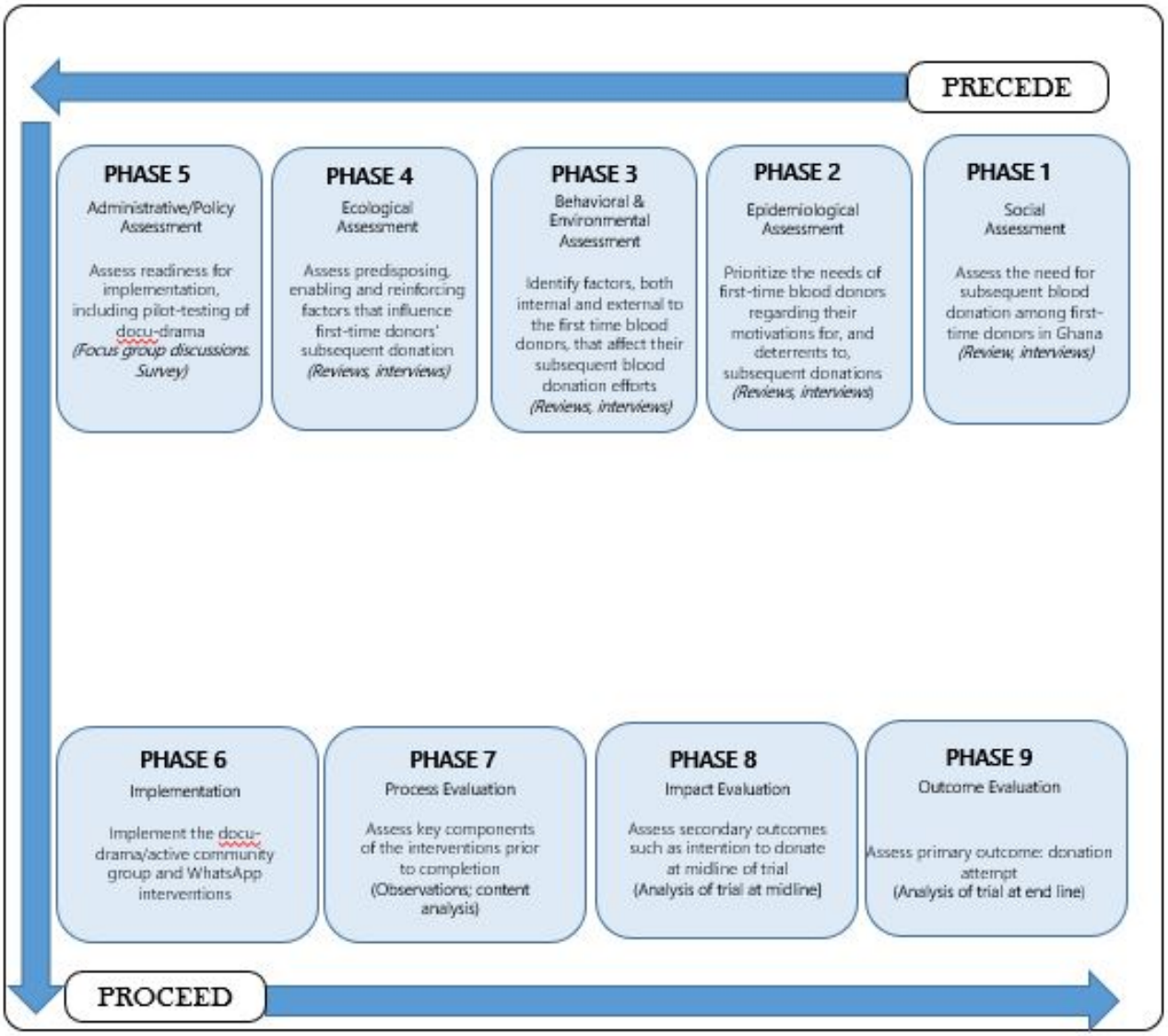



***Figure 2: PRECEDE-PROCEED Model that guides the study***

**Planning Model Component: Five Phases**

We will use the following PRECEDE strategies during the UG3 phase:

First, we will conduct a systematic literature review of the effectiveness of social behavioural interventions including the use of drama for aiding blood donation in low-and middle-income countries. Second, we will conduct key informant interviews with four key stakeholders, with a minimum analysis sample of 24, comprising of: a) Blood Donors (n=6), b) Non-blood Donors (n=6), c) Blood Donation Staff (n=6) and d) community leaders (n=6) in the Greater Accra area of Ghana to seek their perspectives on how to encourage repeat blood donation. The sample size, as recommended for qualitative studies, will be increased if saturation is not reached (Saunders et al., 2018). Blood donors usually donate in groups in the community - such as social clubs, community youth clubs, religious groups etc. Blood donors will be selected

from a list provided by the Blood Donor Recruitment Officers or volunteers (Blood Donor Recruitment Officers are on the staff of the NBSG who work with donors; volunteers are liaison persons between the community groups and the blood center. Both groups recruit blood donors and can advise on non-donors within their groups). Non-donors will be selected purposively from communities within which blood donation sessions are held, to ensure that the non-donors have been exposed to blood donation education just as the donor. The non-donor is a person who is qualified to donate but has never donated and does not intend to donate on the day of the interview.

Third, we will organize a drama design workshop with at least 20 key stakeholders including blood donors, drama actors and drama production experts.

All qualitative data collection will be conducted by trained researchers with social science and qualitative research background. A training manual will be developed for the training which will be conducted prior to data collection.

The activities will help the team to identify barriers, opportunities and recommendations that will inform the development and guidelines for implementation of the docu-drama and WhatsApp weekly messages to promote blood donation in Ghana. Specifically, the five PRECEDE phases will be addressed as follows:

**Phase 1: Social Assessment**

We will use the proposed systematic review, in-depth interviews and drama design workshop to explore and understand the need for creating socio-behavioural interventions to aid blood donation in Ghana.

**Phase 2: Epidemiological assessment**

We will use the findings of the systematic review and other data collected in Phase 1 to identify the evidence around repeat donations among first-time blood donors. This will include assessing current information on the proportion of first-time donors who become repeat donors. Information will be obtained from National Blood Service Ghana records and published literature in Ghana and elsewhere in sub-Saharan Africa.

**Phase 3: Behavioural and Environmental Assessment**

We will use both primary data (key informant interviews) and secondary data (for example, the findings from the systematic review) to identify donor factors and service factors, that affect the subsequent blood donation efforts of first-time blood donors.

**Phase 4: Educational and Ecological Assessment.**

We will consider factors that must be in place to initiate and sustain first time blood donors' attempts at returning to donate blood. These are called predisposing, enabling and reinforcing factors. We will identify these factors through analysis of primary and secondary data, and put them into categories, and rank their importance.

Predisposing factors, which explain first-time blood donors' behaviour regarding subsequent donation efforts, include knowledge, attitudes, cultural beliefs, and readiness to change. Enabling factors, which enable first-time blood donors to act on their beliefs, attitudes, and knowledge, include the availability of policies, assistance, or resources.

Reinforcing factors, which become prominent after a behaviour has been started, promote repetition or persistence of behaviour through the provision of continuing rewards or incentives such as praise or reassurance.

These factors will be identified from previous data on first-time blood donors in Ghana, and the key informant interviews with participants will be drawn from the NBSG staff, community-based blood donation volunteers, blood donors and non-blood donors.

**Phase 5: Administrative and Policy Assessment**

Identify the administrative and policy factors that influence what can be implemented. The team will evaluate how organizational factors such as policies, procedures, culture and the availability of resources influence what can be implemented by using two approaches to evaluate implementation research outcomes of the interventions. These are the creation of WhatsApp and docu-drama interventions and test-running the interventions.

***WhatsApp pilot RCT***

A WhatsApp group will be formed for the pilot RCT. There will be one study team member, who will be the content mediator (research assistant), and who will be responsible for sending

weekly messages and clarifications on blood donation for six months. The participants in the WhatsApp group, after the pilot RCT will have a focus group discussion on what worked well and what did not, and provide information on feasibility, acceptability and cultural appropriateness of the intervention. Prior to, and after exposure to the WhatsApp intervention, a pre-, and post-test survey on the theory of planned behaviour constructs and implementation research measures will be conducted.

***Docu-drama test-run***

A docu-drama group of purposively selected 10 first-time donors will be formed. They will attend one meeting to watch two docu-dramas, each lasting 15 minutes, followed by a one-hour focus group discussion on the content of the drama, and feasibility, acceptability and cultural appropriateness of the intervention. Prior to, and after the viewing and discussion, a pre-, and post-test survey on the theory of planned behaviour constructs and implementation research measures will be conducted. Two study team members will facilitate the discussions. The docu-drama test-run will include an attendance list at the scheduled meeting. Those who attended, watch the 2 episodes, and stayed for the discussion will be considered as having adhered to the intervention.

**The PROCEED Component will be addressed during the four years of the UH3 phase.**

The PROCEED component involves exposing the interventions to participants and evaluating their outcomes. The UG3 pilot RCT will address the feasibility and inform the design of the PROCEED component.

**The Theory of Planned Behaviour**

As shown in Figure 4, according to the theory of planned behaviour, behavioural intention to return to donate in 6 months is influenced by factors such as attitude, subject norms, and perceived behavioural control, and has been examined in first-time blood donors (Masser et al., 2012). The theory of planned behaviour model will be used to evaluate the effect of intervention-specific changes in attitude, subject norms, and perceived behavioural control on intention to return to donate blood, and on actual return donation attempt.

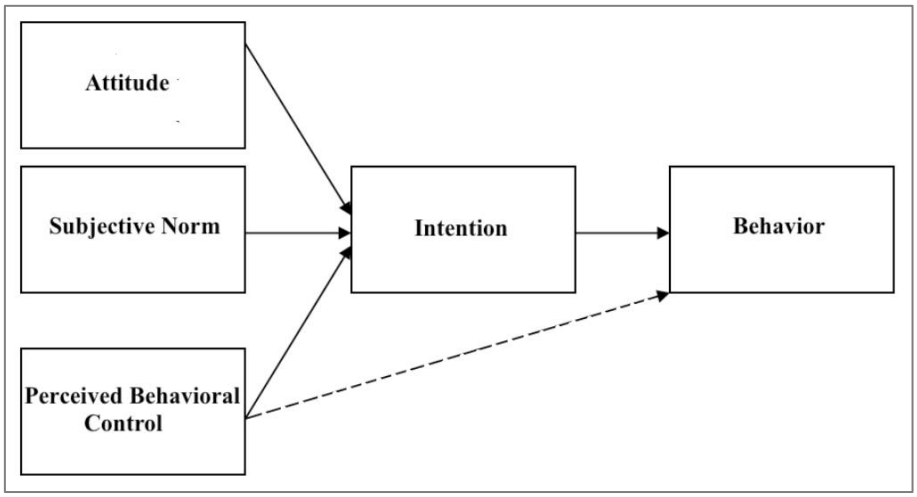



***Figure 3: Theory of planned behaviour***

**The Technology Acceptance Model**

As shown in Figure 5, according to the technology acceptance model, intention to use technology (in this case, WhatsApp) is influenced by perceived usefulness and perceived ease of use of the technology (Venkatesh & Bala, 2008).

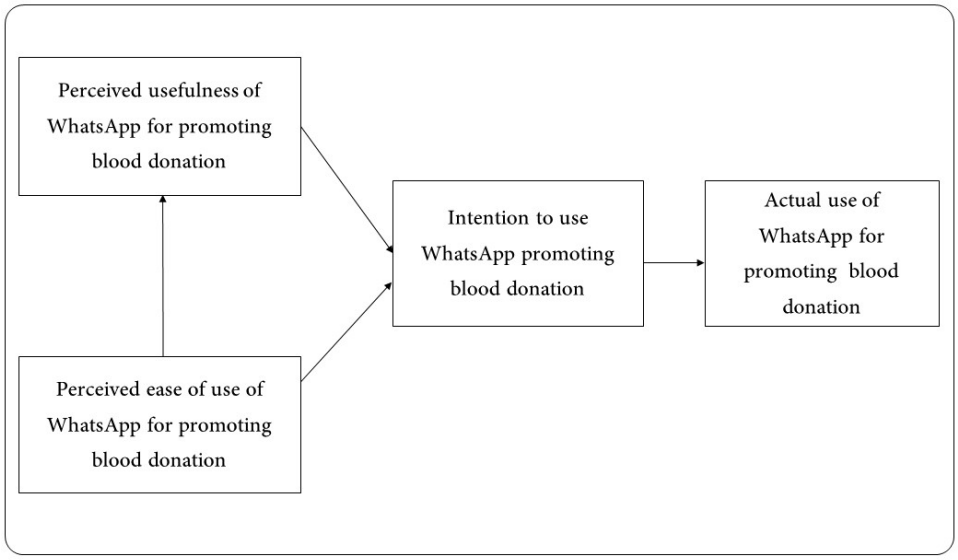



***Figure 4: Technology Acceptance Model***

**Randomization**

The docu-drama design and test-run will not employ randomization. The participants enrolled in the pilot RCT will be randomized immediately following the baseline assessment with a 1:1 allocation ratio to WhatsApp or control using blocked randomization (with randomly mixed

and varying block sizes) stratified by blood donor type. Computer-generated random intervention assignments will be generated by an independent study statistician and conveyed electronically through a web-based app at the time of enrollment to preserve allocation concealment. The upcoming intervention assignment will be concealed from the study staff prior to the randomization outcome. Details on randomization are outlined in the randomization Standard Operating Procedure under “Study tools”.

**Blinding**

This study uses behavioural interventions. Participants and most study staff are not blinded to the intervention assignment. However, both baseline and post-intervention questionnaire administration will be conducted by research assistants who will not be made aware of the treatment assignment of participants.

## Methodology

### Study Interventions

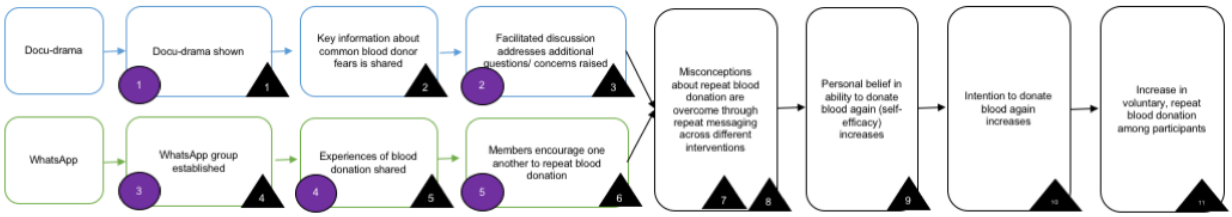
**Docu-drama** pilot test-run: Participants assigned to this group meet once during the intervention. Participants will be asked to watch, in the group setting, a two-episode drama, each lasting 15 minutes. The docu-drama on blood donation will address their concerns for donating blood again and address common donor fears. This will be followed by a one- hour discussion. The meeting will also address common donor fears. The meeting will be facilitated by two project team members who will moderate discussions, record attendance, and make notes on discussions and outcomes. Participants also receive standard National Blood Service Ghana (NBSG) communications for first-time donors (see below). The docu-drama design is subject to change in response to objective 1.

**WhatsApp**: Participants assigned to the WhatsApp group will receive weekly messages developed by communication specialists aimed to motivate blood donation, be encouraged to discuss their blood donation experiences, and share their own motivations for donating blood in a moderated, closed group over a six-month duration. The moderator will provide guidelines on acceptable use of WhatsApp, including images they can or cannot share. Participants also receive standard NBSG communications for first-time donors (see below). WhatsApp functions both online and offline. When a participant's WhatsApp is offline (i.e. not connected to the internet), the participant can access posted messages received earlier, respond to these posts and post new comments. However, the participant can only receive newly posted messages only when the WhatsApp is connected to the internet (online). Similarly, the participant's posted messages will only be sent when the participant's WhatsApp is back online.

**Control**: Participants in this group will receive the standard NBSG communications for first-time donors 1) a "thank you" phone call and 2) and a reminder phone call two-weeks prior to the second blood donation eligibility. The second blood donation eligibility is four months after the first donation.

**Avoiding intervention contamination: For the docu-drama intervention, only those invited to receive the intervention will be allowed to view the docu-drama in and be part of the discussions to avoid intervention contamination. In addition, the docu-drama viewing will be conducted face-to-face, which will make it impossible for those who are not present to share the content. For the WhatsApp intervention, only those randomly selected to be part of the WhatsApp intervention group would receive the messages and be part of the discussion. Participants will be advised against sharing the contents of the WhatsApp intervention with those who are not in the group to avoid contamination.**

As shown in Figure 2, the two interventions, WhatsApp and docu-drama, are expected to lead to sharing of positive experiences, leading to repeat blood donors. However, for these to occur, the project has several assumptions as indicated in black triangles.




**ACTIVITIES (purple circles)**
1: Participatory approaches used to develop docu-drama with stakeholder inputs
2: Facilitators trained and recruited to facilitate discussions after viewing docu-drama episodes
3: WhatsApp group is created, members are invited, terms of reference/code of conduct is circulated
4: Moderators of WhatsApp group prompts to encourage posts by participants
5: Moderators dispel common misconceptions or misinformation and encourage correct and correct information-sharing

**ASSUMPTIONS (black triangles)**
1: Content of the docu-drama will be culturally-appropriate and acceptable to participants
2: Use of docu-drama will be an effective medium for information-sharing
3: Docu-drama will prompt conversation among participants and will facilitate the discussion of common concerns about repeat blood donation
4: WhatsApp will be culturally-appropriate and acceptable to participants (participants will have the technical literacy to use WhatsApp)
5: Participants will feel comfortable raising experiences about blood donation
6: Discussion of experiences of blood donation and sharing information will be sufficient to motivate participants to change their blood donation behaviours
7: Fears and misconceptions about (repeat) blood donation are key reasons why people do not continue to donate blood after their first donation
8: Possessing more information is a key way that participant self-efficacy will be increased
9: Participants' pre-existing relationships will ensure that they can influence one another and support a shifting perception about social norms related to (repeat) blood donation
10: Information about and normalization of (repeat) blood donation will be sufficient to increase intention to donate blood again
11. Intention to donate blood again will lead to a repeat blood donation in practice

*Figure 5: The Theory of Change: Community-Based Communication Approaches for Blood Donation in Ghana*

A major assumption is that there will be high fidelity of the interventions. We will assess adherence to the interventions as a key element of fidelity (Carroll et al., 2007). Adherence will include subcategories of content, frequency, duration and dose (Carroll et al., 2007). The extent to which the intended content or frequency of WhatsApp and docu-drama are implemented will

represent the degree of implementation fidelity achieved for the two interventions (Carroll et al., 2007; Song et al., 2010).

## Study Population

## Inclusion Criteria

### Docu-drama design

Design workshop participants will be drawn from blood donors, non-blood donors, drama experts, drama actors, and communication professionals. All must be at least 18 years old, consent to participate and understand English.

### WhatsApp intervention design

Key informants will be drawn from the NBSG staff, community-based blood donation volunteers, blood donors, and non-blood donors. All must be at least 18 years old, consent to participate, and understand one of English, Twi, or Ga.

## Pilot RCT

- At least 18 years-old
- First-time whole blood donor with the SZBC of the NBSG
- Eligible to donate again
- Consent to participate
- Understands one of English, Twi, or Ga
- Have a smart phone
- Have, or be willing to sign up for an active WhatsApp account

## Docu-drama test-run

- At least 18 years-old
- First-time whole blood donor with the SZBC of the NBSG
- Eligible to donate again
- Consent to participate
- Understands one of English, Twi, or Ga

**Exclusion Criteria**

**Docu-drama design**

Do not meet the above inclusion criteria

**WhatsApp intervention design**

Do not meet the above inclusion criteria

**Pilot RCT**

History of more than one lifetime whole blood donation (with any blood centre)

**Docu-drama test-run**

History of more than one lifetime whole blood donation (with any blood centre)

**Outcome measures**

**Primary Outcome**

The primary outcome for the pilot RCT is to estimate the proportion of return blood donation attempts within six months of enrollment for each arm.

**Secondary Outcomes**

The secondary outcomes are the following measures.

WhatsApp and control

- Blood donation attitudes,
- subjective norms,
- perceived behavioural control,
- intention,
- ease of use of WhatsApp,
- perceived usefulness of WhatsApp.

Docu-drama, WhatsApp and control

- Intention of using the intervention

- Acceptability of the intervention
- Feasibility of the intervention
- Cultural appropriateness of the intervention
- Intervention relatedness

Several measures are new or adapted: cultural appropriateness, acceptability, feasibility, perceived usefulness and perceived ease of use. These measures will be assessed for reliability.

The secondary outcomes will be determined through the use of questionnaires.

**Sample Size Assumptions**

**Docu-drama design sample size**

The planning of the docu-drama will involve participants who will take part in the drama design workshop discussion (n=20). In addition, we will recruit n=10 first-time donors to test-run and provide feedback on the newly designed docu-drama intervention.

**WhatsApp intervention sample size**

Key informant interviews (n=24) will help the team to identify how the WhatsApp platform will be used, and the WhatsApp intervention.

**Pilot RCT sample size**

The targeted sample size is 64 first time blood donors per treatment arm.

One of the primary objectives is to estimate the proportion of return blood donation for planning the randomized clinical trial in the UH3 phase. As the donor return rates are unknown given the Covid-19 pandemic, we focused on obtaining an acceptable precision of event rates for the sample size and power calculation for the UG3 phase. Figure 6 presents the sample size needed to achieve 80% confidence interval length equal to 0.15, 0.20, and 0.25 using the Exact (Clopper-Pearson) method, assuming the return rate ranging from 5% to 30% (Fleiss et al., 2003, Newcombe et al., 1998). A sample size of 59 produces a two-sided 80% confidence interval with a width equal to 0.149 when the sample proportion is 20%, which is the targeted donor return rate in the WhatsApp group. Considering 10% lost-to-follow-up, we would need a sample size of 64 for each treatment arm.

Alternatively, Figure 7 presents the minimum donor return rate in the WhatsApp group that can be significantly detected under various effective sample sizes and event rates in the control group. For example, if the donor return rate in the control group is 3%, an effective sample size of 59 in each group achieve 80% power to detect a minimum difference of 17.21% (i.e. the donor return rate in the WhatsApp group = 20.21%) when using the two-sided Fisher's exact test, with a 2-sided Type I error rate of 5%.

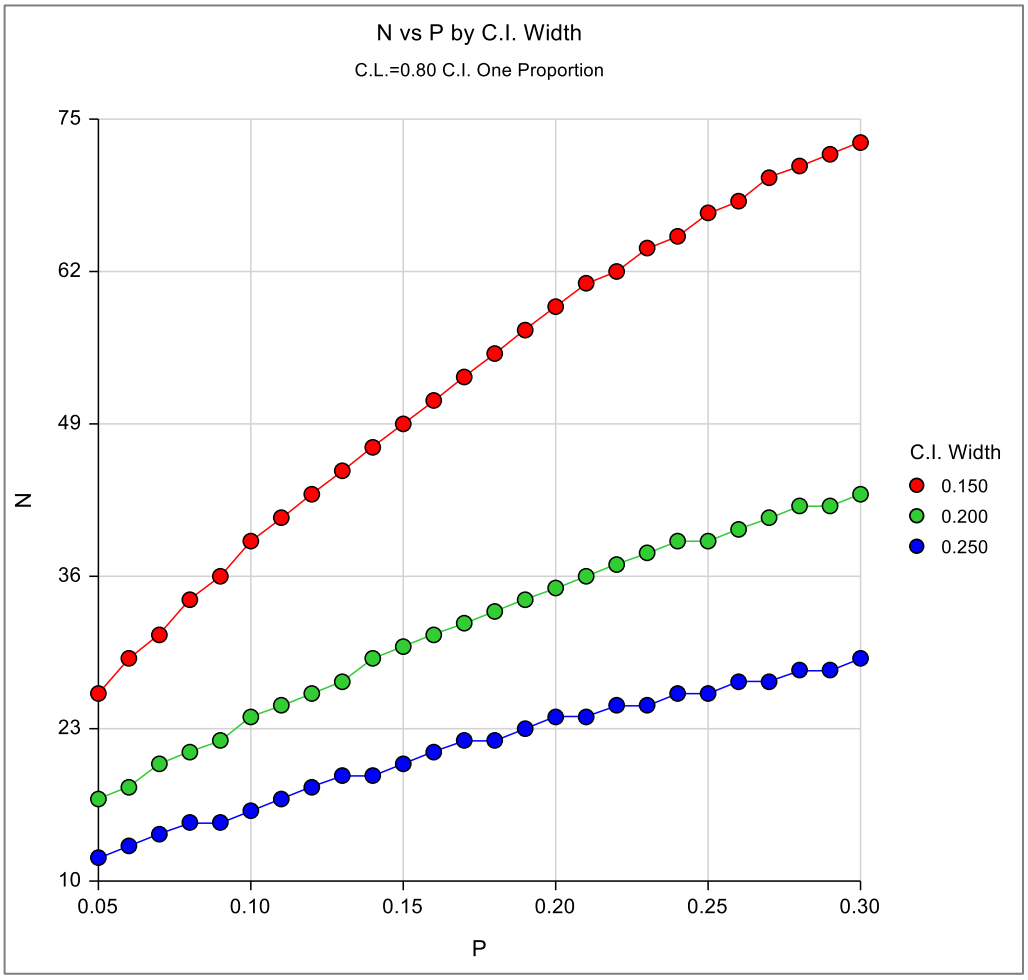



***Figure 6: Sample size calculation based on precision***

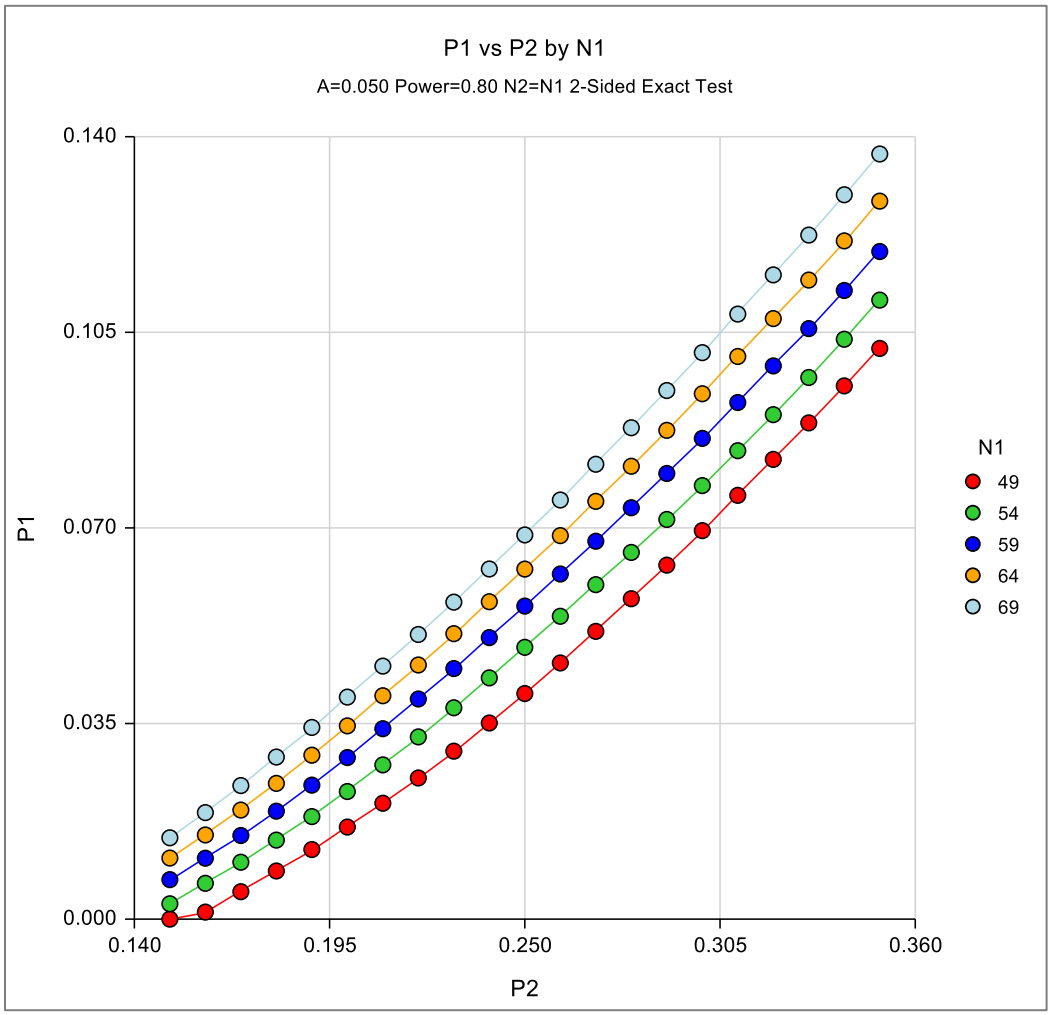



***Figure 7: Alternative sample size calculation***

**Schedule of Assessments: Follow-Up**

The participants will be invited to participate in screening after blood donation at SZBC sites.

**Table 1: Schedule of assessments for pilot RCT**

| Assessment | Screening (At first-time donation) | Baseline A pre-randomization (Day 0) | Baseline B post-randomization (Day 0) | 6-month follow-up (Days 176-190)[1] | 6-12 months follow-up |
|---|---|---|---|---|---|
| Informed Consent Form | *X* | | | | |
| Demographics | *X* | | | | |
| Blood donation attitudes, subjective norms, perceived behavioural control, and intention | | *X* | | *X* | |
| Randomization | | | *X* | | |
| Intention of using the intervention | | | *X* | | |
| Acceptability of the intervention | | | *X* | *X* | |
| Feasibility of the intervention | | | *X* | *X* | |
| Cultural appropriateness of the intervention | | | *X* | *X* | |
| Perceived usefulness of the intervention | | | *X* | *X* | |
| Perceived ease of use of the intervention | | | *X* | *X* | |
| Intervention relatedness | | | *X* | *X* | |
| Return blood donation attempts[2] | | | | *X* | |
| Focus groups of participant views of acceptability, effectiveness, feasibility, and cultural appropriateness | | | | | *X* |

Note: The participants involved in the test-run of the docu-drama will be surveyed prior-to and after the docu-drama with all instruments (except blood donation attempts) and participate in facilitator-led focus groups.

[1] 6-months with a 2-week window.

[2] Donor return will be assessed via telephone calls and cross-checked with SZBC donor records.

**Follow-up assessments for the pilot RCT**

There will be two follow-up assessments.

**6 months**

The 6-month assessment for the pilot RCT will occur over the phone with a 2-week window of the 6-month pilot. Donor return will be assessed via telephone calls and cross-checked with SZBC donor records. The six-month follow-up will repeat baseline post-randomization questionnaires and include the intention of using the intervention, acceptability of the intervention, feasibility of the intervention, cultural appropriateness of the intervention, perceived ease of use of the intervention, perceived usefulness of the intervention, and intervention relatedness. In line with definitions of acceptability, appropriateness and feasibility given by Weiner et al. (2017), we defined these characteristics as follows:

*Acceptability* is the perception among first-time blood donors that an intervention is agreeable or satisfactory for promoting blood donation. Thus, acceptability will be measured with a five-item questionnaire.

*Cultural appropriateness* is the perceived fit, relevance, or compatibility of an intervention; and/or perceived fit of these interventions for promoting blood donation among first-time blood donors (Weiner et al., 2017). Cultural appropriateness will be measured with a five-item questionnaire.

*Feasibility* is defined as the extent to which an intervention, can be successfully used by the NBSG to promote blood donation among first-time blood donors. Feasibility will be measured with a six-item questionnaire by integrating appropriateness measures (Weiner et al.,2017) and the role of culture as it pertains to health communication (Kreuter & McClure, 2004).

The extent to which respondents participated in the activities will also be documented for the WhatsApp intervention and includes not leaving the WhatsApp group during the intervention; evidence of having read a post, an indicator that can be used in closed WhatsApp groups such as the one to be implemented in the study, and posting at least once a month. Those not reading 50% of the weekly post by the moderator and not posting at least three times during the intervention will be considered as non-adherent. The WhatsApp group moderator will obtain participation data by checking the read status and post by participants.

**6–12 months**

The second follow-up will involve facilitator-led participant focus group (8 participants per group) discussions of views on acceptability, effectiveness, feasibility, and cultural appropriateness.

The participants involved in the test-run of the docu-drama will be surveyed after the docu-drama with all follow-up instruments (except blood donation attempts) and participate in facilitator-led focus-groups similar to participants in the pilot RCT.

All the constructs will be constructed using a 5-point Likert scale ranging from “completely disagree” to “completely agree”. Focus group discussions will also be held with 6–8 participants from each group to assess all the above implementation research outcomes of interventions.

## Risk/Benefit Assessment

### Known Potential Risks

Potential risks may include breach of confidentiality and any discomfort that may result from discussions of the docu-drama or issues about blood donation. However, these risks are minimal and are not more than those encountered in everyday life.

Those assigned to the docu-drama may be at risk of contracting COVID-19 if safety protocols are not adhered to during group meetings. To mitigate this risk, the viewing of the docu-drama will be held in a spacious environment where social distancing can be observed and participants will be seated six feet apart. All participants to be required to wear study provided face masks, adhere to socially distanced seating markers and walking directions, and other COVID-19 safety protocols.

There is also the potential of participants assigned to the WhatsApp group posting comments or images that may be upsetting to others. Participants will be given guidelines to follow to mitigate these risks. Participants will have access to each other's personal information (names and phone numbers). They may also share other personal details or experiences, all of which should be kept strictly confidential. This may lead to a breach of confidentiality for participants. From the outset, participants will sign a confidentiality agreement, in which privacy and confidentiality (and how they can be breached) will be explained, and participants will agree to uphold confidentiality and privacy throughout.

### Known Potential Benefits

This study is expected to lead to increased motivation to repeat blood donation. Learning about the challenges around blood donation will help us to address these in the future. This could have a very important impact on patients who require blood transfusion as part of their medical treatment and will hopefully save many lives.

## Safety Assessment

### Definitions

### Adverse Event (AE)

This is a socio-behavioural study, and thus clinical adverse events are unlikely.

Potential risks may include breach of confidentiality, and any discomfort that may result from WhatsApp group participation, discussions of the docu-drama group meetings, or issues about blood donation. In other words, while we will make every effort to de-identify any information participants share with the team, it may not be possible to keep their identity completely anonymous from those who may know their role closely. However, these risks are minimal and are not more than those encountered in everyday life.

There is also the potential of participants assigned to the WhatsApp group posting comments or images that may be upsetting to others. Participants will be given guidelines to follow to mitigate these risks, and a moderator will monitor the group interactions.

**Serious Adverse Event (SAE)**

Serious adverse events (SAEs) are defined as the following:

- Death
- Life-threatening (i.e., an immediate threat to life)
- Hospitalization or prolongation of hospitalization
- Persistent or significant incapacity or substantial disruption of the ability to conduct normal life functions
- Congenital abnormalities/birth defects

Other important medical events that may jeopardize the participant and/or may require intervention to prevent one of the outcomes listed above.

This study does not anticipate any serious adverse events.

## Data Analysis

### Qualitative Data Analysis

All qualitative data collection will proceed simultaneously with data analysis.

Focus group discussions and key informant interviews will be audio recorded with consent from the participants. The recorded interviews and focus group discussions will be tracked and uploaded to the DCC secure server. The recorded information will be transcribed verbatim and will be translated where appropriate.

The framework method will be used for data analysis. This is in part because of the multi-disciplinary team involved in the research (Gale et al., 2013) and use of a-priori themes (Srivastava & Thomson, 2009). The framework analysis will have five steps (Srivastava & Thomson, 2009).

1. Familiarization: Researchers will read the transcripts thoroughly to gain an understanding of the qualitative data collected.

2. Identifying a thematic framework: Researchers will identify key themes from the transcripts. The themes will be determined a-priori, but other themes that emerge will be identified. The themes will include barriers to becoming a repeat donor and motivations for being a repeat donor. These themes will be used to guide intervention development, and to assess secondary outcomes.

3. Indexing: Researchers will identify portions or sections of the data that match particular themes.

. Charting: This will involve arranging specific pieces of data that were indexed in the previous stage into charts. This means that the data will be lifted and placed in charts that consist of the headings and subheadings that were drawn during the thematic framework, or from a priori research inquiries or in the manner that is perceived to be the best way to report the research.

5. Mapping and interpretation: The research team will analyse key characteristics as laid out in the charts and generate a schematic diagram of the key themes. This will include creating typologies, finding associations, providing explanations, and developing strategies.

Data will be coded and analyzed for themes using the Qualitative Software and Research (QSR) Nvivo Release 1.0 (Released March 18, 2020).

Information from the different qualitative methods will be linked to the focus of the study as follows:

1. **Key informant interviews:** These will be used to get information that will help the research team to identify challenges and motivations for first-time blood donors to repeat donation among respondents. The information will help in creating the study interventions.
2. **Design workshop:** Information from the design workshop will be used to create a design document to guide the scriptwriter to produce a script that truly captures the focus of the drama intervention.
3. **Focus group discussions:** Information from the focus groups will be used to identify what worked and what did not work well for the interventions, and to assess the acceptability, *feasibility and cultural appropriateness of the interventions.*

**Quantitative Data Analysis**

Statistical analysis will be completed using SAS or R.

**Analysis pilot trial:**

The analysis for the pilot study is to inform the planned larger UH3 randomized controlled trial and will follow the same anticipated primary analysis (see below) with acknowledgment of low power to evaluate effectiveness.

The feasibility of the larger study will be assessed with descriptive statistics for enrollment rates, retention, and adherence. Key blood donation measures needed to inform the design of the larger UH3 randomized controlled study will be analyzed and include the proportion of participants who return to the blood centre to donate blood.

Primary analysis (anticipated) for the larger UH3 randomized controlled trial:

Baseline characteristics and outcome variables of each group will be summarized by proportions for categorical variables and means with standard deviations for continuous variables as appropriate. The primary analysis will be performed as 'intent-to-treat' with all enrolled subjects included in the analysis as randomly allocated regardless of actual compliance. All analyses will account for stratification by blood donor type. The primary analysis will use logistic regression with a two-sided type I error of 5% using robust standard

errors. Secondary analyses are not adjusted for known multiplicities (e.g., multiple secondary endpoint assessment). As such, all secondary analyses will intentionally not focus on conclusions around the statistical significance, but rather on practical or clinical benefit. Each additional outcome measure will be analyzed separately by appropriate generalized linear regression models (e.g., logistic regression models for binary outcomes and linear models for continuous outcomes) in a similar way to the primary analysis using robust standard errors.

Subgroup analyses for the primary endpoint and major secondary outcomes will be performed to determine whether the intervention differs qualitatively across various baseline-defined subgroups. Subgroup analyses will be performed by age, gender, blood donation group, and blood donation type (e.g., voluntary non-remunerated, family/replacement blood donors). An overall test of heterogeneity will provide evidence of whether the magnitude of the estimates varies across these baseline subgroups.

If necessary, missing data will be handled by multiple imputation via chained equations (MICE), as implemented in SAS PROC MI procedure (White et al., 2011).

**Quality Assurance**

A Data Safety Monitoring Board (DSMB) will provide independent monitoring of this pilot study in accordance with the BLOODSAFE DSMB charter. The DSMB will have an opportunity to review the protocol and informed consent and provide feedback prior to study initiation. An open report will be prepared by a DCC statistician, and a closed report will be generated by statisticians from the DCC. Interim data summaries will be prepared by the DCC statisticians and reviewed at regular intervals by the DSMB (at least twice a year). **The DSMB is an oversight committee assigned by the National Institutes of Health (NIH) to oversee the conduct of the study.**

The DSMB will review the quality and completeness of study data and enrollment data at each meeting to ensure proper trial conduct. Study personnel should provide any new literature particularly pertinent to the trial, along with their recommendation as to whether it affects the trial conduct or design. The DSMB will review the consent periodically and/or as needed and consider whether the consent form requires revision in light of any new findings or amendments.

## Expected Outcomes of the Study

This study will contribute to the literature the use of communication interventions for promoting repeat blood donation in Ghana. The findings could influence the design of socio-behavioral interventions to positively influence blood donation in Ghana. Increased blood donation will lead to improved health outcomes.

## Dissemination of Results and Publication Policy

At the end of the study, we will disseminate the results through

- Report to the Ghana Health Service
- Report to the National Blood Service, Ghana
- Report to our funder
- Publications in peer-reviewed journals
- Conference presentations
- Mass media

**Problems Anticipated and Unanticipated**

We anticipate that some respondents may not be willing to take part in the study.

**Unanticipated Problems**

An Unanticipated Problem (UP) is any incident, experience, or outcome that is:

1. Unexpected in terms of nature, severity, or frequency in relation to:
   a. **the research risks that are described in the IRB-approved research protocol and informed consent document; or other study documents; and**
   b. the characteristics of the population being studied; and
2. Possibly, probably, or definitely related to participation in the research; and
3. **Places study participants or others at a greater risk of harm (including physical, psychological, economic, or social harm) than was previously known or recognized.**

Furthermore, an UP could be an expected event that occurs at a greater frequency than would be expected based on current knowledge of the disease and treatment under study. The DSMB providing oversight to the study may make such an assessment based on an aggregate analysis of events.

Participants who attend the viewing of the docu-drama will be seated six feet apart, with all participants being required to wear face masks (individual or study provided), observe social distancing, handwashing, use of study provided hand sanitizers, and adhere to any new COVID-19 safety protocols.

The national responses to COVID-19 to minimize spread, including social distancing, ban on gatherings, and closure of institutions and lockdown, have resulted in the cancellation of scheduled mobile blood donation sessions, closure of institutions that are the major groups that donate blood (schools, churches, mosques, corporate organizations). There is also reduced blood donations at fixed sites due to reduced numbers of FRDs on account of cancellation of elective surgeries, fear of visiting hospital-based collection sites, and reduced prioritization of blood donation due to public anxiety and economic stress.

These problems, if they remain, could have an impact on the recruitment of participants for the randomized control trial and the pre-trial activities.

Those assigned to interventions requiring meetings may be at risk of contracting COVID-19 if safety protocols are not adhered to during group meetings.

**Project Management**

This protocol is one of two being supported by the National Heart, Lung and Blood Institutes of the US-based National Institutes of Health.

The study will have the following organizational components:
One active Coordinating site at the Department of Hematology, Korle-Bu Teaching Hospital/College of Health Sciences

- NIH Steering Committee for BLOODSAFE Consortia
- Executive Committee
- Advisory committee
- Operations committee
- Implementation Science Committee,
- Data and Safety Monitoring Committee

| **Committee Type:** | **Participants:** | **Responsibilities** |
|---|---|---|
| NIH Steering Committee for<br>BLOODSAFE<br>Consortia | NIH SC Chair<br>NIH/NHLBI Staff<br>Data Coordinating Center (DCC)<br>Dr Yvonne Dei-Adomakoh (PI)<br>Dr. Lucy Asamoah-Akuoko (PI)<br>Dr. Bernard Appiah (SU PI)<br>Kenya Site PIs<br>Uganda Site PIs | ▪ Serve as the main governing board and monitor progress<br>▪ Facilitate coordination and synergy for the entire program<br>▪ Develop recommendations for uniform procedures and policies<br>▪ Identify issues that have broad applicability across the program<br>▪ Determine research collaborations such as methodology, data, and core measures and assessment available<br>▪ Review the protocols developed by the Research Teams<br>▪ Subcommittees<br>▪ e.g. Publications Committee |

| | | |
|---|---|---|
| Executive Committee | Dr Yvonne Dei-Adomakoh (PI) (Chair)<br>Dr. Lucy Asamoah-Akuoko (PI)<br>Dr. Bernard Appiah (SU PI)<br>Project Admin(s) | Meetings of the Executive Committee shall be called by the chair.<br>• Staff recruitment<br>• Review progress and timelines, enrollment<br>• Review conduct of the protocol<br>• Discuss regulatory issues<br>• Review responsibilities and performance of staff and other investigators<br>• Discuss feasibility scientific merit of proposed studies or publications, and issues raised by the various sites. |
| Advisory Committee | Prof. Imelda Bates<br>Prof. Solomon Ofori-Acquah<br>Dr. Justina Ansah | • Provides non-binding strategic advice to the Executive Committee.<br>• The Advisory Committee members bring valuable expertise, knowledge, and appreciation of matters within their areas of expertise, and are asked for input into strategy, policy and the future direction of the project. |
| Operations Committee | Dr. Yvonne Dei-Adomakoh (PI)<br>Dr. Lucy Asamoah-Akuoko (PI)<br>Dr. Bernard Appiah (SU PI)<br>All Co-Investigators<br>Project Admin(s)<br>Research Officers | • Update on progress of implementation on tasks and protocol<br>• Discuss day to day implementation issues<br>• Knowledge sharing |
| Implementation Science Committee | Dr. Yvonne Dei-Adomakoh (PI)<br>Dr. Lucy Asamoah-Akuoko (PI)<br>Dr. Bernard Appiah (SU PI)<br>Prof. Philip Adongo (Co-I)<br>Dr. Tara Tancred (Co-I)<br>Dr. Seth Adu-Afarwuah (Co-I) | • Make input into, and review the implementation science aspects of the project |

| | | |
|---|---|---|
| Data Safety and Monitoring Committee | Dr. Yvonne Dei-Adomakoh (PI)<br>Dr. Lucy Asamoah-Akuoko (PI)<br>Dr. Bernard Appiah (SU PI)<br>Prof. Alfred Yawson<br>Dr. Seth Adu-Afarwuah<br>Data Quality Officer | • Periodically review and evaluate the accumulated study data for participant safety study conduct and progress, and, when appropriate, efficacy<br>• Make recommendations concerning the continuation, modification, or termination of the trial |

## Protection of Human Subjects and Other Ethical Considerations

### Participating Clinical Sites and Local Review of Protocol and Informed Consent

Participating sites include fixed and mobile blood donation sites of the Southern Zonal Blood Center National Blood Service Ghana. Ethical approval will be sought from the Ghana Health Service Research Ethics Committee. Approval will also be sought from the Institutional Review Board of the College of Health Sciences, University of Ghana. and the University of Minnesota. Written approvals obtained will be from these institutions prior to the commencement of the study.

### Ethical Conduct of the Study

The study will be conducted according to the Declaration of Helsinki in its current version; the requirements of Good Clinical Practice (GCP) as defined in Guidelines, EU Clinical Trials Directive (2001/20/EC), and EU GCP Directive (2005/28/EC); International Council for Harmonization of Technical Requirements for Pharmaceuticals for Human Use (ICH) Guidelines; Human Subject Protection and Data Protection Acts; the US Office for Human Research Protections (OHRP); or with the local law and regulation, whichever affords greater protection of human subjects.

### Informed Consent of Study Participants

Eligible participants will be informed about the project in English or their preferred local language by a senior project staff member trained in obtaining informed consent. Information provided for participants will include a description of the project, potential benefits and risks to themselves, and the expected outcomes and impact of the project. They will be assured of the anonymity of their data and that if they choose not to participate, it will not affect their normal donor care. They will be allowed time to ask questions and consider whether or not they want to participate before being asked to sign (or thumbprint if they cannot write) the consent form. For a participant who is not able to read and write, the purpose and contents of the participant information sheet (Appendices I, J, L, and M) will be read and explained satisfactorily to him/her in the local language he/she understands. All questions and clarifications raised by the participant and responses from the investigator will also be translated. The participant will be given a copy of the signed form, and the original will be stored in a locked cabinet, which is only accessible to the project team.

**Known Potential Risks**

**Potential risks may include breach of confidentiality and any discomfort that may result from discussions of the docu-drama or issues about blood donation. However, these risks are minimal and are not more than those encountered in everyday life.**

**There is also the potential of participants assigned to the WhatsApp group posting comments or images that may be upsetting to others. Participants will be given guidelines to follow to mitigate these risks. Participants will have access to each other's personal information (names and phone numbers). They may also share other personal details or experiences, all of which should be kept strictly confidential. This may lead to a breach of confidentiality for participants. From the outset, participants will sign a confidentiality agreement, in which privacy and confidentiality (and how they can be breached) will be explained, and participants will agree to uphold confidentiality and privacy throughout.**

**Known Potential Benefits**

**This study is expected to lead to increased motivation to repeat blood donation. Learning about the challenges around blood donation will help us to address these in the future. This could have a very important impact on patients who require blood transfusion as part of their medical treatment and will hopefully save many lives.**

**Compensation**

Other than participant's time and the cost of data for participating in WhatsApp groups, and online interviews/discussions, participants will not incur any costs for participating in this study. Participants will not be paid for participating in this study. Focus group and docu-drama workshop participants will be reimbursed with the Ghana Cedi equivalent of 10 US Dollars for direct transport cost and internet data respectively, and refreshments will be offered during focus group discussion meetings. All participants in the WhatsApp intervention pilot Randomized Controlled Trial will be given internet data worth the Ghana Cedi equivalent of 3.5 US Dollars per month for the period of the intervention.

**Funding information**

This study is funded by the National Heart, Lung, and Blood Institute (NHLBI), National Institutes of Health (NIH) of the United States. Grant Number 1UG3HL151599-01.

## Declaration of Conflict of Interest

None declared.

## COVID-19 Social Protocols

Those assigned to the docu-drama may be at risk of contracting COVID-19 if safety protocols are not adhered to during group meetings. To mitigate this risk, the viewing of the docu-drama will be held in a spacious environment where social distancing can be observed and participants will be seated six feet apart. In addition, focus group discussion participants will be required to observe all COVID-19 protocols. All participants will be required to wear study provided face masks, adhere to socially distanced seating markers and walking directions, and other COVID-19 safety protocols. Where possible, data collection (surveys and docu-drama design workshop) have been planned to be conducted via phone or online to reduce the risk of COVID-19 transmission.

## Confidentiality of Study Participants

The confidentiality of the data provided will be assured at all stages of the project. Data collectors will take every precaution possible to ensure risks to participants are minimized, and information is kept confidential. This will include holding interviews in a private setting where they will not be overheard by anyone else. Confidentiality of all individuals who provide data through focus group discussions will be upheld by asking participants to agree to keep any responses heard confidential. All completed questionnaires will be numerically coded to ensure anonymity. Electronic files will be stored in an encrypted and password-protected database on a secure server by the Data Coordinating Center (DCC). Only research team members who contact the subjects will have access to information linked to subject identifiers. All the data that are interview and focus group tapes, transcripts, electronic data, and completed questionnaires will be available only to the research team and will be kept locked up in a metal cabinet in the PI's office for 5 years and then destroyed.

## Regulatory Oversight

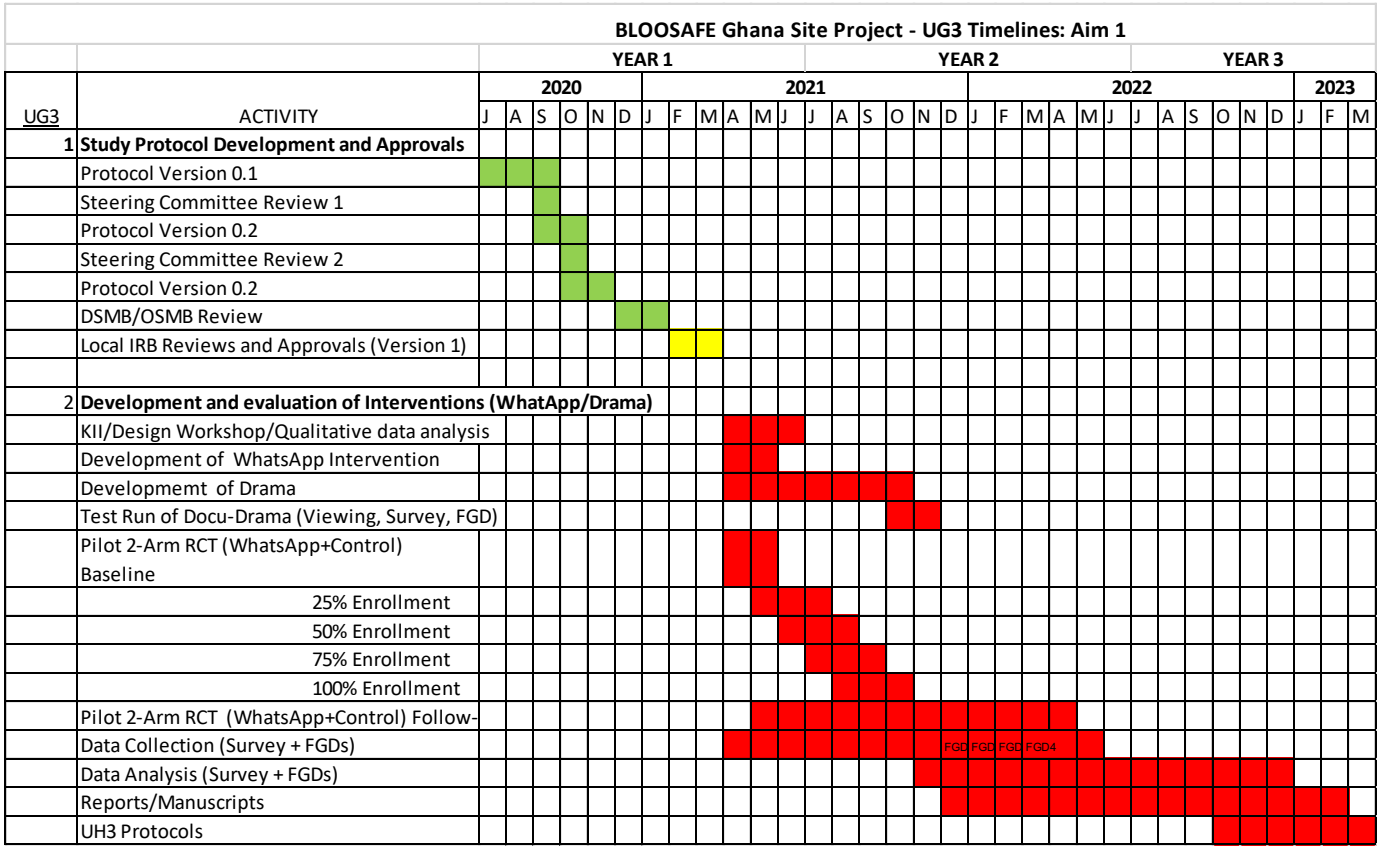
Approvals will be sought from the BLOODSAFE Steering Committee, and NHLBI protocol review teams, the Ghana Health Service Ethics Review Committee, and IRBs of collaborating Institutions (College of Health Sciences of the University of Ghana, Syracuse University, and Liverpool School of Tropical Medicine) for the trial protocol, written informed consent form

(ICF), consent form updates, participant recruitment procedures and any other written information to be provided to study participants. Prior to the start of the study, all of the instructions and procedures found in this protocol will be read and accepted by the study team. An inspection of the clinical site (site initiation visit) will be done by NHLBI (or a designated representative) before the start of the study.

Monitoring will occur in coordination with the data coordinating centre (DCC), the principal investigator (PI), and an independent data safety and monitoring board (DSMB). Regulatory requirements and site-level interim monitoring will be tracked by the DCC. The PI will ensure the required documentation is available to the DCC and site monitoring personnel. The National Heart, Lung, and Blood Institute (NHLBI) will be responsible for providing program oversight through an independent DSMB.

## II Timeline

The timeline of the project is as shown below.



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**Participant Information and Consent Forms**

**1. Participant Information Sheet for Key Informant Interviews**

**Title: Community-based communication interventions for increasing the blood donor pool in Ghana: a pilot randomized controlled trial**

**Introduction:**

Hello. My name is _____, I am working with the BLOODSAFE Ghana team, conducting a research study with the National Blood Service Ghana on approaches to increase blood donation in Ghana.

**Background and purpose of research**: Based on the population of Ghana, about 300,000 units of blood are required per year to ensure that people who need blood transfusion as part of their medical treatment receive enough blood in a timely manner. However, we know that for a number of reasons, all across the country just over half of the required number of units are donated per year. We would like to learn more about these problems so that we can design a bigger piece of research that will allow us to develop approaches to improve blood donation so that patients who require blood transfusion receive it, when they need it.

**Nature of research:** Alongside colleagues from the National Blood Service Ghana, University of Ghana, Syracuse University and the Liverpool School of Tropical Medicine, we are carrying out a study that is trying to uncover why people do not donate blood regularly and what approaches can be used to improve blood donation. This study will involve speaking with people in communities and staff from blood centres about blood donation. We will only be collecting data from people in the Greater Accra, Eastern and Central Regions where the Southern Zonal Blood Centre of the National Blood Service collects blood.

**Reason for your participation: You have been selected be in this study because you are either a staff of the National Blood Service Ghana, a community-based blood donation volunteer, a blood donor, or a non-blood donor, who can provide information relevant to study.**

**Participant involvement:**

- **Duration /what is involved: This information and consent process is being conducted face-to-face, but the actual interview will occur via phone or online, depending on your preference.** You will be participating in a key informant interview, which will last for a maximum of 60 minutes. The key informant interview will be arranged for a time when it is most convenient for you and will occur via a phone call or online. You will be asked questions about issues such as blood donation barriers and enablers, and the challenges and opportunities for using WhatsApp and docu-drama for promoting blood donation. The key informant interview will be audio recorded.

- **Potential Risks and mitigation:** There are very few risks from participating in this study. Potential risks may include breach of confidentiality and any discomfort that may result from some discussions about blood donation. In other words, while we will make every effort to anonymise any information you share with us, it may not be possible to keep your identity completely anonymous from those who may know your role closely. Also, while we put in every effort to maintain the confidentiality of the discussion among study participants, there is a risk that this confidentiality may be breached.

  However, these risks are minimal and are not more than those encountered in everyday life. Another possible risk is the risk of contracting COVID-19 during discussions if safety protocols are not adhered to during the information and consent process. The information and consent process will be conducted in a spacious environment to facilitate physical distancing. Face masks (study-provided masks where required by interviewee) will be worn by both the interviewer and interviewee, and study-provided hand sanitizers will be made available for use. The interview will also be conducted by phone to minimize the risk of contracting COVID-19.

- **Benefits: There is no direct benefit to the you as a participant.** Learning about the challenges around blood donation will help us to address these in the future. This could have a very important impact on patients who require blood transfusion as part of their medical treatment and will hopefully save many lives.
- **Costs:** Other than your time and the cost of internet data for online key informant interview participants, you will not incur any other costs for participating in this study.
- **Compensation:** You will not be paid for participating in this study. Online key informant interview participants will be reimbursed 3.5 USD for internet data.
- **Confidentiality:** In addition to the interviews taking place in a private space where your responses will not be heard by others, your name and any identifying information you provide will never be linked to your responses to questions. Instead, you will be assigned a unique number that will be used instead of your name. In addition, transcripts (a record of what was said in the focus group discussion/interview) will have all identifying information removed.
- **Voluntary participation/withdrawal:** Participation is voluntary, and participants have the right to decline to participate and also withdraw from the study at any time without penalty and without having to give any reasons.
- **Outcome and feedback:** Once data have been collected for this study; we will discuss key *summarised* findings with some stakeholders so that they can help us design a bigger study that will enable us to tackle some of these key problem areas.
- **Feedback to participant**: If you wish, we will take additional contact information from you so that we can share summarised key findings with you as well.

- **Funding information:** This work is funded by the National Heart Lung and Blood Institute (NHLBI), National Institutes of Health (NIH) of the United States and carried out by BLOODSAFE Ghana.
- **Sharing of participants Information/Data:** All data from this study will be stored and used by the BLOODSAFE Ghana team and by the National Blood Service Ghana. It will only be shared upon reasonable request in a in totally anonymised form with no participant information provided. It will be stored in a secured place for five years before being destroyed.

**You will be given a copy of this information sheet as well as your signed informed consent form to keep.**

**Who to Contact for Further Clarification/Questions:**

**Key study contacts:**


**Dr Lucy Asamoah-Akuoko (Principal Investigator)**
Head, Research and Development
National Blood Service
Tel: +233 302 663701 Ext 339
+233 206 301006
lucyasamoah@yahoo.com

**Dr. Yvonne Dei-Adomakoh (Co-Investigator)**
Department of Haematology,
Korle-Bu Teaching Hospital
Tel: +233 243 550980
Email: deiadom@yahoo.com
yadei-adomakoh@ug.edu.gh

**Mr. Emmanuel Nene Dei (Study Manager)**
Research and Development
National Blood Service
Tel: +233 243 442126
Email: nenedei@yahoo.com


**For further clarification on ethical issues and rights of participants, contact:**

**Administrator**
**Ghana Health Service Ethics Review Committee**
**Tel: +233 503539896**
**Ethics.research@ghsmail.org**

**2. Participant Information Sheet for Docu-drama Test Run**

**Title: Community-based communication interventions for increasing the blood donor pool in Ghana: a pilot randomized controlled trial**

**Introduction:**

**Hello. My name is _____, I am working with the BLOODSAFE Ghana team, conducting a research study with the National Blood Service Ghana on approaches to increase blood donation in Ghana.**

**Background and purpose of research: Based on the population of Ghana, about 300,000 units of blood are required per year to ensure that people who need blood transfusion as part of their medical treatment receive enough blood in a timely manner. However, we know that for a number of reasons, all across the country just over half of the required number of units are donated per year. We would like to learn more about these problems so that we can design a bigger piece of research that will allow us to develop approaches to improve blood donation so that patients who require blood transfusion receive it, when they need it.**

**Nature of research: Alongside colleagues from the National Blood Service Ghana, University of Ghana, Syracuse University and the Liverpool School of Tropical Medicine, we are carrying out a study that is trying to uncover why people do not donate blood regularly and what approaches can be used to improve blood donation. This study will involve speaking with people in communities and staff from blood centres about blood donation. We will only be collecting data from people in the Greater Accra, Eastern and Central Regions where the Southern Zonal Blood Centre of the National Blood Service collects blood.**

**Reason for your participation: You have been selected be in this study because you are a first-time whole blood donor with the SZBC of the NBSG, who can provide information relevant to study.**

**Participant involvement:**

- **Duration /what is involved: You will be participating in four activities:**
  a) **You will be asked to complete a first survey over the phone, which will last a maximum of 30 minutes. You will be asked questions about blood donation issues including blood donation knowledge, barriers, motivations and use of communication interventions for promoting blood donation**
  b) **You will be asked to be in a group to watch two episodes of 15-minute video documentary/drama on blood donation, each lasting 15 minutes.**
  c) **You will be asked to participate in a focus group discussion, which will last a maximum of 90 minutes. The focus group discussion will be about the docu-drama, including its feasibility and cultural appropriateness in Ghana. The focus**

**group discussion will be arranged in a convenient location in this community. The focus group discussion will be audio recorded.**

**d) You will also be asked to participate in a second survey to be completed over the phone, which will last a maximum of 30 minutes. The second survey will also be about blood donation.**

- **Potential Risks and mitigation: There are very few risks from participating in this study. Potential risks may include breach of confidentiality and any discomfort that may result from some discussions about blood donation. In other words, while we will make every effort to anonymise any information you share with us, it may not be possible to keep your identity completely anonymous from those who may know your role closely. Also, while we put in every effort to maintain the confidentiality of the discussion among study participants, there is a risk that this confidentiality may be breached.**

  **However, these risks are minimal and are not more than those encountered in everyday life. Another possible risk is the risk of contracting COVID-19 during discussions if safety protocols are not adhered to during group meetings. Group discussions will be held in a spacious environment with markings of spaces, where social distancing protocols can be observed. Face masks (study-provided masks where required by participants) will be worn by all study team members and participants, and study-provided hand sanitizers/hand washing facilities will be used by all participants.**

- **Benefits: There is no direct benefit to the you as a participant. Learning about the challenges around blood donation will help us to address these in the future. This could have a very important impact on patients who require blood transfusion as part of their medical treatment and will hopefully save many lives.**
- **Costs: Other than your time, and the cost of transportation for focus group discussion, you will not incur any other costs for participating in this study.**
- **Compensation: You will not be paid for participating in this study. Focus group discussion participants will be reimbursed with Ghana Cedi equivalent of 10 US Dollars for direct transport cost, and refreshments will be offered during the focus group discussion.**
- **Confidentiality: In addition to the focus group discussions/interviews taking place in a private space where your responses will not be heard by others, your name and any identifying information you provide will never be linked to your responses to questions. Instead, you will be assigned a unique number that will be used instead of your name. In addition, transcripts (a record of what was said in the focus group discussion/interview) will have all identifying information removed.**

- **Voluntary participation/withdrawal: Participation is voluntary, and participants have the right to decline to participate and also withdraw from the study at any time without penalty and without having to give any reasons.**
- **Outcome and feedback: Once data have been collected for this study; we will discuss key summarised findings with some stakeholders so that they can help us design a bigger study that will enable us to tackle some of these key problem areas.**
- **Feedback to participant: If you wish, we will take additional contact information from you so that we can share summarised key findings with you as well.**
- **Funding information: This work is funded by the National Heart Lung and Blood Institute (NHLBI), National Institutes of Health (NIH) of the United States and carried out by BLOODSAFE Ghana.**
- **Sharing of participants Information/Data: All data from this study will be stored and used by the BLOODSAFE Ghana team and by the National Blood Service Ghana. It will only be shared upon reasonable request in a in totally anonymised form with no participant information provided. It will be stored in a secured place for five years before being destroyed.**

**You will be given a copy of this information sheet as well as your signed informed consent form to keep.**

**Who to Contact for Further Clarification/Questions:**

Key study contacts:


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Email: deiadom@yahoo.com
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**Ghana Health Service Ethics Review Committee**
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**3. Participant Information Sheet for the Docu-Drama Design Workshop**

**Title: Community-based communication interventions for increasing the blood donor pool in Ghana: a pilot randomized controlled trial**

**Introduction:**

Hello. My name is _____, I am working with the BLOODSAFE Ghana team, conducting a research study with the National Blood Service Ghana on approaches to increase blood donation in Ghana.

**Background and purpose of research**: Based on the population of Ghana, about 300,000 units of blood are required per year to ensure that people who need a blood transfusion as part of their medical treatment receive enough blood in a timely manner. However, we know that for a number of reasons, all across the country, just over half of the required number of units are donated per year. We would like to learn more about these problems so that we can design a bigger piece of research that will allow us to develop approaches to improve blood donation so that patients who require blood transfusion receive it when they need it.

**Nature of research:** Alongside colleagues from the National Blood Service Ghana, University of Ghana, Syracuse University and the Liverpool School of Tropical Medicine, we are carrying out a study that is trying to uncover why people do not donate blood regularly and what approaches can be used to improve blood donation. This study will involve speaking with people in communities and staff from blood centres about blood donation. We will only be collecting data from people in the Greater Accra, Eastern and Central Regions where the Southern Zonal Blood Centre of the National Blood Service collects blood.

**Reason for your participation: You have been selected be in this study because you are a blood donor, non-blood donor, drama expert, drama actor, or communication professional who can provide information relevant to the study.**

**Participant involvement:**

- **Duration /what is involved:** You will be participating in a docu-drama design workshop, which will take place over two days and last for 2-3 hours each day. The docu-drama design workshop will be held online. The workshop will discuss issues such as key themes for encouraging blood donation, and what the script to be written for the docu-drama should have. The workshop discussions will be audio recorded.
- **Potential Risks and mitigation:** There are very few risks from participating in this study. Potential risks may include breach of confidentiality and any discomfort that may result from some discussions about blood donation. The docu-drama design workshop will lead to a design document that will have the names and affiliations of all participants. However, the names will not be linked to the discussions. In other words, while we will make every

effort to anonymise any information you share with us by not linking your name to the discussions, it may not be possible to keep your identity completely anonymous from those who may know your role closely. Also, while we put in every effort to maintain the confidentiality of the discussion among study participants, there is a risk that this confidentiality may be breached.

However, these risks are minimal and are not more than those encountered in everyday life. The docu-drama design workshop will be held online to avoid the risk of participants and study staff contracting COVID-19.

- **Benefits: There is no direct benefit to the you as a participant.** Learning about the challenges around blood donation will help us to address these in the future. This could have a very important impact on patients who require blood transfusion as part of their medical treatment and will hopefully save many lives.
- **Costs:** Other than your time and the cost of internet data, you will not incur any other costs for participating in this study.
- **Compensation:** You will not be paid for participating in this study. Docu-drama design workshop participants will be reimbursed with Ghana Cedi equivalent of 10 US Dollars of internet data.
- **Confidentiality:** Other than your expertise, your name and any identifying information you provide will never be linked to your responses to questions. In addition, transcripts (a record of what was said in the docu-drama discussion) will have all identifying information removed other than your expertise. However, the docu-drama design workshop will lead to a design document that will have the names and affiliations of all participants.
- **Voluntary participation/withdrawal:** Participation is voluntary, and participants have the right to decline to participate and also withdraw from the study at any time without penalty and without having to give any reasons.
- **Outcome and feedback:** Once data have been collected for this study; we will discuss key *summarised* findings with some stakeholders so that they can help us design a bigger study that will enable us to tackle some of these key problem areas.
- **Feedback to participant**: If you wish, we will take additional contact information from you so that we can share summarised key findings with you as well.
- **Funding information:** This work is funded by the National Heart Lung and Blood Institute (NHLBI), National Institutes of Health (NIH) of the United States and carried out by BLOODSAFE Ghana.
- **Sharing of participants Information/Data:** All data from this study will be stored and used by the BLOODSAFE Ghana team and by the National Blood Service Ghana. It will only be shared upon reasonable request in a totally anonymised form with no participant information provided. It will be stored in a secured place for five years before being destroyed.

**You will be given a copy of this information sheet as well as your signed informed consent form to keep.**

**Who to Contact for Further Clarification/Questions:**

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**4. Participant Information Sheet for the Pilot Randomized Controlled Trials of WhatsApp and Control**

**Title: Community-based and donor care interventions for increasing the blood donor pool in Ghana: a pilot randomized controlled trial**

**Introduction:**

Hello. My name is _____, I am working with the BLOODSAFE Ghana team, conducting a research study with the National Blood Service Ghana on approaches to increase blood donation in Ghana.

**Background and purpose of research**: Based on the population of Ghana, about 300,000 units of blood are required per year to ensure that people who need a blood transfusion as part of their medical treatment receive enough blood in a timely manner. However, we know that for a number of reasons, all across the country, just over half of the required number of units are donated per year. We would like to learn more about these problems so that we can design a bigger piece of research that will allow us to develop approaches to improve blood donation so that patients who require blood transfusion receive it when they need it.

**Nature of research:** Alongside colleagues from the National Blood Service Ghana, University of Ghana, Syracuse University and the Liverpool School of Tropical Medicine, we are carrying out a study that is trying to uncover why people do not donate blood regularly and what approaches can be used to improve blood donation. This study will involve speaking with people in communities and staff from blood centres about blood donation. We will only be collecting data from people in the Greater Accra, Eastern and Central Regions where the Southern Zonal Blood Centre of the National Blood Service Ghana collects blood.

**Reason for your participation: You have been selected be in this study because you are a first-time whole blood donor with the SZBC of the NBSG, who can provide information relevant to study.**

**Participant involvement:**

- **Duration /what is involved:** You will be participating in this study for about 6 months and will be asked some questions as part of a survey relating to blood donation issues such as knowledge, attitudes and feasibility of using communication interventions for promoting blood donation twice: at the beginning and at the end, each survey lasting a maximum of 30 minutes**.** In this study, you will be "randomized" into a WhatsApp group or a control group. "Randomized" means that you are put into a group by chance, like flipping a coin. You will have an equal chance of being placed into the WhatsApp or control group. If you are placed in the control group, your participation will be limited to

only completing the two surveys. If you are asked to be in a control group, you will not be exposed to the WhatsApp intervention. If you are asked to be in a WhatsApp group, you will be expected to read and or comment on posts related to blood donation. You will also be expected to share your blood donation experience with others in the group. Individuals in the WhatsApp group will also be participating in a focus group discussion, which will last a maximum of 90 minutes. This focus group discussion will focus on your experiences during the WhatsApp intervention. If you are participating in a focus group discussion, it will be arranged in a convenient location in this community. Focus group discussions will be audio recorded.

- **Potential Risks and mitigation:** Potential risks may include breach of confidentiality and any discomfort that may result from the WhatsApp group discussions or issues about blood donation. In other words, while we will make every effort to anonymise any information you share with us, it may not be possible to keep your identity completely anonymous. However, these risks are minimal and are not more than those encountered in everyday life.

  Those assigned to interventions requiring meetings may be at risk of contracting COVID-19 if safety protocols are not adhered to during group meetings. Group discussions will be held in a spacious environment with markings of spaces, where social distancing protocols can be observed. Participants will be seated six feet apart for the focus group discussion. All participants to be required to wear face masks (study-provided masks where required by participants) and adhere to other COVID-19 safety protocols such as using study-provided hand sanitizers/hand washing facilities. Six-month survey data collection will be done via phone.

  There is also the potential of participants assigned to the WhatsApp group posting comments or images that may be upsetting to others. Participants will be given guidelines to follow to mitigate these risks.

- **Benefits: There is no direct benefit to the you as a participant.** Learning about the challenges around blood donation will help us to address these in the future. This could have a very important impact on patients who require blood transfusion as part of their medical treatment and will hopefully save many lives.
- **Costs:** Other than your time and cost of data for participating in WhatsApp groups, you will not incur any costs for participating in this study.
- **Compensation:** You will not be paid for participating in this study. Focus group participants will be reimbursed with the Ghana Cedi equivalent of 10 US Dollars for direct transport cost, and refreshments will be offered during focus group discussion meetings. All participants in the WhatsApp intervention will be given internet data worth the Ghana Cedi equivalent of 3.5 US Dollars per month for the period of the intervention.

- **Confidentiality:** In addition to confidentiality guidelines within the group, your name and any identifying information you provide will never be linked to your responses to questions. Instead, you will be assigned a unique number that will be used instead of your name. In addition, all your responses to questions will have all identifying information removed.
- **Voluntary participation/withdrawal:** Participation is voluntary, and participants have the right to decline to participate and also withdraw from the study at any time without penalty and without having to give any reasons.
- **Outcome and feedback:** Once data have been collected for this study, we will discuss key *summarised* findings with some stakeholders so that they can help us design a bigger study that will enable us to tackle some of these key problem areas.
- **Feedback to participant**: If you wish, we will take additional contact information from you so that we can share summarised key findings with you as well.
- **Funding information:** This work is funded by the National Heart Lung and Blood Institute (NHLBI), National Institutes of Health (NIH) of the United States and carried out by BLOODSAFE Ghana.
- **Sharing of participants Information/Data:** All data from this study will be stored and used by the BLOODSAFE Ghana and by the National Blood Service Ghana. It will only be shared upon reasonable request in a totally anonymised forms with no participant information provided. It will be stored in a secured place for five years before being destroyed.

**You will be given a copy of this information sheet as well as your signed informed consent form to keep.**

**Who to Contact for Further Clarification/Questions:**

**Key study contacts:**


**Dr Lucy Asamoah-Akuoko (Principal Investigator)**
Head, Research and Development
National Blood Service
Tel: +233 302 663701 Ext 339
+233 206 301006
lucyasamoah@yahoo.com

**Dr. Yvonne Dei-Adomakoh (Co-Investigator)**
Department of Haematology,
Korle-Bu Teaching Hospital
Tel: +233 243 550980
Email: deiadom@yahoo.com
yadei-adomakoh@ug.edu.gh

**Mr. Emmanuel Nene Dei (Study Manager)**
Research and Development
National Blood Service
Tel: +233 243 442126
Email: nenedei@yahoo.com

**For further clarification on ethical issues and rights of participants, contact:**

**Administrator, Ghana Health Service Ethics Review Committee**
**Tel: +233 503539896**
**Ethics.research@ghsmail.org**

**5. Consent Form for Focus Group Discussions, Key Informant Interviews, Docu-Drama Design Workshop, Docu-Drama Test-run, and the Pilot Randomized Control Trial of WhatsApp and Control.**

**Title: Community-based communication interventions for increasing the blood donor pool in Ghana: a pilot randomized controlled trial**

PARTICIPANTS' STATEMENT

I acknowledge that I have read or have had the purpose and contents of the Participants' Information Sheet read and all questions have been satisfactorily explained to me in a language (English/Twi) I understand. I fully understand the contents and any potential implications, as well as my right to change my mind (i.e. withdraw from the research) even after I have signed this form.

| | Initials (all that apply) |
|---|---|
| I voluntarily agree to be part of this research | |
| I agree to be assigned to a group | |
| I agree to anonymised quotations being used for analysis and reporting purposes | |
| I agree to be audio recorded | |

Name of Participant_____

Participants' Signature _____OR Thumb Print_____

Date:_____

STATEMENT OF INTERPRETER

I certify that the statement and questions have been satisfactorily translated in a local language to the participant. All questions and clarifications raised by the participant and responses from the investigator have also been translated.

Translator's name_____

Signature _____

Date_____

STATEMENT OF WITNESS

I was present when the purpose and contents of the Participant Information Sheet were read and explained satisfactorily to the participant in the local language he/she understood.

I confirm that he/she was given the opportunity to ask questions/seek clarifications, and the same were duly answered to his/her satisfaction before voluntarily agreeing to be part of the research.

Name:_____

Signature_____

Date:_____

INVESTIGATOR STATEMENT AND SIGNATURE

**I certify that the participant has been given ample time to read and/or learn about the study** All questions and clarifications raised by the participant have been addressed.

Researcher's name_____

Signature _____

Date_____

# MODULE 3

**Study Tools**

## 1. Key Informant Interview Guide for Intervention Development (WhatsApp and Docu-Drama)

## Title: Community-based communication interventions for increasing the blood donor pool in Ghana: a pilot randomized controlled trial

Interview number:_____

Brief introduction: This is an interview with a (participant identifiers other than name) on designing interventions to promote blood donation (replace with an appropriate category of audience).

Start time:

**Introduction**

Good morning/afternoon. My name is _____ and I will be your interviewer. I work for the _____based in _____

I am a trained interviewer and I would like to hear your honest opinions about the topics we will discuss today. There is no right or wrong answer to the questions I'm going to ask. Please just relax and enjoy the interview.

Please keep in mind that your participation is completely voluntary. If for any reason you wish to leave the discussion, you may do so.

We are doing this as part of a project to develop interventions for promoting blood donation. Kindly state whether it is okay to continue with the interview.

RULES OR GUIDELINES

1. You have been invited here to offer your views and opinions.
2. Again, there are no right or wrong answers and its okay to be critical. I want to hear your views and opinions about whether you like or dislike something you see or hear.
3. You may excuse yourself from the conversation at any time for any reason.
4. Although this session will be audio taped, it will remain confidential and will ONLY be used to capture everything that is being said today, for the purpose of listening to it again to get the message well. Please feel free to say exactly what is on your mind as nothing will be attributed to any particular person in our report.

**A. WhatsApp Intervention**

Demographics

- What is your name?
- How old are you?

Knowledge

- What is the potential of using WhatsApp for promoting blood donation?
- What do you consider as advantages of using WhatsApp to encourage blood donation?
- What do you consider as disadvantages of using WhatsApp to encourage blood donation?

Beliefs

- Do you believe that WhatsApp can be used to promote blood donation? If yes, why? If no, why not?

Attitudes

- How will you feel if your friends, relatives or others you respect found out that you are in a WhatsApp group that promotes blood donation?

  If positive, explain why

  If negative, explain why

Challenges, opportunities and recommendations

We will be designing WhatsApp intervention for promoting blood donation. Group participants will be expected to share information on their blood donation experiences to encourage others to donate blood. A moderator will also post relevant items periodically.

- Have you used WhatsApp for health promotion activities? If so, was it positive or negative and explain why?
- What do you foresee as potential challenges in the design of WhatsApp intervention for promoting blood donation?
- How can we address these challenges?
- What suggestions do you have for making such an intervention successful?
- How many times should a moderator post an item in a week and why?
- What further comments do you have on the intervention?

**B. Docu-drama intervention**

Demographics

- What is your name?
- How old are you?

Knowledge

- What is the potential of using video documentary with drama (docu-drama) for promoting blood donation?
- What do you consider as advantages of using docu-drama to encourage blood donation?
- What do you consider as disadvantages of using docu-drama to encourage blood donation?

Beliefs

- Do you believe that docu-drama can be used to promote blood donation? If yes, why? If no, why not?

Attitudes

- How will you feel if your friends, relatives or others you respect found out that you are in a docu-drama group that promotes blood donation?
  If positive, explain why?

  If negative, explain why?

Challenges, opportunities and recommendations:

We will be designing docu-drama intervention for promoting blood donation.
We plan to produce two episodes, each lasting 15 minutes. Each episode will be discussed for about 1 hour.

- Have you used drama for health promotion activities? If so, was it positive or negative and explain why?
- What do you foresee as potential challenges in the design of such an intervention for promoting blood donation?
- How can we address these challenges?
- What suggestions do you have for making such an intervention successful?
- What comments do you have on the duration of the discussion of the docu-drama?
- What comments do you have on what should be discussed after showing the drama?
- What further comments do you have on the intervention?

Thank you

End time:

**2. Docu-Drama Design Workshop Discussion Guide**

**Title: Community-based communication interventions for increasing the blood donor pool in Ghana: a pilot randomized controlled trial**

Goal: The goal of the docu-drama design workshop is to help create a document a scriptwriter can use to write the script.

Duration: Two days (Zoom meeting); 2-3 hours each day; include Zoom breakout groups.

Questions for discussion (add probes where necessary):

a. Identify name of the docu-drama
b. Identify overall tone of the docu-drama
c. Describe overall objectives of the drama
d. Identify key messaging for the docu-drama
e. Describe specific objectives of each drama episode or topic

Discuss the order of the 2 docu-drama episodes

**3. Focus Group Discussion Guide for Test-Run Docu-Drama Intervention and for Assessing Acceptability, Feasibility and Cultural Appropriateness**

**Title: Community-based communication interventions for increasing the blood donor pool in Ghana: a pilot randomized controlled trial**

Good morning/afternoon. My name is _____ and I will be your moderator for this focus group discussion. I work for the _____based in _____

If asked (explain about your organization and its objectives): I am a trained focus group moderator and I would like to hear your honest opinions about the topics we will discuss today. There is no right or wrong answer to the questions I'm going to ask. Please just relax and enjoy the discussion.

Please keep in mind that your participation is completely voluntary. If for any reason you wish to leave the discussion, you may do so.

We are doing this as part of a project to develop interventions for promoting blood donation. I am accompanied by_____ who will be responsible for note taking. Other project staff from _____ will also be in the room observing the focus group discussion. Kindly state whether it is okay to continue with the discussion.

RULES OR GUIDELINES

a. You have been invited here to offer your views and opinions.
b. Again, there are no right or wrong answers and its okay to be critical. I want to hear your views and opinions about whether you like or dislike something you see or hear.
c. There will be observers.
d. You may excuse yourself from the conversation at any time for any reason.
e. Although this session will be audio taped, it will remain confidential and will ONLY be used to capture everything that is being said today, for the purpose of listening to it again to get the message well. Please feel free to say exactly what is on your mind as nothing will be attributed to any particular person in our report.
f. Lastly, please turn off the ringers on your cell phones.

ADDITIONAL GUIDELINES

a. Everyone's participation is important.
b. Please speak one at a time and avoid side conversations.
c. Please use any of your names that you are comfortable with only during the discussion.
d. Respect each other's opinions.

Demographics

- What is your name?
- How old are you?

**Docu-drama**

Play the docu-drama and let the respondent(s) watch/listen:

a. Ask the respondent(s) what message was being transmitted by the docu-drama

b. Ask the respondent(s) for any words in the message whose meaning they did not understand. If there are unclear words, identify the words and ask the respondents what they think the words mean. (If necessary, tell the respondent what was meant by the words and ask for what words they suggest should be used as a better substitute that will be generally understood).

c. Ask the respondent if there is anything in the message that they or other people in would say differently (If yes, ask for the phrase or wording).

d. Ask the respondent if there is anything in the message which they think is not true (probe to get details if the response is yes).

e. Ask the respondent if they feel the message said anything that might upset or offend people (if the answer is yes, probe to get what is offensive or upsetting).

f. Ask the respondents what they think this message is asking them to do (probe their willingness to follow the message).

g. Ask the respondent(s) what they liked most about the message.

h. Ask the respondent(s) what would encourage them to follow the message they have just heard (probe if there is something that would discourage them).

i. Ask the respondents to whom they think this message is directed?

j. Ask if docu-drama says or suggests that they must do something? If yes, what?
k. Ask if they would be willing to follow the advice given? Why/Why not?
l. Ask the respondent(s) if the message is appropriate for blood donors
m. Ask the respondent(s) if there is anything in the message which they would say differently (ask them to say it if applicable).
n. How would you gauge the quality of the docu-drama program in terms of sound (volume) and words spoken?
o. Ask the respondent(s) whether the sound level (volume) acceptable
p. Ask the respondent(s) how they would rate the duration of the docu-drama (probe if too long, too short or just right).

q. Ask respondents questions that could be asked of the audience to spark discussions and why
r. Ask the respondents if they have any further questions/observations.

**Docu-drama – acceptability, feasibility, cultural appropriateness**

You watched docu-drama on blood donation and participated in the discussion. We would like to seek your feedback on it.

a. To what extent was the use of docu-drama and its discussion for sharing your experience with blood donation acceptable to you?
b. To what extent was the use of docu-drama and its discussion for sharing your experience with blood donation culturally appropriate (for example, language for the drama and discussion, religious beliefs or differences, concept in line with your personal experiences), for you?
c. To what extent was the use of docu-drama and its discussion for sharing your experience with blood donation effective?
d. How did the use of docu-drama influence your knowledge about blood donation?
e. How did the use of docu-drama influence your beliefs about blood donation?
f. How did the use of docu-drama influence your intention to return to give blood?
g. Indicate the elements of the docu-drama intervention you preferred and why
    i Watching the docu-drama
    ii Discussion of the docu-drama
    iii Share moments of blood donation
    iv Sharing positive experiences with other blood donors
    v Sharing negative experiences with other blood donors
    vi Sharing motivational messages with other blood donors
    vii Organization of the docu-drama meetings
    viii Facilitation of the docu-drama meetings
h. What prevented you from participating actively watching the docu-drama and participating in the discussions?
i. How can these barriers be resolved?
j. What should be done to be make the docu-drama on blood donation more feasible for positively influencing first-time blood donor's attempt to give blood again?

Any other comments?

**4. Participant Observation Guide for Docu-Drama Viewing and Focus Group Discussion**

**Title: Community-based communication interventions for increasing the blood donor pool in Ghana: a pilot randomized controlled trial**

1. What are the first-time blood donors doing?
    a. Asking questions?
    b. Sharing their experiences?
    c. Remain quiet?

2. What are they trying to accomplish?
    a. Motivating others?
    b. Demotivating others?

3. How exactly do they do these?

4. How do people characterise and understand what is going on?

5. What do I see going on here?

6. What did I learn?

**5. Focus Group Discussion Guide for Assessing Acceptability, Feasibility and Cultural Appropriateness at End of 6-month WhatsApp Pilot RCT**

**Title: Community-based communication interventions for increasing the blood donor pool in Ghana: a randomized controlled trial**

## 1. Docu-drama group

Good morning/afternoon. My name is _____ and I will be your moderator for this focus group discussion. I work for the _____based in

If asked (explain about your organization and its objectives): I am a trained focus group moderator and I would like to hear your honest opinions about the topics we will discuss today. There is no right or wrong answer to the questions I'm going to ask. Please just relax and enjoy the discussion.

Please keep in mind that your participation is completely voluntary. If for any reason you wish to leave the discussion, you may do so.

We are doing this as part of a project to develop interventions for promoting blood donation. I am accompanied by_____ who will be responsible for note taking. Other project staff from _____ will also be in the room observing the focus group discussion. Kindly state whether it is okay to continue with the discussion.

RULES OR GUIDELINES

a. You have been invited here to offer your views and opinions.
b. Again, there are no right or wrong answers and its okay to be critical. I want to hear your views and opinions about whether you like or dislike something you see or hear.
c. There will be observers.
d. You may excuse yourself from the conversation at any time for any reason.
e. Although this session will be audio taped, it will remain confidential and will ONLY be used to capture everything that is being said today, for the purpose of listening to it again to get the message well. Please feel free to say exactly what is on your mind as nothing will be attributed to any particular person in our report.
f. Lastly, please turn off the ringers on your cell phones.

ADDITIONAL GUIDELINES

a. Everyone's participation is important.
b. Please speak one at a time and avoid side conversations.
c. Please use any of your names that you are comfortable with only during the discussion.
d. Respect each other's opinions.

Demographics:

- What is your name?
- How old are you?

**WhatsApp**

You have been in this WhatsApp group for the past six months. We will like seek your feedback in terms of the acceptability and feasibility of using WhatsApp to encourage blood donation.

a. To what extent was the use of WhatsApp for sharing your experience with blood donation acceptable to you?
b. To what extent was the use of WhatsApp for sharing your experience with blood donation culturally appropriate (for example, language for the drama and discussion, religious beliefs or differences, concept in line with your personal experiences) for you?
c. To what extent was the use of WhatsApp for sharing your experience with blood donation effective?
d. How did the use of WhatsApp influence your knowledge about blood donation?
e. How did the use of WhatsApp influence your beliefs about blood donation?
f. How did the use of WhatsApp influence your intention to return to give blood?
g. Indicate the elements of the WhatsApp intervention you preferred and why
    i Share moments of blood donation
    ii Send blood donation images or videos
    iii Send blood donation audio notes
    iv Send blood donation motivational messages
    v Comment on other posts
    vi Send positive experiences with blood donation
    vii Send negative experiences with blood donation?
h. How frequently did you read messages or other information posted to the WhatsApp group and why?
i. What prevented you from participating actively in the WhatsApp group on blood donation?
j. How can these barriers be resolved?
k. What should be done to be make the WhatsApp group on blood donation more acceptable to you?
l. What should be done to be make the WhatsApp group on blood donation more feasible for positively influencing first-time blood donor's attempt to give blood again?

# 6. Case Report Form for participants attending baseline visit

**Baseline A**

**Bloodsafe Logo Placeholder**

**Participant ID:**

**Form Date:**
(example: 01-APR-2021)
Day Month Year 2 0 2

**Participant 3-letter code:**

**Site:**
01 Korle-Bu Bld Bank
02 Korle-Bu Maternity
03 Pentecost Hospital
04 LEKMA Hospital
05 Maamobi Polyclinic
06 Accra Shopping Mall
07 Mobile Unit

**Complete this form for all participants attending the C-CAD baseline visit.**

### A. Blood Donation

1. Who did the participant donate blood for?
   - 1 ☐ A friend/acquaintance/colleague
   - 2 ☐ A relative
   - 3 ☐ The blood bank/Blood Service
   - 4 ☐ The community
   - 5 ☐ Other; specify: _____
   - 6 ☐ No one in particular

### B. Knowledge

What follows are a number of statements related to the participant's knowledge about donating blood. Read each statement to the participant and have them indicate True or False.

| | True | False |
|---|---|---|
| 1. I need a special invitation to donate blood. | 1 ☐ | 0 ☐ |
| 2. All people with diabetes or hypertension can donate blood. | 1 ☐ | 0 ☐ |
| 3. A menstruating woman can donate blood. | 1 ☐ | 0 ☐ |
| 4. 'Skinny' people can donate blood. | 1 ☐ | 0 ☐ |
| 5. Breastfeeding women can donate blood. | 1 ☐ | 0 ☐ |
| 6. People with HIV/AIDS can donate blood. | 1 ☐ | 0 ☐ |
| 7. A person with a fever on the day of donation can still donate blood. | 1 ☐ | 0 ☐ |
| 8. A person with low blood level can donate blood. | 1 ☐ | 0 ☐ |
| 9. A man will not become impotent for donating blood. | 1 ☐ | 0 ☐ |
| 10. I can donate blood at any donation site that I choose. | 1 ☐ | 0 ☐ |
| 11. My blood can only be given to my family member or friend. | 1 ☐ | 0 ☐ |
| 12. My donated blood can save the life of another person. | 1 ☐ | 0 ☐ |

**Baseline A**

Bloodsafe Logo Placeholder

**Participant ID:**

**Participant 3-letter code:** ☐☐☐

**C. Beliefs and Perceptions**

What follows are a number of statements related to the participant's perceptions or beliefs about donating blood. Read each statement to the participant, and have them indicate where they fall on the scale from 1 (strongly disagree) to 5 (strongly agree) for each statement.

| | Strongly Disagree | | | | Strongly Agree |
|---|---|---|---|---|---|
| 1. Blood is life | 1 ☐ | 2 ☐ | 3 ☐ | 4 ☐ | 5 ☐ |
| 2. Blood has spiritual importance | 1 ☐ | 2 ☐ | 3 ☐ | 4 ☐ | 5 ☐ |
| 3. Blood is sacred/extraordinary | 1 ☐ | 2 ☐ | 3 ☐ | 4 ☐ | 5 ☐ |
| 4. Donated blood is sold | 1 ☐ | 2 ☐ | 3 ☐ | 4 ☐ | 5 ☐ |
| 5. I don't think my blood is good enough | 1 ☐ | 2 ☐ | 3 ☐ | 4 ☐ | 5 ☐ |

**D. Blood Donation Attitude**

Below are a number of statements relating to the participant's current attitude toward blood donation. Read each statement to the participant, and have them indicate where they fall on the scale from 1 to 5.

For the participant, donating blood within the next 4 months would be:

| | | | | | | |
|---|---|---|---|---|---|---|
| 1. Useless | 1 ☐ | 2 ☐ | 3 ☐ | 4 ☐ | 5 ☐ | Useful |
| 2. Pointless | 1 ☐ | 2 ☐ | 3 ☐ | 4 ☐ | 5 ☐ | Worthwhile |
| 3. The wrong thing to do | 1 ☐ | 2 ☐ | 3 ☐ | 4 ☐ | 5 ☐ | The right thing to do |
| 4. Unpleasant | 1 ☐ | 2 ☐ | 3 ☐ | 4 ☐ | 5 ☐ | Pleasant |
| 5. Unenjoyable | 1 ☐ | 2 ☐ | 3 ☐ | 4 ☐ | 5 ☐ | Enjoyable |
| 6. Frightening | 1 ☐ | 2 ☐ | 3 ☐ | 4 ☐ | 5 ☐ | Not Frightening |

**E. Blood Donation Subjective Norms**

Below are a number of statements relating to the participant's perception of subjective norms about donating blood. Read each statement to the participant, and have them indicate where they fall on the scale from 1 to 5.

1. Most people who are important to me would recommend I give blood in the next 4 months

Strongly Disagree 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ Strongly Agree

2. My family thinks I should give blood in the next 4 months

Strongly Disagree 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ Strongly Agree

3. The people who are most important to me think I should give blood in the next 4 months

Strongly Disagree 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ Strongly Agree

4. A lot of people I know plan to give blood in the next 4 months

Strongly Disagree 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ Strongly Agree

**E. Blood Donation Subjective Norms (continued)**

5. My friends will give blood in the next 4 months

Very Unlikely 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ Very Likely

6. Most people who are important to me will give blood in the next 4 weeks

Very Unlikely 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ Very Likely

**F. Blood Donation Perceived Behavioural Control**

Below are a number of statements relating to the participant's perceived behavioral control regarding donating blood. Read each statement to the participant, and have them indicate where they fall on the scale from 1 to 5.

1. How confident are you that you will be able to donate blood within the next 4 months?

Not Very Confident 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ Very Confident

2. For me, donating blood in the next 4 months would be:

Very Difficult 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ Very Easy

3. If it were entirely up to me, I am confident that I would be able to donate blood in the next 4 months

Strongly Disagree 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ Strongly Agree

4. How much control do you have over whether you donate blood or not in the next 4 months?

Absolutely no control 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ Absolute control

5. I have complete control over whether I donate blood or not in the next 4 months

Strongly Disagree 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ Strongly Agree

**G. Blood Donation Intention**

Below are a number of statements relating to the participant's intent to donate blood. Read each statement to the participant, and have them indicate where they fall on the scale from 1 to 5.

1. I plan to donate blood in the next 4 months

Strongly Disagree 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ Strongly Agree

2. How likely is it that you will donate blood in the next 4 months?

Very Unlikely 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ Very Likely

3. I will donate blood in the next 4 months.

Very Unlikely 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ Very Likely

Signature: _____ Date: _____

## 7. Case Report Form for participants enrolled in the RCT of the study after randomization

**Baseline B**

Bloodsafe Logo Placeholder

**Participant ID:**

**Form Date:** (example: 01-APR-2021)
Day Month Year 2 0 2

**Participant 3-letter code:**

**Site:**
01 Korle-Bu Bld Bank
02 Korle-Bu Maternity
03 Pentecost Hospital
04 LEKMA Hospital
05 Maamobi Polyclinic
06 Accra Shopping Mall
07 Mobile Unit

**Complete this form immediately after randomization for all participants enrolled in the RCT of the C-CAD study.**

### A. Randomization

1. Date of participant randomization: (example: 01-APR-2021) Day Month Year 2 0 2

2. Indicate which arm of the study the participant is in. Follow the instructions listed for the arm.

1 ☐ Control
2 ☐ WhatsApp

### B. Intention of Using the Intervention

| | Yes | No | I don't know |
|---|---|---|---|
| 1. I intend to use WhatsApp to discuss blood donation in the next 6 months | 1 ☐ | 0 ☐ | 2 ☐ |
| 2. I intend to use WhatsApp to discuss blood donation as often as possible | 1 ☐ | 0 ☐ | 2 ☐ |
| 3. I expect my use of WhatsApp to discuss blood donation to continue in the future | 1 ☐ | 0 ☐ | 2 ☐ |

Items C, D, and E have a number of statements related to the acceptability, feasibility, and cultural appropriateness related to potential use of WhatsApp for blood donation education. Read each statement to the participant, and ask them to respond "Yes", "No", or "I don't know" to each statement.

### C. Acceptability

| | Yes | No | I don't know |
|---|---|---|---|
| 1. Using WhatsApp for promoting blood donation among first-time donors **is appealing** | 1 ☐ | 0 ☐ | 2 ☐ |
| 2. Using WhatsApp for promoting blood donation among first-time donors **seems fine with me** | 1 ☐ | 0 ☐ | 2 ☐ |
| 3. I have **no objection** to using WhatsApp for promoting blood donation among first-time donors | 1 ☐ | 0 ☐ | 2 ☐ |

### D. Feasibility

| | Yes | No | I don't know |
|---|---|---|---|
| 1. Using WhatsApp for promoting blood donation among first-time donors seems **practical** | 1 ☐ | 0 ☐ | 2 ☐ |
| 2. Using WhatsApp for promoting blood donation among first-time donors seems **possible** | 1 ☐ | 0 ☐ | 2 ☐ |
| 3. Using WhatsApp for promoting blood donation among first-time donors seems **easy** | 1 ☐ | 0 ☐ | 2 ☐ |
| 4. Using WhatsApp for promoting blood donation among first-time donors seems **challenging** | 1 ☐ | 0 ☐ | 2 ☐ |

**E. Cultural Appropriateness**

| | Yes | No | I don't know |
|---|---|---|---|
| 1. Using WhatsApp for promoting blood donation among first-time donors seems **well aligned to my culture** | 1 ☐ | 0 ☐ | 2 ☐ |
| 2. Using WhatsApp for promoting blood donation among first-time donors seems **reasonable to my culture** | 1 ☐ | 0 ☐ | 2 ☐ |
| 3. Using WhatsApp for promoting blood donation among first-time donors seems **proper for my culture** | 1 ☐ | 0 ☐ | 2 ☐ |

**F. Perceived Usefulness**

Below are a number of statements related to potential use of WhatsApp for blood donation education. Read each statement to the volunteer, and have them indicate where they fall on the scale from 1 to 5.

| | Strongly Disagree | | | | Strongly Agree |
|---|---|---|---|---|---|
| 1. Using WhatsApp for promoting blood donation would increase voluntary blood donation | 1 ☐ | 2 ☐ | 3 ☐ | 4 ☐ | 5 ☐ |
| 2. Using WhatsApp for promoting blood donation would lead to family blood donors becoming repeat blood donors | 1 ☐ | 2 ☐ | 3 ☐ | 4 ☐ | 5 ☐ |
| 3. Using WhatsApp for promoting blood donation would lead to first-time donors becoming repeat blood donors | 1 ☐ | 2 ☐ | 3 ☐ | 4 ☐ | 5 ☐ |

**G. Perceived Ease of Use**

Below are a number of statements related to potential ease of use of WhatsApp for blood donation education. Read each statement to the participant, and have them indicate where they fall on the scale from 1 to 5.

| | Strongly Disagree | | | | Strongly Agree |
|---|---|---|---|---|---|
| 1. I find WhatsApp easy to download | 1 ☐ | 2 ☐ | 3 ☐ | 4 ☐ | 5 ☐ |
| 2. Using WhatsApp is easy | 1 ☐ | 2 ☐ | 3 ☐ | 4 ☐ | 5 ☐ |
| 3. I find it easy to understand the guidelines for using WhatsApp | 1 ☐ | 2 ☐ | 3 ☐ | 4 ☐ | 5 ☐ |

## H. Blood Donor Relatedness

Ask the volunteer to think about blood donors. Indicate the degree to which they feel each of the following, from a scale of 1 ("Not at all") to 5 ("Extremely").

| | Not at All | | | | Extremely |
|---|---|---|---|---|---|
| 1. I feel accepted by other blood donors | 1 ☐ | 2 ☐ | 3 ☐ | 4 ☐ | 5 ☐ |
| 2. I feel comfortable with other blood donors | 1 ☐ | 2 ☐ | 3 ☐ | 4 ☐ | 5 ☐ |
| 3. I feel friendly with other blood donors | 1 ☐ | 2 ☐ | 3 ☐ | 4 ☐ | 5 ☐ |
| 4. I feel like I am part of a blood donor community | 1 ☐ | 2 ☐ | 3 ☐ | 4 ☐ | 5 ☐ |
| 5. I feel a sense of contact with other blood donors | 1 ☐ | 2 ☐ | 3 ☐ | 4 ☐ | 5 ☐ |
| 6. I feel close and connected with other blood donors | 1 ☐ | 2 ☐ | 3 ☐ | 4 ☐ | 5 ☐ |
| 7. I feel a strong sense of intimacy with other blood donors | 1 ☐ | 2 ☐ | 3 ☐ | 4 ☐ | 5 ☐ |
| 8. I feel alone as a blood donor | 1 ☐ | 2 ☐ | 3 ☐ | 4 ☐ | 5 ☐ |
| 9. I have disagreements or conflicts with other blood donors | 1 ☐ | 2 ☐ | 3 ☐ | 4 ☐ | 5 ☐ |

## I. WhatsApp Connectedness Scale

Ask the volunteer to rate their level of agreement with the following statements on a scale of 1 ("Not at All") to 5 ("Extremely")

| | Not at All | | | | Extremely |
|---|---|---|---|---|---|
| 1. I feel close to people on WhatsApp | 1 ☐ | 2 ☐ | 3 ☐ | 4 ☐ | 5 ☐ |
| 2. I feel understood by the people I know when I'm on WhatsApp | 1 ☐ | 2 ☐ | 3 ☐ | 4 ☐ | 5 ☐ |
| 3. My WhatsApp friends feel like family | 1 ☐ | 2 ☐ | 3 ☐ | 4 ☐ | 5 ☐ |
| 4. I am able to relate to my WhatsApp friends | 1 ☐ | 2 ☐ | 3 ☐ | 4 ☐ | 5 ☐ |
| 5. I find myself actively involved in WhatsApp friends' lives | 1 ☐ | 2 ☐ | 3 ☐ | 4 ☐ | 5 ☐ |
| 6. I see WhatsApp friends as friendly and approachable | 1 ☐ | 2 ☐ | 3 ☐ | 4 ☐ | 5 ☐ |
| 7. I feel like an outsider when I'm on WhatsApp | 1 ☐ | 2 ☐ | 3 ☐ | 4 ☐ | 5 ☐ |
| 8. I see myself as a loner when I am on WhatsApp | 1 ☐ | 2 ☐ | 3 ☐ | 4 ☐ | 5 ☐ |
| 9. Even around WhatsApp friends I know, I don't feel that I really belong | 1 ☐ | 2 ☐ | 3 ☐ | 4 ☐ | 5 ☐ |
| 10. I feel disconnected from the WhatsApp world around me | 1 ☐ | 2 ☐ | 3 ☐ | 4 ☐ | 5 ☐ |
| 11. I don't feel related to most people on WhatsApp | 1 ☐ | 2 ☐ | 3 ☐ | 4 ☐ | 5 ☐ |
| 12. I don't feel I participate with anyone or any group on WhatsApp | 1 ☐ | 2 ☐ | 3 ☐ | 4 ☐ | 5 ☐ |

Signature: _____ Date: _____

## 8. Case Report Form for participants attending docu-drama prior to viewing

### Baseline Docu-drama

Bloodsafe Logo Placeholder

**Participant ID:**

**Form Date:** (example: 01-APR-2021)
Day ☐☐ Month ☐☐☐ Year 2 0 2 ☐

**Participant 3-letter code:** ☐☐☐

**Site:** ☐☐
01 Korle-Bu Bld Bank
02 Korle-Bu Maternity
03 Pentecost Hospital
04 LEKMA Hospital
05 Maamobi Polyclinic
06 Accra Shopping Mall
07 Mobile Unit

**Complete this form for all participants attending the C-CAD docu-drama prior to viewing the docu-drama.**

**A. Intention of Using the Intervention**

| | Yes | No | I don't know |
|---|---|---|---|
| 1. I would participate in a docu-drama viewing and discussion on blood donation in the next 6 months | 1 ☐ | 0 ☐ | 2 ☐ |
| 2. I would participate in a docu-drama viewing and discussion on blood donation as often as possible | 1 ☐ | 0 ☐ | 2 ☐ |
| 3. I expect to participate in a docu-drama viewing and discussion on blood donation in the future | 1 ☐ | 0 ☐ | 2 ☐ |

Items B, C, and D have a number of statements related to the acceptability, feasibility, and cultural appropriateness of attending a docu-drama for blood donation education. Read each statement to the participant, and ask them to respond "Yes", "No", or "I don't know" to each statement.

| **B. Acceptability** | Yes | No | I don't know |
|---|---|---|---|
| 1. Using docu-drama to promote blood donation among first-time donors **is appealing** | 1 ☐ | 0 ☐ | 2 ☐ |
| 2. Using docu-drama to promote blood donation among first-time donors **seems fine with me** | 1 ☐ | 0 ☐ | 2 ☐ |
| 3. I have **no objection** to the use of a docu-drama for promotion of blood donation among first-time donors | 1 ☐ | 0 ☐ | 2 ☐ |

| **C. Feasibility** | Yes | No | I don't know |
|---|---|---|---|
| 1. Using docu-drama to promote blood donation among first-time donors **seems practical** | 1 ☐ | 0 ☐ | 2 ☐ |
| 2. Using docu-drama to promote blood donation among first-time donors **seems possible** | 1 ☐ | 0 ☐ | 2 ☐ |
| 3. Using docu-drama to promote blood donation among first-time donors **seems easy** | 1 ☐ | 0 ☐ | 2 ☐ |
| 4. Using docu-drama to promote blood donation among first-time donors **seems challenging** | 1 ☐ | 0 ☐ | 2 ☐ |

| **D. Cultural Appropriateness** | Yes | No | I don't know |
|---|---|---|---|
| 1. Using docu-drama to promote blood donation among first-time donors **seems well aligned to my culture** | 1 ☐ | 0 ☐ | 2 ☐ |
| 2. Using docu-drama to promote blood donation among first-time donors **seems reasonable to my culture** | 1 ☐ | 0 ☐ | 2 ☐ |
| 3. Using docu-drama to promote blood donation among first-time donors **seems proper for my culture** | 1 ☐ | 0 ☐ | 2 ☐ |

## Baseline Docu-drama

Bloodsafe Logo Placeholder

**Participant ID:**

**Participant 3-letter code:** ☐☐☐

### E. Perceived Usefulness

Below are a number of statements related to potential use of a docu-drama for blood donation education. Read each statement to the volunteer, and have them indicate where they fall on the scale from 1 to 5.

| | Strongly Disagree | | | | Strongly Agree |
|---|---|---|---|---|---|
| 1. Using docu-drama to promote blood donation would increase voluntary blood donation | 1 ☐ | 2 ☐ | 3 ☐ | 4 ☐ | 5 ☐ |
| 2. Using docu-drama to promote blood donation would lead to family blood donors becoming repeat blood donors | 1 ☐ | 2 ☐ | 3 ☐ | 4 ☐ | 5 ☐ |
| 3. Using docu-drama to promote blood donation would lead to first-time donors becoming repeat blood donors | 1 ☐ | 2 ☐ | 3 ☐ | 4 ☐ | 5 ☐ |

### F. Blood Donor Relatedness

Ask the volunteer to think about blood donors. Indicate the degree to which they feel each of the following, from a scale of 1 ("Not at all") to 5 ("Extremely").

| | Not at All | | | | Extremely |
|---|---|---|---|---|---|
| 1. I feel accepted by other blood donors | 1 ☐ | 2 ☐ | 3 ☐ | 4 ☐ | 5 ☐ |
| 2. I feel comfortable with other blood donors | 1 ☐ | 2 ☐ | 3 ☐ | 4 ☐ | 5 ☐ |
| 3. I feel friendly with other blood donors | 1 ☐ | 2 ☐ | 3 ☐ | 4 ☐ | 5 ☐ |
| 4. I feel like I am part of a blood donor community | 1 ☐ | 2 ☐ | 3 ☐ | 4 ☐ | 5 ☐ |
| 5. I feel a sense of contact with other blood donors | 1 ☐ | 2 ☐ | 3 ☐ | 4 ☐ | 5 ☐ |
| 6. I feel close and connected with other blood donors | 1 ☐ | 2 ☐ | 3 ☐ | 4 ☐ | 5 ☐ |
| 7. I feel a strong sense of intimacy with other blood donors | 1 ☐ | 2 ☐ | 3 ☐ | 4 ☐ | 5 ☐ |
| 8. I feel alone as a blood donor | 1 ☐ | 2 ☐ | 3 ☐ | 4 ☐ | 5 ☐ |
| 9. I have disagreements or conflicts with other blood donors | 1 ☐ | 2 ☐ | 3 ☐ | 4 ☐ | 5 ☐ |

## Baseline Docu-drama

Bloodsafe Logo Placeholder

**Participant ID:**

**Participant 3-letter code:** ☐☐☐

### G. Docu-drama Connectedness Scale

Ask the volunteer to rate their level of agreement with the following statements on a scale of 1 ("Not at All") to 5 ("Extremely")

| | Not at All | | | | Extremely |
|---|---|---|---|---|---|
| 1. I feel close to other viewers of a docu-drama | 1 ☐ | 2 ☐ | 3 ☐ | 4 ☐ | 5 ☐ |
| 2. I feel understood by the people I know when we view and discuss a docu-drama | 1 ☐ | 2 ☐ | 3 ☐ | 4 ☐ | 5 ☐ |
| 3. My docu-drama fellow viewers feel like family | 1 ☐ | 2 ☐ | 3 ☐ | 4 ☐ | 5 ☐ |
| 4. I am able to relate to fellow docu-drama viewers | 1 ☐ | 2 ☐ | 3 ☐ | 4 ☐ | 5 ☐ |
| 5. I find myself actively involved in the lives of other docu-drama viewers | 1 ☐ | 2 ☐ | 3 ☐ | 4 ☐ | 5 ☐ |
| 6. I see fellow docu-drama viewers as friendly and approachable | 1 ☐ | 2 ☐ | 3 ☐ | 4 ☐ | 5 ☐ |
| 7. I feel like an outsider when I view a docu-drama with an audience | 1 ☐ | 2 ☐ | 3 ☐ | 4 ☐ | 5 ☐ |
| 8. I see myself as a loner when I view a docu-drama | 1 ☐ | 2 ☐ | 3 ☐ | 4 ☐ | 5 ☐ |
| 9. Even around fellow docu-drama viewers I know, I don't feel that I really belong | 1 ☐ | 2 ☐ | 3 ☐ | 4 ☐ | 5 ☐ |
| 10. I feel disconnected from the world around me when viewing a docu-drama | 1 ☐ | 2 ☐ | 3 ☐ | 4 ☐ | 5 ☐ |
| 11. I don't feel related to most people when viewing a docu-drama | 1 ☐ | 2 ☐ | 3 ☐ | 4 ☐ | 5 ☐ |
| 12. I don't feel I participate with anyone or any group while viewing a docu-drama | 1 ☐ | 2 ☐ | 3 ☐ | 4 ☐ | 5 ☐ |

Signature: _____ Date: _____

## 9. Case Report Form for reporting participant death

**Death**

Bloodsafe Logo Placeholder

**Participant ID:**

**Date of Death:**
(example: 01-APR-2021)
Day Month 2 0 2 Year

**Participant 3-letter code:**

**Site:**
01 Korle-Bu Bld Bank
02 Korle-Bu Maternity
03 Pentecost Hospital
04 LEKMA Hospital
05 Maamobi Polyclinic
06 Accra Shopping Mall
07 Mobile Unit

1. Record the primary cause of death.
   - Enter only one cause (medical condition)
   - Be as specific as possible
   - DO NOT abbreviate
   - DO NOT enter terminal events such as cardiac arrest, respiratory arrest, or ventricular fibrillation without showing the etiology

   _____

2. Where did death occur?
   1 ☐ Home
   2 ☐ Hospital
   3 ☐ Other, specify: _____
   4 ☐ Unknown

3. Are medical records available for this death, in the event that additional information is requested?
   0 ☐ No
   1 ☐ Yes

4. Provide a brief summary of events related to the death (if known):

| |
|---|
| |

Signature: _____ Date: _____

# 10. Case Report Form for participants enrolled in the RCT of the study attending the Month 6 visit

**Month 6**

Bloodsafe Logo Placeholder

**Participant ID:**

**Form Date:** (example: 01-APR-2021)

Day Month 2 0 2 Year

**Participant 3-letter code:**

**Site:**

01 Korle-Bu Bld Bank
02 Korle-Bu Maternity
03 Pentecost Hospital
04 LEKMA Hospital
05 Maamobi Polyclinic
06 Accra Shopping Mall
07 Mobile Unit

**Complete this form for participants enrolled in the RCT of the C-CAD study attending the Month 6 visit. Indicate which arm of the study the participant is in. Follow the instructions listed for the arm.**

1 ☐ Control
2 ☐ WhatsApp

### A. Knowledge

What follows are a number of statements related to the participant's knowledge about donating blood. Read each statement to the participant and have them indicate True or False.

| | True | False |
|---|---|---|
| 1. I need a special invitation to donate blood. | 1 ☐ | 0 ☐ |
| 2. All people with diabetes or hypertension can donate blood. | 1 ☐ | 0 ☐ |
| 3. A menstruating woman can donate blood. | 1 ☐ | 0 ☐ |
| 4. 'Skinny' people can donate blood. | 1 ☐ | 0 ☐ |
| 5. Breastfeeding women can donate blood. | 1 ☐ | 0 ☐ |
| 6. People with HIV/AIDS can donate blood. | 1 ☐ | 0 ☐ |
| 7. A person with a fever on the day of donation can still donate blood. | 1 ☐ | 0 ☐ |
| 8. A person with low blood level can donate blood. | 1 ☐ | 0 ☐ |
| 9. A man will not become impotent for donating blood. | 1 ☐ | 0 ☐ |
| 10. I can donate blood at any donation site that I choose. | 1 ☐ | 0 ☐ |
| 11. My blood can only be given to my family member or friend. | 1 ☐ | 0 ☐ |
| 12. My donated blood can save the life of another person. | 1 ☐ | 0 ☐ |

### B. Beliefs and Perceptions

What follows are a number of statements related to the participant's perceptions or beliefs about donating blood. Read each statement to the participant, and have them indicate where they fall on the scale from 1 (strongly disagree) to 5 (strongly agree) for each statement.

| | Strongly Disagree | | | | Strongly Agree |
|---|---|---|---|---|---|
| 1. Blood is life | 1 ☐ | 2 ☐ | 3 ☐ | 4 ☐ | 5 ☐ |
| 2. Blood has spiritual importance | 1 ☐ | 2 ☐ | 3 ☐ | 4 ☐ | 5 ☐ |
| 3. Blood is sacred/extraordinary | 1 ☐ | 2 ☐ | 3 ☐ | 4 ☐ | 5 ☐ |
| 4. Donated blood is sold | 1 ☐ | 2 ☐ | 3 ☐ | 4 ☐ | 5 ☐ |
| 5. I don't think my blood is good enough | 1 ☐ | 2 ☐ | 3 ☐ | 4 ☐ | 5 ☐ |

### C. Blood Donation Attitudes

Below are a number of statements relating to the participant's current attitude toward blood donation. Read each statement to the participant, and have them indicate where they fall on the scale from 1 to 5.

For the participant, donating blood within the next 4 months would be:

| | | | | | | |
|---|---|---|---|---|---|---|
| 1. Useless | 1 ☐ | 2 ☐ | 3 ☐ | 4 ☐ | 5 ☐ | Useful |
| 2. Pointless | 1 ☐ | 2 ☐ | 3 ☐ | 4 ☐ | 5 ☐ | Worthwhile |
| 3. The wrong thing to do | 1 ☐ | 2 ☐ | 3 ☐ | 4 ☐ | 5 ☐ | The right thing to do |
| 4. Unpleasant | 1 ☐ | 2 ☐ | 3 ☐ | 4 ☐ | 5 ☐ | Pleasant |
| 5. Unenjoyable | 1 ☐ | 2 ☐ | 3 ☐ | 4 ☐ | 5 ☐ | Enjoyable |
| 6. Frightening | 1 ☐ | 2 ☐ | 3 ☐ | 4 ☐ | 5 ☐ | Not Frightening |

### D. Blood Donation Subjective Norms

Below are a number of statements relating to the participant's perception of subjective norms about donating blood. Read each statement to the participant, and have them indicate where they fall on the scale from 1 to 5.

1. Most people who are important to me would recommend I give blood in the next 4 months

Strongly Disagree 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ Strongly Agree

2. My family thinks I should give blood in the next 4 months

Strongly Disagree 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ Strongly Agree

3. The people who are most important to me think I should give blood in the next 4 months

Strongly Disagree 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ Strongly Agree

4. A lot of people I know plan to give blood in the next 4 months

Strongly Disagree 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ Strongly Agree

5. My friends will give blood in the next 4 months

Very Unlikely 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ Very Likely

6. Most people who are important to me will give blood in the next 4 weeks

Very Unlikely 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ Very Likely

## Month 6

**Participant ID:**

Bloodsafe Logo Placeholder

**Participant 3-letter code:** ☐☐☐

### E. Blood Donation Perceived Behavioural Control

Below are a number of statements relating to the participant's perceived behavioral control regarding donating blood. Read each statement to the participant, and have them indicate where they fall on the scale from 1 to 5.

1. How confident are you that you will be able to donate blood within the next 4 months?

   Not Very Confident 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ Very Confident

2. For me, donating blood in the next 4 months would be:

   Very Difficult 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ Very Easy

3. If it were entirely up to me, I am confident that I would be able to donate blood in the next 4 months

   Strongly Disagree 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ Strongly Agree

4. How much control do you have over whether you donate blood or not in the next 4 months?

   Absolutely no control 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ Absolute control

5. I have complete control over whether I donate blood or not in the next 4 months

   Strongly Disagree 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ Strongly Agree

### F. Blood Donation Intention

Below are a number of statements relating to the participant's intent to donate blood. Read each statement to the participant, and have them indicate where they fall on the scale from 1 to 5.

1. I plan to donate blood in the next 4 months

   Strongly Disagree 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ Strongly Agree

2. How likely is it that you will donate blood in the next 4 months?

   Very Unlikely 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ Very Likely

3. I will donate blood in the next 4 months

   Very Unlikely 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ Very Likely

### H. Intention of Using the Intervention

| | Yes | No | I don't know |
|---|---|---|---|
| 1. I intend to use WhatsApp to discuss blood donation in the next 6 months | 1 ☐ | 0 ☐ | 2 ☐ |
| 2. I intend to use WhatsApp to discuss blood donation as often as possible | 1 ☐ | 0 ☐ | 2 ☐ |
| 3. I expect my use of WhatsApp to discuss blood donation to continue in the future | 1 ☐ | 0 ☐ | 2 ☐ |

**Participant ID:**

**Participant 3-letter code:** ☐☐☐

Bloodsafe Logo Placeholder

Items I, J, and K have a number of statements related to the acceptability, feasibility, and cultural appropriateness related to potential use of WhatsApp for blood donation education. Read each statement to the participant, and ask them to respond "Yes", "No", or "I don't know" to each statement.

| **I. Acceptability** | Yes | No | I don't know |
|---|---|---|---|
| 1. Using WhatsApp for promoting blood donation among first-time donors **is appealing** | 1 ☐ | 0 ☐ | 2 ☐ |
| 2. Using WhatsApp for promoting blood donation among first-time donors **seems fine with me** | 1 ☐ | 0 ☐ | 2 ☐ |
| 3. I have **no objection** to using WhatsApp for promoting blood donation among first-time donors | 1 ☐ | 0 ☐ | 2 ☐ |

| **J. Feasibility** | Yes | No | I don't know |
|---|---|---|---|
| 1. Using WhatsApp for promoting blood donation among first-time donors seems **practical** | 1 ☐ | 0 ☐ | 2 ☐ |
| 2. Using WhatsApp for promoting blood donation among first-time donors seems **possible** | 1 ☐ | 0 ☐ | 2 ☐ |
| 3. Using WhatsApp for promoting blood donation among first-time donors seems **easy** | 1 ☐ | 0 ☐ | 2 ☐ |
| 4. Using WhatsApp for promoting blood donation among first-time donors seems **challenging** | 1 ☐ | 0 ☐ | 2 ☐ |

| **K. Cultural Appropriateness** | Yes | No | I don't know |
|---|---|---|---|
| 1. Using WhatsApp for promoting blood donation among first-time donors seems **well aligned to my culture** | 1 ☐ | 0 ☐ | 2 ☐ |
| 2. Using WhatsApp for promoting blood donation among first-time donors seems **reasonable to my culture** | 1 ☐ | 0 ☐ | 2 ☐ |
| 3. Using WhatsApp for promoting blood donation among first-time donors seems **proper for my culture** | 1 ☐ | 0 ☐ | 2 ☐ |

**Month 6**

**Participant ID:**

Bloodsafe Logo Placeholder

**Participant 3-letter code:** ☐☐☐

**L. Perceived Usefulness**

Below are a number of statements related to potential use of WhatsApp for blood donation education. Read each statement to the volunteer, and have them indicate where they fall on the scale from 1 to 5.

| | Strongly Disagree | | | | Strongly Agree |
|---|---|---|---|---|---|
| 1. Using WhatsApp for promoting blood donation would increase voluntary blood donation | 1 ☐ | 2 ☐ | 3 ☐ | 4 ☐ | 5 ☐ |
| 2. Using WhatsApp for promoting blood donation would lead to family blood donors becoming repeat blood donors | 1 ☐ | 2 ☐ | 3 ☐ | 4 ☐ | 5 ☐ |
| 3. Using WhatsApp for promoting blood donation would lead to first-time donors becoming repeat blood donors | 1 ☐ | 2 ☐ | 3 ☐ | 4 ☐ | 5 ☐ |

**M. Perceived Ease of Use**

Below are a number of statements related to potential ease of use of WhatsApp for blood donation education. Read each statement to the participant, and have them indicate where they fall on the scale from 1 to 5.

| | Strongly Disagree | | | | Strongly Agree |
|---|---|---|---|---|---|
| 1. I find WhatsApp easy to download | 1 ☐ | 2 ☐ | 3 ☐ | 4 ☐ | 5 ☐ |
| 2. Using WhatsApp is easy | 1 ☐ | 2 ☐ | 3 ☐ | 4 ☐ | 5 ☐ |
| 3. I find it easy to understand the guidelines for using WhatsApp | 1 ☐ | 2 ☐ | 3 ☐ | 4 ☐ | 5 ☐ |

**N. Blood Donor Relatedness**

Ask the volunteer to think about blood donors. Indicate the degree to which they feel each of the following, from a scale of 1 ("Not at all") to 5 ("Extremely").

| | Not at All | | | | Extremely |
|---|---|---|---|---|---|
| 1. I feel accepted by other blood donors | 1 ☐ | 2 ☐ | 3 ☐ | 4 ☐ | 5 ☐ |
| 2. I feel comfortable with other blood donors | 1 ☐ | 2 ☐ | 3 ☐ | 4 ☐ | 5 ☐ |
| 3. I feel friendly with other blood donors | 1 ☐ | 2 ☐ | 3 ☐ | 4 ☐ | 5 ☐ |
| 4. I feel like I am part of a blood donor community | 1 ☐ | 2 ☐ | 3 ☐ | 4 ☐ | 5 ☐ |
| 5. I feel a sense of contact with other blood donors | 1 ☐ | 2 ☐ | 3 ☐ | 4 ☐ | 5 ☐ |
| 6. I feel close and connected with other blood donors | 1 ☐ | 2 ☐ | 3 ☐ | 4 ☐ | 5 ☐ |
| 7. I feel a strong sense of intimacy with other blood donors | 1 ☐ | 2 ☐ | 3 ☐ | 4 ☐ | 5 ☐ |
| 8. I feel alone as a blood donor | 1 ☐ | 2 ☐ | 3 ☐ | 4 ☐ | 5 ☐ |
| 9. I have disagreements or conflicts with other blood donors | 1 ☐ | 2 ☐ | 3 ☐ | 4 ☐ | 5 ☐ |

## Month 6

**Participant ID:**

Bloodsafe Logo Placeholder

**Participant 3-letter code:**

☐☐☐

**O. WhatsApp Connectedness Scale**

Ask the volunteer to rate their level of agreement with the following statements on a scale of 1 ("Not at All") to 5 ("Extremely")

| | Not at All | | | | Extremely |
|---|---|---|---|---|---|
| 1. I feel close to people on WhatsApp | 1 ☐ | 2 ☐ | 3 ☐ | 4 ☐ | 5 ☐ |
| 2. I feel understood by the people I know when I'm on WhatsApp | 1 ☐ | 2 ☐ | 3 ☐ | 4 ☐ | 5 ☐ |
| 3. My WhatsApp friends feel like family | 1 ☐ | 2 ☐ | 3 ☐ | 4 ☐ | 5 ☐ |
| 4. I am able to relate to my WhatsApp friends | 1 ☐ | 2 ☐ | 3 ☐ | 4 ☐ | 5 ☐ |
| 5. I find myself actively involved in WhatsApp friends' lives | 1 ☐ | 2 ☐ | 3 ☐ | 4 ☐ | 5 ☐ |
| 6. I see WhatsApp friends as friendly and approachable | 1 ☐ | 2 ☐ | 3 ☐ | 4 ☐ | 5 ☐ |
| 7. I feel like an outsider when I'm on WhatsApp | 1 ☐ | 2 ☐ | 3 ☐ | 4 ☐ | 5 ☐ |
| 8. I see myself as a loner when I am on WhatsApp | 1 ☐ | 2 ☐ | 3 ☐ | 4 ☐ | 5 ☐ |
| 9. Even around WhatsApp friends I know, I don't feel that I really belong | 1 ☐ | 2 ☐ | 3 ☐ | 4 ☐ | 5 ☐ |
| 10. I feel disconnected from the WhatsApp world around me | 1 ☐ | 2 ☐ | 3 ☐ | 4 ☐ | 5 ☐ |
| 11. I don't feel related to most people on WhatsApp | 1 ☐ | 2 ☐ | 3 ☐ | 4 ☐ | 5 ☐ |
| 12. I don't feel I participate with anyone or any group on WhatsApp | 1 ☐ | 2 ☐ | 3 ☐ | 4 ☐ | 5 ☐ |

## Month 6

**Participant ID:**

Bloodsafe Logo Placeholder

**Participant 3-letter code:** ☐☐☐

**P. Return Blood Donation Attempts**

1. Has the participant attempted to donate blood in the past six months?

0 ☐ No →

1.a Please indicate the reason why the participant did not donate blood.

1 ☐ No reason
2 ☐ No opportunity to donate (e.g. blood donation team did not return, or participant donated at a sponsored event that has not been held again)
3 ☐ Busy
4 ☐ No motivation to donate
5 ☐ Participant initially donated for sick individual (e.g. friend or family member) who no longer needs blood
6 ☐ Medical condition
7 ☐ No reminder
8 ☐ Participant not aware of when to return or where to donate
9 ☐ Distance to the donation site
10 ☐ Other, specify: _____

1 ☐ Yes →

1.b. Were any of the donation attempts successful (blood was donated)?

0 ☐ No →

1.c Indicate reason donation attempt was unsuccessful (use first attempt if more than 1)

1 ☐ Failed donation screening or failed donor selection
2 ☐ Unsuccessful venipuncture
3 ☐ Waiting time to donate was too long
4 ☐ Other, specify: _____

1 ☐ Yes →

1.d Who did the participant donate blood for?

1 ☐ A friend/acquaintance/colleague
2 ☐ A relative
3 ☐ The blood bank/Blood Service
4 ☐ The community
5 ☐ Other; specify: _____
6 ☐ No one in particular

Signature: _____ Date: _____

## 11. Case Report Form for participants attending docu-drama after viewing

**Post Docu-drama**

Bloodsafe Logo Placeholder

**Participant ID:**

**Form Date:** (example: 01-APR-2021)

Day ☐☐ Month ☐☐☐ Year 2 0 2 ☐

**Participant 3-letter code:** ☐☐☐

**Site:** ☐☐

01 Korle-Bu Bld Bank
02 Korle-Bu Maternity
03 Pentecost Hospital
04 LEKMA Hospital
05 Maamobi Polyclinic
06 Accra Shopping Mall
07 Mobile Unit

**Complete this form for all participants attending the C-CAD docu-drama after viewing the docu-drama.**

### A. Blood Donation Attitudes

Below are a number of statements relating to the participant's current attitude toward blood donation. Read each statement to the participant, and have them indicate where they fall on the scale from 1 to 5.

For the participant, donating blood within the next 4 months would be:

| | | | | | | |
|---|---|---|---|---|---|---|
| 1. Useless | 1 ☐ | 2 ☐ | 3 ☐ | 4 ☐ | 5 ☐ | Useful |
| 2. Pointless | 1 ☐ | 2 ☐ | 3 ☐ | 4 ☐ | 5 ☐ | Worthwhile |
| 3. The wrong thing to do | 1 ☐ | 2 ☐ | 3 ☐ | 4 ☐ | 5 ☐ | The right thing to do |
| 4. Unpleasant | 1 ☐ | 2 ☐ | 3 ☐ | 4 ☐ | 5 ☐ | Pleasant |
| 5. Unenjoyable | 1 ☐ | 2 ☐ | 3 ☐ | 4 ☐ | 5 ☐ | Enjoyable |
| 6. Frightening | 1 ☐ | 2 ☐ | 3 ☐ | 4 ☐ | 5 ☐ | Not Frightening |

### B. Blood Donation Subjective Norms

Below are a number of statements relating to the participant's perception of subjective norms about donating blood. Read each statement to the participant, and have them indicate where they fall on the scale from 1 to 5.

1. Most people who are important to me would recommend I give blood in the next 4 months

Strongly Disagree 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ Strongly Agree

2. My family thinks I should give blood in the next 4 months

Strongly Disagree 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ Strongly Agree

3. The people who are most important to me think I should give blood in the next 4 months

Strongly Disagree 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ Strongly Agree

4. A lot of people I know plan to give blood in the next 4 months

Strongly Disagree 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ Strongly Agree

5. My friends will give blood in the next 4 months

Very Unlikely 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ Very Likely

6. Most people who are important to me will give blood in the next 4 weeks

Very Unlikely 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ Very Likely

**C. Blood Donation Perceived Behavioural Control**

Below are a number of statements relating to the participant's perceived behavioral control regarding donating blood. Read each statement to the participant, and have them indicate where they fall on the scale from 1 to 5.

1. How confident are you that you will be able to donate blood within the next 4 months?

   Not Very Confident 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ Very Confident

2. For me, donating blood in the next 4 months would be:

   Very Difficult 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ Very Easy

3. If it were entirely up to me, I am confident that I would be able to donate blood in the next 4 months

   Strongly Disagree 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ Strongly Agree

4. How much control do you have over whether you donate blood or not in the next 4 months?

   Absolutely no control 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ Absolute control

5. I have complete control over whether I donate blood or not in the next 4 months

   Strongly Disagree 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ Strongly Agree

**D. Blood Donation Intention**

Below are a number of statements relating to the participant's intent to donate blood. Read each statement to the participant, and have them indicate where they fall on the scale from 1 to 5.

1. I plan to donate blood in the next 4 months

   Strongly Disagree 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ Strongly Agree

2. How likely is it that you will donate blood in the next 4 months?

   Very Unlikely 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ Very Likely

3. I will donate blood in the next 4 months

   Very Unlikely 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ Very Likely

Items E, F, and G have a number of statements related to the acceptability, feasibility, and cultural appropriateness of attending a docu-drama for blood donation education. Read each statement to the participant, and ask them to respond "Yes", "No", or "I don't know" to each statement.

| **E. Acceptability** | Yes | No | I don't know |
|---|---|---|---|
| 1. Using docu-drama to promote blood donation among first-time donors **is appealing** | 1 ☐ | 0 ☐ | 2 ☐ |
| 2. Using docu-drama to promote blood donation among first-time donors **seems fine with me** | 1 ☐ | 0 ☐ | 2 ☐ |
| 3. I have **no objection** to the use of a docu-drama for promotion of blood donation among first-time donors | 1 ☐ | 0 ☐ | 2 ☐ |

## Post Docu-drama

**Participant ID:**

**Participant 3-letter code:** ☐☐☐

Bloodsafe Logo Placeholder

**F. Feasibility**

| | Yes | No | I don't know |
|---|---|---|---|
| 1. Using docu-drama for promoting blood donation among first-time donors seems **practical** | 1 ☐ | 0 ☐ | 2 ☐ |
| 2. Using docu-drama for promoting blood donation among first-time donors seems **possible** | 1 ☐ | 0 ☐ | 2 ☐ |
| 3. Using docu-drama for promoting blood donation among first-time donors seems **easy** | 1 ☐ | 0 ☐ | 2 ☐ |
| 4. Using docu-drama for promoting blood donation among first-time donors seems **challenging** | 1 ☐ | 0 ☐ | 2 ☐ |

**G. Cultural Appropriateness**

| | Yes | No | I don't know |
|---|---|---|---|
| 1. Using docu-drama to promote blood donation among first-time donors **seems well aligned to my culture** | 1 ☐ | 0 ☐ | 2 ☐ |
| 2. Using docu-drama to promote blood donation among first-time donors **seems reasonable to my culture** | 1 ☐ | 0 ☐ | 2 ☐ |
| 3. Using docu-drama to promote blood donation among first-time donors **seems proper for my culture** | 1 ☐ | 0 ☐ | 2 ☐ |

**H. Perceived Usefulness**

Below are a number of statements related to potential use of a docu-drama for blood donation education. Read each statement to the volunteer, and have them indicate where they fall on the scale from 1 to 5.

| | Strongly Disagree | | | | Strongly Agree |
|---|---|---|---|---|---|
| 1. Using docu-drama to promote blood donation would increase voluntary blood donation | 1 ☐ | 2 ☐ | 3 ☐ | 4 ☐ | 5 ☐ |
| 2. Using docu-drama to promote blood donation would lead to family blood donors becoming repeat blood donors | 1 ☐ | 2 ☐ | 3 ☐ | 4 ☐ | 5 ☐ |
| 3. Using docu-drama to promote blood donation would lead to first-time donors becoming repeat blood donors | 1 ☐ | 2 ☐ | 3 ☐ | 4 ☐ | 5 ☐ |

**I. Blood Donor Relatedness**

Ask the volunteer to think about blood donors. Indicate the degree to which they feel each of the following, from a scale of 1 ("Not at all") to 5 ("Extremely").

| | Not at All | | | | Extremely |
|---|---|---|---|---|---|
| 1. I feel accepted by other blood donors | 1 ☐ | 2 ☐ | 3 ☐ | 4 ☐ | 5 ☐ |
| 2. I feel comfortable with other blood donors | 1 ☐ | 2 ☐ | 3 ☐ | 4 ☐ | 5 ☐ |
| 3. I feel friendly with other blood donors | 1 ☐ | 2 ☐ | 3 ☐ | 4 ☐ | 5 ☐ |
| 4. I feel like I am part of a blood donor community | 1 ☐ | 2 ☐ | 3 ☐ | 4 ☐ | 5 ☐ |

## Post Docu-drama

**Participant ID:**

Bloodsafe Logo Placeholder

**Participant 3-letter code:** ☐☐☐

### I. Blood Donor Relatedness (cont)

| | Not at All | | | | Extremely |
|---|---|---|---|---|---|
| 5. I feel a sense of contact with other blood donors | 1 ☐ | 2 ☐ | 3 ☐ | 4 ☐ | 5 ☐ |
| 6. I feel close and connected with other blood donors | 1 ☐ | 2 ☐ | 3 ☐ | 4 ☐ | 5 ☐ |
| 7. I feel a strong sense of intimacy with other blood donors | 1 ☐ | 2 ☐ | 3 ☐ | 4 ☐ | 5 ☐ |
| 8. I feel alone as a blood donor | 1 ☐ | 2 ☐ | 3 ☐ | 4 ☐ | 5 ☐ |
| 9. I have disagreements or conflicts with other blood donors | 1 ☐ | 2 ☐ | 3 ☐ | 4 ☐ | 5 ☐ |

### J. Docu-drama Connectedness Scale

Ask the volunteer to rate their level of agreement with the following statements on a scale of 1 ("Not at All") to 5 ("Extremely")

| | Not at All | | | | Extremely |
|---|---|---|---|---|---|
| 1. I feel close to other viewers of a docu-drama | 1 ☐ | 2 ☐ | 3 ☐ | 4 ☐ | 5 ☐ |
| 2. I feel understood by the people I know when we view and discuss a docu-drama | 1 ☐ | 2 ☐ | 3 ☐ | 4 ☐ | 5 ☐ |
| 3. My docu-drama fellow viewers feel like family | 1 ☐ | 2 ☐ | 3 ☐ | 4 ☐ | 5 ☐ |
| 4. I am able to relate to fellow docu-drama viewers | 1 ☐ | 2 ☐ | 3 ☐ | 4 ☐ | 5 ☐ |
| 5. I find myself actively involved in the lives of other docu-drama viewers | 1 ☐ | 2 ☐ | 3 ☐ | 4 ☐ | 5 ☐ |
| 6. I see fellow docu-drama viewers as friendly and approachable | 1 ☐ | 2 ☐ | 3 ☐ | 4 ☐ | 5 ☐ |
| 7. I feel like an outsider when I view a docu-drama with an audience | 1 ☐ | 2 ☐ | 3 ☐ | 4 ☐ | 5 ☐ |
| 8. I see myself as a loner when I view a docu-drama | 1 ☐ | 2 ☐ | 3 ☐ | 4 ☐ | 5 ☐ |
| 9. Even around fellow docu-drama viewers I know, I don't feel that I really belong | 1 ☐ | 2 ☐ | 3 ☐ | 4 ☐ | 5 ☐ |
| 10. I feel disconnected from the world around me when viewing a docu-drama | 1 ☐ | 2 ☐ | 3 ☐ | 4 ☐ | 5 ☐ |
| 11. I don't feel related to most people when viewing a docu-drama | 1 ☐ | 2 ☐ | 3 ☐ | 4 ☐ | 5 ☐ |
| 12. I don't feel I participate with anyone or any group while viewing a docu-drama | 1 ☐ | 2 ☐ | 3 ☐ | 4 ☐ | 5 ☐ |

Signature: _____ Date: _____

## 12. Participant Contact Information Form

### Contact Information

Bloodsafe Logo Placeholder

**Attach a PID label here:**

**Provide information for yourself and people you know who will be able to tell us how you are doing if we are unable to contact you. This information is confidential and will not be disclosed to anyone outside the study.**

**A. Volunteer Information**

1. Name: _____

2. Telephone numbers:
   a. Primary _____
   b. Alternate _____

3. Address: _____

**B. Information for Contacts**

1. First contact
   a. Name: _____
   b. Telephone number: _____
   c. Address: _____
   d. Relationship to volunteer: _____

2. Second contact
   a. Name: _____
   b. Telephone number: _____
   c. Address: _____
   d. Relationship to volunteer: _____

## 13. Protocol Deviation Form

### Protocol Deviation

Bloodsafe Logo Placeholder

**Attach a PID label here:**

**Date of Site Awareness:**
(example: 01-APR-2021)
Day Month Year 2 0 2

**Sequence:** * 

**Participant Initials:**

**Site:**
01 Korle-Bu Bld Bank
02 Korle-Bu Maternity
03 Pentecost Hospital
04 LEKMA Hospital
05 Maamobi Polyclinic
06 Accra Shopping Mall
07 Mobile Unit

*Sequence number across all deviations for this patient

**Indicate the type of protocol deviation. Complete a separate form for each deviation.**

1. Type of deviation; related to:
   1 ☐ Informed consent
   2 ☐ Eligibility
   3 ☐ Visit procedures
   4 ☐ Other deviation, specify; _____

2. Provide a brief narrative of the deviation:

3. Is this deviation considered:
   1 ☐ Minor deviation
   2 ☐ Major deviation

4. Date of deviation:
   (example: 01-APR-2020)
   Day Month Year 2 0 2

5. Date this form completed:
   (example: 01-APR-2020)
   Day Month Year 2 0 2

PI/Designee: _____ Date: _____

# 14. Serious Events (SAEs) Report Form

**SAE**

Bloodsafe Logo Placeholder

**Participant ID:**

**SAE Number (for this participant):** ☐

Each SAE must be given a unique number within that participant's record.

**Participant 3-letter code:** ☐☐☐

**Site:** ☐☐

01 Korle-Bu Bld Bank
02 Korle-Bu Maternity
03 Pentecost Hospital
04 LEKMA Hospital
05 Maamobi Polyclinic
06 Accra Shopping Mall
07 Mobile Unit

**Complete this form to report any serious events (SAEs) the participant experiences during C-CAD.**

## A. Primary Event

**Be as specific as possible. Record the diagnosis (disease or clinical syndrome), if known. If a diagnosis has not been made, record the sign or symptom that is the most important in your clinical judgement. In the case of death, record the event that resulted in death. DO NOT write "Death" as the primary event. If the cause of death is unknown, write "death of unknown cause" as the primary event.**

1. Record **one** primary event: _____

2. Date signs and symptoms related to the event began: (example: 01-AUG-2021) ☐☐ – ☐☐☐ – 2 0 2 ☐ (Day – Month – Year)

3. Date event became serious: (example: 01-AUG-2021) ☐☐ – ☐☐☐ – 2 0 2 ☐ (Day – Month – Year)

4. Date site became aware that event was reportable (serious): (example: 01-AUG-2021) ☐☐ – ☐☐☐ – 2 0 2 ☐ (Day – Month – Year)

5. Indicate the reason(s) the event is considered serious (**mark all that apply**):

1 ☐ Death → **Complete the Death CRF**
2 ☐ Life-threatening event (i.e., an immediate threat to life)
3 ☐ Hospitalization or prolongation of hospitalization
4 ☐ Persistent or significant incapacity or substantial disruption of the ability to conduct normal life functions

6. Indicate the current status of the event:

1 ☐ Resolved
2 ☐ Resolved with sequelae
→ 7. Date of resolution: (example: 01-AUG-2021) ☐☐ – ☐☐☐ – 2 0 2 ☐ (Day – Month – Year)
3 ☐ Not resolved
4 ☐ Chronic, not expected to resolve
5 ☐ Resulted in death → **Complete the Death CRF**
6 ☐ Participant died with event unresolved → **Complete the Death CRF**
7 ☐ Unknown

**Participant ID:**

**SAE Number (for this participant):** ☐

**Participant 3-letter code:** ☐☐☐

**B. Event Summary**

**Explain the chain of events and provide appropriate details to describe the event and put it in the context of the participant's experience in the study. The summary should include:**

--Age, race/ethnicity, sex of participant
--Description of event in chronological order: date of onset, clinical presentation, diagnostic work-up and lab results relevant to the SAE being reported (attach copies of test results and note any pending tests), treatment, and concomitant medications, and clinical course, including any hospitalizations and procedures, and any follow-up information
--Pertinent medical and family history

1. Provide narrative summary of event:

**C. C-CAD Site Physician Contact Information**

1. Name of site physician: _____
2. Site physician telephone number: _____
3. Site physician e-mail address: _____
4. Site physician signature: _____

**Date of site physician signature:** (example: 01-AUG-2021) ☐☐ – ☐☐☐ – 2 0 2 ☐

Day Month Year

# 15. Study Volunteers Screening Form

## Screening

Bloodsafe Logo Placeholder

**Participant ID:**

**Form Date:** (example: 01-APR-2021)
Day Month 2 0 2 Year

**Participant 3-letter code:**

**Site:**
01 Korle-Bu Bld Bank
02 Korle-Bu Maternity
03 Pentecost Hospital
04 LEKMA Hospital
05 Maamobi Polyclinic
06 Accra Shopping Mall
07 Mobile Unit

**Complete this form for all volunteers being screened for the C-CAD study.**

### A. Inclusion Criteria (all must be marked "Yes" for volunteer to be eligible)

| | No | Yes |
|---|---|---|
| 1. At least 18 years old | 0 ☐ | 1 ☐ |
| 2. First-time whole blood donor with the SZBC of the NBSG | 0 ☐ | 1 ☐ |
| 3. Eligible to donate again based on available information | 0 ☐ | 1 ☐ |
| 4. Ability to consent to participate | 0 ☐ | 1 ☐ |
| 5. Understands English, Twi, or Ga | 0 ☐ | 1 ☐ |
| 6. Have a smart phone | 0 ☐ | 1 ☐ |
| 7. Have, or be willing to sign up for, an active WhatsApp account | 0 ☐ | 1 ☐ |

### B. Exclusion Criteria (must be marked "No" for volunteer to be eligible)

| | No | Yes |
|---|---|---|
| 1. History of more than one lifetime whole blood donation (with any blood center) | 0 ☐ | 1 ☐ |

### C. Enrollment Documentation

| | Check if completed |
|---|---|
| 1. Consent form was signed and dated | 1 ☐ |
| 2. Volunteer received copy of consent | 1 ☐ |

### D. Eligibility

1. Are all inclusion criteria marked "Yes" and exclusion criteria marked "No"?
   - 0 ☐ No → Participant is not eligible. Skip Item E, sign and date the form.
   - 1 ☐ Yes → Participant is eligible.

**Participant ID:**

**Participant 3-letter code:** ☐☐☐

## E. Demographics

1. What is the participant's age? ☐☐ Age in complete years

2. Sex at birth: 1 ☐ Male 2 ☐ Female

3. Marital status:
   - 1 ☐ Single (never married)
   - 2 ☐ Married
   - 3 ☐ Co-habiting
   - 4 ☐ Divorced
   - 5 ☐ Separated
   - 6 ☐ Widow/Widower

4. Do you have children?
   - 1 ☐ Yes → 5. State the number of children ☐☐
   - 0 ☐ No

6. What is your home situation?
   - 1 ☐ I live alone
   - 2 ☐ I am a single parent without child/children
   - 3 ☐ I live with only my husband/wife/partner
   - 4 ☐ I live with my husband/wife/partner and children
   - 5 ☐ I live with my parents/relatives/friends
   - 6 ☐ Other, specify: _____

7. Do you use private or public transport as a main method of travel?
   - 1 ☐ Private
   - 2 ☐ Public
   - 3 ☐ Other, specify: _____

8. Highest level of education completed:
   - 0 ☐ None
   - 1 ☐ Primary school
   - 2 ☐ Junior high school
   - 3 ☐ Senior high school
   - 4 ☐ Diploma
   - 5 ☐ Degree
   - 6 ☐ Postgraduate level
   - 7 ☐ Other, specify: _____

**E. Demographics (continued)**

9. In which of the following employment categories do you fall?

1 ☐ Student
2 ☐ Out of school, and/or Unemployed
3 ☐ Homemaker/Housewife
4 ☐ Informal/Part-time employment
5 ☐ Self-employed
6 ☐ Formal employment
7 ☐ Pensioner
8 ☐ Other, specify: _____

10. What is your net monthly income?

1 ☐ No income
2 ☐ Less than GH₵ 500.00
3 ☐ GH₵ 500.00 - GH₵ 1000.00
4 ☐ GH₵ 1001.00 - GH₵ 2000.00
5 ☐ GH₵ 2001.00 - GH₵ 3000.00
6 ☐ More than GH₵ 3000.00
7 ☐ Not sure
8 ☐ Prefer not to say

11. Do you own any of the following? (select all that apply)

1 ☐ Car
2 ☐ Motorbike
3 ☐ Bicycle
4 ☐ Television
5 ☐ Refrigerator or deep freezer
6 ☐ Radio
7 ☐ Cooking stove

**E. Demographics (continued)**

12. What is your ethnic background?

1 ☐ Akan
2 ☐ Ewe
3 ☐ Dagbani
4 ☐ Ga/Dangbe
5 ☐ Hausa
6 ☐ Other, specify: _____

13. Do you belong to a religious faith?

1 ☐ Yes, Christian
2 ☐ Yes, Moslem
3 ☐ Yes, Traditionalist
4 ☐ Yes, Other, specify: _____
5 ☐ No

Signature: _____ Date: _____

## 16. Participation Withdrawal Form

**Withdrawal**

Bloodsafe Logo Placeholder

**Participant ID:**

**Date of withdrawal:**
(example: 01-APR-2021)
Day Month 2 0 2 Year

**Participant 3-letter code:**

**Site:**
01 Korle-Bu Bld Bank
02 Korle-Bu Maternity
03 Pentecost Hospital
04 LEKMA Hospital
05 Maamobi Polyclinic
06 Accra Shopping Mall
07 Mobile Unit

**Complete this form if a participant has actively (verbally or in writing) withdrawn consent or if the participant is withdrawn by the PI from the C-CAD study.**

### A. Withdrawal

1. Indicate the type of withdrawal (mark only one):
   1 ☐ Participant actively withdrew consent from all aspects of the C-CAD study
   2 ☐ Administrative withdrawal

2. The participant requested destruction of the following (mark all that apply):
   1 ☐ All participant recordings
   2 ☐ All participant data
   3 ☐ N/A (The participant did not request destruction of data or recordings)

3. Reason for withdrawal:
   1 ☐ Participant preference
   2 ☐ Staff/PI request
   3 ☐ IRB/sponsor request
   4 ☐ Other; specify: _____

Staff person completing this form (please print): _____

Signature: _____

**Signature indicates a withdrawal has been verified with site and all necessary documentation is available.**

## 17. SOP: Randomizing participants into study groups for the pilot RCT of WhatsApp and control

**BLOODSAFE: Standard Operating Procedure**

| **Randomizing participants into study groups for the pilot RCT of WhatsApp and control** | | **Version 0.3** 15 Feb 2021 |
|---|---|---|

| Revision history | | |
|---|---|---|
| Version | Date | Description |
| | | |
| | | |

### 1. Purpose

The purpose of this standard operating procedure (SOP) is to describe how to use the randomization application for the pilot RCT of WhatsApp and control for the *Community-Based Communication Approaches for Blood Donation in Ghana–Pilot Study* (C-CAD) study. Participants are allocated with a 1:1 ratio to WhatsApp or control stratified by one of two donor types (e.g., Voluntary non-remunerated donor or Family/replacement donor) using the web-based application described in this SOP. Participants will be randomized after the consent and screening process immediately following completion of Baseline A case report form (CRF).

### 2. Scope and responsibilities

Allocation into study groups for C-CAD will be performed using the randomization application tool on the study website. The protocol principal investigator determines who will be given randomization privileges. Only the research assistants (RAs) assigned to C-CAD randomization as listed in the delegation log for this protocol will have access to the randomization application tool. The web-based application has been designed so that the upcoming intervention assignment is concealed from the study staff prior to the randomization outcome.

### 3. Accessing the randomization application on the website.

Only study RAs with randomization permissions for C-CAD will be able to see the link for the randomization application tool. Each study RA with permissions must complete the training requirements prior to randomizing a C-CAD participant. Training includes at least 3 practice randomizations using a test website and the training must be documented by the data coordinating center.

The randomization application tool, Randomization Application (Pilot RCT of WhatsApp and Control), is located under the C-CAD specific protocol page below Documents and Downloads (see Figure 1). If you do not see the randomization application, you do not have permissions to randomize participants for C-CAD.

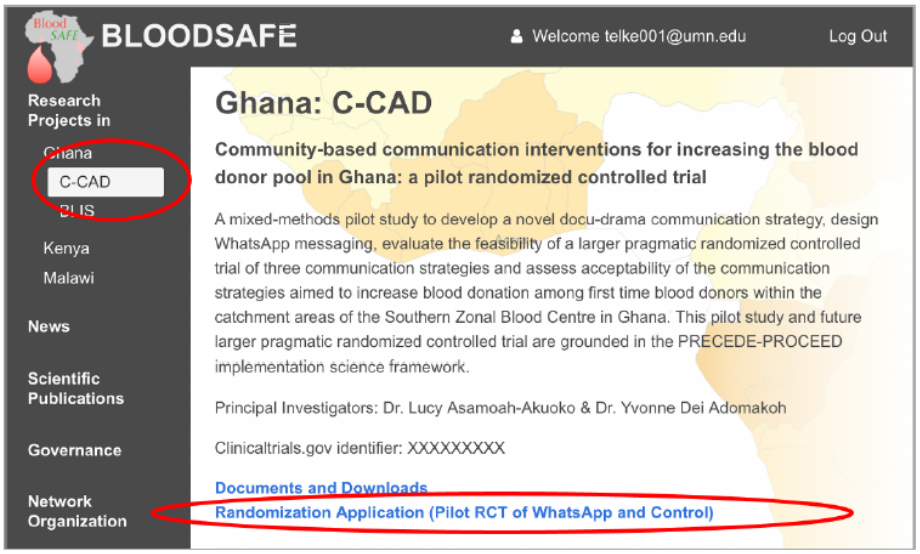


Figure 1: Location of randomization application on the BLOODSAFE website.

## 4. Performing individual random group allocation during an onsite blood donation visit.

4.1. Determine the type of donor for this blood donation visit using the study definitions.

> **Voluntary non-remunerated donor:** A participant who donated for the blood bank/Blood Service, the community, Other if specified is blank or a specific individual is not named, or no one in particular (see form C-CAD BASA).
>
> **Family/replacement donor:** A participant who donated for a friend/acquaintance/colleague, a relative, or Other if specified for a named individual (see form C-CAD BASA).

4.2. Enter and double-check the participant ID (PID)

4.2.1. Using the bar-code scanner, click on the blank box for entering the PID on the website randomization app, scan the PID label on the participant's folder. The PID will automatically fill in the PID number into the website randomization application.

4.2.2. Double-check that the scanned PID matches the pre-printed PID number located at the top of Baseline B CRF (Form C-CAD-BASB) (see Figure 2).

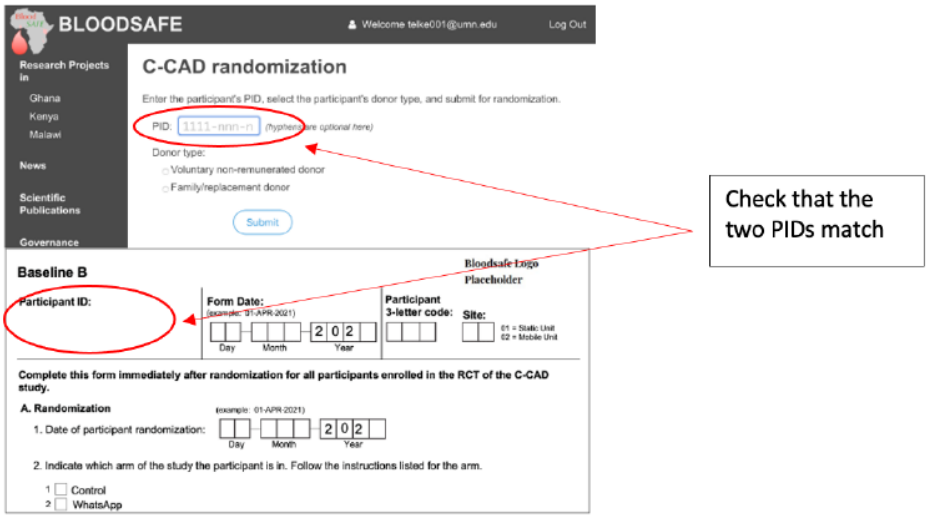


Figure 2: Double-check that the scanned PID matches the pre-printed PID number on the Baseline B CRF.

4.3. Enter the Donor type as defined by the C-CAD study definitions and submit the website randomization application (see Figure 3).

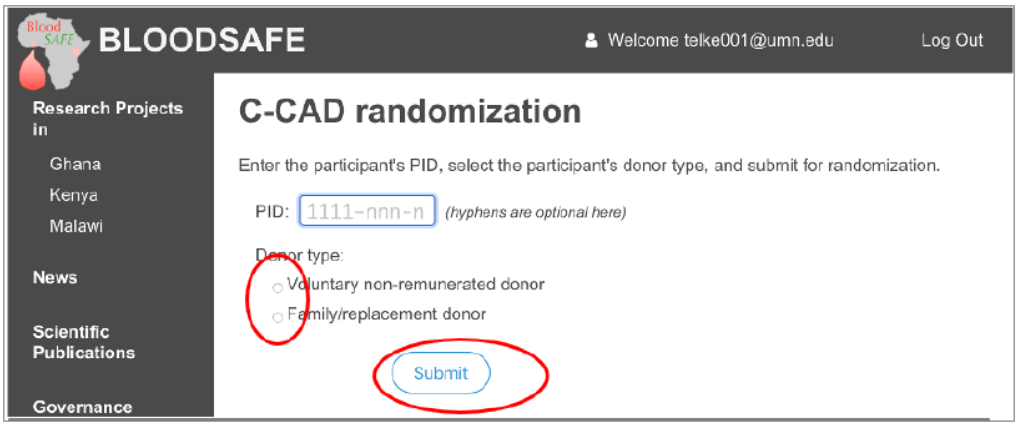


Figure 3: Enter Donor type and Submit.

4.4. The C-CAD Randomization application will display the random group allocation outcome (see Figure 4).

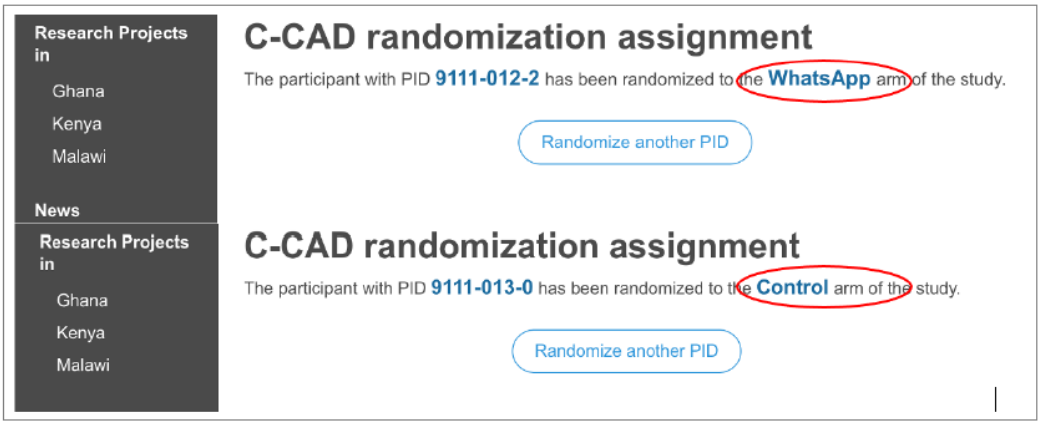


Figure 4: Example of randomization application outcomes screen for two different PIDs.

4.5. Record the date, randomization stratum, and outcome of the randomization outcome on the Baseline B CRF (C-CAD BASB) Section A. Randomization (see Figure 5).

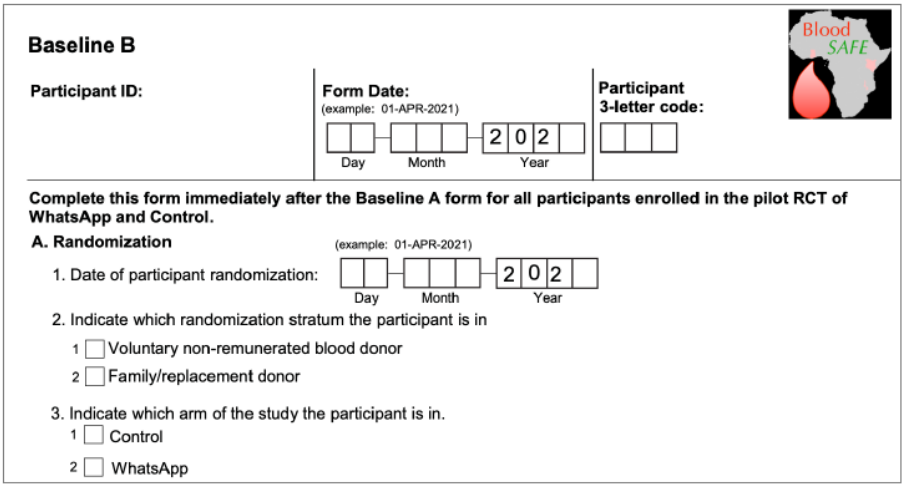


Figure 5: Complete Section A. Randomization with the date, stratum and randomization application outcome.

**18. Phone Interview Guide**

**Title: Community-based communication interventions for increasing the blood donor pool in Ghana: a randomized controlled trial**

**Phone Interview Guide**

Introduction should be brief, clearly identifying the caller, caller's institution and referring to the invitation to participation. In asking to speak with the intended participant, the actual nature of the call should not be disclosed to a third party. For instance, it is enough to say "*I would like to speak with… in relation to having scheduled a phone interview earlier about blood donation*".

## A. STRATEGIES FOR INCREASING PHONE INTERVIEW PARTICIPATION

**Hangs up before hearing reason for survey. Call back!**

1. "I want to make sure you understand that I'm not selling or promoting anything. I'm calling in regard to the earlier request to interview you on blood donation. I was wondering if this would be a good time to go through the survey with you. It only takes about 30 minutes."
2. "I'm sorry, I realize I've called at a bad time, but we are conducting a very important study that will have a direct impact on blood donation as we informed you the last time, and I'd like to have a chance to get your opinions. When would be the best time to call you back?" (Be sure to use assertive language such as, "When can I call you back?" instead of "Can I call you back?")

**I don't have time now.**

"As explained to you the last time, the survey only takes about 30 minutes and I can assure you that your responses will have a direct impact on blood donation in Ghana. If now is not a good time, when would be the best time to call you back?"

**I agree with the rest of the questions.**

"We're very interested in your opinions on the rest of the questions because your opinion on all the questions is very important for the study."

**I can no longer continue with the interview:**

**"**We're very interested in your opinions. When can I call you?"

## B. CONDUCTING THE PHONE INTERVIEW

1. Each interview will last about 30 minutes. Ask interviewer at 5 minutes intervals if they are still willing to proceed with the interview.

2. The participant must be informed about the next set of questions and whether they are willing to continue with the interview or where the subject matter changes during the interview.