Capstone Practicum Report

IMPLEMENTATION OF TRANSPORT STIPEND IN CERVICAL AND BREAST CANCER SERVICES: THE EXPERIENCES OF WOMEN BENEFICIARIES AND PERSPECTIVES OF PROGRAM PERSONNEL IN BUGESERA DISTRICT, RWANDA

By

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DECLARATION

We, Beth and Michelle, hereby declare that the practicum capstone thesis has been written by us without any external unauthorized help, that it has been neither presented to any institution for evaluation nor previously published in its entirety or in parts. Any parts, words or ideas, of the thesis, however limited, which are quoted from or based on other sources, have been acknowledged as such without exception.

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DEDICATION

This research study is dedicated to the women in Rwanda's Bugesera District, who so kindly supported our interview process. We hope our study can repay their generosity and play a part in advocating for the integration of transport stipend into health services and hospital budgets especially for those accessing cancer screening, diagnostics, treatment, and management.

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ABSTRACT

Background: Barriers preventing timely transportation to health facilities may impact patients' adherence to accessing cancer diagnostic, treatment, and management services. In Rwanda where the burden of cervical and breast cancer is high with 13.9% and 14.0% incidence and 13.7% and 10.5% mortality rate respectively, economic support through transport stipend provision can help alleviate financial burdens, increase follow-up, and improve patient health outcomes (IARC, 2020b). According to Habinshuti et al. (2020) and O'Neil et al. (2019), they also found the loss-to-follow-up rate of cervical and breast cancer patients in their sample population in Rwanda to be 40.1% and 14.0% respectively. The study aims to understand the respective experiences and perspectives of women beneficiaries and program personnel involved in the transport stipend provision program of Rwanda's Bugesera District.

Methods: This descriptive qualitative study used purposive sampling to select seventeen participants for in-depth interviews. Twelve women beneficiaries who received the transport stipend as part of the BIO Ventures (BVGH) for Global Health Educate, Screen, and Treat (EST) program were selected using maximum variation based on their age, distance to the health facility, number of referrals, and insurance category. Five program personnel involved in program planning and stipend provision of the same program were selected based on their period of participation. Document review of financial reports and transport database provided by BVGH were used to provide an overview of the program's stipend eligibility criteria, distribution process, amount, reach, and cost. To enhance contextual understanding of the women beneficiaries' experiences, two household visits were carried out, offering valuable insights into their journeys to healthcare facilities.

Results: From the document review, 6730 women were screened for cervical and breast cancer between September 2021 and May 2023. An overall 7,672 $USD was allocated to the provision of transport stipend during this period with 2,762 $USD utilized as of the end of data collection period. The stipend reached 75% of the 204 women who attended follow-ups. The amount of transport stipend provided to each beneficiary varied based on their distance to the hospital. Five themes emerged from women beneficiaries' interviews: (1) financial difficulties in accessing transportation for cancer care, (2) impact of transport stipend on access to cancer services, (3) barriers faced during transportation to cancer services, (4) challenges in the process of receiving transport stipend, and (5) recommendations to overcome transport stipend provision challenges. Five themes emerged from program personnel's interviews: (1) impact of transportation stipend on access to cancer services, (2) challenges in the process of providing transport stipend, (3) recommendations to overcome transport stipend provision challenges, (4) recommendations for implementation of transport stipend in other settings, and (5) sustainability. Both women beneficiaries and program personnel found the transport stipend to be impactful. However, challenges remain within the provision process related to communications and delays. Insufficiency of the stipend was highlighted with recommendations to provide the same amount for all regardless of insurance and distance as well as to increase coverage to other expenses such as food, accommodation, and travel companions.

Conclusion: The study provides insights on how transport stipends can help facilities access cervical and breast cancer diagnostics, treatment, and management services. A recommendation for program replication and sustainability includes the need for strong local and multisectoral partnerships and funding. The findings of this study are relevant for the planning and implementation of similar transport stipend programs in low-income countries of Sub-Saharan Africa.

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LIST OF ABBERVIATIONS

AAI	African Access Initiative
BCCOE	Butaro Cancer Center of Excellence
BVGH	BIO Ventures for Global Health
CBE	Clinical breast examination
DH	District hospital
EST	Educate, Screen, and Treat
GLOBOCAN	Global Cancer Observatory
HIV	Human immunodeficiency virus
HPV	Human papilloma virus
HIS	Health information system
IARC	International Agency for Research on Cancer
IRB	Institutional Review Board
LEEP	Loop electro-surgical excision procedure
MOH	Ministry of Health
MRS	Medical record system
RMH	Rwanda Military Hospital
RWF	Rwandese Franc
RBC	Rwanda Biomedical Center
SMS	Short message service
UGHE	University of Global Health Equity
USD	United States Dollar
WHO	World Health Organization
VIA	Visual inspection with acetic acid

CHAPTER ONE: INTRODUCTION

1.1 Background

1.1.1 Burden of Cervical and Breast Cancer

Cervical and breast cancer pose significant threats to women's health worldwide, regionally, and locally. According to the GLOBOCAN 2020 report as cited in Sung et al. (2021), among all cancers, breast cancer is the most common among women worldwide with new cases exceeding the 2.3 million mark, and a reported 700,000 deaths reported per year. Similarly, cancer of the cervix has an incidence of roughly 600,000 cases per year worldwide and an estimated 350,000 deaths annually (Sung et al., 2021). In Sub-Sahara Africa, cancers of the breast and the cervix are the most prevalent type of cancers and collectively account for 3 out of 10 cancers diagnosed for both sexes (IARC, 2022). A similar trend is seen in Eastern Africa where cervical and breast cancer make up 16.5% and 13.8% of new cancer cases per year and 16.4% and 10.8% death rates respectively (IARC, 2020a). Cervical and breast cancer have a similar impact in Rwanda. Specifically, Rwanda reports a crude cervical and breast cancer incidence of 13.9% and 14.0% for each cancer type (IARC, 2020b). Rwanda's mortality rates for cervical cancer and breast cancer at 13.7% and 10.5% respectively are both higher than the global mortality rates (IARC, 2020b). Clearly, cervical and breast cancer are great burdens for all populations including the women who reside in Rwanda.

The incidence and death rate of breast and cervical cancers are concerning because of their impact on women's health globally. They are also a huge cost burden on healthcare systems. A study conducted by Neal et al. (2018) quoted the annual operations cost for the BCCOE to be 957,203 $USD. Assuming homogeneity in cancer patients, the average cost of treating and managing one cancer patient per year is approximately US$ 372 (Neal., 2018). Furthermore, the high death rate among cancer patients essentially robs Rwanda of valuable human capital that would otherwise be productively employed towards improving the country's gross domestic product. Thus, cervical and breast cancer contributes to substantial financial burden for the Rwandan government.

1.1.2 Prevention of Cervical Cancer and Early Detection of Breast Cancer in Rwanda

To mitigate the strain of the above-mentioned cancers, it is important for these cancers to be diagnosed early and treatment initiated as soon as possible. This would not only reduce the mortality rates from advanced cancer complications, but also reduce the financial burden of advanced care. Early detection and screening programs have been implemented globally to cater to this. For example, in Rwanda, a Women's Cancer Early Detection Program was implemented in two districts starting in 2018 (Pace et al., 2023; Uwimana et al., 2022). The intervention begins with community health workers conducting health education on cancer prevention, which emphasizes the necessity of early detection and also highlights the early symptoms of the disease. Thereafter, midwives perform CBE for breast cancer and VIA for cervical cancer at health centers and patients with suspected cancer are referred to DH for further diagnosis and treatment. At the DH, further CBE is conducted using ultrasound and biopsy for cervical cancer (MOH Rwanda, 2020; Muhimpundu et al., 2021). Upon identification of precancerous lesions in the cervix region, treatment is executed either using cryotherapy or loop electrosurgical excision procedure (MOH Rwanda, 2020). Further diagnosis, staging, and treatment is delivered at the tertiary level healthcare facilities like the BCCOE which are equipped with pathology laboratories for cytology, histology, hematology, biochemistry, and tumor markers as well as advanced medical imaging equipment such as endoscopy and radiology (MOH Rwanda, 2020; Nambaziira et al, 2022; Uwimana et al., 2022). Cancer treatment is available at five hospitals,

categorized as tertiary level facilities in Rwanda University Teaching Hospital of Kigali, University Teaching Hospital of Butare, King Faisal Hospital, RMH and BCCOE offering surgery, chemotherapy, and radiotherapy (MOH, 2020). As human resource is critical in providing cancer care for the population. Rwanda has heavily invested in training healthcare professionals. Compared to 2010 when there was only one oncologist in Rwanda, a 2020 study reported an increase in the number of trained oncology staff to encompass a total of 55 clinical oncologists, pediatric oncologist, nurse oncologists, general pathologists, and general radiologists (Neal et al., 2018; Rubagumya et al., 2020). Overall, Rwanda has a comprehensive multi-leveled healthcare approach in screening, diagnosing, and treating cervical and breast cancer, which can be further strengthened to address the cancer burden.

Despite availability of diagnostic and treatment services above in Rwanda, there are still barriers to accessing these services, including health system level barriers and financial barriers, and in particularly the cost of transport to health facilities (Uwimana et al., 2022; Pace et al., 2015). According to Habinshuti et al. (2020) and O'Neil et al. (2019), they also found the loss-to-follow-up rate of cervical and breast cancer patients in their sample population in Rwanda to be 40.1% and 14.0% respectively. The barriers prevent women from accessing timely treatment and management for their cervical and breast cancer. Several interventions have been implemented in Rwanda to address the transport barrier, such as BVGH's EST program, which provides transport stipend to alleviate financial burdens of women beneficiaries accessing cancer services. However, the experiences of women and perception of BVGH EST program personnel in the rural Rwanda context have not been explored in any of the available literature to inform areas of improvement and service contextualization.

1.2 Problem Statement

Transport and financial barriers result in less uptake and late access of cancer care services, contributing to less-than-optimal health outcomes among women in Rwanda's Bugesera District

1.3 Objectives of the Study

1) To understand the implementation of BVGH's transport stipend provision within their cervical and breast cancer services and the resulting reach and cost by July 2023.

2) To understand the experiences of women beneficiaries in receiving the transport stipend for cervical and breast cancer services by July 2023.

3) To explore program perspectives of program personnel involved in providing transport stipend for cervical and breast cancer services by July 2023.

1.4 Organization of the Report

The organization of this report is as follows:

- Chapter One: Introduction
- Chapter Two: Literature Review
- Chapter Three: Methods

- Chapter Four: Results
- Chapter Five: Discussion
- Chapter Six: Conclusion and Recommendations

CHAPTER TWO: LITERATURE REVIEW

2.1 Barriers to Cervical and Breast Cancer Services

Impediments to cancer screening are caused by a variety of factors including structural, socio-cultural and personal influences. Previous research in Nigeria, Ethiopia, and rural Uganda reflected that the lack of awareness, and misconceptions on screening methods discouraged women from cervical cancer screening uptake (Ndejjo et al., 2016; Okunowo & Okonu, 2020; Tefera & Mitiku, 2017). These results compare well with a Nigerian study that emphasized the important role of healthcare workers, proper education, and awareness in increasing women's uptake of breast cancer screening (Olasehinde et al., 2017). Similarly, a study in Iraq pointed out the need to spread awareness and the contrasting detrimental effects of misinformation due to invalid resources (Rasul et al., 2016). The study further highlighted psychological factors such as the fear, discomfort, embarrassment, and mistrust associated with the perceived pain, screening results, and interaction with providers as factors that diverged women from partaking in screening tests (Rasul et al., 2016).

Socio-cultural barriers mentioned by the women included lack of time due to family responsibilities, lack of perceived necessity due to religious trust in God, and the lack of testing experienced by those in their circle (Ndejjo et al., 2016; Rasul et al., 2016). Women from Nigeria and Cameroon also cited religious and cultural obligations such as modesty and belief in healing through prayers as reasons to not uptake screening (Manga et al., 2022; Modibbo et al., 2015). Therefore, limited knowledge, negative feelings, and existing sociocultural norms pose as major access bottlenecks for women in their uptake of cancer screening services.

While barriers limiting women's access to initial screening are important, there is also a need to focus on the barriers that limit timely follow-up. A study in Cameroon on cancer management care-seeking behavior found that the fear of results was a main reason for non-compliance (Tchounzou et al., 2019). A Uganda inquiry into the same area of cancer management came to the same conclusion; of their 359 cancer patients, 35% did not commence treatment, while another 41% skipped appointments while undergoing treatment (Nakaganda et al., 2020). The reasons for failure in commencing or completing treatment included preference for alternative medicine, extensive waiting periods, and lack of suitable resting spaces at referral facilities.

Aside from the individual barriers, lack of reliable social support structures and family obligations also generated anxiety and worry for cancer patients in their decision to access treatment (Nakaganda et al., 2020). In rural Rwanda, Habinshuti et al. (2020) found that the lack of documented disease at first visit, long travel distances, palliative care, and missed treatment sessions contributed to a higher likelihood of lost-to-follow-up. A similar study done in India attributed the reasons of loss-to-follow-up to the lack of awareness and understandings for the screening process, feelings of fear, lack of financial and familial support, and contrasting sociocultural beliefs (Vidhubala et al., 2020). Thus, factors stemming from different causes not

only prevent access to screening, but also deter cancer patients from attending their follow-up appointments.

2.1.1 Barriers Specific to Finance and Distance

While there are many factors affecting women's access to cancer services, difficulties related to finance and distance often delay patients in seeking diagnosis and treatment as well as demotivate them to continue necessary follow-ups. When experiencing financial difficulties, majority of respondents in Aviki et al.'s (2021) study engaged in material cost-coping such as reducing leisure spending, using savings, and applying financial assistance, while 10% engaged in medical cost-coping such as delaying or skipping medical visits or tests and reducing intake of prescribed medication. Particularly, the cost of transportation to treatment facilities was identified as a barrier especially when spousal support for childcare and transport money was lacking (Adewumi et al., 2019). Failure of commencement in treatment and non-compliance can be attributed to financial burden and related barriers due cost of transport (Nakaganda et al., 2020; Tchounzou et al., 2019). Due to traditional gender roles, women may need to seek approval from their spouse who oversee the distribution of their family's finances (Manga et al., 2022; Modibbo et al., 2015). In Cameroon, women also reflected on the cost of treatment as a barrier despite the option to pay in installments or to have it on credit (Manga et al., 2020). In fear of being asked about their debts, the women chose to delay their follow-ups (Manga et al., 2020). Clearly, financial burdens associated with cancer care prevent women from seeking timely screening, diagnosis, and treatment.

The issue of distance is further exacerbated by those living in remote areas where screening facilities may be limited (Manga et al., 2020). In Rwanda, a geospatial analysis on Cancer Care Centers found that more than 87% and 60% of patients lived an hour or two hours away respectively from tertiary cancer care hospitals (Fadelu et al., 2022). A study by Onyenwenyi & Mchunu (2018) in Nigeria found geographical barrier to be related to the location of hospital facilities that offer cervical cancer screening services; the distance of hospitals paired with the lack of financial means made screening uptake difficult (Onyenwenyi & Mchunu, 2018). Similarly, in Uganda, researchers found the lack of breast screening services in primary healthcare setting to be a limitation which predisposed women in poverty to structural and community-level hazards that are related to distance and transportation cost (Ilaboya et al., 2018). Women in Botswana also reflected on the unpredictability of public transport paired and the distance of screening services as factors that deterred them from accessing services especially if they were required to take time off work (Matenge & Mash, 2018). Furthermore, the odds of screening decreased when women in Burkina Faso lived in rural or semi-urban areas when compared to their counterparts who lived in urban settings (Compaore et al., 2016). Clearly, those who live far away from health facilities face disproportionate obstacles in accessing cancer services.

2.2. Existing Interventions to Address Transportation Barriers

As transport-related barriers have repeatedly been identified as impediments to accessing cancer care, various studies have explored interventions to alleviate the challenge. A previous cross-sectional study done in an urban academic cancer center in the United States of America by Aviki et al. (2021) discovered that the most preferred intervention to financial toxicity due to out-of-pocket expenses from accessing gynecological cancer care was transportation coupon

followed by an understanding of the treatment costs and minimization of wait times. Another qualitative study by Mujumdar et al. (2021) established that cost, childcare, difficult navigation, and physical discomfort were barriers which deterred women from travelling to access gynecologic cancer care. Direct monetary grants and social support such as loans or vehicles were able to mitigate difficulties experienced from transportation to cancer therapy (Mujumdar et al., 2021; Thom et al. 2021 as cited in Aviki et al., 2021). While the finding supports the need to mitigate transport difficulties by providing monetary funds to cancer patients, the setting and region of the research is not reflective of the rural DH setting in our study.

Studies conducted in rural settings in Africa also support the impact of transport support on other health services aside from cancer. A qualitative study by Massavon et al. (2019) in rural Uganda on childbirth services found that transport vouchers were the preferred intervention in mitigating issues of high transportation costs and perceived long distances to health facilities from remote villages that lack reliable transportation services (Massavon et al., 2019). In their study, transport vouchers were effective in increasing attendance and referrals of women patients and further motivated the women's spouse to escort them for services (Massavon et al., 2019). While this study was directed at women accessing antenatal care and not on cancer care, it further reflects the importance of transport support especially in settings where remoteness and poverty are prevalent. They also emphasize the need to consider the women's social context and the cooperation of relevant stakeholders such as health workers and transporters when executing similar programs.

Redeemable vouchers have also been implemented by Lutge et al. (2013) for tuberculosis treatment in South Africa. They found the treatment completion rate of patients who received vouchers were relatively higher with less treatment interruption and treatment failure rates. Within HIV care, Siedner et al.'s (2015) comparative study in rural Uganda found that their SMS messaging-coupled with transport reimbursement intervention were effective in increasing the likelihood of HIV patients returning to the clinic and initiating antiretroviral therapy earlier. Ommeh et al.'s (2019) study in rural Kenya further found mobile technologies and provision of transport e-vouchers to be crucial in improving health outcomes for mothers and newborns and their access to healthcare. However, poor mobile telephone network, limited phone ownership, suboptimal road network, limited ambulance services, and low numeracy and literacy levels limited their implementation (Ommeh et al., 2019). The effectiveness of monetary transport support in various health services carries implications for its success in supporting cancer care access.

Related to cancer care, studies have also reflected on the presence of transport stipend in rural areas. Furthermore, Erwin et al. (2019) conducted a randomized controlled trial in Tanzania to evaluate the impact of behavior change communication SMS and electronic vouchers on cervical cancer screening uptake. The research targeted women within the age of reproduction with access to a phone; they observed the highest uptake of cervical cancer screening services to be among the women who received both SMS and electronic vouchers. Interestingly, the study found that their interventions fared better in rural areas than in urban areas. Another study by Pham et al. (2022) in the Western Region of Cameroon recruited women for cervical cancer screening through community information channels and community health workers. Through their study, financial aid for transportation was also provided to support the women's travel to

screening centers. They found that their dual recruitment method increased the number of women from rural areas in accessing cervical cancer screening from 12.1% to 61.4% (Pham et al., 2022). This showcases the effectiveness of implementing community health workers in transport stipend and screening programs to engage women populations who may be harder to reach (Pham et al., 2022). Clearly, transport vouchers have been found to be impactful in reaching rural populations to access screening services.

In Rwanda, a study also investigated the implementation of refunding transport fees for cancer patients. Habinshuti et al. (2020) retrospective study found that due to differences in travel distance, women living outside the Northern Province displayed a higher loss-to-follow-up in compared to their in-province counterparts. The study's lower percentage of patients who are loss-to-follow-up may be attributed to their refunding of transportation fees for cancer patients with limited financial means (Habinshuti et al., 2020). It was also suggested that the transport support was insufficient to address other travel-related barriers such as travel time which conflicted with other priorities and the patient's ability to pay for their transport up front (Habinshuti et al., 2020). Thus, while monetary refund of transport fees shows potential in alleviating women's financial stress when accessing cancer services, further research needs to be conducted to better understand its impact and best practices for its implementation.

For this research, we will focus on the transport stipend provision program by BVGH, an intervention that is implemented in Bugesera district, Rwanda to alleviate transportation costs as impediments to the access of cancer/breast cancer care in Rwanda.

2.3. Transport Stipend Provision in BVGH's EST Program

BVGH is a not-for-profit organization based in the United States of America working across the government and private industry to develop and manage programs related to health and research. BVGH launched the AAI with the aim to establish sustainable access to oncology medicines and technologies, strengthen healthcare infrastructure, build clinical oncology capacity, and expand awareness of cancer. In November 2017, Rwanda joined the AAI and formalized its partnership with BVGH. Within Rwanda, the AAI program has focused on building capacity through the coordination of multidisciplinary training programs, installment of essential cancer diagnostic equipment, development of an electronic national cancer registry, improvement of cancer patient referrals, increasing the pathology capacity of oncology units, and strengthening partnerships between the Rwandan MOH and actors in the private sector.

BVGH in collaboration with the Rwandan MOH, RBC, and Garda World, developed and implemented the EST program at the Nyamata DH located in Rwanda's Bugesera District. In line with the Rwandan National Cancer Control Plan 2020-2024, the EST program consists of screening, pre-cancer treatment, and cancer treatment. Such services were integrated into the standard healthcare offerings of the Bugesera district health centres and Nyamata DH. BVGH's EST program consists of five main components, namely, training of healthcare professionals, equipping health facilities, launching screening services for women beneficiaries, monitoring and reporting of data, and promoting cancer awareness.

As part of the training provided by local cancer experts, healthcare professionals in the district such as nurses, midwives, gynaecologists, data managers, lab technicians, and community health

workers were trained on cancer signs and symptoms, patient communication and education, screening and treatment techniques, and data recording. Refresher training was provided by RBC and BVGH approximately six months after the initial training program to ensure that the healthcare workers continue to offer the services in a quality and sustainable manner.

To equip health facilities, BVGH and RBC coordinated the permanent placement of the instruments needed to screen for and detect cervical lesions, as well as treat precancerous cervical lesions, at each health centre and DH. The screening services launched allowed women to visit their local health centres for screening during routine health consultations with nurses and/or midwives. Screening for cervical cancer at health centres is done using HPV sampling and/or VIA respectively. Women with a VIA-detected pre-cancerous cervical lesion are treated with thermal ablation at the health centre or, if needed, referred to the DH for colposcopy and LEEP. Women with concerning cervical lesions are counselled on diagnostic and treatment options. Women were also offered breast cancer screenings (clinical breast exams) along with cervical cancer screenings at the district health centres. Additionally, BVGH and RBC promoted cancer awareness through the EST program with posters and other print materials distributed at health centres, radio announcements, press coverage, and vehicle wraps installed on GardaWorld vehicles. Additionally, CHWs were provided with booklets to enhance and improve cancer awareness among the general population, they encouraged participation in the EST program, and adherence to follow-up of appointments.

In partnership with the RBC-HIS team, the EST program data is collected using Open MRS which is Rwanda's national electronic medical system to enable RBC to compare the outputs and outcomes of the EST program with screening programs in other districts to determine the best implementation practices for cervical cancer services in Rwanda. This data includes the number of women screened, prevalence of HPV, number of VIA positive cases, number of precancerous and cancerous lesions. Specifically, the EST program supports the standardization of data, improvement of information exchange between and across health facilities and a central server, integration of patient data with the national registry and standardization of electronic medical records systems.

Lastly, in line with the cancer care continuum, transport stipend is provided for women to travel to DHs such as Nyamata DH and some tertiary hospitals such as Rwanda Military Hospital and Mediheal Diagnostic and Fertility Centre following abnormal screening tests at health centers. The stipend program started in 2021 and has so far benefited 153 women.

2.4 Gaps in Literature

Overall, our literature review has identified various research that covers the barriers of transportation of cancer patients. Whereas studies executed in Sub-Saharan Africa was available on the topic, many were conducted outside of Rwanda. Furthermore, it was difficult to identify literature that implemented interventions to mitigate such barriers through transport stipend provision especially for breast cancer care. The available literature on transport provision

interventions mostly focused on aspects such as the loss to follow-up rate or behavioral change communication and not on the stipend program itself. Additionally, there was scant literature available focusing on the experiences of beneficiaries of transport support in their access to cancer services, and the perceptions of transport stipend program personnel in Rwanda. Thus, this gap creates an opportunity for our research to explore and better understand these experiences and perceptions, specifically in the case of BVGH's transport stipend program in Bugesera district, Rwanda.

2.5 Study Justification

Given the high impact of cervical and breast cancer on women's health, it is important to minimize patient and health system delays, which often result in advanced stage diagnosis and negative treatment outcomes (MOH Rwanda, 2020). Cervical cancer incidence and mortality can be effectively reduced through the implementation of screening programs and early treatment of precancerous lesions (WHO, 2020). The slow progression of cervical cancer development makes prevention possible as the disease can be identified through screening methods and treated before it develops invasively (Cooper, 2022). Similarly, early diagnosis of breast cancer has been associated with better treatment outcomes (MOH Rwanda, 2020).

By providing transport stipends to mitigate against the financial barriers of transportation costs, women can access the screening and treatment services in a timely manner resulting in the overall improvement of health outcomes. Therefore, it is crucial to understand the experiences of the women beneficiaries and the perspectives of the program personnel to improve the ongoing program and maximize its impact in Bugesera District. The research will also inform future scaling of similar interventions the rest of Rwanda, and other similar settings in Sub-Saharan Africa.

CHAPTER THREE: METHODS

3.1 Setting

The inquiry was conducted in the Rwandan district of Bugesera, located in the Eastern Province. The demographic of the district is made up of 54.5% females (National Institute of Statistics of Rwanda, 2016c). In terms of education, 84.2% of females aged six and above have attended school and 69.5% of females aged 15 years and above are literate (National Institute of Statistics Rwanda 2016b). Females head only 27.8% of households but spend over 2.5 times the number of hours as male on domestic duties (National Institute of Statistics of Rwanda, 2016c). In general, the unemployment and economic inactivity rate in Bugesera are 1.5% and 11.3% respectively (National Institute of Statistics of Rwanda, 2016a). Farming and farm-related activities are the economic mainstay of Bugesera accounting for 68.2% of the legal working age population of 16 years and above (National Institute of Statistics of Rwanda, 2016a). Based on the poverty line referred from a minimum food consumption basket, 47.7% of the population live under the threshold of food poverty which currently stands at 105,064 $RWF (National Institute of Statistics Rwanda, 2015). In Rwanda, only 48.4% of households can walk to a health center in under an hour with the mean walking distance being 29.9 and 66.6 minutes for urban and rural households respectively (National Institute of Statistics Rwanda, 2016d).

Women in the Bugesera District can access breast and cervical screening as part of BVGH's EST program. Their entry point into healthcare is through the community health centers with women who require further evaluation being referred to the Nyamata DH. Suspected cases that require management are then referred to tertiary hospitals such as Rwanda Military Hospital in Kigali.

3.2 Design

This study aimed to understand the perspectives and experiences of women beneficiaries and program personnel within the BVGH program, receiving and providing transport stipend for cervical and breast cancer care. To achieve this, we employed a descriptive qualitative study to gather data from the women beneficiaries and program personnel through semi-structured interviews. The findings were supplemented with on-site observations at the hospital and site visits to the women's homes. To provide context to the research, we reviewed relevant BVGH documents to describe the EST program reach and stipend distribution process.

3.3. Sample

The sample population was selected through purposive sampling for maximum variation taking into consideration the factors of age, insurance, and the health centers closest to the women's home. The age categories were divided into 34 and below, 35 to 44, 45 to 54, 55 to 65 with at least 1 woman from each age range. Insurance categories were divided into 3 categories in accordance to Rwanda's community-based insurance categories one, two, and three with at women representing each category. Finally, our sample was able to cover 9 health centers with only 2 health centers, namely Mayange and Nyamata, having more than one women representing. We interviewed 12 women beneficiaries and 5 program personnel. We selected age to reflect upon the changes in age range of the program after initial launch, the distance to reflect upon different travel time, duration, and transport modes, and insurance to reflect upon financial capabilities and economic status of the women beneficiaries. For program personnel, it was based on their level of involvement in offering transport stipends or period of participation in the BVGH transport stipend distribution program. The number of interviewees was selected following the recommendations by BVGH and the reach of data saturation on-ground when reading through the translated interview transcripts.

The inclusion criteria were as follows:

1. BVGH staff and hospital personnel involved with the BVGH EST program for more than 6 months
2. Women enrolled in the BVGH EST program
3. Transport-related documents pertaining to the program, covering the period from August 2021 to April 2023.

The exclusion criteria are as follows:

1. Women who did not receive the transport stipend

Aside from the interviews, there was another sample for document review to provide an overview of the stipend program. The documents were sampled included budget sheets, concept notes, and client database based on their relevance in providing information on program and stipend cost, stipend distribution, stipend eligibility, and beneficiary demographics.

3.4 Measure

From the document review, we extracted the following measures:

- Direct cost of transport stipend, one-time costs, and program operational costs
- Number of women reached in screening and transport stipend provision
- Socio-demographics: type of cancer screening, women's age, health center, insurance category, number of referrals, and format of stipend received

From the interviews, we explored:

- Women's experiences with the transport stipend program, and their recommendations for improving the program or addressing any identified challenges
- Program personnel's perception of the stipend intervention program, and their recommendations to address identified challenges and thoughts on sustainability

3.5 Data Collection Tools

Two separate semi-structured interview guides with probing questions designed to elicit responses from the women beneficiaries and program personnel respectively (See Appendix D and Appendix F for the English interview guides). Both interview guides were translated into Kinyarwanda and pre-tested before interviews (See Appendix E and Appendix G).

For document review, we extracted relevant data points from the documents and databases into an excel file

3.6 Data Collection Procedures

1) For document review, we requested, reviewed, and extracted information from relevant programmatic reports from BVGH (i.e., client records, budget sheets, proposals, concept notes)
2) For the semi-structured in-depth interviews, we pre-scheduled 12 interviews with women beneficiaries and 5 interviews with program personnel. Besides the single online interview, the rest were physical interviews conducted in Nyamata. The interviews lasted for about 45 minutes on average, with the longest taking about an hour.
3) For household visits, we selected two women beneficiaries from among the interviewees living in Bugesera District to better understand their patient journeys. The two households were selected on the basis of acceptance of visit request and the differentials of distances from Nyamata DH, with one household located in Ntarama and the other in Gashora, located 0km and 29km respectively from the hospital. Throughout the journey, the research team took notes of their observations and experiences.

3.7 Data Collectors

Two female and one male data collected accompanied by their supervisor and the principal researchers conducted the in-depth interviews in Kinyarwanda. The data collectors are fluent in both English and Kinyarwanda and have bachelor's degrees with experience in research. The data collectors had a one-day training session on the study's objectives, consent process, ethical

considerations, and feminist interview techniques. An additional one-day session on mental health support and referrals was conducted by a psychologist. The document review and the online English interview were conducted by the principal researchers

3.8 Data Management

The interviews were recorded, and the audio files transcribed and translated into English by translators. All related data files including any BVGH documents used for the document review Institutional Review Board were stored in a password protected digital folder accessible only to the researchers, preceptors, supervisors, and translators.

3.9 Data Analysis Procedure

From the document review, cost of operations, and stipend reach were added up and the totals summarized into a narrative. The number of women accessing cervical, breast, or both types of cancer services were summarized and stratified based on socio-demographics (age, insurance category, number of referrals, and format of received stipend as cash or mobile money) and presented in a bar chart.

All interviews were translated verbatim from Kinyarwanda into English except for one which was conducted in English. This unique case involved program personnel who was not a local resident and therefore was more comfortable with English. Thematic analysis was chosen as our method of choice owing to its flexibility in determining themes in different ways. All the 12 women beneficiary transcripts and 5 program personnel were included in the analysis. The tool used for coding was Dedoose 9.0.106. Following Braun & Clarke's (2006) thematic analysis steps, we first (1) familiarized ourselves with the data by individually reading all the available transcripts. The research team (2) coded the transcripts independently using an inductive approach; identified the relevant excerpts and convened to review and agree upon the identified codes inductively. We (3) grouped the codes into categories and identified the themes using Excel and then (4) we reviewed the themes (5) and defined the themes (6) Lastly, we explained the themes using specific excerpts from the interview transcripts.

Household visits were later conducted to better understand the context and settings of the patient. The researchers generated visual and written notes which helped to give context to the patients' journey.

3.10 Ethical Consideration

Approval to conduct this research project was granted by the UGHE's IRB: ID #214 (See Appendix A on UGHE IRB Academic Ethic s Review Notification of Approval).

3.10.1 Vulnerable Populations

The research does not involve any vulnerable populations.

3.10.2 Assessment of Risks to Participants

The researchers foresaw potential discomforts in discussing socioeconomic backgrounds of participants and the psychosocial impact on the women who are asked to discuss their cancer experience in the interviews.

3.10.3 Medical or Psychosocial Support

Psychosocial support was needed for participants who felt uncomfortable speaking about their cancer care experiences. The contact of a mental health professional was made available to participants who found the support necessary. An emphasis was made during the informed consent process for the participant to freely opt out of the interview at any time during the study without consequences.

3.10.4 Information and Consent Process

All researchers and field workers involved in the study adhered to ethical standards in seeking informed consent. Prior to giving consent, study participants were provided with information on the study in written and verbal formats in English or Kinyarwanda as preferred (See Appendix B on English information and consent form; Appendix C on Kinyarwanda information and consent form). The participants were given time to read and reflect on the consent form as well as to share their understanding of it and ask any questions they may have with the researchers and data collectors. The women beneficiaries were further briefed on their ability to follow-up, abstain, or withdraw from the study at any time. The researchers and data collectors were present to provide the necessary clarification or explanation to ensure that participants have a full understanding of the study and their rights before giving informed consent. Permission to record interviews was asked explicitly with reference to privacy and confidentiality measures. Each women beneficiary and personnel who were interviewed were compensated with 10,000 $RWF (8.58$USD). This compensation amount was determined based on previous research conducted by the hospital, which recommended providing the same amount as transport reimbursements to participants

3.10.5 Protection of Privacy and Confidentiality

To ensure the privacy and confidentiality of participants during the research, we assigned unique identification numbers to each participant, stored their information in a password-protected format, and strictly controlled access to the information, limiting it only to the research team.

3.10.6 De-identification of Data

For every interview transcript, we assigned a unique ID for the anonymity of the participant throughout the analysis process, as well as during the dissemination of results and publication.

3.10.7 Safekeeping of Data

For the security of our data, digital records were stored on password-protected laptops and on OneDrive. Access to the data was restricted to only the researchers and transcribers working on the study. Once the research was completed, the data was stored at UGHE in accordance with IRB regulations.

CHAPTER FOUR: RESULTS

4.1 Objective 1: Document Review

From the document review exercise, the following key data points were identified:

4.1.1 Stipend Eligibility

As part of BVGH's EST program, transport stipend is provided to women aged 30 to 49 years to facilitate transportation from their homes to the Nyamata DH, Rwanda Military Hospital and Mediheal Diagnostic and Fertility Centre for cervical and breast cancer screening and management. The age was later expanded to 30 to 65 years in accordance with Rwanda's WCEDP. However, in the actual provision of the stipend, discretion is exercised by program personnel, and the stipend was provided to women outside the above-mentioned age-group who underwent screening and treatment. Women without community-based insurance were excluded from the transport stipend provision.

4.1.2 Stipend Distribution Process

In the paper-based process the transport stipend is provided as a reimbursement upon presentation at the hospital. After accessing health services, valid documentation (eg. referral and transfer forms) and signatures from the women beneficiaries and on-ground program personnel, are submitted to the hospital accountant for approvals and reimbursement through cash is done as shown in Figure 1. While the mobile money process was originally used to distribute the transport stipend as it was convenient to send women beneficiaries the money, program personnel made the transition to cash reimbursement.

Figure 1

Process of stipend distribution and approvals before the money can reach beneficiaires.

4.1.3 Stipend Amount

The amount of transport stipend provided to each women accessing cervical and breast cancer services vary based on their distance as advised by BVGH's local partners. No updates to the amount has been made since the initiation of the program. Stipend amounts for travel to the DH calculated based on the health centres that the women are referred from, while stipend amounts for travel to the referrals hospitals is a standard rate of 12,000 $RWF. The amounts are shown in Table 1 below.

Table 1

Breakdown of transport stipend amounts based on distance

From Health Center	To Nyamata DH ($RWF)	To Referral hospital (Rwanda Military Hospital & Mediheal Diagnostic and Fertility Centre ($RWF)
Manyange	4,000	12,000
Nyamata	4,000	12,000
Ntarama	4,000	12,000
Juru	5,000	12,000
Rilima	6,000	12,000
Mwogo	7,000	12,000
Mareba	8,000	12,000
Ngeruka	8,000	12,000
Ruhuha	10,000	12,000
Gashora	10,000	12,000
Nzangwa	10,000	12,000
Kamabuye	10,000	12,000
Nyarugenge	11,000	12,000
Gihinga	12,000	12,000
Gakurazo	12,000	12,000

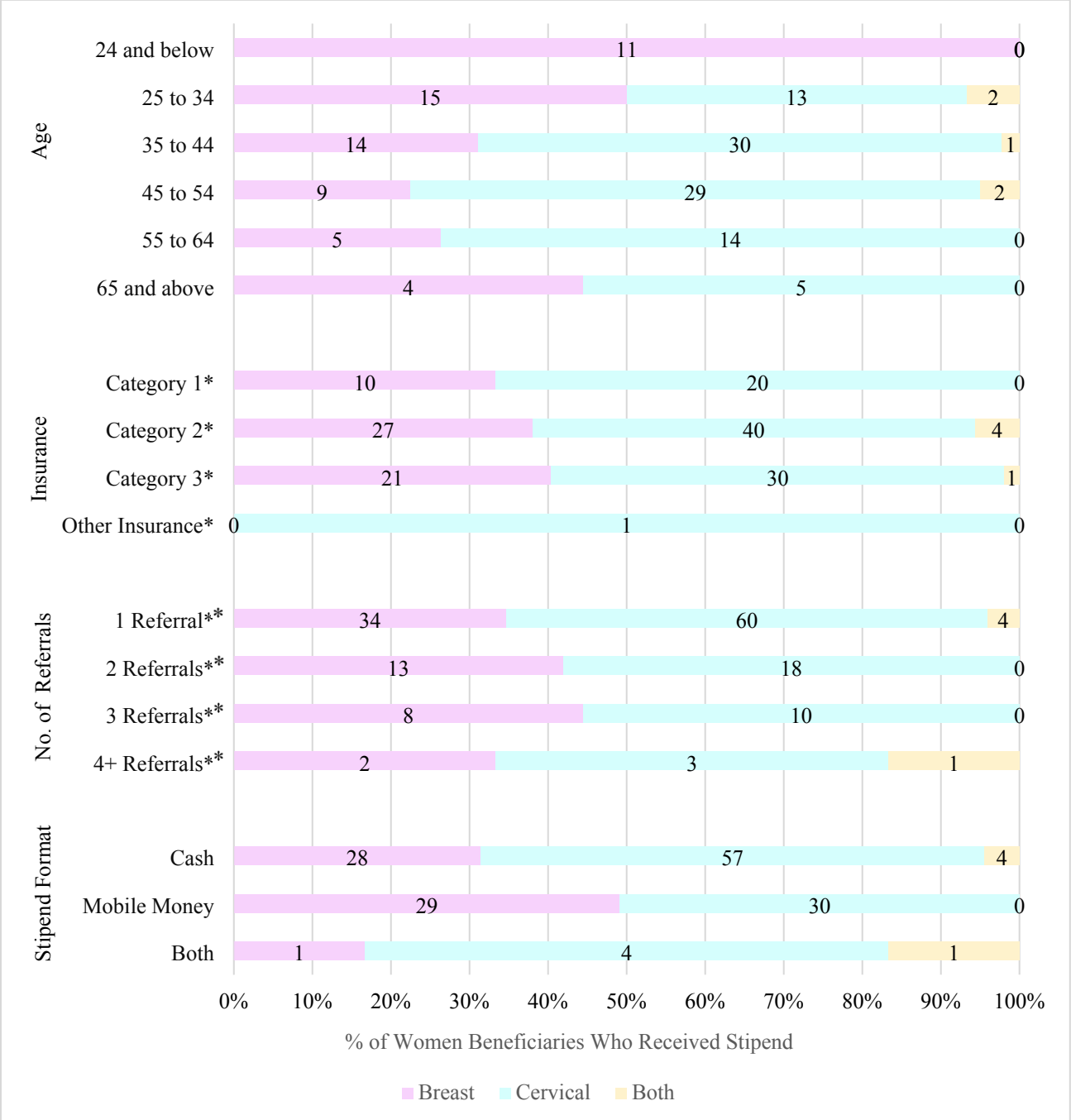
4.1.4 Program Reach

During the study period from September 2021 to May 2023, 6730 women were screened for cervical and breast cancer, of which 216 women with suspected cancer were referred for follow-up services at the DH or RMH. Of the ones referred, 204 attended follow-ups at Nyamata DH and were eligible for the stipend. The discrepancy is because women with abnormal CBE were referred to RMH for ultrasound, while women with suspected cervical cancer were referred to DH for biopsy. However, due to operational challenges, only 75% of the women who showed up at Nyamata DH received the transport stipend. The original overall target for the program was to screen 5,000 women, which was achieved in the month following the launch of the program when only the cervical screening component was available. However, a specified target following the initial program results were not stated following the addition of breast cancer screening services.

The following graph summarizes the number and characteristics of the women beneficiaries in terms of their insurance category, number of referrals, and stipend format such as cash or mobile money received. The number in each bar graph represent the number of women accessing health services for breast, cervical, or both types of cancer respectively.

Figure 2

Type of cancer services accessed by socio-demographic in BVGH EST program among women who received transport stipend



**The community-based health insurance in Rwanda (Mutuelles de Santé,) is based on four levels that is aligned to one's socio-economic status, from lowest (category 1) to highest (category 4) socio-economic status. Those in category 1 do not pay anything when accessing medical services while in those in categories 2 and 3 have to pay a premium of 3000 $RWF per year per household member and a 10% co-pay for all hospital medical services. On the other hand, category 4 members have to pay 7000 $RWF per person in a household per year with 10% of all*

hospital service costs (Koch et al., 2022). Other insurance categories include those who have insurance but not under the Mutuelles de Santé, such as the Military Medical Insurance.

***Number of Referrals: Beneficiaries with 1 referral are those who were referred from the Health centre to the District Health Center for further screening. If they tested positive for early pre-cancerous conditions, they would undergo pre-cancerous treatment using LEEP. Those with 2 referrals had an additional referral from the DH to the referral hospital for follow-up screening due to suspicion of advanced stage cancer. Those with 3 referrals have been diagnosed and have started hospital visits for the initial stage of treatments. Those with 4 and above are undergoing follow-up treatments to monitor their progress after surgery, chemotherapy, radiation therapy, etc.*

4.1.5 Program Costs

BVGH was able to implement the EST program with funding from Faber Daeufer & Itrato PC, Johnson & Johnson, and Garda World. The total direct cost of the full EST program was 297,490.22 $USD, which covered items needed for training, equipment, communications, promotional campaigns, and diagnosis and treatment. An additional 20% flexible fund (56,626.14 $USD) was included in the program budget to prepare for unforeseen costs. The project coordinator role and the transport stipend total transfer were included in this flexible fund. In total, 317,657.22 $USD was spent on the program as a whole, although the team was prepared to spend up to 368,120.72 $USD based on the estimated costs, which includes the added 20% flexibility. Although we aimed to understand the cost from the documents we received, the specific cost elements were difficult to determine as the transport stipend was built into a larger program with many operational arms, making it hard to parse out the amount of money needed operationally solely for the transport stipend itself.

4.2 Objective 2: Qualitative Analysis

4.2.1 Participant Characteristics

Twelve women beneficiaries who received transport stipend as part of the EST program were interviewed. The women beneficiaries were within the age range of 27 to 63 years and were referred from health centers within the Bugesera District. Three (25.0%) of the sampled women beneficiaries had Community-based Insurance (Mutuelles de Santé,) Insurance category one, six (50.0%) had category two, and three (25.0%) had category three. Out of all the participants, four (33.3%) accessed breast cancer services, eight (66.7%) accessed cervical cancer services, and one (8.3%) had accessed both. The details of the women beneficiaries' characteristics including their occupation, marital status, children, educational level, and health center are summarized in Table 1.

Table 2

Demographic characteristics of the women beneficiaries interviewed.

Characteristics		**n (%)**
Sample size		12 (100%)
Age	24 and below	1 (8.3%)
	25 to 34	2 (16.7%)
	35 to 44	1 (8.3%)
	45 to 54	6 (50.0%)
	55 to 64	2 (16.7%)
Mutelle Insurance Category*	Category 1	3 (25.0%)
	Category 2	6 (50.0%)
	Category 3	3 (25.0%)
Type of Cancer Screening	Breast	4 (33.3%)
	Cervical	7 (58.3%)
	Both	1 (8.3%)
Health Center*	Gakurazo	1 (8.3%)
	Gashora	1 (8.3%)
	Gihinga	1 (8.3%)
	Juru	1 (8.3%)
	Mayange	2 (16.7%)
	Ngeruka	1 (8.3%)
	Ntarama	1 (8.3%)
	Nyamata	3 (25.0%)
	Ruhuha	1 (8.3%)
Education	Primary School	7 (58.3%)
	Secondary School	3 (25.0%)

	Vocational Training	2 (16.7%)
Occupation	Farmer	5 (41.7%)
	Homemaker	1 (8.3%)
	Teacher	2 (16.7%)
	Trader	4 (33.3%)
Marital Status	Married	8 (66.7%)
	Separated	3 (25.0%)
	Single	1 (8.3%)
Children	0	1 (8.3%)
	1-2	5 (41.7%)
	3-4	3 (25.0%)
	5+	3 (25.0%)

**Health center refers to the primary level health facility closest to the women beneficiary's home.*

Five program personnel involved with the transport stipend provision as part of the EST program were interviewed: 1 doctor (20.0%), 2 nurses (40.0%), 2 BVGH staff (40.0%). Within the program, these personnel took on the roles of hospital director, project coordinator, screening staff, program officer, and program manager respectively.

4.2.2 Women Beneficiary Interview Results

After 12 in-depth interviews, we reached data saturation. In-depth interviews were chosen to give privacy to women as the topic is related to cancer and possibly their experience with healthcare, which may be personal and difficult to discuss in a group. From the interviews, we gained useful insights into the experiences of women beneficiaries. Five themes were identified from the transcripts: (1) financial difficulties in accessing transportation for cancer care, (2) impact of transportation stipend on access to cancer services, (3) barriers faced during transportation to cancer services, (4) challenges in the process of receiving transport stipend, and (5) recommendations to overcome transport stipend provision challenges.

Theme 1: Women beneficiaries experienced financial difficulties associated with travelling to health facilities

This theme discusses difficulties in meeting transport expenses, competing expenses and cost of a travel companion. The narratives provided by women offered valuable insights into the difficulties they encounter when trying to cover transportation expenses, which led to emotional distress, missed appointments and the necessity to borrow money.

> *"I went to Kanombe and I was looking for a doctor who specializes in our condition (cancer); he works on Wednesdays. That day, I realized that I could not*

come back here because I only had 2,000 $RWF when I reached Kanombe." (B1, Age 48)

"Transport to the nearby healthcare center is not a bother. I cannot cancel an appointment because of transport. I can go by bicycle for only 500 $RWF. On the other hand, going to the hospital (in ADPER) costs over 5000 $RWF in transport. I need time to mobilize the money before my next appointment; Failure can mean missing my appointment date." (B7, Age 33)

"When you take motorbike, it brings you straight here. When you do not have the capacity to board one; you try to come walking slowly by slowly and get [Nyamata DH] on foot." (B4, Age 47)

From the interviews, women beneficiaries also mentioned competing expenses during their journey to the hospital such as the need to pay for airtime to contact the hospital regarding the appointment, food when travelling on the way to the hospital, accommodation due to the long waiting time for health services, medication and health services due to limited coverage by insurance, and printing fee for photocopying transfer forms.

"Now days telephones are essential, so you can't just leave home without buying at least 200$RWF airtime to communicate and get directions or telling someone that I am coming for so and so service, 200$RWF airtime is enough." (B7, Age 33)

"If you had it, you could use it. When you come from home, you board something. But we also have the challenge of not meeting the doctor right away; you need something to eat. You sometimes get here, and they tell you that the doctor is treating someone else; so, you wait. You get something to eat in the meantime but when you have something from you own pocket; you add to it" (B4, Age 47)

"If they had to do examinations for you in the afternoon there those you can't get their results immediately, and you find it's important to sleep over." (B6, Age 52)

"That thought of stipend made me feel contented but the challenge we face is that when we are assigned for certain medication you must buy it from outside the hospital so even when you have Mutuelle, it helps us while at the hospital and only for those medications that do not go beyond 100$RWF but for other expensive ones you go to the pharmacies to look for them yourself so that is the only challenge we face." (B12, Age 63)

The interviewees highlighted the need for a travel companion**;** however, one has to also pay for the associated costs such as food, accommodation and transportation.

"Earlier in the morning at 5AM the doctors asked me where is your caretaker? And I was like I have no one, I admitted that did not think that I needed one and making someone wait for long would not be financially helpful for them." (B9, Age 53)

"It is important to have a travel companion, especially when you're feeling very ill. However, that requires that you also pay for their transport costs." (B4, Age 47)

Theme 2: The transport stipend motivated women beneficiaries to access cancer services in a timely manner

The women interviewed highlighted some positive aspects of receiving the stipend. Women reported the transport stipend as a motivation for continuing accessing their cancer care. It provided them with an opportunity to be informed about their health status. Moreover, it facilitated timely attendance of appointments which eventually contributed to their recovery and wellbeing.

> *"The stipend is really helpful because it covers the burden of transport and allows you to honor your appointments. I am now healthier because of the transport facilitation I received. I had lost a lot of weight before that. Vaseline would stick on my body and would feel a burning sensation when walking. I feel that I'm now slowly recovering because I go for all my sessions." (B10, Age 27)*

> *"I'm grateful because sometimes I sit at home contemplating giving up, then the (BVGH) lady calls me asking me whether I will make it for my next appointment. I said I would not, but she told me that she would provide me with transport and that encouraged me to go for my sessions." (B3, Age 48)*

> *"The transport (from the BVGH facilitator) was helpful because I got to know about my health status, and I was given money to repay a loan I had taken for bus fare." (B5, Age 23)*

> *"This program is a good one because sometimes one goes to the hospital from where is coming from but when sent to another hospital finds out that does not have that ability to reach there therefore has to wait and look for the transport and the date given exceeds and finds out that it gives challenging time, So this transport stipend helps us in treatment issues and also motivates us that even if you do not have it you can lend from the neighbor so that when it is given, you reach home you pay it back." (B11, Age 40)*

Theme 3: Women beneficiaries experienced challenges related to transport when accessing cancer services

The women beneficiaries also mentioned non-financial transport factors that make their journey difficult regardless of the stipend provision. The following were identified as the key non-financial challenges: distance and duration of travel, and transportation delays

During the interviews, women beneficiaries mentioned perceiving the distance and duration of travels between their homes and Nyamata DH to be far and long. Most women mentioned having to leave their homes at around 5am with the duration of transport ranging from 20 minutes to upwards of 5 hours depending on whether the women decided to walk or take public transportation methods, as well as the distance from their homes to the DH.

Aside from the Nyamata DH, there were also mentions of travels to the Rwanda Military Hospital and the Butaro Hospital with a similar timeframe. The early wakeup time and planning

is necessary to maximize the chances of accessing the necessary services. For accessing cancer services at Rwanda Military Hospital, the stakes to wake up early is even higher.

> *"While preparing to go to the hospital, since it is far, you are required to wake up early or prepare the night before." (B10, Age 27)*

> *"The opening hours were extend recently, but before we were supposed to reach at the hospital, so I get up around 5am and get ready bathing you understand, if I am going with a bicycle, I book that person at night or if I have his number, I call him to come and take me somewhere." (B7, Age 33)*

> *"When we were going to Kanombe, if you reach beyond 7am sometimes you would go back without getting any service which means you would leave home at around 5am." (B3, Age 48)*

The modes of transport mentioned include bus, motorcycles, bicycles, and by foot. Some take a combination of transport to reach their destination. It is important to note that multiple forms of transportation may be enlisted for the journey. Even when transport means are available, there are also often delays that are associated with more affordable transport means which may result in women missing their appointments or having to spend additional expenses for an alternative transportation.

> *"Sometimes I use a bus, but I have now come by motorbike because the bicycle would delay me, yet I had an appointment, so I have come by motorbike. Sometimes I come by motorbike or sometimes I go to the main road and get the bus." (B12, Age 63)*

> *"Delays and other transportation challenges can significantly escalate the cost of transport. For instance, there was a day I had an appointment at 8am, but because of unforeseen delays in public transportation, I was late getting to Remera. I missed the bus and had to use other modes of transportation to get to the hospital, including a motorbike." (B1, Age 48)*

> *"Normally, I can leave home at 5.30am and wait until 6am to take the bus. On other days, the bus delays and gets here at around 8am because it has to pick up passengers on the way here." (B2, Age 52)*

Theme 4: Women beneficiaries experienced process-related challenges while receiving the transport stipend

Women beneficiaries reported facing certain barriers while receiving the transport stipend. There are the challenges they experienced in the process: communication gaps, delays in receiving transport stipend, referral form as a requirement for patients continuing with cancer care, and limitation in days of processing transport stipends and in facilities covered.

One of the challenges they pointed out was a lack of clear communication about the process of receiving the stipend.

> *"…only the first time I went back home without the transport money, and I think it is because the process was not clearly communicated. The stipend was sent*

directly to my phone without any prior communication, which made me wonder. She (the BVGH facilitator) called me later to clarify that the money was for transport." (B2, Age 52)

"Initially, when we were instructed to attend the screening, they promised us a stipend. However, during that time, I did not receive any amount. Surprisingly, I found an unexpected sum of 30$RWF on my phone. I thought it was my husband who sent us the money, since the senders name was not showing when I came back for a review, I engaged the woman (BVGH coordinator), and she informed me about the delayed reimbursement and clarified that the money was indeed from them." (B3, Age 48)

Even though the money is always reimbursed, delays in receiving the transport stipend are a cause of discontent among women beneficiaries. Some reported sleeping hungry or having to borrow money to honor their appointment at the referral hospital.

"Sometimes the lady (BVGH facilitator) is away from work or on sick-off. In such cases, I'm forced to borrow transport money to go for my appointments. I can't miss my appointment because I want a healthy life. The good thing is that they always reimburse the money." (B3, Age 48)

"Sometimes there are delays in getting the stipend. There was a time I went for treatment and did not receive the transport stipend when I needed it most. I thought they would give me the stipend after getting out of the theater to go buy milk for something else to energize me. I was called back for review after a week, but I still had to wait for another whole week before receiving the stipend." (B4, Age 47)

"You understand if I may say, the treatment extended to 2pm and we waited for stipend until 4pm almost 5pm we can understand there was delayed but we cannot blame her because she was still waiting for money too." (B7, Age 33)

Women beneficiaries also pointed out the problematic requirement of needing a valid transfer or referral form for long-term patients to receive the stipend. As referral forms expire every 30 days, those with management that last beyond a month find themselves having to bear the cost of visiting the health center to process new transfer forms every time.

*"The only requirement one needs to get the stipend is to have an appointment from the hospital, yet one has to produce a copy of the document before getting the funds. Sometimes, that means calling Kanombe (hospital) to beg them to send me a copy of the referral letter via phone. Most of the time, they will refuse and ask me to go pick up the document in person. That involves transportation that is expensive". (B3, Age 48 year**s)***

*"The funds required to go to the healthcare center to ask for a transfer is money that can be put into other household needs. Sometimes I have the money to spare for transport; sometimes I don't." (B2, Age 52**)***

As BVGH only processes transport stipends for patients on limited days, women beneficiaries felt restricted in accessing necessary funds to travel to their appointments.

> *"I have gone to the (Nyamata DH) office twice seeking the transport stipend because my medical appointment was due and both times, I missed the lady (BVGH officer). When I called her about my situation, she asked me to find an alternative because it was not a workday." (B6, Age 52)*

The limitation of the stipend also extended to the facilities they covered. Thus, women beneficiaries accessing cancer care outside of the designated facilities were excluded.

> *"There is no stipend when referred to Butaro - Butaro is expensive. Kanombe is a more affordable destination. One can even call up their family members for support; not so for Butaro." (B6, Age 52)*

Theme 5: Women beneficiaries recommended ways to overcome challenges experienced in receiving transport stipend

As per the challenges shared by the women beneficiaries, several recommendations emerged to improve the provision of transportation stipends and enhance access to cancer care considering the specific challenges they encountered. The following are the recommendations by the women: advance processing of stipend, increased number of days for processing stipends and in the facilities covered, removal of referral form as a reimbursement requirement for patients continuing with cancer care and increasing the transport stipend amount.

Women beneficiaries suggested that getting their transport stipend in advance of their travel to the referral hospitals would be the more acceptable option instead of a reimbursement after their sessions at the referral hospitals. This would alleviate the challenge of having to borrow money for transport.

> *"The program should give stipends to the patients when they come/go for treatment because that is when the funds are most needed. Program officers should understand that patients have many problems. Calling and preparing the stipend beforehand and remitting the funds to the patients immediately after the treatment would be helpful and will prevent them from taking up loans." (B4, Age 47)*

> *"If you have an appointment on a specific date, you should arrange with the lady in charge of transport stipend distribution to send the funds to your phone on that very day, before you leave the house. This would be better than borrowing money from your neighbors and then repaying them after you've been reimbursed the stipend." (B7, Age 33)*

> *"The program can be improved by having the patients call in beforehand and getting their transport stipend well in advance of their medical appointments. This is better than accumulating debts." (B2, Age 52)*

Beneficiaries also suggested increasing the stipend amount to adequately cater for their travel costs. Some of the patients complained that the stipend was not sufficient when referred to

destinations like Kanombe. The matter is further aggravated when they use expensive motorbikes to get to the main roads from their homes.

> *"There are patients who live far from the main roads and are forced to spend between 3000 and 4000 $RWF to get to the main roads by motorbike. This is a big challenge, and I do not know what can be done about it." (B10, Age 27)*

> *"Transport costs to nearby healthcare centers are affordable (for most cancer patients). However, transfers to destinations like ADEPR and Kanombe can be costly. The program should increase the stipend amounts according to the destination of treatment or screening." (B8, Age 55)*

Besides the increase in the stipend amount, respondents also recommended the increase of days during which the stipend is provided and the facilities that are covered. Due to the unpredictable nature of cancer treatment procedures, patients may visit the hospital on days transport stipend is not distributed. They suggested that in such cases, the program should consider, upon production of supporting documents, reimbursing them for the days spent at the hospital. Similarly, a patient may be referred to Butaro for treatment but is unable to access transport stipend because the BVGH program does not cover this destination. In response to this, the patients suggested the program should consider a stipend for Butaro referrals.

> *"Not all hospital visits are planned; some are abrupt and can be challenging for (most cancer) patients considering the widespread poverty these days. In such cases, consideration should be made for transport reimbursement upon production of supporting documents." (B6, Age 52)*

> *"The stipend provided (to cancer patients) is helpful and adequate for a destination like Kanombe. However, getting to Butaro is challenging because the stipend is not sufficient. We would like the program to consider providing the stipend amount for Butaro." (B3, Age 48)*

Finally, women beneficiaries suggested removing the requirement of valid referral forms when processing transport stipends since the records of patients seeking long-term cancer services are already in the database.

> *"Currently, one must first go and pick up their appointment documents (while ill), before being facilitated for transport. Instead of that, one should be able to go directly to the hospital for treatment because their name is already in the treatment database". (B3, Age 48)*

4.2.3 Program Personnel Interview Results

Through the five in-depth interviews, we managed to reach data saturation and were able to gain insight into the perceptions of program personnel with the transport stipend program. Five themes were identified from the transcripts: (1) Impact of transportation stipend on access to cancer services, (2) challenges in the process of transport stipend provision, (3) recommendations to overcome transport stipend provision challenges, (4) recommendations for implementation of transport stipend for other settings, (5) sustainability.

Theme 1: Perspective of program personnel on transport stipend provision in motivating access to cancer services

Supporting the women beneficiaries' claims that the impact has positively impacted their access to cancer services, the program personnel also highlighted the role of the stipend in motivating women to continue their screening and management follow-ups. Even when the women beneficiaries did not have the means to pay for transportation prior to the appointments, they felt more confident travelling to the hospitals knowing that they will be able to pay back their loans.

> *"The positive impact that happened is that the turn up and follow up of those ladies became easier. That is because for anyone that is not severely ill and with whom you do not have constant communication; there are higher chances or risks of being left out; what we call lost to follow up; Where they come for screening and show symptoms, but they go and maybe fail to get transport to bring them back. So, it helped us a lot in that they kept showing up." (P4, Hospital Director)*

> *"The way Bugesera is structured, there are few bus stops and that is a challenge most of them face; mobility is mostly done by motorbikes, and they are quite costly. Imagine taking a motorbike from a place like Gakurazo; it is about 5,000. For a village person to find 5,000 when going and another 5,000 when coming back; it is such a big challenge. So, the transport stipend is a motivation that helps them come for treatment on time." (P2, Nurse)*

Theme 2: Program personnel faced process-related challenges in provision of transport stipend to beneficiaries

The program personnel interviewed stipulated that the distribution faced significant challenges. These challenges significantly impacted the timely provision of stipends to the women in need. They highlighted several key issues that contributed to these difficulties including those interactions with women beneficiaries and others related to program design and implementation. There were five challenges mentioned, namely: communication gaps, challenges in accessing mobile telephone, delays in provision of transport stipend, difficulties in determining the modality of distribution and the amount of transport stipend.

Program personnel interviewed observed that there were still some communication gaps within the programs. In some instances, the beneficiaries were unaware of the existence of the transport stipend facility. It is possible that some women may have missed their appointments at the referral facilities because they did not receive information about the transport facilitation.

> *"Many women are not aware of the transport stipend program that aims to mitigate their transport challenges. Consequently, she may find it hard to transport herself and may opt to return home (without treatment)". (P1, Program Coordinator)*

> *"I engaged the nurses and inquired about why they don't follow-up on the women after facilitating their transfers to the DH." (P1, Program Coordinator)*

> *"There are instances where the nurses forgot to inform patients about the availability of the transport stipend facility while some could simply be unaware of existence of such a program." (P1, Program Coordinator)*

The issue of communication also extends toward difficulty in reaching women beneficiaries by means of telephone. Many women in resource-constrained settings professed challenges in accessing mobile phones. This challenge, manifested as gaps in communication and/or errors in contact details, ultimately meant that program personnel were unable to communicate with patients or even send them money.

> *"One of the challenges encountered was the difficulty in reaching the women by phone. It was discovered that many of the contact numbers provided belonged to their children who were not always available at home when contacted." (P4, Hospital Director)*

> *"The phone cell details of the women were not written down correctly or something then those women may miss out on the transport stipend." (P5, Program Manager)*

Program personnel also highlighted delays in provision of transport stipend to women beneficiaries due to reasons such as delays in processing stipends or unavailability of funds and/or signatories present. They highlighted the limitation of having systemic bottlenecks, such as bureaucracy, in supporting patient transportation.

> *"The process of requesting for the transport stipend for just a single woman who comes for screening can be time consuming and may require more than two hours." (P1, Program coordinator)*

> *"Challenges can arise when the manager responsible for signing off the transport stipend is unavailable, resulting in the patient attending treatment leaving without receiving their stipend." (P2, Nurse)*

> *"Challenges may arise, especially on Tuesdays, when patients come for their appointments only to discover that their transport stipend is not available due to unavailability of funds." (P3, Nurse)*

> *"Finding a timely and efficient solution for receiving funds posed a significant challenge and caused considerable worry. The concern extended to the potential barrier in reimbursement." (P5, Program Manager)*

Within programmatic planning, program personnel also encountered difficulty in determining the modality of distribution and amount of transport stipend distribution. There are many instances of variations which pose challenges to patients. BVGH adopted a tiered approach based on travel distances, which although logical and fair, does not always cover the full costs of travel for cancer patients.

> *"One of the significant stressful challenges we faced when planning the program revolved around determining the efficient method of disbursing the stipends to the patients. While mobile money (MOMO) would have been an ideal solution for repayment or payment it was necessary to consider not all women have access to cell*

phones or the application, so the adjustment made was to have Nyamata DH distribute the funds as appropriate to the patients." (P5, Program Manager)

"Developing a tiered system for repayment posed a challenge in determining a fair amount. While the initial intention was for the funder to cover the exact amount incurred by the woman, implementing such a precise approach proved to be complex. So as a team we decided to have the tier system based on the patients travel (distance)." (P5, Program Manager)

Theme 3: Program personnel recommended ways to overcome challenges when providing the transport stipend

Systemic weaknesses such as delays in receiving funds from the donors or the requirement that signatories sign off on physical copies of documents, are passed down to patients as delays in receiving their stipend. Program personnel highlighted the need to provide transport stipend early-on before appointments. Timely planning and disbursement of funds when required should be a hallmark of the program. This would prevent delays in processing stipends which can affect health-seeking behaviors. Improving access to funds by program personnel by maintaining a rolling balance or automating the process can also improve timely provision of stipend.

"Early disbursement of the transport stipend should be done in partner screenings. By preparing the funds and ensuring their availability. This would prevent any instances of women going home without receiving the transportation stipend." (P3, Nurse)

"My suggestion was for them to consider maintaining a balance of 300,000 $RWF for BVGH transport reimbursements. This buffer would be a good solution for the challenges of a bureaucratic process and would potentially address the excuses of delayed cheque collection and the missing signatory when the Director General is absent." (P1, Program Coordinator)

"BVGH can make me (BVGH Program coordinator) a signatory to the account such as when a woman requires say, 10,000 $RWF, I can swiftly access the funds via mobile phone transfer. This would ease the lengthy bureaucratic process that involves the Finance and Hospital Directors." (P1, Program Coordinator)

"Automating the process would allow me (BVGH Program coordinator) to request for the funds online, thereby expediting the process. Both the Finance and Hospital Directors can approve my requests on the online system. We could also suggest that beneficiaries of the stipend must have a phone." (P1, Program Coordinator)

Program personnel also highlighted inclusivity by providing the same amount of transport stipend to all women beneficiaries including those without Mutuelle insurance.

"It is essential to motivate all the patients because they all face common challenges. The current criteria that exclude individuals with insurance covers like RAMA and MMI appears to be discriminatory and unfair to." (P3, Nurse)

> *"It is important to acknowledge the efforts made by the patients traveling long distances for treatment. The stipend should be a standard amount regardless of where a person comes from. Therefore, all patients from Bugesera district should receive same amount of stipend." (P2, Nurse)*

In support of the women beneficiaries, program personnel also suggested providing transport stipend for travel companions and increasing the amount to cover indirect costs associated with the travel for cancer treatment.

> *"It is important to consider stipends for companions. In addition, it is important as well to provide stipends for any costs associated for time away from home or work as well." (P5, Program Manager)*

Theme 4: Program personnel recommended ways to implement transport stipend in other settings

Building upon the recommendations provided for BVGH program, the personnel had further suggestions tailored to districts aiming to enhance their women's cancer care healthcare services. These recommendations focus on specific areas that require attention and investment. Many similar programs on the implementation of transport stipend have been conducted around the world and in Sub-Saharan Africa, including BVGH's EST program. Thus, it is necessary to learn about the benefits and limitations of each implementation plan as reference.

> *"It is beneficial to learn from programs that have successfully implemented stipend programs and engage them to understand the best practices and effective strategies to be implemented." (P1, Program Coordinator)*

For on-ground execution, program personnel recommended organizing collective transportation for women beneficiaries in the same area. A pooled transportation arrangement was suggested as a possible solution to improving cancer services; as opposed to every patient taking care of their transport arrangements. This would not only mitigate transport challenges but would also improve efficiency and the professionalism of cancer care.

> *"Organize transportation by region. Rather than having each woman arrange for her own transport to the hospital, a coordinated approach can be implemented; for instance, a shared ride or dedicated bus for a specific region would mitigate the transportation challenges to and from hospital." (P5, Program Manager)*

Throughout the program timeline, BVGH was flexible on-ground to make the necessary adjustment as they implement the program. One of the biggest changes include the expansion of age range to benefit more women in the Bugesera District in accessing cancer services. Furthermore, the mode of transport stipend provision has also been adjusted from mobile money to providing a lump sum to the hospital to distribute cash for the reason of accommodating women who may have difficulty accessing a phone.

> *"These services were originally available for women aged 30-49 which was the recommended age in the Rwanda National cancer control plan from 2022-2024 but the program eligibility quickly reacted to the change in recommended*

screening ages and adjusted to include eligible women ages from 30-65." (P5, Program Manager)

"So, there were earlier plans to have Garda World distribute money to each woman via MOMO, via Mobile money transfer but that requires each woman to have a cellphone and to make that assumption that each woman has a cellphone, so instead Nyamata DH agreed to receive a lump of forecasted sum so that their staff could retrospectively distribute the funds to each woman at the time of her appointment at Nyamata DH." (P5, Program Manager)

"I took over and started distributing the transport stipend to the pending list of women beneficiaries, the screening program was still going on meaning that the transport stipend will also continue to be provided to the women, only what I changed is to take initiative see how the women can get their transport stipend immediately after the Cervical and breast cancer screening and treatment service instead of long process of going to the bank and transfer women's money on their Mobile Money or TIGO Cash depending on which number the women shared. To avoid the long bureaucratic system of name list verification by both telecommunication companies I advised the hospital to request for money and women go back with their transport stipend in cash after cancer treatment or screening, so cash refund is the only major change and its routine till today." (P1, Program Coordinator)

Theme 5: Program personnel recommended ways for sustainability of the transport stipend provision program

To ensure long-term implementation of the program the personnel recommended having sufficient funds for implementation through lobbying for budget allocation from national finance pools. It is suggested that donors and the government should plan for and allocate adequate resources to cover all facets of the cancer treatment programs including equipment, personnel and operations costs. For long-term sustainability, hospitals should include cancer screening budgets in their annual budget plans instead of relying solely on donors to fund this budgetary item. A long-term funder would also greatly improve the long-term prospects of the intervention.

"It requires a sufficient budget and funds. To ensure the availability of equipment and resources to facilitate the operation of the program at all times, an adequate budgetary allocation is critical." (P4, Hospital Director)

"It is important to include line items for breast/cervical cancer screening in the annual budget plans for the hospital." (P1, Program Coordinator)

"Securing a dedicated funder for the project would greatly facilitate the continuity of the program." (P2, Nurse)

Program personnel also pointed out collaboration among multi-sectoral partners in improving efficiency and sustainability of the transport stipend. Integration with other on-going programs was also suggested as a possible solution to the sustainability question. Integration has the added advantage of improving the efficiency of programs.

"I would strongly recommend consulting with the Ministry of Health to establish direct partnerships with the hospital or district where BVGH plans to implement the program. This can help expedite scaling of the program (partnering with other NGOs operating in Rwanda." (P1, Program coordinator)

"Transportation is not within the mandate of the hospital. Therefore, to ensure sustainability, collaboration is essential - multisectoral collaboration, and with the Rwanda Biomedical Center. However, it is also crucial to reflect on our own responsibilities as Rwandans in helping ourselves."(P1, Program coordinator)

"Integration all the programs supported by the Rwanda Biomedical Center mechanism across the different health facilities in the country is the key to sustainability." (P4, Hospital Director)

"The remarkable achievement by this program, as evidenced by the number of women who have benefited from its services, provides a compelling case for its integration into the broader health system for sustainability." (P5, Program Manager)

4.3 Household Visits

In support of our second objective to assess the experiences of women beneficiaries in receiving the transport stipend, the research team conducted household visits. The aim of the household visits was to supplement the insights gained through the interviews with a first-hand encounter with transportation realities. As we experienced the women's journey we took notes, from which we came up with the following main observations around the women's journey and their social environment.

4.3.1 Distance, Road Conditions, Cost, and Modes of Transport

We observed that the conditions of the road that they experience daily and during their transportation to the health facilities. As the woman lived away from the main roads, the roads on the way to their homes were often dusty and unpaved with challenging terrains that were hilly and portrayed for the need of a hike. While motorcycles and bicycles were available to manage most of the roads, the transport itself was not always smooth due to the many potholes and protruding rocks.

Furthermore, the research team realized the long travel times that the women experience to access health facilities. Embarking on the journey starting at a bus station close to Nyamata DH, both women's homes took around one hour to reach. This required a combination of bus, motorbikes, and walking. A notable issue is the lack of available transport means to one of the women's homes, resulting in the need for a steep 10-minute walk or a 20-minute walk in a road that is flatter but may have traction issues in the earlier hours of the day due to morning dew. A different noteworthy observation from the other women's home is the prolonged time of the journey due to the bus having to halt at each of the 12 stops between the DH and her home.

We also visited the Center De Sante Avega Ntarama Health Center and found that it took around 30 minutes by bike to reach. However, BVGH EST program does not provide transport stipend for travels to health centres, so if a patient needs a follow-up visit at Health centre level, they will have to fund this themselves.

4.3.2 Infrastructural Environment

The household visits also provided insights into challenges that may come with receiving funds in a timely manner through the usage of mobile money. Like most households in the area, the women did not have access to electricity and can only charge her phone through her neighbour's solar power device for a small fee and a walk's distance away. One of the women also shared the phone with her family. Relying on the telephone as the main mode of communication is a challenge even though mobile money was still her preferred method of receiving the transport stipend.

CHAPTER FIVE: DISCUSSION

The purpose of the study was to understand the experiences and perspectives of women beneficiaries and program personnel respectively regarding the provision of transport stipend for patients accessing cancer diagnostics, treatment, and management services. The research aimed to provide insights into the barriers faced by women beneficiaries in their access to cancer care, the impact of the stipend implementation, the challenges present in the provision process, recommendations to overcome the identified challenges, and suggestions for sustainability and future implementation.

5.1 Financial Difficulties in Accessing Transportation to Health Facilities for Cancer Diagnostics, Treatment, and Management

This study highlighted some major barriers faced by women beneficiaries in their access to cervical and breast cancer services related to finance and transportation. Many women beneficiaries pointing out difficulty in affording timely transport to Nyamata DH due to lack of financial means. Some would even delay appointments until they were able to gather sufficient funds for the transportation or feel stressed having to borrow money from family and friends without knowing when they will be able to pay back their debts. This is supported by Varela et al.'s (2019) study in Malawi, which found the lack of financial resources for transportation to be a barrier in accessing timely cancer services, especially surgical care. Studies in Cameroon and Uganda found that financial burden related to cancer services and transportation limited women's timely follow-up to cancer services after the initial screening (Nakaganda et al., 2020; Tchounzou et al., 2019). A study in Uganda by Tuller et al. (2010) further confirms this finding, stating that economic factors, especially the high cost of transportation to medical appointments, posed as a significant challenge in achieving sustained treatment success for people living with HIV/AIDs. Similarly, the absence of support from family and resources has also been

highlighted as a reason for loss-to-follow-up in India (Vidhubala et al., 2020). Financial limitations can prevent patients from accessing transport to attend medical appointments for their cancer care, which speaks to the need for transport-related support for the women beneficiaries in BVGH's EST program.

5.2 Benefits of Implementing Transport Stipend for Cancer Services

The provision of transport stipend to women beneficiaries has shown to be impactful in overcoming transportation costs as a barrier for accessing cancer services in Rwanda's Bugesera District. Both the women beneficiaries and program personnel reported the provision of transport stipend to be a motivational factor for patients to continue attending necessary cancer care appointments. However, it is important to note that the stipend in BVGH's EST program was only provided to women beneficiaries who needed further screening and tests after their initial screening at health centers; thus, it was not possible to assess the stipend's role in motivating cancer screening access; instead, the study is only able to reflect on the stipend's effect in minimizing patient delays when attending follow-up appointments. The impact of the stipend aligned with Aviki et al.'s (2021) study, which found transport stipends to be beneficial in mitigating the need to engage in cost-coping, such as delaying or skipping medical visits. Pham et al.'s (2022) study in Cameroon also demonstrated that transportation aid significantly increased the number of women accessing cancer screening services from rural areas. Within Rwanda, the positive impact of transport stipend is in synergy with Niyigena et. al's (2023) research where the patients who were offered transport support in their study (87.8%) were more likely to physically visit the clinic during the pandemic compared to those that did not (64.7%). Those with transport support were also less likely to detail transportation as an impediment to accessing cancer care (42.9%) compared to their unsupported counterparts (24.3%). Another retrospective Rwandan study found an overall low loss-to-follow-up rate which could be attributed to their reimbursement of transport expenses (Habinshuti et al., 2020). Clearly, the provision of transport stipend can improve access to cancer care follow-ups.

The benefits of the transport stipend are not limited to cancer patients, but also to patients of other healthcare services. An experimental study in the rural communities of Uganda reported a doubling of facility deliveries when transport vouchers were distributed to women in the intervention area (Mutebi et al., 2015). The provision of safe motherhood voucher to cater for transport among other things in Yemen, also resulted in a significant increase in skilled facility deliveries as it allowed women from poor and remote rural backgrounds to access services without financial hardship (Grainger et al., 2017). Overall, the implementation of the transport stipends in cancer care and other health areas has proven to be effective in improving patients' access to services, especially for those who are more disadvantaged financially.

5.3 Personal and Systemic Challenges Faced During Transportation to Cancer Services

Despite the benefits of receiving the stipend, this study found that women beneficiaries continued to face personal and systematic challenges related to the journey and finances outside of direct transportation costs. When discussing their personal challenges, the women beneficiaries mentioned not only using money for transportation, but also other aspect of

expenses related to their travels when attending appointments. These indirect travel costs include airtime, food, accommodation, and travel companions. With so many conflicting expenses, the women are caught in a dilemma to decide where and how to spend their limited amount of money.

The aforementioned challenges are in conformity with those highlighted in previous studies. Ommeh et al.'s (2019) research in rural Kenya found poor mobile telephone network to be a factor that limited implementation of transport support. The need for accommodation in accessing cancer services has also been previously identified by Partners in Health, which implemented a program at a referral hospital in Butaro for patients in Rwanda's Burera district (Umurengezi, 2019). In the United States, a program provided free accommodation for cancer patients with certain geographical and economic requirements to access critical medical treatment (Gourd, 2019). The need to extend coverage to the cost of travel companions for patients was also considered by Grainger et al. (2017) whose study provided coverage towards the companion's accommodation and food while accompanying the patient. This is further supported Sheehan et al.'s (2023) study which highlighted the importance of caregivers to aid with psychological, emotional, and physical support, information sharing with healthcare providers, and coordination of appointments. Thus, previous literature along with our interviews showcased the limitation of solely providing transport stipend for patients and the need to expand towards indirect travel expenses encountered during the patients' journey to health facilities.

These findings were also reflected in the research teams' insight during household visits where we found the journey between the women's homes and Nyamata DH to be difficult and time-consuming. Water was necessary as travel involved being under the open sun especially when walking, biking, or motorcycling. As the research team travelled together, we can also see how a travel companion can be of emotional and physical support during the long travel especially for women who were diagnosed with cancer. While the research team had breakfast before the start of the journey, we had not eaten until we came back. This helped us empathize with the women's mention of their wish to purchase a Fanta or food for consumption during their journey.

Women beneficiaries also faced systemic challenges such as the long distance and duration of travel between their homes and health facilities as well as the availability of effective transport means. A previous study in rural Rwanda found long travel distances to be the reason for higher patient lost-to-follow-up (Habinshuti et al., 2020). Similarly, in Nigeria and Uganda respectively, the combination of hospitals being far away, and the patients' limited financial abilities disproportionately prevented women in poverty from accessing cervical and breast cancer screening services (Ilaboya et al., 2018; Onyenwenyi & Mchunu, 2018). Women in Botswana also weighed in on the unpredictability of public transport, which, whence with the distance to cancer care service points, often deterred them from accessing services especially when they were required to take time off work (Matenge & Mash, 2018). In Ommeh et al.'s (2019) study, suboptimal road network was also a barrier which limited the effectiveness of transport stipends. This observation was relevant to our home visits where we found it difficult to travel on unpaved and hilly roads with many potholes, especially since the availability of motorbikes was not always guaranteed. Interestingly, while a previous study in Burkina Faso found that those who

lived in rural or semi-urban areas were less likely to uptake screening compared to their urban counterparts, our interviews reflected an interesting alternative where regardless of the difference in distance and urbanization, women remained motivated to attend follow-ups stemming from the will to live with good health (Compaore et al., 2016).

5.4 Challenges in the Process of Receiving Transport Stipend

The process of communicating the stipend distribution to women beneficiaries was established to be unclear by most women in the interviews as many were initially unaware of their existence or the process to receive them. This insight is akin to a survey by Njuki et al. (2015) which investigated the experiences of health workers in Kenya's voucher subsidy program and found the awareness of vouchers for contraceptives and gender-based violence recovery therapy to be lower than that for maternal health vouchers (Njuki et al., 2015). This variation in awareness and utilization impacted the effectiveness of the program (Njuki et al. 2015). The lack of clear and effective communication on the transport stipend could be detrimental in limiting the reach and thus, impacting patient access to cancer services.

Women interviewed also expressed their frustration for the requirement of a valid referral form when receiving the stipend as it was a costly and time-consuming process to acquire the documentation. Rwanda has a decentralized health care system in which a patient starts their health-seeking journey at the primary health center level before being referred to either the district or tertiary level hospitals. Fidelity to policy therefore requires patients to source for referral forms from health centers before proceeding to higher level facilities (Kalume et al., 2022). However, when the women beneficiary is a long-term patient, then the requirement of a valid referral form is quite problematic as it expires every 30 days. While a previous study concluded that referral processes had no effect on the timeliness of patient cases recommended for further medical care, it may not be applicable in our study's context where women may have to spend extra time and money to travel to the health center from their homes to renew their referral forms (Nkurunziza, et al., 2016). Within our household visit, we found the need to expend additional cost to reach the nearest health center from the women beneficiary's home which took 30 minutes by bike. As BVGH does not provide transport stipend for travels to health centres, the expenses related to the transport to health centers were all self-funded, which can be an issue especially when women were already struggling to pay for the expenses related to the actual appointment itself.

Tapela et al (2016) concluded that the abnormally high patient load led to personnel shortages, that necessitated regular reviews. This situation is comparable to the current situation facing the BVGH Transport Stipend program where one officer/nurse in addition to their other duties, must also process the stipends; meaning that they are only available for stipend processing on Tuesdays. Despite the research being in a different context, Muhimpunda et al. (2021) offers further insights into this issue. The study examined the administration of VIA to detect cancer of the cervix on the same day of the patient's visit. The study highlighted the limited number of professionals available to administer the procedure and the consequent delays in follow-up appointments. Similarly, in the case of cervical cancer management in Rwanda, the shortage of

qualified personnel and essential resources would still significantly hinder the timely delivery of services, even if the number of days for processing the transport stipend was increased.

The BVGH program provides transport stipends to a limited number of healthcare facilities. This emerged as a possible barrier for women seeking therapy without the recommended healthcare facilities. A case in point is an instance where a patient was referred for further treatment to a facility outside Kigali and was not facilitated. In contrast, a facilitation program at Butaro provided patients with transport stipend and food packages for patients going for treatment as far as the neighboring Uganda. The stipends were calculated based on a standard socio-economic and clinical criterion. The BVGH program can borrow a leaf from the BCH exemplar and implement a standardized approach for selecting patients who meet specific socio-economic and clinical criteria to be fully supported regardless of their referral location (Tapela et al., 2016)

5.5 Challenges in the Provision of Transport Stipend

The choice between using mobile money or cash payment methods presented difficulties during implementation. Similarly, a study conducted by the Mobile Health Organization in Arusha Tanzania, encountered challenges in enrolling women from low socio-economic backgrounds because not all of them had access to a mobile phone (Erwin et al. 2019). Likewise, our study identified complexities and challenges faced by program personnel when determining the most suitable method for distributing commuting stipend to women in low socioeconomic levels. A study by Marie Stopes in Madagascar regarding influence of subsidized electronic voucher programs on access to contraception services, revealed that the success of the model was dependent on the settings, context, and preference of the service provider(s). Some preferred the banks, while some preferred to be reimbursed via the phone-based payment platform (Marie Stopes International, 2010).

Another challenge faced by program personnel was determining the fair amount of transport stipend to be reimbursed to patients attending cancer therapy. Tuller et al. (2020) also conducted a study that supports our findings. The study emphasized the complexity of determining transportation expenses and how that becomes a barrier to accessing healthcare. Rapidly changing direct expenses like the hikes in bus fare make it hard to estimate a fair amount of transport reimbursement. Furthermore, additional costs incurred during the journey make it harder to plan for proper compensation and also impact on the patient's ability to properly plan for their upcoming appointments. In a quasi-experimental study, Pariyo et al. (2011) faced similar challenges in setting the pricing for transport payments to transporters in Eastern Uganda. The pricing was influenced by factors such as the time of travel and distance. The objective of the study was to enhance accessibility to antenatal care and facility delivery through implementation of transport voucher. These studies highlight the importance of programs to consider the specific needs of the target population and be more flexible and adaptable in payment options, this can help ensure that each beneficiary can easily access the financial support they require.

BVGH programme personnel indicated that reaching cancer patients by phone for reimbursement was an exacting challenge for them. In the beginning, the program had implemented mobile money transfers for reimbursements but faced challenges of unsuccessful transfers due to inactive telephone numbers and had to revert to cash as the preferred mode of payment.

A feasibility study of mobile money transfers in Malawi among lymphoma patients by Ellis et al., (2021) also reported that reimbursement via mobile telephone platforms were efficient but were prone to failure due to challenges in network coverage. Some patients did not have access to electricity and therefore charging their phones was a challenge. A comparable study in rural Kenya further disclosed that mobile technologies provided an effective means for the distribution of transport e-vouchers that were critical to accessing healthcare and the general advancement in the health of newborns and mothers. Nonetheless, poor mobile telephone network coverage, limited phone ownership, suboptimal road networks, limited ambulance services, and low numeracy and literacy levels restricted their optimal implementation (Ommeh et al., 2019).

Mukhopadhyay et al. (2014) assessed the utilization of vouchers as an incentive for improving access to skilled Birthcare in India. This inquiry revealed that the lack of mobile phones in villages was one of the main barriers affecting the execution of the transport voucher facility. In Democratic Republic of Congo, limited mobile coverage, poor internet connectivity and unreliable electricity connections in District One were responsible for delays in payment of wages due to health workers participating in the country's polio vaccination campaign (Hamani et al., 2023). These studies demonstrate that while mobile technologies can offer efficient solutions for reimbursements and voucher distribution, challenges related to network coverage, phone ownership, access to electricity can hinder the successful implementation of such programs, therefore addressing accessibility gaps is crucial for effective and reliable mobile-based reimbursement systems or e-health programming.

Processing transport stipends for cancer patients can be time-consuming with turn-around times of up to two hours after screening being the norm. This finding is corroborated by Njuki et al. (2015) who observed that health providers also experienced delays in reimbursement of funds, thus highlighting the parallel challenges encountered in various cash reimbursements programs. The same study supports the perspective of program personnel who suggested the implementation of automated systems to address the delays in processing the transport stipends. Hamani et al. (2015) also asserts that delays in disbursement of funds down the operational levels due to bureaucracy is an endemic challenge that often results in inefficiencies such as duplication of processes. To streamline the process and mitigate delays, implementing automated systems can improve the efficiency of processing transport stipends for cancer patients

The BVGH program has had instances of delays in fund flow which were cascaded down to its beneficiaries. Funding delays can significantly and negatively affect program outcomes. In a policy brief by Acharya and Mampi (2020) titled "Delay in Fund Flow", procedural lapses and systemic bottlenecks were identified as the main causes of funding delays. In the case of BVGH, bureaucratic processes from the donor level to the hospital accounting processes that require signatories to sign off on physical documents, staff shortages, and a non-automated process are all responsible for many of the delays experienced by the program. To resolve this challenge,

development and implementation partners need to design systems that address the identified systemic weaknesses and structural bottlenecks. Program personnel are also encouraged to practice early budget planning to avoid delays in fund flow (Arcya and Mampi, 2020)

5.6 Improving Implementation of Transport Stipend Program

Women beneficiaries expressed the need to increase accessibility of the transport stipend through timely provision of the money beforehand rather than as a reimbursement. Reasons include the lack of means of women beneficiaries to seek out the funds to travel to the health facility in the first place to receive the stipend. Because of the current reimbursement process, women need to seek out family and friends for financial support or loan services, resulting in accumulation of debts and emotional stress that comes with looking for funds. Furthermore, some women end up having to walk part of their travels to the health facility due to insufficient funds needed to pay the transportation services.

This is supported by the program personnel who highlighted the recommendation to provide the stipend at the initial screening for those who received referral to prevent women having to travel follow-up health facilities without the means, which could prevent the full benefits of providing transport stipend for access to its full effect.

Additionally, the program personnel also recommended improving access of funds by program staff for more timely distribution of funds to women beneficiaries. This was suggested in ways such as having a set amount set aside for the program, assigning a BVGH staff as a signatory to access the account, or automating the distribution of funds through an online system. In Lutge et al.'s (2013) study, transport vouchers were redeemed monthly instead of the reimbursement method conducted in this study's EST program and Siedner et al.'s (2015) study in rural Uganda. However, because of low sensitization in Lutge et al.'s (2013) study, the redeeming of monthly vouchers from local stores was not found to be effective as one-third of their patients in intervention clinics did not pick up their transport subsidy. There remains to be limited studies on the implementation of transport stipend in this context assessing the user's experience qualitatively and thus, carries implications that a more efficient method of stipend disbursement should be discussed, planned, implemented, and evaluated in partnership with the patients who will receive them to ensure a seamless and logical process.

In this study, women beneficiaries also express the need to increase coverage of the transport stipend to extend beyond the current designated hospitals. The stipend was originally meant to cover transportation only to Nyamata DH and Rwanda Military Hospital. However, upon hearing about the patient experience and feedback of the women beneficiaries, the program personnel on ground decided to advocate for the extension of coverage to Mediheal Diagnostic and Fertility Centre; yet there remains to be referral hospitals such as the BCCOE which is not covered by the program's transport stipend. As this is a specific recommendation for the coverage of the EST program, there is no existing literature that provides such specific insights.

Both women beneficiaries and program personnel provided recommendations to adjust the amount of transport stipend provided. While women beneficiaries suggested increasing the

stipend amount to reflect the amount needed for farther health facilities, program personnel suggested providing the same amount of transport stipend to all women including those without Mutuelle insurance and expanding the provision of transport stipend to travel companions. However, the current allocation of funds has been discussed to be needs and equity based. The tiered system was determined upon great discussion around the best way for repayment; while the funder wanted to spend exactly what women were paying for transport, that would be a difficult task to implement. The team decided to have tiers instead based on where women were traveling from.

The suggestions were supported by Massavon et al.'s study (2019) in rural Uganda which provided a set amount of transport vouchers of 4 $USD for all women from all four sub counties mentioned. Lutge et al. (2013) also implemented a similar standardized amount of 15 $USD collected monthly from nurses along with their treatment; here, the amount was determined to be enough as an encouragement for treatment adherence without being large enough as an incentive for patients to stay ill. While others set a time limit for participants to return for follow-up within a certain number of days to receive 6 $USD (Siedner et al., 2015). However, participant perception on the sufficiency of the stipend amount were not assessed in the studies that provided a standard amount. A study providing transport vouchers for Yemen women accessing motherhood services also subsidizes costs towards accommodation and food for their chaperone found this support to invite poor women and their families often from remote rural areas to access quality services without the risk of unpredictable and unaffordable costs (Grainger et al., 2017). Aside from recommendations to adjust the stipend itself, there are also recommendations for improving accessibility through practices in the process of provision. Women beneficiaries also suggested increasing the number of days during which the transport stipend can be redeemed as well as removing the need to repeatedly obtain transfer forms from health centers for those accessing cancer care long-term. These recommendations are also specific to the implementation of the EST program and not covered in existing studies. This also brings into question the need to take into consideration the local context and experiences of the women beneficiaries in the EST program and to determine an appropriate amount in collaboration with their needs.

5.7 Advice for Implementation of Transport Stipend in Other Settings

When asked about the lessons learned from implementing the transport stipend that could be used to advise others implementing a similar intervention, program personnel pointed out the importance of learning from existing programs such as the BVGH EST.
To streamline access to cancer screening and treatment, personnel encouraged other districts to explore the provision of no-cost collective transport services for women beneficiaries. A study by Chaiyachati et al 2018 examined the impact of such services on patients' attendance to primary care appointments. The study divided patients into two groups: one group only received appointment reminder texts while the other group received both reminders and free transportation to and from the clinic. The control group had a decline in appointments from 60% to 51% while those in the rideshare transportation appointment showing up rate improved from 54% to 68%. The study findings imply a shared transportation model increases the appointment show-up rate for patients on medical care and could be adapted for similar programs.

Program personnel implementing similar projects are also encouraged to embrace adaptive agile programming as a basis for innovation and resilience in healthcare (Lyng et al., 2021). Adaptive agile programming is cognizant of evolving factors that vary across time and space. The rule of thumb when designing agile programs is simplicity, flexibility, and a reasonable cost-conscious model that allows for scalability. This calls for program personnel to be open to change and adjust the program as needed based on the unique circumstances and emerging challenges

5.8 Sustainability of Transportation Support for Access to Cancer Services

Sustainability of programs is often overlooked in the planning process and only realized during implementation as resources start to run out. Thus, during the interviews, program personnel advised on possible approaches that can be employed to ensure sustainability of the transport stipend. To start, there should be sufficient funds allocated for the implementation of the program in long term. This can be achieved through lobbying for renewable funds and for national budgets to include transport support for patients, which can be integrated into the budgets allocated for different health facilities. Massavon et al.'s (2019) study similarly highlights concerns about sustainability of interventions beyond funding periods, especially when the program's target population may involve people who are vulnerable and in poverty. In Grainger et al. (2017)'s study, funding contracts between local organizational funders and service providers allowed for continuous channeling of funds for access to health services even during a period when state funds were restricted with unreliable flows to governorate from the central government.

Sustainability can also be improved through a multi-sectoral collaborative approach. This recommendation aligns with a qualitative study conducted by Richardson-Parry et al. (2023) supports the involvement of all stakeholders in all stages of design, implementation and evaluation of cancer care programs. The study emphasizes that cancer screening should not be viewed as a onetime event but as a continuous process which has various barriers that hinder access and uptake therefore, customized interventions are more successful than a one-off intervention and therefore better co-created interventions with the patients, healthcare professionals, private sector players and non-profit organizations is needed (Richardson-Parry et al., 2023). Siedner et al. (2015) also supported this recommendation as they attributed success to their transportation reimbursement intervention to co-creation and development with their local stakeholders and end users throughout the whole process of program planning, implementing, and evaluating.

According to the program personnel informants, sustainability can be achieved through integration with other programs. This premise is corroborated in a study by Okal et al. (2013) which established effectiveness of integrating voucher program into existing health services resulted in an increment in the uptake of sexual and reproductive health services. Another study by Nyong'o and Wambua (2022) on how to integrate cancer care into primary health care in Kenya, 25, 502 people were screened of cancer and other non-communicable diseases (10,414) and linked to existing healthcare delivery mechanism. This model proved the efficacy of

integrating cancer care into other health areas can solve the referral challenges and provide opportunity for multi-disease diagnosis and treatment.

5.9 Limitations

This was a small-scale qualitative research study and participation was limited to only the patients who received a transport stipend through the BVGH-supported program. As the scope of the study was limited to BVGH beneficiaries, the beneficiaries of other programs even in similar settings may have a different experience. However, the results can still be used as a baseline to inform new programs as they tailor them to their own setting. Additionally, while the purposive sampling had been intended for maximum variation and representation from each category named, we found the on-ground execution to be difficult and instead, prioritized participation in meeting the sample size for data saturation and representation of at least one woman from each of the age, insurance, and health center categories.

CHAPTER SIX: CONCLUSION AND RECOMMENDATIONS

6.1 Conclusion

Our inquiry gives a deeper understanding of the implementation of transport stipend provision in facilitating women beneficiaries' seeking breast and cervical cancer services. Both women beneficiaries and program personnel found the provision of transport to be impactful although there remains to be challenges related to difficulties in communications and delays of the provision process. Insufficiency of the current transport stipend was also highlighted with recommendations to increase the amount, provide the same amount to all women accessing the services, and extending subsidy to expenses of the journey such as food, accommodation, and travel companion. Recommendations for replication of the transport stipend program highlighted the need for sustainability through strong local and multisectoral partnerships and funding. The findings of this study are relevant for the planning and implementing of similar transport stipend programs in rural settings of low-income countries in Sub-Saharan Africa.

6.2 Recommendations

The following are our recommendations based on the study findings:

Automate stipend provision processes from request to distribution

Automating the process can significantly improve the speed of distributing (efficiency) the transport stipends, reducing paperwork, bureaucracy, challenges of human error and the frequent delays. An automated system would allow the program coordinator to make requests online and the signatories can verify and approve the said requests on the same platform, allowing the women to be paid via a mobile money transfer service like Momo.

Re-evaluate calculation of transport stipend amount to meet beneficiary needs

Women interviewed complained that the transport stipend did not cover all referral destinations, was not sufficient for some destinations, and did not cover non-transport costs. We therefore

recommend that cost facilitation programs should review their formula for calculating the amount of transport stipend offered to women suffering cervical/breast cancer. The formula should consider the mode of transport available to patients, travel distance, and the prevailing fuel prices. In many countries, regulatory authorities (e.g., Rwanda Utilities Regulatory Authority) regularly issue circulars setting the price of fuel. These can be used to monitor the fuel costs and any changes in prices impacting commuting costs should be logged into the formula for computing the stipends.

Introduce systematic approach to provision of transport stipend through vouchers

For women without smart phones, a voucher system can be introduced. The vouchers can also be handed out directly to patients at health centers, at the time of their referral rather than at the end of their hospital visit. Transporters can also be engaged to accept the vouchers and transport the clients to the referral sites then cash out the vouchers upon their return.

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APPENDICES

Appendix A

UGHE IRB Academic Ethics Review Notification of Approval

University of Global Health Equity Institutional Review Board

Academic Ethics Review

Notification of approval

April 08, 2023

Our Ref:	UGHE-IRB/2023/005

Protocol Title	Implementation of a transport stipend in cervical and breast cancer screening program: The experiences of women beneficiaries and program personnel in Bugesera district, Rwanda
Principal Investigator(s)	Beth Wangui Mbogo and Michelle Che Yan Lam
Protocol #	214
Funding Source	UGHE
Review Dates	March 16, 2023, April 04,2023
IRB Review Action	**Approval**
Effective Date	April 08,2023
Expiration Date	April 07,2024

Dear Beth Wangui Mbogo and Michelle Che Yan Lam,

On April 04,2023, the University of Global Health Equity Institutional Review Board (UGHE IRB) approved this resubmission. **Please note that the approval for this protocol will lapse after one (1) year and must be renewed according to the procedures of the UGHE IRB.** The IRB reminds you that you are responsible for fulfilling the following requirements:

- Changes, amendments, and addenda to the protocol or consent form (if applicable) must be submitted to the committee for review and approval, prior to activation of the changes
- Only approved consent forms are to be used for the enrolment of participants.
- All consent forms signed by subjects must be retained on file, and are submitted to inspection, along with other project materials, during routine onsite visits or audits.
- Failure to submit an application for continuing review will result in the suspension or termination of the study.
- The UGHE IRB must be notified at the closure of the study.

Appendix B

Information and Consent Form (English)

Version Date : 21/03/2023

Participant ID: _____

Project Title

Implementation of transport stipend in cervical and breast cancer services: The experiences of women beneficiaries and program personnel in Bugesera district, Rwanda

Study Population

The study population for this research consists of women between the ages of 30-49 years who have been screened for breast and cervical cancer at Nyamata DH in Rwanda under the BVGH EST Program, and who have received a transport stipend as part of the program. The program personnel who have been involved in implementing the program are also included in the study population. The sample of women in the study will be diverse, including individuals from different age groups, socio-economic backgrounds and geographic locations within the district. This will ensure that the experiences of a broad range of women are represented in the study population. The aim of the study is to explore the experiences of both women beneficiaries and program personnel with the transport stipend, including its impact on cervical and breast screening in the district. By understanding the perspectives of those directly involved in the program, the study will help identify areas for improvement and inform future interventions to increase access to cancer screening.

Principal Investigators

Michelle Che Yan Lam and Beth Wangui Mbogo are students at UGHE who have partnered with BVGH, which is the non-profit organization implementing the cervical and breast cancer screening service and transport stipend provision. We are currently conducting research to better understand the experience of beneficiaries in receiving the transport stipend while accessing cancer services in Nyamata DH so that we can better understand the implementation of the program and its impact to inform improvements for future transport stipend provision.

About this consent form

Before joining the project in question, you must understand and take into consideration the contents of this form, since it contains important information to assist you in deciding whether to participate. Please take your time in choosing whether to participate in this research, and discuss it with your family, friends, and doctor if necessary. Please feel free to ask any question about this research or about this form. If you agree to participate, you will sign this form and be given a copy for your records.

Participation is voluntary

It is your choice whether or not to participate in this project. If you choose to participate, you may change your mind and leave the study at any time. Refusal to participate or stop your participation will involve no penalty or loss of benefits to which you are otherwise entitled.

What should you know about this research study?

We are conducting a research study to investigate how the provision of travel stipend may impact women who participate in the EST cancer screening program at Nyamata DH. Before conducting the interview, one of the members of the research team will explain the study to you in detail and provide information on why you are being asked to participate. They will answer any questions you may have. As part of the research study, you will be asked to provide informed consent before the interview process begins. During the interview, the researcher will ask you questions about your experiences and perspectives related to the travel stipend provision in the EST program for cervical and breast cancer screening. It is important to note that the study will also involve other participants who have taken part in the program as staff or patients. The information collected during the study will be used to help improve the program in the future. If you agree to participate in the research, you will be asked to sign a consent form.

What is the purpose of this project?

The purpose of this research is to better understand the implementation of the BVGH EST cervical and breast cancer transport stipend and its impact in order to identify areas for improvement for future transport stipend provisions.

How many people will take part in this research?

Approximately 15 people will take part in this research.

What is the procedure for participation in this project?

The participants in this research will be provided with a detailed explanation of the study and their rights as participants. Once they provide their informed consent, they will be interviewed. The interview will take around thirty minutes to an hour. It is important to note that participation in this study will be voluntary, and the participant may withdraw at any time. The researchers may ask for permission to record or document the interaction, but this is only done with the participants consent, and the information will be kept confidential.

What are the possible risks or discomforts related to taking part in this project?

We would like to inform you that the interview topic related to cancer screening may be sensitive and could potentially cause emotional distress. However, we encourage your participation and want to assure you that contact with a trained counselor will be made available to offer support should it be necessary.

What are the possible benefits of taking part in this project?

We understand that transportation can be a barrier for some people to participate in the screening programs. That is why BVGH offers transport stipend to women beneficiaries to alleviate the financial burden of travelling to screening services. By participating in this research, you will be helping us to evaluate the effectiveness of this program and provide feedback on how it can be improved, which can ultimately lead to better health for other women in your community.

What are my alternatives to participating in this study?
Participation is voluntary and you are not obligated to take part if you choose not to. It is important to note that your decision not to participate will not affect your access to medical care, and you will not be penalized in any way for choosing not to participate in the research.

Will I be compensated for participating in this research?

For the women beneficiaries participating in the interview, we understand that your time and transportation are valuable. We would like to offer a reimbursement of $10 for your time and transportation expenses. The reimbursement will be provided immediately after the interview by the lead researchers. Please note that the reimbursement is not intended to influence your decision to participate in the interview, but it is an acknowledgement of the time and effort you have invested in participating in the interview.

What will I have to pay for if I participate in this research?

It will not cost you anything to participate in this research.

What happens if I am injured as a result of participating in this research study?

We do not foresee any physical injury from participation in this research study.

Can my taking part in the research end early?

You may decide not to continue the research at any time without it being held against you. The person in charge of the research can remove you from the research at any time without your approval for any reason including if it is in your best interest, if you do not follow the study directions, or for other reasons deemed appropriate by the research team.

If I take part in this project, how will my privacy be protected? What happens to the information you collect?

The information will not have your full name on it, but a code to identify you. Your identifiable information will be kept confidential and only accessed by authorized study personnel as necessary to conduct the research. The information will be stored in a password protected format, and strictly controlled access to the information, limiting it only to the research team including the principal investigators, supervisors, preceptors, translators, and transcribers. Once the research is complete, all identifiable data, including audio and video recordings, will be stored securely at UGHE for a period of 10 years in accordance with IRB regulations. After this time period has elapsed, the data will be permanently destroyed. We plan to disseminate the research findings through academic defense and presentation, report to the BVGH organization, and possibly through publication in academic journals. In all cases, we will ensure that the data shared does not reveal the identity of any study participant.

If I have any questions, concerns or complaints about this project, who can I talk to?

To contact the research team, please feel free to email Michelle Lam (michelle.lam@student.ughe.org) and Beth Mbogo (beth.mbogo@student.ughe.org). If you prefer to speak to them directly, you may reach them by phone at 0795258080. Alternatively, you may also email the research supervisor, Rashidah Nambaziira (rnambaziira@ughe.org).

Please contact the above research team for any of the following:

- If you have questions, concerns, or complaints;
- If you would like to talk to the project team;
- If you think the project has harmed you, or;
- If you wish to withdraw from the study.

This research has been reviewed by University of Global Health Equity Institutional Review Board. If you wish to speak with someone from the IRB, please contact the IRB at irb@ughe.org, telephone: 0788316894 or Office of Human Research Administration (OHRA) at Kigali Heights Building, 5th floor, Kacyiru, Kigali, P.O. Box 6955, Rwanda, for any of the following:

- If your questions, concerns, or complaints are not being answered by the research team;
- If you cannot reach the research team;
- If you want to talk to someone besides the research team;
- If you have questions about your rights as a research participant, or;
- If you want to get information or provide input about this research.

Statement of consent

Signing an X next to each statement and your fingerprint below indicates that:

- You have understood the content of this form;
- You have had the opportunity to ask questions and received answers that were satisfactory;
- If needed, you took time to discuss this information with others to help you decide whether to participate;
- You will receive a dated and signed copy of the form;
- You agree to participate in this research project.

☐ I consent to have the interview audio-recorded

_____ _____

Full name and signature of the witness Date and location

_____ _____

Full name and signature of the person requesting consent

Date and location

I have read the information in this consent form including risks and possible benefits. All my questions about the research have been answered to my satisfaction. I understand that I am free to withdraw at any time without penalty or loss of benefits to which I am otherwise entitled.

I consent to participate in the study.

SIGNATURE (see next page**)**

Your signature below indicates your permission to take part in this research

Name of participant

Signature of participant

Date

Signature of person obtaining consent

Date

Alternatively, if your respondent is illiterate, you could use the following for your statement of consent. Example: "Your signature below indicates you acknowledge that:

2. You have understood the content of this form;
3. You have had the opportunity to ask questions and received answers that were satisfactory;
4. If needed, you took time to discuss this information with others to help you decide whether to participate;

5. You will receive a dated and signed copy of the form;
6. You agree to participate in this project.

_____	_____
Full name and signature of the participant	Date and location
_____	_____
Full name and signature of a parent or legal guardian if respondent is a minor (>21)	Date and location
_____	_____
Co-signature by child if they are older than 9 years and of appropriate maturity, psychological and physical condition	Date and location
_____	_____
Full name and signature of the person requesting consent	Date and location

Appendix C

Information and Consent Form (Kinyarwanda)

Itariki ya verisiyo: 21/03/2023

Indangamuntu: _____

Umutwe w'umushinga

Gushyira mu bikorwa amafaranga yo gutwara abantu muri gahunda yo gusuzuma kanseri y'inkondo y'umura n'amabere: Uburambe bw'abagore bahabwa inyungu n'abakozi ba gahunda mu karere ka Bugesera, mu Rwanda

Kwiga Abaturage

Umubare w’ubushakashatsi kuri ubu bushakashatsi ugizwe n’abagore bari hagati y’imyaka 30-49 bapimwe kanseri y'ibere na kanseri y'inkondo y'umura mu bitaro by'akarere ka Nyamata mu Rwanda muri gahunda ya BVGH EST, kandi bakaba barabonye amafaranga yo gutwara abantu mu rwego ya Porogaramu. Abakozi ba gahunda bagize uruhare mu gushyira mu bikorwa iyo gahunda nabo bari mu baturage biga. Icyitegererezo cy’abagore bari muri ubwo bushakashatsi kizaba gitandukanye, harimo abantu bo mu byiciro bitandukanye, imibereho-ubukungu ndetse n’imiterere y’akarere. Ibi bizemeza ko uburambe bwumugore mugari bugaragara mubaturage biga. Ikigamijwe muri ubu bushakashatsi ni ugushakisha ubunararibonye bw’abagore bahabwa inyungu n’abakozi ba porogaramu bafite amafaranga yo gutwara abantu, harimo n’ingaruka zabyo ku gusuzuma inkondo y'umura ndetse n'amabere mu karere. Mugusobanukirwa ibitekerezo byabagize uruhare rutaziguye muri gahunda, ubushakashatsi buzafasha kumenya aho bigomba kunozwa no kumenyesha ingamba zizaza kugirango hongerwe uburyo bwo kwipimisha kanseri.

Abashakashatsi Bakuru

Michelle Che Yan Lam na Beth Wangui Mbogo ni abanyeshuri bo muri kaminuza ya Global Health Equity bafatanije na BIO Ventures for Global Health, akaba ari umuryango udaharanira inyungu ushyira mu bikorwa serivisi yo gusuzuma kanseri y'inkondo y'umura ndetse n'amabere ndetse no gutanga amafaranga yo gutwara abantu. Muri iki gihe turimo gukora ubushakashatsi kugira ngo twumve neza uburambe bw'abagenerwabikorwa mu kubona amafaranga yo gutwara abantu mu gihe babona serivisi zita ku barwayi ba kanseri mu bitaro by'akarere ka Nyamata kugira ngo dushobore kumva neza ishyirwa mu bikorwa rya gahunda n'ingaruka zayo kugira ngo tumenyeshe iterambere ry’itangwa ry'amafaranga atangwa mu gihe kizaza.

Ibyerekeye iyi fomu

Mbere yo kwinjira mu mushinga uvugwa, ugomba gusobanukirwa no kuzirikana ibiri muri iyi fomu, kubera ko ikubiyemo amakuru yingenzi agufasha guhitamo niba uzitabira. Nyamuneka fata umwanya wawe uhitemo niba uzitabira ubu bushakashatsi, hanyuma ubiganireho n'umuryango wawe, inshuti, na muganga nibiba ngombwa. Nyamuneka nyamuneka kubaza ikibazo icyo ari cyo cyose cyerekeye ubu bushakashatsi cyangwa iyi fomu. Niba wemeye kwitabira, uzasinya iyi fomu hanyuma uhabwe kopi kubyo wanditse.

Uruhare ni ubushake

Nuguhitamo kwawe cyangwa kutitabira uyu mushinga. Niba uhisemo kwitabira, urashobora guhindura imitekerereze yawe hanyuma ukareka kwiga umwanya uwariwo wose. Kwanga kwitabira cyangwa guhagarika uruhare rwawe nta gihano cyangwa gutakaza inyungu ufite ubundi buryo.

Ni iki ukwiye kumenya kuri ubu bushakashatsi?

Turimo gukora ubushakashatsi kugirango tumenye uburyo itangwa ry'ingendo rishobora kugira ingaruka ku bagore bitabira gahunda yo gusuzuma kanseri ya EST mu bitaro by'akarere ka Nyamata. Mbere yo gukora ikiganiro, umwe mubagize itsinda ryubushakashatsi azagusobanurira birambuye kandi atange amakuru kumpamvu usabwa kwitabira. Bazasubiza ibibazo byose waba ufite. Mubice byubushakashatsi, uzasabwa gutanga uruhushya rubimenyeshejwe mbere yuko ikiganiro gitangira. Muri icyo kiganiro, umushakashatsi azakubaza ibibazo bijyanye nubunararibonye bwawe hamwe nibitekerezo bijyanye no gutanga amafaranga yingendo muri gahunda ya EST yo gusuzuma kanseri y'inkondo y'umura n'amabere. Ni ngombwa kumenya ko ubushakashatsi buzaba burimo n'abandi bitabiriye gahunda nk'abakozi cyangwa abarwayi. Amakuru yakusanyijwe mugihe cyo kwiga azakoreshwa mugufasha kunoza gahunda mugihe kizaza. Niba wemeye kugira uruhare mubushakashatsi, uzasabwa gushyira umukono kumpapuro zabemereye.

Intego yuyu mushinga niyihe?

Intego yubu bushakashatsi ni ugusobanukirwa neza ishyirwa mu bikorwa ry’amafaranga yo gutwara kanseri y’inkondo y'umura na kanseri y'ibere na BVGH EST n'ingaruka zayo kugira ngo hamenyekane aho hagomba kunozwa amafaranga yo gutwara abantu mu gihe kizaza.

Ni bangahe bazitabira ubu bushakashatsi?

Abantu bagera kuri 15 bazitabira ubu bushakashatsi.

Nubuhe buryo bwo kwitabira uyu mushinga?

Abazitabira ubu bushakashatsi bazahabwa ibisobanuro birambuye ku bushakashatsi n'uburenganzira bwabo nk'abitabira. Nibamara gutanga ibyemezo byabo babimenyeshejwe, bazabazwa. Ikiganiro kizatwara iminota mirongo itatu kugeza kumasaha. Ni ngombwa kumenya ko kwitabira ubu bushakashatsi bizaba ku bushake, kandi abitabiriye amahugurwa bashobora kuva igihe icyo ari cyo cyose. Abashakashatsi barashobora gusaba uruhushya rwo gufata amajwi cyangwa kwandika imikoranire, ariko ibi bikorwa gusa abitabiriye amahugurwa babyumvikanyeho, kandi amakuru azabikwa ibanga.

Ni izihe ngaruka zishobora kubaho cyangwa kutoroherwa bijyanye no kwitabira uyu mushinga?

Turashaka kubamenyesha ko ingingo yabajijwe ijyanye no gusuzuma kanseri ishobora kuba yoroheje kandi ishobora guteza ibibazo byamarangamutima. Ariko, turashishikariza uruhare rwawe kandi turashaka kukwizeza ko kuvugana numujyanama watojwe bizaboneka kugirango batange inkunga nibiba ngombwa.

Ni izihe nyungu zishoboka zo kwitabira uyu mushinga?

Twumva ko ubwikorezi bushobora kuba inzitizi kubantu bamwe kwitabira gahunda yo gusuzuma. Niyo mpamvu BVGH itanga amafaranga yo gutwara abagenerwabikorwa kugirango bagabanye umutwaro wamafaranga yo kujya muri serivisi zipima. Mugira uruhare muri ubu bushakashatsi, uzadufasha gusuzuma imikorere yiyi gahunda no gutanga ibitekerezo byukuntu byanozwa, amaherezo bikaba byaviramo ubuzima bwiza kubandi bagore bo mu gace utuyemo.

Ni ubuhe buryo bushoboka bwo kwitabira ubu bushakashatsi?

Uruhare nubushake kandi ntugomba kubigiramo uruhare niba uhisemo kutabikora. Ni ngombwa kumenya ko icyemezo cyawe cyo kutitabira kitazagira ingaruka ku kubona ubuvuzi, kandi ntuzahanwa mu buryo ubwo ari bwo bwose bwo guhitamo kutitabira ubushakashatsi.

Nzahabwa ingurane zo kwitabira ubu bushakashatsi?

Ku bagenerwabikorwa b'abagore bitabiriye ikiganiro, twumva ko igihe cyawe no gutwara bifite agaciro. Turashaka gutanga amafaranga 10 $ kumwanya wawe hamwe nogutwara. Amafaranga azishyurwa azatangwa nyuma yikiganiro nabashakashatsi bayoboye. Nyamuneka menya ko gusubizwa bitagamije guhindura icyemezo cyawe cyo kwitabira ikiganiro, ariko ni ukwemera igihe n'imbaraga washoye mukwitabira ikiganiro.

Nzagomba kwishyura iki niba nitabira ubu bushakashatsi?

Ntacyo bizagusaba kugira uruhare muri ubu bushakashatsi.

Bigenda bite iyo nkomerekejwe no kwitabira ubu bushakashatsi?

Ntabwo duteganya gukomeretsa kumubiri kubitabira ubu bushakashatsi.

Uruhare rwanjye mubushakashatsi rushobora kurangira hakiri kare?

Urashobora guhitamo kudakomeza ubushakashatsi igihe icyo aricyo cyose utagukorewe. Ushinzwe ubushakashatsi arashobora kugukura mu bushakashatsi igihe icyo ari cyo cyose utabanje kubiherwa uruhushya n'impamvu iyo ari yo yose harimo niba ari inyungu zawe, niba udakurikije amabwiriza yo kwiga, cyangwa kubera izindi mpamvu zibona ko zikwiye n'itsinda ry'ubushakashatsi. .

Ninitabira uyu mushinga, ubuzima bwanjye buzarindwa bute? Bigenda bite kumakuru ukusanya?

Amakuru ntabwo azaba afite izina ryawe ryuzuye, ariko kode yo kukumenya. Amakuru yawe yamenyekanye azabikwa ibanga kandi azagerwaho gusa nabakozi bashinzwe kwiga nkuko bikenewe kugirango bakore ubushakashatsi. Amakuru azabikwa muburyo bukingiwe ijambo ryibanga, kandi agenzurwe cyane no kubona amakuru, agarukira gusa kumatsinda yubushakashatsi harimo abashinzwe ipereereza nyamukuru, abagenzuzi, abategetsi, abasemuzi, hamwe n’abandi. Ubushakashatsi nibumara kurangira, amakuru yose yamenyekana, harimo amajwi n'amashusho, azabikwa neza muri UGHE mugihe cyimyaka 10 hakurikijwe amabwiriza ya IRB. Nyuma yiki gihe cyashize, amakuru azasenywa burundu. Turateganya gukwirakwiza ibyavuye mu bushakashatsi dukoresheje kwirwanaho no kwerekana, gutanga raporo ku

muryango wa BVGH, ndetse no mu binyamakuru byandika. Mubibazo byose, tuzemeza ko amakuru asangiwe atagaragaza umwirondoro wuwitabira kwiga.

Niba mfite ibibazo, impungenge cyangwa ibirego bijyanye nuyu mushinga, ninde ushobora kuvugana nande?

Kugira ngo ubaze itsinda ry'ubushakashatsi, nyamuneka wohereze ubutumwa kuri Michelle Lam (michelle.lam@student.ughe.org) na Beth Mbogo (beth.mbogo@student.ughe.org). Niba uhisemo kuvugana nabo mu buryo butaziguye, urashobora kubageraho kuri terefone kuri 0795258080. Ubundi, ushobora kandi kohereza ubutumwa bugenzuzi, Rashidah Nambaziira (rnambaziira@ughe.org).

Nyamuneka saba itsinda ryubushakashatsi hejuru kuri kimwe muri ibi bikurikira:

- Niba ufite ibibazo, impungenge, cyangwa ibibazo;
- Niba ushaka kuvugana nitsinda ryumushinga;
- Niba utekereza ko umushinga wakugiriye nabi, cyangwa;
- Niba wifuza kuva mu nyigisho.

Ubu bushakashatsi bwasubiwemo na kaminuza ya Global Health Equity Institutional Review Board. Niba wifuza kuvugana numuntu ukomoka muri IRB, nyamuneka hamagara IRB kuri irb@ughe.org, terefone: 0788316894 cyangwa Ibiro bishinzwe ubushakashatsi bw'abantu (OHRA) ku nyubako ya Kigali Heights, igorofa ya 5, Kacyiru, Kigali, agasanduku k'iposita 6955, U Rwanda, kuri kimwe muri ibi bikurikira:

- Niba ibibazo byawe, impungenge, cyangwa ibibazo byawe bitashubijwe nitsinda ryubushakashatsi;
- Niba udashobora kugera kubitsinda ryubushakashatsi;
- Niba ushaka kuvugana numuntu usibye itsinda ryubushakashatsi;
- Niba ufite ibibazo bijyanye n'uburenganzira bwawe nkuwitabira ubushakashatsi, cyangwa;
- Niba ushaka kubona amakuru cyangwa gutanga ibitekerezo kubyerekeye ubu bushakashatsi.

Itangazo

Gusinya X kuruhande rwa buri jambo hamwe nintoki zawe hepfo byerekana ko:

- Wumvise ibikubiye muri iyi fomu;
- Wagize amahirwe yo kubaza ibibazo no kwakira ibisubizo bishimishije;
- Niba bikenewe, wafashe umwanya wo kuganira naya makuru nabandi kugirango bagufashe guhitamo niba uzitabira;
- Uzakira itariki kandi yashyizweho umukono ya fomu;
- Uremera kwitabira uyu mushinga wubushakashatsi.

☐ Nemeye ko ikiganiro cyandikwa amajwi

_____ _____

Izina ryuzuye n'umukono wumutangabuhamya Itariki n'aho bihererereye

_____ _____

Izina ryuzuye n'umukono wumuntu Itariki n'aho bihererereye

gusaba uruhushya

Nasomye amakuru muriyi fomu yemewe harimo ingaruka ninyungu zishoboka. Ibibazo byanjye byose bijyanye n'ubushakashatsi byashubijwe kunyurwa. Ndumva ko mfite umudendezo wo gukuramo igihe icyo ari cyo cyose nta gihano cyangwa gutakaza inyungu nemerewe ubundi.

Nemeye kwitabira kwiga.

IKIMENYETSO (reba urupapuro rukurikira **)**

Umukono wawe hepfo yerekana uruhushya rwawe rwo kugira uruhare muri ubu bushakashatsi

_____

Izina ryabitabiriye

_____ _____

Umukono w'abitabira Itariki

_____ _____

Umukono wumuntu ubona uruhushya Itariki

_____

Ubundi, niba uwagusubije atazi gusoma, ushobora gukoresha ibi bikurikira kugirango ubyemeze. Urugero: “Umukono wawe hepfo yerekana ko wemera ko:

2. Wumvise ibikubiye muri iyi fomu;
3. Wagize amahirwe yo kubaza ibibazo no kwakira ibisubizo bishimishije;

4. Niba bikenewe, wafashe umwanya wo kuganira naya makuru nabandi kugirango bagufashe guhitamo niba uzitabira;
5. Uzakira itariki kandi yashyizweho umukono ya fomu ;
6. Uremera kwitabira uyu mushinga.

_____ _____

Izina ryuzuye n'umukono wabitabiriye Itariki n'aho bihereereye

_____ _____

Izina ryuzuye n'umukono w'ababyeyi cyangwa Itariki n'ahantu
umurera wemewe n'amategeko niba uwabajijwe ari muto (> 21

_____ _____

Gufatanya-umukono numwana niba arengeje 9 Itariki nahantu
imyaka no gukura bikwiye, psychologique
n'imiterere y'umubiri

_____ _____

Izina ryuzuye n'umukono wumuntu Itariki n'aho bihereereye
gusaba uruhushya

Appendix D

Interview Guide for Women Beneficiaries (English)

Socio-demographic characteristics

Participant ID	
Age	
Residence	
Insurance Type/Ubedehe	
Type of Cancer Screening • Cervical • Breast • Both	
Frequency of Screening	

Pre-interview introduction

Hello [Beneficiary Name], thank you for taking the time out to speak with me today. I am [Data Collector Name] and I am a data collector working with the students at the University of Global Health Equity who are partnering with BIO Ventures for Global Health, which is the non-profit organization implementing the cervical/breast cancer screening service and transport stipend provision. (Show the beneficiaries the UGHE/BVGH ID to verify identity.) We are currently conducting research to better understand the experience of beneficiaries in receiving the transport stipend while accessing cancer services, so that we can better understand the implementation of the program and its impact to inform improvements for future transport stipend provision.

Here is the consent form for your viewing. (Show consent form and explain as follows). As you can see, should you consent to your involvement with this research you will be asked to engage in a 1-hour long interview session which will be recorded for the research process. If you don't want to be recorded, it's okay, please let us know. During the interview we will ask you about your experience receiving the transport stipend. Your data will not be identified to ensure your privacy and confidentiality and the data will be password-protected to viewing only by the research team involved. The overall results of the research without any personal identifiers will be shared with the UGHE and BVGH and may be further disseminated for publishing.

Please know that your involvement is voluntary and if at any moment you feel uncomfortable at any point of the interview, you can let me know and we can pause to stop. At any point in the research, you may request to withdraw should you wish to do so, and there will be no consequences, nor will your healthcare access be compromised, so do not worry. Should you feel that you may require any counselling support during or after the interview from discussing the content asked, please do let me know and we can connect you with the necessary counselling services to support you.

Feel free to take some time to read through the consent form again and ask me any questions you may have. Remember that there are no right or wrong answers, and your sharing of experience is very much appreciated!

Interview questions

Remember to note down non-verbal cues

1) Experience: Can you describe to me your experience travelling to Nyamata DH for screening?

- *Type of transport*
  - What type of transport services did you use to get to the cancer screening facility
  - Did you have to connect to come here, or did you just use one means of transport?
- *Time of transport*
  - What time did you leave home to make it to the screening on time?
  - How long did the journey to the cancer screening facility take?
- *Cost of transport and sufficiency of stipend*
  - How much money did you spend on travel to and from the cancer screening facilities? (Specify as applicable: to and from the district health center? To and from the DH? To and from the military hospital?)
  - Did you incur any additional transportation expenses beyond the stipend provided?
  - Were there any other non-transportation additional expenses that you had to spend due to your trip to the cancer screening facility? (e.g., food, overnight stay, travel companion expenses, etc.)
  - In thinking about the cost/expense to travel to cancer screening services, how did you feel about costs/money for your visits to the facility?
  - Did you receive any other support to help pay for transport expenses (eg. community, friends, family)? Not reliable source – lend me money
- *Process of receiving stipend:*
  - Can you describe the process of receiving the transport stipend?
  - How was this process for you? Were there any specific challenges?
  - Using the screening day as reference, how long did it take you to receive the stipend?

2) Perception: What are your views on the program providing transport money for cervical/breast cancer screening?

- *Awareness of stipend*
  - Can you describe to me how you learned about the transport stipend?
- *Impact of stipend*
  - How has the transport stipend benefited your experience with cancer screening?
  - How does the transport stipend affect your decision to attend your next cancer screening appointment?

3) Challenges: Based on your experience, what are some challenges you have experienced while receiving the transport stipend?

- Can you describe if there was anything you were particularly worried or concerned about?
- What aspect of the experience was the most stressful?
- Were there any aspects of the program provided some relief to these feelings of worry, concern, and stress you have mentioned? If so, can you explain.

4) Recommendations: Referencing the challenges you mentioned, how can the transport stipend provision be improved to support future screenings?

5) Others: Is there anything else about your experience that you think is important for us to discuss?

6) Context: Finally, I would like to ask a few questions about your…

- *Living situation*
    - Can you describe your living situation? Who do you live with in your household? (partner/marital status)
- *Education*
    - How much schooling did you complete?
- *Employment*
    - What are your main daily responsibilities? (e.g., working full-time, farming, raising children, being a student)

Thank you so much for your time. I greatly appreciate your willingness to talk with me today.

Appendix E

Interview Guide for Women Beneficiaries (Kinyarwanda)

<u>Irangamimerere</u>

Nimero iranga ubazwa	
Imyaka	
Aho atuye	
Ubwoko bw'Ubwishingizi/Ubedehe	
Ubwoko bwa kanseri yisuzumishije • Inkondo y'umura • Amabere • Byombi	
Inshuro yisuzumishije	

Intangiriro yo kubaza

Mwaramutse [Izina ry'Abagenerwabikorwa], urakoze gufata umwanya wo kuvugana nanjye uyu munsi. Ndi [Izina ry'abakusanya amakuru] kandi nkaba ndi umu kusanyamakuru nkorana nabanyeshuri bo muri kaminuza ya UGHE bafatanya na BIO Ventures for Global Health, akaba ari umuryango udaharanira inyungu ushyira mu bikorwa serivisi yo gusuzuma kanseri y'inkondo y'umura na kanseri y'ibere no gutanga ubufasha bw' amafaranga yurugendo kubajya kwisuzumisha izo ndwara. (Erekana abagenerwabikorwa UGHE / BVGH ikarita ikuranga kugirango ushimangire uwo uriwe) Muri iki gihe turimo gukora ubushakashatsi kugira ngo twumve neza uko abagenerwabikorwa bafata igikorwa cyo guhabwa amafaranga y'urugendo mu gihe bagana serivisi zita kuri kanseri, kugira ngo dushobore kumva neza ishyirwa mu bikorwa rya gahunda n'ingaruka zayo kugira ngo tumenyeshe iterambere ry'imishinga itangwa mu gihe kizaza.

Hano hari urupapuro rw'isezerano ryo kwemera kubazwa. (Erekana urupapuro rwisezerano kandi usobanure kuburyo bukurikira). Nkuko ubibona ku rupapuro, uramutse ubyemeye, uruhare rwawe muri ubu bushakashatsi rusaba isaha 1 yo kubazwa ibibazo ku bijyanye nuko ufata igikorwa cyo guhabwa amafaranga y'urugendo mu gihe ugana serivisi zita kuri kanseri. Ayo makuru azafatwa amajwi kugira ngo azifashishwe mu bushakashatsi. Muramutse mushaka ko tutabafata amajwi mwatubwira. Muri iri bazwa, tuzababaza ku bijyanye no gufata amafaranga y'urugendo. Amakuru ku mwirondoro wawe ntazamenyekana kugirango turinde amakuru waduhaye. Amakuru uzaduha azarindwa nijambo ryibanga kuri mudasobwa yacu kugirango arebwe gusa n'itsinda ry'ubushakashatsi. Ibizava muri ubu bushakashatsi rusange havanywemo ibiranga umuntu ku giti cye cyangwa umwirondoro, bizasangizwa UGHE na BVGH kandi bishobora gukomeza gukwirakwizwa, bigatangazwa.

Uruhare rwawe muri ubu bushakashatsi ni kubushake kandi umwanya uwo ari wo wose wumva utameze neza mukiganiro, ushobora kubimenyesha tugahagarika ikiganiro. Igihe icyo ari cyo cyose mu bushakashatsi, ushobora gusaba kuvamo uramutse ubishaka, kandi nta ngaruka zizabaho, nta nubwo ubuvuzi bwawe buzahungabana, ntuhangayike. Niba wumva ko ushobora gusaba ubufasha ubwo aribwo bwose mu gihe cyangwa nyuma y'ikiganiro umbwire. Dushobora

kandi kuguhuza na serivisi zikenewe zubujyanama kugirango tugushyigikire.

Wafata umwanya wo gusoma iri sezerano ryo kwemera kubazwa kandi umbaze ibibazo ushobora kuba ufite. Wibuke ko nta bisubizo byiza cyangwa bibi, kandi turagushimiye kubwo kudusangiza amakuru!

Ibibazo byo kubaza

* Wibuke kwandika ibimenyetso bitari mu magambo ubazwa akora*

1) Araribonye: Ushobora kunsobanurira uko bikugendekera mu rugendo rwo kujya ku bitaro bya Nyamata ujyiye kwisuzumisha?

- *Ubwoko bwo gutwara abantu*
  - Ni ubuhe bwoko bwa serivisi zitwara abantu wakoresheje kugirango ugere ku kigo gisuzuma kanseri
  - Icyo gihe Waba warakoresheje uburyo burenze bumwe, cyangwa wakoresheje uburyo bumwe bwa serivisi zo gutwara abantu?
- *Igihe wakoresheje*
  - Wavuye mu rugo saa ngahe kugirango ugere ku ivuriro ku gihe?
  - Urugendo rwo kujya kwisuzumisha kanseri rwatwaye igihe kingana iki?
- *Igiciro cy'urugendo n'ubufasha buhagije*
  - Ni amafaranga angahe wakoresheje mu rugendo ujya ndetse uva mu bigo bipima kanseri? (Garagaza ibiciro: kuva no kujya ku kigonderabuzima? Kujya no kuva ku bitaro by'akarere? Kujya no kuva ku bitaro bya gisirikare?)
  - Wigeze ukoresha amafaranga yinyongera arenga ku mafaranga wari wahawe?
  - Haba hari andi mafaranga yinyongera (Atari ayurugendo) wakoresheje mugihe wajyaga gushaka serivisi za kanseri? (urugero: ibiryo/ifunguro, icumbi, amafaranga y'uguherekeje/umurwaza, cyangwa nibindi)
  - Mugutekereza ikiguzi / amafaranga y'urugendo rwo kujya gushaka serivisi za kanseri, wumvaga umerewe ute ku bijyanye n'amafaranga/nigiciro cy'urugendo?
  - Haba hari ubundi bufasha wabonye bugufasha kwishyura amafaranga y'urugendo (urugero; kominote, inshuti, umuryango)?
- *Uburyo bwo kwakira amafaranga:*
  - Wasobanura inzira/uburyo bicamo kugira ngo uhabwe amafaranga y'urugendo?
  - Ubu buryo ubwumva gute? Haba hari ingorane zihariye?
  - Ukoresheje umunsi wo kujya kwisuzumisha nk'urugero, byagutwaye igihe kingana iki kugirango ubone amafaranga?

2) Imyumvire: Iyi gahunda itanga amafaranga y'urugendo rwo kujya kwisuzumisha kanseri yinkondo y'umura / kanseri y'ibere uyitekerezaho iki/ uyumva ute?

- *Kumenya amafaranga y'ingoboka*
  - Wansobanurira uko wamenye iki gikorwa cy'itangwa ry'amafaranga y'urugendo ku bajya gushaka serivisi za kanseri ?
- *Akamaro kamafaranga y'urugendo*

- Nigute aya mafaranga y'urugendo yagufashije muri serivisi zo kwisuzumisha kanseri?
- Ni gute amafaranga y'urugendo agira ingaruka ku cyemezo cyawe cyo kwitabira gahunda ikurikiye yo kwisuzumisha kanseri?

3) Inzitizi: Ukurikije ibyakubayeho, ni izihe ngorane/mbogamizi zimwe na zimwe wahuye nazo mu gihe uhabwa amafaranga y'urugendo?

- Wansobanurira niba hari ikintu cyari kiguhangayikishije muri icyo gihe?
- Ni ubuhe buryo cyangwa ikintu cyari kikubangamiye cyane kurusha ibindi muri icyo gihe?
- Mu buryo porogaramu yatanzwemo, ni ubuhe buryo cyangwa ikintu cyaguhaye/bwaguhaye ihumure ku mbogamizi wavuze mbere. Niba gihari ni ikihe?

4) Ibyifuzo: Ugendeye ku mbogamizi wavuze, ni gute uburyo bwo gutanga amafaranga y'urugendo ku bantu bwanozwa kugirango dushyigikire serivisi zo kwipimisha kanseri mubihe bizaza?

5) Ibandi: Haba hari ikindi kintu kijyanye n'ibyakubayeho ubona ko ari ngombwa ko twaganira?

6) Imiterere: *Dusoza*, ndashaka kukubaza ibibazo bikeya kuri wowe.

- *Imibereho*
  - Wansobanrira uko ubayeho mubuzima bwawe bwa burimunsi? Ninde mubana mu rugo rwawe? (umufasha / imiterere y'abashakanye)
- *Uburezi*
  - Waba warize amashuri angahe?
- *Akazi*
  - Ni izihe nshingano zawe za buri munsi? (urugero, akazi gahoraho, guhinga, kurera abana, kuba umunyeshuri)

Urakoze cyane kumwanya wawe. Nishimiye cyane ubushake bwawe no kuvugana nanjye uyu munsi.

Appendix F

Interview Guide for Program Personnel (English)

Socio-demographic characteristics

Participant ID	
Position in hospital	
Position in program	

Pre-interview introduction

Hello [Personnel Name], thank you for taking the time out to speak with me today. I am [Data Collector Name], and I am a student at University of Global Health Equity (Show the personnel the UGHE ID to verify identity.) We are partnering with BIO Ventures for Global Health to conduct research on the transport stipend provision of the EST program to better understand its implementation and impact and to inform improvements for future transport stipend provision.

Here is the consent form for your viewing. (Show consent form and explain as follows). As you can see, should you consent, your involvement with this research will involve a 1-hour long interview session which will ask you about your experience receiving the transport stipend. Your data will not be identified to ensure your privacy and confidentiality and the data will be password- protected to viewing only by the research team involved. The overall results of the research without any personal identifiers will be shared with the UGHE and BVGH and may be further disseminated for publishing.

Please know that your involvement is voluntary and if at any moment you feel uncomfortable at any point of the interview, you can let me know and we can pause to stop. At any point in the research, you may request to withdraw should you wish to do so, and there will be no consequences, nor will your healthcare access be compromised, so do not worry. Should you feel that you may require any counselling support during or after the interview from discussing the content asked, please do let me know and I can connect you with the necessary counselling services to support you.

Feel free to take some time to read through the consent form again and ask me any questions you may have. Remember that there are no right or wrong answers, and your sharing of experience is very much appreciated!

Interview questions

Remember to note down non-verbal cues

1) **Context:** Can you tell me about your work at the Nyamata DH and your role in the BVGH EST program?

- Can you describe how you first got involved with the program?
- How many years have you been engaged with the program?
- Since you first started, has there been any particular changes regarding the implementation of transport stipend that are worth noting?

2) Experience: Can you describe the implementation of the transport stipend?

- What steps were taken to initiate the transport stipend? Can you describe the process?
- What was the process taken to raise awareness for this program to the potential beneficiaries in the Bugesera district?
- Can you describe the eligibility criteria of the beneficiaries for the transport stipend? What were the factors considered in such a decision?
- Can you describe the distribution process of the transport stipend? Were there any interactions with the beneficiaries that were particularly noteworthy that you would like us to know about?

3) Access: Can you describe the uptake of cancer screening services after the implementation of the transport stipend?

- In your opinion, does the transport stipend effectively impact the beneficiaries? If so, in what way? (Find out if they have supporting data that shows this belief of effectiveness)

4) Challenges: Based on your experience, what are some challenges you have experienced in implementing the transport stipend?

- Can you describe if there was anything you were particularly worried or concerned about?
- What aspect of the experience was the most stressful?
- Were there any aspects of the program provided some relief to these feelings of worry, concern, and stress you have mentioned? If so, can you explain.

5) Recommendations: Referencing the challenges you mentioned, how can the transport stipend provision be improved to support future screenings?

- Based on the challenges mentioned above what solutions would you advise the program to take?
- What advice would you give someone who would like to implement a similar transport stipend provision program in a different district or country?
- Do you have any recommendations for the Government of Rwanda Ministry of Health in providing their support for the transport stipend related to cancer screening services?

Thank you so much for your time. I greatly appreciate your willingness to talk with me today.

Appendix G

Interview Guide for Program Personnel (Kinyarwanda)

Irangamimerere

Nimero iranga ubazwa	
Umwanya mu bitaro	
Umwanya muri porogaramu	

Intangiriro yo kubaza

Mwaramutse [Izina ry'umukozi], urakoze gufata umwanya wo kuvugana nanjye uyu munsi. Ndi [Izina ry'abakusanya amakuru], kandi ndi umunyeshuri muri kaminuza ya Global Health Equity (Ereka umukozi ikarita ikuranga ya UGHE kugirango bamenye umwirondoro wawe) Dufatanya na BIO Ventures for Global Health gukora ubushakashatsi ku gutanga amafaranga y'urugendo ku bantu muri Gahunda ya EST kugirango twumve neza ishyirwa mu bikorwa ryayo n'ingaruka zayo no kumenyesha iterambere ry'yi porogaramu y'itangwa ry'amafaranga y'urugendo.

Hano mureba hari urupapuro rwo kuduha uburenganzira bwo kubabaza. (Erekana urupapuro rw'uburenganzira kandi usobanure ku buryo bukurikira). Nkuko ubibona ku rupapuro, uramutse ubyemeye, uruhare rwawe muri ubu bushakashatsi rusaba isaha 1 yo kubazwa ibibazo ku bijyanye nuko ufata igikorwa cyo guhabwa amafaranga y'urugendo mu gihe ugana serivisi zita kuri kanseri. Amakuru ku mwirondoro wawe ntazamenyekana kugirango turinde amakuru waduhaye. Amakuru uzaduha azarindwa nijambo ryibanga kuri mudasobwa yacu kugirango arebwe gusa nitsinda ry'ubushakashatsi. Ibizava muri ubu bushakashatsi rusange havanywemo ibiranga umuntu ku giti cye cyangwa umwirondoro, bizasangizwa UGHE na BVGH kandi bishobora gukomeza gukwirakwizwa.

Uruhare rwawe muri ubu bushakashatsi ni kubushake kandi umwanya uwo ari wo wose wumva utameze neza mu kiganiro, ushobora kubimenyesha tugahagarika ikiganiro. Igihe icyo ari cyo cyose mu bushakashatsi, ushobora gusaba kuvamo uramutse ubishaka, kandi nta ngaruka zizabaho, nta nubwo ubuvuzi bwawe buzahungabana, ntuhangayike. Niba wumva ko ushobora gusaba ubufasha ubwo aribwo bwose mu gihe cyangwa nyuma y'ikiganiro umbwire. Dushobora kandi kuguhuza na serivisi zikenewe zubujyanama kugirango tugushyigikire.

Wafata umwanya wo gusoma iri sezerano ryo kwemera kubazwa kandi umbaze ibibazo ushobora kuba ufite. Wibuke ko nta bisubizo byiza cyangwa bibi, kandi turagushimiye kubwo kudusangiza amakuru!

Ibibazo byo kubaza

* Wibuke kwandika ibimenyetso bitari mu magambo ubazwa akora*

1) Imiterere: Ese wambwira ku bijyanye n'akazi kawe mu bitaro by'akarere ka Nyamata n'uruhare rwawe muri gahunda/porogaramu ya BVGH EST?

- Wansobanura uburyo winjiye bwa mbere muri gahunda/porogaramu ya EST?
- Mumaze imyaka ingahe mukorana niyi gahunda/porogaramu?
- Kuva mwatangira gukora muri iyi porogaramu, hari impinduka zihariye zijyanye n'ishyirwa mu bikorwa ry'itangwa ry'amafaranga y'urugendo twavugaho.

2) Imyumvire: Ese wansobanura mumagambo arambuye uko ishyirwa mubikorwa ry'itangwa ryamafaranga y'urugendo rigenda?

- Ni izihe ntambwe zatewe mu gutangiza itangwa ry'amafaranga y'urungendo? wansobanura inzira byaciyemo?
- Ni ubuhe buryo bwakoreshejwe mu rwego rwo gukangurira iyi gahunda abagenerwabikorwa bo mu karere ka Bugesera?
- Wansobanurira ibigenderwaho kugirango hahitwemo abagenerwabikorwa baterwa inkunga? Ni ibihe bintu byagendeweho mubihe byabanje mu gufata icyemezo?
- Mwansobanura uburyo bukoreshwa mugutanga inkunga y'amafaranga y'urugendo haba hari ubundi buryo mwakoranye n'abagenerwabikorwa mwumva mwifuza ko tumenya?

3) Kwinjira: Wansobanurira uko itangwa rya serivisi zo gusuzuma kanseri ryifashe nuko abantu bagana izo serivisi nyuma yo gushyira mu bikorwa gahunda y'itangwa ry'inkunga y'amafarnaga yurugendo?

- Ku bwawe, itangwa ry'amafaranga y'urugendo agira ingaruka nziza kubagenerwabikorwa? Niba aribyo, ni mu buhe buryo? (Menya niba bafite amakuru/imibare ishyigikira cyangwa yerekana iyi myizerere yingirakamaro)

4) Inzitizi: Ukurikije ibyakubayeho, ni izihe ngorane/imbogamizi zimwe na zimwe wahuye nazo mugihe uhabwa amafaranga y'urugendo?

- Wansobanura niba hari ikintu cyari kiguhangayikishije muri icyo gihe?
- Ni ubuhe buryo cyangwa ikintu cyari kikubangamiye cyane kurusha ibindi muri icyo gihe?
- Mu buryo porogaramu yatanzwemo, ubuhe buryo cyangwa ikintu cyaguhaye/bwaguhaye ihumure ku mbogamizi wavuze mbere? Niba bihari, wadusobanurira?

5) Ibyifuzo: Ukoresheje imbogamizi wavuze, nigute uburyo bwo gutanga amafaranga y'urugendo kubantu abantu bwanozwa kugirango dushyigikire serivisi zo kwipimisha kanseri mubihe bizaza?

- Ugendeye ku mbogamizi wavuze mbere, ni ibihe bisubizo/inama wagira abategura porogaramu gukora?
- Ni izihe nama wagira umuntu wifuza gushyira mubikorwa gahunda/porogaramu itanga inkunga y'amafarsanga y'urugendo mu tundi turere cyangwa mu kindi gihugu?

- Waba ufite inama watanga kuri minisiteri y'ubuzima mu Rwanda mu gutanga inkunga y'amafaranga y'urugendo ajyanye na serivisi zisuzuma kanseri?

Urakoze cyane kumwanya wawe. Nishimiye cyane ubushake bwawe no kuvugana nanjye uyu munsi.