



## **International Organizations Initiatives And Malaria Eradication In Rwanda A Case Of USAID Initiative In Kicukiro District In The City Of Kigali**

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**Abstract:**

**Background:** *This paper aims at analysing the role of USAID, the outcomes of the partnership between USAID initiative and the Government of Rwanda in malaria eradication from 2015 to 2018 in Kicukiro District and assessing the contribution of international organizations to the fight against malaria in Rwanda. The study highlights the needs, tools and requirements for the conclusion of the partnership between International Organizations (IOs) and Rwanda Government; and identifies the main challenges encountered by USAID in malaria eradication programs implementation process in Rwanda.*

**Materials and Methods:** *The study included 56 healthcare workers selected from 10 health centers of the 10 sectors of the District of Kicukiro. Data collection tools were questionnaires and semi-structured interviews. This work provided opportunity for the researcher to put in practice the knowledge he acquired in theory, it improved the researcher's knowledge in conducting a research paper and finding solutions to identified problems on malaria eradication at the national level in general and in Kicukiro District in particular. For policy makers of the Government of Rwanda, this study is of great importance in formulating a flexible and reasonable cooperation environment system of regulations of partnership towards malaria eradication in Rwanda. For USAID managers, the study findings helped to appreciate their role in malaria eradication in Rwanda and the study also showed more areas as challenges and opportunities for their increased intervention. For scholars in international relations and diplomacy, this study helped to understand the establishment of USAID in the eradication of malaria by evaluating different initiatives, policies and strategies elaborated for an efficient relationship between the GoR and USAID.*

**Results:** *Findings revealed that GoR, IOs and the community health centers cooperate to improve USAID program performance in eradicating malaria disease, since projects are initiated basing on the needs of Kicukiro communities. For most of respondents, the contribution of USAID to fight against malaria in Kicukiro District can be perceived through the importance of the project to individuals where beneficiaries are able to receive mosquito nets, ease blood smear tests, initiate personal investment plans for the prevention of malaria, and the ability to take the family members to health facilities.*

**Conclusion:** *at the end, the researcher has provided recommendations to the Government of Rwanda, to Kicukiro leaders and community members, to health centers managers, to USAID and to international organizations representatives. The Government of Rwanda should emphasize on open selection of project beneficiaries' sites, and work conjointly with community leaders for minimizing malaria spread among the population. Project monitoring and evaluation should be done regularly without any delay: this will help to keep an eye on the people who could fall in the area of temptation to decrease the efforts in malaria eradication measures hence minimizing the behavior of reoccurrence of malaria infection. For USAID and International organizations representatives; it was recommended that meetings for community health leaders and the USAID managers should be conducted better at field without any biases: this could help in monitoring and evaluation of the project activities hence giving better results as far as malaria eradication is concerned. Kicukiro District leaders should make a permanent monitoring and evaluation and organize more training sessions on malaria prevention modalities while Kicukiro community members should keep and manage all activities carried out through implementation of projects undertaken for malaria eradication in Kicukiro District.*

**Key words:** *International Organizations, Malaria Eradication, Usaid Initiative, Kicukiro District, Rwanda*

## I. Introduction

For many years back, malaria was considered largely not eradicable, as traditional mode of prevention and cure were insufficient to give to the entire population a comfortable support and standard prevention program. With the arrival of mosquito nets, new drugs against malaria and insecticides, mass campaigns against malaria were organized and large distribution of mosquito nets was done in many sub-Saharan African countries (President Malaria Initiative - PMI, USA, 2015).

Communication and sensitization of the population on the cleanliness of their houses and local environment for eradication of the vector are more important. The supply of drugs and mosquito nets was made accessible to the general population through the ease of taxes and restrictions of import of basic needs and materials for the prevention of malaria. Strategies for malaria eradication were initiated at large area to support campaigns against malaria (PMI, USA, 2015).

Malaria mortality rate reduction was a major goal and evaluator factor for many international organizations that are involved in the fight against malaria such as the World Health Organization WHO, the World Bank, and the USAID. The WHO estimated 217 million cases of malaria in 2017 among of which, about 92% were in Africa, and among them 93% of deaths were counted also in Africa. Between 2000 and 2018, the malaria mortality decreased from 653,000 to 435,000 (a decline of 48%), but still, malaria prevalence remains a challenge; as it is observed in all parts of the world, especially in Low- and Middle-Income Countries LMIC (PMI, USA, 2017).

The increase of malaria in Africa is related to many factors: poverty, poor hygiene, promiscuity, lack or shortage of nearby health centers in remote areas. Malaria continues to be a big challenge for Rwanda government and IOs programs are one among the mechanisms used to eradicate this malaria disease in Rwanda (PMI, Rwanda 2018; PMI, Rwanda 2019).

Rwanda registered fewer malaria cases owing to different strategies. Under the Malaria Contingency Plan, different strategies have been initiated and they have decreased severe malaria cases by 40% and deaths due to malaria by 43% between 2015/2016 and 2017/2018. Such initiatives include home based management for malaria at community level countrywide (PMI, Rwanda 2018; PMI, Rwanda 2019). The Government of Rwanda (GoR) also initiated many healthcare programs for the fight against malaria such as the National Malaria program which was initiated in all districts of Rwanda working closely in health centers. Rwanda's latest data (2018) show enormous improvement in the prevention standards against malaria, and progresses towards the complete eradication of malaria are promising (Rwanda: National Malaria Control Program NMCP 2008).

Between 2015 and 2018, Rwanda registered an improved life expectancy of 67.8 years through the improvement of many health indicators. A mix of political will and healthcare development is helping and driving Rwanda's success in eradication of malaria, despite challenges such as unparalleled economic growth and education. The country's leadership insists on the vision and cultivates a unity of purpose among GoR officials and the population at large. This includes working on mass campaigns for the fight against malaria, and constant monitoring of health indicators of malaria mortality and morbidity (Rwanda: NMCP 2008).

Many Non-governmental organization NGOs are involved in the fight against malaria. USAID is the US agency for aids distribution and strategic plan of US development programs across the world. It's a US wide development network, improving change and corroborating the US Government and beneficiary countries, experience and resources to help people build a better life. USAID does support the GoR with policy advice and technical assistance across several areas (USAID Report, 2018).

USAID is also working for the eradication of malaria in Rwanda, and initiates different programs for the fight against malaria. Among the USAID initiatives, the identification of needs of the society for the eradication of malaria for instance estimating the rate of malaria infection, the number of consultations made on patient with malaria, and the frequency of communities' visits by USAID agents. The assistance of the USAID initiative was possible through different intervention tools like: negotiations, resolutions and agreements, and various communities support in regards to the eradication of malaria in Rwanda which focused on 5 major practice areas namely distribution of malaria tests in health centers, distribution of malaria drugs, distribution of mosquito nets, distribution of pesticides and insecticides, and finally organization of campaigns of sensitization and prevention of malaria extension in the local communities (USAID Report, 2018). Many International organizations (IO) operate in the health sector in Rwanda through different governmental institutions or directly with local non-governmental organizations. Among diseases prevention and management, communicable diseases are the most monitored and surveyed for the prevention of extension among the population. Malaria has been declared one of the greatest enemies in the health sector in Rwanda, and in many parts of the sub-Saharan Africa. This paper specifically aims the role of international organizations in Malaria eradication in Rwanda with interest to the USAID initiative from 2017 to 2018.

Many organizations establish strong relations with the government of Rwanda in the health sector for instance USAID, WHO, UNICEF, and CARE International, but many of them operate with no thorough follow-up at the expense of the national strategic agenda (Rwanda: HMIS, 2017). National programs are implemented with the support of many international organizations for instance WHO, USAID, and UN, but the contributions of international organizations are not known for guidance of support at national level (Rwanda: HMIS, 2017). This proposed study aims to study the international organizations initiatives and strategies to the eradication of malaria in Rwanda.

Herein, the study interrogates the activities, the task forces and the outcomes of international organizations operating in the country in disease prevention especially in the eradication of malaria. There have been 4 national USAID programs for the fight against malaria: Rwanda PMI 2018; and Rwanda PMI 2019. During the period of 2016 to 2017, there was a tremendous decline of malaria cases in 57% of Districts in Rwanda where severe cases of malaria decreased from 39 per 10,000 cases in 2016 to 24.5 per 10,000 cases in 2017 (PMI, 2017); therefore, the study investigates the contributions of USAID in fighting malaria in Rwanda, and the outcomes of the partnership between USAID initiative and the government of Rwanda in malaria eradication. Herein, the study elucidates the needs and tools used in concluding partnerships between USAID and the Government of Rwanda. The general objective that guided this study is to analyze the roles of USAID in malaria eradication from 2015 to 2018 in Kicukiro District. Specific Objectives are:

- i. To establish the role of USAID needs identification on malaria eradication in Kicukiro District
- ii. To ascertain the role of USAID intervention tools on malaria eradication in Kicukiro District
- iii. To determine the role of USAID requisite actions on malaria eradication in Kicukiro District

## **ii. Theoretical Literature**

This work is a golden opportunity for the researcher to put in practice the knowledge he acquired in theory. Therefore, this research improves the researcher's knowledge in conducting a research paper and finds solutions to identified problems on malaria eradication at the national level in general and in Kicukiro District in particular.

For policy makers of the Government of Rwanda, it is of great importance in formulating a flexible and reasonable cooperation environment system of regulations of partnership towards malaria eradication in Rwanda. For USAID managers, the study findings will help to appreciate their role in malaria eradication in Rwanda. The study also will show more areas as challenges and opportunities for their increased intervention.

For scholars in international relations and diplomacy, this study will help to understand the establishment of USAID in the eradication of malaria by evaluating different initiatives, policies and strategies elaborated for an efficient relationship between the GoR and USAID.

There were four Limitations: sample size, sites location, participants' disappointment, and USAID area of operations. The representativeness and geographical description of Kicukiro District limit valid conclusions for the study aim and hypothesis. Therefore, the results will be assumed for generalization over the whole country.

### **Needs identification on malaria eradication in Rwanda**

From 2005 to 2011, Rwanda achieved significant reductions in the burden of malaria through the successful implementation and scale-up of malaria control interventions. In a survey conducted in 2005, "malaria was the leading cause of morbidity of children under five years. In 2008, malaria was the third cause of morbidity, and by 2012 it dropped further to the fourth cause of morbidity in under-five years children."

According to data provided by the Rwanda HMIS, "overall malaria incidence declined 86 percent between 2005 and 2011, outpatient malaria cases declined 87 percent, inpatient malaria deaths declined 74 percent, and malaria test positivity rate declined 71 percent". According to the 2010 Rwanda Demographic and Health Survey (DHS), "malaria prevalence decreased from 2.6% in 2008 to 1.4% in 2010 in children less than five years of age. More than 95% of total reported malaria cases are laboratory confirmed" (DHS 2014-2015).

From 2012 to 2016, however, malaria incidence increased every year in Rwanda from 48 per 1,000 population in 2012 to 403 per 1,000 in 2016. Rwanda saw more than an eight-fold increase in reported malaria cases, from 564,407 in 2012 to 4,794,778 in 2016. Increases in malaria cases were observed in all 30 districts. Ten districts, primarily in East and South Provinces, had the largest increases in malaria cases. The number of cases increased five-fold in East Province (from 356,736 in 2012 to 1.7 million in 2016), and 13-fold in South Province (from 132,108 in 2012 to nearly 1.8 million in 2016) (Rwanda: NMCP, 2008).

An increase in malaria-related deaths was also reported from 419 deaths in 2013 to 715 deaths in 2016 but the overall case fatality rate was reported to decrease from 1.8 percent to 1.5 percent during the same period. Additionally, the DHS 2014-2015 revealed an increase of malaria prevalence among children less than five years of age (from 1.4 percent in 2010 to 2.2 percent) and stable prevalence among women aged 15-49 years (from 0.7 percent in 2010 to 0.6 percent).

The Malaria Indicator Survey (MIS) 2017 confirmed the increase in malaria with prevalence (by microscopy) rising to 7.2 percent among children less than five years of age (compared with 2.2 percent in the DHS 2014-2015). The MIS 2017, which also provided the first set of prevalence estimates for other age groups, yielded a prevalence of 11.2 percent among children 5–14 years of age and 5.4 percent among those  $\geq 15$  years (MIS, 2017).

From 2016 to 2017, malaria cases in Rwanda stabilized, with 4,746,958 confirmed cases reported in 2017, minimally decreased from 4,794,778 cases in 2016. National incidence remained stable with 401 cases per 1,000 population in 2017 compared with 403 in 2016. Although cases rose slightly in East (up 14 percent) and South (up 1 percent) Provinces, case declines were noted in North, West, and Kigali Provinces (PMI, 2018). In all, 17 of 30 (57 percent) districts saw malaria cases decline from 2016 to 2017. Severe cases and deaths also declined with severe malaria incidence decreased from 39.0 per 10,000 cases in 2016 to 24.5 per 10,000 cases in 2017, and malaria-related deaths decreasing from 715 in 2016 to 376 in 2017, indicating strong case management (PMI, 2018).

### **Intervention tools on malaria eradication in Rwanda**

Rwanda expanded community-based treatment of malaria in September 2016 to include children more than five years of age and adults, and in November 2016, the GoR granted free malaria diagnosis and treatment to the most economically vulnerable populations (Ubudehe 1 and 2). With these expansions of community management of malaria, by early 2017, community health workers (CHWs) accounted for 56 percent of all malaria diagnosis treatment in Rwanda (Rwanda: NMCP 2008).

In late 2016 and early 2017, the GoR distributed more than five million insecticide treated Mosquitos (ITN) through a mass distribution campaign, thereby increasing the proportion of the population with access to an ITN from 64 percent (DHS 2014–2015) to 72 percent (MIS 2017).

IRS was implemented with an organophosphate insecticide beginning in September 2016 to pre-empt resistance to carbamate insecticides, and spray operations were expanded from three to five districts. Malaria & Other Parasitic Diseases Division (MOPDD) has engaged with other governmental sectors such as the Ministry of Agriculture to address concerns of malaria increase potentially related to environmental changes, and irrigation and farming practices (DHS 2014 -2015; MIS 2017).

With continued increases in malaria, a further situational analysis in 2017 led to a revision of the Contingency Plan. During that situational analysis, it was noted that malaria has been increasing in the eastern African region. In addition, experts hypothesized that a potential contributor to the increase in cases was the government initiative to convert marshlands into rice fields to improve food security and create economic opportunities for small farmers. Areas of expanded rice cultivation were noted to map geographically and temporally with areas experiencing increasing malaria burden. “Although this finding was suggestive of a correlation of expansion of rice cultivation with increased malaria cases, causative association could not be established” (PMI, 2018).

### **Requisite actions on Malaria eradication in Rwanda**

The MOPDD, in collaboration with RBM partnership to end malaria (RBM), the World Health Organization (WHO), Global Fund, PMI, and other partners, developed the 2013-2018 Malaria Strategic Plan (MSP) in 2012, and revised it in March 2017 as the Extended MSP 2013-2020. The original MSP addressed challenges and gaps identified in a Malaria Program Review completed in March 2011 and incorporated recommendations from a malaria pre-elimination forum that took place in September 2012.

The Malaria Mid-Term Review, undertaken in September 2016, provided a detailed evaluation of achievements of the Rwanda malaria control program, identified enabling factors in terms of strategies/activities, and described gaps between planning and implementation. These included the recommendation to review the applicability of pre-elimination strategy in line with WHO guidance, strengthened the supply chain, maintained the current level of performance of the HMIS for effective malaria surveillance, and developed a structured operational research agenda. The Extended MSP was developed in 2017 through consultations with health service providers at all levels of the healthcare system and development partners, drawing on the lessons learned and recommendations from the Malaria Mid-Term Review. Included in the extended plan was a determination to refocus malaria resources from pre-elimination activities to enhanced prevention and treatment efforts for malaria control (PMI, 2019).

Under the strategic plans, the MOPDD assumes the lead coordination role and takes responsibility for the decentralization of malaria control and prevention activities throughout the country. The MOPDD coordinates the

contributions of all health partners, donors, and private sector stakeholders (NMCP, 2008). The vision of Rwanda's 2013-2020 Extended MSP is to be free from malaria as a way to contribute to socio-economic development. The mission of the national malaria control program is "to contribute to socio-economic development by strengthening and implementing appropriate interventions and quality health delivery services in partnership with stakeholders." (PMI, 2019).

The strategy's goals and objectives are aligned with three of the GoR's primary strategic plan: Vision 2020, the overarching strategy used to guide long-term development in Rwanda; the National Strategy for Transformation and Prosperity for 2017-2024; and Rwanda's mid-term development plan, which in turn serves as the framework for the national Health Sector Strategic Plan IV for 2018-2024. The MSP also builds on strategies contained in the WHO Global Technical Strategy for Malaria 2016-2030. The GoR is currently working on a revised national strategy for vision 2050 (PMI, 2019).

The MSP focuses on prevention and treatment of malaria and strengthening surveillance, evaluation, and program management and coordination. It addresses gaps observed in the implementation of Rwanda's previous strategies, and provides detailed approaches for achieving malaria-related results and targets. "The plan emphasizes the guiding principles of decentralization, equity, and accessibility of services, partnership with multi-sectorial approach, and integration of activities, program ownership, and evidence-based interventions" (PMI, 2019).

### **The Contribution of USAID in malaria eradication in Rwanda**

USAID is the US global development network, advocating for change and connecting partners around the world with the US government through knowledge, experience and resources to help people build a better life. In Rwanda, there have been some gains from the recent cooperation after the 1994 Genocide against Tutsis. Rwanda's post war and nation building priorities dovetail, fit together or merge perfectly with the very concerns of USAID and the expertise it has to offer.

The bulk of USAID's contribution in Rwanda between 1994 and 2001 aimed at helping the government to implement its emergency reintegration and reconstruction program covering areas of recovery for capacity building of institutions; democratization; response to the relief of basic socio-economic needs and the collective response to the intense demands posed by the repatriation and integration of more than two million refugees.

Therein, efforts are focused on the consolidation of gains and expansion of the progress achieved. Notably, USAID has boosted GoR's capacity in key areas such as strategic planning, statistical management, Aid management, Malaria eradication, and coordination system poverty observatory. USAID is working with Rwandans as they reduce poverty, create jobs, improve opportunities for women and conserve the environment. As Rwandans develop local capacity to take on their country's developmental challenges, the assistance of USAID in Rwanda focuses around the five major practice areas namely: Democratic governance, Poverty reduction, crisis prevention and recovery, energy and environment, HIV/AIDS, and Malaria eradication. As Rwandans develop local capacity to take on their country's developmental challenges, they draw on the people of USAID and wide range of partners (USAID, 2018).

The study assumes that the GoR, IOs and the community health centers cooperate very well to improve the health program performance that eradicate malaria, since projects are initiated basing on the needs of communities. The importance of the project to individuals where beneficiaries are able to receive mosquito nets, ease blood smear tests, and initiate personal investment plans for the prevention of malaria, and the ability to take the family members to health services. The USAID contributes to the fight against malaria in Rwanda through effective malaria eradication project implementation in Kicukiro District.

### **iii. Methodology**

This research is a descriptive case study, with mixed-method analysis: qualitative and quantitative. The investigators adopted relevant references and USAID Rwanda as the choice of study provided the prevalence of malaria in the general population in Rwanda, and the extended role of USAID Rwanda in the fight against malaria in Rwanda. The case study was conducted in the District of Kicukiro in the City of Kigali.

This research is first based on a descriptive survey collecting data from groups involved in malaria eradication in Kicukiro District, This study provides understanding of how and why USAID and Kicukiro communities perform well in malaria eradication and the surveyed population gives suggestions intended to improve health service delivery in Kicukiro District.

The District of Kicukiro is one among three Districts that constitute the City of Kigali. It is limited by Gasabo District in the North, Nyarugenge District in West, Bugesera District in the South and Rwamagana District in East.

Kicukiro District has 10 sectors, 41 cells and 333 villages with a population of 318,564 people and covers a surface of 167km<sup>2</sup>. Those 10 sectors are: Kanombe, Nyarugunga, Gahanga, Gatenga, Gikondo, Kagarama, Kicukiro, Kigarama, Masaka, and Niboye” (NISR, 2012). This study on “The role of international organizations to malaria eradication in Rwanda: A case study of USAID initiative in the District of Kicukiro” was conducted within all sectors of Kicukiro district, specifically in the 10 health centers that are in the district namely: Bethasaida, Busanza, Gahanga, Gatenga, Gikondo, Kabeza, Kabuga, Kicukiro, Masaka, and Nyarugunga.

The data were collected from Kicukiro District of the City of Kigali. The target population for surveyed sectors is 320 people in total in 2018. Thus, a sample of 56 health care workers were selected for the study.

Researchers select a given number of members or cases from the accessible population. This subgroup is carefully selected so as to be representative of the whole population with the relevant characteristics. A sample is therefore “a smaller group obtained from the accessible population. Each member or case in the sample is referred to as a subject. Sometimes, the terms “respondent” or “interviewees” are used” (O. Mugenda, AG. Mugenda, 2003: 9).

The respondents include mainly health care workers in 10 health centers, representatives of USAID and Rwanda government representatives.

**Table 1: Distribution of the target population according to selected administrative Sectors**

N <sup>0</sup>	Health Centers Location	Administrative Sectors	Target population
1	Bethasaida	Kicukiro	26
2	Busanza	Kanombe	37
3	Gahanga	Gahanga	36
4	Gatenga	Gatenga	25
5	Gikondo	Gikondo	28
6	Kabeza	Kagarama	24
7	Kabuga	Kigarama	34
8	Kicukiro	Niboye	35
9	Masaka	Masaka	37
10	Nyarugunga	Nyarugunga	38
	<b>Total</b>		<b>320</b>

**Source:** Ministry of Health, Rwanda (April 2020)

Following the sequence of methodological steps was needed to develop instruments with which we collected the necessary information. In this research, instruments that were used are: questionnaires administered to sampled sectors, and health care workers, and interview guide for USAID and GoR representatives. Interview and observations checklist will also be applied to this research. Primary data will be collected from the selected population with the use of questionnaire and interview guide.

The questionnaire is divided into two sections: the first section underlying personal profile of respondents and the second section assessing the current situation on the role of USAID in malaria eradication in Kicukiro District like increasing the government commitment to malaria eradication, increase of access on health services, access to mosquito nets, insecticides, awareness campaigns and factors influencing Malaria Eradication such as Regulations and policies, Resolutions and agreements, USAID visits to healthcare centers, and Training of Healthcare workers from 2015 to 2018.

Secondary data will be collected from the observation check lists as applied to all levels of aspects of activities that our research intend to study in depth. The interviews will be conducted with the use of interview guide. The questionnaire will also be used while interviewing with open-ended responses that are rated according to the views of respondents. Interviewees will be divided into two categories: Government and USAID representatives.

research. At the level of the health centers, questionnaires were distributed to the selected sample with assistance of the health centers Directors to distribute questionnaires to respondents and forty minutes will be given to respondents to fill in the questionnaire after clarifications had been given.

This research was conducted ethically; the researcher required consent from the respondents to collect data. Participation in this study was voluntary; no respondent was forced to participate in the study against his or her will. We hope respondents will be cooperative and more likely give valid and reliable responses. As a researcher, I had also an ethical responsibility to protect the privacy of persons who supplied data. Confidentiality and anonymity was guaranteed to respondents.

#### iv. Results

##### Questionnaire response rate

Findings from the respondents, all participants responded to questions with 100% response rate.

The response rate of the study is indicated in Table 2.

**Table 2: Distribution of respondents according to their sex and age**

N <sup>o</sup>	Results	Frequency	Percentage (%)
	Respondents	56	100.00
	Non-Respondents	0	0.00
	<b>Total</b>	<b>56</b>	<b>100</b>

Source: Primary data (April 2022)

##### Demographic characteristics of Respondents

The demographic characteristics of respondents include sex, age, marital status, level of education, and occupation. Additional information consists of times of malaria infection consultations, number of total consultations, and number of visits of USAID agents to respondent's facility. Table 3 makes a distribution of respondents according to their sex and age.

**Table 3: Demographic characteristics of respondents**

N <sup>o</sup>	Gender/Sex	Frequency	Percentage (%)
<b>1</b>	<b>Gender</b>		
	Male	8	14.3
	Female	48	85.7
	<b>Total</b>	<b>56</b>	<b>100</b>
<b>2</b>	<b>Group-age</b>		
	20-35	39	69.6
	36-50	17	30.4
	<b>Total</b>	<b>56</b>	<b>100</b>
<b>3</b>	<b>Marital Status</b>		
	Single	12	21.4
	Married	44	78.6
	<b>Total</b>	<b>56</b>	<b>100</b>
<b>4</b>	<b>Level of education</b>		
	No formal	0	0
	Primary	0	0
	Secondary	40	71.4
	University	16	28.6
	<b>Total</b>	<b>56</b>	<b>100</b>
<b>5</b>	<b>Occupation / Profession</b>		
	Receptionist	6	6
	Lab technician	9	9
	Nurse	31	31
	Manager	10	10
	<b>Total</b>	<b>56</b>	<b>100</b>

Source: Primary data (April 2022)

According to table 3, women were predominant in the sample selection of respondents with 85.7%. The majority of the respondents 85.7% were female while 14.3% were male. This implies that there was gender disparity among the primary health care workers in Kicukiro District. The study also sought to establish the age distribution of the respondents. The respondents' age helped the researcher to determine the age level of the healthcare workers included in the sample in surveyed sectors in Kicukiro District.

Age is an important demographic characteristic; it plays a big role in considering the professional experience and groups categories. Age affects the performance of projects both positively and negatively. In any field that involves serious decision-making; age is the main issue to be considered when establishing professional experience.

From the information given in the table 4; 69.6% of respondents were between 20-35 years old, 30.4% of them were between 36-50 years old, and none among respondents was above 50 years old.

Table 4 provides also the distribution of respondents according to their marital status. The issue of marital status was considered during the collection of primary data. It was put under consideration mainly because the performance of the project is to some extent affected by the marital status of the professional healthcare worker. According to table 3, among 56 respondents 21% were single while 78.6% among them are married. The same table reveals that none among respondents was either widow or widower. The level of education of respondents was considered to be important to the researcher because different levels of education differ in the quality of information they can provide (Table 4). Four options were proposed (no formal, primary, secondary and university level of education) but it revealed that respondents were only distributed among two proposed levels (secondary education with 71.4% and University level of education represented by 28.6% of respondents) while no respondent could be found neither in the formal nor in primary education.

The occupation issue was also very important to consider by the researcher because different professional positions contribute differently to malaria eradication in Kicukiro District. Four options were proposed (receptionist, lab technician, nurse and manager) and table 4 summarizes the professional occupation of respondents as follows: the majority of respondents at the rate of 55.5% are nurses, 17.8% are managers, 16% are lab technicians and 10.7% are receptionists.

#### Perception on the impact of malaria eradication

Data indicated that all health care workers are mature and included in active population with working force in Kicukiro District. They are aware of the role of USAID in malaria eradication from 2015 to 2018 in Kicukiro District, and can easily assess the contribution of IOs to the fight against malaria in Rwanda (Table 5).

The findings elucidated the perception of respondents about the impact of the frequencies of malaria infection consultations, the number of total consultation and the number of visits of USAID agents to the facilities, and their contributions to the fight against malaria (table 5).

The knowledge about the perception of respondents about malaria infection, consultation and the number of visits of USAID agents to respondents' facility by the researcher was also crucial. Table 5 indicate cases of malaria infection, 62.5% of respondents recognize between 201 and 300 cases.

In the same perspective 6 times of visit have been rated by 60% of respondents, 44.6% among them were for 801 and 1000 cases of consultation, 35.7% of the respondents identified between 1001 and 1200 cases of consultation, while 17.9% among them supported the total number of consultation included between 601 and 800 and 1.8% of respondents recognized the total number of consultation included between 400 and 600. USAID agents visited respondents' facility 2 times among 10 sites at the rate of 20% and they did it once at the rate of 10% for each of respondents' facility.

**Table 4: Impact of supports on malaria eradication**

Impact of supports on malaria eradication	SA		N		A		D		SD		Mean	Sd Dev
	N	%	N	%	N	%	N	%	N	%		
Do awareness campaigns support the community in the fight against malaria	41	73.2	5	10	10	17.9	0	0	0	0	11.2	7.68
Does the number of consultations for malaria contribute to the eradication of malaria	12	21.4	7	12.5	37	66	0	0	0	0	11.2	6.84
Does the number of visits of USAID agents to healthcare centers contribute to the fight against malaria	41	73.2	5	8.93	10	17.7	0	0	0	0	11.2	7.68



Does consulting the community contribute to the fight against malaria	52	97.8	1	0.6	3	1.7	0	0	0	0	11.2	10.21
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Source: Primary data (April 2022)

The contributions to the fight against malaria from the facilities activities were shown with a great impact of the visits of the USAID agents to the facilities and interventions of the communities (Table 4) compared to the number of the consultations of patients to the facilities (Table 5).

**Table 5 : Perception of respondents about malaria infection, consultation and number of visits of USAID agents to respondents' facility**

N <sup>0</sup>	Perception of respondents about malaria infection, consultation and number of visits of USAID agents to respondents' facility	Frequency	Percentage (%)
1	<b>Times of malaria infection consultations</b>		
	[100-200]	1	1.8
	[201-300]	35	62.5
	[301-400]	20	35.7
	<b>Total</b>	<b>56</b>	<b>100</b>
2	<b>Number of total consultation</b>		
	[400-600]	1	1.8
	[601-800]	10	17.9
	[801-1000]	25	44.6
	[1001-1200]	20	35.7
	<b>Total</b>	<b>56</b>	<b>100</b>
3	<b>Number of visits of USAID agents to respondent's facility (10 sites)</b>		
	12 Visits	1	10
	11 Visits	1	10
	10 Visits	6	60
	8 Visits	2	20
	<b>Total</b>	<b>10</b>	<b>100</b>

Source: Primary data (April 2022)

### The initiatives of USAID to the fight against malaria

This section addresses the contributions of USAID to the fight against malaria in Rwanda. It describes the good outcomes of the partnership between USAID initiative and the Government of Rwanda; highlights the needs, tools and requirements for the conclusion of the partnership between USAID and Rwanda Government; and identifies the main challenges encountered by USAID in malaria eradication programs implementation process in Rwanda (Table 6).

**Table 6: Initiatives of USAID to the fight against malaria**

Initiatives of USAID to the fight against malaria	SA		A		D		SD		Mean	Sd Dev		
	N	%	N	%	N	%	N	%				
Does negotiations increase the role of USAID to eradicate malaria	41	73.2	5	8.9	10	17.9	0	0	0	0	11.2	7.68
Do resolutions and agreements increase the role of USAID in the fight against malaria	38	67.9	7	12.5	11	19.64	0	0	0	0	11.2	7.02

Do USAID intervene in the low rate of malaria infection	48	85.7	2	3.57	6	10.7	0	0	0	0	9.26
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**Source:** Primary data (April 2022)

### The contributions of USAID to Malaria Eradication in Rwanda

This sub section analyses the perceptions of the respondents on the contributions of USAID to malaria eradication by identifying different areas of USAID operations in malaria eradication in Kicukiro District (Table 7). According to table 7, all respondents at the rate of 100% are aware about the existence of USAID as an International organization, and that they belong to groups whose projects are directly supported by USAID and they all know different USAID areas of operation for malaria eradication in Kicukiro District. Table 6 indicates the importance of USAID operations in malaria eradication in Kicukiro District with 85.7% of respondents agreeing to the impact of USAID Intervention in the low rate of malaria infection.

**Table 6: The contributions of USAID to malaria eradication in Kicukiro District**

N <sup>0</sup>	The contribution of USAID to malaria eradication in Kicukiro District	Yes		No	
		Frequency	Percentage (%)	Frequency	Percentage (%)
1	The knowledge of respondents about the existence of USAID International organization	56	100	0	0
2	Belongingness of respondents to groups whose project are directly supported by USAID	56	100	0	0
3	Opinions of respondents about their awareness about USAID areas of operations for malaria eradication in Kicukiro District	56	100	0	0
	<b>Total</b>	<b>56</b>	<b>100</b>	<b>0</b>	<b>0</b>

**Source:** Primary data (April 2022)

Moreover, 30.4% of respondents perceived the importance of USAID operations on malaria eradication in Kicukiro District through the reduction of malaria cases, 21.4% of the respondents talked about the knowledge about malaria treatment, 17.9% among them support the provision of mosquito nets, 16.07% were for self-protection for malaria infection, and 14.3% indicated the knowledge of malaria prevention (Table 8).

**Table 8: The importance of USAID operations on malaria eradication in Kicukiro District**

N <sup>0</sup>	Opinions of respondents about the importance of USAID operations on malaria eradication in Kicukiro District	Frequency	Percentage (%)
1	Reduction of malaria cases	17	30.4
2	Knowledge of malaria treatment	12	21.4
3	Provision of mosquito nets	10	17.9
4	Self-protection for malaria infection	9	16.07
5	Knowledge of malaria prevention	8	14.3
	<b>Total</b>	<b>56</b>	<b>100</b>

**Source:** Primary data (April 2022)

### Outcomes of the partnerships between USAID initiative and the Government of Rwanda

This section describes the outcomes of the partnership between USAID initiative and the Government of Rwanda. It is concerned with the cooperation of Government of Rwanda with USAID, interventions for Kicukiro health facilities and individual citizens beneficiaries in eradicating malaria disease, the achievements of USAID in malaria eradication in Kicukiro District between 2015 and 2018, and the contribution of Kicukiro community to malaria eradication as an outcome of USAID initiated Project. Table 9 indicates USAID interventions for Kicukiro groups and individual citizens beneficiaries in eradicating malaria disease.

**Table 9: USAID interventions for Kicukiro groups and individual citizens beneficiaries in eradicating malaria disease**

N <sup>0</sup>	Opinion of respondents about USAID interventions for Kicukiro groups and individual citizens beneficiaries in eradicating malaria disease	Frequency	Percentage (%)
1	Reduction of malaria cases	15	26.8
2	Training of healthcare workers	13	23.2
3	Healthcare system improvement	11	19.6
4	Provision of mosquito net	9	16.1
5	Community support	8	14.3
	<b>Total</b>	<b>56</b>	<b>100</b>

Source: Primary data (April 2022)

According to table 9, the USAID interventions for Kicukiro groups and individual citizens beneficiaries in eradicating malaria disease can be perceived in reduction of malaria cases as it was revealed by 26.8% of the respondents, 23.2% of them supported training of healthcare workers, 19.6% were for healthcare system improvement, 16.1% indicated the provision of mosquito nets while 14.3% put emphasis on community support. In addition, the majority of respondents; 89% and 91% as shown on table 10, reiterates the positive impact of malaria prevention and lifestyle improvement measures in the fight against malaria.

**Table 10 Positive impact of measures for malaria prevention**

Positive impact of measures for malaria prevention	SA		A		D		SD		Mean	Sd Dev		
	N	%	N	%	N	%	N	%				
Does the awareness of malaria prevention support in the fight against malaria	51	91	1	1.8	4	7.1	0	0	0	0	11.2	9.98
Does the lifestyle improvement support in the fight against malaria	50	89.3	1	1.8	5	8.9	0	0	0	0	11.2	9.74

Source: Primary data (April 2022)

Among achievements in malaria eradication in Kicukiro District between 2015 and 2018 as they have been provided by interviewees include: malaria prevalence reduction, mosquito net distribution, public awareness on malaria infection, and support of malaria treating teams. According to table 11, among the achievements of USAID in malaria eradication in Kicukiro District between 2015 and 2018 the awareness of malaria prevention is ranked the first by respondents at the rate of 26.8%, the lifestyle improvement at the rate of 23.2%, tuberculosis prevention was supported by 16.1% of respondents, awareness of malaria infection and HIV prevention indicated by 8.9%, malaria guidelines development and malaria prevention in pregnant women confirmed by 7.1% while malaria under-5 mortality reduction was revealed by 1.8% of the respondents.

**Table 11: Achievements of USAID in malaria eradication in Kicukiro District between 2015 and 2018**

<b>N<sup>0</sup></b>	<b>Opinion of respondents about achievements of USAID in malaria eradication in Kicukiro District between 2015 and 2018</b>	<b>Frequency</b>	<b>Percentage (%)</b>
1	Awareness of malaria prevention	15	<b>26.8</b>
2	Lifestyle improvement	13	<b>23.2</b>
3	Tuberculosis prevention	9	<b>16.1</b>
4	Awareness of malaria infection	5	<b>8.9</b>
5	HIV prevention	5	<b>8.9</b>
6	Malaria guidelines development	4	<b>7.1</b>
7	Malaria prevention in pregnant women	4	<b>7.1</b>
8	Malaria under-5 mortality reduction	1	<b>1.8</b>
	<b>Total</b>	<b>56</b>	<b>100</b>

**Source:** Primary data (April 2022)

**Table 12: The contribution of Kicukiro community to malaria eradication as an outcome of USAID initiated Project**

<b>N<sup>0</sup></b>	<b>Opinions of respondents about the contribution of Kicukiro community to malaria eradication as an outcome of USAID initiated Project</b>	<b>Frequency</b>	<b>Percentage (%)</b>
1	Community education	17	<b>30.1</b>
2	Execution of USAID programs	15	<b>26.8</b>
3	Sleeping in mosquito nets	11	<b>19.7</b>
4	Malaria treatment by community health workers	6	<b>10.7</b>
5	Early consult for malaria suspicion	5	<b>8.9</b>
6	Implementation of USAID workshop recommendations	2	<b>3.6</b>
	<b>Total</b>	<b>56</b>	<b>100</b>

**Source:** Primary data (April 2022)

Respondents revealed the contribution of Kicukiro community to malaria eradication as an outcome of USAID initiated project through community education (30.1%), execution of USAID programs (26.8%), sleeping in mosquito net (19.7%), and malaria treatment by community health workers (10.7%), Early consult for malaria suspicion (8.9%), and 3.6% with implementation of USAID workshop recommendations (Table 12).

#### **Community support to malaria eradication programs initiated and promoted by USAID**

This section covers Kicukiro community support of programs initiated and promoted by USAID for malaria eradication, the successful utilization of USAID support by group members, the involvement of Kicukiro community in USAID malaria eradication programs and planning process, attendance of beneficiaries of USAID organized workshops, the contribution of respondents with viable ideas to USAID programs that can help in malaria eradication, the number of workshops organized by USAID for Kicukiro individual citizens for malaria eradication purpose, the methods used by USAID in choosing communities to be supported by USAID, mechanisms used by USAID in involving local communities in its programs, sources of USAID assistance given to local communities,

different projects supported by USAID for group of beneficiaries, and the extent to which projects supported by USAID help groups and individual citizens in Kicukiro District.

Concerning the community support to malaria eradication programs initiated and promoted by USAID, respondents identified the community education, execution of USAID programs, sleeping in mosquito nets, malaria treatment by community health workers, early consult for malaria suspicion, and practice of USAID workshop recommendations (Table 13). It has been revealed by all respondents at 100% that the whole community support malaria eradication programs initiated and promoted by USAID in Kicukiro District through adherence to USAID projects at 82.1% and through participation to USAID organized workshops at the rate of 17.9% (Table 13).

The successful utilization of USAID support by group members was ensured through the creation of the supervision team at the rate of 30.3%, feedback report from fields and the use of mosquito nets reported by 14.3%, treatment of all malaria patients supported by 10.7% of the respondents, outputs measurements at the rate of 8.9%, reduction of malaria cases and observation reported by 5.4% and 10.7% who recognized no recorded success. In addition to that, 89.3% of respondents argued against the involvement of Kicukiro community in USAID malaria eradication programs and planning process supported by their financial limitation while only 10.7% among them agreed with the statement based on their management positions and their participation to USAID management meeting (Table 13).

**Table 13: The successful utilization of USAID support by group members**

N <sup>0</sup>	Opinions of respondents about the successful utilization of USAID support by group members	Frequency	Percentage (%)
1	Creation of supervision team	17	<b>30.3</b>
2	Feedback report from fields	8	<b>14.3</b>
3	Use of mosquito nets	8	<b>14.3</b>
4	Treatment of all malaria patients	6	<b>10.7</b>
8	No recorded success	6	<b>10.7</b>
5	Outputs measurements	5	<b>8.9</b>
6	Reduction of malaria cases	3	<b>5.4</b>
7	Observation	3	<b>5.4</b>
	<b>Total</b>	<b>56</b>	<b>100</b>

**Source:** Primary data (April 2022)

Table 14 indicates the number of workshops organized by USAID for Kicukiro individual citizens for malaria eradication purpose. At the rate of 12.5%, respondents attended USAID organized workshops and contributed with some viable ideas to USAID programs that can help in malaria eradication while 87.5% of them didn't attend such organized workshops. Interviewees perceived the use of USAID support for malaria eradication through distribution of mosquito nets, training of healthcare workers, and provision of malaria medications.

**Table 14: Number of workshops organized by USAID for Kicukiro individual citizens for malaria eradication purpose**

N <sup>0</sup>	Opinions of respondents about the number of workshops organized by USAID for Kicukiro individual citizens for malaria eradication purpose	Frequency	Percentage (%)
1	None	46	<b>80.1</b>
2	Ten times	6	<b>10.7</b>
3	Eight times	2	<b>3.6</b>
4	Eleven times	1	<b>1.8</b>
5	Twelve times	1	<b>1.8</b>
	<b>Total</b>	<b>56</b>	<b>100</b>

**Source:** Primary data (April 2022)

Respondents at the rate of 80.1% argued against the organization of workshops by USAID, 10.7% supported that USAID organized workshops ten times, 3.6% revealed that the USAID organized workshops eight times while 1.8% were for eleven and twelve times. Therefore, 80.1% respondents never participated in USAID workshops, 10.7% among them have participated ten times, 3.6% of the respondents participated eight times while 1.8% either participated eleven or twelve times (Table 14).

Respondents highlighted different projects supported by USAID for group of beneficiaries in Kicukiro District at the rate of 53.6% for provision of mosquito nets, by providing malaria medications rated by 16.1%, by supplying malaria equipment's at the rate of 10.7%, malaria diagnosis reagents supported projects confirmed by 8.9%, training of healthcare workers at the rate of 7.14%, while HIV prevention and tuberculosis prevention have been identified by 1.79% (Table 15).

**Table 15: Different projects supported by USAID for group of beneficiaries in Kicukiro**

<b>District</b>			
<b>N<sup>0</sup></b>	<b>Different projects supported by USAID for group of beneficiaries in Kicukiro District</b>	<b>Frequency</b>	<b>Percentage (%)</b>
1	Provision of mosquito nets	30	<b>53.6</b>
2	Malaria medications	9	<b>16.1</b>
3	Malaria lab equipments	6	<b>10.7</b>
4	Malaria diagnosis reagents	5	<b>8.9</b>
5	Training of healthcare workers	4	<b>7.14</b>
6	HIV prevention	1	<b>1.79</b>
7	Tuberculosis prevention	1	<b>1.79</b>
	<b>Total</b>	<b>56</b>	<b>100</b>

**Source:** Primary data (April 2022)

Table 14 relates the extent to which projects supported by USAID help groups and individual citizens in Kicukiro District.

Moreover, projects supported by USAID help groups of Kicukiro District in the following areas: at the rate 26% in reduction of malaria cases, with the confirmation of 23.2% in training of healthcare workers, as revealed by 19.6% in healthcare system improvement, as supported by 16.1% in provision of mosquito nets and as indicated by 14.3% in community support (Table 16).

**Table 16: The extent to which projects supported by USAID help groups in Kicukiro**

<b>District</b>			
<b>N<sup>0</sup></b>	<b>The extent to which projects supported by USAID help groups in Kicukiro District</b>	<b>Frequency</b>	<b>Percentage (%)</b>
1	Reduction of malaria cases	15	<b>26.8</b>
2	Training of healthcare workers	13	<b>23.2</b>
3	Healthcare system improvement	11	<b>19.6</b>
4	Provision of mosquito net	9	<b>16.1</b>
5	Community support	8	<b>14.3</b>
	<b>Total</b>	<b>56</b>	<b>100</b>

**Source:** Primary data (April 2022)

Different USAID interventions for Kicukiro group and individual citizen beneficiaries in eradicating malaria disease as they have been revealed by interviewees include: reduction of malaria cases, training of healthcare workers, and provision of mosquito nets, healthcare system improvement, and community support. Table 24 shows the extent to which projects supported by USAID help individual citizens in Kicukiro District. From results indicated, projects supported by USAID help individual citizens of Kicukiro District in the following areas: 30.4% in reduction of malaria cases, by 19.6% in knowledge of malaria treatment, at the rate of 14.3% in knowledge of malaria prevention, at the rate of 17.9% in provision of mosquito nets, and as highlighted by 10.7% in self-protection for malaria infection. The following section underlies the needs, tools and requirements for the conclusion of the partnership between International Organizations and Rwanda Government (Table 17).

**Table 17: The extent to which projects supported by USAID help individual citizens in Kicukiro District**

N <sup>0</sup>	The extent to which projects supported by USAID help individual citizens in Kicukiro District	Frequency	Percentage (%)
1	Reduction of malaria cases	17	<b>30.4</b>
2	Knowledge of malaria treatment	11	<b>19.6</b>
3	Provision of mosquito nets	10	<b>17.9</b>
4	Knowledge of malaria prevention	8	<b>14.3</b>
5	Self-protection for malaria infection	6	<b>10.7</b>
	<b>Total</b>	<b>56</b>	<b>100</b>

**Source:** Primary data (April 2022)

#### **Needs, tools and requirements for the conclusion of the partnership between International Organizations and Rwanda Government**

This section covers the needs for the conclusion of the partnership between International Organizations and Rwanda Government, different tools used for the conclusion of the partnership between International Organizations and Rwanda Government, and requirements for the conclusion of the partnership between International Organizations and Rwanda Government as they have been identified by respondents. Table 18 details out the needs for the conclusion of the partnership between International Organizations and Rwanda Government.

**Table 18: Needs for the conclusion of the partnership between International Organizations and Rwanda Government**

N <sup>0</sup>	Needs for the conclusion of the partnership between International Organizations and Rwanda Government	Frequency	Percentage (%)
1	Support the population	42	<b>75</b>
2	Support the government	12	<b>21.4</b>
3	Organizations specific agenda	2	<b>3.6</b>
	<b>Total</b>	<b>56</b>	<b>100</b>

**Source:** Primary data (April 2022)

The conclusion of the partnership between International Organizations and Rwanda Government is needed for the following reasons: give support to the population as rated by 75% of the respondents and support to the government identified by 21.4% and organization of specific agenda resulted from 3.6% of the respondents (Table 18).

Among different approaches used for the conclusion of the partnership between International Organizations and Rwanda Government by respondents; consultations meetings have been rated by respondents at the rate of 58.9% while respondents ignore the specific tools used as revealed by 41.1% (Table 19).

**Table 1: Tools for the conclusion of the partnership between International Organizations and Rwanda Government**

N <sup>0</sup>	Tools for the conclusion of the partnership between International Organizations and Rwanda Government	Frequency	Percentage (%)
1	Consultations meetings	33	<b>58.9</b>
2	No Consultation meeting	23	<b>41.1</b>
	<b>Total</b>	<b>56</b>	<b>100</b>
1	Negotiation	17	<b>52.1</b>
2	Resolutions & Agreement	16	<b>47.9</b>

3	Community support	31	96.4
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**Source:** Primary data (April 2022)

Concerning the requirements for the conclusion of the partnership between International Organizations and Rwanda Government, all respondents at the rate of 100% disagreed with the statement thus; none among respondents was able to identify with certainty the required tools for the conclusion of the partnership between International Organizations and Rwanda Government. Approximately, 52% of the respondents knew the intervention of negotiations, 48% thought there were implications of resolutions and agreements in the conclusion of partnership between USAID and GoR. In contrast, 96% of respondents believed that consultations meetings were needed with the support of community in concluding the partnership.

### Challenges faced by IOs in malaria eradication in Rwanda and available solutions

This section covers challenges faced by USAID in malaria eradication in Kicukiro District, and solutions to overcome those challenges.

The following challenges faced by IOs in malaria eradication in Rwanda have been identified by respondents: linking USAID with the population at the rate of 26.9%, using community health workers in malaria has been identified by 23.1%, campaign for malaria prevention supported by 19.2% of respondents, reporting outcomes of malaria treatment rated by 13.5% of respondents and mass distribution of mosquito nets revealed by 5.8% of respondents (Table 20).

**Table 20: Challenges faced by IOs in malaria eradication in Rwanda**

N <sup>0</sup>	Challenges faced by IOs in malaria eradication in Rwanda and available solutions	Frequency	Percentage (%)
1	Linking USAID with the population	14	26.9
2	Using community health workers in malaria	12	23.1
3	Campaign for malaria prevention	10	19.2
4	Reporting outcomes of malaria treatment	7	13.5
5	Mass distribution of mosquito nets	3	5.8
	<b>Total</b>	<b>56</b>	<b>100</b>

**Source:** Primary data (April 2022)

Among challenges faced by USAID in malaria eradication in Kicukiro District, respondents identified the linking USAID with the population, and effective involvement of community health workers in malaria eradication.

The solutions provided for the challenges faced by USAID in malaria eradication in Kicukiro District, we report: the need for more funding was supported by 54% of respondents, the need for frequent meetings was proposed by 18% of respondents, the need for more training and research on malaria eradication programs have been indicated by 10% while the need of more monitoring and evaluation have been identified by 8% of the respondents. Interviewees provide future plans towards malaria eradication in Kicukiro District through support of malaria treating teams, distribution of mosquito nets, distribution of malaria drugs, and public awareness on malaria infection, distribution of insecticides, and reinforcement of existing programs (Table 21).

**Table 21: Solutions to overcome challenges faced by USAID in malaria eradication in Kicukiro District**

N <sup>0</sup>	Solutions to overcome challenges faced by USAID in malaria eradication in Kicukiro District	Frequency	Percentage (%)
1	Need of more funding	25	54
2	Need of frequent meetings	8	18
3	Need of more trainings	5	10
4	Need of more researches on malaria eradication programs	5	10
5	Need of more monitoring and evaluation	3	8
	<b>Total</b>	<b>56</b>	<b>100</b>

**Source:** Primary data (April 2022)

## v. Discussion

The objectives of the study were to describe the initiative of USAID and the outcomes of the partnership between USAID initiative and the Government of Rwanda in malaria eradication from 2015 to 2018 in Kicukiro District.



In general, respondents highly rated at 100% the knowledge of respondents about the existence of USAID as an International organization, the belongingness of respondents to groups whose projects are directly supported by USAID, and opinions of respondents about their awareness on USAID areas of operations for malaria eradication in Kicukiro District.

Up to 30.4% healthcare workers perceived the importance of USAID operations on malaria eradication in Kicukiro District through the reduction of malaria cases, 21.4% respondents agreed on malaria treatment, 17.9% among them support the provision of mosquito nets, 16.07 agreed on self-protection for malaria infection, while 14.3% were for the knowledge of malaria prevention.

Therefore, the conclusion of the partnership between International Organizations and Rwanda Government is needed for the following reasons: give support to the population and the government, and organization of a specific agenda answering the needs towards the fight against malaria.

It has been revealed that 50% of respondents don't know the extent to which the Government of Rwanda cooperates with IOs such as USAID towards malaria eradication while the USAID interventions for Kicukiro groups and individual citizens beneficiaries in eradicating malaria disease can be perceived in reduction of malaria cases by 26.8% of the respondents, 23.2% of them supporting training of healthcare workers, 19.6% were for healthcare system improvement, 16.1% indicated the provision of mosquito nets, while 14.3% put emphasis on community support.

Negotiations, resolutions and agreements were partly observed in the conclusion of partnership between USAID and GoR; however, the intervention of the community support was mainly the tool that helped to ascertain the goal of the eradication of malaria through the help of the USAID initiative.

Among the achievements of USAID in malaria eradication in Kicukiro District between 2015 and 2018, the awareness of malaria prevention is ranked the first by respondents at the rate of 26.8%, the lifestyle improvement was revealed by 23.2%, tuberculosis prevention was supported by 16.1% of respondents, awareness of malaria infection and HIV prevention indicated by 8.9%, malaria guidelines development and malaria prevention in pregnant women indicated by 7.1% while malaria under-5 mortality reduction was confirmed by 1.8% of the respondents.

Among achievements in malaria eradication in Kicukiro District between 2015 and 2018 as they have been provided by respondents include: malaria prevalence reduction, mosquito net distribution, public awareness on malaria infection, and support of malaria treating teams.

The contribution of Kicukiro community to malaria eradication as an outcome of USAID initiated project is highlighted by 30.1% of respondents for community education, by 26.8% of respondents for the execution of USAID programs, 19.7% supporting the sleeping in mosquito nets, 10.7% indicating malaria treatment by community health workers, 8.9% who confirmed early consult for malaria suspicion and 3.6% were for best practice on the implementation of USAID workshop recommendations.

Respondents revealed the contribution of Kicukiro community to malaria eradication as an outcome of USAID initiated project through community education, execution of USAID programs, sleeping in mosquito net, and malaria treatment by community health workers.

Concerning the community support to malaria eradication programs initiated and promoted by USAID these include: the successful utilization of USAID support by group members, the involvement of Kicukiro community in USAID malaria eradication programs and planning process, attendance of beneficiaries of USAID organized workshops, the contribution of respondents with viable ideas to USAID programs that can help in malaria eradication, the number of workshops organized by USAID for Kicukiro individual citizens for malaria eradication purpose, the methods used by USAID in choosing communities to be supported by USAID, mechanisms used by USAID in involving local communities in its programs, sources of USAID assistance given to local communities, different projects supported by USAID for group of beneficiaries, and the extent to which projects supported by USAID helped groups and individual citizens in Kicukiro District.

A total number of respondents at the rate of 100% revealed that the whole community support malaria eradication programs initiated and promoted by USAID in Kicukiro District; through adherence to USAID projects at the rate of 82.1% and through participation to USAID organized workshops as supported by 17.9%.

Concerning the community support to malaria eradication programs initiated and promoted by USAID, respondents identified the community education, execution of USAID programs, sleeping in mosquito nets, malaria treatment by community health workers, early consult for malaria suspicion, and practice of USAID workshop recommendations.

The successful utilization of USAID support by group members was ensured through the creation of the supervision team at the rate of 30.3%, feedback report from fields and the use of mosquito nets rated at 14.3%, treatment of all malaria patients supported by 10.7% of the respondents, outputs measurements at 8.9%, reduction of malaria cases and observation reported by 5.4% and 10.7% confirmed no recorded success. In addition to that, 89.3% of respondents argued against the involvement of Kicukiro community in USAID malaria eradication programs and planning process supported by their financial limitation while only 10.7% among the respondents agreed with the statement based on their management positions and their participation to USAID management meetings.

At the rate of 12.5%, respondents attended USAID organized workshops and contributed with some viable ideas to USAID programs that can help in malaria eradication while 87.5% didn't attend such organized workshops. Interviewees perceived the utilization of USAID support for malaria eradication through the distribution of mosquito nets, training of healthcare workers, and provision of malaria medications.

Respondents at the rate of 80.1% argued against the organization of workshops by USAID, 10.7% supported that USAID organized workshops ten times, 1.8% were for eleven and twelve times, while 3.6% revealed that the USAID organized workshops eight times. It is from the above discussion that 80.1% respondents have never participated in USAID workshops, 10.7% among them have participated ten times, 3.6% of the respondents participated eight times while 1.8% either participated eleven or twelve times.

All interviewees indicated that the organization of workshops by USAID was regular (twice per year). All respondents at the rate of 100% provided consultation meetings with Government of Rwanda as a single method used in choosing communities to be supported by USAID while all key informants divided these methods into the high prevalence of malaria eradication, organization of trainings for team elite in malaria treatment, and high density of population as different methods used by USAID in choosing communities to be supported by USAID.

Among different mechanisms used by USAID in involving local communities in its programs; government project was supported by 100% of the respondents and organized workshops have been identified by 17.1% of the respondents while interviewees supported that participatory and informative mechanisms are used by USAID in involving local communities in its programs. United States of America government has also been identified by key informants at the rate of 100% as the source of USAID assistance given to local communities.

Respondents highlighted different projects supported by USAID for group of beneficiaries in Kicukiro District at the rate of 53.6% for provision of mosquito nets, by providing malaria medications revealed by 16.1%, by supplying malaria equipment's confirmed by 10.7%, malaria diagnosis reagents supported projects at the rate of 8.9%, and training of healthcare workers agreed on by 7.14%. Information collected from USAID and government representatives and observation check list supplementing data collected from the questionnaire revealed different areas of USAID operations to malaria eradication in Kicukiro District that can be perceived through provision of mosquito nets, training of healthcare workers and malaria medications.

Projects supported by USAID help groups of Kicukiro District in the following areas: at the rate of 26% in reduction of malaria cases, confirmed by 23.2% in training of healthcare workers, ranked at 19.6% in healthcare system improvement, supported by 16.1% in provision of mosquito nets and identified by 14.3% in community support. Different USAID interventions for Kicukiro group and individual citizen beneficiaries in eradicating malaria disease as they have been revealed by interviewees include: reduction of malaria cases, training of healthcare workers, and provision of mosquito nets, healthcare system improvement, and community support.

Research findings revealed that projects supported by USAID helped individual citizens of Kicukiro District in the following areas: at the rate of 30.4% in reduction of malaria cases, indicated by 19.6% in knowledge of malaria treatment, ranked by 14.3% in knowledge of malaria prevention, confirmed by 17.9% in provision of mosquito nets, and supported by 10.7% in self-protection for malaria infection. The following activities were necessary from USAID in malaria eradication in Rwanda: linking USAID with the population supported by 26.9% of the respondents, using community health workers in malaria identified by 23.1% of the respondents, campaign for malaria prevention supported by 19.2% of respondents, reporting outcomes of malaria treatment rated by 13.5% of respondents and mass distribution of mosquito nets revealed by 5.8% of the respondents. Among challenges faced by USAID in malaria eradication in Kicukiro District, interviewees identified the linking USAID with the population, and effective involvement of community health workers in malaria eradication.

Among solutions put forward by respondents to overcome challenges faced by USAID in malaria eradication in Kicukiro District these include: the need for frequent meetings proposed by 18% of respondents, the need for more funding supported by 54% of respondents, the need for more training indicated by 10% of respondents, and the need for more monitoring and evaluation identified by 8% of the respondents.

Interviewees provided future plans towards malaria eradication in Kicukiro District through support of malaria treating teams, distribution of mosquito nets, distribution of malaria drugs, and public awareness on malaria infection, distribution of insecticides, and reinforcement of the existing programs. All categories of respondents' view point concluded that key players needed to be involved in health sector to be effective: central government, IOs, health center managers, healthcare workers, donors, Kicukiro community groups, Non-Government Organizations, all government officials, health sector planners, stakeholders, all sponsors and partners, health sector policy makers, local leaders, private sector. Central government has to pay medical insurance and give sponsorship

and other financial means to disabled patients for malaria prevention in Kicukiro District. Up to 100%, respondents appreciated positively the existence of USAID as an International organization, the areas and importance of operations for malaria eradication, through the reduction of malaria cases, malaria treatment, malaria prevention, and self-protection for malaria infection.

## **vi. Conclusion**

Research findings reached to the conclusion that several actions to be undertaken to improve malaria disease eradication are concerned with improved accountability in USAID, Kicukiro District, administrative sectors, and health centers.

USAID initiated malaria eradication project, community education, execution of USAID programs, supporting the sleeping in mosquito nets, malaria treatment by community health workers, and early consult for malaria suspicion were for best practice on the implementation of USAID workshop recommendations.

The successful utilization of USAID support was ensured through the creation of the supervision team, feedback report from fields and the use of mosquito nets, treatment of all malaria patients, outputs measurements, reduction of malaria cases and observation, and no recorded success. Kicukiro community is involved in USAID malaria eradication programs through their management positions and their participation to USAID management meetings.

Healthcare workers attended USAID organized workshops and contributed with some viable ideas to USAID programs that can help in malaria eradication, and the utilization of USAID support for malaria eradication through distribution of mosquito nets, training of healthcare workers, and provision of malaria medications.

Healthcare workers perceived the importance of USAID operations on malaria eradication in Kicukiro District through the reduction of malaria cases, provision of mosquito nets, prevention, and self-protection for malaria infection. A contract between local governments and USAID has been combined with performance indicators and a number of medical equipment to enhance health outcomes in Kicukiro district. They also managed to improve health centers management.

Health sector local governments recruit health center managers, healthcare workers; monitor contractual performance indicators of health centers, including staff attendance and healthcare worker-patient ratios, prepare and control requests for financial transfers; oversee the budget for health center building, manage investments and establish management health center committees. The following are key actors to be involved in health sector to achieve its performance at the maximum level: central government, local community, health center managers, patients, donors, civil society, Non-Government Organizations, all government officials, health planners, policy makers, stakeholders, all sponsors and partners, health center committees, local leaders, and private sectors.

The conclusion of the partnership between International Organizations and Rwanda Government is needed for the following reasons: give support to the population and the government and organization of specific agenda. Among different tools used for the conclusion of the partnership between International Organizations and Rwanda Government consultation meetings have been identified even if some healthcare workers ignore such tools.

Among challenges faced by USAID in malaria eradication in Kicukiro District these include: the linking USAID with the population, effective involvement of community health workers in malaria eradication, organization of campaign for malaria prevention, reporting outcomes on malaria treatment and mass distribution of mosquito nets.

Delay in report submission by healthcare workers, overloaded tasks allocation, lack of definition of other activities which were not specified by performance contract, working hours length that is not the same for all workers and this causes a delay in health service provision, meetings that are sometimes postponed and lack of planning within sectors and health centers.

There is a lack of infrastructure such as rooms for patients, and planning is still to be a big challenge for healthcare centers in Kicukiro District. Financial resources for private health centers come from patients, and this becomes difficult for them to cover their expenditures. The following factors will help to overcome above highlighted problems: improved healthcare workers' standards of living and their motivation, creation of more competitive health centers, ensure the stability of health program, put health facilities at health centers' disposal, and continuous health centers' evaluation, increase salary for health workers, improve relationships between healthcare workers, patients and health center managers.

The health sector didn't achieve its objectives at the maximum level. The quality of health services moved backward because of many changes occurred during this period especially of Covid-19 pandemic while healthcare workers were not well prepared to test patients, and the system of specialization increase the ratio between doctor-patients in health centers. Some health centers failed to match their budgets with their action plans due to the contribution of patients to medical insurance which is not regular, and the delay in paying salaries to health sector workers.

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