PROGRAMME EVALUATION

SUPPORTING MEDICAL ASSISTANCE AND ACCELERATION OF VACCINE ROLLOUT AGAINST COVID-19 INFECTIONS IN SURINAME (2021-2022)

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MARCH 2023

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Acknowledgements

The Evaluation Team acknowledges and expresses gratitude to all of the stakeholders, beneficiaries, and staff members of the United Nations Children's Fund (UNICEF) involved in the evaluation of the programme 'Supporting emergency medical assistance and acceleration of vaccine rollout against COVID-19 infections in the interior of Suriname'.

We are especially grateful to all representatives of the Medical Mission Primary Health Care Suriname for sharing their experiences, providing detailed information, and facilitating this study at the health centers in the interior. Likewise, we are sincerely thankful to all our respondents from the communities in the interior of Suriname for taking the time to participate in this evaluation and having the generosity to share their opinions and experiences.

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Acronyms

BOG	Bureau of Public Health
CEPI	Coalition for Epidemic Preparedness Innovations
COVAX	COVID-19 Global Access Facility
COVID-19	Coronavirus disease 2019
EPI	Expanded Programme on Immunization
FGD	Focus Group Discussion
HDI	Human Development Index
IPC	Infection Prevention and Control
KII	Key Informant Interview
MoH	Ministry of Health
MM	Medical Mission Primary Health Care Suriname
Natcom	Dutch Cooperation Aid Organizations
PAHO	Pan American Health Organization
RC	Regional Coordinator
RCCE	Risk Communication and Community Engagement
SOP	Standard Operation Procedures
SPRP	Strategic preparation and response plan
SRCS	Suriname Red Cross Society
SRP	Strategic Response Plan
ToC	Theory of Change
ToR	Terms of reference
UN	United Nations
UHC	universal health coverage
UNICEF	United Nations Children’s Fund
WASH	Water Sanitation and Hygiene
WHO	World Health Organization

Executive Summary

Background

On March 13, 2020, the first case of COVID-19 was detected in the Republic of Suriname. Since April 2021, the country has experienced several major waves of the pandemic, resulting in increasing numbers of deaths and infections. To control the disease and save lives, vaccination is a primary prevention measure, especially since there are no definitive therapeutic options available.

The pandemic has highlighted the importance of resilient health systems and revealed weaknesses in the Surinamese health system. The crisis prompted the government to revise its priorities, and donors also had to adjust their focus. During the first nine months of the crisis, the government focused on the health response, and from June 2021 to June 2023, it plans to concentrate on the recovery phase.

UNICEF has been working closely with the Ministry of Health to implement the COVID-19 deployment plan, providing technical and financial support for demand generation, risk communication, cold chain, vaccine rollout planning and preparedness, WASH, infection prevention and control (IPC) in health facilities and school settings, and improving planning and coordination. UNICEF's key mandate areas, including Cold Chain and Vaccine Supply Management and Communication and Community Engagement, have been the main focus of their support.

To ensure pandemic control and reduce fatality rates, UNICEF developed a plan to accelerate COVID-19 vaccination through Risk Communication and Community Engagement interventions. Proposals based on this plan were submitted to the Foundation of Dutch Cooperation Aid Organizations (Dutch Natcom) to request co-funding. The main objective of the proposal was to accelerate vaccination against COVID-19 and strengthen case management protocols, particularly for infected children, to control the pandemic and reduce the fatality rate. To achieve this objective, between May 2021 and May 2022, a range of interventions were implemented with the financial support of the Dutch Cooperation Aid Organization, with a total budget of US$ 280,487.

The programme targeted four main intervention areas as its strategy for the response, with several activities developed for each intervention area:

1. Strengthening of case management capacities by contribution to the procurement of portable oxygen concentrators to provide support for moderately ill COVID-19 patients.
2. Risk Communication and Community Engagement interventions for addressing vaccine hesitancy and strengthening demand for immunization against COVID-19, focusing on communities living in the peri urban and rural area of the two most at-risk regions in the interior of Suriname: Brokopondo and East Suriname.
3. Strengthening of cold chain capacities and operational & logistics support by provision of equipment and supplies.
4. Strengthening of Infection Prevention and Control (IPC), Water, Sanitation and Hygiene (WASH) by provision of equipment and supplies.

Evaluation purpose, objective and scope

The main purpose of this evaluation is to examine the relevance, efficiency and effectiveness of project interventions carried out as a response to COVID-19 with the support of the Dutch Cooperation Aid Organizations in the interior of Suriname.

The evaluation has the following specific objectives:

- To determine the effectiveness, efficiency, and relevance of the project interventions for the potential scale-up of interventions in areas for similar project outcomes.
- To identify enablers and barriers to the achievement of results.
- To provide recommendations and lessons learned for the design, management, coordination, and implementation of future interventions.

The evaluation covers activities implemented from May 2021 to May 2022 and the geographic scope includes targeted communities and health facilities in the interior of Suriname and Paramaribo. The evaluation criteria include relevance, effectiveness, and efficiency.

Methodology

The evaluation focuses on the programme's relevance, effectiveness and efficiency, in accordance with UNEG norms and standards. For each criterion the evaluation questions are completed with sub-questions. The methodological design of this evaluation was based on a mixed methods approach, consisting of qualitative research, through semi structured interviews with key informants (KII) and Focus Group Discussions (FGD) with programme beneficiaries. In addition, a desk review of existing documents and an analysis of available secondary data were conducted. A total of 43 key-informant interviews were conducted, using a semi structured interview guide. Ten FGDs were held, using a topic list as guidance. Participants were selected based on their involvement and exposure to COVID-19 activities. Prior to data collection, all participants were given the opportunity to provide either verbal or signed consent to participate.

The data obtained was systematically and structurally analyzed using inductive coding to generate key themes. The findings were triangulated where possible, with information obtained from the desk review and available quantitative data.

Key findings and conclusions

Summarized, the interventions implemented by UNICEF in collaboration with Medical Mission Primary Health Care (MM) in Suriname have been successful in improving healthcare services in the targeted areas during the COVID-19 pandemic. The provision of portable oxygen concentrators has significantly improved case management capabilities, while risk communication and community engagement programmes have increased vaccine demand and decreased hesitancy in targeted communities. The investment in cold chain equipment has ensured the safety and efficacy of vaccinations and increased vaccination coverage in remote areas, while the provision of infection prevention and control materials has protected healthcare workers from COVID-19 and other sources of diseases. The interventions were well-aligned with national policies and UNICEF's COVID-19 Response and Recovery Plan, with effective management and coordination structures in place. Despite minor implementation challenges, the programmes have been considered relevant, effective and efficient. Overall, the interventions have contributed to improving

the healthcare system's response to respiratory illnesses and protecting healthcare workers and communities during the pandemic.

The following sections describe the specific findings per intervention:

Strengthen case management capacities by the provision of portable oxygen concentrators

The objective of this intervention was to strengthen the COVID-19 case management system by providing portable oxygen concentrators to all MM healthcare facilities in the interior, with the aim to reduce case fatality rates. The evaluation indicated that the provision of portable oxygen concentrators has significantly improved case management capabilities for patients with respiratory illnesses during the COVID-19 pandemic. This intervention is aligned with national policies and UNICEF's COVID-19 Response and Recovery Plan and has allowed for closer monitoring and treatment of patients with underlying medical conditions. Overall, the intervention has been crucial in improving the healthcare system's response to respiratory illnesses, particularly during the COVID-19 pandemic.

The evaluation showed that the intervention has been effective in achieving its intended output level objectives. Although the delivery of devices to all health facilities was not possible due to the challenge of electrical power supply, the intervention has still proven to be relevant and practical in the areas where the devices were introduced. The intervention has been perceived as useful by frontline workers and has the potential to improve healthcare quality, strengthen the healthcare system, and save lives.

The programme's efficiency was evaluated based on four questions assessing management and coordination structures, strategy design and implementation, partnerships, and fund allocation. The evaluation found that the programme was well-coordinated, with effective management structures in place, generating solid evidence from monitoring and evaluation, and effective partnerships. The fund allocation was deemed adequate, and the programme was considered efficient and sustainable, with the potential to improve healthcare quality and strengthen the healthcare system at the local level.

Risk Communication and Community Engagement

The intervention’s goal was to increase vaccine demand and decrease hesitancy in targeted communities in the interior of Suriname through sensitization sessions with traditional and community leaders and vaccination demand creation. The intervention was effective in achieving its established targets, such as the number of persons reached by sensitization messages and the number of persons vaccinated against COVID-19 in targeted areas. However, the vaccination coverage in the targeted areas was still low, indicating a need for more community engagement, building trust with the traditional authority, and addressing misinformation. The programme was well-aligned with Primary Health Care Principles and the National COVID Response Plan, and the available funds were utilized to the fullest extent possible despite significant logistical expenditures.

The Backlot Foundation's Youth Debates programme was also successful in raising awareness about COVID-19, vaccine sensitization, and demand creation among adolescents in Suriname. The activity aimed to raise awareness about COVID-19 and promote vaccine demand among adolescents through youth debates. The programme was implemented through the production of four semi-live Krutu's on television, where young people were trained in debating skills and encouraged to express their opinions on the

subject of vaccinations. The programme was well-received, and respondents confirmed its relevance in raising awareness of COVID-19 and vaccination among adolescents.

Cold Chain and logistic support

This intervention aimed to strengthen the cold chain by supplying cold chain equipment to MM and increase COVID-19 vaccination coverage in the interior of Suriname. The evaluation found that the intervention was relevant and based on the needs of support and aligned with national policies. UNICEF's support included transportation of equipment and supplies, installation, and on-the-job training. The vaccine carriers and solar-powered refrigerators were particularly effective in increasing vaccination coverage in remote areas. The intervention was successful in providing proper vaccine storage, ensuring the safety and efficacy of vaccinations, and increasing vaccination coverage in remote areas.

The intervention was found to be effective in increasing vaccination coverage in remote areas and positively impacting routine vaccination and outreach efforts. The delay in the installation of solar-powered refrigerators was due to heavy rainfalls in the interior causing airstrip closures. Despite minor implementation challenges, the project successfully achieved its intended objectives.

The investment in cold chain equipment was considered a sustainable investment and cost-effective in making safe vaccines widely available to hard-to-reach communities. Overall, the programme demonstrated efficiency in achieving its objectives and contributed to improving healthcare services in the targeted areas.

Infection prevention control and WASH promotion

The objective of this intervention was to provide healthcare workers with infection prevention and control materials and WASH items to protect them during exposure to COVID-19 patients. UNICEF provided waste management materials and supported in the logistical costs of transportation of the equipment to the health facilities. The intervention was successful in providing healthcare workers with necessary equipment to protect themselves from COVID-19 and other sources of diseases.

The intervention was effective in providing the necessary equipment and contributed to safe waste management practices. The delays in the distribution of incinerators due to suboptimal weather conditions were the major challenges in achieving results. However, the intervention has contributed to the continuity of essential health services during the pandemic.

The partnership between MM and UNICEF facilitated efficient procurement and distribution of necessary equipment. MM's existing management and logistic structures were used to guide the intervention's implementation, with regular progress updates submitted to UNICEF. The success of the intervention in timely and efficient supply delivery to health facilities was largely attributed to the effective management and coordination structures.

Recommendations

1. It is recommended to incorporate contextual factors into the design and implementation of healthcare interventions. This includes conducting a needs assessment to identify the specific needs and challenges at the healthcare facilities, as well as considering the local infrastructure to support the intervention. To resolve the electricity supply issue, it is suggested that measures be

taken to address the continuous power requirements of the oxygen concentrators in use. One possible solution would be to install solar power systems in the areas where the devices are being utilized.

2. To enhance vaccine uptake, it is necessary to increase community engagement and establish trust with traditional authorities. It may be beneficial to replicate the RCCE activities in other regions that share similar characteristics, such as a lack of functional mass communication infrastructure and language variations. Occasional RCCE activities may not result in long-term awareness and behavioral changes over time, as the disease context continues to evolve. Therefore, RCCE initiatives should be consistently maintained and integrated into standard care service packages. Special emphasis should be placed on addressing identified barriers to ensure maximum impact. Therefore, continued efforts are needed to emphasize the importance of vaccination, with a focus on its long-term effects and potential risks posed by new variants or surges of the virus.

3. To enhance the relevance and reach of the Backlot Foundation's Youth Debates programme it is recommended to expand it to more districts and involve adolescents from diverse backgrounds. This would allow for a wider representation of opinions and perspectives, increasing the programme's impact. Additionally, incorporating taboo topics such as mental health would create a more inclusive space for young people to discuss and debate relevant issues. This would contribute to breaking down social and cultural barriers and promoting critical thinking and awareness on important topics that affect adolescents.

4. The evaluation findings and lessons learned suggest that it is important to develop contingency plans to address external factors such as weather conditions that can potentially impact programme implementation and lead to delays. Therefore, it is recommended that such plans are put in place to mitigate the effects of these factors and ensure the efficient and timely execution of the programme. An efficient and effective cold chain system at the local level enhances the delivery of health services and facilitates access to life-saving treatments for vulnerable communities.

5. Overall, the implementation of the infection prevention control, WASH promotion, and logistic support intervention has been effective in achieving the planned results. The availability and use of PPE materials have been effective in protecting healthcare workers from COVID-19 and other diseases. The provision of incinerators has also contributed to safe waste management practices. Therefore, it is recommended that the programme continue to be implemented and monitored to ensure that the supply of PPE and WASH items is sustained, and safe waste management practices are maintained.

1. Introduction

This report presents the findings, lessons learned, and recommendations of the ex-post evaluation of the 'United Nations Children's Fund (UNICEF) Programme *'Supporting emergency medical assistance and acceleration of vaccine rollout against COVID-19 infections in the interior of Suriname'*.

The main objective of the programme was to accelerate the vaccination against COVID-19 and strengthen the case management protocols, particularly for infected children, in order to ensure the control of the pandemic and reduce the fatality rate. The programme was funded by the Dutch Cooperation Aid Organizations (Dutch Natcom) and implemented by UNICEF in close collaboration with WHO-PAHO and the Ministry of Health through a partnership with the Medical Mission Primary Health Care Suriname (MM). The programme's interventions concentrated on the interior of Suriname, where the most vulnerable and marginalized populations live.

Evaluation is a driving force behind the development of effective public health strategies, the enhancement of existing programmes, and the demonstration of the outcomes of resource investments. In this context, the UNICEF Suriname Country Office commissioned an ex-post evaluation of the project, which was conducted by an individual consultant.

The purpose of the evaluation was to provide a more in-depth, systematic, and objective analysis of the project's results with a focus on the relevance, effectiveness, and efficiency of project interventions, with the goal of using the findings for future collaborations and developing innovative ways to achieve better results. The evaluation encompasses all interventions carried out with the support of the Dutch Natcom between May 2021 and May 2022.

The evaluation was divided in three phases: (1) Desk review, interviews with stakeholders, development of research instruments, and writing of an inception report; (2) Data collection and analysis phase and; (3) Final report writing and sharing of findings. This report is the final deliverable.

The report follows UNICEF's Global Evaluation Reports Oversight System (GEROS) for an evaluation report. The structure of the report is outlined below:

- Chapter 1 presents the introduction, context, and object of evaluation.
- Chapter 2 details the evaluation's purpose, objectives, and scope.
- Chapter 3 describes the methodology of the evaluation.
- Chapter 4 presents the findings, organized by activity and key evaluation criteria.
- Chapter 5 contains conclusions, lessons learned, and recommendations.

1.1 Context

This section provides a brief overview of the country and the global and national context of the COVID-19 situation.

1.1.1 Global context

COVID-19 has spread around the world, affecting every country and overwhelming even the most resilient healthcare systems. Globally, as of September 4, 2022, more than 600 million confirmed cases and over 6.4 million deaths had been reported to the World Health Organization (WHO, 2022). The pandemic led to significant disruptions in health services worldwide, resulting in a massive burden for healthcare systems, medical supply chains, as well as a negatively impacting the socioeconomic situation of many vulnerable populations. Ending the COVID-19 pandemic requires coordinated global action for suppressing transmission and reducing morbidity and mortality in every country and context, using an evolving combination of preparedness, risk management, and public health measures, all while ensuring the safe delivery of high-quality health services (World Health Organization, 2021).

On February 4, 2020, the WHO released the first COVID-19 Strategic preparation and response plan (SPRP), which was revised as the pandemic progressed. The SPRP focuses on ten operational and technical pillars that serve as guidelines for countries in adapting response plans and setting priorities, with WHO's support when required. The main objectives of the SPRP are to halt the epidemic's spread, provide optimal care for all patients, save lives, reduce the impact of the epidemic on health systems, social services, and economic activity. The pillars within the SPRP framework are as follows: (1) Country-level coordination, planning, and monitoring;(2) Risk communication and community engagement; (3)Surveillance, rapid response teams, and case investigation; (4) Points of entry; (5) National Laboratories; (6) Infection prevention and control; (7) Case management; (8) Operational support and logistics; (9) Maintaining essential health services during an outbreak; (10) Vaccination.

Aligned with 2020 WHO global Strategic Response Plan (SRP) and UNICEF COVID-19 Humanitarian Action for Children appeal, UNICEF response contributed in the following pillars:

- Risk Communication & Community Engagement (RCCE)
- Infection Prevention and Control (IPC)
- Supply and procurement
- Protective Environment for Children
- Health & Nutrition
- Education
- Child Protection
- WASH Social Protection, Economic Impact, Social research & Early Recovery
- National COVID-19 Coordination Mechanisms

COVID-19 vaccination

COVID-19 vaccination has substantially altered the course of the pandemic, saving lives globally. Vaccines administered during the first year of global rollout contributed to the prevention of an estimated 19.8 million deaths, according to a recent study by Watson et al (Watson, 2022). According to the WHO COVID-19 dashboard, a total of 12,540,061,501 vaccine doses have been administered globally as of September 2022 (WHO, 2022). However, while countries progress at varying rates, challenges remain in the equitable distribution of vaccines around the world, resulting in disparities in vaccine availability and accessibility.

The COVID-19 Global Access Facility (COVAX) and WHO established vaccine targets to ensure global vaccine equity; by the end of June 2022, countries must vaccinate 70% of their populations against COVID-19, with an interim goal of 40% by the end of 2021. These targets were not met by the end of 2021 due to initially vaccine shortages (Watson, 2022). While global COVID-19 vaccination coverage was around 70%, and at least three out of every four people in high-income countries have received at least one dose. In low-income countries, 25% has received at least one dose of the vaccine. Vaccine uptake has also been suboptimal in many countries due to vaccine hesitancy. Negative perceptions of safety, efficacy, and risks of the COVID-19 vaccine, as well as mistrust in institutions in charge of vaccination campaigns, have all been identified as factors contributing to vaccine hesitancy (Lazarus, 2022). Effective and comprehensive vaccination strategies require a current understanding of the perceptions that drive COVID-19 vaccine hesitancy and the common characteristics of people who are less likely to accept a vaccine.

1.1.2 Country context

Demographics

The Republic of Suriname is located on the north-eastern coast of South America, bordered by French Guiana to the east, Guyana to the west, and Brazil to the south. The country covers a geographical area of about 163,820 km^2. In terms of access, Suriname is divided into three different geographic regions: urban coastal, rural coastal, and rural interior (Amazon rainforest). The coastal area comprises two urban districts and six rural districts, and the interior contains two districts. Due to its colonial past, Suriname has a multi-ethnic population. Suriname was a Dutch colony and became an independent republic in 1975. The official language is Dutch; the native language is Sranan Tongo. Ninety percent of the estimated 612,985 population lives in urban coastal areas, including the capital city of Paramaribo, and ten percent lives in small villages in the country’s forested interior.

The sparsely populated rural interior covers nearly 90% of the country and is mainly accessible by boat or airplane. It has a population of approximately 50, 000 people, the majority of whom are Indigenous Amerindian and Maroon communities who live in remote, scattered villages primarily along rivers (Pan American Health Organization, 2022). Suriname improved its Human Development Index score by 1% between 2010 and 2021, rising from 0.723 to 0.730. The number of registered live births is around 10,000, resulting in a crude birth rate of 20 per 100,000 people and a total fertility rate of 2.5. The life expectancy at birth in 2021 was 71.9 years. Mortality has remained relatively stable at 6.5 to 7 deaths per 100,000 people (Pan American Health Organization, 2022).

Health care systems in Suriname

Suriname's constitutional framework recognizes individuals' right to health. The National Strategic Plan for Health and Wellbeing in Suriname 2019-2028 describes a model of care designed to address health inequities and achieve universal health coverage (UHC) through a primary health care approach that is people-centered, ensures the right to health, is equitable, and ensures that the people of Suriname receive care and benefits based on their needs. The state's role is to protect public health, and the Ministry

of Health is the lead ministry. This role includes supervising health-care services to ensure adequate quality, availability, and accessibility of care (Ministry of Health Suriname, 2020).

Suriname has a fragmented health system that covers the urban, coastal, and interior regions of the country. The MoH Bureau of Public Health (BOG), a government institution, is responsible for the public health programmes, including environmental health, sanitation, and the public health laboratory.
The Ministry of Health operates two general hospitals and one psychiatric hospital in Paramaribo, and three district hospitals in the western coastal district of Nickerie, the eastern district of Marowijne, and the coastal district of Wanica. These eight hospitals have a total of 1500 hospital beds, or 3.0 beds per 1000 people. There are 40 dedicated ICU beds available in four of the hospitals. (Ministry of Health, Suriname, 2021).

In the coastal area, about 150 general practitioners operate through private health clinics. Two networks of government-funded primary healthcare centers provide primary care in Suriname's healthcare system:

- Regional Health Services (RGD) receives public funds to manage 46 primary health clinics in the eight districts in the coastal area.
- Medical Mission Primary Health Care Suriname (MM), a faith-based organization, receives government funding to manage 52 primary health clinics in the interior.

Medical Mission Primary Health Care Suriname

MM is a Christian-based health organization responsible for providing primary health care to residents in the interior of Suriname in the districts of Brokopondo and Sipaliwini. MMPHS is the sole healthcare provider in the interior, and it has implemented the Alma Ata Declaration's basic principles of primary healthcare: equitable healthcare distribution, community participation, health workforce development, use of appropriate technology, and using a multi-sectoral approach.

The geographical working area covers about 130,000 square kilometers and is home to approximately 55,000 people, with the greatest concentrations along the rivers in the eastern half of the country. The working area is divided into five regions, with their respective resorts (Figure 2 and Table 1). The geographical placement of health facilities, staff, and logistics material is determined by the population size, morbidity, and accessibility of the various villages in the interior. Medical Mission currently operates through 52 health facilities spread across rural areas, which are coordinated by the 'Jan van Mazijk Coordination Center' in Paramaribo by means of regular communication and supervisory visits.

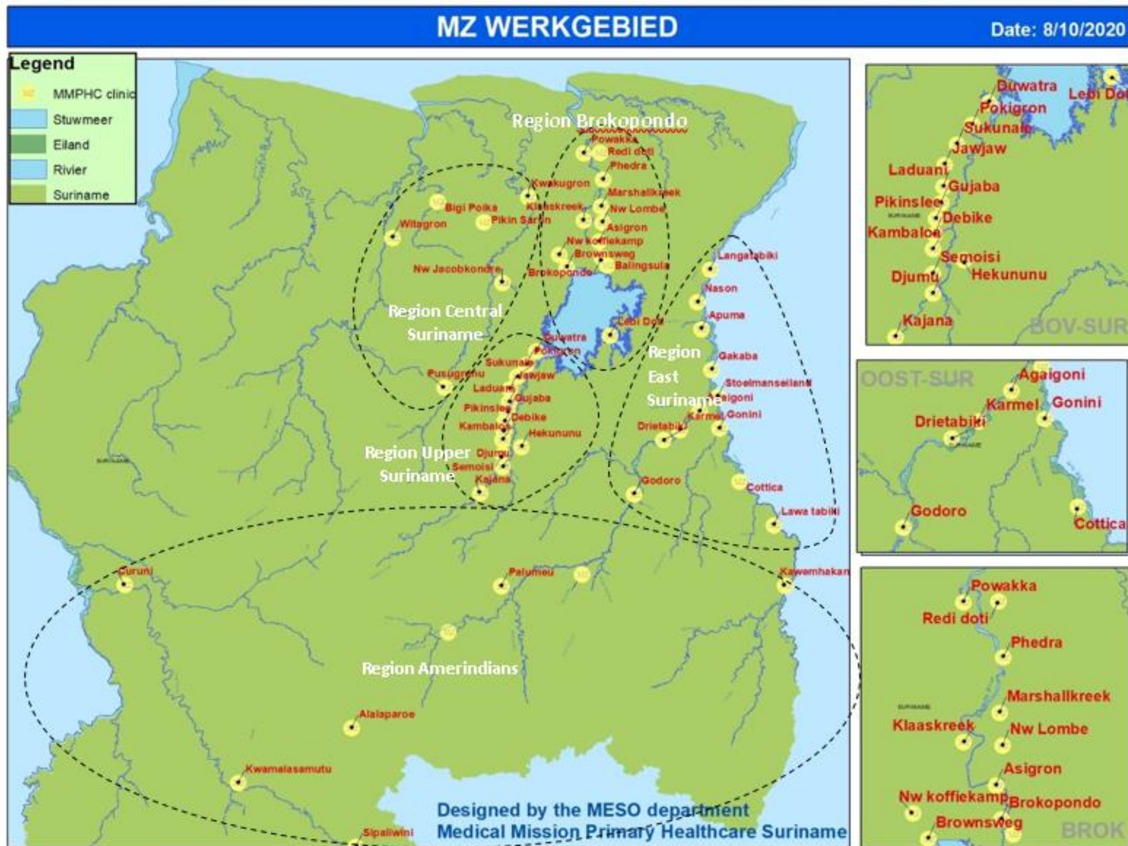

Figure 1 Map of Medical Mission working area

The resorts (table 1) can be considered a municipality, with a central location and a few settlements. It should be noted that this division does not correspond with the national district grouping. The Brokopondo region is located in rural coastal areas and is accessible by car. All other areas are only accessible by boat or plane. The regions East Suriname, Upper Suriname, and Central Suriname are primarily inhabited by people of Maroon ethnicity, whereas the region of Upperland- Amerindians is mainly inhabited by Indigenous Amerindians. Brokopondo region is home to both Maroon and Indigenous villages.

Region	Resort
Brokopondo	Brokopondo South
	Brokopondo North
Upper Suriname	Djoemoe
	Debike
	Ladoani
East Suriname	Drietabbetje
	Stoelmanseiland
Central Suriname	Central Suriname
Upperland Amerindians	Amerindians

Table 1 Regions and resorts working area Medical Mission

Health care is provided by health assistants with a clear-cut level of responsibility. The majority of the health assistants are members of the local community who have been trained by the Medical Mission and received a diploma recognized by the Ministry of Health. In everyday practice, health assistants are the first point of contact for patients. The health assistants are supervised by the regional clinic head (SPH) and the resort doctor. These resort doctors report to the regional coordinator (RC), a physician who ensures that all aspects of health care are functioning properly. In addition to health assistants there are also malaria microscopists working in the clinics, who can examine patients on malaria. Furthermore, there are clinic assistants who provide assistance. The primary health care services include: first aid in emergency situations; maternal and child health; family health planning; School health programme; Preventive health programmes; prevention and control of communicable – and non-communicable diseases and dental care.

COVID-19 situation in Suriname

Since the first COVID-19 case in Suriname was confirmed on March 13, 2020, the country has experienced five major outbreaks between April 2020 and May 2022. Until September 14, 2022, a total of 81,057 confirmed cases and 1,384 COVID-19 related deaths have been reported to the World Health Organization, with a case fatality rate of 1.9% overall (World Health Organization, 2022). Suriname faced a challenge in responding to the new virus while maintaining essential health services across the country. UNICEF and other development partners, international organizations and befriended nations have played a significant role in supporting the country in planning, financing, and implementing the response.

UNICEF supported the Government of Suriname to prepare and respond to the outbreak since the start of the pandemic. The Ministry of Health established a National Public Health Response team in January 2020. UNICEF was part of the response team chaired by the Director of Health and consisted also of specialists from the Ministry of Health and the PAHO. A National COVID-19 Preparedness and Response Plan was developed using WHO guidelines as references (World Health Organization, 2020). The response focused on four main areas: (1) saving lives; (2) protecting health workers; (3) slowing the spread; and (4) strengthening epidemic intelligence. The response plan includes Standard Operation Procedures (SOPs) and case scenarios to assess the ongoing risk of disease importation, enhance epidemiological surveillance for early detection, and ensure health sector preparedness and response capacity. SOPs for laboratory diagnosis, clinical management, infection prevention and control measures, and quarantine and isolation were developed (Oostburg, 2020).

To mitigate the devastating impact on the health sector, the government received full support from the private sector and international partners to strengthen its health system, train and equip health workers and other key stakeholders, communicate prevention measures to specific groups and the general public, and purchase vaccines.

The government implemented public health measures to contain the spread of the pandemic. Gatherings were prohibited or restricted, public and private offices and schools were (partially) closed, and non-essential services and other locations were also (partially) closed. Face masks and physical distancing were required in public places, public transportation was prohibited, and all borders were closed at the beginning of the pandemic. In addition, full or partial lockdowns were effectuated. At the Bureau of Public Health, a COVID-19 helpline was activated, and information regarding the situation was published on the

COVID-19 Suriname website (*https://covid-19.sr/).* Face masks and hand sanitizers were provided to health workers, schoolchildren and other vulnerable groups (Ministry of Foreign Affairs, International Business and International Cooperation, 2022). Launching the vaccination campaign and expanding the number of testing facilities were other important measures taken by the government to halt the pandemic. Since April 2022, COVID-19 measures in the country have largely been suspended, and the main ongoing COVID-19 policy is to expand further scale-up and implementation of the vaccination programme in cooperation with international partners.

COVID-19 Vaccination

Suriname received and implemented the first vaccines in March 2021. The vaccines were received through the COVAX Facility, a global effort co-led by the Coalition for Epidemic Preparedness Innovations (CEPI), the Gavi Vaccine Alliance, UNICEF, WHO, and PAHO. The Government of Suriname and its partners (including UNICEF) have developed the national vaccine roll out plan, targeting different population groups based on the risk factors. The priority groups included healthcare workers, Military, police, penitentiary officers, Government Officials, populations in elderly homes, including dialysis patients, elderly from sixty years and over (national level), adult population with chronic-or underlying diseases and the healthy population. Since the availability of the vaccines increased, adolescents (>12 years of age) became part of the target group. To date, a total of 237,879 persons are fully vaccinated in Suriname, representing 40% of the target population (>12 years of age) (WHO, 2022).

Vaccine hesitancy

Similar to other countries, Suriname has witnessed the widespread transmission of misinformation during the pandemic, resulting in a strong vaccine hesitancy that has led to a plateau in the number of vaccines administered. The WHO defines vaccine hesitancy as '*a delay in accepting or refusing vaccines despite the availability of vaccination services.'* Many myths were among the misinformation, all of which had the potential to reduce risk perception among people and contribute to a lack of compliance with preventive measures. To address these misconceptions, it was crucial to engage with the community. Risk communication was focused mainly on Information and the promotion of awareness material focusing on preventive measures and was done primarily through media sensitization and training.

Situation in the interior of Suriname

The pandemic highlighted several gaps in the health system, including health-and social disparities related to geographic location, socio-economic status, population group, and gender, and created an urgent need for the government's priorities and the donor group in Suriname to be revised (UNICEF, 2021).

Particularly among the Maroon and Indigenous populations near the Eastern border, who often reside and work on both sides of the border along the Marowijne river, COVID-19 had a significant impact on livelihoods. As of March 2021, the epidemic had caused many cases among the Amerindian population, with a relatively high infection rate of 2708 per 100 000, compared to 1555 per 100 000 for the country overall. The case fatality ratio among the Amerindian population was also higher at 5.1%, compared to 1.9% for the country overall (Pan American Health Organization, 2022). The most rapid increase was found in the Brokopondo district, where MM, the primary health care provider, recorded an average COVID-19 positivity rate of 30-40% per month.

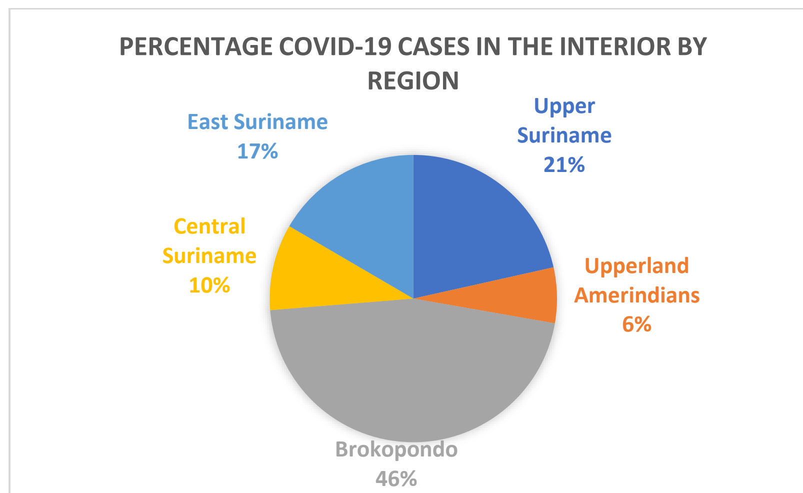

Figure 2 Percentage COVID-19 cases in the interior by region

Along the country's eastern border with French Guyana, there were concerns of cross-border activities, as the COVID-19 Delta mutant was spreading. COVID-19 vaccination media campaigns had a minor impact in the interior of Suriname. Since the launch of the COVID-19 vaccination campaign in April 2021, around 500 people have been vaccinated to date from these two regions. Cultural beliefs, combined with strong vaccine hesitancy in the interior of Suriname, hindered the COVID-19 vaccination rollout.

1.2 Programme of evaluation: Supporting emergency medical assistance and acceleration of vaccine rollout out against Covid-19 infections in Suriname

1.2.1 Programme overview

The programme of evaluation is the UNICEF COVID-19 response programme in Suriname *Supporting emergency medical assistance and acceleration of vaccine rollout against Covid-19 infections.*

UNICEF has made various contributions to the government's COVID-19 Response Programme (UNICEF, 2021). To ensure pandemic control and reduce fatality rates, UNICEF developed a plan to accelerate COVID-19 vaccination through Risk Communication and Community Engagement interventions. Proposals based on this plan were submitted to the Foundation of Dutch Cooperation Aid Organizations (Dutch Natcom) to request co-funding. The planned interventions in this cooperation were developed to support the government of Suriname as part of the National COVID-19 response. The programme was implemented in close collaboration with WHO-PAHO and with the Ministry of Health, through a partnership with the Medical Mission Primary Health Care. The interventions concentrated on specific parts of the interior of Suriname, where the most vulnerable and marginalized populations live.

The ultimate goal of the programme was formulated as follows: *By May 2022, targeted people, especially those most at risk, receive correct information on the COVID-19 vaccine, have access to quality COVID-19 case management services and are vaccinated against COVID-19.*

The main objective of the programme was to accelerate the vaccination against COVID-19 and strengthen the case management protocols, particularly for infected children, in order to ensure the control of the pandemic and reduce the fatality rate.

To achieve this objective, between May 2021 and May 2022, a range of interventions were implemented with the financial support of the Dutch Cooperation Aid Organization, with a total budget of US$ 280,487. The programme targeted four main intervention areas as its strategy for the response, with several activities developed for each intervention area:

1. **Strengthening of case management capacities** by contribution to the procurement of portable oxygen concentrators to provide support for moderately ill COVID-19 patients.
2. **Risk Communication and Community Engagement interventions** for addressing vaccine hesitancy and strengthening demand for immunization against COVID-19, focusing on communities living in the peri urban and rural area of the two most at-risk regions in the interior of Suriname: Brokopondo and East Suriname.
3. **Strengthening of cold chain capacities and operational & logistics support** by provision of equipment and supplies.
4. **Strengthening of Infection Prevention and Control (IPC), Water, Sanitation and Hygiene (WASH)** by provision of equipment and supplies.

The programme established targets for each activity in order to track progress. The following section describes the interventions being evaluated, their intended outputs and outcomes, strategies and components, and geographic spread.

Intervention Area 1: Strengthening of Case Management Capacity

UNICEF's case management strengthening support is aimed at ensuring that the targeted population have access to quality COVID-19 services. MM health facilities depended exclusively on refillable oxygen cylinders to offer respiratory assistance to patients with oxygen needs, including but not limited to COVID-19, trauma, heart failure, pneumonia, asthma, and maternal and childcare. While Suriname already had a delivery network for oxygen cylinders, the surge in demand during the pandemic's peak posed a challenge to meet it due to limited stock availability.

In this regard, UNICEF has purchased 52 portable oxygen concentrators (which are 10-liters- per -minute single-flow machines) to be utilized in MM health centers located in the interior. The purpose was to provide quick and portable assistance to at least 50 COVID-19 patients who are moderately ill. Furthermore, UNICEF also provided transportation and on-the-job training to the healthcare staff in the use and maintenance of the devices.

Intervention Area 2: Risk Communication and Community Engagement interventions

In the case of COVID-19, effective and coordinated RCCE can support in breaking the chains of transmission and mitigating the pandemic's effects and are critical to the success of health-emergency responses. UNICEF's risk communication and community engagement interventions are intended to empower individuals and communities to take action to mitigate risks and protect themselves and their communities (IFRC, UNICEF, WHO, 2020). UNICEF identified the urgent need to accelerate the vaccination against COVID-19, given the poor immunization rates, overloaded health care systems, and increasing

number of cases and deaths. Focus was given to communication to all categories of targeted recipients and advocacy towards vaccination. MM and The Backlot served as the implementation partners for the RCCE intervention, which consisted of a number of activities aimed at various target audiences.

The objective of this intervention was to address vaccine hesitancy and strengthen the demand for immunization against COVID-19 for approximately 50,000 people (aged 12-39 years) living in the peri urban and rural areas. The focus was on the two most at-risk regions, Brokopondo and East Suriname, with an estimated population of 11,329 people including caregivers of approximately 2700 children aged 12 to 18.

Activities in this intervention to achieve this objective include:

Activity 1: Sensitization sessions with Traditional and Community Leaders religious leaders, and community mobilizers' engagement on the COVID-19 vaccine roll out in the interior

The aim of this activity was to seek consent and mutual collaboration of existing community engagement structures in the interior, since involved communities can play significant and active roles in the prevention and control of diseases. Targeted villages in the interior in region East Suriname are Cottica, Lawatabiki, Dagoe ede, Goninikreek, Stoelmanseiland, Agaigonini, Gakaba, Apoema, Nason and Langatabiki. The target population in these most-at risk villages is 6,895 persons, including approximately 1650 children aged 12 to 18. Target villages in region Brokopondo include Lebidotie, Brokopondo centrum and environs, Balingsoela, Klaaskreek, Nw.Lombe,Marchallkreek, Powakka and Redidotie. The target population in these villages is 4,434 persons. With these activities, it was aimed to reach at least 10,000 community members with the sensitization sessions.

Activity 2: COVID-19 Risk communication and vaccination demand creation in communities in the interior

The aim of this activity was to create awareness about COVID-19 in 30 at-risk communities, and to strengthen the demand for immunization. The activity included the development and adaptation of messaging and communication material for use in the communities. The strategy for outreach to the community was based on a door-to-door approach to establish a two-way communication. The target was to reach at least 10,000 people by RCCE activities and vaccinate at least 1000 people in the target areas in the interior. Suriname's Red Cross was designated as an implementing partner for providing support during awareness sessions and at vaccination sites.

Activity 3: Adolescents' awareness sessions in communities in the interior

Health professionals have observed that adolescents lack awareness of COVID-19 and do not adhere to the recommended preventive measures. With this activity, it was aimed to sensitize adolescents in the interior in order to raise awareness about COVID-19 among them, leading to adoption of preventive behaviors. To encourage adoptive behavior, the distribution of 250 hygiene packages to adolescents of Stoelmanseiland, Pokigron and Brokopondo was included to support in COVID-19 disease prevention practices.

Activity 4: Adolescents' awareness sessions by Youth Debates Backlot

As the pandemic progressed, it became clear that adolescents face a number of challenges, including access to education, employment opportunities, protection, and civic participation. Adolescents make up 30% of the Surinamese population. To foster adolescents and child-friendly solutions, it is critical that the youth be involved in thinking about issues that affect them. Adolescents, on the other hand, have few opportunities to express their views and opinions on issues that directly affect them. This applies to both current school systems and non-existent platforms to encourage participation in decision making. Children in some environments are born into circumstances that prevent them from speaking out or expressing their opinions. As a result, few children are equipped with the ability to express themselves and voice their opinions in a way that is heard.

The objectives of this programme were to sensitize adolescents and youth about the subject of vaccinations; sensitize and inform general public through the TV broadcasts and increase youth participation and their role in having a right to an opinion. To achieve the objectives, it was planned to train a group of about 40 adolescent and youth and educate them in debating skills in order to express their views and opinions about vaccinations and to create a snowball effect of informing and sensitizing target groups at the general public through the views expressed in debate. Four semi-live broadcasts on television were planned, with the goal to creatively informing and sensitizing the public about COVID-19 vaccinations, as well as influencing and sensitizing them by the various points of views presented during the debate.

Intervention area 3: Strengthening of cold chain capacities and operational support

The aim of this activity was to ensure the continuity of vaccines available through the provision of 50 vaccine carriers for vaccine transportation to the mobile and advanced vaccination sites, three solar powered refrigerators for hard to reach clinics. In addition, 21 remote temperature monitoring unit including transportation, installation, on-the job training in use and maintenance of the supplies were provided to the MM.

Operational support includes equipment for the support and improvement of real-time vaccination data entry in the field and for reporting and monitoring purposes. A total of three laptops and two tablets were made available for data entry at vaccination sites at the health facilities in Stoelmanseiland, Brokopondo, Drietabbetje, Klaaskreek and Agaigonini.

Intervention area 4: Strengthening Infection Prevention and Control (IPC) and Water, Sanitation, and Hygiene (WASH) Activities

UNICEF provided support to control the spread of COVID-19 by supplying health workers with Personal Protective Equipment (PPE) and promoting ongoing hand-washing practices in communities. UNICEF also provided support for waste management. The following materials were provided:

- 3,000 Masks (high-fill, FFP2/N95).
- 300 Face shields (fog-resistant, full face-length).
- 300 Face shields (fog-resistant, full-face length, disposable).
- 200 Masks (surgical, type IIR, ear loop, disposable).
- 60 boxes of Biohazard bags (20L) for waste management.

- Logistic support for the distribution of 52 incinerators for waste management

1.3 Programme Components Framework and Theory of Change

1.3.1 Programme Components Framework

The programme *'Supporting medical assistance and acceleration of vaccine rollout against COVID-19 infections in the interior of Suriname'* was not articulated through a logical framework. To frame the intervention, a Programme Components Framework was constructed during the inception phase, based on the project proposals and other relevant documents provided by the stakeholders. The Programme Components Framework provides a schematic overview of UNICEF's four intervention areas, including the activities, objectives, target population, and intended outputs.

Programme Components Framework

Intervention	Activities	Objective	Target population	Output target
Case Management Interventions for COVID-19 response	Provision of 52 oxygen concentrators	Distribution of oxygen concentrators to 52 health facilities in the interior for the support of moderately ill COVID-19 patients at 52 local health facilities in the interior	All 52 Health Clinics of MM in the interior	Number of distributed oxygen concentrators = 52
				Number of moderately ill COVID-19 patients assisted by the oxygen concentrators = 50
Risk Communication & Community Engagement	Sensitization sessions with Traditional and Community Leaders religious leaders, and community mobilizers' engagement on the COVID-19 vaccine roll out in the interior	1. Seek consent and mutual collaboration of the various traditional leaders & community mobilizers in COVID-19 mitigation activities 2. Improve awareness and upscale of COVID-19 vaccination	Populations from interior in regions Brokopondo and East Suriname	Number of persons reached by RCCE sensitization messages = 10,000
	COVID-19 Risk communication and vaccination demand creation in communities in the interior			Number of persons vaccinated against COVID-19 in the targeted areas, including from the 30 most at risk communities = 1000
	COVID-19 adolescent awareness sessions (age 10-19 years) in the interior	Raise COVID-19 awareness among adolescents	Adolescents (10-19 years of age) at Stoelmanseiland, Pokigron & Brokopondo	Number of adolescents reached by awareness sessions = 250
	Adolescents awareness sessions by youth debates Backlot	Raise COVID-19 awareness among youth by debate	Adolescents & Caregivers of children (12-18 years of age)	Number of adolescents & caregivers of children (12-18 years of age) reached by awareness sessions = 50,000
Cold Chain and logistics support	Provision of 50 vaccine carriers for vaccine transportation to the mobile and advanced vaccination sites,	Contribute to continuation of the vaccination programme and increasing vaccination coverage in the interior of Suriname to ensure safe and secure storage of vaccines	All 52 Health Clinics of MM in the interior	Number of distributed vaccine carriers = 50
	Provision of 21 Remote Temperature Monitoring units for strengthening the cold chain in targeted area.			Number of refrigerators distributed and installed refrigerators = 3

	Provision of 3 solar powered refrigerators for hard to reach clinics		Tepoe, Hekununu, Puleowine	Number of temperature loggers distributed = 21
	Provision of laptops (3) & tablets (2) for Real-Time Field data Entry during COVID-19 Vaccination	Improve Real-time field vaccination data collection & monitoring	Stoelmanseiland, Brokopondo, Drietabbetje, Klaaskreek, Agaigonini	Number of devices distributed = 5
IPC-WASH items for healthcare workers	Provision of: 3,000 Facemasks, 600 Face shields, 200 Surgical masks, 60 biohazard bags	Distribution of PPE and WASH items for protection of healthcare workers against COVID-19	All 52 Health Clinics of MM in the interior	
	Support in transportation of 52 incinerators	Contribute to safe disposal of medical waste at health facilities	All 52 Health Clinics of MM in the interior	Number of distributed incinerators = 52

Table 2 Mapping of Programme components

1.3.2 Theory of Change (ToC)

The ultimate goal of the programme was formulated as follows: *By May 2022, targeted people, especially those most at risk, receive correct information on the COVID-19 vaccine, have access to quality COVID-19 case management services and are vaccinated against COVID-19.*

The evaluation team proposed a ToC for guidance and monitoring towards results. In this context, all outcomes and outputs that constitute the theory of change are focused on contributing to its achievement with the COVID-19 response activities.

The following assumptions were considered:

- Funds are mobilized and donors maintain their support
- Essential supplies and vaccines are available at the local level
- Human resources are available at the local level
- UNICEF maintains working together with stakeholders and beneficiaries

The detailed ToC is presented in Annex 2.

2. Evaluation purpose, objectives and scope

This chapter presents the evaluation's purpose, objectives, criteria, evaluation key questions and scope and outlines stakeholders' role and possible uses of the findings.

2.1 Evaluation purpose

The main purpose of this evaluation is to examine the *relevance, efficiency and effectiveness* of project interventions carried out as a response to COVID-19 with the support of the Dutch Cooperation Aid Organizations in the interior of Suriname. The evaluation should provide a deeper, more systematic and objective analysis of the projects results.

2.2 Evaluation objectives

The evaluation has the following specific objectives:

1. To determine the effectiveness, efficiency, and relevance of the project interventions for the potential scale-up of interventions in areas for similar project outcomes.
2. To identify enablers and barriers to the achievement of results.
3. To provide recommendations and lessons learned for the design, management, coordination, and implementation of future interventions.

2.3 Evaluation scope

The evaluation encompasses the full range of activities implemented within the context of the Programme *'Supporting medical assistance and acceleration of vaccine rollout against COVID-19 infections in the interior of Suriname',* supported by UNICEF and implemented by the Ministry of Health through MM in the interior of Suriname, and the Backlot Foundation in Paramaribo. The evaluation covers activities implemented from May 2021 to May, 2022. The geographic scope of the evaluation covers targeted communities and health facilities in the interior of Suriname and in Paramaribo, as described in the methodology section.

2.4 Evaluation criteria and questions

The evaluation is structured around main evaluation criteria and questions, consistent with the provided criteria in the Terms of Reference (ToR) and the objectives of the evaluation. Table 3 reflects how these criteria were applied in this evaluation.

Evaluation criteria	
Relevance	The evaluation examined relevance from the perspectives of the different stakeholders. The design and implementation processes of the interventions are considered in relation to the needs and priorities of the different beneficiaries, alignment with national policies and international guidance in the COVID-19 response.
Effectiveness	The effectiveness criterion aimed to determine whether and to what extent the intervention achieved its objectives. The evaluation examined to what extent the project's expected results were achieved at the output and outcome levels.

Efficiency	The efficiency criterion assessed the extent to which resources were utilized and allocated to achieve the desired objectives, providing information and accountability to the donor regarding the management of human and financial resources.

Table 3 Evaluation criteria

Based on these evaluation criteria, the key evaluation questions and sub-questions were formulated and presented in an Evaluation Matrix. These set of questions guided the data collection and analysis in the evaluation.

Evaluation criteria	Key Evaluation questions (ToR)	Sub-question	Indicators/ measure	Data sources
Relevance	**To what extent were the implementing strategies of the programme appropriate for achieving results?**	What was the purpose of the programme/activity? Intended target group?	Extent to which the beneficiaries experience the project activities were relevant and accessible to them and others	Key informant interviews, Programming documents
		To what extend was the selection of activities appropriate for addressing the objectives?		
		To what extend were the design and the objectives of the project based on the needs of support?		
		To what extend were the project results relevant to the needs of the beneficiaries? (Health centers, communities?)	Extent to which there is a clear link between the response priorities and the needs of MZ and the affected communities	
		To what extend were the programme activities aligned with government/ and MZ policies and the needs of the affected communities?		
		To what extent were the implementation strategies appropriate to respond to differential needs by gender and needs of vulnerable groups?		
	To what extent was the programme relevant to increasing the demand of the COVID vaccine? / To what extent was the programme relevant to decreasing the COVID vaccine hesitancy? / Was the programme delivered in a	Is there evidence that the target population adequately was involved and reached in activities?	Evidence that affected community needs are taking into account in programming and implementation	Key informant interviews, Programming documents, Focus group discussions
		Did the RCCC campaign address the information needs and address the causes of low demand and vaccine hesitancy? Were the appropriate implementation modalities used given the context of target population (e.g., appropriate communication channels?		
		What obstacles occurred in increasing the demand?		

	culturally appropriate- and gender sensitive manner?	In which way was cultural sensitivity addressed during de programme? Was this approach appropriate for the context?		

Evaluation criteria	Key Evaluation questions (ToR)	Specific Evaluation Question	Indicators/ measure	Data sources
Effectiveness	**To what extent have the planned results in the implementation been achieved?**	What are the outputs of the activity?	Result per output targets (programme objectives) as specified in evaluation matrix	Key informant interviews, focus group discussions, Programming documents, Monitoring data
	What are the major factors influencing the achievement and non-achievement of the results?	What is helping or hindering the activities to achieve their results?		
	To what extent have efforts contributed to strengthening existing vaccine cold chain programme?	How is de vaccine cold chain strengthened? What was the situation before, what is the current situation? What is the effect on other programmes?		
Efficiency	**Which management and coordination structure and mechanisms among programme staff and partners have aided/ guided the programme implementations?**	Which management and coordinating structure mechanisms were in place at programme implementation?	Result per output targets (programme objectives) as specified in evaluation matrix	Key informant interviews, programming documents, Monitoring data
	What has worked well and what needs to be strengthened?	What strategies were effective and needs to be continued or strengthened?		
	To what extent is the fund allocation adequate to implement the strategic interventions?	Could the activities and output have been delivered with fewer resources? Was the activity implemented in the most efficient way compared to alternatives?		
	To what extent is the strategy designed and implemented in a way to generate solid evidence from monitoring and evaluation to monitor progress against results and to inform adjustments where required?	To what extent was it possible to track progress of activities and results and how was this done? To what extent was the evidence of sufficient quality and scope to be useful?		
	To what extent are existing partnerships contributing or strengthened to achieve results?	How efficient was the level of coordination between UNICEF and other partners?		

	What are the enabling factors for and or bottlenecks?	Which challenges and enabling factors occurred in the implementation of the programme?		

Table 4 Evaluation matrix

2.5 Stakeholders' role and uses of evaluation

Several stakeholders were involved in the evaluation. Stakeholders are in this case defined as people or organizations that have invested in the programme, are interested in the results of the evaluation, or have a decision-making role in what will be done with the results of the evaluation. Based on the ToR and in close consultation with UNICEF and the Medical Mission, relevant stakeholders in this evaluation have been: UNICEF, Dutch Cooperation Aid Organizations, Medical Mission Primary Health Care Suriname, Suriname Red Cross Society, communities in the interior of Suriname, and the Backlot Foundation.

Stakeholder	Role in the Programme
UNICEF Suriname	UNICEF Suriname is the lead technical and resource stakeholder, responsible for the programme design and organization of technical support for project delivery.
Dutch Cooperation Aid Organizations (Natcom)	Natcom is the donor of the programme, providing the financial support to implement the interventions.
Medical Mission Primary Health Care Suriname	MM is the main implementing partner of UNICEF, responsible for implementing activities and delivering results.
Communities in the interior of Suriname: adolescents, parents & caregivers	Communities in the interior are the intended the beneficiaries of the interventions. Their role is to attain benefit from all implemented activities and serve as contributors to spread awareness regarding COVID-19.
Suriname Red Cross Society (SRCS)	MM and SRCS have identified common goals and mutual benefits in working together to raise awareness and vaccination rates among the Maroon and Indigenous populations of rural communities. SRCS had played a role in assisting MM to implement RCCE activities in the interior.
The Backlot Foundation	The Backlot Foundation the implementing partner of UNICEF for awareness building in youth in general.

Table 5 Listing of stakeholders

3. Evaluation methodology

3.1 Evaluation design and method

This ex-post summative evaluation was guided by UNEG Norms and Standards (2016). The evaluation is based on the use of the Programme's Components Framework and the ToC. To address the evaluation questions, a mixed methods approach was adopted. The primary data collection method to inform the evaluation was qualitative in nature, consisting of qualitative research, by conducting semi structured interviews with key informants (KII) and Focus Group Discussions (FGD) with programme beneficiaries. In addition, a desk review of existing documents and an analysis of available secondary data were conducted. This approach enabled the cross-verification of data gathered from different sources. Besides these mentioned data collection methods, the physical presence of the received medical items was investigated through observations at the visited health centers.

3.1.1 Desk review

The review of documents has provided the evaluation with critical knowledge and understanding of the programme. The desk review was an ongoing process throughout the course of the evaluation and included a review of existing sources related to UNICEF's evaluation requirements, UNICEF's response to COVID-19 and all other relevant programme documents; planning, progress, and programming documents provided by UNICEF and MM and peer-reviewed scientific articles. Information was analyzed, synthesized, and triangulated with qualitative data to the extent possible.

3.1.2 Qualitative data collection

Key informant interviews (KIIs) with stakeholders and focus group discussions (FGDs) with communities were used to collect qualitative data.

Geographic sampling

In terms of geographic sampling, regions were purposively selected in consultation with UNICEF and MM. The following selection criteria for sampling were considered:

- Regions were selected based on programme coverage and serving ethnic communities.
- Health centers were selected based on population size and programme coverage.
- Respondent's age: above 18 years and older.

Key informant interviews

The selection of KII respondents was driven by the purpose of involving all those stakeholders who have been involved directly or indirectly in programme design and implementation. This ensured gathering of a diverse range of opinions to inform the evaluation findings. Key informants were purposively selected, based on information from UNICEF and the implementing partners. A total of 43 stakeholders were interviewed (22 female and 21 male) using a semi structured interview guide (topic list). Key informants' selection was based on individuals with first-hand knowledge and/or actively involved in the COVID-19 response activities. The interviews were held face-to-face. Annex 4 includes the interview questions.

Stakeholder	**Number of Interviews**		
	Female	Male	Total
KII with implementing partner MM			
Frontline workers at health facilities	8	4	12

Management and implementation team	5	5	10
Community members			
Traditional authority	6	1	7
Community mobilizers	3	4	7
Other implementing partners			
Suriname Red Cross	3	1	4
Back Lot foundation	2	1	3
TOTAL	**22**	**21**	**43**

Table 6 Key Informant interviews and Focus Group Discussions

Focus Group Discussions

The FGD were conducted with members of communities who had either directly or indirectly benefited from the programme or had been involved in its activities at the community level. On average, eight community members participated in each session. Participants were purposively selected based on their involvement and exposure to COVID-19 activities, and their willingness to share their perspectives on how the programme and the community have responded and adapted to the pandemic. Locally trusted key informants from the areas were used to recruit participants. To ensure gender equity and equal participation, the FGDs were initially stratified by gender, considering the traditional roles of men and women in the community. However, in cases where gender stratification was not feasible due to low participation rates or the unavailability of men, a gender-sensitive approach was used to encourage equal participation by both genders. A total of ten focus groups were conducted, including two FGDs with only men, three with only women, and five mixed, balanced FGDs. The FGDS were guided by a topic list (Annex 5). Participants in each KII and FGD session held in the interior were provided with a food snack and a mobile phone card worth SRD 200 as compensation for their participation.

Location	Number of FGD
Region Oost Suriname (3)	
Gakaba	1
Stoelmanseiland	1
Drietabiki	1
Region Brokopondo North (3)	
Powakka	2
Redi Dotie	1
Region Brokopondo South (4)	
Brownsweg	2
Klaaskreek	1
Brokopondo Centrum	1
TOTAL	**10**

Figure 7 Focus Group Discussions

3.1.3 Ethical approach

The evaluation team adhered to the United Nations Evaluation Group (UNEG) Code of Conduct for Evaluation in the United Nations Systems and the UNICEF Procedure for Ethical Standards:

- Independence and impartiality: The evaluation team members had no conflict of interest and no role in the implementation of programme activities.

- Credibility: The evaluation team applied a participatory data collection methodology and triangulation of reported findings by using and analysis of evidence from both primary and secondary data sources.
- Privacy of Participants: Collected data from participants was stored private with password protection and data was processed anonymous to maintain the confidentiality of the participants.

Prior to the interviews and group discussions, the study objectives were explained to all participants, and they were given the opportunity to provide either verbal or signed consent to participate.

3.2 Data processing and analysis

To analyze the data obtained from the KII and FGDs, a systematic and structured content analysis was conducted. The FGDs were transcribed verbatim and thematically analyzed using inductive coding to generate key themes from the findings. The textual content was summarized into data relevant to the evaluation criteria. The results from the KII and FGDs were then triangulated with information obtained from the desk review of secondary sources and available quantitative data from progress reports and monitoring data provided by MM.

Integration of gender and equity in the evaluation

The evaluation assessed the extent to which the project activities were informed by the needs and interests of diverse groups of stakeholders. Additionally, the evaluation assessed the extent to which a human rights-based approach was incorporated in the design and implementation of the interventions.

3.3 Challenges and mitigation measures

Risks and limitations	**Mitigation measures**
Challenges in arranging interviews	The evaluation team was as accommodating to the extent possible during the fieldwork period. When staff was KII respondents were unavailable for interviews, an attempt was made to shift the fieldwork to more appropriate dates. In exceptional situations when that was not feasible, a colleague was invited for interview. When focus group participants canceled their commitment ad hoc, the evaluation team recruited other participants by convenience sampling (with considering of in-and exclusion criteria).

Table 8 Challenges and mitigation measures

4. Evaluation findings

This chapter describes the evaluation findings based on the criteria that were established. The findings are organized by intervention and in accordance with the evaluation question, as reflected in the evaluation matrix.

4.1 Strengthen case management capacities by the provision of portable oxygen concentrators

4.1.1 Relevance

The relevance evaluation criterion was guided by one key evaluation question:

<u>EQ 1: To what extent were the implementing strategies of the programme appropriate for achieving results?</u>

Programme objectives and implementation

According to programming documentation, the objective of this intervention was to strengthen the COVID-19 case management system by providing portable oxygen concentrators to all MM healthcare facilities in the interior, with the aim to reduce case fatality rates. With this intervention it was aimed to serve at least 50 patients in need of oxygen. The procurement of the oxygen concentrators was done by UNICEF, and the devices were delivered to the MM coordination center in Paramaribo in November 2021.

The distribution of oxygen concentrators to the health facilities in the interior by air and/ or boat was planned and carried out by the logistics department of MM in collaboration with medical doctors in charge of the designated regions. The initial plan was to deliver one portable oxygen concentrator to each of MM 52 health facilities. However, this goal appears to be unachievable because the provided oxygen concentrators needed a constant electrical power supply, which represents a significant challenge for health facilities in the interior. Although each MM health facility is equipped with solar power panels as basic energy source, these panels are not capable enough to generate the continuous energy required by the oxygen concentrators. Only the region Brokopondo and a number of health facilities in the Upper Suriname region have continuous electricity delivered by the state electricity company. Consequently, the devices were introduced only at these locations.

Intervention based on need of support and alignment with national policies

MM has adapted the national case management guidelines from the National COVID-19 Preparedness and Response Plan in their case management protocol, with one of the recommendations being the use of biomedical equipment for respiratory support with oxygen therapy. The intervention is also consistent with case UNICEF's COVID-19 Response and Recovery Plan (UNICEF, 2021).

Prior to the implementation of this intervention, MM health facilities relied solely on refillable oxygen cylinders to provide respiratory support to patients in situations requiring oxygen, such as trauma, heart failure, pneumonia, asthma, and for maternal and child care. Suriname has an oxygen cylinder delivery network in place, but during the peak of the pandemic, there was a high demand for oxygen, which was challenging to meet due to limited stocks. This affected the timely delivery of oxygen cylinders to health centers in the interior where it was required for treatment of COVID patients. In addition, transport of oxygen tanks to the rural areas in the interior is expensive and logistically intensive.

Evidence gathered through KII confirms that UNICEF's support in the provision of portable oxygen concentrators was appropriate, despite the fact that the devices could not yet be used at every location as intended.

Interviewed frontline workers and MM implementation team members agreed that the devices arrived at a critical time and this intervention was perceived as lifesaving for patients who could not be transported to the hospital. At times, during the pandemic's peak, there were multiple patients in need of oxygen, demanding a quick response. The refillable tanks were then insufficient to meet the needs. Where the new devices were available and usable, relevance was proven and considered as practical solution for assisting patients for several factors:

- MM now had more treatment options available for scenarios where numerous patients needed oxygen at the same time, which enhanced the case management capacities.
- It was recognized that patients find it more convenient to receive care at local health facilities, closer to their families and thus allowing them to stay closer to home, taking into account logistical costs and quality of life. It takes several hours to get to a hospital in Paramaribo, and the hospitals had reached their maximum capacity. This was emphasized by all health workers.
- The devices are being used for a variety of medical conditions, in addition to COVID-19 patients. As a result, the devices contribute to the improvement of case management capabilities not only for COVID-19 patient care, but also for other respiratory diseases or medical conditions that require of oxygen.

Examples given include Powakka and Redi Dotie, two peri-urban indigenous settlements in the Brokopondo region that saw significant outbreaks during the pandemic's fourth wave. According to the health workers, there are many people with underlying medical conditions in both villages, who are at higher risk of severe illness when they become infected with COVID-19.

> *'After a major outbreak here in Powakka almost every household in this community had one COVID-19 positive member. We have a lot of patients with underlying diseases. People in need of oxygen didn't want to go to Paramaribo to the hospital because they were afraid.'* Healthcare worker, Powakka.

> *'Sometimes several people at the same time were in need of oxygen. During peak times it was used by several patients. It was valuable because those requiring oxygen could be monitored by us at the policlinic and didn't have to be transported for hours to the Wanica Hospital.'* Healthcare worker, Redi Dotie.

Also, in Upper Suriname, at the Ladoani health facility, oxygen concentrators were used for several patients, and in some cases were given home to patients who had access to electricity via a fuel-based electric generator.

> *'We have used the oxygen concentrators at several patients. It was more convenient for the patients since they could bring the oxygen concentrator home with them. The patients and their family received instructions on how to use the device, and so they were able to use it at home.' Health worker, Ladoani.*

Figure 3 Oxygen concentrators at MM Health facilities

4.1.2 Effectiveness

This section compiles findings on how the intervention achieved its objectives at output level.

The effectiveness evaluation criterion was guided by three main evaluation questions.

EQ 1: To what extent have the planned results in the implementation been achieved?

Progress towards expected output

The expected output of this intervention was to provide an oxygen concentrator to each of the 52 MM health facilities in order to strengthen their case management capacities. At least 50 oxygen-dependent patients were expected to benefit from the distribution.

At the time of the evaluation, all health centers in Brokopondo, as well as two in Upper Suriname (Ladoani and Guyaba), had received the oxygen concentrators; these are the locations with a continuous power supply. Distribution was also done to the main health centers of region East (Stoelmanseiland and Drietabbetje) for storage until the possibility of usage is created. Distribution to health facilities in region Central Suriname, Amerindians and the remaining health facilities in the Upper Suriname region has not yet occurred; the remaining devices are stored at the coordination centrum in Paramaribo.

Data gathered through KII with frontline workers confirmed that the devices were useful in treating at least 54 patients in need of oxygen. The intervention was perceived as effective as it has the potential to save lives and improve child survival, as well as improve health care quality and strengthening the health care system at the local level.

The table below provides an overview of collected information regarding equipment distribution to health facilities, as well as the number of health facilities able to use the device.

Region	Number of MM health facilities	Number of oxygen concentrators distributed	Capability to use the oxygen concentrator	Number of people treated
East Suriname	12	12	0	0
Upper Suriname	13	2	2	10
Brokopondo	12	12	12	44
Central Suriname	6	0	0	0
Amerindians	9	0	0	0
Total	**52**	**26**	**14**	**54**

Table 9 Equipment distribution

The numbers in the table above, indicates that half of the devices were distributed at the time of evaluation. In terms of effectiveness, the geographical coverage target was not reached, since coverage was affected by the lack of adequate power supply. The total number of people who benefited from the oxygen concentrators, on the other hand, was significant and met the target.

EQ 2: To what extent have efforts contributed to strengthening existing case management programme?

Systems strengthening

UNICEF's case management strengthening support is aimed at ensuring that the targeted population have access to quality COVID-19 services. At the time of the evaluation, this had only been partially accomplished. According to interviewed health workers, the use of oxygen concentrators is beneficial over traditional oxygen cylinders because they do not need to be refilled. Furthermore, the devices can be used to assist patients suffering from other diseases who require oxygen, such as mothers and newborns. The intervention was viewed as a sustainable solution that could benefit a larger population when existing operational challenges at health facilities with limited electric infrastructure are addressed.

EQ 3: What are the major factors influencing the achievement and non-achievement of the results?

Challenges in implementation

As already mentioned above, one major constraint in reaching the planned geographical coverage of the oxygen concentrators include a lack of continuous power supply at the local health facilities in the interior. This was identified early on, and it was discussed and reported to UNICEF in the progress report. However, MM seized the opportunity to receive the equipment because it can contribute to further strengthen their healthcare system once the power supply system is upgraded.

Another issue raised and experienced by several health workers in the interior was a lack of proper training in the use of the oxygen concentrators. Although the RC provided on-the-job guidance and training, either physically at the location or using telehealth, some health workers expressed a lack of confidence in using the equipment and suggested a more in-depth training, integrated in the refresher training programme.

4.1.3 Efficiency

Efficiency of the programme was assessed along four main evaluation questions.

EQ 1: Which management and coordination structure and mechanisms among programme staff and partners have aided/ guided the programme implementations?

EQ 2: To what extent is the strategy designed and implemented in a way to generate solid evidence from monitoring and evaluation to monitor progress against results and to inform adjustments where required?

EQ 3: To what extent are existing partnerships contributing or strengthened to achieve results?

Management and coordination structures

The management and coordination of this intervention were guided by existing management- and logistic structures within MM, in close collaboration with UNICEF. UNICEF procured the equipment, which was later officially handed over to MM. MM was in charge of distributing the devices to the health facilities in the interior. Regular updates on implementation and progress status were provided to UNICEF through standard quarterly progress reports submitted to the UNICEF office on a quarterly basis.

EQ 4: To what extent is the fund allocation adequate to implement the strategic interventions?

Funds allocation

The evaluation assessed whether the costs of the devices were reasonable to the benefits. When weighing the costs versus the benefits of this intervention, KII respondents assumed that the benefits would outweigh the expenses due to the high transportation costs of patients from the interior to Paramaribo. Another important factor mentioned was that the intervention leads to improvement in patients' quality of life. This finding is in line with findings from the literature review, where several studies imply that the use of oxygen concentrators in low-resource settings is found to be cost-effective. The initial equipment purchase is considered relatively high, but device maintenance costs are low, and in addition, the devices can operate for thousands of hours without significant maintenance and costs (Nowadly & Portillo , 2022). Compared to the prior alternate strategy (use of refillable cylinders which needs to be refilled), the portable oxygen concentrators offer benefits. The devices are also useful for other diseases, indicating a sustainable investment.

4.2. Risk Communication and Community Engagement

4.2.1 Sensitization sessions with Traditional and Community Leaders religious leaders and Vaccination Demand creation in communities in the interior

4.2.1.1 Relevance

The relevance evaluation criterion was guided by three key evaluation questions:

EQ1: To what extent were the implementing strategies of the programme appropriate for achieving results?

EQ 2: To what extent was the programme relevant to increasing the demand of the COVID vaccine?

EQ 3: To what extent was the programme relevant to decreasing the COVID vaccine hesitancy?

Programme objectives and implementation

As derived from programming documents, the objective of this intervention was to address vaccine hesitancy and strengthen the demand for immunization against COVID-19. The main target group includes residents of Brokopondo and East Suriname. Another target group aimed at were the adolescents.

The key activities in the RCCE intervention implemented were:

1. Sensitization sessions with traditional leaders and community mobilizers' engagement on the COVID-19 vaccine roll out in the interior.
2. COVID-19 awareness- and vaccination demand creation within communities in the interior aimed at adults and adolescents

According to KII with MM management and implementation team, the RCCE strategies coincide with the Primary Health Care Principles on which MM health care provision is based; entailing a health-care system that promotes community well-being by preventing and treating disease and encouraging community participation. The implemented RCCE strategies are also aligned with the National COVID Response Plan which includes RCCE as one of the key pillars.

During the evaluation, respondents were asked whether the implemented RCCE activities were appropriate for addressing the objective in the current context. It was widely agreed among those interviewed that tailored RCCE strategies for communities in the interior were required. Prior to this programme, the MM management team conducted preliminary information sessions about COVID-19 with traditional leaders and health workers in the interior. It became clear that there were many information gaps, and misinformation about the vaccine was circulating among the communities, both of which needed to be addressed.

While RCCE activities were deployed through mass communication at the national level, this was not found to be appropriate for the interior, given the specific context. Most areas lack a functional mass communication infrastructure that allows for timely and accurate health information spread. Furthermore, given the diversity of spoken languages among tribes, one-way mass communication was considered inappropriate for communities in the interior. In rural areas, health information is mostly spread through word of mouth. As noted by one respondent:

> *'The national COVID-19 vaccination campaign did not reach the populations in the interior.' In the beginning, there was no information in the various local languages offered. This resulted in an information gap in communities in the interior.'* MM Management team member.

Sensitization sessions with traditional leaders and community mobilizers' engagement

The sensitization sessions were led by the MM management and medical team and were aimed at raising awareness about health-protection measures and educating the community about COVID-19 risk factors. At the same time, the sessions aimed at understanding the risk perception and behaviors of the community and the local interpretation, and dispelling myths. Preventive measures for COVID-19 were discussed, with a focus on handwashing, wearing face masks, physical distancing, and vaccination. During sessions and focus group discussions, traditional authority members were given the opportunity to

express their concerns, which were directly addressed by MM. MM sought collaboration with people with influence and respect in the village, ranging from religious leaders in villages with a strong religious community to political figures.

Among the KII respondents it was commonly agreed that conducting sensitization sessions with traditional leaders was a prerequisite for vaccine demand generation activities within the community. Traditional leaders from different regions have unanimously stated during interviews that MM should provide them and their community with accurate information about the virus and the vaccine, otherwise cooperation would not be granted for vaccination campaigns in their community. As a result, the sensitization sessions were planned and carried out during the intervention's first phase.

MM also acknowledges the existence of strong hierarchical social relationships in the interior, particularly in rural communities, which cannot be ignored. Indigenous and tribal communities are directed by traditional authorities who are legally recognized by the Government. The Granman is the highest traditional authority, followed by Head Captains, who are assisted by Basyas. Traditional and community leaders are familiar with all aspects of their community's social structures, and their involvement in reaching communities is critical. Cultures in the interior are collectivism oriented rather than individualistic, and community activities are commonly undertaken together.

As stated by KII, engaging with traditional leaders and community influencers such as local and religious leaders is well aligned with natural community processes. The assumption was that they have influence over others and could contribute to community mobilization activities by empowering individuals and communities, raising awareness about COVID-19, reducing vaccine hesitancy, and increasing vaccine uptake. The main task of the community mobilizers was to promote preventive measures and vaccine uptake by acting as a "champion" for the vaccine, using a dialogue-based approach. Success stories of community mobilizers were shared with the community through a variety of sources (short movies via WhatsApp, local radio stations).

Relevance of collaboration with community influencers was expressed by several KII and respondents from different FGDs. Seeing their peers as champion has helped them in their decision to vaccinate against COVID-19.

> *'….in our community's people do not believe that the vaccine would not harm them. Seeing people from their own community who promotes the vaccine gives bigger trust in the vaccine.'* FGD participant, East Suriname.

On the other hand, a number of FGD participants also expressed their concerns, and indicated that there is still a major distrust of the vaccine, although people from their own communities served as role model:

> *'…we don't believe that they are vaccinated. People think that they have injected water instead of the vaccine.'* FGD participant, East Suriname.

A health worker from region Brokopondo noted:

> '*We have collaborated with Galimo, a singer, an influencer and artist from this community. Also, with prominent political persons, but I do not think that this has led to more vaccinations. People are still afraid.'*

COVID-19 awareness- and vaccination demand creation within communities

Community engagement refers to the involvement and participation of individuals, groups or structures in decision making, planning and design, governance, and the delivery of services. According to the MM management team, involving communities contributes in the development of public health interventions that are acceptable and beneficial to them. In two areas in East Suriname and Brokopondo, MM worked with consultation platforms that were installed earlier. Consultation platforms are health committees consisting of 10-15 community members who are nominated by the traditional authority. In collaboration with MM, the platforms are contributing to health improvement initiatives. MM healthcare workers have reported that members of the consultation platforms have actively and significantly assisted MM in executing activities.

After the initial sensitization sessions with traditional leaders and community mobilizers, the next implemented activity included COVID-19 awareness sessions within the communities. Emphasis was given to the need for two-way communication following a dialogue-based approach. According to the MM implementation team and healthcare workers, the dialogue-based approach was the most suitable. MM has extensive experience with health promotion activities, since this is one of their core functions. Usually, health education is provided in groups, but due to restrictions on mass gatherings, a door-to door approach was chosen. The health workers who conducted the activity found that the door-to-door approach was effective in this particular context. This was made possible by the intervention covering transportation costs, which are typically high in the interior. The target audience was provided with information on COVID-19 preventive measures, modes of transmission, symptoms, and vaccination.

Participants in the FGD noted that due to the COVID-19 awareness campaigns, people now understand how to follow preventive guidelines and avoid getting sick. In general, there was appreciation for the door-to-door approach from MM and the two way-communication. As expressed by a MM health worker:

> *'From previous experience, we found that door-to-door was the best method to reach our communities because people felt more comfortable asking questions and expressing their concerns.' We were also in the midst of a pandemic, so gathering was not recommended.'*
>
> *'First, we disseminated information through group sessions. However, we have found that going door-to-door works better because people are more willing to express their concerns and ask questions. Because of social media information, there are so many misconceptions.'*

Another MM health worker expressed:

> *'We noticed that with door-to-door outreach in the communities, women in particular would ask us more questions about the vaccine in relation to fertility issues. During mass information sessions, there are fewer opportunities to address these concerns in private'.*

It was commonly agreed among FGD participants that the two-way communication awareness sessions were most appropriate. In general, this method was perceived well since they were able to address questions directly. In addition, it was also mentioned that during group sessions, you can also learn from the questions of others, which was also perceived as an advantage.

The importance of sensitization sessions and community engagement was also expressed by KII respondents in terms of aligning community expectations with offered services. Consulting the community assures that mutual expectations are clear at an early stage and helps avoid unrealistic expectations. As expressed by one respondent from the MM management team:

> *'We know from experience that the activities we carried out not always align with the expectations of the community. We have experienced that communities often want interventions that are tangible. It can be challenging to find a balance between what MM can offer and the expectations of the communities.'*

This was further demonstrated by another example:

> *'When we reach out to the community in awareness sessions and we demonstrate hygiene practices for example, people expect that we also provide the attributes to be able to follow the measures. Having discussed mutual expectations contributes to a better understanding of perspectives. '*

Adolescents

The sensitization sessions aimed at adolescents were intended to sensitize adolescents so that they can influence their parents. It was important to improve their knowledge about COVID-19, ensuring that they had the correct information to understand the issue and make informed decisions. During the FGD, it became evident that there are numerous challenges that affect adolescents. It was observed that there was a high rate of children who dropping out of school. Healthcare workers also noted that youth do not believe in the presence of COVID, and assume they are not the groups at risk, as was evident during the awareness sessions.

> *"…so, the whole pandemic has also affected our youth. Because when the pandemic broke out, the schools were closed. The boys then left for working in the goldmining fields and when everything was back to normal, they didn't want to go back to school, they stayed on the goldmining fields to work and earn money. The girls have entered into serious relationships with men and have also not gone back to school to continue their studies, so that pandemic has caused a setback in that area'*. FGD participant, East Suriname.

4.2.1.2 Effectiveness

Effectiveness is evaluated based on progress towards achieving established targets. The targets were derived from programming documents. The effectiveness evaluation criterion was guided by two main evaluation questions.

<u>EQ 1: To what extent have planned results in the implementation been achieved?</u>

<u>EQ 2: What are the major factors influencing the achievement and non-achievement of the results?</u>

Progress towards expected output

In terms of achieving the established targets, the RCCE activities can be considered effective. All targets have been achieved at the output level, as presented in the table below. This data was derived from the MM monitoring and vaccination data system. With the sensitization sessions in the communities MM

aimed to reach at least 10,000 people in targeted areas in the regions of East Suriname and Brokopondo. In total, 11, 807people were reached with the sensitization sessions.

Indicator	Target	Achieved
Number of persons reached by sensitization messages	10,000	11,807
Number of persons vaccinated against COVID-19 in targeted areas	1,000	2,070
Number of adolescents reached by awareness sessions	250	430

A more detailed table in which the achievements are presented by region, can be found in Annex 7 and 8.

Regarding COVID-19 vaccination, MM aimed to vaccinate at least 1000 persons in targeted areas. Evaluation data shows that a total of 2070 people in the interior have received their second dose since the start of the vaccination campaigns in March 2021, until May 2022. In perspective, despite the fact that the objective of this intervention was achieved (at least 1000 persons vaccinated in targeted areas), this indicates that less than 4-5% of the total population in the interior is vaccinated, while Suriname's national COVID-19 vaccination coverage is approximately 40%.

Most health workers expressed the opinion that output is usually achieved over the long term, indicating that the number of vaccinated individuals can increase over time.

> *'Usually, we do not get direct output from health information sessions. People need time to think about the information. Now, they have learned about the disease and about the vaccine. It sometimes takes time for them to process the information. Behavior change is considered a long-term outcome.* 'Healthcare worker, region Brokopondo.

Facilitators and barriers to sensitization sessions with traditional leaders and community engagement

As stated before, the sensitization sessions with traditional leaders were considered a prerequisite for further implementation of RCCE activities. The assessment revealed that the level of community engagement varied by region and by village and that in villages where the traditional authority had a strong influence, adherence to preventive measures was better.

In summary, the identified facilitators derived from the KII and FGDs were as follows:

- Sensitization sessions with traditional leaders were positively valued by them, especially the personal contact with medical doctors from Paramaribo was highly appreciated and improved their level of trust.
- Community mobilization activities were easier to carry out in areas where traditional authorities possess significant influence and have a positive attitude towards the COVID-19 vaccine.
- Community members were more likely to engage in communities with an active consultation platform.
- The involvement of community influencers was deemed significant because it had a positive impact on those who required peer persuasion.

Facilitators and barriers to COVID-19 vaccine uptake

As the evaluation sought a more in-depth understanding of the enabling factors and barriers for the achievements, respondents from KII and FGDs were asked about their opinion regarding the major factors influencing the achievements of the RCCE objectives. There was a multiplicity of views and concerns expressed by the participants. Their views are presented thematically under two main themes: (1) facilitators of COVID-19 vaccine uptake and (2) barriers to COVID-19 vaccine uptake.

Perceived barriers

Data collected from KII respondents and FDG, indicates that there are different factors that drive vaccine acceptance. Vaccine acceptance is described as the willingness and intention to receive the vaccine, if available. The circulation of conflicting information about the vaccine is considered the major barrier and is contributing to lower vaccine acceptance. FGD participants claimed that a lot of information is disseminated via social media and that people tend to believe it.

During interviews with the MM management team and health workers, it was stated that one of the biggest obstacles is the low proportion of vaccinated health workers working in the interior. While approximately 70% of MM personnel in Paramaribo are vaccinated, this percentage is significantly lower in the interior, where approximately 30% of health workers are vaccinated.

Many healthcare workers in the interior have expressed concern about being vaccinated. This was viewed as a weakness because people always wanted to know if the person providing the information had been vaccinated against COVID-19 during community outreach activities. Motivating community members to vaccinate against COVID-19 is therefore perceived as challenging.

> *"When people hear that healthcare, workers are not vaccinated against COVID-19, they are more skeptical and quit believing you.' Healthcare worker, region Brokopondo.*

From the FGD sessions, the main recurring themes that influence vaccine hesitancy were categorized as follows:

- the perceived risk and severity of the illness, such as whether people believe they will be infected or that the virus will be severe if they are infected. This influences motivation to protect oneself through vaccination.
- beliefs about the health system's and health providers' ability to provide a safe vaccine, to act in a trustworthy manner, or to have beneficial motives
- whether vaccines are delivered in a culturally acceptable way (language appropriate)

Perceived risk and severity of illness, in combination with the circulation of fake news were mentioned often by KII and FGD participants as the main barrier for vaccine uptake.

> *'What have played a role is the you tube movies that people have seen. Therefore, it was difficult for them to make a choice. And, there were not a lot of sick people in this area. The sickness was bearable and people used their traditional medicine for cure. People were not afraid anymore for COVID and that made vaccination unnecessary'.* KII member Traditional Authority Upper Suriname.

According to the majority of FGD, regardless of region, it was stated that people have more trust in their own traditional medicine for strengthening their immune system and curing COVID-19, and do not consider it necessary to take the vaccine.

> *'When I had COVID, I boiled leaves from the forest and bathed in them. I had no idea it was COVID; I'd been doing what I used to do when I was sick'.* FGD participant Gakaba.

> *'It was less here, but we really heard that Covid still exists….understand me? We have our oso dresi, we took our oso dresi, those things helped us a lot here. When you get sick, we pick leaves, cook and bathed well and preferably sweat. Within a week it is over*.' FGD Klaaskreek

> *'I kept telling myself I'm going to use oso dresi and I also adhere to the government's rules, so I adhered to that and everything else was fine.'* FGD Klaaskreek

The vaccine uptake was also largely hampered by fear:

> *'Too much fake news preceded the vaccine, on facebook, whatsapp, all kinds of things, then you get scared. Because we as Auccaners, we don't believe things easily. If you bring information to us, it must be very good information, otherwise we will not believe it, so with regard to the vaccine, no fake news had to be spread beforehand, then we would have ourselves vaccinated, but as it happened, no, it is not. Maybe from this whole village only 2 people got vaccinated, no more than that*'. FGD participant, Drietabiki

> *'…because my sister took both vaccinations and that booster. She then called here to say, I'm dying, she was infected again despite being vaccinated, you could hear her shivering on the phone'.* FGD participant Stoelmanseiland

> '…and we hear all kinds of things, that young people who have children have a chance to have an unhealthy baby'. FGD participant, Drietabiki

Summarized, the main barriers to vaccine uptake included the following:

- The circulation of contradicting information, misinformation, and fake news
- Lack of trust in the vaccine
- Lack of trust in health care workers promoting the vaccine
- The use of traditional medicine
- Stigma and lack of decision autonomy
- concerns about the speed of the vaccine roll out
- Concerns about known and unknown effects on health
- Fear of side effects
- Effectiveness of the vaccine
- Availability of the preferred choice of vaccine
- Not enough detailed information about the vaccine

Perceived benefits

The evaluation showed that villages with high vaccination rates either had strong religious influence or traditional leaders who supported vaccination rates. On the other hand, significant outbreaks and a raised awareness of risk also contributed significantly.

> *'I don't know where the news came from, it was sent around on Facebook and through other channels, so you don't go, because you don't know what's true and what's not. You're scared. But after that information from MZ and from that organization to which we are affiliated (church), everything was clear. Because all leaders within the organization have been vaccinated, none of them have died, God has protected them, so why should it turn out differently with us. So that way, but I don't think anyone would get vaccinated if there hadn't been any education.'* FGD participant, Gakaba.

> '*Yes, we must be honest; when the vaccination campaigns began, I stated that I would be the last to be vaccinated. But…you all know what that thing is, I have a phone, and if you all hear the information that is forwarded to you….people died right after that vaccination, mothers and children died, and others became paralyzed, so for something like that, if you don't have the right receive information, you don't go*.' FGD participant, Gakaba.

Cultural and gender aspects in the activity

By providing information in the local languages, health promotion and education materials in own languages, language barriers were addressed. The RCCE activity aimed at adolescents did not consider a specific gender approach, however, specific attention was given to women when addressing concerns regarding the vaccine and fertility issues. When suitable vaccines became available for pregnant women, special awareness was created.

At the awareness sessions for adolescents, a gender approach was integrated in the activity. Special consideration was given to the hygiene packages that were provided to both genders, e.g. the packages for girls contained sanitary napkins and other products utilized by girls for hygiene. The adolescents received the packages with great enthusiasm.

Figure 4 Hygiene packages adolescents (left= for girls, right = for boys)

4.2.1.3 Efficiency

Efficiency of the programme was assessed along four main evaluation questions.

EQ 1: Which management and coordination structure and mechanisms among programme staff and partners have aided/ guided the programme implementations?

EQ 2: To what extent are existing partnerships contributing or strengthened to achieve results?

The collaboration between UNICEF and MM is based on mutual benefits. While MM has the opportunity to strengthen its health system's capacity to provide healthcare to communities in Suriname's interior, UNICEF addresses its goals and strategic objectives through its priority programmes. UNICEF's role is to support the technical implementation of the programme. The day-to-day implementation and monitoring of results are carried out by the MM management team. Project activities are both top-down and bottom up driven at MM: the management team sets priorities and delegates tasks to the health facility, or the health facilities make proposals based on their needs as assessed in their communities. Working this way has proven to be effective, according to MM.

EQ 3: To what extent is the strategy designed and implemented in a way to generate solid evidence from monitoring and evaluation to monitor progress against results and to inform adjustments where required?

Monitoring is important to assess whether the intended target audience is reached, the messages are understood, and the intended behavior change is taking place. MM has a data collection system in place, in which all health facilities report their activities monthly. Collected data includes the e.g., number of patient visits, number of people reached through outreach. For each activity, specific indicators are tracked. Based on these collected data the progress of implementation is informed and reported to UNICEF.

EQ 4: To what extent is the fund allocation adequate to implement the strategic interventions?

All available funds allocated for this activity were utilized to the extent possible because of the unique environment of hard-to-reach communities and significant logistical expenditures. The door-to-door strategy that was chosen as intervention strategy presented logistical and financial issues for the MM implementation team in the interior, where expenditures are occasionally higher than projected due to price fluctuations. This was addressed by MM by merging several (logistical) activities for greater efficiency. Alternative strategies, such as mass media campaigns targeted at communities in the interior, were asserted to be ineffective because many areas of the interior lack access to power and technological advancements.

4.2.2 RCCE - Youth Debates: The Backlot Foundation

4.2.2.1 Relevance

The relevance evaluation criterion was guided by three key evaluation questions:

EQ1: To what extent were the implementing strategies of the programme appropriate for achieving results?

EQ 2: To what extent was the programme relevant to increasing the demand of the COVID vaccine?

EQ 3: To what extent was the programme relevant to decreasing the COVID vaccine hesitancy?

The Backlot Foundation

The Backlot, a Foundation established in 2002, is committed to contributing to the social and cultural development of Suriname through the creation of educational and commercial activities. Back Lot also produces programmes for Surinamese Television. A well-known educational programme in Surinamese society is "10 minuten Jeugd Journaal" in which during 10 minutes news regarding actual topics is presented targeting youth in a child friendly way, and "Krutu", in which adolescents express their opinions and discuss current relevant matters that affect them most. In collaboration with UNICEF, Back Lot produced a series of Special Edition Krutu's in which different topics were central.

Programme objectives and implementation

The goal of this activity was to raise awareness about COVID-19, vaccine sensitization, and demand creation among adolescents and to enable them to express their opinion on what COVID-19 means to them and how it has impacted their lives through youth debates. This was done through the broadcast of four semi-live Krutu's on television, with the goal to creatively informing and sensitizing the public about COVID-19 vaccinations, as well as influencing and sensitizing them by the various points of views presented during the debate.

The intended target groups were divided into three age groups: under the age of 12, between the ages of 12 and 18, and between the ages of 18 and 25. The programme's objectives are aligned with UNICEF Humanitarian Response Plan and intended to contribute to an increased understanding of children's priority issues among key decision makers and communities, including opportunities for children to express their views. Specific objectives were formulated as follows:

- Sensitize adolescents and youth about the subject of vaccinations
- Sensitize and inform the general public through the TV broadcast
- Increase youth participation and their role in having a right to an opinion

The Krutu's with the topic COVID-19 and vaccination were organized and broadcasted between November and December 2021. Krutu, a well-known national television programme in Suriname, is an organized debate programme in which adolescents are encouraged to express their opinions and discuss current issues that are important to them in order to effectively engage in critical thinking about the given topic. During studio sessions, this programme's debates are recorded for semi-live broadcasting via television. The programme was implemented in stages, beginning with the development of the concept and training materials, followed by the training of adolescents in debating skills, the facilitation of debates, and studio productions of the programme, including promotion and broadcasting.

According to KII, Backlot has a core group consisting of young people who regularly participate in debates. For the COVID-19 debates, additional participants were recruited through the Backlot network (social media, word-of-mouth) and through different schools. In selecting participants, the Backlot attempted to represent a reflection of the Surinamese community through a cross-sectional sample, considering both a gender and equity-based selection in terms of background and ethnicity. Another requirement was that participants must be familiar and have affinity with the subject COVID-19. Prior to the debates, the new participants were trained and educated in debating skills in order to express their views and opinions

about vaccinations and to create a snowball effect of informing and sensitizing target groups at the general public through the views expressed in debate. The training took place for 2 days.

Participants who participated earlier in the debates, followed a teach inn session. Topics and statements about COVID-19 and vaccination were tailored to the target group's age. Every trained adolescent who had participated to the debate, was considered, and included as agent of change for other programme areas and activities. The Krutu's were led by two facilitators who presented the statements and guided the discussions. The debates were repeatedly broadcasted on four national television channels, ABC, Apintie, STVS, and ATV. Social media channels were also used to livestream the event (Facebook). An after movie was also made available, in which the good interaction between the debaters and the atmosphere were noticeable.

During the evaluation respondents were asked if they thought the debate was relevant for raising awareness of COVID-19 and vaccination. All respondents positively confirmed, although some suggestions were also listed to improve the programme. The interviewed respondents highlighted that focusing on adolescents has shed light on the impact of COVID-19 on their lives, what it means to them and how they cope. As expressed by one respondent:

> *"From the debates we have observed that young people have had a lot of trouble dealing with the COVID situation, and the mental impact cannot be underestimated. Also, there is a lack of guidance for young people."*

Another participant mentioned:

> "One *suggestion is to include adolescents from the districts as well. People from the districts do not have easily access to Paramaribo for participation in a debate. It should be considered to determine the difficulties they are facing".*

Another participant mentioned:
"*There are also many 'taboo topics that should be included, including mental health and depression*".

The collected views reflect the relevance of this intervention for the adolescents.

4.2.2.2 Effectiveness

The effectiveness evaluation criterion was guided by two main evaluation questions.
<u>EQ1: To what extent have planned results in the implementation been achieved?</u>

<u>EQ 2: What are the major factors influencing the achievement and non-achievement of the results?</u>

As planned, a total of four Krutu's were held, respectively one Krutu with participant under the age of 12, one Krutu with participants between 12 and 18 years old, and two Krutu's with participants between 18 and 25 years old. In total, 40 adolescents were trained in debating skills.

Krutu is a well-known programme and watched by many people. By broadcasting approximately 50,000 people of all ages were reached, by repeatedly broadcasted the programme. This was derived from the audience rating from the broadcast of this tv programme. Trough social media the debates were also followed and live streamed through Facebook. It was mentioned by one participant she had achieved more than 1000 followers, and it was shared by more than 2000 people.

4.2.2.3 Efficiency

Efficiency of the programme was assessed along two main evaluation questions.

EQ 1: Which management and coordination structure and mechanisms among programme staff and partners have aided/ guided the program implementations?

The programme was guided by a planning that was implemented by the production team of the Backlot who has a lot of experience with this programme already. According KII with participants, there as a clear communication structure which was consequently followed. The organization was good, there was a time schedule and clear communication.

EQ 2: To what extent is the fund allocation adequate to implement the strategic interventions?
The programme had a total budget of USD 21,503.71, of which USD 718.85 was provided by Backlot and the remaining USD 20,784.86 by UNICEF. With this investment an estimated total of 50,000 people of all ages were sensitized with COVID-19 and vaccination and special attention was given to adolescent by increasing youth participation and their role in having a right to an opinion.

4.3 Cold chain support and logistic support

4.3.1. Relevance

The relevance evaluation criterion was guided by one key evaluation question:

To what extent were the implementing strategies of the programme appropriate for achieving results?

Programme objectives and implementation

As derived from the programming documents, the objective of this intervention was to strengthen the cold chain by supplying cold chain equipment to MM with the aim of contributing to the continuation of the vaccination programme and increasing COVID-10 vaccination coverage in the interior of Suriname. The equipment was procured by UNICEF and handed over to MM for distribution to the health facilities in the interior. The cold chain supplies include:

- 50 Vaccine Carriers for safe storage and transport of vaccines
- Temperature monitoring devices (6 Remote Temperature Monitoring units, including 3-year subscription services and 20 Temperature Day logger Berlinger FT2E Int. sensor)
- 3 Solar Powered Vaccine Refrigerators for storage of vaccines
- 3 Laptops and 2 tablets for real-time field data entry for COVID-19 vaccination

The support from UNICEF included transportation of equipment and supplies, installation (where required), and on-the-job training in the use and maintenance of supplies.

Intervention based on the need of support and alignment with national policies

MM recognized immunization as one of the most basic and important health services provided to communities in the interior. At MM, vaccines are administered in accordance with the guidelines of the National Immunization Programme (NIP) and the vaccination programme is based on the Expanded Programme Immunization (EPI). Given the extensive field in which MM offers services, it is important that every health facility is furnished with equipment that can guarantee that the cold chain is safe. For the

safety and efficacy of the vaccinations to be guaranteed, proper vaccine storage is crucial. MM has equipped most of its health facilities with cold chain storage equipment that is suitable in the interior-context, given the low resource settings such as a lack of power supply. However, not every health facility is equipped with a solar powered refrigerator yet, which poses challenges to the timely vaccination of target groups. Health centers without refrigerator are dependent on the visit of the doctor once a month who brings the vaccines. Through several donors MM received vaccine carriers for supporting the immunization programme, however replacement was needed due to malfunctioning. MM carried out an inventory based on direct needs.

MM integrated the use of vaccine carriers into its EPI programme. When carrying out vaccination outreach campaigns, two vaccine carriers are used simultaneously: one for storage of the vaccine to guarantee the required temperature, and one that is used to 'work with'. MM strives to equip every of its health centers with the ability to store routine vaccines locally. In this way, vaccines can be made available on demand, for example, vaccines that have to be administered at birth to provide the Hepatis vaccine at newborns, and pregnant women. During every pregnancy, the woman's tetanus status is evaluated, and if necessary, she is immunized.

Vaccine carriers

Vaccine carriers are insulated containers that keep vaccines and diluents cold during transportation. The vaccine carriers are lined with coolant packs. Compared to cold boxes, vaccine carriers are smaller and easier to carry when walking.

During outreach activities, MM health workers are frequently required to travel by boat and walk long distances in the heat to reach remote villages since there are no other ways of transportation in the interior. The vaccine carriers are used by health workers for keeping vaccines cold during transportation during immunization campaigns and out-reach services. The vaccine carriers can be used for transporting vaccines from health facilities with refrigerators to outreach immunization sessions where refrigeration and ice are not available. The vaccine carriers were used at the COVID-19 vaccination sites in the interior for storing vaccines. The carriers are also used for regular vaccinations. With vaccine carriers, immunization outreach can be done to clients who are not able to visit the clinic due to their medical condition.

Health workers pointed out that the recently received vaccine carriers have advantages over the previous model that was used.

> *'These vaccine carriers are more convenient in use, since the ice packs do not have to be pre-conditioned.'*

Figure 5 Vaccine carrier

Relevance of the solar powered refrigerators was demonstrated by the cases described below:

> *Pelele Tepoe, an Ameriandian village in Suriname's far south, is located along the Tapanahoni river. The village is only accessible by plane, which takes about two hours from the capital city of Paramaribo. Tepoe has a population of approximately 500 people (2020), the majority of whom are members of the Trio indigenous tribe and are led by the tribal Captain. The village has a primary school and a Medical Mission health center with one permanent health assistant who provides basic care to the community, such as routine vaccinations for newborns, children, and pregnant women. In Tepoe, 15% of the population is younger dan 5 years of age. The village lacks a continuous source of electricity and basic services such as clean water for households.*
>
> *In Tepoe there was no possibility to store vaccines at the health facility prior to the arrival of the solar-powered vaccine refrigerators, and routine vaccination was only possible when vaccines were brought to the village with scheduled doctor visits, usually once a month. Vaccination in accordance with the vaccination schedule or provision of necessary vaccines at birth was thus not always achieved.*
>
> > *'With the installation of the solar powered refrigerator, the accessibility and availability of routine immunization increased considerably at this health center. Having the possibility to store vaccines locally creates the opportunity to provide routine immunization when needed and in time.'* Medical doctor, MM Coordination center.

In Hekoenoenoe, a village in region Upper Suriname, the donation of the refrigerator had contributed in a better availability of vaccines for the area.

> 'With *a vaccine refrigerator at location, we are less dependent on other policlinics in the area for outreach. It allows us to carry out our vaccination planning for children and do outreach.'* Healthcare worker, Hekoenoe.

The purchase of the solar powered vaccine refrigerators is therefore considered a sustainable investment in the long term, and it contributes to strengthening the cold chain.

Digital thermometers received also prove their worth by continuously recording the accurate temperature of the refrigerators. For example, the temperature can be monitored for a longer period of time and abnormalities can be detected and dealt with more quickly, increasing 'safety' of the vaccine. Technical problems can be detected quickly.

Figure 6 Solar powered refrigerator at Hekoenoenoe MM Health facility

4.3.2 Effectiveness

The effectiveness evaluation criterion was guided by two main evaluation questions.

EQ1: To what extent have planned results in the implementation been achieved?

EQ 2: What are the major factors influencing the achievement and non-achievement of the results?

Progress towards expected output

All vaccine refrigerators have been transported and installed at the planned location and are in use. The planned villages were the Amerindian villages Tepoe and Puleowime, and Hekununu in region Upper Suriname. At the time of the evaluation, all vaccine carriers had been distributed to all health facilities. Health workers have received training in the proper use of the vaccine carriers (train de trainers), since these are different models than the ones already in use at the health facilities.

Activity	Output target	Output Achieved	%
Distribution of Vaccine carriers	50	50	100%
Distribution of Solar Powered Refrigerators	3	3	100%
Distribution of 21 remote temperature monitoring unit	21	21	100%
Distribution of devices for real-time vaccination data entry	5	5	100%

Table 10 Distribution of cold chain equipment

EQ: What are the major factors influencing the achievement and non-achievement of the results?

While the solar powered refrigerators were handed over in November 2021 to MM, the installation of these at the designated locations finally were done during March/April 2022. The delay was caused by heavy rainfalls in the interior which has led to closure of airstrips. There were no other implementation issues identified during the evaluation.

System strengthening

EQ: To what extent have efforts contributed to strengthening existing cold chain?

As expressed by MM health workers, the distribution of the vaccine refrigerators and carriers as replacements of older models positively influences routine vaccination. Outreach is now possible to villages in surrounding areas without delay. The fridge tags allow for monitoring and signaling of problems in time, while guaranteeing the storage of the vaccines at correct temperatures therefore contributing to safety of the vaccines.

4.3.3 Efficiency

Efficiency of the programme was assessed along four main evaluation questions.

EQ 1: Which management and coordination structure and mechanisms among programme staff and partners have aided/ guided the programme implementations?

EQ 2: To what extent is the strategy designed and implemented in a way to generate solid evidence from monitoring and evaluation to monitor progress against results and to inform adjustments where required?

EQ 3: To what extent are existing partnerships contributing or strengthened to achieve results?

Management and coordination structures

In line with the case management intervention, the management and coordination of this activity was guided by existing management- and logistic structures within MM, in close collaboration with UNICEF. UNICEF procured the equipment, which was later officially handed over to MM. MM was in charge of distributing the equipment to the health facilities in the interior. Regular updates on implementation and progress status were provided to UNICEF through standard quarterly progress reports submitted to the UNICEF office on a quarterly basis.

EQ 4: To what extent is the fund allocation adequate to implement the strategic interventions

Funds allocation

The evaluation assessed whether the costs of the intervention are reasonable to the benefits. A review of existing literature revealed that a strong immunization programme can have a positive effect throughout society, including gains in school enrollment and education, longer life expectancies and increased economic productivity. Research has shown that the return on investment- including savings in healthcare costs and prevention of lost wages and loss of productivity due to illness- for every dollar invested in immunization children in low- and middle-income countries is larger than for other interventions (Pan American Health Organization, 2016). The cold chain equipment is considered a sustainable investment by interviewed healthcare workers and MM management team and has strengthened the MM cold chain

capacities. Given the high transport costs for reaching rural communities in the interior, the intervention is considered cost-effective in making safe vaccines widely available to hard-to reach- communities.

4.4 Infection prevention control WASH promotion

4.4.1 Relevance

The relevance evaluation criterion was guided by one key evaluation question:

To what extent were the implementing strategies of the programme appropriate for achieving results?

The objective of this intervention was to provide Healthcare workers with Infection Prevention and Control Material (PPE) and WASH items in order to offer protection during exposure to COVID-19 patients. In order to follow the hygiene preventive measures, there was an increased requirement for PPE-and WASH supplies. PPE-and WASH items were provided by UNICEF based on the identified needs. As PPE helps to prevent transmission of diseases between patients and health workers, MM Health workers are required to wear proper PPE when exposed to (suspected) COVID-19 patients or other sources of diseases.

According to MM health workers and management, there is an ongoing need for PPE at the health clinics. PPE supplies were received from different donors and the donation from UNICEF contributed to a good stock of PPE, allowing health workers to protect themselves from infection.

UNICEF also provided waste management materials. MM has a proper waste management system in place at its health facilities and has already started a project to introduce incinerators to the interior. UNICEF supported the logistical costs of transportation of this equipment to the health facilities.

Distribution of the PPE and WASH materials to the health facilities was based on needs and regulated by the MM warehouse department, which has a tracking system in place. The transport-and logistics department of MM was responsible for timely shipping the requested materials to the interior. According to the interviewed health workers, PPE material for health workers was available at all facilities, enabling them to perform their jobs safely.

4.4.2 Effectiveness

There were two key evaluation questions that served as the basis for the effectiveness evaluation criterion.

EQ1 : To what extent have planned results in the implementation been achieved?

During the evaluation, it became clear that PPE was always available. The challenges in receiving the materials on time at the health facilities were related to timely requesting them from the warehouse storage in Paramaribo and transportation to the interior. At the time of the evaluation, it was not possible to determine whether all materials were used, since MM also obtained PPE material from other sources. However, it was unanimously agreed among the interviewed respondents that the use and availability of PPE materials have been effective and important during the pandemic to protect oneself.

The provision of incinerators has contributed to safe waste management practices. Previously, medical hazardous waste materials such as needles and syringes were disposed of in safety boxes and locally

burned, but now incinerators can be used. At the time of the evaluation, all health facilities except for the region Amerindians were provided with incinerators for waste management.

EQ 2: What are the major factors influencing the achievement and non-achievement of the results?
The provision of IPC and WASH materials has contributed to the continuity of essential health services. Delays in the distribution of incinerators were caused by suboptimal weather conditions. During the evaluation, no other challenges were encountered with regard to these activities.

4.4.3 Efficiency

Management and coordination structures

In line with the interventions regarding the distribution of supplies, the management and coordination of this activity were guided by existing management- and logistical structures within MM, in close collaboration with UNICEF. UNICEF procured the equipment, which was later officially handed over to MM. MM was in charge of distributing the equipment to the health facilities in the interior.

Figure 8 Left picture: PPE stock at MM Ladoani. Right picture: Incinerators at MM Hekoenoenoe

5. Conclusions, lessons learned and recommendations

The main purpose of this evaluation was to examine the *relevance, efficiency and effectiveness* of project interventions carried out as a response to COVID-19 with the support of the Dutch Cooperation Aid Organizations in the interior of Suriname. The evaluation should provide a deeper, more systematic and objective analysis of the projects results.

In this chapter the conclusions per evaluation criteria, lessons learned, and recommendations of UNICEF's Programme *'Supporting medical assistance and acceleration of vaccine rollout against COVID-19 infections in the interior of Suriname'* are presented per intervention area.

5.1 Strengthen case management capacities by the provision of portable oxygen concentrators

Relevance: The provision of portable oxygen concentrators to healthcare facilities in the interior of Suriname has been a crucial intervention in improving the case management capabilities for patients with respiratory illnesses during the COVID-19 pandemic. The portable oxygen concentrators have provided patients with access to respiratory support, reduced the need for transportation to distant hospitals, and allowed for closer monitoring and treatment of patients with underlying medical conditions. This intervention aligns with the national policies of Suriname and UNICEF's COVID-19 Response and Recovery Plan. Therefore, it can be concluded that this intervention has been crucial in improving the healthcare system's response to respiratory illnesses, particularly during the COVID-19 pandemic.

Effectiveness: The intervention has been effective in achieving its intended output level objectives. Although the goal of delivering the devices to all health facilities could not be achieved due to the challenge of electrical power supply, the intervention has still proven to be relevant and practical in the areas where the devices were introduced. The intervention has been perceived as useful by frontline workers and has the potential to improve healthcare quality, strengthen the healthcare system, and save lives. Overall, the findings suggest that the intervention has been successful in achieving its goals at the output level.

Efficiency: The efficiency of the programme was evaluated through four main evaluation questions, which assessed the management and coordination structures, the strategy design and implementation, the existing partnerships, and the fund allocation. The programme was found to be well-coordinated, with existing management and logistic structures within MM, in close collaboration with UNICEF. The strategy was designed and implemented in a way to generate solid evidence from monitoring and evaluation to monitor progress against results and inform adjustments where required. Existing partnerships were contributing to achieving the programme's objectives. Finally, the fund allocation was found to be adequate as the benefits outweighed the costs, and the portable oxygen concentrators were found to be cost-effective compared to the prior alternate strategy. Overall, the programme was considered efficient and sustainable, with potential to improve health care quality and strengthen the health care system at the local level.

Lessons learned: The significance of context is evident as the intervention was only feasible and applicable in the areas where the devices were introduced, and the objective of supplying the devices to all healthcare facilities was hindered by the issue of inadequate electrical power supply. This emphasizes the

necessity of taking into account the contextual factors when formulating and implementing healthcare interventions

Recommendations: Based on the lessons learned, it is recommended to incorporate contextual factors into the design and implementation of healthcare interventions. This includes conducting a needs assessment to identify the specific needs and challenges at the healthcare facilities, as well as considering the local infrastructure to support the intervention. To resolve the electricity supply issue, it is suggested that measures be taken to address the continuous power requirements of the oxygen concentrators in use. One possible solution would be to install solar power systems in the areas where the devices are being utilized.

5.2 Sensitization sessions with Traditional and Community Leaders religious leaders and Vaccination Demand creation in communities in the interior

Relevance: The objective of this intervention was to address vaccine hesitancy and strengthening the demand for immunization against COVID-19. The main target group include residents of the regions Brokopondo and East Suriname. Another target group aimed at, were the adolescents. The evaluation revealed that the sensitization sessions with traditional and community leaders and community mobilizers' engagement, were appropriate for achieving the programme's objective of increasing vaccine demand and decreasing hesitancy in the targeted communities. The strategies were well-aligned with the Primary Health Care Principles and the National COVID Response Plan and were tailored to the specific context of the interior, which lacks functional mass communication infrastructure and has a diversity of spoken languages.

Engaging with traditional leaders and community influencers, who have significant influence in their respective communities, was critical in addressing the information gaps and misinformation surrounding COVID-19 and the vaccine. The involvement of community mobilizers, who served as role models for vaccine uptake, contributed to increasing trust and uptake of the vaccine among community members. However, while progress has been made, the MM should continue to address vaccine hesitancy and misinformation to ensure increased vaccine uptake in the future.

Effectiveness: In conclusion, the RCCE activities implemented by MM have been effective in achieving the established targets for COVID-19 sensitization and vaccination campaigns. The data from the MM monitoring and vaccination system showed that all targets at the output level have been met, including the number of persons reached by sensitization messages, the number of persons vaccinated against COVID-19 in targeted areas, and the number of adolescents reached by awareness sessions. However, the vaccination coverage in the targeted areas was still less than 4-5% of the total population, indicating that the long-term outcome of behavior change would require more time to achieve. The assessment also revealed that community engagement varied by region and village, and adherence to preventive measures was better in villages where the traditional authority had a strong influence. The barriers to vaccine uptake included the circulation of conflicting information about the vaccine and the perceived risk and severity of the illness, combined with fake news. Thus, to increase vaccine uptake, there is a need for more community engagement, building trust with the traditional authority, and addressing the concerns and misinformation circulating in the communities.

Efficiency: The efficiency of the programme was assessed based on four evaluation questions, which focused on the management and coordination structure, partnerships, strategy design and implementation, and fund allocation. The programme's strategy is designed to generate solid evidence from monitoring and evaluation data, which informs adjustments where required. MM has a data collection system in place to track progress against results and to inform reporting to UNICEF. The available funds allocated for the programme were utilized to the fullest extent possible despite the unique environment of hard-to-reach communities and significant logistical expenditures.

Lessons learned:

- Two-way communication and the door-to-door approach were considered relevant and effective by health workers and the community
- Tailoring interventions, while respecting cultural identity among communities has resulted in better understanding and increased awareness regarding COVID-19 preventive measures
- Information gaps, misinformation about the vaccine, the use of traditional medicine, and the perceived risk and severity of illness were considered the main barriers for vaccine uptake
- The low percentage of health workers vaccinated against COVID-19 played a major role in vaccine uptake.
- Providing health information and education material in the local languages increases understanding of concepts
- While involving traditional leaders has facilitated communication with communities, further community engagement, establishing trust with traditional authorities, and addressing concerns and misinformation within communities are required to enhance vaccine uptake
- The available funds allocated for the programme were utilized to the fullest extent possible despite the unique environment of hard-to-reach communities and significant logistical expenditures.

Recommendations: To enhance vaccine uptake, it is necessary to increase community engagement and establish trust with traditional authorities. It may be beneficial to replicate the RCCE activities in other regions that share similar characteristics, such as a lack of functional mass communication infrastructure and language variations. Occasional RCCE activities may not result in long-term awareness and behavioral changes over time, as the disease context continues to evolve. Therefore, RCCE initiatives should be consistently maintained and integrated into standard care service packages. Special emphasis should be placed on addressing identified barriers to ensure maximum impact. Therefore, continued efforts are needed to emphasize the importance of vaccination, with a focus on its long-term effects and potential risks posed by new variants or surges of the virus.

RCCE - Youth Debates: The Backlot Foundation

Relevance: The goal of this activity was to raise awareness about COVID-19, vaccine sensitization, and demand creation among adolescents and to enable them to express their opinion on what COVID-19 means to them and how it has impacted their lives through youth debates. The evaluation demonstrated that the Backlot Foundation's Youth Debates programme was successful in achieving its objectives of raising awareness about COVID-19, vaccine sensitization, and demand creation among adolescents in Suriname. The programme was implemented through the production of four semi-live Krutu's on

television, where young people were trained in debating skills and encouraged to express their opinions on the subject of vaccinations. The programme was well-received, and respondents confirmed its relevance in raising awareness of COVID-19 and vaccination among adolescents. Although some suggestions were made to improve the programme, such as including adolescents from the districts and covering taboo topics like mental health, the programme's success in sensitizing and informing the general public through the TV broadcast and increasing youth participation and their role in having a right to an opinion is commendable. Overall, the programme was an effective tool for engaging adolescents in critical thinking about the given topic.

Effectiveness: The evaluation has indicated that the Backlot Foundation's Youth Debates programme was effective in achieving its intended outcomes. The program successfully organized four Krutu's and trained a total of 40 adolescents in debating skills. The programme was broadcast on television, reaching approximately 50,000 people through multiple broadcasts, and was also followed through social media, with one participant gaining over 1000 followers and the debates being shared by over 2,000 people. These results demonstrate the effectiveness of the programme in raising awareness about COVID-19 and vaccination among adolescents in Suriname. The programme's success in achieving its planned results can be attributed to the well-known and widely watched Krutu programme, as well as the engagement through social media. Overall, the programme can be considered an effective tool in engaging adolescents in critical thinking and contributing to the social and cultural development of Suriname.

Efficiency: In conclusion, the efficiency evaluation of the Backlot Foundation's Youth Debates programme showed that the programme was well-managed and coordinated, with a clear communication structure and a well-planned implementation schedule. The programme had a budget of USD 21,503.71, with USD 20,784.86 provided by UNICEF and the remaining USD 718.85 by Backlot. The programme was able to reach an estimated total of 50,000 people of all ages, with a special focus on sensitizing adolescents to COVID-19 and vaccination and increasing their participation and role in expressing their opinions. Overall, the programme was a cost-effective and efficient tool for raising awareness and promoting critical thinking among the youth in Suriname.

Lessons learned: Engaging youth in critical thinking through debates can be an effective tool for raising awareness about important topics like COVID-19 and vaccination.

Recommendations: To enhance the relevance and reach of the programme, it is recommended to expand it to more districts and involve adolescents from diverse backgrounds. This would allow for a wider representation of opinions and perspectives, increasing the programme's impact. Additionally, incorporating taboo topics such as mental health would create a more inclusive space for young people to discuss and debate relevant issues. This would contribute to breaking down social and cultural barriers and promoting critical thinking and awareness on important topics that affect adolescents.

5.3 Cold chain and logistic support

Relevance: The objective of this intervention was to strengthen the cold chain by supplying cold chain equipment to MM with the aim of contributing to the continuation of the vaccination programme and increasing COVID-10 vaccination coverage in the interior of Suriname. Findings from the evaluation indicated that the intervention was based on the needs of support and aligned with national policies. The

support from UNICEF included transportation of equipment and supplies, installation, and on-the-job training in use and maintenance of supplies. The relevance of vaccine carriers and solar-powered refrigerators was especially demonstrated by the cases of Pelele Tepoe and Hekoenoenoe, where the accessibility and availability of routine immunization increased considerably with the installation of solar-powered refrigerators. The intervention was successful in providing proper vaccine storage, ensuring the safety and efficacy of vaccinations and increasing vaccination coverage in remote areas.

Effectiveness: The evaluation found that all planned results for the distribution of cold chain equipment were achieved, with a 100% output achieved for each of the target activities. The major factor influencing the delay in the installation of solar powered refrigerators was heavy rainfalls in the interior which led to airstrip closures. The evaluation also found that the efforts to strengthen the existing cold chain through the distribution of new equipment positively impacted routine vaccination and outreach efforts. Overall, the project was effective in achieving its intended objectives, with only minor implementation challenges encountered.

Efficiency: In conclusion, the efficiency of the programme was evaluated based on four main evaluation questions. The management and coordination structures utilized by MM and UNICEF were found to be effective in guiding the implementation of the activity, with regular updates provided to UNICEF through progress reports. The programme was designed and implemented in a way to generate solid evidence from monitoring and evaluation to monitor progress against results and inform adjustments where required. Existing partnerships were strengthened to achieve results, and the fund allocation was deemed adequate for the strategic interventions. The investment in cold chain equipment was considered a sustainable investment and cost-effective in making safe vaccines widely available to hard-to-reach communities. Overall, the programme demonstrated efficiency in achieving its objectives and contributed to improving healthcare services in the targeted areas.

Lessons learned:

- Investing in cold chain equipment is a sustainable and cost-effective way to make safe vaccines widely available to hard-to-reach communities.
- External factors such as weather conditions can impact programme implementation, and contingency plans should be in place to mitigate delays

Recommendation: The evaluation findings and lessons learned suggest that it is important to develop contingency plans to address external factors such as weather conditions that can potentially impact programme implementation and lead to delays. Therefore, it is recommended that such plans are put in place to mitigate the effects of these factors and ensure the efficient and timely execution of the programme. An efficient and effective cold chain system at the local level enhances the delivery of health services and facilitates access to life-saving treatments for vulnerable communities.

5.4 Infection prevention control and WASH promotion

Relevance: The objective of this intervention was to provide Healthcare workers with Infection Prevention and Control Material (PPE) and WASH items to protect them during exposure to COVID-19 patients. The PPE and WASH items were provided based on the identified needs and distributed to health facilities according to the tracking system in place. The donation of PPE from UNICEF contributed to a good stock,

enabling health workers to perform their jobs safely. UNICEF also provided waste management materials and supported in the logistical costs of transportation of the equipment to the health facilities. Overall, the intervention was considered in providing healthcare workers with necessary equipment to protect themselves from COVID-19 and other sources of diseases.

Effectiveness: In conclusion, the effectiveness of the IPC and WASH promotion intervention was evaluated based on two key evaluation questions. The evaluation found that the provision of PPE and WASH materials has been effective and important during the pandemic to protect health workers from infections. The availability of incinerators has contributed to safe waste management practices. The major factors influencing the achievement of results were delays in the distribution of incinerators due to suboptimal weather conditions. Overall, the intervention has contributed to the continuity of essential health services.

Efficiency: Overall, the management and coordination structures for the distribution of supplies were found to be effective. The partnership between MM and UNICEF allowed for efficient procurement and distribution of the necessary equipment to the health facilities in the interior. MM's existing management and logistic structures were utilized to guide the implementation of the intervention, which contributed to its success. Regular updates on implementation and progress status were provided to UNICEF through standard quarterly progress reports submitted to the UNICEF office on a quarterly basis. The effective management and coordination structures played a crucial role in ensuring that the supplies reached the health facilities in a timely and efficient manner.

Lessons learned:

- The provision of PPE and WASH materials is crucial in protecting healthcare workers from infections, especially during a pandemic
- Weather conditions and other external factors can affect the distribution of supplies, and contingency plans should be in place to mitigate such risks

Recommendations: Overall, the implementation of the infection prevention control, WASH promotion, and logistic support intervention has been effective in achieving the planned results. The availability and use of PPE materials have been effective in protecting healthcare workers from COVID-19 and other diseases. The provision of incinerators has also contributed to safe waste management practices. Therefore, it is recommended that the programme continue to be implemented and monitored to ensure that the supply of PPE and WASH items is sustained, and safe waste management practices are maintained.

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Annexes

Annex 1 Terms of reference

<table>
<tr><td>Title

Individual consultant for the evaluation of the program with DutchNatcom:

Supporting emergency medical assistance and acceleration of vaccine roll out against COVID-19 Infections in Suriname</td><td>Funding Code

SM21039</td><td>Type of engagement

☒ Consultant
☐ Individual Contractor Part-Time
☐ Individual Contractor Full-Time</td><td>Duty Station:

Paramaribo, Suriname</td></tr>
<tr><td colspan="4">Introduction

UNICEF Suriname is commissioning an ex-post evaluation to examine the relevance, efficiency, effectiveness of project interventions carried out as response to COVID-19 with the support of the Dutch Natcom in the interior of Suriname. The support included emergency medical assistance and acceleration of vaccine rollout against COVID-19 in Suriname in the period May 2021 to May 2022.

The interventions contributed to the objective 1.1 of the UNICEF Suriname COVID-19 Response and Recovery Plan, which aimed to address factors leading to increased vaccine hesitancy and decreasing immunization rates and to strengthen the case management system by reducing the case fatality rate.

In this context, the office seeks a National Evaluator with deep commitment and relevant professional experience (at least 5 years of experience conducting evaluations), to locally support the data collection and analysis and for drafting the evaluation report including recommendations for future programming. In consideration of the COVID-19 pandemic, and to ensure the safety and well-being of evaluators, the UNICEF office is seeking an individual with the proven capacity for flexible and remote work arrangements.</td></tr>
<tr><td colspan="4">Background
The Republic of Suriname detected its first case of COVID 19 on March 13, 2020. Since April 2021, the country has experienced 5 major waves of the pandemic with increasing cases of deaths and serious numbers of COVID-19 infected cases which were of great concern to the government of Suriname and its partners. In the absence of definitive therapeutic options for the management and control of this disease, vaccination is a primary prevention measure and the best option for controlling the disease and save lives through reduction of severe cases and deaths.

The pandemic has also brought the importance of resilient health systems back in focus and exposed weaknesses in health system. The COVID-19 created an urgent need for the revision of Government priorities and for the donor's group in Suriname. As part of the measures implemented to control the COVID-19 pandemic, the government decided to focus on the health response during the 9 first months of the crisis and to start working on the recovery phase from June 2021 to June 2023. While country attempt to control and interrupt the virus transmission and ensure that people with COVID-19 receive appropriate treatment, health resources, including personnel and facilities were diverted to the response.</td></tr>
</table>

UNICEF has been working closely with the Ministry of Health in the implementation of the COVID-19 deployment plan by supporting and providing technical and financial support for demand generation, risk communication cold chain, vaccine roll-out planning and preparedness, WASH and Infection Prevention and Control (IPC) in health facilities and school settings and improving planning and coordination.

UNICEF continued to support the efforts of the Government for COVID -19 vaccine, program planning and management in the country with a particular focus on UNICEF's key mandate areas – Cold Chain and Vaccine Supply Management, and Communication and Community Engagement and coordinate health section and with supply and other sections for a coordinated response. In this regard to respond adequately across the country in coordinating vaccine supplies, risk communication, community engagement, capacity building and strengthening of the cold chain in response to COVID-19 the financial support of the Dutch Natcom was requested and received with as main objective of the proposal ***to accelerate the vaccination against COVID-19, and to strengthen the Case management protocols, particularly for infected children, in order to ensure the control of the pandemic and reduce the fatality rate.***

The specifics objectives included in the proposals were the following:

- Oxygen Concentrators to provide swift and portable support for at least 50 moderately ill COVID-19 patients. Cost based on 10 Litres Per Minute single flow machines.

Target: 52 Oxygen Concentrators

- Addressing vaccine hesitancy and strengthening demand for immunization against COVID-19 for 60,000 (aged 12-39 years) with focus on 2 most at-risk regions living in the peri urban and rural area, covering an estimate of 11,329 inhabitants in Brokopondo and East Suriname and national caregivers of children age 12-18.

o Target: at least 1,000 persons to be vaccinated (52% female and 48% male) in target area in the interior.

- Deployment of IPC-WASH and vaccine mobile cold chain materials in support to 50 mobile vaccination sites, to cover the need of 120 health care workers and "clients" attending the vaccination sites.

Objectives and need for a project evaluation:

n close consultation with the donor, it was decided to have an ex-post evaluation of the project carried out focusing on the relevance, effectiveness and efficiency this to use the findings for future collaborations and develop innovative ways to reach better results.

UNICEF aims to meet people needs in a timely, appropriate, effective, and efficient manner especially the most vulnerable and marginalized. Complex, hard to reach and changing environments including working with other partners to help affected populations during a pandemic can be challenging. It makes it critical then adopt innovative and new approaches in order to deliver in a timely and effective/ efficient manner. The evaluation of the UNICEF response in the interior of Suriname with the support of the Dutch Natcom aims to provide a deeper, more systematic and objective analysis of the projects results. The evaluation needs to provide information if UNICEF with the support of the partner succeeded to reach affected populations with the planned support in an efficient and effective manner and if the program was relevant. This information in turn, should enable the CO to innovate and introduce alternative approaches and mitigation measures that will improve the coverage and quality of future program delivery. The evaluation is important to the CO and the donor and the partnership as it will take stock of the effectiveness,

efficiency, and the relevance of the program as response to crises in hard to reach and changing environments.

Scope of Work:

The evaluation covers the period from May 2021 to May 2022 and has the following objectives:

- To determine the effectiveness, efficiency, relevance of the project interventions and to determine the potential scale-up in areas for similar project outcomes.
- To identify enablers, bottlenecks and barriers to the achievement of results.
- To Provide recommendations and lessons learned for the design, management, coordination, implementation as input for future interventions

Scope and Focus/Objectives

The evaluation will provide answers to the following questions: -

Relevance

- To what extent were the implementing strategies of the program appropriate for achieving results?
- To what extent was the strategy relevant in achieving the objectives of the program?
- To what extent was the program relevant to increasing the demand of the COVID vaccine
- To what extent was the program relevant to decreasing the COVID vaccine hesitancy?

Effectiveness

- To what extent have planned results in the implementation been achieved?
- What are the major factors influencing the achievement and non-achievement of the results?
- To what extent has the intervention been supporting the vaccine roll out and case management?
- To what extent have efforts contributed to strengthening existing vaccine cold chain program?

Efficiency

- Which management and coordination structure and mechanisms among programme staff and partners have aided/ guided the program implementations?
- What has worked well and what needs to be strengthened?
- To what extent is the fund allocation adequate to implement the strategic interventions?
- To what extent is the strategy designed and implemented in a way to generate solid evidence from monitoring and evaluation to monitor progress against results and to inform adjustments where required?
- To what extent are existing partnerships contributing or strengthened to achieve results?
- How cost effective was the approach to manage and implement the program?
- How cost effective was the approach to manage and implement the program?
- How can the cost/benefit in the implementation be maximised?
- Has the implementation and monitoring of the project interventions been implemented in a standardized way as per plan? If so, to what extent?
- What are the enabling factors for and or bottlenecks?
- Was the program delivered in a culturally appropriate manner?

Evaluation process and methodology:

The consultant is expected to work closely with the key officials of the Medical Mission (MM) and the Ministry of Health. This evaluation is qualitative, and the consultant will design, conduct, and analyse participatory In-Depth Interviews (IDIs) and Focus Group Discussions (FGDs) with duty bearers, mothers, health workers,

community members. Data will be collected from Health workers, health clinics, the communities, other key stakeholders of the MM, others involved in the program development and implementation.

Phase 1: Desk review, interviews with key stakeholders, development of research instruments, and submission of inception report

- **Conduct a desk review:** Review will include but not limited to documents related to UNICEF's evaluations requirements; UNICEF's response to COVID-19 and all other relevant program documents; reports from feedback workshops and community engagements- Monitoring documents. Existing quantitative data will also be considered in the desk review.
- **Key stakeholder interviews:** The evaluator will produce a list of stakeholders to be considered for the key stakeholder's interview in close consultation with UNICEF and MM
- **An Inception Report must be submitted.** The inception report will include an evaluation matrix i.e., a table showing how each evaluation question will be answered and how the information will be collected.
- Development of research instruments IDI, FGD, and other instruments

Phase 2: Data collection and analysis

The evaluator is expected to collect and analyze data in accordance with the overall evaluation approach, plan, and timeline specifically:

• Ensure that full contact details of key informants are available, and interviews set up; and that interview questions are translated into the national language(s) as needed.
• Conduct key informant interviews, alone or jointly with his/ her team
• Conduct site-visits and focus group discussions.
• Ensure consistent recording of interview/focus group data according to the agreed templates.
• Follow up with key informants on documentation they offered to provide and names/contact details of other interviewees they identified.
• Support on following up on filling data gaps/collecting missing data.
• Perform other related duties and assignments as and when required.

Phase 3: Data Analysis, sharing of findings and writing of report

The consultant will be responsible for the data analysis, writing the report and presentation of findings.

The safety of data during the data collection phase will be the total responsibility of the researcher; all information gathered for this evaluation is the property of MM and UNICEF. No data collected and or reviewed for this evaluation or data to which the evaluator is privileged during time of the evaluation as direct or indirect result of being the evaluator for this evaluation, can be shared and or used by the evaluator neither can s/he approve the use of the whole or any part of it for personal or professional purposes without approval in writing

- The main findings will be presented by the consultant to UNICEF and MM
- The writing of the report should be done in constant communication with UNICEF
- The final report will be approved by UNICEF

Ethical Consideration

To ensure that the key ethical principles for the conduct of evaluation involving human subjects are followed, each potential respondent will be given full information about the evaluation including the purpose and potential benefits of the evaluation, their rights, and how the information collected will be used. They will also be informed that all data will be kept confidentially being only accessible by members of the assessment team. Verbal consent will be collected from all those who agree to participate. (The person receiving the consent and a witness will sign the consent form). All participants will be informed of their right to discontinue their participation at any point and approaches for ensuring confidentiality will be described.

Management and governance arrangements

The National Evaluator will be working under the supervision of Monitoring and evaluation specialist and the Education specialist / project focal point. Given the fact that COVID-19 pandemic measures have been lifted or simplified the consultant is expected to carry out data collection mission to the interior to do interviews and propose other data collection methods to collect the data on project interventions. The deputy representative will be the final approver of the evaluation deliverables.

Qualifications and Experience

This consultancy is for one national consultant who must possess the following competencies:

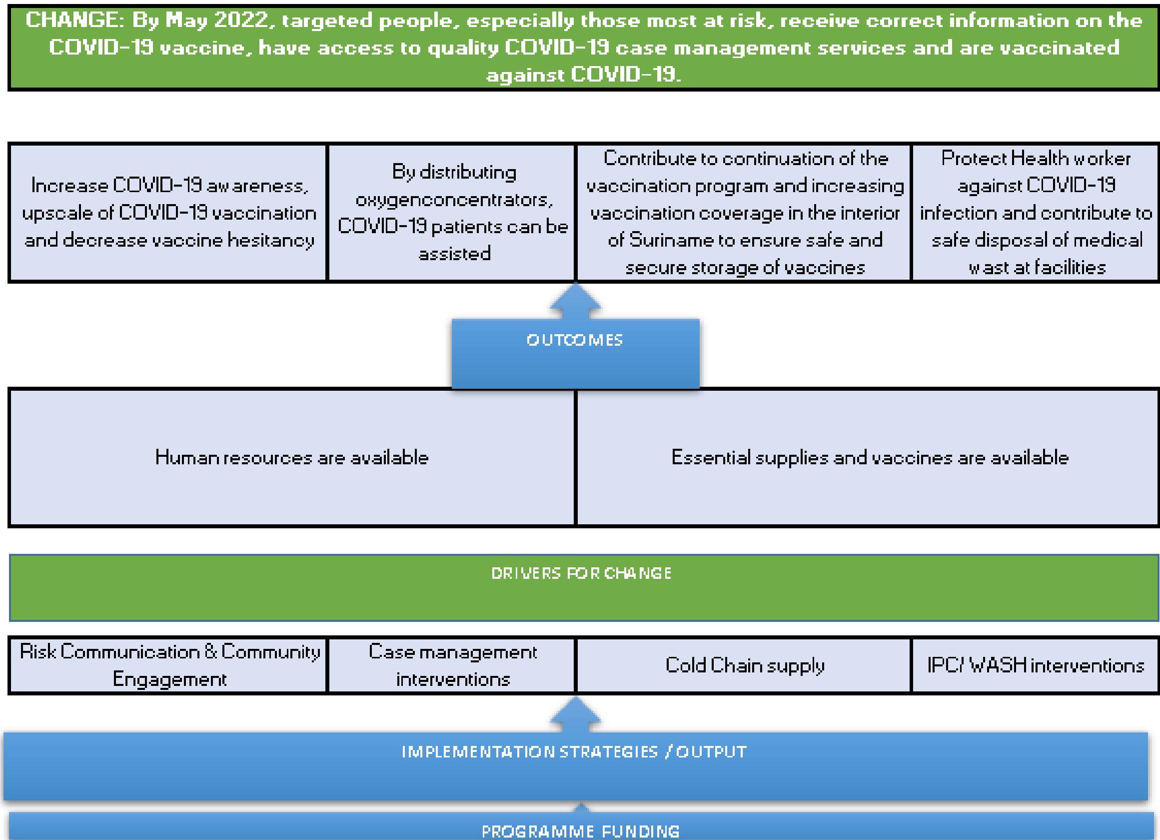
- An Advanced University Degree in Social Sciences, Anthropology, Sociology, education. A specialization in health or health related back ground will be an advantage
- A minimum of 5 years of professional experience in designing, implementing and supervising Monitoring and Evaluation programmes
- Proven experience in leading and managing outcome and impact evaluations. Good understanding of evaluation methodologies and UNEG norms and standards for Evaluation.
- A good understanding of equity issues
- Proven analytical skills and experiences lending to the ability to identify and evaluate best practices and innovative approaches to be utilized by the project
- Excellent English writing skills
- Strong organizational, and presentation skills
- Proven knowledge of local context; knowledge of local languages is an asset

Deliverables and timelines

Deliverable	Main components	Days
Inception Report	• Clearly outlined work plan including timelines and strategies for each phase of the study including sampling methodology • An evaluation matrix i.e., a table showing questions to be answered by the research and how the information will be collected to answer each question. • Comprehensive document review report • Interview schedule, data collection instruments i.e., FDG guides, IDI guides along with the relevant consent and ascent forms. • Outline of final report	3Weeks (including data collection)

Draft Report (in line with UNEG and UNICEF's Global guidelines on reporting standards)	• Report based on the agreed outline in the inception report, using collected data transcription of interview, coded transcripts of data according to themes checklists and notes on observations and field visits An Oral presentation of main findings to UNICEF and MOE on: • Key findings and recommendations • Constraints, challenges and other critical factors of research implementation • Outline of the next steps	2 weeks
Final Report (in line with UNEG and UNICEF's Global guidelines on reporting standards)	• Final Report based on comments on the draft report, together with the Executive Summary no longer than two pages.	1 week

Annex 2 Theory of Change



Annex 3 Key evaluation questions

Key evaluation questions	
Relevance	To what extent were the implementing strategies of the programme appropriate for achieving results?
	To what extent was the programme relevant to increasing the demand of the COVID vaccine?
	To what extent was the programme relevant to decreasing the COVID vaccine hesitancy?
	Was the programme delivered in a culturally appropriate manner?
Effectiveness	To what extent have planned results in the implementation been achieved?
	What are the major factors influencing the achievement and non-achievement of the results?
	To what extent have efforts contributed to strengthening existing vaccine cold chain programme?
Efficiency	Which management and coordination structure and mechanisms among programme staff and partners have aided/ guided the programme implementations?
	What has worked well and what needs to be strengthened?
	To what extent is the fund allocation adequate to implement the strategic interventions?
	To what extent is the strategy designed and implemented in a way to generate solid evidence from monitoring and evaluation to monitor progress against results and to inform adjustments where required?
	To what extent are existing partnerships contributing or strengthened to achieve results?
	What are the enabling factors and or bottlenecks?

Annex 4 Key informant In-depth Interview Template

Interviewee	
Function (s) / Role	
Date of interview	
Interviewer	
Location	
Signed Informed consent	

Introduction
1. Presentation of interviewer
2. Purpose of the interview: to evaluate project activities carried out as a response to COVID-19 during the period May 2021 and May 2022. We wish to understand what was useful, what worked well, what did not work so well, and how to improve in the future.
3. Emphasize that this is not an evaluation of anyone's individual performance. Not a control, not an audit, but a learning experience.
4. Request to record the interview and take notes

Topic list

1. How and since when were you involved in project activities?
2. In which programme activities have you been involved? (Interviewer checks boxes, multiple possible)

Case management activities:

- Oxygen concentrators (distribution/ use of…. for patients

Vaccine acceptance and demand (Demand Generation and Communications (RCCE)),

- Sensitization sessions for religious leaders, Traditional/ Community Leaders, Policy Makers Sessions etc.
- Community Mobilisers' Engagement on the C-19 vaccine roll out
- COVID-19 support for vaccination demand creation, risk communication
- COVID-19 adolescent awareness sessions (age 10-19 years) in the interior
- COVID-19 adolescent awareness sessions: Youth Debate with the Black Lot) in Paramaribo

Cold chain activities

- Provision of 50 vaccine carriers for vaccine transportation to the mobile and advanced vaccination sites,
- Provision of 3 solar powered refrigerators for hard to reach clinics
- Provision of 20 electronic refrigerator temperature logger and 6 Remote Temperature Monitoring units including 3-year subscription for strengthening the cold chain in targeted area.

- Support for Real-Time Field Data Entry for COVID-19 Vaccination, pre- and post-sensitization rapid assessments

IPC WASH activities

- Provide Infection Prevention and Control Material (PPE) and WASH items to the 120 Health Care workers appointed to the 50 mobile and advanced vaccination sites.
- Distribution of hygiene packages to adolescents

We would now like to elaborate on each of the activities you were involved in.

Activity 1. ……………………………………………………………………………………..

Relevance

1. What was your specific role or contribution? (e.g. implementor, participant in Youth Debate, Community member making use of facilities/ Influencer at sensitization session, Community leader)

THEME: To what extent were the implementing strategies of the programme appropriate for achieving results?

- What was the purpose of the programme/activity?
- Who was the intended target group or beneficiaries?
- To what extend was the selection of activities appropriate for addressing the purpose/objectives?
- To what extend were the design and the objectives of the project based on the needs of support?
- To what extend were the project results relevant to the needs of the beneficiaries? (health centers, communities, Youth?)
- IF APPLICABLE: To what extend were the programme activities aligned with government/ and MZ policies and the needs of the affected communities?

THEME: To what extent was the programme relevant to increasing the demand of the COVID vaccine? / To what extent was the programme relevant to decreasing the COVID vaccine hesitancy?

- To what extent have the expected results of the project been achieved on the output level?
- In which way was the community (or target population) involved in the activities?
- What were your observations regarding the willingness or readiness of the target group towards COVID-19 vaccination after the activities?
- What were the successes experienced in the RCCE activities? What works well and should be continued?
- What were the bottlenecks/obstacles experienced in the RCCE activities? And how have these been addressed?

- To what extent were the activities designed in a way leading to demand generation for the vaccine by the target group?
- How was the programme perceived by the target population?
- Did the knowledge of COVID-19 increase among community members after sensitizing sessions? And what were the key observed differences?

Effectiveness

THEME: To what extent have the planned results in the implementation been achieved?

- Are programme objectives met? If yes, how? If not, why not?

THEME: What are the major factors influencing the achievement and non-achievement of the results?

- What is helping or hindering the activities to achieve their results?

THEME: To what extent have efforts contributed to strengthening existing vaccine cold chain programme?

- How is de vaccine cold chain strengthened? What was the situation before, what is the current situation?

Efficiency

- How is the project functioning from administrative, organizational, and/or personnel perspectives?
- What strategies were effective and needs to be continued or strengthened?
- Is the cost of the services or activities reasonable in relation to the benefits? Are there alternative approaches that could have the same outcomes with less cost?
- To what extent was it possible to track progress of activities and how was this done?
- To what extent was the mix of resources and procedures contributing in achieving results?
- What works well and what does not?
- In which way was cultural sensitivity addressed during de programme? Was this appropriate for the context?

Annex 5 Focus group Discussion Topic List

Focus group	
Date	
Time (start-end)	
Moderator	
Assistant (notetaker)	
Location	

Introduction

TOPIC: Evaluation of COVID-19 activities provided by the Medical Mission and UNICEF in your community during the period May 2022-May 2023 (Relevance, Efficiency, Effectiveness)

1. Introduction moderator, explanation of topic
2. Request for verbal informed consent
3. Purpose of the Focus group: to evaluate activities carried out as a response to COVID-19 during the period May 2021 and May 2022. We wish to understand what was useful, what worked well, what did not work so well, and how to improve in the future. Gather opinions and discussions about the topic.
4. Emphasize that this is not an evaluation of anyone's individual performance. Not a control, not an audit, but a learning experience. No personal information will be shared.
5. Request to record the focus group and take notes, emphasize on confidentiality will be maintained throughout the process.
6. Request to fill in the participant list
7. Explanation on how the focus group will be conducted and what are the expectations, time duration (approximately 1,5 hours)
8. Introduction of group participants to each other

Topic	
General introduction	COVID-19 Pandemic
	How has it affected you and your community?
	Probe: What is different now/what has changed?
Response from authorities and Medical Mission	What was the response from the authorities and the Medical Mission? *Discuss*: How was this response perceived in the community? What specific response activities from the Medical Mission have noticed or were you involved in?
Activity (e.g. sensitization sessions, vaccination campaigns)	Can you describe the activity? What was according to you to goal of this activity?

	Do you think this activity was relevant for you/ for the community? *Discuss:* If so, why? *Discuss:* If not, why? (bottlenecks) Do you think the activity reached its goal? (e.g. less vaccine hesitancy?) *Probe:* Was the activity implemented at the right moment? Was the community involved in the activities, and how? What could have been better in implementing the activity and reaching the target group? *Probe:* What works well, and what could have been better? Was the activity culturally sensitive? *Discuss:* If so, why, if not, why not?

Annex 6 Overview In-depth Interviews sampling

		In-depth Interviews					**Focusgroup Discussions**
Location	**Ressort**	**Management & implementation team MM**	**Front line Health Workers**	**Community members (Traditional Authority)**	**Key informants (Community mobilisers & religious leaders)**	**Other implementing partners (Red Cross & Backlot)**	**FGD**
Region East Suriname	Stoelmanseiland	1	1	2	2		2
	Drietabbetje		2		1		1
Region Brokopondo	Brokopondo Noord	1	2	2	2		4
	Brokopondo Zuid		1	2	2		3
Region Upper Suriname	Djoemoe	1	1	1			
	Debike	1	1				
	Ladoani		1				
Region Central Suriname	Central Suriname		2				
Region Amerindians	Amerindians		1				
Paramaribo	Paramaribo	6				7	
Total		**10**	**12**	**7**	**7**	**7**	**10**

Annex 7 Number of people reached by sensitization messages

Region East Suriname	Number of people reached by sensitization messages
Lawatabiki	260
Cottica	90
Gonini	338
Stoelmanseiland	325
Gakaba	400
Apoema	600
Nason	350
Langatabiki (including goldmining areas)	980
Agaigoni	450
Karmel	150
Drietabbetje	450
Godoholo	500
Total	**4893**
Region Brokopondo	
Lebidotie (including goldmining areas)	1500
Asigron	300
Brokopondo	376
Balingsoela	450
Nw. Lombe	478
Klaaskreek	550
Nw. Koffiekamp	260
Brownsweg	1950
Marchalkreek	200
Rediddotie	350
Powakka	500
Total	**6914**
GRANT TOTAL	**11807**

Annex 8 Number of people vaccinated by region

Region	1st dose	2nd dose
Brokopondo	2090	1479
East Suriname	121	422
Upper Suriname	109	84
Central Suriname	121	85
Total	**2441**	**2070**

Annex 9 List of KII interviewed

	Management & implementation team (10)	Position
1	Mr. H. Jintie	Director Medical Mission (Paramaribo)
2	Mr. T. Danso	Medical doctor & Region coordinator East Suriname and Brokopondo (Paramaribo)
3	Ms. L. Yau	Medical doctor & Coordinator Vaccination (Paramaribo)
4	Mr. M. Uiterloo	Coordinator Project Office Medical Mission (Paramaribo)
5	Mr. R. Dalapoe	Officer Health Promotion Department (Paramaribo)
6	Ms J. Robinson	Coordinator Health Promotion Department (Paramaribo)
7	Mr. E. Esperanza	Regional Clinic Head Region Upper Suriname (ressort Debike)
8	Ms. S. Dalen	Regional Clinic Head Region Upper Brokopondo
9	Ms. A. Huur	Regional Clinic Head Region East Suriname
10	Ms. U. Jabini	Regional Clinic Head Region Upper Suriname (ressort Djoemoe)

	Frontline workers (12)	Location	Region
1	Ms. M Panaidedemu	Tepu	Amerindians
2	Ms. R. Hope	Powakka	Brokopondo
3	Mr. T. Wajacabo	Redidoti	Brokopondo
4	Ms. D. Olan	Brownsweg	Brokopondo
5	Mr. P. Eubyan	Poesoegroenoe	Central Suriname
6	Ms. Z. Idelia	Bigi Poika	Central Suriname
7	Mr. E.Banai	Stoelmanseiland	East Suriname
8	Mr. J. Adjako	Drietabiki	East Suriname
9	Ms. Dikan	Gakaba	East Suriname
10	Ms. F. Rozewijn	Pokigron	Upper Suriname
11	Ms. R. R. Menig	Hekununu	Upper Suriname
12	Ms. R. Naingi	Ladoani	Upper Suriname

	Traditional Authority (7)	Location	Region
1	M. Walden (Kapitein)	Brokopondo	Brokopondo
2	Ms. Madhavi Doerga	Powakka	Brokopondo
3	Mr. E. Sabajo	Powakka	Brokopondo
4	Mr.J. Sabajo	Redi doti	Brokopondo
5	Mr. T. Amedo	Gakaba	East Suriname
6	Mr. J. Deel	Stoelmanseiland	East Suriname
7	Mr. Aboikoni	Djoemoe	Upper Suriname

	Key Informants: regilious leaders & community mobilizers (7)	Location	Region
1	Ms. L. Amiemba	Brownsweg	Brokopondo
2	Ms. A. Cayenni	Brownsweg	Brokopondo
3	Mr. V. Kent	Brownsweg	Brokopondo
4	Mr. E. Wijman	Klaaskreek	Brokopondo
5	Mrs. I. Napoleon	Dritabiki	East Suriname
6	Mr. I. Badoo	Gakaba	East Suriname
7	Mr. A. Velanti	Stoelmanseiland	East Suriname

	Key Informants other implementing partners (7)	Organization & position
1	Ms. S. Bosk	The Backlot, Producer
2	Ms. L. Nanthoe	The Backlot Foundation, debate participant
3	Mr. C. Draibas	The Backlot Foundation, debate participant
4	Ms. S. Jacobi	Suriname Red Cross, health officer
5	Ms. J. Abdoelrahiman	Suriname Red Cross, volunteer
6	Mr. G. Vriesde	Suriname Red Cross, volunteer
7	Ms. A.Wengo	Suriname Red Cross, volunteer