Evaluation

USAID Integrated Health Program (IHP) Evaluation Report

Midline Qualitative Addendum

September 2023

USAID FROM THE AMERICAN PEOPLE

DATA FOR impact

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Evaluation

D4I is committed to local partner engagement and individual and institutional strengthening. Local authorship is important and we urge you to engage local partners in analysis and reporting.

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Cover

Caption: Urban health facility. Photo: D4I.

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Contents

Abbreviations

AC	Animateur Communautaire [community engagement facilitator]
ACT	artemisinin-based combination therapy
ANC	antenatal care
ARI	acute respiratory infection
BCP	bulletin de performance Communautaire
BCZS	Bureau Central de la Zone de Santé [Office of the Health Zone Team]
CAC	cellule d'animation communautaire [community action group]
CDR	centre de distribution régional [regional distribution centre]
CHW	community health worker
CODESA	Comité de Développement de l'Aire de Santé [health area development committee]
COGE	Comité de Gestion [management committee]
COVID-19	coronavirus disease 2019
CPN	consultation prénatale [prenatal care]
CPS	consultation préscolaire [well baby visit]
D4I	Data for Impact
DHIS2	District Health Information Software, version 2
DPS	Division Provinciale de la Santé [Provincial Health Division]
DRC	Democratic Republic of the Congo
FP	family planning
FGD	focus group discussion
GIBS	Groupe Inter Bailleurs Secteur Santé
HA	health area
HC	health center
HGR	Hôpital Général de Référence (General Reference Hospital)
HIV	human immunodeficiency virus
HPHA	high performing health area
HPHC	high performing health center
HZ	health zone
iCCM	integrated community case management
IHP	Integrated Health Program
IPS	Inspection Provinciale de la Santé [Provincial Health Inspectorate]
IT	infirmier titulaire [head nurse]

LPHA	low performing health area
LPHC	low performing health center
MCZ	médecin chef de zone
M&E	monitoring and evaluation
MOH	Ministry of Health
MUAC	mid-upper arm circumference
NGO	nongovernmental organization
PDSS	Projet de Développement de Système de la Santé [Health Care System Development Project]
PICAL	Participatory Institutional Capacity Assessment and Learning Index
PNAM	Programme National d'Approvisionnement en Medicaments [National Drug Supply Program]
PRODES	Programme de Reinforcement de l'Offre et de Développement de l'Accès de Soins de Santé
RECO	relais communautaire [community health worker]
SBC	social and behavior change
SNIS	Système National D'information Sanitaire [National Health Information System]
SONU B	soins obstétrico-néonatal d'urgence de base [basic emergency obstetric and neonatal care]
SONU C	soins obstétrico-néonatal d'urgence [emergency obstetric and neonatal care]
TB	tuberculosis
UNICEF	United Nations Children's Fund
USAID	United States Agency for International Development
VSAT	very small aperture terminal
WASH	water, sanitation, and hygiene
WHO	World Health Organization

Lualaba Province

Evaluation Methods and Informants

We conducted the midline evaluation in March 2022. Key informants included the United States Agency for International Development (USAID) IHP provincial director, the Division Provinciale de la Santé (DPS) director, the head of the provincial inspection office (IPS), the chief medical officer of the Dilala health zone (HZ), and the nurse supervisor of the Bunkeya rural HZ.

A team of three researchers representing JANNA collected data in the urban HZ of Dilala and rural HZ of Bunkeya in higher and lower performing health areas (HAs). HAs were selected according to child health indicators related to service utilization for key childhood illnesses and vaccination coverage. In each HA, we conducted in-depth interviews with an Infirmier Titulaire (IT) [head nurse], a member of the Comité de Développement de l'Aire de Santé (health development committee) [CODESA], and a relais communautaire (RECO) [community health worker]. We also administered in-depth interviews in the Bunkeya reference hospital with one physician and the hospital administrator and with a nurse in the Dilala reference hospital. Additionally, we conducted observations of four health centers (HCs) and one reference hospital; hospital administrators in Dilala did not permit observations.

We administered focus group discussions (FGDs) with 6-12 mother or grandmother caregivers of children under 5 years of age in each of the 4 HAs included in the evaluation. Discussions focused on perceptions of child health services offered in facilities, care seeking for sick children, and community health interventions.

Introduction

Lualaba province has 14 HZs, with several zones located in remote areas that are difficult to access. DPS staff work from a dilapidated building; the DPS workforce does not meet government standards. The DPS director mentioned that the province has few partners, crediting USAID IHP for providing critical support, particularly in five focal HZs. The USAID IHP partners mentioned by key informants included Chemonics, which is involved in the transport of drugs from provincial warehouses to HZs, Iplus Solutions working on supply chain, and VIVA!.[1] While VIVA! initiated activities such as the establishment of a steering committee and training, activities had been curtailed due to budgetary constraints.

Informants reported that project activities aim to improve the quality of healthcare through technical, administrative, financial, and personnel management training and the delivery of essential medication, supplies, and formative supervision. Primary healthcare training related to human resources, financial, and material and drug management, as well as technical training on treatment practices, has been carried out in all health facilities in the province. One health official reported improvements in leadership capacities at the DPS and HZ levels, although the Participatory Institutional Capacity Assessment and Learning Index (PICAL) assessments had not been carried out in DPS or HZ offices since 2020. PICALs had been carried out in the urban HZ but not in the rural HZ that was evaluated during the qualitative midline; the chief medical officer in the urban HZ considered the PICAL assessment as a useful tool to identify problems with Bureau Central de la Zone de Santé (BCZS) operations.

[1] VIVA! is a family campaign developed by USAID's Breakthrough ACTION and implemented by Johns Hopkins Center for Communications Programs; VIVA! uses human centered design to promote the adoption of healthy behaviors.

A government health official underlined USAID IHP's contribution to planning, mentioning assistance with annual and quarterly workplans. Zonal heads confirmed that planning workshops helped to improve scheduling of activities. The same key informant indicated that the unique contract enhances coordination of partner workplans and travel schedules, limits overlap of activities, and generally keeps partners accountable, although he mentioned that some partners still do not adhere to contract commitments. Another key informant asserted that the unique contract improves transparency of funds, noting that payment of health personnel transferred by telephone has decreased misuse of funds.

Key informants reported that the project supported training and review meetings on data quality and utilization and production of reports, although one health official noted that data collection tools are not always available. This key informant suggested that the introduction of the software INFOMED, which is available in each HZ, along with training on data analysis and interpretation, has improved data monitoring and guided decisions regarding supervision. Key informants agreed that data promptness and completeness still pose challenges.

Informants reported that INFOMED also helps HZ manage drug stocks. One health official added that USAID IHP supports quarterly reviews of drug management to identify problems and how to make corrections as well as drug distribution.

Additionally, informants said that USAID IHP supports supervisory visits and coordination meetings including GIBS, DPS monthly health team meetings and quarterly data reviews, BCZS and HA monthly monitoring reviews, and quarterly quality of care assessments. One key informant mentioned that USAID IHP funds weekly surveillance meetings at the DPS level and RECO training on identification of illness signs and symptoms, with informants reporting community surveillance of tuberculosis (TB) and measles. USAID IHP also provides forms and instruments essential for INFOMED, PICAL assessments, SNIS, and DHIS2. While USAID IHP has ensured the installment of very small aperture terminal (VSAT) systems in all 14 HZs, connectivity is a problem, with médecin chef de zones (MCZs) from both HZs confirming that internet connection is only possible late at night or early in the morning, forcing health personnel to purchase internet credit.

> While VSAT systems were set up in health zones, many are not fast enough to access the DHIS2 or are not working.

The DPS has been trained on the iHRIS Health Workforce Information Systems Software; they maintain an updated list of government health workers on a quarterly basis. One health official reported that 32 of 3,200 workers in Lualaba receive a government salary. While the provincial governor has been touted for providing provincial bonuses, informants mentioned that provincial bonuses are small and infrequent. The medical officer in Dilala maintained that following workers in urban zones is difficult because most personnel work in private structures.

Regarding community activities, USAID IHP has supported CODESA revitalization (10 of 14 HZs) and monthly meetings; champion communities; integrated community case management (iCCM) training; mini-campaigns; and information sharing efforts carried out by cellule d'animation communautaire (community action group) [CAC] members, CODESA, and RECO. One key informant reported that the community-based

score care approach started in two HZs but stopped due to budgetary constraints and that USAID IHP plans to introduce a hotline. This key informant was skeptical about the cultural appropriateness of suggestion boxes, which are not supported by USAID IHP. He noted that documentation of community activities is poor.

Regarding challenges, one health official mentioned that strengthening capacity beyond the targeted five HZs is needed. He also noted that delivery of USAID IHP funds is often delayed, hampering activities. He reported ongoing challenges with drug supplies, highlighting routine delays in delivery associated with problems caused by customs officials overseeing drug importation. However, he praised USAID IHP for the 'last mile' assistance involving transport of drugs to HCs. The same key informant highlighted the need for assistance with infrastructure improvements and provision of equipment, mentioning that USAID IHP had not yet provided equipment. He also noted that HA leadership requires more attention, stating,

> *The entire health system has forgotten the health areas and the leadership of ITs in health centers, especially in rural areas. They enter lots of data, but ITs often do not understand the data produced…. According to the primary health care system, the IT is the head of these structures. Establishing IT leadership would make a big improvement.*

While he reported improvements in data quality and timeliness of reports, he underlined the need for more training of HA personnel involved in data collection and entry. Another key informant mentioned challenges motivating staff to complete data entry and to manage data and data quality, particularly in private facilities. Two key informants mentioned recurrent staff turnover as major challenges, adding that frequent changes of personnel necessitates more training. One government official also cited the need for more administrative and managerial training and reported that improvements in quality of care are slow.

USAID IHP supports the IPS to carry out quarterly audits in HZs and to procure equipment and supplies, with the IPS director stating that USAID IHP assistance allows them to carry out audits more regularly. One key informant suggested that increased audits reduce misuse of funds and recruitment of inappropriate health personnel. However, he felt that IPS does not always have adequate authority to enforce sanctions when irregularities occur, stating,

> *Inspection offices hold audits and find problems in the health zones; they can propose sanctions to the DPS, but sometimes the sanctions do not follow. It is deplorable because when they recommend it is necessary to sanction an agent for bad management, embezzlement or other infractions, and the sanctions do not follow, that weakens their authority. Inspection personnel will go on another mission and find the same agent who had been sanctioned is still working.*

Regarding contextual factors, informants maintained that the coronavirus disease 2019 (COVID-19) pandemic did not have a major impact on health activities. While conflict occurred in the eastern part of the province in 2020, the province had recently been peaceful. Funding constraints resulting from USAID IHP budgetary cuts were seriously impeding health activities including supervisory visits at the time of the evaluation.

Bunkeya Health Zone, Lualaba

Background Information

The average age of the HA informants was 50 years, and the majority (5 out of 6) were men. Both ITs had A2 training. The informants had an average of six years of work experience in the same post. Most informants engaged in other work as teachers or working as farmers or in small commerce, although neither of the ITs carried out other income generating activities. The average number of people living in informants' households was eight.

We interviewed the reference hospital administrator as well as a medical doctor and the director of nursing. Because the chief medical officer of the HZ had recently started coursework for a master's in public health and therefore had limited availability, we interviewed the nurse inspector who was temporarily in charge of the HZ activities. Three of these four informants were men.

All FGD participants were mothers of children under five years of age.

It is important to note that Bunkeya HZ was receiving assistance from the World Bank performance-based financing project (PDSS).

Facility-Based Services

Infrastructure

The higher performing HA (HPHA) was comprised of eight villages and included one HC and one iCCM post. The HC was situated 12 km from Bunkeya, the capital of the HZ, and was a small structure built in 2008 and owned by the Catholic Church. The HC maternity ward was a separate building made of local brick and a thatched roof. During our observations, the maternity ward door was left open making it accessible to animals. The HC did not have electricity; solar panels in the HC had not worked since 2020 and a phone network was unavailable. The HC obtained water from a local river or from rainwater collected in a tank. No renovations had been made since the baseline evaluation.

Prior to the baseline evaluation, the Catholic Church requested that health officials vacate the building so that the Church could use it for their ongoing activities. At the time of the baseline evaluation, zonal and HA health workers were planning the construction of another HC. During the midline evaluation, we found that a new HC made of local bricks had been built using PDSS funds. The IT estimated the cost of the new structure to be about US$8,000. The new HC, which was also small, was constructed with assistance from the CODESA committee and community members who made the bricks. We were told that the new center would become functional about a week after the midline evaluation. At the time of the evaluation, staff included the same IT (A2) whom we had met during the baseline, a nurse assistant (A3), and a receptionist.

Most rural health facilities lack electricity and running water.

The lower performing HA (LPHA) comprised 10 villages, with 1 HC, 2 health posts, and 2 iCCM posts. Two of the 10 villages, including the village where the HC was located, were on the main road, and the other villages were in the interior of the HA and often inaccessible, particularly during the rainy season. Since the baseline, the main

road from Bunkeya, which is 55 km from the LPHA, had been paved, making the town where the HC is located much easier to reach. The HA is vast and sparsely populated.

Health facility

During the baseline evaluation, the low performing health center (LPHC) was in a small brick, mud floor building which was originally a house and rented. In 2019, the HC staff used PDSS funds to build a small annex for sick patients; the same year, community members constructed a second building, which included two rooms. Both buildings were made of cement. At the time of the midline evaluation, the annex and the second building constructed by community members were being used as the central location to provide healthcare services, while the rented building housed in-patient males. While quarters were still cramped, the HC appeared to be cleaner and more orderly. Informants from the LPHA indicated that they also aimed to build or renovate the maternity ward, which was made of local brick and restricted in space. The HC had solar panels which provided power for a refrigerator, but otherwise electricity was not available. The HC had regular access to a telephone network. The HC relied on river water about 80 meters from the HC for ongoing needs. No building renovations had been done since our baseline evaluation.

Maternity

Staff included the IT (A2: high school graduate), an ITA (A1: high school graduate with three years of additional training), and one A3 (no specific period of formal training) staff recruited locally. Tragically, the IT in charge during the baseline evaluation, who was originally from the area, had died in a motorcycle accident; his replacement had arrived only one and a half months before our evaluation. Additionally, the ITA working during the baseline evaluation had been suspended due to a disagreement with an A3 worker about engaging in sorcery which caused harm to his colleague.

Reference Hospital

The reference hospital was originally constructed in 1953 and comprised numerous units, including a separate ward for children. A generator ran in the evenings and was run to perform surgery, and solar panels were used at night to light the hospital corridors and grounds. Informants indicated that the building has extensive cracks and problems with the roofing which required significant renovation and that ongoing renovations financed through monthly hospital revenue and assistance from PDSS were insufficient. The hospital was known for accepting all patients regardless of economic status, with informants indicating that the

Reference hospital

approach reflects the strategy of the Spanish nuns in charge of the hospital administration.

Health facility

Services Offered

Health Centers

HCs offered a minimum package of treatment services for children. Informants reported that the small size of the HCs forced providers to treat adults and children, as well as sick and well patients, in the same consultation area. Hospitalized children shared the same room with adults. The high performing health center (HPHC) health workers did not perform minor surgery, while the LPHA workers did. Both HCs assisted normal deliveries and referred complicated cases to the reference hospital. Services included screening and treatment for HIV and TB.

ITs mentioned that health workers followed flowcharts to orient treatment practices. Flowcharts were first introduced years earlier, and ITs received additional training sponsored by USAID IHP in 2020. When talking about the recent training, the IT from the HPHA said: “Flowcharts have helped us with treatment, how to take care of a child, where to start when treating a child. With the training we feel that we are better able to take care of a child.” The LPHA IT stated: “It helps us to diagnose, give medicine, and when to refer a patient. It is very beneficial for us.”

Neither HC had products to treat severely malnourished children, who we were told are referred to the reference hospital.

Other reported child health services included consultation préscolaire (well baby visit) [CPS] which involved vaccinations and growth monitoring, including screening for malnourishment using arm circumference measures and routine weighing of children, as well as distribution of vitamin A and mebendazole. Both ITs mentioned that CPS had been revitalized about a year before our evaluation, making it more comprehensive to include more nutrition activities. However, the IT from the LPHA mentioned that health staff required refresher training to better understand how to conduct CPS. Specifically, he reported that while RECO had received training on complementary child feeding, including leading porridge demonstrations and nutrition support groups, those trained were no longer active. Other reported activities included consultation prénatale (prenatal care) [CPN] and counseling on family planning (FP).

We received a wide range of information regarding fixed and outreach CPS sessions, with informants often contradicting their own responses and raising questions as to whether CPS is routinely conducted in the HAs. For example, the IT in the HPHA reported seven CPS per month, but later in the interview stated that they hold three sessions monthly; the RECO from the same HAs reported four sessions per month. Only the CODESA from the HPHA provided concrete information including the timing of fixed sessions, which he said were offered one time a month; this information was confirmed by FGD participants. Strikingly, the LPHA CODESA president and RECO were not well informed about CPS activities, which they should normally partake in. The CODESA president mentioned that CPS was held in the HC once every few months.

Neither IT could readily respond to questions regarding integrated healthcare; they mentioned providing information on handwashing for illness prevention, exclusive breastfeeding, complementary feeding for improved child nutrition and promoting CPS participation during treatment consultations. The IT in the HPHA indicated that they need additional training on integrated care.

HCs were evaluated by PDSS and USAID IHP quarterly on integrated quality health services. Both HCs maintained a register of the key indicators evaluated but had not received feedback regarding the results of ongoing assessments. The HZ nurse supervisor stated that, while quality of care had gradually improved, it was still not up to government standards, reporting,

> *We need to strengthen the quality of care, not just the capacity of service providers, but also the structures. You can see for yourself that we have structures with roofs made of straw. We must improve the materials, the drugs, but also, we must motivate the staff. But that is the responsibility of the government, it is not (the responsibility of) USAID IHP.*

Focus group participants reported that services offered for children included treatment of malaria, fever, diarrhea, cough, pneumonia, typhoid, measles, intestinal worms, and stomach problems. Other mentioned services included maternity care, vaccinations, and CPN and CPS sessions during which caregivers learn how to prevent certain illnesses and feed their young children. They also reported bed net distribution during CPN and during CPS after the child received the measles vaccine. Some participants in the HPHA also noted that the HC responded to outbreaks, such as recent cholera and measles epidemics. The same group of participants complained that the HC does not make drinking water available to residents. Several participants in the HPHA contended that the nurses did not perform night duty or were only available three nights a week, forcing sick patients to seek care in nurse's homes at night.

Reference Hospital

Hospital informants reported that sick patients were encouraged to first seek care in the HC that is next to and linked with the hospital, although severe cases can go directly to the hospital for care. A full package of preventive care was offered through the HC adjacent to the hospital. The hospital had a pediatric ward for hospitalized children and provided treatment for a wide range of illnesses and conditions; the hospital also offered treatment consultations for non-hospitalized cases. The hospital had a laboratory and radiology department to screen for and diagnosis a range of illnesses and an operating theater. While the hospital treated severely malnourished children, informants reported frequent shortages of milk therapies, vitamin A, and Plumpy'Nut. We were told that nurses followed flowcharts, which are posted on the consultation walls, for treatment of common childhood illnesses (diarrhea, ARI, malaria), although staff had not been trained on recently revised government flowcharts.

While the hospital focused mainly on treatment, it also offered some preventive services for children, such as vaccinations. Hospital staff conducted weekly group meetings with parents of hospitalized children to share information related to child health. Additionally, hospital staff worked with RECO who screened for and monitored cases of malaria, HIV, and TB in households. Hospital staff also disseminated preventive messages on the community radio during times of outbreak.

Hospital clinicians reported that malaria is the most common childhood illness, particularly during the rainy season. Informants reported that parents often seek care only when the situation is urgent, such as when children suffer from anemia and require a blood transfusion.

Physician-informants indicated that a quality assessment of child health services was supposed to be done quarterly by PDSS but hadn't been conducted for six to eight months. Our informants indicated that during the last evaluation the hospital met about 60 percent of their objectives due to lack of supplies such as milk and Plumpy'Nut needed for the treatment of malnourished children.

Equipment

The HC in the HPHA had a petrol-run refrigerator but did not have funds to purchase petrol; as a result, HC staff had to travel to the HZ offices to obtain vaccines prior to vaccination sessions. The incinerator was functioning but did not appear to be well maintained. Two latrines that were built using PDSS funds about four years before the midline evaluation were poorly maintained, although the showers were clean. The HC did not have a functioning laboratory; patients in need of lab tests were referred to the reference hospital. The center did not have a table to treat young children, nor did it have a functioning scale for newborns. It did have height measures and a hanging scale with trousers, but growth monitoring kits were unavailable; the center had a working adult scale. The HC had sterilization equipment, a stethoscope, and thermometer, but not a timer or medical lamp. The center had over 50 bed nets in stock. In the maternity ward, we found a maternity bed and regular beds for women in labor and postpartum.

The HC had a handwashing station on the veranda, but no soap was available during our observations. The center did not have a non-contact thermometer to check the temperature of people entering the HC. The HC had gloves; none of the health workers wore masks during the evaluation.

Attractive educational posters related to vaccinations and prevention of TB were displayed in the HC. The HC possessed many flipcharts for message dissemination during CPN and CPS; while in good condition, they were covered in dust and clearly not being used. The megaphone used to make announcements had not worked since 2018.

The LPHC had a functioning solar-run refrigerator to maintain the vaccine cold chain. The incinerator was not working. The HC had a microscope but no electricity, and while they had a centrifuge, all the glass tubes were broken. While the HC did not have a treatment table for children, it did possess a functioning newborn scale, although the IT mentioned that the newborn scale recently provided inaccurate measurements. A height measure, hanging scale and trousers, and a growth monitoring kit were available, but the HC did not have an adult scale. The center had sterilization equipment, a stethoscope, and a thermometer, but not a functional blood pressure cuff, timer, or medical lamp. The HC had 20 bed nets in stock.

There was a handwashing station in the consultation room but no soap. Only one pair of gloves was available; none of the health workers wore masks during data collection. The HC did not have a non-contact thermometer to check temperatures of people entering the HC.

The center displayed posters related to CPS, TB, the vaccination schedule, and FP, but they were covered with dust. The center possessed many flipcharts and a megaphone for message dissemination.

Both ITs made equipment requests to the BCZS and reported using HC funds to purchase equipment. When asked whether they were ever given equipment, the IT in the LPHA mentioned receiving used beds four years earlier from the predecessor USAID IHP project and the second IT reported getting the solar-run refrigerator to store vaccines from UNICEF. When asked about current needs, the IT in the HPHA mentioned a baby scale

and delivery kit, while the IT in the LPHA indicated surgery and delivery kits, gynecological clamps, a maternity bed, and new mattresses for the observation room. Costs for equipment repairs were covered by the HCs.

Maternity bed

Reference Hospital

Informants mentioned that the hospital had basic equipment, much of which had been received second hand from Europe, which raised special challenges. For instance, the oxygen machine operated on a different voltage and could only be run on a generator. Informants said that patients often lacked funds to pay for the fuel required to run the generator.

The acting head of the HZ noted that in 2019 USAID IHP had promised to provide equipment, but at the time of our interview equipment had not yet been received by the project.

Medication

The IT from the HPHA stated that the delivery of medicines provided by USAID IHP was irregular, forcing the HC to purchase drugs in pharmacies and affecting the functioning of the structure. He stated,

> *There are a lot of things that we need to do with the 50 percent revenue set aside for health center operational costs, there are a lot of things. But instead of taking care of other things we must pay for drugs; the center can't function without medication.*

At the time of our study, the IT from the HPHA reported stockouts of malaria tests and amoxicillin, and the HC only had 40 artemisinin-based combination therapy (ACT) tablets. During observations, we found that zinc was also not available in the HC pharmacy and had to be purchased by patients. Through interviews with other HC staff, we learned that the IT keeps some medications in his home, and at the time of our interview the IT had a stock of zinc in his home. When we talked to the IT, he stated that drugs stored in the HC get stolen, and therefore he keeps some stock at home.

The supply chain faces major challenges providing adequate medical supplies, leading to stockouts of essential medications in health area facilities and forcing facilities to procure less costly, unregulated drugs.

The IT in the LPHA reported stockouts of ACT for over three months (for all age groups) and malaria tests; the HC also lacked iron for pregnant women, mebendazole, paracetamol, vitamin B1, and zinc. The IT reported that they purchase drugs in kiosks in Likasi (city in Haut Katanga), mentioning that many medications such as ACT are replaced with lower quality drugs. The CODESA president from the same HA stated that during stockouts drugs are purchased in local pharmacies.

Both ITs reported that they have regular access to all children's vaccines. The IT in the HPHA, which did not have a refrigerator, had to obtain vaccines from the BCZS on days when the HC administered vaccinations to children.

ITs in both HCs reported that USAID IHP supports the delivery of drugs directly to the HC. Either USAID IHP hires a vehicle to deliver the medications, or they provide the IT with transport costs. While the ITs appreciated that USAID IHP covered transport of drugs, the IT from the LPHA believed that the modified approach led to challenges replenishing drug stocks, which previously could be obtained in the BCZS pharmacy but at the time of our evaluation had to be ordered through the BCZS and DPS causing long delays.

The IT from the HPHA mentioned that when deliveries arrive, ITs are called to the BCZS to verify their orders and claim the drugs. While the IT in the HPHA reported that the drugs correspond with orders, the IT from the second LPHA responded differently, stating,

> *The drugs do not at all correspond with our requests. When the drugs arrive, we see that there are other drugs that were not included in our order… to change the drugs really causes us problems, difficulties. Also, sometimes they give enough and sometimes they don't.*

According to the IT in the HPHA, the last drug delivery was in December 2021 and prior to that April 2021, while the IT in the LPHA mentioned that the most recent delivery was in October 2021. The IT in the HPHA reported a recent decrease in medications treating the biggest causes of child mortality, including malaria, diarrhea, and acute respiratory infections (ARI).

FGD participants in both HAs cited ongoing stockouts of medications. One participant noted that sick children die while waiting for the nurse to obtain drugs in neighboring HZs, highlighting that it often takes a long time to replenish drugs. They also mentioned that when stockouts occur nurses may give prescriptions to purchase drugs; caregivers in the LPHA mentioned this happens often and is negatively received.

Reference Hospital

At the time of the study, the hospital had not received any drugs from USAID IHP for over 10 months and we were told that the most recent delivery involved very small quantities of drugs, especially ACT. Informants reported that drug deliveries typically involve small quantities that do not correspond with their requests, particularly antimalarials which sometimes are not delivered at all. The administrator indicated that shipments vary dramatically, providing examples of one shipment valued at US$383 and another at US$2,461 despite the fact that the requests were similar. As a result, informants reported ongoing stockouts of ACTs as well as zinc and vitamin A. We were told that the hospital is forced to purchase medications on the "black market" in Lubumbashi and to give less recommended drugs, such as quinine, which can be purchased locally, for severe malaria cases. The administrator said: "Since May 2021, we have not received a single antimalarial. Antimalarials had been received the previous three trimesters. ACTs used in the hospital are being purchased on the black market in Lubumbashi and coming from Zambia."

The nurse supervisor confirmed that drugs do not arrive regularly, adding that they had been waiting for a shipment that was supposed to be delivered six to seven months earlier. He added that when structures experience stockouts of USAID IHP subsidized drugs, they resort to substandard drugs to treat malaria, diarrhea, and pneumonia. At the time of the study, he noted stockouts of malaria drugs, stating,

> *Among the ACTs, it is more artesunate amodiaquine that is lacking, there are structures that are already out of stock of antimalarials, mainly amodiaquine artesunate. And then we must resort to treatments that are not our first choice but only to palliate. The USAID IHP subsidized drugs are given free of charge. When we must buy these drugs, we are going to charge a fee, and it weighs on the community which is*

used to free malaria treatment for children and adults. Even now we are going through this because there is a long delay with the delivery.

He reported that three HZ staff had been trained in the software INFOMED developed to manage drug stocks. More recently, two HZ staff in charge of managing drug stocks (the MCZ and pharmacist) participated in a USAID IHP training on drug supply chain management which included a review of INFOMED. The nurse supervisor praised the software because it generates drug requests based on real needs. However, he reported that poor internet connection prevents health personnel from using the software as needed, adding that access can be interrupted for five days straight. The nurse supervisor said that a USAID IHP technician frequently promises that the VSAT connection will improve, but it never does. In Bunkeya, obtaining an internet connection by telephone can also be difficult and involves out of pocket costs. As a result, the nurse supervisor is forced to travel to Likasi, which is about 79 km from Bunkeya, to enter data.

Poor internet access persists, particularly in remote areas, impacting on the timeliness of data submission.

Utilization of Services

While HA informants contended that low tariffs facilitated easier access to healthcare, they mentioned lack of drugs as a deterrent for community members to seek care in the HCs. Distance to the HCs was also considered an obstacle, particularly when transport requiring payment is involved. In the HPHA, where villages are located 15-20 km from the HC, water inundation during the rainy season was also reported to limit access. Informants from both HAs stated that some people visit local pharmacies to obtain medications to treat simple conditions before visiting the HC when illnesses become more serious. There was also agreement that health beliefs can guide treatment seeking with traditional practitioners, particularly when witchcraft or sorcery are believed to be the underlying cause of the condition. The CODESA president from the LPHA mentioned that hospitalized patients seek traditional care simultaneously with medical care, underscoring the mix of belief systems. Mentioned ways to increase health service utilization focused on improving medications available in the HC pharmacies and reducing stockouts, which forced people to seek care elsewhere.

Most focus group participants reported that they utilize the HCs for treatment of their sick children, although some participants from the LPHA stated that they also frequent traditional healers. Caregivers also mentioned attending CPN and CPS sessions and obtaining vaccinations for their children in the HCs. Mothers from the HPHA stated that they are primarily involved in seeking care for their children, adding that while this duty should be shared with the children's fathers, many men shirk their responsibilities.

Caregivers cited multiple barriers to care seeking at HCs including: stockouts of medications and receipt of prescriptions to purchase medications; receipt of medications that caregivers do not believe will treat the illness or save the child's life; increases in consultation fees (LPHA); lack of tests to diagnosis certain illnesses such as meningitis (HPHA); absence of nurses when patients arrive in the HC (higher performing); inadequate funds to cover treatment and costs for medication; negligence of mothers (LPHA); interference of husbands, with participants from the LPHA mentioning that many fathers are opposed to vaccines because they are believed to cause children to cry at night and experience fever; the fact that men and women must share the same ward during hospitalization; inadequate beds for hospitalized patients and in the maternity ward,

forcing patients to share beds (lower performing); absence of a sitting area for women waiting to attend CPN and CPS; and a perceived need to access traditional healthcare. One focus group participant from the HPHA said: “Some diseases cannot be treated at the hospital or through the health care system. This is the case of some forms of meningitis associated with evil spirits which can only be treated by devin (soothsayers).”

Caregivers confirmed that when HC treatment is prolonged and fails to reduce illness symptoms or achieve the expected results, a conclusion is often drawn that treatment must by sought with a traditional healer. In these instances, hospitalized sick children may be taken from the health facility to local healers. Participants explained that local healers often use medicinal plants and engage in traditional practices such as drawing “bad” blood from patients. One caregiver said: “Fear of losing a child who does not recover quickly from an illness pushes me to seek a solution, pushes me to consult with local healers.”

When talking about herself, another mother added: “It happened to me last year. I had headaches and felt that something was in my body. I started in the hospital and because it didn’t help, there was no progress, I went to a local healer. I came got cured up to this moment.”

Participants from the LPHA added that many people have firm trust in treatment provided by devins, particularly for certain illnesses, who they go to when the HC medications have failed to treat an illness or combine with biomedical care. This FGD participant said: “To be clear, here we mix, if, for example, I go to the center and they give me medicine to drink and I see that the medicine does not give a favorable result, I will not delay, I go straight to the devin.”

Some participants even said that the HC nurses may recommend going to the devin for treatment. A mother said: “Sometimes they tell us that this disease is not normal, go find the solution elsewhere, without involving modern medicine.”

Other types of healers mentioned included herbalists and people who engage in spiritualism.

Management and Governance

Coordination

ITs reported holding monthly HC monitoring meetings which are attended by facility personnel, CODESA members, and RECO representatives. These meetings, which USAID IHP generally fund by providing US$15, involved data compilation for monthly reports. Also, USAID IHP financed monthly CODESA meetings by giving US$15 which was partitioned three ways.

In addition, ITs attended monitoring meetings at the BCZS monthly. Normally, a USAID IHP representative participated in the BCZS monthly meetings and provided money (US$15) to each attending IT as transport money. However, we were told that for three to four months prior to our study payments had not been made. ITs reported that these meetings presented the only opportunity to focus on improved coordination and collaboration with other government health officials and partners. During these meetings, ITs were encouraged to share best practices and challenges in their work settings, which ITs stated was beneficial to ongoing activities. The IT in the LPHA noted that when a USAID IHP representative was present, food and coffee was offered. He also appreciated the transport money that USAID IHP provided to attendees either by phone or in person, although he noted that this had recently become less regular. The nurse supervisor suggested that transport money is US$20 per participant, while both ITs mentioned US$15.

CODESA presidents also mentioned participating in occasional meetings convened by the BCZS when they shared their work experiences, and the higher performing CODESA president also participated in meetings organized by PDSS. The RECO in the HPHA had only participated in one meeting convened by the MCZ, while the RECO in the second HA, who had been working for over 15 years, had never met with health officials outside of the HA.

In addition to monitoring meetings at the HA and HZ level, the nurse supervisor mentioned that USAID IHP also financed zonal board of directors' meetings and monthly coordination meetings (COGE).

When asked about data monitoring, the nurse supervisor reported continued problems with data timeliness, completeness, and quality, mentioning that there was often missing data in the HA reports, analysis at the HA level was poor, and some HAs had problems delivering the data reports. He proposed that BCZS staff attend HA monitoring meetings to assist with data analysis and that HA workers receive more training and oversight. The nurse supervisor noted that since the beginning of 2022, no money had been available to support meetings, causing further problems with data monitoring. He considered the money that USAID IHP provided to support meetings a tremendous help.

Regarding meetings on community development, the CODESA presidents mentioned meetings convened by the local population to talk about health services or community projects such as the construction of a new HC. The IT from the HPHA mentioned participating in community development meetings with CODESA members and attending occasional CAC meetings. Interestingly, the RECO interviewed had not participated in CAC meetings.

Reference Hospital

Reference hospital informants reported limited collaboration with HZ and DPS staff. While one hospital representative participated in the monthly BCZS monitoring meetings and hospital staff were official members of the zonal team and were invited to participate in occasional emergency meetings, hospital informants mentioned that relations were poor. Hospital personnel did not participate in DPS forums, except when they were asked to defend the hospital annual workplan.

The hospital administrator reported that the MCZ had recently left his post to pursue a public health degree and did not inform her about his departure. While acting as MCZ, his residence was in Kolwezi, and he only occasionally visited Bunkeya for short (one to two week) periods.

Accountability Mechanisms

Both HCs previously had a suggestion box, which was no longer posted. During the baseline in 2019, personnel in the same HCs said that they planned to install suggestion boxes, but this had not happened. The nurse supervisor reported that each structure was supposed to have a suggestion box as part of the PDSS mandate. Hotlines had not yet been introduced, and community score cards were being piloted only in select HZs in Lualaba.

We were told that community concerns or complaints about health services or providers were often shared with CODESA members or RECOs, who reported the problem to the CODESA president. Typically, the CODESA president shared community complaints with the IT and other HC agents and worked with health personnel to identify appropriate actions to address problems. In both HAs, meetings were occasionally convened during which community members shared feedback on health services and health providers—such a meeting was

called in the HPHA a couple of months prior to our evaluation when community members expressed discontent that a night guard was not permanent in the HC. Informants suggested that health workers try to change their behavior when an offense occurs.

If a situation escalates or is not adequately resolved, the CODESA president can submit a complaint to the BCZS. However, involvement of the BCZS is generally avoided because the situation can become complicated.

The nurse supervisor emphasized that CAC and CODESA presidents have important roles in ensuring accountability, including related to use of HC funds and supplies. In that regard, the CODESA president from the HPHA indicated that he visits the HC regularly to check medication and supply stocks. The nurse supervisor stressed the importance of sharing financial information with entire health teams to prevent one person from controlling all HC funds.

Informants reported that community members are not concerned about reprisals and are open to reporting problems about healthcare services. The IT from the HPHA welcomed receiving feedback, even negative, to resolve problems. There was general agreement that health personnel were there to serve the community, which required providing quick solutions to requests or concerns.

The nurse supervisor emphasized the importance of IPS visits, which he contended forced health structures to follow government norms, particularly related to financial management. He reported that inspectors are often flexible when they identify first time offenses but did not tolerate repetition of the same faults. He stated that since the start of USAID IHP inspection visits occurred more regularly and involved visits to HCs, whereas previously visits only entailed supervision of the BCZS.

Reference Hospital

Informants reported that the suggestion box was posted but not being used. The only other mechanism for reporting was when patients complained directly to physicians. According to our informants, IPS personnel did not conduct supervision in the hospital.

Referral Systems

Informants described the referral system to include CODESA members and RECOs at the community level who are responsible for identifying, referring, and sometimes accompanying sick patients to the HC; the HC where sick members are provided basic care; and the zonal reference hospital where patients who HC workers are unable to treat are referred. They reported that referrals from the HC to the reference hospital were made by the ITs and occurred when patients spent three to four days in the HC without showing signs of improvement or presented conditions that HC health workers were unable to treat, with the ITs specifying that the HC workers had limitations treating severe cases. We were told that ITs followed treatment flow charts to determine when a referral was necessary.

Reported conditions that typically required referrals included delivery complications, anemia, severe malaria, and severe malnutrition. We were told that HC workers used a referral form and entered the patient information in a register, and both ITs suggested that after hospital treatment patients returned with a counter reference describing the diagnosis and treatment received in the hospital. Informants from the HPHA, which was about 11 km from the reference hospital, indicated that a community health worker (CHW) or facility worker often accompanied patients to the hospital, while informants based in the LPHA situated over 50 km from the hospital suggested that HC workers sometimes talked to hospital workers about the

patient by phone. The IT in the LPHA mentioned referring about five patients each month. None of the informants had received training on referrals.

Long distances, poor road infrastructure and transport, and concerns about health care costs cause dangerous delays to care seeking during health emergencies.

Informants mentioned that referred patients and their family members were responsible for transport to the hospital, which generally involved travel by motorcycle which cost US$1.10 from the HPHA and US$10 from the LPHA. Informants from the closer HA mentioned that families sometimes opted to travel by bicycle or on foot, which could cause dangerous delays in obtaining hospital care. No local mechanisms were set up to assist sick community members with transport to the reference hospital, although health workers in both HCs mentioned occasionally assisting with transport costs. No formal assistance was available for vulnerable members.

Mentioned obstacles to patient acceptance of referrals included lack of means to cover transport costs, concerns about hospital costs, and belief systems, with informants from the more distant HA also highlighting lack of transport. The IT from the LPHA faced major challenges convincing people to accept referrals to the reference hospital, underlining that traditional belief systems played a major role in choice of care and delays in care seeking. He also mentioned that traditional practitioners sequestered sick patients for dangerously long periods. This IT planned to meet with local practitioners to discuss the importance of seeking rapid care at biomedical facilities, particularly for childhood illnesses. He said,

> *Here we have serious problems, that's why I talked to you about holding a meeting with traditional healers. As soon as we refer someone, healers come to convince the patient to go to him first. When the former IT was here, he had his own motorcycle to transport patients, so I told my staff, when we refer someone, you need to have a motorbike outside ready to go…. Given the distance, we have serious problems, we first explain why the reference is needed, try to convince the patient, but still, we have difficulties.*

Later he said,

> *Every time they come for treatment, when there's something wrong, any danger or seriousness, they first think of witchcraft, fetishes. When they come, we treat, do whatever we can, then refer. They say that the grandfather did that, the mother did this, so it's by raising awareness first that we try to make the family understand there is this and that condition concerning their health, and we need to get the patient to more advanced care. Sometimes we cover the transport costs to the hospital, and when the patient becomes healthy, family members believe it was important that the patient be referred.*

Informants from the HPHC were less candid about the influence of traditional belief systems on care seeking behaviors, although the RECO shared information on a child who had died two days before the interview. The parents of the child, who was severely anemic, first sought treatment with a devin before taking the child to the HC. When the IT asked whether the family had CF 10,000 (Congolese francs) [US$1 = CF 2,482.25, 2023] for a blood transfusion, the parents said that they had spent all savings on treatment provided by the traditional healer. The family finally agreed to take the child to the hospital, where the child died.

Reference Hospital

Hospital workers reported recent improvements in referrals, which they attributed to PDSS support which paid for referrals and counter referrals. It was also mentioned that PDSS covered some costs for vulnerable community members. They added that referral forms, which were distributed by USAID IHP, were always available, which was not the case in the past. Informants reported that referrals often involved severe malaria cases with anemia and increased during disease outbreaks such as cholera or measles. The hospital administrator said that some ITs go to the hospital or call by phone to inquire about patients referred.

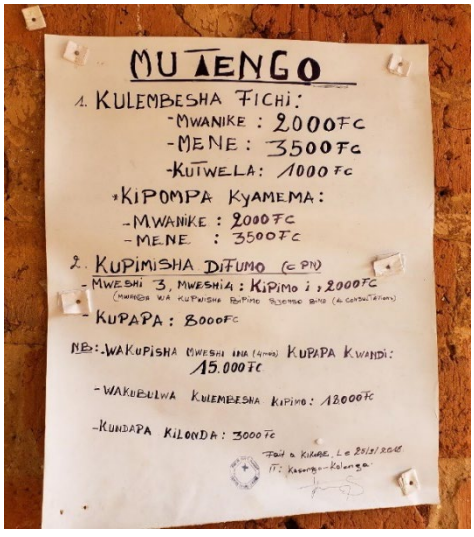
Hospital informants mentioned a reluctance to refer as a primary obstacle, stating that HC nurses view hospitalized patients as an important source of revenue. They also emphasized that hospital costs deterred patients from accepting referrals. The hospital administrator said,

> *Some health centers keep patients and do not refer them for the simple reason that the patient is a source of income for the health center. The reference to the hospital is done late because the health centers draw an income from the patient, they keep the patient as long as possible. In addition, the patient resists, thinking that in the hospital there will be a lot of costs to pay.*

Hospital informants also mentioned the use of traditional medicines, which they stated can cause serious complications and delay care seeking, as a major barrier to seeking hospital care. Distance and accessibility to the hospital were also cited, although informants noted that PDSS paid for half of the referral transport costs.

Healthcare Financing

Both HCs had reduced flat price consultation fees based on negotiations with the local population and as mandated by PDSS, which subsidize the HCs. Treatment consultation and other fees, which were posted in local language in both HCs, were highly visible in the HPHA, but not in the LPHA. Most informants felt that the fees, which in the HPHA were CF 5,000 for adults and CF 3,000 for children, and in the LPHA were CF 2,000 for both adults and children, were affordable for most community members. However, ITs mentioned that it was still a challenge for some members to pay for healthcare, with the IT in the LPHA mentioning that the HC absorbed the costs for vulnerable members. This IT added that the HC was in the process of negotiating further reduced fees with the goal to improve care seeking, particularly for children. ITs from both HCs reported that patients without adequate funds were treated on credit, with the health workers attempting to collect money for payment after patients left the center. In the HPHA gifts in kind, such as chicken, were also accepted as payment. Neither of the ITs requested that patients unable to pay leave items as assurance of payment.


MUTENGO

1. KULEMBESHA FICHI:
-MWANIKE : 2000Fc
-MENE : 3500Fc
-KUTWELA: 1000Fc
*KIPOMPA KYAMEMA:
-MWANIKE : 2000Fc
-MENE : 3500Fc
2. KUPIMISHA DIFUMO (c PN)
- MWESHI 3, MWESHIA : KIPIMO i ,2000Fc
- KUPAPA : 8000Fc
NB:-WAKUPISHA MWESHI UNA (4mois) KUPAPA KWANDI: 15.000Fc
-WAKUBULWA KULEMBESHA KIPIMO : 12000Fc
-KUNDAPA KILONDA : 3000Fc

Health center fee schedule

Other than PDSS, which evaluated healthcare services and made payments to health structures every three months, the HPHA did not implement other initiatives such as mutuals or bonds to finance healthcare. The LPHA had an agreement with a local commercial farm to cover workers' healthcare costs. However, the IT indicated that payments had not been made for over seven months.

Both ITs maintained a list of indigent patients who they claimed received free healthcare. The list was established in 2021 by a local committee and based on set criteria, with eligible community members including orphans, people who are bedridden, and extremely poor members. In the HPHA, the list consisted of 21 people and was posted in the HC, while a list comprised of eight people was not posted in the second HC. The IT in the LPHA mentioned that two of the vulnerable people on the list had died, and that the HC needed to update the list. We were told that free care for vulnerable members is supported by another USAID funded organization, but not USAID IHP.

The nurse supervisor indicated that structures tried to institute health mutuals, but people perceived it as a risk. Each structure financed by PDSS had established fixed fees with local populations; the nurse supervisor expressed concern about what would transpire when the HZ transitioned away from World Bank support. When we asked the nurse supervisor whether fixed fees were followed, he said that most people were illiterate and cannot read the information posted regarding the official fees, and that it was difficult for BCZS staff to enforce that the HCs adhere to the fixed fees.

Reference Hospital

We were told that most hospital patients paid out of pocket; basic consultation fees were CF 4,000 for adults and CF 3,500 for children. In conjunction with the PDSS approach, hospital fees had also been negotiated with community members. All services provided beyond the first consultation involved additional fees. Informants reported that patients were required to pay the bill for hospital services at discharge, and if they could not, were retained in the hospital; some people were reported to flee the hospital at night. The hospital had contracts with several companies to provide care for their employees, with companies paying bills monthly. Mutuals had not been introduced.

Resources for Facility Workers

Training

ITs from both HCs reported that staff had attended training organized by USAID IHP within the past 12 months. In the HPHA, the IT had participated in training on FP, while his assistant had participated in training on malaria treatment. Two LPHA staff had participated in malaria training, but one of these staff members had subsequently been suspended from work. Another staff member had attended training on HIV (not funded by USAID IHP) but was later transferred to another health post. Additionally, both ITs had attended training on primary healthcare for children 0-5 years in 2020 when treatment protocols for children were reviewed. It did not appear that health workers attempted to share findings with other health personnel working in the same HC after participating in trainings. We were told that BCZS personnel were in charge of selecting USAID IHP sponsored training participants.

The ITs considered training organized by USAID IHP of high quality. However, the IT from the LPHA mentioned that they needed more refresher training, particularly related to CPS revitalization and complementary feeding support groups, indicating that the RECO who attended the initial training were no longer active. He also mentioned the need for capacity building on treatment of childhood illnesses and maternity care, including CPN.

Reference Hospital

Informants reported that hospital staff had participated in a variety of training offered by USAID IHP in 2021, including conflict management, integrated care of neonatal and childhood illnesses, drug management, malaria treatment, and treatment of malnourished children. In 2020, two doctors attended training on health worker attitudes and behaviors. While hospital physicians praised the quality of the training, they contended that the training included too few hospital workers, raising questions about the impact. The administrator also claimed that the duration of training was short. While the hospital held briefing sessions following the training, busy schedules did not always allow many personnel to attend. The doctor informant questioned how training participants were selected, noting that the same individuals were always chosen to attend.

While USAID IHP has supported extensive training efforts designed to increase the capacity of facility based and community health workers, the proportion of health workers trained is limited and insufficient.

When asked about recent HZ training, the nurse supervisor cited training on management of TB cases, integrated management of childhood illnesses, CPS revitalization, nutrition, obstetric care, health worker attitudes and behaviors, iCCM, and HZ financial management. He raved about a training on management of primary healthcare that was attended by four HZ team members prior to 2021. While the nurse supervisor praised training sponsored by USAID IHP, he suggested that trainings need to be accompanied by other essential support such as materials and drugs which are often insufficient. He also recommended more follow-up or monitoring to make sure that lessons that were learned during training were being followed, stressing the need for follow-up training related to the improvement of health information systems.

Access to Continuing Education

When asked whether the ITs received up to date information such as technical guides or health literature, they showed us manuals dating back to 2010. Both ITs noted that they did not have access to the internet and were rarely provided with scientific or technical information. There was general agreement amongst both facility- and community-based informants that they needed access to information to enhance their knowledge related to work responsibilities, which would ultimately serve to improve health services. The IT in the LPHA contended that HC personnel were particularly in need of information on treatment of young children, who he stated were the primary recipients of inferior care in remote settings. The RECO from the same HA added that she needed to be better equipped to respond to questions from community members.

Reference Hospital

Hospital personnel, who purchased phone credit to access the internet, participated in a WhatsApp group with other clinicians in Bunkeya, as well as a WhatsApp group of physicians in Lualaba; both groups shared general medical information. Informants reported limited contact with government officials and UN and donor agencies.

The nurse supervisor noted that health workers obtained medical and work-related information from health workers in other provinces during training or on the internet, but not from USAID IHP.

Attitudes of Health Workers

There was general agreement amongst all types of informants that the attitudes and behaviors of health workers towards community members were good and that providers were on good terms with villagers. Several informants mentioned that the role of health providers was to serve the community and that exhibiting negative behaviors could reduce service utilization. The IT from the LPHA said,

Informants commonly described attitudes and behaviors of HC staff towards parents or child guardians as positive, with some noting that health workers recognize the importance of maintaining good relations with community members.

> *If we behave badly, then the community will never frequent our services. As nurses, we must give what we owe back to the sick, and to the community. We must always behave in an upstanding, honest way and in a way that can attract the community.*

The CODESA president from the HPHA said,

> *When we notice something negative, we often talk about it amongst ourselves (community health workers). We are here to improve health and to sensitize the community to use the health center. When there is a problem we go to the health center, we speak to the person in question to change his language, so that he improves, so that he can satisfy clients. We do not want to discourage community members, because there is a risk of losing clients. Our role is to raise health indicators.*

Informants did, however, indicate that health workers occasionally manifested negative behaviors such as leaving the HC during treatment hours or during night duty, sleeping during night duty, speaking inappropriately, becoming irritated with patients or caregivers, or refusing to work after performing night duty. When a negative instance occurred, community members sometimes threatened to stop using the health facility and reduce utilization. In addition, informants reported that community members often instigated negative interactions with health providers due to unrealistic expectations regarding treatment and recovery. Some mentioned that they must tolerate negative feedback from patients and maintain their composure when providing care.

When negative occurrences happened, the community members implicated generally complained to a CODESA member or RECO who shared the information with the IT or spoke directly to the health worker involved. In addition, HC team members and community workers shared remarks from community members and addressed problems during regular meetings. There was consensus that the health worker concerned generally responded by changing their behavior, with informants once again stressing the importance of maintaining clients. Health workers also mentioned that community members quickly voiced complaints if they felt that a health worker behaved inappropriately.

Informants mentioned that supervisory visits motivated health workers to maintain good attitudes. Only the IT from the LPHA had participated in a group discussion about health worker attitudes and behaviors when he was previously based in Bunkeya. None of the informants had received formal training on attitudes and behaviors.

Caregivers in the FGDs described the health workers as punctual, welcoming, and performing well in their jobs, although one mother mentioned that health personnel are arrogant at times.

Interestingly, the nurse supervisor contended that it was easy to monitor and control health worker behaviors but believed that community behaviors often posed a problem. He stated,

> *The attitudes and behaviors of the service providers, they have to show compassion to the population, they have to take into account all aspects when someone comes for consultation, they have to treat them with dignity. This is easy because they studied and know something about ethics, but it is in the community where a lot of work is needed. The main problem is at the community level; there may be occasional cases of bad behavior towards patients, but the change in behavior which is most needed is from the community. It's easy for us as a manage a service provided, but in the community, dangerous behavior cannot be punished, there we must always educate and raise awareness.*

Reference Hospital

Hospital informants confirmed that health workers sometimes exhibited inappropriate behaviors with patients and felt that training was needed. No training on attitudes and behaviors had been carried out in the hospital since 2016.

Health Worker Sources of Motivation

Its reported that health worker motivation is through renumeration primarily from the monthly HC revenue. The IT in the HPHA reported a monthly revenue of CF 500,000, while in the LPHA it was CF 300,000 per month. ITs noted that poor revenue reflects the low fixed price consultation fees.

Health personnel claimed that monthly worker payments, which are based on facility revenue, are insufficient and irregular due to fluctuations in health care utilization.

In the HPHA, we were told that 50 percent of revenue was used for personnel payment and 50 percent was used for operational costs, but the LPHA did not seem to follow a strict partition of the revenue, with the IT mentioning that some money was set aside for drug purchases and that revenue was divided amongst workers, with each worker receiving about CF 15,000-20,000 monthly. Both ITs stressed that personnel remuneration also depended on health service utilization, which was poor because the population had limited means. In addition, each HC received about US$900-1,350 quarterly from the PDSS project, but one IT mentioned that payment often arrived 1-2 months late.

None of the health workers in the two HCs received government salary or risk bonuses, but they did mention a provincial bonus of US$120 (HPHA) or CF 112,000 (LPHA) that was sent on two occasions. Unfortunately, the IT in the LPHA did not receive the second payment which was apparently sent to the wrong phone number.

Other mentioned forms of motivation included training and providing treatment to sick community members, especially children. Interestingly, the IT in the HPHA reported that training opportunities had decreased since 2019 when we carried out the baseline evaluation. ITs reported that they receive US$65-150 when attending a training, depending on the location, as well as money for transport. Other remuneration mentioned included US$15 for monthly HC monitoring meetings, which is divided amongst personnel, and

US$15 for monthly supervision of iCCM sites.

When asked about satisfaction, one IT said they worked because it is their duty, while the second IT indicated that he gets satisfaction treating sick patients and ensuring community members maintain good health. Informants indicated that there is no possibility for promotion or advancement within the government system, but that employment opportunities can arise with implementing partners.

Reference Hospital

Hospital staff received a fixed monthly payment, with our physician informant reporting getting US$500 monthly. Four hospital workers received government salaries, and few received the national risk bonus. The administrator reported that some staff who had previously received the national risk bonus had recently reported that payments were being sent to other people. In addition, hospital staff had received a provincial bonus twice, which was paid in CF and involved US$120 for doctors and US$15 for nurses. Informants considered performance-based financing payments as a good source of motivation, increasing their salaries by 30 percent to 40 percent, although at the time of our evaluation there had been a recent 20 percent reduction in payments. Additionally, there were concerns that PDSS may curtail activities due to mismanagement of funds in Kinshasa.

Informants also reported training as a motivator. One medical doctor mentioned possessing the medical knowledge to treat patients and to save lives as another motivator. The same doctor added that there was little room for promotion in the health system.

The nurse supervisor said that USAID IHP had not contributed to health worker motivation and that only PDSS provides payment based on worker's performance. He considered the quality of staff a serious problem, adding that it was difficult to recruit better qualified workers because revenue was very low and health workers make little money. He added that most health workers did not receive government salary, less than 20 percent of personnel received the national risk bonus, and that the provincial bonus was irregular and low; he added that performance-based financing payments increased salaries by 30 percent to 40 percent. According to the nurse supervisor, poor compensation pushed many health personnel to leave the health profession for the mining sector. He stated,

> The vast majority of health workers did not receive government salaries and very few received risk premiums.

> *In the whole zone there are not twenty who receive salary, there are not twenty; for the doctors there is only the zonal chief medical doctor and the hospital administrator. For the other categories, there are three who receive the risk premium, but it is not significant to cover family expenses, it is a small premium. We hear promises from the central level that they will pay everyone according to their function, their qualification, it will come. We still have hope, but it is also demotivating, because people work almost on a voluntary basis.*

He considered training as a motivation because it updates skills, improves quality of care, and makes workers more eligible for promotions.

Community Health Services

Infrastructure

Health Area

Community activities reported by informants included raising awareness of common health conditions and preventive measures during community meetings led by health facility staff and household visits involving CHWs. We were told that the main task of CHWs was to encourage community members to seek healthcare in the HCs. Informants also mentioned that CHWs identified sick community members and referred them to the health facilities. They stated that RECOs were responsible for seeking out children who had missed vaccinations and screening for malnutrition using arm circumference measures.

Informants mentioned that health information that required rapid dissemination such as disease outbreaks or campaigns was also transmitted by CAC members, village criers, and mobilisers using megaphones, although the megaphone in the HPHA had not worked for years. In addition, informants reported that messages were transmitted by RECOs in schools and churches, which was confirmed by FGD participants who mentioned that their school children shared health related information learned at school in the home setting. Messages transmitted on community radio were received by FGD participants in the HPHA.

Informants mentioned that community outreach involving growth monitoring and vaccinations were held monthly in distant villages. CODESA members in both HAs reported organizing community development projects, with the CODESA committee in both HAs playing a major role in HC construction.

Local nongovernmental organizations and associations did not exist in the two HAs, and FGD participants confirmed that there were no local associations working on community development or activities focused on child health. The most frequently mentioned community health structure was CACs; one informant in the HPHA also stated that the ADBC group which distributes FP methods and is supported by USAID IHP was active. CAC revitalization which involved training and the reorganization of committees had occurred in 2021 in the HPHA; the IT reported that three CACs were functioning in the HA. While the IT asserted that a primary CAC role was to transmit village level health information to the HC personnel, he was unable to articulate how the HC works with the CACs. Curiously, CHW informants working in the HPHA reported that CODESA members and RECOs had not been trained on the CAC mandate and were not working with CACs. Informants from the LPHA had only heard of CACs, which were not functional in the HA. The IT reported that CAC revitalization was included in the operational workplan, but he was unclear when CAC activities would begin.

Regarding facility workers' involvement in community activities, both ITs reported holding meetings with community members to talk about healthcare and community development. The IT from the LPHA mentioned that topics discussed included healthcare fees, common illnesses, and the importance of seeking rapid treatment; and that health personnel obtained feedback on the quality of health services. However, FGD participants from the same HA claimed that they had never been invited to community meetings. The IT from the HPHA reported participating in CAC meetings when community upkeep such as latrine construction or water drainage was discussed. He also mentioned carrying out training and coaching of RECOs, although our RECO informant had never benefited from training provided by the IT. Data triangulation suggested that the main role facility workers played in community activities was to provide instructions to the CHWs on message dissemination related to disease prevention.

Reported mass events included a measles vaccination campaign in December 2021, bed net distribution several months prior to our data collection, and mass distribution of vitamin A and mebendazole. Informants in the HPHA reported two mini-campaigns, one related to malaria and a second to family planning; no mini-campaigns had taken place in the LPHA. Group discussion participants confirmed the bed net campaign and distribution of vitamin A and mebendazole, as well as mini-campaigns for polio and TB in the HPHA. The nurse supervisor mentioned that mini-campaigns were held in two to three HAs each quarter, stating that mini-campaigns had been conducted in eight to nine of the HZ HAs and that workers leading mini-campaigns were paid directly by USAID IHP. While the nurse supervisor reported a rise in illness detection after mini-campaigns, the hospital administrator contended that, while campaigns attracted many patients, they depleted already low stocks of essential drugs, particularly ACTs for malaria treatment. She added that USAID IHP did not contribute the necessary money or drugs to support mini-campaigns, stating.

> *In June-July 2021, USAID IHP organized a campaign without giving any money. People flocked to health structures, draining stocks of medicines in the hospital and health centers. These mini-campaigns offering free care are carried out without USAID IHP giving anything. Tokens for free care are given to community members.*

Informants from both HAs mentioned that nutrition support groups had been established and meetings convened. The IT in the LPHA reported that porridge demonstrations had previously been held, but that nutrition groups were no longer active, in part because they lacked funds. The CODESA president in the same HA had never heard of the groups. The nurse supervisor reported that each HA should have a nutrition group carrying out culinary demonstrations and meetings to discuss complementary feeding.

The HPHA had youth groups actively involved in sensitizing youth on protection against sexually transmitted disease, with groups established in 2018. No youth groups existed in the LPHA. The nurse supervisor reported that USAID IHP stipulated that sponsored activities should include 40 percent female representation, but that the project did not have a specific gender strategy. He reported difficulties involving women, stating that women in rural communities chose to stay at home.

Informants suggested that facility workers and CHWs used flip charts to disseminate messages during CPS. While the ITs indicated that each RECO has a flipchart, RECO informants reported limited access to flipcharts. The research team found many flip charts available in both HCs which were covered in dust and not being used. ITs reported no change in the communication approach since the baseline evaluation.

The Bunkeya HZ had nine iCCM sites, with one iCCM located in the HPHA and two in the LPHA. ITs had received training on iCCM activities early in the implementation of USAID IHP. Both ITs claimed to carry out monthly supervision of iCCMs during which they reviewed forms and registers maintained by the RECOs, examined the medicine chest to see if it was orderly and well stocked, assessed how many referrals to the HC had been conducted, and provided instructions on how to improve activities. Subsequent to supervision, ITs completed a form which they submitted to the BCZS during monthly monitoring meetings. Supervision forms were collected by DPS or USAID IHP staff during trips to the HZ and shared with the USAID IHP central offices. ITs reported receiving US$15 per month to visit the sites. They mentioned that access to iCCMs can be difficult due to poor roads, particularly during the rainy season, and long distances (up to 40 km).

During a visit to an iCCM, we found that the site did not have any medications and had not been functional for over two years. The nurse supervisor acknowledged that community care sites are not functioning well, which he attributed to poor motivation of the RECOs overseeing activities, as well as lack of drugs and materials. He noted that the sites rely on HCs for drugs, and when there are stockouts, the iCCMs are the first to be affected. Additionally, while training occurred in 2021, many RECOs had left their post. The nurse supervisor said,

> *We have to equip and revitalize community care sites, these are care structures that will help us, help to take charge of diseases in communities killing children. But if they do not have basic materials such as scales, enough medicines, data collection tools, then it is nothing. Maybe you haven't had the chance to visit or access a site, you will see that there is almost nothing at the sites.*

System Design

Role of CODESA Members

Informants reported that the CODESA committee created a link between the HC and the community. They mentioned that CODESA members were responsible for overseeing the activities of HCs and posts, ensuring the appropriate use and maintenance of HC materials and medications, raising awareness in the population about health issues during household visits, seeking out sick patients in the community, encouraging members to seek treatment in health facilities, referring and sometimes accompanying sick patients to the HC, providing counselling to the RECO regarding their work, and participating in special campaigns. In the LPHA, it was also mentioned that CODESA members conveyed health-related messages in schools and churches. The nurse supervisor said,

> *The responsibility of CODESA members is to manage together with the IT, to follow the evolution of activities at the health center, in all aspects, technical aspects, community participation aspects, the CODESA committee ensures the link with the community and the CODESA is supposed to know the assets of the health center and how it is managed. The CODESA is associated with the management of the center's resources, of course with an eye on development, so that the health area advances in terms of health and use of services by the community are improved.*

As we reported during the baseline, there appeared to be much overlap between CODESA members and RECO activities, with CODESA members often engaging in work officially delegated to RECOs, such as household visits.

CODESA members in both HAs participated in monthly HA monitoring meetings but did not attend monthly BCZS monitoring meetings. CODESA committees held monthly meetings when they discussed work plans, although informants in the LPHA reported that the committee had not convened for several months. The CODESA committee in the LPHA, where the village chief had previously been the president, appeared to be fraught with conflict, disorganized, and generally inactive. Our RECO informant in this HA complained that the committee members had failed to give directives for a prolonged period to active RECO, thus paralyzing ongoing RECO activities. She said,

> *Their negligence (of RECOs) started during the months of January, February, March. They are the leaders, and they must carry out their work, we RECOs are there to follow their orders and put their directives into practice. We are there to carry out the work, but we need guidance.*

One informant suggested that the village chief's involvement complicated the CODESA committee's relationship with the HC. In addition, we were told that the village chief did not always share money provided for the monthly meetings with other CODESA members. It is important to note that prior to 2022, USAID IHP had routinely provided US$15 monthly for CODESA members to participate in monthly meetings, but the money had not been allocated since the start of 2022.

Informants reported inconsistencies regarding the number of CODESA committee members, mentioning 5-12 CODESA members, including two women who served as treasurer and advisor, in each HA. CODESA members had not been formally evaluated in the past few years. CODESA members in the HPHA had participated in CODESA revitalization, but not in the LPHA. The CODESA president in the HPHA considered revitalization training extremely helpful, mentioning that it strengthened his ability to make community members aware of health issues and services.

Informants stated that CODESA members participated in periodic training in Bunkeya, with the CODESA president in the HPHA specifying training on malaria and FP linked to mini-campaigns. Informants from the LPHA mentioned training of CODESA members led by PDSS but failed to specify themes of the trainings led by USAID IHP. CODESA member informants reported receiving about US$5 for participation in the trainings along with transport fees and phone credit.

Role of RECOs

Informants described two types of RECOs, including those involved in FP counselling and method distribution and those engaged in sensibilization, which are the type of RECO we interviewed during the midline. Responsibilities of RECOs carrying out sensibilization included household visits to identify sick community members, particularly children, and other vulnerable members of the population in need of assistance; and referring (and often accompanying) ill community members to the HC. Another primary role involved raising awareness about the importance of seeking rapid healthcare to health facilities during times of sickness, the potential dangers of seeking treatment with traditional healers, and how to treat less serious conditions such as mild diarrhea at home. They also encouraged women to participate in CPN and CPS, get their children vaccinated, practice FP, maintain cleanliness in household compounds, and utilize bed nets. In the HPHA, RECOs also participated in outreach activities, which was less evident in the LPHA. The RECO from the LPHA also mentioned that she assisted with activities in the HC.

RECOs also participated in periodic campaigns, such as vaccinations and bed net distributions, both of which occurred in late 2021 in Bunkeya HZ. We were told that RECOs enjoy these events which typically involve financial compensation. However, during our study we found that the RECO who had participated in a bed net distribution in November 2021, had still not been paid.

RECOs were responsible for maintaining notebooks of their ongoing activities and submitting activity reports to the IT at the end of the month. Reports included the number of household visits and sick children identified and surveillance data collected during epidemics. Notebooks had not recently been distributed to the RECOs in the LPHA, thus impeding the work.

Informants reported inconsistent numbers of active RECOs. In the HPHA, informants indicated that there were from 5-11 active RECOs, of which 2-4 were women, while in the LPHA informants reported 7-10 active RECOs, 2-4 of whom were women. Neither HAs had RECOs in each of the HA villages, as stipulated by the

government. The RECO-informant in the LPHA reported that when she joined there were 20 female RECOs, but of the 20, she was the sole remaining female. The IT explained that the RECOs quit due to lack of remuneration. It is important to note that most of the RECOs we met were older (50-70 years of age).

Informants from the HPHA reported that RECOs followed 50 households, the number of households required by PDSS, while LPHA informants mentioned 15-20 households. There were many contradictions regarding the number of visits (anywhere from one to four) made to households each month. RECOs from both HAs reported that they must travel many kilometers to visit households. Informants from the LPHA mentioned a recent decrease or stoppage in RECO activities, which was in part attributed to the fact that they did not have notebooks to track household visits.

In both HAs, our RECO informants had been volunteering for many years; neither had been elected by community members. Informants reported that RECOs had not received training since the baseline study, except for an emergency training associated with a measles epidemic in 2021. While IT and CODESA informants in both HAs reported giving informal training and coaching to active RECOs, our RECO informants denied that this occurs. Due to the long lapse in training, the RECOs reported that they had forgotten a lot of material initially learned and needed refresher training. The RECO from the LPHA said,

The research shows that many RECOs and CODESA lacked the necessary skills, knowledge, and motivation to carry out their roles.

> *You know where the problem lies, after we are trained, we need to receive feedback and counseling so that what we learned doesn't get lost in our heads, but that doesn't happen, I came here to ask my colleagues in the HC – weren't we asked to raise awareness? It is the president (CODESA) who is supposed to give us briefings, to tell us what we must do, but he doesn't do it, which is why we can't perform well. Even a student needs to repeat what he or she has learned so that it doesn't get lost. Repetition is how we learn.*

Informants cited only a few times when a RECO manifested negative behavior. A RECO from the HPHA mentioned an instance when a disgruntled RECO spread rumors that the medicines used in the HC caused illness. It was also mentioned that some RECOs complained about lack of compensation, or their being excluded from trainings or mass events, which is their only way to receive payment. A CODESA president mentioned that the criteria for selection of participants in USAID IHP sponsored training caused resentment, stating: "RECOs who can read and write are selected, hence some RECOs are not invited to these trainings, and this is what generates bad behaviors because they complain that they are not invited to trainings."

FGD participants from both HAs reported that RECOs shared information at the community level and in church; they mentioned receiving information on childhood vaccinations, nutrition, protection against malaria including the use of bed nets, exclusive breastfeeding, clean water and hygiene measures, the importance of participating in CPN and CPS, and reduced consultation fees in the LPHA. Participants noted that messages regarding vaccinations and attendance of CPN and CPS were well received; both groups of women suggested that they stopped CPS when the child reached nine months of age, which opposes CPS revitalization recommendations. During the HPHA focus group, a lively discussion ensued regarding difficulties adhering to healthcare messages, most notably exclusive breastfeeding up to six months, which

most caregivers stated was impossible to follow due to farming obligations shortly after birth. Caregivers also reported receiving health-related information about diseases such as measles or COVID-19 by radio.

Specific Services Offered

Insecticide Treated Bed Nets

Informants stated that a mass bed net campaign targeted to all residents had occurred in late November and early December 2021 in the Bunkeya HZ, with the previous distribution occurring in 2016. CODESA presidents in both HAs and the RECO in the LPHA had participated in the campaign, which they reported went smoothly, noting that bed nets were sufficient for all eligible members. Bed nets were also distributed during CPN (HPHA), during childbirth in the HC (LPHA), and when children attending CPS are fully vaccinated. At the time of our study, the HPHA had 57 bed nets in stock which the IT said would last 4 months, while the LPHA only had 20 bed nets. The IT in the LPHA reported challenges maintaining adequate stocks, indicating that the HC had not received bed nets since October 2021 (for over five months) and stating, “We are supposed to give bed nets, but we have shortages all the time. Today there will be a CPN session, but we only have 20, so we decided to only give bed nets to children because they are most vulnerable to malaria.”

The RECO from the HPHA stated that bed nets are not routinely distributed during CPN and CPS, mentioning that his wife did not receive a net when their child was fully vaccinated. We were told that bed nets are supplied by USAID IHP; ITs must send a requisition to the BCZS to replenish stocks.

Health worker informants were in general agreement that community members valued and used bed nets, stating that mosquitos were widespread, and it was difficult to sleep without a net; fewer mentioned that sleeping under bed nets protected against malaria. A reported challenge was that many households were too small to hang multiple nets. As a result, parents who typically slept on a mattress used a bed net, while their children who slept on the floor did not. Some informants agreed that local fishermen used bed nets for fishing, stating that some people haven’t assimilated the importance of bed net utilization. Some added that people purchase bed nets in the market.

Focus group participants from the HPHA confirmed that a mass distribution occurred in October 2021 when all households received bed nets according to the number of people living in the household. They also reported receiving bed nets during CPN and CPS sessions. Participants claimed that their children regularly sleep under bed nets. However, most mothers in the LPHA said that the most recent bed net distribution was in October 2019, and that the bed nets they were currently using were more than two years old and had holes, although some had received bed nets during CPN and CPS. They added that all family members sleep under one net.

Vaccinations

Informants reported that vaccinations were routinely offered during fixed CPS sessions and outreach visits to villages in the HA. ITs stated that revitalization of CPS activities had improved integration of child services and better ensured regular administration of vaccines. Mentioned vaccinations offered included BCG, Penta 1-3, ROTA 1-2, VAR, and VAA. The HPHC did not have a working refrigerator and therefore had to obtain vaccines from the BCZS the day of vaccinations, while the LPHC did have an operating refrigerator to keep vaccines. Informants from both HAs reported that all vaccines were well stocked, and the cold chain was maintained, although the LPHA reported stockouts of measles vaccine during a recent epidemic at the end of 2021.

While informants suggested that outreach to distant villages was supposed to be carried out one to two times monthly, lack of transport (neither HC even had bicycles) and poor road conditions presented challenges that prevented health workers from meeting the schedule. Informants reported some vaccine resistance, particularly in distant villages in the LPHA. The CODESA member said, “No, not everyone accepts, resistors are not lacking. It is especially those who practice certain religions that prohibit children from getting vaccinated, but we always continue to explain to them, provide them with advice.”

Informants reported that vaccine avoidance may also be driven by concerns that vaccines transmit illnesses and cause fever, with health workers in the LPHA acknowledging that local rumors about COVID-19 negatively influenced vaccine acceptance. Another challenge cited by informants in the HPHA included displacement of families, which increased obstacles to sustaining high coverage.

Both HAs maintained vaccine registers monitoring childhood vaccinations; registers were used by RECOs who made follow up visits in households where children had missed vaccines to encourage caregivers to get their child vaccinated.

Informants reported a mass vaccination campaign in late 2021 during a measles epidemic, but no recent mass campaigns involving vitamin A or mebendazole. We were told that campaigns are preceded by radio broadcasts; community mobilizers also shared messages. Both CODESA members and RECOs were deployed to assist with sensibilization and logistics.

Caregivers participating in the FGDs were generally aware of the different childhood vaccines and reported that vaccinations were necessary to protect children against illness. The majority of mother participants affirmed that their children were up to date on vaccinations. FGD participants indicated that many HA residents declined to have their children vaccinated due to beliefs that vaccinations stir up disease in the body, causing fever and pain. A mother from the LPHA said: “Here in the community, many people hide their children to avoid the side effects of vaccines.”

Another mother from the LPHA admitted getting discouraged when her child becomes feverish after receiving a vaccine, noting that after vaccinations she is forced to spend money on healthcare for her children. Some FGD participants added that their husbands blame them for getting the child vaccinated. One mother participant said, “Husbands threaten us by saying that because we took the child for vaccination, he got sick, and tell us not to take the child again. I become afraid, and to avoid a marital problem, I will not take the child for additional vaccinations.”

Several caregivers suggested that fathers are more likely to decline to have their children vaccinated.

The nurse supervisor stated that USAID IHP supported the transport of vaccines and CHW activities to identify children who missed vaccinations, but that funding had stopped since the start of 2022. He indicated that the Mashako initiative had started in December 2021, with support from another donor.

Community Health Worker Motivation

Informants stated that the primary motivation of CHWs to carry out their work was to protect community members, particularly children, from illnesses. The IT from the LPHA said,

> *They are helping the population and when they help the population and people get better, then they are thanked. When someone who could have died is healed, then the CHWs are really loved by community members.*

The CODESA president from the LPHA said: “We honor our commitment to the community; you can’t neglect the commitment. Since we have this treasure (health center), we take good care of it.”

Other mentioned sources of motivation included participating in training to strengthen capacity, which also involved receipt of per diem (about US$5 daily) and transport fees, of which informants considered quite substantial. CHWs also received compensation during special events, such as vaccination and bed net campaigns, when they were supposed to receive about CF 20-50,000. Prior to 2022, CODESA committees were receiving a small sum (US$15 per meeting) to participate in monthly committee meetings. Any events that involved financial compensation, along with the hope that other opportunities would arise, motivated CHWs to continue with their work, which was otherwise unpaid.

CODESA members and RECOs reported that they get discouraged when authorities deceived them by failing to give compensation for participation in special events, with several CHW informants expressing fatigue working as volunteers. CHWs from the HPHA suspected that USAID IHP money targeting CHWs was being stolen, indicating that on several occasions promises made regarding compensation were never fulfilled. The RECO in the HPHA said,

> *Maybe in Kolwezi. Maybe the project gives money that they take and put in their pockets. Like the last time, we were told that we would receive 10 dollars to submit reports, and we signed four papers and were promised that we would be called, but so far, we haven’t received a call. It was the IT who requested that we (the community relays travel) to Bunkeya (city), we paid for our transport to go to Bunkeya and then we signed. We still haven't received the money.*

The RECO from the LPHA who claimed to have worked 12-hour days in a recent bed net distribution but was never paid for the work said,

> *We persevere, always strive because we are working for the well-being of the population. It's voluntary, we strive but we're starting to get tired, because we have been working a long time, normally they must also think of us. There has been no profit. I wanted to give up but the IT who died last year begged me. We are human too, please think of us.*

Almost all informants claimed that CHWs needed more capacity building and refresher training to increase performance, with some mentioning that they had not retained much of the information originally taught. Many CHWs expressed dissatisfaction that training offered by USAID IHP limited the number of CHW participants.

COVID-19

Informants reported receiving little or no information on COVID-19 and that the pandemic generally had not changed work activities, with only the ITs exposed to information about COVID-19 during BCZS monthly meetings. None of the CHW informants had received training, although the RECO from the HPHA indicated that other CHWs attended COVID-19 training in Bunkeya. While the CODESA president in the LPHA reported receiving face masks, hand sanitizer, and gloves, the CODESA president in the HPHA and both RECOs had not

received any protective materials. No registers were used to track COVID-19 cases, although in the HPHA, HC workers received monitoring forms.

We were told that CHWs promoted preventive measures such as discouraging handshaking and social distancing and setting up handwashing stations. One CODESA in the HPHA mentioned that community members became reluctant to have children vaccinated due to rumors and beliefs that child vaccinations were been substituted with the COVID-19 vaccine.

During data collection, none of the health providers wore masks and we did not find any masks stored in the HCs, social distancing was not practiced, and handwashing stations lacked soap; the nozzle on the handwashing station in the HPHC was broken. The hospital received some materials such as masks and gloves and 100 COVID-19 tests. Hospital informants reported improvements in the use of barrier methods and handwashing at the height of the pandemic but stated that people failed to continue to apply these methods.

Caregivers in group discussions believed in the existence of COVID-19. Some had heard on the radio that COVID-19 had killed many people, particularly in Europe; they had also received information in the HC on barrier measures. One group of participants mentioned that churches and schools had closed at the outset of the pandemic, underlining the danger of the disease. At the time of the midline, participants mentioned that they had resumed their regular behaviors, indicating that COVID-19 had not adversely affected their communities.

Dilala Health Zone, Lualaba

Background Information

The average age of the HA informants was 41 years, and the majority (4 out of 6) were men. Both ITs had A0 (high school graduate plus five years of additional schooling) training. The informants had an average of six years of work experience in the same post. Half of the informants engaged in other income generating activities including managing a school, masonry, and work as a mechanic. The average number of people living in informants' households was seven.

The reference hospital administrator and medical director declined to participate in the evaluation. To gather information on hospital services and administration, we interviewed a hospital nurse who was formally the Director of Nursing. We also interviewed the chief medical officer of the HZ. Both informants were female.

FGD participants were predominantly mothers of young children, but both groups included two grandmothers.

Facility-Based Services

Infrastructure

The HPHA comprised eight neighborhoods and six health structures and one iCCM; the farthest neighborhood was five km from the HC. The HC was a private facility supported by the Adventist Church, located in a busy district of the city of Kolwezi, the capital of Lualaba province. The HC included a main structure built in 2008 and several annexes housing facilities for preventive services such as antenatal care (ANC) and well-baby visits and offices for administrative and financial personnel. The central building had a reception and triage area, consultation rooms, a maternity ward, and several offices where treatment was provided. Thirty technical staff including doctors (six), nurses, and lab technicians worked in the HC. The IT reported that the HC compound was inadequate for accommodating the ongoing flow of incoming patients, mentioning that they planned to construct a new building in an adjacent plot. The HC used the city's electricity but also had two generators and a solar system; ongoing running water was available through the public water systems, and the HC also had a pump that filled tanks in the HC with water supplied from a borehole. The IT reported ongoing renovations.

The LPHA was located on the periphery of Kolwezi in a hilly, peri-urban mining district where both formal and artisanal mining took place. The HA included 14 neighborhoods and villages, one HC, and three iCCMs; the farthest village was in a rural area 40 km away. The HC was private and owned and managed by the IT; 15 staff, including nurses, 2 doctors, 2 lab personnel, a maintenance person, and guards worked for the HC. The HC did not have trained midwives. The HC was comprised of a myriad of small buildings built around 1980 that were originally used as homes of Gecamine (the government mining company) staff. The houses were converted into a HC starting in 2003 with renovations made up to 2015. The IT reported that he plans to construct new buildings including a maternity ward and pavilion for the treatment of children, stating that the HC buildings were old and could not adequately accommodate clientele. Due to proximity to the mining areas, where people engage in dangerous mining practices, the HC received many trauma cases of people (both adult and children) seeking care. The HC had regular access to electricity and water provided by the

government, as well as solar panels. Water shortages occurred during the dry season. The IT reported many renovations such work on latrines and a COVID-19 center carried out since 2018.

The Dilala reference hospital was privately owned by the Decamine mining company. Built prior to independence, the hospital was comprised of pavilions joined by long walkways where treatment services were offered. The buildings were old and required renovation. Our informant reported that a five-year plan to renovate was underway, involving painting and construction of new buildings designed to house essential services, such as a separate surgery building for women and a building for treatment of TB patients. Adjacent to the hospital was an HC where treatment consultations and triage were conducted before referring patients to the hospital. The HC also offered preventive services, such as CPN and CPS.

Services Offered

The HC located in the HPHA offered a complementary package of services including a wide range of relatively sophisticated testing services for illness detection, as well as more advanced and specialized treatment including surgery, physiotherapy, ophthalmology, and dentistry. The second HC offered a minimum package of treatment services which included minor surgery. Both HCs carried out child consultations in locations designated for children.

Health workers had received primary healthcare training led by USAID IHP; both ITs confirmed that HC health providers followed flowcharts revised in 2021 for treatment of child illnesses, which are posted in the consultation rooms. ITs reported that the flowcharts are extremely useful, with the IT from the HPHA adding that the guidance provided a step-by-step orientation on curative care for specific illnesses. The IT in the LPHA said,

> *It's really useful because when you follow the flowchart closely certain decisions are made for you. There are times in the past when we provided treatment without taking into account the flowchart, but the diagnosis was not really certain. When you follow the flowchart, it is 100% clear how to treat sick patients.*

Neither HC provided treatment for malnourished children, and only the LPHA offered treatment for children with TB or HIV.

Informants stated that treatment consultations were integrated and involved counselling on illness prevention. For example, if a child had malaria, counselling on malaria prevention included promotion of use of bed nets, maintaining clean concessions, and avoiding stagnant water. The IT in the HPHA mentioned that USAID IHP provided critical materials such as ACT and impregnated bed nets for malaria and zinc and ORS for diarrhea on a quarterly basis to ensure that integrated care of key child illnesses such as malaria, diarrhea, and pneumonia was followed.

Other mentioned child health services included CPN, CPS, and vaccinations; CPON was only offered in the HPHA. Both HAs implemented revitalized CPS comprised of educational sessions, arm circumference measurements, weighing and measuring the height of children, culinary demonstrations on how to make porridges, and vaccinations, with revitalized CPS occurring about two years prior to the midline data collection. ITs reported that revitalization made CPS sessions more comprehensive, increasing the focus on prevention and early identification of malnutrition and involving immediate treatment of illnesses detected in both children and their guardians. In both HCs, CPS was held once a week, with vaccinations administered

once or twice weekly. ITs also reported outreach visits to distant neighborhoods or villages, with the LPHA reporting weekly outreach.

FGD participants from both HAs mentioned that the HC offers childhood treatment for malaria, diarrhea, and cough, with participants from the LPHA also mentioning TB, measles, HIV, typhoid, polio, and malnutrition and that the structure has a laboratory for illness diagnosis. FGD participants reported that health workers were also involved in preventive care such as child vaccinations, CPN and CPS sessions, bed net distribution, and porridge demonstrations that allowed mothers to have a healthy pregnancy and ensured the wellbeing of their children.

ITs reported that USAID IHP evaluated integrated quality care quarterly; both HCs maintained a register outlining key indicators evaluated. During evaluation visits, BCZS or DPS staff assessed the quality of key interventions, verified the use of management tools, and provided recommendations on how weaknesses should be addressed, with the IT in the LPHC also mentioning that they provided interpersonal coaching. The LPHC, which received PDSS support, was also evaluated by PDSS.

Reference Hospital

Our informant reported that advanced services were offered for childhood illnesses, including chronic diseases and malnutrition. Treatment of malnourished cases involved provision of Plumpy'Nut, F100 milk, and nutritional counselling, although the interviewee did not know whether stocks of Plumpy'Nut and F100 milk were available. She reported that the hospital workers integrated curative and preventive care during consultations but noted that the adjacent HC focused more on prevention, while the hospital concentrated on curative care. Nursing students from a local nursing school assisted with educational sessions and community activities.

Equipment

The HPHC had all the basic equipment essential for the treatment of child illnesses, as well as an array of more advanced equipment for screening and testing of both common and rare conditions. The HC was managed and financed by the Adventist Church, which provided equipment and materials needed to ensure curative care and implementation of ongoing activities. The IT reported that when the center needed equipment, they first tried to obtain it locally, although he highlighted that local procurement is extremely challenging. If that was not possible, they informed the church, adding that donors and IPs did not provide equipment. The IT reported that the church had supplied the HC with ultrasound and EKG machines a year earlier. Mentioned equipment needed to improve child services included an incubator, ultrasound (the IT mentioned that the ultrasound in the HC was not working well), an x-ray machine, a respirator, and a consultation table that could be heated. He added that when the HC expands, the aim is to obtain more advanced, sophisticated equipment for testing and treatment purposes. It is important to note that impregnated bed nets were not available.

A modern refrigerator was available to store vaccines, and the HC had improved latrines for men and women, which were well maintained. The incinerator functioned and the laboratory was managed by trained staff and had up-to-date equipment.

The LPHC generally maintained equipment to meet government standards for the treatment of children,

although a functioning newborn scale was not available. The LPHC had a functioning refrigerator to store vaccines, maintained a laboratory with a trained technician, and had a working incinerator. The HC had a stock of bed nets.

The IT reported challenges maintaining equipment, which he said constantly breaks down and needs to be repaired or replaced. The HC attempted to set aside money to pay for equipment repairs and replacement, with the IT mentioning that implementing partners rarely provided equipment, and even when equipment was given, it often did not coincide with their needs. Informants mentioned needing consultation tables, cabinets, beds, mattresses, adjustable beds, an incubator, an oxygen machine for children in distress, an ultrasound machine, and an x-ray machine. The IT mentioned that miners working in the area, including children, engaged in dangerous practices that caused injuries that required x-rays to identify the problem.

When equipment needed repair, the HPHA paid for technicians who worked in the location where the equipment was purchased, generally in Lubumbashi, to travel to Kolwezi to work on the equipment. The LPHA only reached out to technicians in Lubumbashi for more sophisticated repairs. Both HCs had a technician on staff who oversaw equipment maintenance and basic repairs. The IT in the LPHA mentioned that they had a maintenance plan in their workplan.

Regarding hygiene and sanitation equipment, HCs had handwashing stations with soap. Health workers in the HPHC did not wear masks during our visit, while workers in the LPHC did.

HCs posted educational material related to child malnutrition, vaccinations, and FP on the walls. HCs possessed many flipcharts to use for message dissemination during CPN and CPS, as well as megaphones to use at the community level.

Reference Hospital

Unfortunately, the research team was not permitted to conduct observations of the supplies and equipment in the hospital. Our informant reported many equipment needs for provision of child services. She added that maintaining functioning equipment is a big challenge, and that equipment repairs or replacement is a lengthy process. Gecamine maintained technicians for equipment repairs.

Medication

ITs reported that USAID IHP was supposed to deliver essential drugs for childhood treatment including antimalarials, iron, zinc, ORS, and amoxicillin quarterly. The IT from the HPHA with high service utilization mentioned that USAID IHP drug provisions are small and may last a week or a week and a half, except for malaria drugs which are given in bigger quantities and may cover needs for one to two and a half months. The IT in the LPHC stated that drugs received from USAID IHP are insufficient to cover needs for three months but are a big asset to the functioning of the HC. Both ITs praised the high quality of the drugs received but mentioned that the variety of and quantity has decreased over time. They mentioned that certain drugs such as malaria medication was distributed in larger quantities (the LPHC had a large stock of ACT), and others, such as amoxicillin, were more susceptible to stockouts, adding that iCCMs were the first to suffer when stockouts occur. It is important to note that FGD participants in the LPHA reported vaccine stockouts, particularly stockouts of the BCG vaccine.

While ITs reported that USAID IP drug deliveries had in the past been relatively routine with some small delays, at the time of the study drugs had not been delivered for six months, with the exception of drugs

provided by the HIV and TB programs. No explanation was given to the HCs regarding the reason for the long delay. ITs reported that USAID IHP delivers drugs to the HCs.

To maintain stocks, the HPHC routinely obtained drugs (some weekly and others monthly) from large warehouses endorsed by the government to provide quality drugs, which offered a range of medications. At the time of our study, all essential drugs to treat childhood illnesses were available, although the HPHC did not have malaria testing kits. The IT from the LPHC mentioned purchasing drugs from local pharmacies when stockouts occurred. Both ITs confirmed that when the HCs purchased drugs locally treatment costs increased, with the HPHC mentioning that they sometimes give prescriptions to patients. The IT from the HPHC stated,

> *We go to the drug depots that have been certified and approved. We purchase the drugs because we cannot do the opposite, we are obliged to pay for drugs to supplement our stocks and avoid stockouts, because if we do not deaths will increase. Automatically it changes the price of care.*

The same IT added that the drugs purchased locally are not the same quality as medications supplied by USAID IHP. Both ITs mentioned that drugs received often did not coincide with their drug requisitions.

Reference Hospital

The reference hospital informant explained that the hospital receives drugs monthly from the Gecamine depot in Lubumbashi and quarterly from USAID IHP. With drug stockouts, which she reported occurred regularly, the hospital was obliged to purchase drugs from local pharmacies which may be of an inferior quality.

The MCZ indicated that the software INFOMED had been introduced and drug management training had been held in the HZ. However, she reported that only a few people in the urban HZ had received training thus minimizing the effect. The MCZ mentioned that structures continue to face challenges tracking medications and producing reliable information to guide drug orders, stating that the ITs are overworked. The MCZ explained that health structures did not have a permanent staff member managing drugs and that most personnel involved were not formerly trained. Frequent staff turnover added to the challenges and undermined the quality of drug orders. All of this caused poor drug management and led to stockouts, with the MCZ noting ongoing stockouts of ACTs and malaria tests.

Utilization of Services

When asked about reasons for using the HC in the HPHA, focus group participants reported that the structure has a range of advanced equipment and qualified doctors and nurses, and that diverse diseases are treated. It was also mentioned that health workers treat patients on credit, and that patients are well received and cared for. Regarding preventive services, caregivers stated that health workers shared information on the importance of CPN and CPS, child vaccinations, exclusive breastfeeding, FP, hygiene practices, and disease prevention such as use of bed nets, which encouraged them to follow preventive activities.

FGD participants in the LPHA indicated that the health workers are welcoming and competent in treating childhood illnesses, the HC has laboratory equipment to diagnosis health problems, and the HC has medications available. They also reported that the HC is easily accessible and that community leaders, including RECO, recommended seeking treatment of childhood illnesses in the HC. One participant added

that the HC is in an area with intense mining activities and that mining companies provide healthcare for their workers seeking care. Another mother mentioned that the HC provides care on credit. It should be noted that several caregivers criticized the fact that trainees, whom they considered unqualified, sometimes provide treatment rather than doctors or nurses.

Participants from the HPHA mentioned cost of care as a main obstacle to care seeking, with some describing the cost as exorbitant and only affordable for people working in organized structures such as mining. Several caregivers reported that the high costs forced them to get approval from the child's father before seeking care. One woman said: "Lack of money obliges some mothers to give drugs at home to relieve symptoms such as novalgin or aspirin while waiting for approval or money from the father to go to the health center."

Another participant added: "The child who falls ill while the father is away must wait for a consultation between the father and the mother to decide where to have the child treated and to get money for care."

This mother added,

> *I consult with my husband, the head of the house, to get his approval. He asks my opinion and then he decides if I should go with the child to the hospital, because without his agreement, when you have an angry husband, if something bad happens in the hospital, he will put everything on my back.*

Informants from the LPHA reported that costs are not a barrier due to reduced consultation fees. However, the IT maintained that poverty forces parents to provide suboptimal childcare. He stated,

> *Obstacles are related to the parents, because parents are responsible for children, but they are not 100% available for their children. Some children are left at home while the parents look for work. When the parent comes back it is already nighttime and the children who may have been undergoing some health problems have become worse during the day. In addition, we receive children who have been beaten. We are surrounded on all sides by quarries, and because of the poverty in our community, children are forced to go to the quarry in search of something, and in these quarries, there are risks of landslides causing injuries, there are risks of rape. Parents send the children to get something to eat at night (another possible exposure to rape). These are some of the obstacles we face in relation to health care for children.*

He added that, in particular, families who live far from the HC bring their children too late when conditions are severe.

Both ITs mentioned that certain churches such as the Jehovah's Witnesses opposed certain biomedical treatment such as blood transfusions due to religious convictions and that some church leaders and congregation members promoted prayer (Apostolos church) rather than medical care. All types of informants reported that traditional beliefs guided community members to use local healers who they said make inaccurate diagnoses and use dangerous treatment practices. The IT from the HPHA said,

> *It often takes a lot of explanation for people to understand a disease. Someone is really sick and you, the health personnel, have identified such and such a pathology, but you are told no, he has been bewitched, somebody has thrown fetishes at him, even if you give your medication it won't matter, we have to take him to the witch doctors….Stories like that. This can prevent somebody from believing that he needs to go to the hospital, it disorients the patient who may go to a diviner or a witch doctor.*

Informants also mentioned that people often self-treat at home before seeking medical care, causing dangerous delays.

Mothers in the HPHA reported that certain illnesses are better treated with traditional medicine; some participants noted that self-medication, either through the purchase of pharmaceuticals or indigenous remedies, was less expensive and therefore sometimes the preferred option. Obstacles to seeking care reported during FGDs in the LPHA included negligence on the part of the mother, lack of funds to cover transport or treatment fees, and other childcare responsibilities at home. Mothers reported missing vaccinations because of persistent vaccine stockouts, particularly BCG, and the time required to attend vaccination sessions. One mother said, “You give up household chores, you spend a lot of time at the center, then you are told there is no vaccine, or the vaccine will come at 2 pm. At each appointment they always apologize. Vaccines are not always available.”

The reference hospital nurse reported financial constraints to be the biggest barrier to care seeking. Other obstacles included distance and transport to the hospital. The informant suggested that sick patients are often kept too long before the HC refers them to the hospital in a severe condition, adding that the HC retains patients to increase revenue. She stated,

> *Recently the chief doctor asked me to review the health center situation for such cases, we found that HCs wait until all their money is stripped from the family. I don't know, some families are ignorant, they don't know how to distinguish what is serious, they trust the medical personnel they find in the health centers.*

The nurse added that when children experience severe illness parents often sometimes skip the HCs to seek rapid and more advanced care in the hospital.

The hospital nurse mentioned that a surge of pharmacies that did not follow medical standards but provided drugs involving advanced treatment were opening, allowing people to engage in often dangerous self-medication practices. She reported that traditional healers are also prevalent, diverting sick community members from seeking rapid medical care and leading to the administration of often harmful, toxic medicinal substances that can even lead to death.

Management and Governance

Coordination

ITs reported holding monthly meetings to compile HA data. Shortly after the HA meetings, they participated in monthly monitoring meetings in the BCZS where they presented data on health indicators. ITs reported that these meetings provided an opportunity to share challenges faced executing HA activities and facilitated exchanges that helped to identify priority problems and possible solutions. ITs acknowledged a positive change in the BCZS monthly meeting format, which in the past only concentrated on data dissemination. ITs reported that monthly monitoring meetings were occasionally attended by USAID IHP staff. It was also mentioned that disease surveillance meetings were held weekly when all 12 HA representatives in the HZ presented information on disease pathologies. We were told that USAID IHP gives transport money for IT attendance of monthly monitoring and disease surveillance meetings. USAID IHP provides data monitoring forms which are kept in the BCZS, with the IT from the HPHA mentioning that forms are always adequate.

The IT from the HPHA also indicated that he occasionally participates in DPS meetings and meetings convened by the BCZS to introduce new strategies. For instance, he recently attended a meeting introducing a new activity focused on adolescent reproductive health.

Both ITs participated in meetings focused on community development. The IT from the HPHA described a meeting aimed to increase RECO activity and a second meeting to encourage RECOs to educate community members about COVID-19. The second IT participated in a meeting with NGOs to talk about health problems and the role of champion communities in community development. These meetings were sponsored by USAID IHP.

CODESA members reported occasional participation in meetings related to specific activities, such as bed net distribution, culinary demonstrations, or community education aimed to boost facility utilization. Both CODESA members valued these events, noting that they present critical opportunities to exchange information with other health workers and learn how to improve activities. The RECO from the HPHA mentioned participating in local community development meetings designed to identify community needs (e.g., road maintenance to ensure easy access to CACs and health structures, access to potable water) and ways they can be addressed.

The MCZ considered quarterly meetings held with other implementing partners working under the unique contract as the main mechanism to exchange information with IPs and government partners.

Reference Hospital

The hospital informant stated that HR staff participate in monitoring meetings in the BCZS to validate monthly data; prior to the monitoring meeting, hospital data is compiled and validated internally. She noted that this forum facilitates exchanges of work experiences, which can influence improved practices. Hospital staff, including the medical director, administrator, and the director of nursing are members of the COGE (comité de gestion) which also includes the MCZ, the HZ administrator, and nurse supervisors who oversee zonal management. The informant mentioned that the hospital medical director has regular exchanges with the MCZ who provides guidance on ways to resolve problems and improve services. The hospital medical director submits regular reports to the BCZS on routine and epidemiologic data.

Accountability Mechanisms

Both HCs had a suggestion box; interestingly, the community health workers in the HPHA were not aware of the boxes or how they are used. ITs indicated that suggestions are reviewed monthly and appropriate actions are discussed. Neither HA had hotlines to report negative attitudes and practices, nor had community score cards been introduced. We were told that complaints about health worker staff or services are often shared by CODESA members based on information they receive from RECOs and CAC presidents, with CACs playing an important role monitoring community feedback. The IT from the LPHA insisted that HC staff prioritize good interactions with community members and understanding community concerns, acknowledging that provider patient relations are a critical component of quality of care. He stated,

> *We want to be on good terms with the community, previously doctors and nurses were not much in contact with community members and there were serious problems with the community. We work with the community to improve the quality of care, but we noticed that some nurses are not really interested with the community and do not care about providing good care… We try to make members feel comfortable by talking with them. It may turn out that there are comments or complaints, we pay much attention to the suggestions of our clients.*

The two HCs had slightly different approaches to deal with health workers accused of inappropriate behavior. In the HPHA, CHWs shared complaints about health workers with the HC administrator, who met with the person in question to encourage behavior changes. In the LPHA, which did not have an HC

administrator, health personnel or the CODESA president informed the IT who encouraged the accused staff member to modify his or her behaviors.

Reference Hospital

The HR informant stated that the hospital has a suggestion box that in previous times was widely used to submit complaints about personnel, but she was doubtful that it was still functioning. She did not report other mechanisms to share complaints about health personnel.

Referral Systems

HCs referred patients requiring more advanced care to the zonal reference hospital with the HPHA also making referrals to specialists in Lubumbashi. The reference hospital was less than 6 km from the HPHC, but 15-20 km from the LPHC. ITs reported that patients received a referral form and that a staff member accompanied the referred patient to the hospital, adding that HC staff communicate with hospital staff regarding the patient's condition. We were told that patients received counter referral forms after completing hospital treatment. The LPHA received PDSS funding, which included hospital referrals as a performance indicator.

Both HAs had instituted a system encouraged by USAID IHP whereby cases referred from the community were given an orientation coupon to go to the HC where they were provided free or reduced treatment for childhood illnesses. A mother participating in the FGD in the LPHA mentioned that a RECO visiting her household gave her a voucher for free treatment of her sick child at a time when the mother lacked money.

The HPHA had an ambulance, while the LPHA had established arrangements to rent ambulances to transport patients. Because patients are responsible for payment of transport costs, they and their families frequently opted to use less expensive means such as motorcycles to transport referred patients to higher level facilities. The IT in the LPHA reported that patients often travelled from villages up to 40 km from the HC, making additional referrals difficult to accept due to cost concerns. While the HA started an initiative to raise funds at the community level for emergency transport, efforts were not sustained. The IT stated that the HC assisted with payment if the family did not have the means.

Mentioned conditions that required referral included obstetric complications, fetal distress, accidents causing shock, unconsciousness, or compound fractures (LPHA), severe malaria, patients requiring oxygen or resuscitation, patients requiring surgery (in the case of the HPHA, specialized surgery), or organ failure.

Barriers to patients' acceptance of referrals included cost concerns and belief systems, with both ITs reporting that costs associated with transport contributed to referral acceptance. The IT from the HPHA added that hospitals request payment for each service, which deters patients from accessing hospital care. He stated,

> *When we refer someone, he refuses, he says no, I am not leaving, it's in relation to the realities in the reference hospital system. For example, when you refer someone to the emergency room, there are a lot of formalities to take care of, there you must pay for everything. Some people prefer to stay where they are out of concern that if they go to the hospital, it could cause a lot of problems, because they do not have the means.*

Regarding training, the IT in the LPHA mentioned that integrated management of childhood illnesses training carried out in 2021 involved referrals of urgent cases. CHWs, who are responsible for referring sick patients to

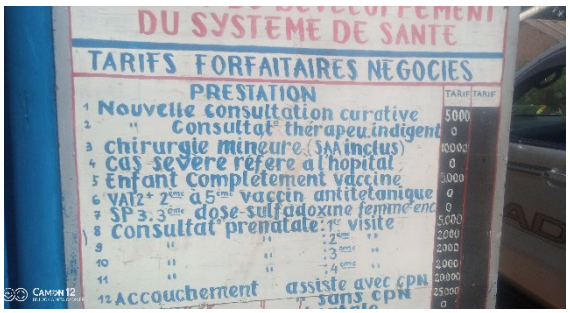
the HCs or informing HC staff about patients experiencing severe conditions identified during VADs, had not received formal training on referrals.

Reference Hospital

The hospital informant indicated that referred patients often arrive with unofficial slips of papers which can easily be misplaced and that patients are not accompanied by health workers. As a result, hospital workers may fail to provide appropriate treatment. She also mentioned that HC staff do not communicate with the hospital staff regarding the status of patients and that the hospital does not always use counter referrals, adding that this was the topic of a recent hospital staff meeting. The reference hospital had recently purchased an ambulance, which was being used for nighttime emergencies. Mentioned referral challenges included lack of transport and high transport costs, the fact that referral slips get lost and referred patients are ignored, and failure to make counter referrals. The hospital, which did not receive PDSS assistance, had a fund to reduce fees for indigent patients.

Healthcare Financing

The HC in the HPHA conducted an internal evaluation about a year prior to our study to establish set service fees which resulted in increased consultation fees. The center set consultation fees and the provision of basic medications at US$10, but the fee increased if additional drugs were needed. The IT justified the high consultation fees by stating that the private HC must support all operational costs, including maintaining supplies and equipment. The HC did, however, reduce costs for CPN and CPS, which the IT claimed increased HC utilization. For CPN, there is a CF 5,000 fee for the consultation form; women also must pay CF 3,000 for each visit. Regarding CPS, the initial registration is CF 2,500 but attendance is free. The HC did not post service fees.



Fixed consultation fees

The HC in the LPHA held meetings with community organizations and negotiated with community members to establish service fees. As part of the PDSS approach, efforts were made to identify affordable fees. The IT explained that the HC reduced adult consultation fees from CF 15,000 to CF 7,000, with PDSS subsidizing the rest of treatment costs; consultation fees for children were CF 5,000. The IT mentioned that reduced fees made treatment more accessible and increased utilization. The IT reported that CPN and CPS activities were subsidized by PDSS and free, and that treatment of TB and HIV patients was also subsidized and free. The IT added that drug assistance provided by USAID IHP also helped to reduce costs. Consultations fees were posted at the entrance of the HC.

The HPHA HC, which was not supported by PDSS, did not maintain a list of indigent patients, although the IT mentioned that they use church donations to assist some vulnerable community members. The IT said that all patients received treatment regardless of their ability to pay; patients treated on credit must pay three to six months later, although the IT reported that some patients disappeared without paying. Based on the PDSS criteria, the HC in the LPHA had a committee in charge of identifying indigent community members eligible for assistance; a list of about 60 people was posted in the HC.

The HPHC had contracts with several companies, many of them mining companies, which provided healthcare benefits to their workers. In these cases, eligible company workers received free healthcare, and the company reimbursed the HC at the end of each month. The HC in the LPHA relied heavily on PDSS subsidies to reduce costs. The IT reported that the tokens distributed by CHWs to caregivers of sick children without adequate means to access care helped to reduce barriers to care seeking. Located in a mining zone, the HC had reached out to mining companies to provide help for indigent members but had not received any assistance.

Reference Hospital

The HR hospital provided treatment on credit to indigent patients unable to pay at discharge. Our informant mentioned that these patients often gave fake addresses and phone numbers to avoid paying hospital debts. The hospital had contracts with several mining companies to provide care to their workers; companies paid the hospital bill at the end of each month.

The MCZ reported that not all facilities had fixed fees, nor did all post fees as requested by USAID IHP. She mentioned that structures supported by PDSS provided free care to vulnerable members.

Resources for Facility Workers

Training

ITs reported that they and other facility health workers had participated in multiple trainings over the past 12 months, with most trainings sponsored by USAID IHP. Typically, two and at most five health workers were invited from each HC to participate in trainings, depending on the topic matter. The HPHA reported that staff participated in trainings on integrated management of childhood illnesses and utilization of treatment flowcharts, management of malaria cases, identification of COVID-19 cases, and CPS revitalization; the IT mentioned that trainings generally involved theoretical and practical sessions. He also reported that mini-campaigns sponsored by USAID IHP (e.g., identification of children missing vaccinations, sensitization on FP, identification of children with diarrhea or malaria) are preceded by one-day trainings of the facility staff and CHWs. The IT in the LPHA reported training on integrated management of childhood illnesses and utilization of flowcharts, case management of children with TB, care during the third trimester of pregnancy, low risk pregnancies, treatment of urgent cases and referrals, and improving health worker behaviors and interactions with clients. The IT from the HPHA stated that training participants shared training findings with other health personnel working on the same topics, but this did not appear to be routinely done in the LPHA. ITs expressed enthusiasm about the content of the trainings; the IT from the LPHA mentioned that during training they are exposed to new information and learn about practices that need to be corrected. The IT from the HPHA said that USAID IHP's greatest contribution relates to training, also noting that USAID IHP's support provided for meetings is important.

There are no set procedures to ensure that information gained through training is shared with other health workers.

The HR informant reported that USAID IHP offered different trainings, but she wasn't aware of the topic matter.

The MCZ confirmed that USAID IHP supported lots of training, but she felt that training did not adequately cover the needs of the HZ which has 20-30 structures. For example, she mentioned that 12-16 structures were trained on the use of the new flowcharts and only two hospitals received training on emergency obstetric and neonatal care (SONU C). She noted that trainings provided essential knowledge, but needed to be more frequent and involve more personnel, stating,

> *Well in my opinion the ideal is that these activities should be regular because in our health system we have a lot of problems with the movement of personnel, health workers move around so much so you are eternally restarting. We have to increase the critical mass of agents who are trained, that's very important. In our health zone we have many health structures, and of course I understand it may be that the funding is not sufficient to train everyone, but it is also something that disturbs operations because in one health area out of ten structures or nine or eight structures, only two people are trained. You see the information gained during training is being diluted, it is as if there has been no training.*

She explained that the USAID IHP framework assumes that there are one or two health structures in each HA, but in urban HAs there are several first line health structures and multiple hospitals, making the situation more complex and increasing the needs for training assistance. She said,

> *We have twelve health areas and in each health area there are several structures, the configuration of the urban health areas is not the same as in the interior because in rural settings you have a structure or two structures in each health area, that's what it should normally be, but here in our city health zones you will find that in a health area there are several health structures. In the USAID IHP project framework, they talk more about the health area according to the principles of our Congolese health system whereby in each health area there should be a single structure but on the ground that is not the case. That causes the (USAID IHP) training efforts to be diminished.*

The MCZ confirmed that trained health workers are supposed to hold post training sessions to share the training contents with other health workers but emphasized that this cannot substitute for participation in a three to four-day training session.

Access to Continuing Education

According to the ITs, access to health-related information had not improved since the start of USAID IHP. The internet constituted the primary source of information for the ITs, both of whom purchased credit and used their personal phones to access health-related information. Both ITs insisted on the need for improved internet access, with the IT from the HPHA mentioning that using personal credit is a constraint. He stated,

> *We should not be limited, the world evolves, as the world evolves, we should also evolve to be on the page with all that is happening. We should not have to rely on the same theories learned a long time ago, that way we will stagnate. We must be able to access new learnings each day, it will contribute to our performance.*

The IT from the LPHA had heard that USAID IHP offered training courses online, but he did not know how to access the link. He emphasized the need for relevant information, recommending access to courses and more training to strengthen performance and quality of care in the HAs. He said, "I am not satisfied. When we

have information, it helps us improve ourselves and take appropriate actions to better address medical situations. I would like to study more, to have new information via the links or to have access to online courses."

The hospital informant also relied on the internet as her primary source of information but in her case, she used internet credit provided by USAID IHP for access. Both ITs and the hospital informant participated in a WhatsApp group involving HZ staff and implementing partners including representatives and UN agencies and NGOs which shared health-related information.

CHWs, who primarily obtained information from other people, voiced a need for more training to improve their knowledge base and work performance.

Attitudes of Health Workers

ITs reported occasional misunderstandings between health workers and clients. They mentioned that negative interactions typically occur when patients or people accompanying patients are over demanding or request immediate treatment. The IT from the LPHA stated that negative interactions most often involve motorcyclists who seek care after having an accident. Other mentioned negative interactions occur due to misunderstandings regarding patient bills, when health workers chastise women for being late to CPN or CPS visits, or when a patient speaks inappropriately to a staff member. ITs described these occurrences as infrequent and easy to resolve.

HCs held discussions about health worker behavior during weekly (HPHC) or monthly (LPHC) meetings when health workers are evaluated. The IT from the HPHA reported that, when a complaint concerning a health provider is submitted in the suggestion box, a special meeting is called. The same IT mentioned that recommendations resulting from supervision visits can focus on improvements in health worker attitudes and behaviors. CODESA members reported negative behaviors to the HC administrator or IT, depending on the HC hierarchy.

Informants agreed that negative behaviors can affect healthcare utilization and should be resolved quickly. The IT from the church sponsored HPHA claimed that the church strictly enforces appropriate health worker behavior, adding that staff manifesting negative behavior are suspended. The IT from the second HA mentioned that if the health worker is at fault he or she must apologize to the patient, adding that he takes disciplinary actions if the behavior of the health worker does not change. This IT, who raved about the USAID IHP sponsored training on health worker behaviors and conflict avoidance, emphasized the importance of establishing good relations with clients. The CODESA member from the LPHA also mentioned discussing health worker behaviors during CODESA revitalization training. Both ITs confirmed that there was room for improvement, particularly related to communication with patients.

FGD participants in both HAs reported that HC staff are welcoming, caring, respond to concerns of sick patients and their caregivers, and provide good care, with some participants from the LPHA reporting that the care is better than health treatment offered by mining companies. They also appreciated the fact that the HCs administer care before requesting payment.

The HR nurse reported negative behaviors exhibited by the nursing staff, indicating that nursing staff become agitated easily. She attributed this to the fact that they are overworked. The hospital administration was aware of the problem, but unable to hire additional staff to lessen the burden and reduce the tension caused

by overwork. According to our informant, poor nursing attitudes make patients cautious to complain about the quality of medical care, adding that patients in need of emergency care do not have other options.

The MCZ mentioned that only 12-15 health personnel had participated in the USAID IHP training on attitudes and behaviors. She noted that some health workers consider themselves "like little kings" and behave inappropriately with patients. She viewed ongoing training on health worker behaviors as essential to improve quality of care.

Health Worker Sources of Motivation

Workers in the HPHA received a fixed salary based on their grade and the HC annual budget; the administrator reported monthly revenue to be about US$30,000. Nurses earned US$300, while doctors received US$5-600 monthly. The IT considered the monthly salary insufficient to cover basic needs such as good schooling for his children. Health workers in the HPHA also received an annual bonus which was less than half of the monthly salary, as well as health benefits for their entire family. We were told that health workers are given small sums of money when they participate in activities such as mini-campaigns, training, or meetings. The HPHA provided salary advances and promotions.

The LPHC staff relied on HC revenue, which was US$4-4,500 per month at the time of the study; the IT noted that reduced patient fees decreased monthly revenue. Under PDSS, the HC offered incentives based on hours worked and performance. He claimed that health workers are primarily motivated by the desire to help the community rather than money, stating,

> *I know they need money, but I told my nurses that I want staff who have the will to help our community. It's true they need money, but in our criteria, we want much more, we speak to them before hiring, that they come to work first to help the community and with the good will to do the job well.*

The IT mentioned that PDSS serves as an important source of motivation, even though payments arrive late. The IT also reported that training and visits by and discussions with partners as important motivators.

Because both HCs were private institutions, facility staff members were not eligible to receive government bonuses. Both ITs mentioned routine training to maintain and improve skill sets as an important form of motivation. The IT from the LPHA stressed that training also affects self-efficacy and satisfaction. ITs noted that the population appreciates the effect of training on quality of care, which in turn increases healthcare utilization.

Health workers acknowledged that low work satisfaction affects the quality of their care.

When asked about satisfaction, the IT from the HPHA said that many colleagues had left the HC for higher paying positions with mining companies. While he expressed dissatisfaction with his payment, he added that unemployment is high, and it is difficult to find work elsewhere that provides adequate support; he also mentioned that he likes his work. The IT from the LPHA was unable to confirm whether workers were satisfied, although he believed they were treated well. He acknowledged that health worker satisfaction affects the quality of care.

The hospital informant reported that hospital workers received low fixed salaries that did not allow them to cover basic needs and forced them to engage in secondary income activities. To compensate for salary reductions in previous years, the hospital was providing plots of land to hospital workers. She also received

compensation from the PDSS performance-based program and a bonus from the HIV program. Because the hospital is private, health workers were not eligible for national or provincial bonuses. However, she reported that hospital personnel received free healthcare. The hospital informant also mentioned trainings as a motivation but added that projects that proceeded USAID IHP offered more training. She stated that increasing hospital staff would improve health worker satisfaction.

The MCZ reported that very few health personnel in the HZ received government salary. She indicated that provincial bonuses are often less than US$50 or US$100 depending on the level of personnel, and that provincial bonuses had only been received two times in 2021. The MCZ considered training as a motivation because it gives health personnel opportunities to obtain more profitable work with IPs. She added that government personnel are supposed to get promotions every five years, but this never happens. She felt that health personnel performance would improve with increased renumeration and more training. When asked about female employment and motivation, the MCZ reported that the HZ has many female health providers, but few women are in decision making positions.

Community Health Services

Infrastructure

Health Areas

Reported community activities included awareness raising at the community level about illness and malnutrition prevention during group meetings and household visits carried out by RECOs. ITs mentioned that focal health topics are guided by current illness rates and needs in the HA, but that CHWs typically shared information on the importance of child vaccinations, FP, hygiene, handwashing and environmental sanitation, exclusive breastfeeding, and the use of bed nets, with some mentioning that prevention of COVID-19 was a main topic at the height of the pandemic. ITs from both HAs also reported working closely with church pastors who sensitize their congregations about health issues, particularly prior to special events such as vaccination campaigns. However, the IT from the LPHA reported that some pastors discourage community members from visiting the facility. In addition, HAs used community mobilizers and CHWs to transmit information by megaphone, particularly to publicize special events or concerns about suspicious illness pathologies. HAs also reported engaging local leaders and schoolteachers to share key illness prevention messages and to participate in activities such as environmental sanitation.

Focus group participants from both HAs mentioned receiving messages from CHWs on the importance of using bed nets to prevent malaria, exclusive breastfeeding and complementary feeding of children under five years, childhood vaccinations, good hygiene and handwashing, disease prevention (including prevention of COVID-19), FP, and attendance of CPN and CPS sessions, all of which they considered important. They also confirmed that health related communiques are read in church, and that teachers shared messages with school children and encouraged their students to transmit the information to their parents. FGD participants from both HAs mentioned that health information is also transmitted by radio and television, adding that they hear about campaigns or disease prevention, particularly when epidemics occur, although television viewing is less common. They preferred obtaining information through one-on-one interactions with the RECOs who they encountered in their neighborhoods, noting that active exchanges allow them to better understand the information. The LPHA also convened group sessions with community members to discuss health issues.

Both HAs had revitalized multisectoral CACs working on community development activities including health and nutrition interventions. The HPHA had 8 CACs, while in the LPHA there were 14 established CACs, with the most distant 40 km away. CACs, which met once or twice a month, included RECOs who were responsible for completing monthly reports summarizing health and nutrition activities which are transferred to the IT. Informants from the LPHA claimed that revitalization of CACs coincided with a marked increase in community activities, citing screening for malnourished children and culinary demonstrations. The HPHA did not work with other local organizations, except for youth groups. The LPHA worked closely with a local NGO which had started as a champion community and was involved in awareness raising about children's illnesses. They also reported working with neighborhood chiefs on health-related activities such as environmental sanitation.

Regarding campaigns, informants and focus group participants in the HPHA reported vaccine campaigns for measles and polio, bed net distribution, and vitamin A and mebendazole distribution, while informants from the LPHA mentioned vaccine campaigns for polio and bed net distribution. The MCZ stated that international days relating to TB, vaccinations, and malaria were recently held in the Dilala HZ.

Both ITs mentioned that USAID IHP supported mini-campaigns; the HPHA held mini-campaigns to identify and refer malaria and diarrhea cases to the HC, while the LPHA implemented campaigns on FP, use of zinc, use of bed nets, and care seeking for cough and pneumonia. We learned that RECOs received medicines or transport money for participating in mini-campaigns. The MCZ believed that mini-campaigns helped to orient community members to the HC but claimed that they do not touch many people. She added that USAID IHP provided free drugs for mini-campaigns.

Informants reported that ITs and HC nurses participated in community outreach activities involving vaccinations and growth monitoring, as well as awareness raising activities when there is a special event or activities related to an epidemic. ITs from both HAs participated in CODESA committee and CHW meetings to understand ongoing community grievances. Both indicated that they primarily relied on RECOs, who interacted regularly with community members during household visits, to learn about problems at the community level.

Both HAs had functioning IYCI nutrition groups which involved RECOs and appeared to be attached to the nutrition sector of the CAC. Activities included screening for malnourished children, nutritional counselling during community meetings focused on appropriate complementary feeding, and culinary demonstrations of locally available nutritious meal foods for young children. Informants reported that nutrition group participants are asked to bring foods for cooking demonstrations, which informants including the MCZ reported presented challenges; they indicated that nutrition groups lack adequate resources to function as planned. The MCZ added that people cannot afford to purchase protein rich foods, as promoted during the group sessions. Interestingly, FGD participants in the HPHA were not aware of nutrition groups.

The HZ had 10 iCCM maintained by RECOs who had received training on identification and treatment of childhood illnesses; each iCCM was supposed to have two trained RECOS. The HPHA had one iCCM

iCCMs lack adequate resources and support to operate as planned.

about 7 km from the HC, and the LPHA had three sites, 7-25 km from the HC. Informants reported that RECOs responsible for iCCMs are supposed to have supplies and medication to treat basic illnesses in children 2 to 59 months and provide appropriate counselling; RECOs were also supposed to have family planning supplies. ITs indicated that they carry out monthly supervision of iCCMs to review treatment registers, observe treatment practices, and assess supplies. During visits to two iCCMs in the LPHA, we found that only one RECO worked in each site. RECOs reported shortages of forms required to carry out their work and ongoing stockouts of medications, particularly drugs to treat malaria and IRA. RECOs had not received critical materials promised by the IT such as a chest to store drugs, nor did they have means of transport to travel to the HC to pick up medications and submit activity reports. RECOs received supervisory visits by the IT, but in the more distance iCCM supervision was irregular.

Informants from both HAs reported that in 2021 USAID IHP led training on sexual and reproductive health for youths. Trained youths worked with the ITs and CODESA members to organize educational sessions when they sensitized other youth on sexual and reproductive health; they also worked as peer educators and referred youth with health problems to the HCs. Informants from the HPHA reported that youth groups also worked on environmental sanitation, and some were attached to CACs.

The IT from the LPHA claimed that the HC organizes monthly community debates to collect information on health concerns and recommendations regarding HC activities. The same HA also had *club d'écoutes* (listening clubs) during which participants listened to health-related messages broadcast on the radio and held discussions after the radio emission, but the MCZ said that these sessions are financed by UNICEF.

Both HCs had flip charts which they stored in the facility for the CHWs; RECOs also kept flip charts in the communities where they worked. Informants reported that flip chart messages had not been modified for many years. While HCs had posters of their walls conveying different health related messages, many posters contained a lot of written content, which one CODESA member contended is less effective because many people, particularly women, are illiterate.

A strong reliance on a volunteer-driven model impacts the quality and sustainability of community health services.

The MCZ confirmed that USAID IHP has supported a variety of community activities such as supervision of iCCMs, training of RECOs on family practices, and FP distribution. She noted that establishing structured community interventions and enlisting community involvement is more difficult in urban settings where the mentality is different and people are less likely to accept voluntary work, stating,

> *The problem is volunteering, volunteering is not accepted in the RECO environment, it's even difficult to recruit RECOs. We lost a lot of RECOs who were very well trained; working for free is no longer very well accepted, people would like to do this work, but it takes a lot of time, and they don't see what it brings them. We keep saying that it's for the community, but you must be in the reality of what is happening, many no longer agree because they work for free.*

As a result, the HZ has too few volunteers to take part in activities.

System Design

Role of CODESA Members

CODESA members described their role as the bridge between the HC and community members, mentioning that a primary task is to maintain ongoing contact with community members. We were told that CODESA are responsible for identifying health problems which are shared with the HC, evaluating community activities, and ensuring that the HC functions to meet community needs. The IT from the HPHA said,

> *In principle, a CODESA member is the leader of community health dynamics, he is the one who convenes meetings with other intermediaries, evaluates, asks questions. He also oversees the relays and the development of the monthly report, the progress report, and delivers the report to the HA. He is the one who plans activities, who coordinates, he does everything.*

Informants added that CODESA members oversee the CAC presidents who coordinate ongoing RECO activities. Specific roles performed by CODESA included holding meetings with the CAC presidents to understand the progress of health activities, receiving monthly progress reports compiled by RECOs and transferring the reports to the HC IT, and working with RECOs to assess community activities and problems that exist. It was also reported that CODESA members investigated and identified health problems at the community level, which they shared with the IT. CODESA members also met with community members to resolve problems and encourage utilization of the HC, organized and led awareness raising activities, occasionally carried out household visits, monitored the way structure nurses interacted with patients and reported any problems to the IT, and participated in outreach sessions in distant villages. The CODESA member in the LPHA also worked with neighborhood chiefs on activities such as environmental sanitation and registration of newborn babies.

While the LPHA had held CODESA revitalization in 2021, revitalization had not been conducted in the HPHA. Informants in the LPHA reported that revitalization changed the composition of the CODESA committee to ensure that members represented a wide range of professional backgrounds. CODESA members in the LPHA had more regular contact with CAC presidents including weekly meetings to review community problems and decide how they should be addressed, while these meetings were held monthly in the HPHA; USAID IHP provided support for these meetings. The MCZ mentioned that BZCS staff tried to hold monthly meetings with all HZ CODESA presidents.

In the HPHA, CODESA committees included from 10-14 members including a president, vice president, secretary, and treasurer, as well as someone in charge of social mobilization and hygiene and sanitation. The LPHA had 5 CODESA members, although informants also considered the CAC presidents (8 in the higher performing and 14 in the LPHA), as participants of the committee. Both HAs had two CODESA members who were women, and over half of the CAC presidents were women.

The CODESA president in the HPHA had not participated in many trainings, whereas the president in the LPHA had attended the revitalization training, as well as training focused on specific themes such as TB and prevention and control of COVID-19. Neither CODESA informant had participated in training that discussed health worker attitudes and behaviors. CODESA presidents participated in meetings held in the BCZS related to specific activities such as bed net distribution, culinary demonstrations, or community sensitization aimed to boost facility utilization, and the CODESA president from the HPHA occasionally attended monthly monitoring meetings. Both CODESA presidents valued these events, noting that they presented critical

opportunities to exchange information with other health workers and learn how to improve community activities.

Informants from both HAs reported periodic evaluations (annual, bi-annual, quarterly) of CODESA activities carried out by USAID IHP, and in the lower performing, PDSS conducted quarterly evaluations.

Role of RECOs

There are different types of RECO, including those strictly involved in information sharing and workers who distribute FP methods; our evaluation focused on RECOs tasked with awareness raising. We were told that RECOs carried out household visits to identify and refer sick children to the HC, screened for children who had missed vaccinations, and promoted utilization of the health facility. Both HAs used a system whereby RECOs gave mothers of sick children without adequate means to pay for treatment a voucher to access free care in the HC. In addition to sharing health related information during household visits, RECOs used microphones to convey messages on different health topics in the morning and evening hours or during community meetings. We were told that RECOs were responsible for leading education sessions prior to CPN and CPS, holding culinary demonstrations on how to prepare nutritious porridge, and participating in outreach sessions. RECOs were also involved in program funded activities such as active screening of suspected disease TB and polio cases and peer counseling (HIV and TB); these activities involved training and some financial compensation. RECOs were also responsible for compiling data and submitting monthly reports to the HC. During mass campaigns they were tasked with awareness raising and the distribution of bed nets or vitamin A and mebendazole. Health workers in the LPHA reported that RECOs are an integral part of the revitalized CACs.

Informants in the HPHA reported 28 to 50 active RECO of whom more than half were women; we were told that RECOs in the HPHA visited about 30 households per month. Informants in the LPHA mentioned anywhere from 25 to 49 active RECOs who were predominantly female (90%) with the IT suggesting that women have more free time and are more willing to make sacrifices to help community members. Informants from the LPHA claimed that each RECO visited 50 households monthly when they shared information related to essential family practices.

The RECO informant from the HPHA had not participated in any training since 2019, whereas the RECO from the LPHA had participated in various trainings in 2021 and 2022, including training on cough, child nutrition and complementary feeding, malaria, and FP. The IT from the HPHA reported that training motivates the RECOs and boosts confidence to fulfill their roles and respond to queries by community members. The IT from the LPHA reported that few RECO in his HA received training.

The IT in the HPHA reported holding regular meetings with RECOs to learn about problems and health related needs at the community level and how they could be addressed. The RECO from the HPHA also participated in local community development meetings designed to identify community problems (e.g., road maintenance to ensure easy access to CACs and health structures and to water sources) and ways they can be addressed.

FGD participants from the HPHA indicated that RECOs did not make routine household visits, but that they conveyed information on current health topics using a megaphone. Participants from the LPHA mentioned that RECOs make household visits and share messages using a megaphone early in the morning or at night,

and that RECOs are particularly active during epidemic outbreaks. These FGD participants added that RECOs inform community members about campaigns, sensitize residents about good hygiene, FP, and use of mosquito nets; lead culinary demonstrations; and administer oral vaccines, zinc, anti-worming medication, and ORS.

Informants from both HAs reported instances when RECOs shouted at or scolded community members; some suggested that during bed net distribution RECOs conveyed arrogance which precipitated negative exchanges with community members, and in one instance the RECO was released from his duties. There was also mention of RECOs being disgruntled due to their voluntary status. Informants emphasized that RECOs must be tolerant, positive, and dignified to gain trust so that community members accept their messages and that negative instances must be addressed quickly.

Specific Services Offered

Bed Net Distribution

Informants from both HAs reported mass distribution of insecticide impregnated bed nets in December 2021. Health workers distributed bed nets according to household size, with the aim of giving one bed net for every two people living in the household. The HPHA reported giving bed nets to all HA residents, while the LPHA faced a shortage, which the IT reported affected about 2 percent of the population.

Informants stated that bed nets are supposed to be distributed to women attending CPN during the first trimester of pregnancy and to children participating in CPS after completing the full vaccination schedule. ITs reported that they do not receive enough bed nets to meet the demand, causing regular stockouts; the HPHA had a stockout of bed nets at the time of our study. Informants stated that RECOs sensitize community members on why and how to use the bed nets and monitor household utilization. They mentioned that CHWs are also responsible for awareness raising about malaria prevention measures, such as maintaining clean households and avoiding stagnant water in family compounds.

FGD participants in both HAs confirmed a recent mass distribution of bed nets to community members of all ages. While participants from the HPHA reported receiving nets according to the number of people living in their household, some women from the LPHA expressed disappointment because the number of bed nets was inadequate. Caregivers from the HPHA reported that the last mass distribution was held 10 years earlier, while in the LPHA participants mentioned that mass distribution was held every five years. Participants in both groups noted that bed nets wear out quickly and that distribution should be more frequent. Caregivers reported that RECOs oversaw distribution and provided information on how to care for and install the bed nets.

Focus group participants also reported receiving bed nets at the beginning of ANC and during CPS when their children receive their measles vaccine. In the HPHA, women delivering in the HC were also given bed nets. Focus group participants from both groups appreciated the protection that bed nets provide against malaria, stating that they are widely used, and several from the LPHA maintained that children like to sleep under bed nets. One mother from the HPHA said: “I sleep and I have the children sleep under mosquito nets, in any case I do not shy away from it. I use bed nets because if malaria knocks on your door and enters the household it's a big expense.” A mother from the LPHA reported: “Children like them a lot. If you don't put them up, they even start to cry, they like to sleep under mosquito nets.”

Several focus group participants from both HAs mentioned that they and other community members purchase bed nets if they are not available in the HC, emphasizing that they want to ensure that all family members sleep under a bed net.

Vaccinations

HAs held mass vaccination campaigns targeting specific illnesses affecting children (e.g., measles, polio) with the most recent campaign carried out in July 2021 when the polio vaccine was administered. Informants mentioned that children ages 0-5 years were eligible to receive vaccines. Mass campaigns were preceded by awareness raising involving community mobilizers who shared messages by megaphone and church leaders who broadcast information about vaccine importance to congregations. The LPHA also involved school directors in mobilizing communities to get vaccinated. Mass campaigns generally lasted several days, with a final day dedicated to "clean up" when RECOs go house to house identifying children who missed vaccinations.

Informants reported that vaccinations are routinely administered in HCs to children ages 0-11 months of age; children generally curtailed attending CPS at nine months when they completed their full set of vaccinations. In the HPHA, vaccines were offered by three health structures once or twice a week, while the LPHA vaccinated all eligible children visiting the HC and administered vaccinations during CPS twice weekly. Both HCs administered child vaccinations during outreach sessions held in distant villages once a week. The IT from the LPHA mentioned that the HC staff used their personal motorcycles to get to distant villages, making outreach sessions difficult. RECOs were responsible for maintaining registers with lists of children's vaccination records; they also administered oral vaccines to children.

Challenges related to child vaccinations included refusals by church members whose pastors opposed vaccines, with informants from both HAs reporting that members of the Church of Apostolos and born-again churches prohibited child vaccinations. The IT from the LPHA mentioned that some pastors in the area even discourage community members from visiting the facility. He said,

> *Sometimes they are afraid to come to the hospital because of fake pastors, this is also part of our culture, we have Apostolos (reference to a sect) who don't even want to hear about vaccinations. In their church they prohibit vaccinations and that congregation members come to the health center.*

Both ITs mentioned that the COVID-19 pandemic affected vaccine acceptance. In the HPHA, people believed that child vaccinations contained the COVID-19 vaccine, and that the vaccine was introduced by foreigners to sterilize or kill children. Another belief was that health workers were injecting the COVID-19 virus. These beliefs caused vaccine refusals (see COVID-19 section below). It is, however, important to note that some of the FGD participants had voluntarily opted to get the COVID-19 vaccine.

Other barriers included that residents of the HAs were always moving in search of employment opportunities, making it challenging to fully vaccinate their children. ITs also referred to some parents as "negligent," suggesting that they forgot to attend vaccine sessions or prioritized other events. Informants from both HAs mentioned stockouts of BCG vaccine in 2021 which lasted for several months, and in the HPHA the HC faced problems finding space for vaccines in their refrigerators.

Focus group participants from both HAs reported that child vaccinations are widely accepted because they protect children from experiencing severe illness, with all participants from the HPHA indicating that their

children were up to date with vaccinations. A mother from the LPHA said,

> *Vaccinating helps children, it is prevention for example against measles. You should not wait until the child is affected by measles and needs treatment. I have already noticed that children who have been vaccinated and the ones who have not been vaccinated react differently to measles, you will see that the vaccinated resist, while the unvaccinated become very sick.*

Several of these mothers reported side effects such as fever and pain and swelling around the place where the child was vaccinated as barriers to vaccination acceptance, adding that some community members believed that pain and fever is a sign that the vaccine introduced disease. One woman mentioned that her son got an abscess around the vaccine site, causing a conflict with her husband who claimed that she had done a disservice to their child. Another participant reported beliefs that vaccines are contaminated by evil spirits or that "white people who make vaccines" want to harm Africans. She said,

> *A man came to tell me that my child's illness was explained by the fact that he had been vaccinated, which meant that he had been affected by an evil spirit… when I told my husband he scolded me a lot and told me that we, the parents, had been vaccinated, so why shouldn't the children be? This is the same man who said that white people make vaccines from animal remains.*

Another woman added that the Apostolos religious sect opposed vaccines, claiming that they are made from animals and harm children, while the sect supported bed nets. Some caregivers reported parental negligence and belief systems as major barriers to vaccination acceptance, noting that responsible parents have their children vaccinated. FGD participants from the HPHA also reported that stockouts of the VAR, VAA and BCG vaccines discouraged mothers from traveling to the HC.

The MCZ confirmed that USAID IHP assists with transport of vaccinations, ensuring that the cold chain functions, and recovering children who missed vaccinations. USAID IHP also supported supervisory visits related to vaccinations.

Community Health Worker Motivation

Several community health informants mentioned that they worked to assist community members and out of love for the community. A RECO from the HPHA said,

> *When I started this job, I knew that it was not a paying job. I work to help the community in the same way that sometimes I am asked to advise parishioners with problems in church or to lead sessions in church, it is a way of assisting others that gives me satisfaction.*

Informants reported that there are different opportunities, although sporadic, for community health workers to receive financial compensation, including participating in training or in mini or other campaigns when they receive small sums (US$10-20), or when special activities are introduced in the HA. According to our RECO informants, special activities are more lucrative; examples included awareness raising about COVID-19 when RECOs received US$163 monthly from UNICEF, or involvement in the AVADAR project which provided CHWs US$30 monthly to identify TB illness cases. Additionally, when special activities are introduced, CHWs frequently participate in training and receive other benefits such as telephone or internet credit. The national TB and HIV programs appeared to frequently engage CHWs in activities related to the identification of sick community members and monitoring of drug compliance that involved remuneration, and PDSS (in the LPHA) also supported household visits related to monitoring drug compliance of HIV patients. The IT in the

LPHA mentioned that PDSS gives a small percentage of quarterly subsidies to social marketing, which falls under the work of RECOs.

Others forms of motivation included the perception that USAID IHP will hire CHWs as regular employees to compensate for their service as volunteers. One CODESA member believed that holding the title of CODESA president would open up possibilities to be hired for a paid job.

CODESA members and RECO informants claimed that they were satisfied with their work, adding that otherwise they would have left. One CODESA president mentioned that he is appreciated by the BCZS staff, which is rewarding.

There was general agreement that active CHWs needed ongoing capacity building to fulfill their roles and do quality work. Some informants suggested that community workers have to maintain a solid knowledge base of basic health issues in order to respond to questions, maintain credibility, and convince community members to follow their counselling.

COVID-19

CODESA members and RECOs reported major changes in their work with the introduction of COVID-19. One of the CODESA presidents mentioned that an initial challenge was to convince RECOs about the existence and danger of COVID-19. Awareness raising entailed sharing information on illness signs and symptoms and disease prevention focused on mask wearing, social distancing, and handwashing, all of which became the main focus of their work. Community health workers reported that COVID-19 forced them to change the way they interacted with residents.

Informants in the HPHA received assistance from UNICEF, while the LPHA received COVID-19 assistance from USAID IHP. Both agencies provided materials such as masks, handwashing stations, disinfectants including alcohol, chlorine and hand sanitizer, and buckets, as well as t-shirts with slogans such as “Non a COVID a Lualaba.” Community health workers in the USAID IHP-supported HA participated in training, while informants in UNICEF-supported HA did not. In the HPHA, UNICEF set up handwashing stations and installed cisterns in public places. Another organization (REMED) provided megaphones for the RECOs to use when conveying messages.

At the time of our evaluation, both HAs offered the COVID-19 vaccine in their facilities. Informants reported that rumors circulated that the vaccine was being introduced by foreigners, caused infertility, turned people into animals, or even led to death. They mentioned that information disseminated on social media contributed to and escalated suspicions and fears. The IT from the HPHA said,

> *A lot of people have prejudices about vaccines, as was the case with the vaccine against COVID-19, they said no, you are giving the vaccine to reduce fertility or to kill the person in a certain timeframe. A lot of people were exposed to these things, they were afraid. We had to explain that there are people who are vaccinated, and they have reached 90 years, that the vaccine does not pose a problem, we had to explain a lot.*

Informants claimed that community concerns about COVID-19 reduced healthcare seeking in facilities out of fear of exposure to the virus and decreased acceptance of other vaccines. People believed that other vaccines either contained the COVID-19 vaccine or the virus which killed people or caused sterility, and informants stated that mothers started to decline vaccines. The IT in the HPHA said,

> *When we introduced the vaccine against COVID-19 a lot of people refused routine vaccination. People thought that during routine vaccine services we were introducing the COVID-19 vaccine, or that we wanted to administer the COVID-19 virus to children. The vaccine became diabolized, they said that it must be the 666, there were stories like that. We had to intensify a lot of awareness-raising, hold a lot of meetings and training to make the community understand that we were offering a vaccine against the disease that is killing people. That is when people regained confidence in the hospital, and above all they saw that people who had been vaccinated against COVID-19 were not dying… However, it took time, even sending the community relays in the community was risky, because there were people who became violent in the community, and threatened them stating, "do not pass here with your stories, you want to give COVID to our children." It was necessary to intensify our efforts to convince the community.*

He continued: “They believed it would decrease fertility, decrease the African people, there was a lot of conjecture from different perspectives, whether it be beliefs or religion.”

The IT from the LPHA stated,

> *A lot of women did not want to come to the structure, they said that we were giving vaccines against COVID-19. They were afraid, but they also saw a lot of death on the television. The barrier measures seemed to be accepted but not medical care, as soon as they had a problem, even childbirth, they preferred to give birth in their church, where there is a house where women give birth… When we started offering the COVID-19 vaccination there was a decrease in utilization because lots of mothers didn't even want to go to the health facilities anymore stating, ‘Oh, over there they are vaccinating against Covid, if you go there, they will vaccinate your child.’ There was this problem.*

Over time, as people who had been vaccinated survived without consequence, people became less skeptical, and acceptance of child vaccination was restored.

Focus group participants reported that COVID-19 was a contagious disease that they first learned about on the radio; participants from the HPHA added that reports on COVID-19-related deaths caused them fear. Caregivers cited several barrier methods (wearing a mask, avoiding hand shaking) that should be followed to avoid contracting the disease. Several admitted that they had not followed barrier methods, adding that masks are inconvenient and uncomfortable due to the heat, while others considered barrier methods imperative. Some group discussion participants added that due to efforts around COVID-19 handwashing stations were more widely available and handwashing more regular.

Caregivers were aware that the COVID-19 vaccine was available in the HCs, with participants from the HPHA mentioning that they knew of people who had voluntarily gotten the vaccine. They expressed trust in the health workers and were not concerned that providers would inject their children with the COVID-19 virus. Mothers in the LPHA said that some people think that health workers want to administer the COVID-19 vaccine to children, which interfered with obtaining regular childhood vaccinations. One caregiver said that the father of her child told her to wait and observe before taking the child for vaccinations out of concern about the COVID ‘contamination’ vaccine, stating,

> *I was afraid to take my fourth child to vaccinations, unlike the first three children for whom I followed the vaccine schedule as required. I was afraid because her dad told me that they bought the COVID contamination virus vaccine to the health centers, so I should keep the child at home and first watch the evolution.*

South Kivu Province

Evaluation Methods and Informants

We conducted the midline evaluation in August 2021. Key informants included the USAID IHP provincial director, the DPS director, the head of the provincial inspection office, and the MCZ of the Walungu HZ. The second MCZ declined to participate mainly because he was discontented with USAID IHP activities. All key informants interviewed were male.

We collected data in the Walungu and Miti Murhesa HZs in higher and lower performing HAs. HAs were selected according to child health indicators related to service utilization for key childhood illnesses and vaccination coverage. In each HA, we conducted in-depth interviews with an IT, a member of CODESA, and a RECO. We also administered in-depth interviews in the reference hospital with one physician and the hospital administrator. Additionally, we carried out observations of four facility infrastructures.

We also administered FGDs with 6-12 mothers and grandmothers of children under 5 years of age in each of the 4 HAs included in the evaluation. Discussions mainly focused on child health services and care seeking for sick children.

Introduction

Sud Kivu province was established in 1989 when Kivu province was divided into three provinces. Bukavu, the capital of Sud Kivu province and the home to government provincial offices, including the DPS, was also the capital of Kivu province. The DPS offices in Sud Kivu have been functioning for decades.

South Kivu is comprised of 34 HZs, 18 of which are included in USAID corridors where other USAID partners implement activities. The HZs in our evaluation, Miti Murhesa and Walungu, are in a USAID corridor (focal USAID area where complementary activities funded by USAID are being implemented) where Food for Peace activities were also being implemented. Mentioned USAID IHP partners in Sud Kivu included IPlus Solutions working on supply chain and medication delivery, Matchboxology working on health worker behaviors and interactions, Breakthrough ACTION working on the VIVA campaign, and the International Rescue Committee working on community activities related to sexual violence and nutrition.

Two key informants noted that the first year of USAID IHP was devoted to staff recruitment and setting up offices and administrative issues and that activities did not start until Year 2, with one health official underlining that HZs suffered during this period of inactivity. The same key informant complained that USAID IHP hired qualified DPS and zonal staff experienced in planning, monitoring and supervising activities to work on the program. He considered it paradoxical that a project designed to reinforce health systems recruited valuable government personnel, thus weakening the provincial health systems. In general, he underlined the fragility of the health system due to the instability of staff members.

One key informant in Sud Kivu stated that the main focus of the project is to improve quality of care through training and to ensure that essential commodities, medications, and supplies are available for health providers to perform their work. As part of capacity building, the DPS has experienced teams of encadreurs polyvalent (multi-tasked supervisors) who visit HZs for 10 day stretches to provide technical and organizational assistance to zonal health workers. A government official stated that the province has benefitted from multiple USAID IHP led trainings at the zonal level including sessions on drug management,

finances, and treatment practices, and that DPS staff participated in a PICAL assessment. One informant reported extensive technical training including sessions on improved birthing assistance in reference hospitals, which involved training at Panzi hospital and the establishment of obstetric centers of excellence. USAID IHP also funded a fistula repair center in the province. A government official praised hospital training on pediatric emergencies and illnesses.

One key informant reported that USAID IHP funds critical government meetings related to the development of workplans and coordination, data monitoring and disease surveillance, as well as community activities focused on both curative and preventive care and aimed to increase service demand. While equipment needs had been assessed during the USAID IHP mapping exercise, at the time of the midline evaluation equipment had not been received.

A government health official considered the terms of the USAID IHP contractual agreement as a major challenge because USAID IHP provides funds directly to individuals and not to institutions. DPS and zonal key informants complained that USAID IHP did not allow officials to manage project money, claiming that the approach opposed health systems strengthening and hindered conduct of activities. The DPS also took exception to the fact that funds go directly to HZ personnel without keeping the DPS informed. Because Sud Kivu province had received support from the predecessor project, which was under a cooperative agreement and provided funds directly to institutions, and because many other donor agencies fund government institutions, the change in financial management of funds was difficult for DPS and zonal officials to accept, with informants claiming that they were being treated like children. In addition, two key informants reported that project administrative procedures are complex and time consuming, often causing delays in accessing funds and implementation of workplans.

To ensure ongoing monitoring and evaluation, USAID IHP tried to reactivate VSAT systems that had previously been set up by the predecessor project in all HZs. A government health official mentioned that VSATs were not properly maintained and that they frequently break down. Correspondingly, during data collection our research team found that the VSAT system in Walungu HZ was too slow to access the District Health Information Software, version 2 (DHIS2) system. Key informants reported that in HZs where VSAT was not functioning, the project paid for modems and credit to send data to the DHIS2 software. One key informant mentioned that, even when the HZs have the capacity and equipment to send data, health personnel often fail to deliver complete data sets on time. He indicated that the province experienced ongoing problems with data quality, underlying that errors begin at the HA level where health workers enter the data manually.

A reliance on facility-based health workers to enter health structure data manually impacts on data quality.

One of the key informants underscored the importance of the work carried out by the Inspection Provinciale de la Santé (ISP) which carries out audits to identify irregularities and nonconformities related to health practices, embezzlement, and other corrupt practices and implements penalties for infractions. The same key informant indicated that USAID IHP is the only organization that provides regular funding to ISP. While ISP offices are supposed to conduct two weeklong audits in each HZ on a quarterly basis, the funds provided by USAID IHP only allowed personnel to visit five to six HZs per quarter over a four to six-day time period. One

government health official stressed that shorter than planned visits do not give ISP representatives adequate time to understand the situation in HZs. In addition to budgetary constraints, other challenges the office faced included insufficient and inappropriate transport (the office had two motorcycles which are about 20 years old), lack of materials and equipment, lack of funds for phone credit, and the fact that other political entities, including people working in the governor's office, as well as local chieftains, do not always follow central government directives and carry out separate audits governed by different, and often contradictory rules. Additionally, one health official reported that salaries for the 25 nurses working in the inspection offices were low, making it difficult to ensure that personnel are enforcing ISP directives. At the time of our evaluation, 70 percent of the inspection office workers were on strike.

Walungu Health Zone, South Kivu

Background Information

The average age of the HA informants was 47 years, and the majority (4 out of 6) were men. Both ITs had A1 training. CODESA and RECO had an average of 15 years of schooling. The informants had an average of eight years of work experience in the same position. Most informants engaged in other work as farmers, teachers, or religious leaders. The average number of people living in their household was seven.

FGD participants were all mothers of young children under five years of age.

Facility-Based Services

Infrastructure

The Walungu HZ is comprised of 28 HAs and located in a USAID corridor. The HPHA included eight villages with the HC located about 7 km from the reference hospital. According to the IT, the HA did not have a functioning iCCM. The HC, which was made of cement, was constructed in 2007 with support from the Catholic Church. The IT reported that the structure had cracks that had formed in 2020 after an earthquake but had never been renovated. The HC was comprised of one building with separate rooms for treatment consultations, and a pharmacy, laboratory, and maternity ward; adults and children were treated in the same consultation room. The maternity ward was small, and according to the IT, did not meet national standards. The laboratory was not functional, although the center did have a microscope. The HC had separate latrines and showers for men and women. The IT indicated that USAID IHP had proposed constructing new and improved latrines and showers in the HC; in preparation, CODESA members had secured a plot of land for the construction. In February 2021, HC staff received USAID IHP training on the installation and hygienic maintenance of the latrines and showers. While the latrines were supposed to be constructed around March 2021, at the time of our interviews construction had not started.

The LPHA, which is located 10 km from the reference hospital, was also comprised of eight villages; the HA did not have an iCCM. The HC was built in 2008 and made of brick and cement; while the building also showed signs of cracks, no renovation had taken place. The LPHC had a separate maternity ward detached from the main building, but the IT mentioned that it did not meet government standards. The HC did not have lab equipment. As was the case in the HPHA, adults and children were treated in the same consultation room. While the HC had separate latrines for men and women, the IT reported that the number of latrines was insufficient. When describing the HC, focus group participants mentioned that water is not available, power is sporadic, and the maternity ward is inadequate.

The reference hospital, which was built in 1948, had a separate building for pediatric care. Buildings were renovated in 2016 with financial assistance from the US government. Despite this, informants reported that many additional renovations were needed such as repairs of the cracked maternity ward floor. While the hospital had electricity, it was often insufficient to give light or to operate certain

Latrines health facility

medical devices. Hospital administrators had approached NGOs and the Congolese government for assistance with renovations, but nobody had responded.

The USAID IHP provincial director mentioned that USAID IHP had promised to work on renovation of 55 facilities in Sud Kivu. He considered lack of progress on renovations to be a major deficit in overall efforts to improve health service quality.

Services Offered

Health Centers

Health services involved treatment consultations for out-patients available 24-hours a day, hospitalization for more severe cases, basic surgery, and preventive care. ITs explained that patients are not officially hospitalized, but because they travel long distances for care, they may be observed in the HC for several days during treatment. Both facilities had a maternity ward where traditional midwives assisted normal deliveries. Neither HC met the minimum package of health services and personnel, with both lacking trained midwives, adequate numbers of trained A1 or A2 nurses, and a laboratory and lab technician. Diagnostic capabilities and curative care were basic.

ITs reported that nurses followed newly introduced national protocol flowcharts (2021) for childhood illnesses during consultations, which provided treatment approaches for different pathologies according to the severity and characteristics of patients. While interviewees suggested that the flowcharts are enormously helpful, only one of the ITs had received formal training on the new treatment protocols while the second informant had been oriented on the use of the flowcharts by the MCZ during formative supervisory visits. During consultations, ITs mentioned that they encourage caregivers to return to the HC if the child's condition worsens and avoid self-medication and discourage traditional practices, such as visiting *chambres de prieres* (prayer rooms) where children believed to be possessed by witchcraft are treated. ITs reported that health staff talk to mothers about preventive care such as the importance of exclusive breastfeeding and hygiene practices.

Both HCs received training on and implemented revitalized CPS which included taking anthropometric measures to monitor the child's growth, administration of child vaccinations, distribution of bed nets, and educational sessions on a variety of health themes, with informants suggesting that the revitalized approach is more focused on identifying cases of malnutrition and nutritional counselling. They also mentioned that vitamin A and deworming medication is provided during CPS; one IT also reported FP counseling during CPS. Both ITs mentioned screening for malnourished children during CPS (using mid-upper arm circumference [MUAC]) and at the community level, nutritional counselling, and the provision of supplementary foods (Plumpy'Nut) for severely and moderately malnourished children, although one informant mentioned recent stockouts of Plumpy'Nut. They added that IHP USAID is focused on prevention of malnutrition, while other donors supported treatment. Focus group participants in both Has reported distribution of Plumpy'Nut, as well as flour and oil, to children identified as undernourished in the HCs.

The IT in the HPHA reported holding CPS three times a month in the HC and once a month during outreach visits to villages, while the IT in the LPHA said that CPS is held once a month in the HC and in nearby villages. Both ITs mentioned that RECOs and CODESA members assist with CPS.

The IT from the HPHA mentioned that they have educational aids to share messages on behavior change during CPS sessions, which are delivered by the HC nutritionist, CODESA members, or RECOs. The CODESA member stated that health themes are discussed during CODESA meetings and selected according to community behaviors and needs. Educational sessions focus on preventive measures for childhood illnesses; for example, when discussions are held on malaria, CHWs explain transmission of malaria, the dangers of stagnant water, the importance of maintaining a clean compound and proper sanitation, and the importance of sleeping under bed nets. Other topics mentioned included avoiding self-medication and potentially harmful traditional practices, the benefits of FP, how to assess a child's health, treatment of childhood illnesses, the vaccine calendar, and the importance of maintaining good hygiene.

HCs also offered CPN and FP counseling and methods. The HPHA carried out weekly visits to villages to sensitize people about FP, although the IT mentioned that FP supplies are limited.

The IT from the HPHA reported that an evaluation team from Kinshasa had visited the HA to assess SNIS indicators related to vaccination coverage, CPS implementation, FP activities, and malaria treatment and prevention, but that he had never received the evaluation results. A performance evaluation had not been conducted in the LPHA.

Reference Hospital

Reference hospital informants reported that services for children are offered by the neonatology, gyno-obstetric, and pediatric departments, as well as in a nutrition treatment center providing medical and nutritional treatment (Plumpy'Nut, therapeutic milk) and dietary counselling. They also mentioned that surgical care and physical therapy are available for children. Hospital clinicians followed official treatment protocols posted in consultation rooms, as established by provincial and national authorities. The administrator mentioned that application of the protocols has become more rigid over the past two years. Informants underlined the importance of adhering to standardized care, insisting that protocols should serve to orient clinicians and ensure they maintain quality care, increasing curative rates and decreasing infections, particularly during surgery. The medical doctor added that clinicians follow treatment protocols for leading childhood illnesses including malaria, pneumonia, and diarrhea according to the illness severity and age and weight of the patient. The doctor also mentioned the clinicians follow emergency pediatric protocols for patients with TB, HIV, and malaria.

Hospital informants struggled to respond to questions regarding the integration of curative and preventive care; both were primarily focused on treatment services. However, they did report that the hospital provides counselling to mothers on topics such as hygiene, exclusive breastfeeding, and child nutrition. They mentioned that preventive approaches are primarily led by HCs or done at the community level.

When asked how to improve child services, informants emphasized that the primary challenge relates to the use of traditional care. The administrator said,

> *Many children in communities do not have easy access to care, residents in Walungu are poor and care seeking to the hospital is really the last approach. Many cases that come to the hospital are in a desperate state, they have gone to prayer rooms, to traditional healers, I don't know what, and finally when things are not going well, the child is brought to the hospital. This (the delay) leads to the need for more care and impacts patient costs. While we apply a flat rate, at times we must go beyond the rate because the case has sought care late.*

The medical doctor added,

> *There are traditional practices that are followed in the community and the hospital suffers the consequences. People give traditional products to children, they do all sorts of things, so the children arrive with complications or even die because they took time obtaining care in the village. I think that we should see whether the partner, I didn't say that care should be given for free, but maybe subsidize certain care so that people don't seek treatment in the village and caregivers first come to the hospital. Measures could be taken against people in the village who provide questionable care to children; once caught, perhaps legal measures could be taken.*

Equipment

The USAID IHP Director in South Kivu reported that equipment needs were identified during the mapping exercise carried out by USAID IHP at the beginning of the program. While the equipment had been ordered, it had not been delivered to the facilities, which he considered a major constraint to efforts to enhance the quality of healthcare.

Both HCs had solar panels, but ITs mentioned that the power generated was unstable and sometimes even insufficient to illuminate the HCs. Neither HC had a refrigerator. In the HPHC, the incinerator was functioning, but it was not in the LPHC. The HPHC appeared to have enough beds and mattresses for sick patients under observation and in the maternity ward, including a delivery bed. The maternity ward in the LPHC lacked an appropriate delivery bed and did not have adequate beds and mattresses. The LPHC had a consultation table for infants and children, while the HPHC did not.

Both HCs had basic equipment such as thermometers, stethoscopes, and blood pressure machines, although the HPHC did not have sterilization equipment. The HPHC had a microscope while the LPHC did not. Both HCs had a scale for newborns and infants, hanging balances with trousers for small children, and height measures.

Regarding hygiene and sanitation facilities and other protective measures, HCs had handwashing stations; the LPHC also had gloves and hand sanitizer for health workers, but the HPHC did not. HCs had a non-contact thermometer to check temperatures of people entering the center, but it was not used systematically. Both ITs reported that health workers do not wear face masks routinely.

When asked about supply needs, the IT in the HPHC mentioned surgical, delivery and dressing forceps, while the second IT indicated a delivery bed, mattresses for the maternity ward and observation room, and beds. He also highlighted the need for more medications, particularly to treat childhood illnesses. Neither center had received BCG vaccines for months.

The IT in the HPHC reported that the HC uses 10 percent of its revenue to purchase needed materials available locally. He mentioned that ITs can first contact the MCZ to see whether the required materials can be obtained from another HC or provided by an implementing partner, although during his tenure in the HC he had never received equipment from higher level authorities. The HPHC had a staff member to work on maintenance and repairs or contacted somebody local for repairs. Given the challenges in repairing equipment, the IT emphasized the importance of maintaining equipment by keeping it covered and clean. The IT from the LPHA suggested that repairs are costly and difficult for the HC to afford, although the HC attempts to get equipment repaired locally.

The hospital had basic equipment to treat children, including essential medications, newborn and children's scales, height measures, sterilization equipment, thermometers, stethoscopes, and timers. Informants stated that they need lifesaving equipment such as incubators for premature newborns, resuscitation equipment, a digital X ray machine (the physician mentioned that the X-ray machine is old and images are difficult to read), ultrasound scanners, and supplies for treatment of severe malnourishment, with the medical doctor also mentioning that they need a neonatology room in order to meet safety standards for newborns. In general, the medical doctor suggested that the hospital needs improved, modern devices to provide better medical care.

The administrator reported that the hospital is not aware of who to contact and how to acquire new equipment, although the hospital does occasionally receive gifts from the organization Médecins sans Vacances. A hospital staff member is in charge of repairs; if that person is unable to make the repair, the hospital looks for technicians in the area. If repair costs are too high, they seek assistance from implementing partners. The administrator added that spare parts can be difficult to obtain and businesses providing medical equipment are not available, stating,

> *At the provincial level, there is not even a place to get spare parts for certain devices, when we try to repair equipment, they have to order the parts, and we don't even know where. We don't have businesses interested in medical equipment, so getting certain medical equipment is difficult.*

Medication

The USAID IHP provincial director and the DPS director considered the decrease of program medications from 117 to 14 or fewer drugs to be a major setback to efforts designed to improve quality of care. The USAID IHP provincial director contended that decreasing the number of drugs offered by the program will encourage facilities to procure less costly, low-quality drugs when stocks run out. He stated,

> *We started at 117 ITM and now we have gone to around 14 ITM. The question for me is, by revising like that, how can we think we can ensure quality, how? Whether we like it or not, in a health structure, drugs constitute the lungs, if we don't have drugs how will we treat? So, all the USAID people who have been here, we discuss, they say USAID would like the Congolese government to take charge and initiative. That is all good and beautiful, but in my opinion it's like we are doing the opposite, we are asked to improve the quality of care and at the same time we reduce the drugs. It is true that we kept the 13 drugs essential for the health of mothers and children, but for me that is not enough. If we want to contribute to quality, we are a province that borders with neighboring countries, everyone knows how our customs services work, our borders are porous and therefore there are fake medicines coming here, so if you don't give the right medicines to a health center, you want these centers to find them where? The center will go buy fake drugs that are underdose. Because they don't have enough resources, they survive on self-financing, when you tell them that we don't have the drugs, go and pay for the drugs yourself, their tendency is to go and pay for drugs that cost less, except those drugs that cost less are fake drugs, we expect what quality? For me we are in the process of jeopardizing the quality that has been attained after all these years that USAID has intervened in this country.*

ITs reported that they submit a monthly drug requisition to the BCZS based on ongoing patterns of drug needs and the availability of medications in the zonal pharmacy with both mentioning that their goal is to avoid drug stockouts. ITs reported that the drugs received are generally much less than the requisition. The

IT in the higher performing zone stated “You ask for say two boxes, 2000 tablets for one month, but you are served 1000 tablets. They never meet our requests; we make a requisition, but the product is always not enough to meet our needs.”

If requested drugs are not available, the BCZs will inform the HC when the drug is delivered to the zone. The CODESA president is responsible for keeping the population informed about drug shortages and when medications are restocked and available in the HC. HCs used their revenue to pay for medications distributed by the HZ at 30 percent of the selling price.

ITs reported stockouts of many essential drugs used to treat childhood illnesses, including zinc, antibiotics (one mentioned that antibiotics for treatment of pneumonia had not been available for several months), gentamicin, penicillin, paracetamol, aspirin, diclofenac, ibuprofen, albendazole, and mebendazole. Both ITs noted that anti-malaria medications were provided regularly. The IT of the LPHC underscored that recent reductions in the number of drugs provided has diminished the diversity of drug stocks needed for quality treatment and affected HC operations. When asked about the most needed supplies, he said,

> *I want to see drugs first, this is a big concern for us, the few drugs that we find at the zone, it no longer covers the needs of a health structure. There have been reductions in drugs supplied at the zonal level, this reduction has had repercussions on the functioning of our health center.*

FG participants in the LPHA also reported ongoing stockouts of medications.

Our data suggested that ITs do not obtain drugs until they experience stockouts. When this occurs, they first confirm whether the BCZS has the drug, and if not, they travel to Bukavu where they can purchase drugs in private pharmacies at full cost. While the government recommends drug purchases in pharmacies that sell medications that meet government standards, HCs lose money when they purchase expensive medications and have an incentive to buy less expensive, unregulated drugs. Some drugs, such as paracetamol, mebendazole, and most antibiotics, are easy to replace, but special imported drugs, such as ACT, are not.

Nurses in South Kivu emphasized that reductions in the number of drugs provided by USAID IHP has diminished the diversity of drug stocks needed for quality treatment and affected health center operations.

Reference Hospital

Reference hospital informants reported that 20 percent of the hospital revenue is used to supply drugs. While the hospital receives large drug orders quarterly based on drug requisitions, they must replenish drug shortages monthly. At the time of our study, the hospital had stocks of essential drugs for treatment of childhood illnesses, such as zinc, ORS, amoxicillin, ACT and other malaria medications, vitamin A and mebendazole. Informants reported that they monitor consumption of essential drugs closely, and when they are close to running out of a drug, order the drug from a provider in Bukavu to hold them over until the quarterly requisition is fulfilled. Both informants agreed that they rarely have stockouts of essential medications, with the hospital administer adding that it would be irresponsible. The exception was children’s medications for treatment of malnutrition, such as 100 and 75 milk products and Plumpy’Nut. When a stockout occurs, they try to orient patients to locations where the drug is available. The doctor said,

In the event of a stockout, we submit the requisition to the hospital or the BCZS. For patients in need of the drug, especially malnourished children, we try to understand where they can get the therapeutic milk. However, they are poor, when you orient them, they tell you that they do not have the means, that they will just stay in the hospital or go home, and then we don't know if the child will die, or what else will happen.

The hospital receives drug donations from implementing partners, but we were told that these gifts often involve unessential drugs or drugs about to or which have already expired. When asked whether drug donations coincide with their needs, the medical doctor said,

Not often, there are times when we are supplied drugs that will expire soon and that we did not ask for, and we have even refused certain provisions. For example, they once gave us injectable aspirin, we didn't need it or ask for it, but they just gave it to us. Medicines like that. Often, we say we don't need them, and if we keep these medicines they will expire, because we don't use them. We are forced to return these types of medicines to the partner.

Utilization of Services

Informants reported that obstacles to care seeking in facilities included poverty, drug shortages, belief systems favoring traditional care, and parental negligence. Informants stated that treatment fees are beyond the means of many families, causing them to keep sick members at home or delay care. Officially, patients are not supposed to be treated on credit, and even if treatment has started, we were told that providers stop treatment if the patient is unable to provide a guarantee of payment. When asked about obstacles to care seeking for children, this RECO said: "The main problem is lack of financial means because it is money that does everything. If you are admitted but cannot make a deposit, they can stop treatment until you make a payment."

Additionally, patients with previous debt are requested to pay for both the debt and ongoing care. Furthermore, facility workers often prescribe drugs that must be purchased, increasing the costs. This IT said, "We often send people to buy medications we don't have in the health center. When products are not available in the HC pharmacy, the costs increase, and when costs increase for an impoverished family, they will not be able, they will stay at home, the child will be placed at risk, undergo all kinds of risks. This is due to poverty and lack of drugs."

Contextual factors related to belief systems and health care costs encourage utilization of traditional health practices and discourages facility-based care.

One CODESA member also mentioned lack of father's involvement as a barrier, suggesting that many men see care seeking as the responsibility of the child's mother. He stated,

Fathers do not want, cannot even bring the child to the structure if the mother is not around. Some children are left to suffer at home if the mother is absent, and this is one of the difficulties. Furthermore, many mothers do not have the means, they say if we bring our child to the health center, we will be charged a lot of money, but who will pay for that?

Informants also described various health beliefs related to sorcery or poisoning that motivate parents to first seek traditional care for their sick children. This IT from the HPHC explained,

> *There are criminals at the community level, any child who has abdominal pain is directly suspected of being poisoned, they are taken to traditional healers to receive medical products to make the child vomit…finally they arrive in the health center with severe dehydration. Second, there is a practice that involves the tonsils, when a child has a fever, they take it to a local healer who removes a section of the tonsils. Next the child will develop a fever or even sepsis. And a third practice, you see the child after birth, they have tattoos everywhere. These are practices that we forbid, but they don't understand.*

HA informants also reported that many community members take the child to the chambre de prieres (prayer room) before seeking formal care which only occurs when the child develops more serious illness signs. Hospital informants highlighted preferences for traditional or religious based care as the biggest obstacle to utilization of facility care, with the administrator noting that the use of traditional care is also linked to poverty. He stated,

> *The main obstacles relate to the mentality, we are in a community that believes a lot in the care of traditional healers, herbalists, unfortunately this is how children are taken care of. What mothers do when the children are sick, they don't think directly of hospital care, medical care, they take a lot of paths, and when that doesn't work, that's when they turn to formal care… You will find the sections of the throat cut, I don't know what, serious tattoos, cases of anemia, cases of dehydration, because they spend a lot of time trying other things before coming to the hospital. I always mention the economic constraints, because people are economically poor, they first seek the least expensive option, and when that fails, they come to the hospital.*

Later he added,

> *Most people fear the cost of care. People are diverted to traditional healers, prayer rooms, or other healers. There are beliefs everywhere, everywhere, people think, no, this disease is not medical, let's try elsewhere first. There are others who self-medicate…Even after being admitted patients go home, for example a diabetic is told there is an herbalist who can cure the problem, or a hernia can be treated by herbalists, you see all these obstacles.*

While there was general agreement that few private pharmacies exist, hospital informants talked about private healthcare options available in more populated areas near the hospital that also impact on hospital utilization. Health workers both at the HC and hospital level did not consider distance to facilities as a barrier.

Focus group participants in the HPHA reported that they seek care in the HC because health workers have the capacity to treat many childhood illnesses. The same group of women mentioned poverty as the biggest barrier to care seeking in the HC. Some added that even after initiating treatment, health workers may refuse to provide care if payments are not made, forcing patients to stop the drug regimen. One participant explained,

> *Sometimes I don't have money, and when I get sick, and go for treatment, they will give me the medicine for one day. I'll go home with it, and sleep. The next day I will go for treatment again, and they will ask me for the money. I will say that I have not found any, and they will say no, if you don't have money, you will not be treated. That's the problem, they can't treat me the second time if I don't have the money.*

Other barriers to seeking care in the HCs reported by FGD participants included drug shortages. They also shared negative perceptions of certain medications, particularly artesunate, which participants described as strong and weakening the body. Lack of laboratory facilities and equipment to diagnose conditions was also mentioned as a barrier to seeking care in the HC. Focus group participants denied that many people utilize traditional care.

Management and Governance

Coordination

At the HC level, a monthly review meeting is held with the IT, CODESA members, and RECOs to compile data and evaluate HA activities. In addition, the ITs participated in the BCZS monthly monitoring meetings convened at the beginning of each month and attended by the zonal health team, all HC ITs, and often a DPS staff member. During monitoring meetings, each IT presents information on a series of health indicators based on monthly data collected in the HA and members discuss the HA performance and how to make improvements. Particular attention is given to the highest and lowest performing Has and reasons for their successes or challenges. If the LPHA does not show improvement in the indicators over a two-month period, a member of the zonal team will make a special visit to the HA. IT informants indicated that this forum presents an opportunity to share positive experiences and challenges, and to discuss solutions to common constraints. One IT said: “This is the reason for this meeting, we share experiences. Where there is a good performance, we ask ourselves why, the IT tells us what he did, and the others learn from this.” Only the IT in the higher performing zone had participated in meetings on community development.

Regarding community workers, CODESA members hold committee meetings designed to share experiences and increase solidarity and some attend HA monthly review meetings. Other approaches community workers cited as ways to share information and experiences included supervisory visits and trainings, although one disgruntled CODESA member asserted that supervisory visits are not done at the community level. CODESA and RECO did not participate in meetings with other government workers or NGOs, although they considered these important. The second CODESA member reported that previously all zonal CODESA presidents attended review meetings with the BCZS, but that recent zonal leadership barred CODESA members participation. This informant considered CODESA member participation in zonal review meetings as critical and expressed frustration about the lack of opportunities to participate in forums that facilitate exchanges of field experiences with personnel working in other Has and capacity building events. The same CODESA member blamed USAID IHP for not facilitating improved interactions with other health team members and training opportunities, stating,

> *CODESA presidents no longer participate in meetings with the DPS or BCZS to share experiences. Before we participated in reviews and understood how others improved their health indicators, but now we are blocked from participating. Now if you are going to cheat on health indicators, if you are smart, you can do it in your own backyard. There are no capacity building trainings, there are no technical exchange visits, there are no community visits. When supervisions take place, they only ask, ‘Have you done this or that or have you strengthened the capacities of people.’ I often I ask them, ‘When did you strengthen the capacities of the people?’ The project USAID IHP, what it said it will do, none of that occurred. USAID IHP nothing. I’m not hiding anything, tomorrow I may not have a job, but we have to denounce them, but to whom? The health system does not evolve any more. When there is a dialogue with other health structures, I can share an innovation and others can tell me things that I did not know. Now those*

learnings have stopped, the situation is going from bad to worse. Before all health area CODESA presidents could exchange information on many things.

Reference Hospital

Hospital staff participated in several weekly and monthly meetings and councils convened by the zonal management board and technical health team but did not attend meetings with DPS personnel. We were told that these forums provide opportunities to exchange experiences, share best practices and challenges, and make recommendations for improvements. Informants mentioned that formative supervisions also serve as a mechanism to share information and innovative experiences and improve collaboration and health worker performance. Only the medical doctor had participated in meetings on community development.

Accountability Mechanisms

A suggestion box was posted on the outside of both HCs for community members to submit comments on positive and negative attitudes and behaviors exhibited by health personnel. We were told that submitted suggestions are reviewed during monthly monitoring meetings. There was agreement that suggestions remain anonymous and there should be no concern of reprisals. However, health personnel reported that comments from the community are rare, and when received, primarily related to healthcare costs and fee schedules. The MCZ also stated that the boxes are rarely used, although he believed that the approach has potential to provide useful information. The MCZ called for efforts to inform the population about the purpose of the boxes and encourage their utilization. He stated,

Suggestion boxes have been set up in all structures but are not used. I think it will take an effort. We're going to ask that a partner funds it, we put that in the operational action plan. We must inform people about the merits of using the boxes. They have been mounted in the structures, but they remain closed, the padlock becomes rusty because it is never used, and the community does not even know the meaning. The IT and CODESA don't know how to encourage use of these boxes, which are designed to improve health care. People can complain about a structure, but the health providers are not aware of their complaints. If used, we think these suggestion boxes can considerably improve the health system, the care offered to the community.

Neither HC had introduced community score cards nor a telephone line to enhance health provider accountability.

At the community level, each CAC has a suggestion box which is circulated to community members and considered a way to oversee HC performance; complaints and concerns are shared during CAC monthly meetings. When comments relate to health provider practices, they are conveyed to CODESA members who act as community representatives during monthly HC meetings. CODESA members may also receive community feedback from RECOs, with informants noting that RECOs are well positioned to receive firsthand information from villagers. RECOs may share community complaints during monthly HC meetings, but one RECO expressed concerns about reprisals from the health providers. The LPHA held community meetings with villagers, village leaders, NGO representatives, CAC members, and CODESA members quarterly to assess the integration of community activities in the health system. There was general agreement that accountability mechanisms are important to identify and address problems.

Reference Hospital

The hospital posted a suggestion box, although the administrator mentioned that it is not often used. The medical doctor maintained that the approach is more appropriate for 'intellectuals.' Informants reported that the suggestion box did, however, provide an opportunity for hospital staff to give anonymous feedback on other health personnel. Every quarter the hospital holds a staff meeting where complaints are analyzed, and recommendations are made.

We were told that hospitalized patients or their guardians frequently make complaints directly to personnel providing services or to the hospital administrator. The hospital occasionally organizes community surveys to understand how residents perceive services.

Informants did not know about community-based scorecard activities, and the reference hospital did not have a green line. The USAID IHP director mentioned that a green line is being introduced gradually in the different provinces. The hospital is considering establishing a community unit to facilitate better communication between the hospital and community members.

Referral Systems

The referral system is comprised of different layers, starting at the community level where informants reported that local leaders, CAC members, or RECOs, who are officially charged with referring ill patients during routine household visits and identifying community members who require biomedical care. The HPHA implemented a system called 'avadar,' which is funded by another partner and designed to improve referrals; RECOs, who are provided phones, are responsible for contacting the IT when they identify a sick patient during VADs and referring the patient to the HC. However, informants reported that family members, who are responsible for transport and healthcare costs, often require a lot of convincing about the need to get the patient to the facility. If the required care is beyond the capabilities of the HCs, which offer a minimum package of care, a nurse is obligated to refer the patient to the reference hospital. If the reference hospital is unable to treat, patients are referred to higher level facilities in Bukavu.

HCs do not have any means of transport, which is the responsibility of the patient's family. As a result, patients travel by foot, motorcycle, or public transport. Those with more serious conditions may be transported on a chair, homemade stretcher, or carried. In rare instances, a local community member may provide free transport or money to cover transport costs. While the reference hospital has two ambulances, the cost (US$15 during the day and US$20 beyond regular work hours) is beyond the means of most families.

Common reasons for referral are that the patient requires medication, a surgical intervention such as a c-section, or more sophisticated care that HC providers do not have the capacity to provide. Health worker informants mentioned that referrals most commonly involve severe malaria cases and obstetric complications. According to focus group participants in the HPHA, referrals occur if the patient's health has not improved after three days of treatment. Informants reported that patients are given a referral slip which is provided to health providers upon arrival at the reference hospital. While HC nurses are instructed to phone the reference hospital prior to the arrival of the patient, lack of phone credit prevents this from happening. For the same reason, health providers do not contact the reference hospital to get an update on the patient, nor do they have funds or time to visit the patient. After treatment, a hospital physician is supposed to send a counter reference to the HC. Counter references are particularly important when additional care at the HC Is required. Of the six informants, only one RECO reported receiving training on referrals.

Informants cited costs as the biggest obstacle to referrals, particularly when higher level facilities offering more sophisticated and costly care are involved, with one informant mentioning that people are aware that they can incur hundreds of dollars. Informants also mentioned that transport poses problems due to costs and lack of access to appropriate forms of transport; one informant mentioned that the hilly terrain increases transport challenges. Most informants indicated that there are no official funds to assist vulnerable patients, although occasionally other community members may provide money. Once again, informants reported local preferences for traditional remedies and practitioners as a reason to delay or avoid facility care. They also mentioned obstacles associated with the COVID-19 pandemic such as concerns that the patient will be diagnosed with COVID-19 or injected with the COVID-19 vaccine.

The IT in the LPHA reported convening a meeting with village leaders to discuss why villagers are avoiding referrals to the HC and hospital. The same IT indicated that an HC health provider who assisted deliveries had been accused of frequently referring obstetric patients to the reference hospital where family members incurred hundreds of dollars in fees, causing families to decline referrals.

Reference Hospital

Hospital informants reported that HCs refer patients who require urgent care such as patients with severe malaria or in need of future hospital care (e.g., pregnant women with a history of delivery complications, people in need of surgery). They explained that the referral form includes the patient's name, medical diagnosis, treatment the HC provided, and reason for the referral. Once treated and discharged, hospital workers give a counter referral slip providing details of the hospital treatment. Our medical doctor informant was the only hospital employee trained on referrals; other hospital staff participating in the same referral training had either died or been transferred.

The administrator stated that a major problem is that HC personnel frequently fail to follow medical protocol and start treatment without a proper diagnosis, thus delaying hospital care. Even when a referral is made, people often avoid going to the hospital due to fear of the costs or seek care with local practitioners, particularly when children are involved. Because of late referrals from the HCs to the hospital, the hospital is forming supervisory teams to visit HCs and assess reasons for late referrals.

Hospital informants confirmed that due to costs patients avoid the ambulance and travel by motorcycle or by foot which may exacerbate the health condition. Informants also reported that poor roads, particularly during the rainy season, can delay arrival and cause harm to the patient during transport. They added that most HCs are in relative proximity to the hospital and distance is not a major obstacle, although three HCs are about 40 km away.

Hospital informants recommended that the government regulate the package of treatment activities provided by HCs, emphasizing that HCs do not have lab facilities or other diagnostics such as imaging to make proper diagnoses, and that when treatment starts, patients often get sequestered in facilities and hospital care is delayed. The medical doctor mentioned the need for an open phone line to discuss referral patients with HC providers. He also reported insufficient referral forms.

Healthcare Financing

HCs relied on monthly revenue, which in the HPHA HC never exceeded CF 900,000, to cover operational and health personnel costs; unfortunately, the research team did not collect information on revenue from the

LPHA. Both HCs posted official flat price treatment fees. The IT from the LPHC said that revenue would be higher if all patients paid the fees, which were CF 5000 for adults and CF 3000 for children, at the time of treatment. Both HCs treated on credit and reported debt incurred by many community members. According to ITs, monthly HC revenue was used as follows: 60 percent for health personnel, 25 percent to 30 percent for drug purchases, and 10 percent to 15 percent for supplies needed for the functioning of the HC. Neither HC had conducted an evaluation to determine affordable healthcare prices.

Health financing initiatives such as health mutuals, bonds, or emergency funds, or assistance to reduce costs for certain sectors of the population, were not available. While the LPHA had attempted to introduce health mutuals, no families were willing to participate. The IT believed that the concept underlying health mutuals, which involves paying for something before it happens, opposes cultural norms. The same IT mentioned that some families save money for healthcare costs, which is an approach introduced by VIVA! in the HZ. Both ITs claimed that their HCs provided free treatment to 5-10 indigent community members; they reported that this has a negative impact on the HC, because it is self-financed.

Reference Hospital

Informants reported that sick patients requiring immediate care were admitted to the hospital notwithstanding their financial situation, but payment must be made at discharge. Referral cases not in need of immediate care, such as pregnant women or patients who require surgery, are expected to make a payment before being admitted. According to our informants, some recovered patients waiting for discharge remain in the hospital a long time waiting for somebody to pay the hospital bill; other patients with debt flee and disappear. The hospital administrator said,

> *The hospital never requires money or a deposit upon entry, so it can't be justified that referred people do not come directly to the hospital, only for the ambulatory cases do we require that payment be made directly, but for non-ambulatory cases there is no request for money before the patient is admitted.*

The administrator reported that the hospital has a small social fund for vulnerable patients. Sometimes other patients or hospital workers provide food for indigent patients.

The administrator mentioned that the DPS did an assessment to determine appropriate flat rate pricing. While the hospital instituted fixed fees, informants mentioned that the rates do not cover certain health structure costs that should normally be subsidized by the government, making it difficult for the hospital to function. The hospital accepted different financing mechanisms, such as health mutuals which involved an annual payment of US$6 and bonds provided to employees of organizations or companies that signed a contract with the hospital, but these were rare.

Resources for Facility Workers

Staff in the HPHC included one A1 and two A2 nurses, a nutritionist (A2), an A3 worker who assisted deliveries, as well as a maintenance technician and security guard. The LPHC had two A1 and two A2 nurses, one nutritionist (A2), one birth attendant (A3), a receptionist, a cleaner, and a guard. Neither HC met government standards regarding health worker staff.

Rural health facilities continue to use unqualified A3 health workers to provide care.

Training

Health personnel from the HPHC had participated in multiple trainings offered by USAID IHP within the past year including training on maternal health, FP, nutrition, hygiene and sanitation, revitalization of CPN and CPS, and pharmacy management. The IT, who had attended training on FP, hygiene and sanitation, revitalization of CPN, and maternal health, considered all of the training of high quality, particularly training on maternal healthcare which provided new and potentially lifesaving information regarding dangerous medical practices that were previously recommended and approaches (e.g., how to clean the newborn, breastfeeding immediately post-delivery, the kangaroo method) that are critical to newborn care. The LPHC personnel had participated in comparatively fewer trainings offered by USAID IHP, including training on maternal health and CPN revitalization. The IT attended the CPN training, which he stated introduced innovative approaches related to malaria treatment during pregnancy, birth preparedness, and care for newborns, as well as new directives related to high-risk pregnancies. The IT mentioned that a debriefing of the training learnings was held with other HC personnel following the training. In early 2021, both ITs had participated in a training on COVID-19 which included information on the COVID-19 vaccine.

> Health center and hospital informants who had participated in USAID IHP trainings considered trainings of high quality and extremely useful.

HC staff in both HAs had not recently participated in training focused on treatment of major childhood illnesses; the IT from the HPHA mentioned that during formative supervisions BCZS staff reviewed treatment protocols for major childhood illnesses and assessed whether nurses are adhering to treatment flowcharts and making appropriate referrals.

The MCZ also mentioned that zonal staff participated in gender training in 2020 and 2021.

Reference Hospital

The hospital administrator reported that hospital staff had benefitted from many trainings sponsored by USAID IHP over the past year, including training for maternity staff on SONI B, as well as training for doctors and nurses on surgical care during childbirth. He also mentioned training on prevention of COVID-19. He did not report any training on child health. Interestingly, he stated that the hospital administration faced challenges monitoring training participation of health workers.

The medical doctor was only aware of training that the director of nursing and the hospital medical director had participated in; he himself had not partaken in training over the past 12 months.

Both informants reported that after trainings efforts are made to ensure that the trained staff share newly acquired information with other hospital personnel. They suggested that physicians require more technical training focused on surgery or specialized treatment. The administrator reported that administrative staff would benefit from training in logistics, finance, and management.

The USAID IHP director reported that it is difficult to retain trained personnel, underscoring that there is lots of turnover since government workers do not receive salary. He said,

> *So, the program puts everything in place, but the big difficulty is keeping the staff who are trained. There is a high turnover because the government does not take charge of the health agents working in the structures. These people are unstable; at any time, they get a better offer they leave and we are obliged to do restart the trainings. All of this has financial repercussions, it leads to financial costs. We have constant turnover which forces us to train each year. For me this is one of the big challenges that we face.*

High health worker staff turnover affects the quality of USAID IHP interventions. Informants attributed the instability of health workers to the fact that most workers do not receive government salaries, and even when paid, salaries are very low.

During the midline evaluation the IT from the HPHA reported that the HC receives supervisory visits from the vaccination and nutrition programs, as well as from DPS and BCZS personnel. He valued supervision as a way to exchange information with zonal and DPS leadership about positive experiences and challenges and to understand the HA strengths and weaknesses. In the same HA, both the IT and CODESA president reported supervisions by VIVA! campaign staff, which they considered informative. The dissatisfied CODESA president from the lower preforming HA called supervisory visits ineffective, stating that exchanges are one way and superficial, involve standard questions that do not coincide with the status of field activities, and do not include community visits.

The MCZ considered supervision to be a main contribution made by USAID IHP, he stated that HZs receive US$750 per quarter to conduct integrated supervisory visits.

Access to Continuing Education

Data findings indicated that ongoing access to health and medical information is extremely limited, with material learned through training the primary source of updated information. ITs reported that the BCZS team is supposed to provide HC nurses with written documentation from the DPS and MOH, but that written medical materials are not available at the HC level. CHWs, particularly RECO, also reported limited access to information, mentioning that HC personnel do not attempt to keep them informed. All informants desired to receive more information; recommended ways to increase access included through training, participation in WhatsApp groups with other health personal, and distribution of smartphones.

Reference Hospital

Both hospital informants reported that they obtain medical information through the internet. One suggested way to enhance information sharing was through conduct of pair training whereby people working in different environments involved in similar work spend time in a hospital workplace sharing experiences. Another suggestion was to participate in technical training related to different health themes and pathologies, with informants suggesting that more training will always increase hospital capacity.

Attitudes of Health Workers

All but one informant reported that health providers occasionally manifest negative behavior towards patients. They reported that negative behaviors occur when a patient is unable to pay for treatment or has a past debt or when there is a disagreement about the treatment, which most often happens when either the health worker or patient is drunk. The IT in the LPHC said,

> *It can happen that a person comes for care, and when we ask him to pay something, there are people who will always say, 'no, I have nothing.' But also, if a person has a previous debt from past years or months, it becomes a showdown between the one who receives the patients and the client himself, because we are going to ask him to pay both the previous debt and the cost of the care. We explain that each illness episode needs to be paid for.*

Recent directives from the DPS prohibiting use of injectables in favor of oral medications at the HC level had caused discontent amongst patients and provoked negative interactions.

The IT in the HPHA reported that health providers in his structure have a bad approach when assisting childbirth, stating that they often make fun of and even curse women during delivery. He stated,

> *I would say they are not welcoming when women give birth, I have a provider in my structure who women shun because he uses inappropriate language, which is the first problem, and he is afraid of obstetric cases. When he assists a birth, he often calls an ambulance, and families argue. You see the life our community leads, it's very difficult. They cannot even manage to pay the CF 3,000 for child consultations, now we refer the woman to the hospital where they may have to pay hundreds of dollars.*

Other faults noted were that patients are poorly welcomed, health providers arrive late (even several hours) to work, or workers leave the HC during treatment hours. The CODESA member from the HPHA said,

> *There are nurses who neglect the sick. You see the provider on the road, sometimes they are not in the health center. Others arrive late. The population gets discouraged, when they arrive at the health center and there are no nurses, they feel abandoned and leave the facility.*

CODESA and RECO reported that community members often first convey complaints of inappropriate attitudes or behaviors to CHWs who subsequently share the information during monthly monitoring meetings when HC personnel and CHWs exchange ideas to identify appropriate solutions. If the problem continues, a CODESA member can submit an informal written complaint to the IT, and if that does not resolve the problem, send an official letter to higher level officials. The IT from the HPHA had participated in group sessions involving RECOs and community members to discuss community concerns about healthcare. The same IT reported that training on health provider behavior had been carried out in 2021, but that only 15 HCs were invited, and his center was not included.

Recommended ways to improve health provider attitudes included providing salary and premium payments, improvements in the HC infrastructure, increased availability of essential supplies and medicines, training on health provider-patient interactions, and improving mechanisms to provide

Health centers treat on credit and monitor debt incurred by community members, and most focus group participants admitted to having incurred a debt at the health facility.

feedback to providers.

Interestingly, FGD participants in both HAs, but particularly in the LPHA, gave favorable reports about facility health workers, stating that they greet them warmly, talk to them like friends, are courageous in their work, and follow special measures to treat patients and save lives. They also appreciated the fact that the HC treats on credit, with 8 of 11 participants indicating that they had a debt anywhere from CF 500-5,000 at the time of the discussion. This LPHA FG participant said,

> *We are all the same. IT's 10/10. We converse with them as we converse with a friend, a neighbor with whom you are accustomed. When you come here, they welcome you and understand you. You are given treatment even when you don't have money. In this center there are many debts owed by patients. You come with a child in a bad state, and you don't have the money, they welcome you anyway. And when the child has recovered, you go home and start looking for money to pay for the care.*

Reference Hospital

Hospital workers could not recall an instance when health workers behaved inappropriately towards patients or parents of children, underlining that inappropriate behavior can affect healthcare seeking, and that it is important to treat community members humanely. The administrator said,

> *Because the behavior of service providers is the basis for utilization or non-utilization, we are obliged to behave with courtesy towards the sick. Even in your family, when a member gives a bad reception to someone, they may have difficulty approaching that family member the next time. Somebody you have treated badly cannot confide in you, medical services require a high degree of confidentiality, but you can't confide in someone whose behavior towards you is inappropriate.*

Most focus group participants praised health providers for their good attitudes and capacity to treat many childhood illnesses.

They indicated that during recruitment it is important to assess the way that candidates interact with patients. They also stressed the importance of training on social issues that occur at the community and hospital level and conflict prevention and resolution. The hospital administrator also underlined the importance of hospital leadership and the establishment of internal regulations. He insisted that the hospital should assess health worker behaviors and enforce penalties for inappropriate behaviors.

The medical doctor had participated in work sessions when health worker attitudes and behaviors were discussed; while working with an NGO, he had also attended training on how to improve health worker-patient interactions, while the hospital administrator had never participated in training on health worker behaviors. Neither were aware of gender training in the hospital.

Health Worker Sources of Motivation

IT informants indicated that health personnel are primarily motivated by monetary compensation. They reported that HC health workers receiving government salary get CF 90-94000 or US$47 per month, while the risk premium is CF 100,000 or close to US$50. Both ITs received the government prime de risqué, but not salaries. The ITs stated that most HA personnel rely on HC monthly revenues for personal payment, which in the HPHC never exceeded CF 900,000; the IT noted that revenue would be higher if all patients paid

immediately when healthcare is provided. Money allocated to health staff, which is 60 percent of monthly revenue, is distributed according to the personnel level, with A1 nurses receiving the highest and janitors and guards receiving the lowest percentage.

Health providers considered the lack of government salary and poor risk and local premiums (HC) as the reason for the nurse's strike that was ongoing during the evaluation. The IT from the LPHC said,

> *Payment for personnel is insignificant, it is what is causing strikes. We are not recognized by the state and the population is poor, so it is difficult for them to pay for health care. Almost half of what we are supposed to earn becomes a debt, so that increases the challenges. There is also a risk premium that is given to some, not everyone, but some. The risk premium is nothing, the most paid is 100,000Fc, it is insignificant. This is why we are striking; the state should do something for us ...*

The IT from the HPHA stated: "Health workers are not satisfied because of what they earn. The risk premium that we receive is insignificant, the local premium that we receive is also insignificant. It is the state that causes all the problems."

In addition, drug stockouts forced ITs to purchase drugs at normal costs, which impacted HC revenue. Informants believed that the behavior and work ethic of providers would improve with better remuneration. As indicated, the IHP director attributed high turnover to the lack of government salaries.

Both ITs mentioned that training opportunities are another way to improve health worker motivation and performance. The IT in the HPHA also mentioned that encouragement given to personnel is key to work motivation. The same IT considered reliance on HC revenue for payment serves as a motivation to do quality work, stating: "The revenue is not bad if there is good facility utilization, I think it's a motivator. Something else, if the HZ makes medicines available, that reduces expenses, and we manage to achieve higher revenue." He also mentioned that formative supervision motivates health workers.

Reference Hospital

The hospital administrator and physician indicated that no hospital workers received government salary even though some have ID numbers; less than half received the risk premium, which ranges from CF 1,250,000 for doctors to about CF 100,000 for nurses. In addition, hospital workers received the local prime based on monthly hospital revenue which varied from US$13,000 to US$15,000. Because monthly revenue covered other hospital costs (20% for drugs, 20% for hospital operations, 20% for investments), 40 percent of monthly revenue was available to cover salaries, which ranged from US$35 to US$300/$350 per month, depending on educational backgrounds. While the administrator noted that strengthening hospital performance should increase utilization and revenue, he added that the context is poor, which prevents residents from utilizing hospital services. He stated,

> *Our staff are sufficiently trained, they have the capacity to serve our community. The low utilization of the hospital is not linked to the low performance of the staff, although they should always be trained to acquire new techniques to reach a higher level, but they are not insufficiently trained to perform well. Rather, it is the other side that is the problem, an impoverished population which does not frequent the hospital out of fear of costs, that is why I am not saying that low performance is related to the staff, in clinical terms we are not weak, when we evaluate our indicators, we are at an acceptable level of performance, it is the financial side which is not good.*

The physician noted that many people only seek hospital care after they have exhausted other treatment options and spent their meager resources. He recommended that the government force closure of unofficial forms of treatment, which would improve hospital utilization and revenue.

The hospital administrator noted that motivation relates to many factors, including the way workers are treated, opportunities for work advancement, opportunities for capacity building and participation in conferences, work conditions, and gifts provided, adding that workers must receive enough money to survive. He stated,

> *Motivation is a broad term, to succeed in motivating someone, there are many things that come into play. We tend to believe that motivation is always financial; however, motivation can be the way you treat the health agent, the consideration you give him in the workplace. When you treat staff with dignity, they are motivated and do a good job, motivation can also involve opportunities, promotions, he acquires new training, he feels recognized, this can motivate him. You can give encouragement to a worker who has done a good job, you can show appreciation, you can give small gifts, all that. Motivation is vast. While motivation is not always pecuniary, workers must receive the minimum for survival, they must also have adequate equipment and working conditions, because you can have the will to provide services but when you are in an inappropriate setting you become demotivated.*

The physician added that saving lives, particularly of young children, also serves as a motivator.

Despite low salaries, hospital informants felt that hospital workers respected their work and strived to perform well but needed ongoing encouragement for that to be sustained. Both informants stressed that staff at all levels require additional training to maintain and gain new skills, improve their performance, and advance in their work.

The USAID IHP director considered lack of government payment of salaries as a tremendous obstacle to health worker motivation and quality of care, claiming that it is difficult to maintain a health system that doesn't pay workers.

Community Health Services

Infrastructure

Health Areas

Informants from both HAs reported that the community health structure is primarily comprised of CAC committees, CODESA committees, and RECOs. The HZ established CACs in 2020 when communities elected board members and trained CAC members, CODESA members, and RECOs on the organization and role of the CAC. Village chiefs, who are frequently the first to receive information from government and higher-level traditional authorities, serve as advisors to the CAC. CHWs claimed that CAC community activities are critical because they serve to sensitize the population about health issues and encourage community members to frequent HCs. Several informants emphasized that the community health structure is ultimately under the control of community members.

According to informants, routine services involve community education on common health problems during CAC and other community meetings, community announcements using a megaphone, and household visits. They stated that household visits are primarily used to disseminate information on childhood illnesses, vaccinations, and the use of bed nets. Household visits are also conducted to assess the health of community

members, identify, and refer sick patients, particularly children, to facilities and find children who have missed vaccinations. Hospital staff occasionally participate in community radio emissions that convey information on childhood illnesses and healthcare, and when to seek care in the hospital. In both HAs, health groups and organizations, along with CODESA members and RECOs, worked with churches to propagate health information, and in the HPHA, religious leaders participated in training on COVID-19. CODESA and RECO also shared information on improved health behaviors in schools. Other community activities included *stratégies avancées* or community outreach involving well baby consultations and vaccinations, and vaccination campaigns.

Informants considered CACs as central to the organization of community health systems in HA villages. They reported that village leaders oversee the functioning of CACs which are comprised of elected board members and sub-committees managing multisectoral development activities related to agriculture, infrastructure development, sanitation and hygiene, and health and nutrition at the community level. Each CAC is supposed to follow a work plan designed to integrate and organize community activities. Village RECOs are attached to the CAC structure and involved in health and nutrition activities. CHWs claimed that CAC community activities are critical because they serve to educate the population about health issues and encourage community members to frequent HCs. Reported messages encouraged by CACs included maintaining hygienic latrines and using local handwashing devices and soap. Focus group participants from the HPHA reported that the CAC calls monthly meetings to convey messages to community members. They mentioned that the CAC promotes construction of improved latrines, use of racks to dry kitchen materials, involvement in road maintenance, and gardening, which are all activities promoted by Food for Peace.

CAC activities are monitored through activity reports submitted to the IT. Additionally, informants from both HAs mentioned that every few months villages hold general assembly meetings attended by village and religious leaders, NGO representatives, CAC representatives, and CODESA members to evaluate integrated workplans. Community scoreboards had not been introduced, although the CODESA in the LPHA mentioned receiving training on bulletin de performance communautaire (BCP) in March 2021.

IT informants claimed that they and other HC staff members are involved in community activities such as meetings related to the CAC organization. The IT from the HPHC also mentioned that facility workers carry out household visits with RECOs to identify children who have missed CPS sessions and vaccinations or who are malnourished. The IT from the LPHA reported attending church meetings to share health information and encourage utilization of the HC. In contrast, CHW informants reported that nurses rarely participate in community activities, except on special occasions when an important health message must be conveyed, or a severely ill patient requires special medical care.

Informants mentioned that vaccination, vitamin A, and deworming campaigns are conducted, and FGD participants from the HPHA reported bed net distribution in 2019. While two vaccination campaigns were held in 2020, no campaigns had been conducted in 2021. There was no mention of mini-campaigns or champion communities by any of the in-depth interview informants. The USAID IHP provincial director reported that mini-campaigns and champion communities were being led in other HZ in Sud Kivu.

Informants mentioned that several international and local organizations were engaged in HZ activities. Under the USAID funded Food for Peace program, Food for the Hungry was implementing community activities, which were winding down at the time of our evaluation. Informants and focus group participants

reported the existence of local groups established by organizations funded by Food for Peace, such as mother leaders, model fathers, and the 'Coeur' group, which hold group sessions and disseminate information on health and nutrition. They also reported the existence of nutrition groups (groupe d'ANGE) which is supported by USAID IHP and promotes complementary child feeding for children of breastfeeding mothers. Informants reported that these groups play central roles in educating community members about maternal and child health and nutrition. The VIVA! campaign was also leading activities in the HZ (see below).

Neither in-depth interview informants nor group participants knew about youth groups. However, there was mention of listening clubs, which met Tuesdays to listen to and discuss health themes provided on a VODACOM phone line. In conjunction with the listening clubs, CHWs visited households to reinforce the information shared during club meetings. FGD participants in the HPHA also mentioned the 42502 number, which can be called up to 10 times free of charge for health-related information.

The USAID IHP director and MCZ reported that community debates are held to discuss sociocultural factors affecting healthcare access and their determinants. The MCZ indicated that discussions often focus on gender and age discrimination, such as work roles than men and women are expected to play, as well as ethnic differences that affect health behaviors and care seeking.

The MCZ mentioned that international days related to TB and HIV had recently been held at the provincial level.

When asked about aides for education sessions, informants mentioned that flip charts are available in the HCs and used to lead educational sessions during CPS, CPN, and community meetings. Informants felt that HCs need additional educational aides, and that CACs could also benefit from educational materials. One CODESA felt that the flipcharts do not always convey messages that coincide with mothers' needs.

FGD participants mentioned that their main source of information is from CPS and CPN counselling sessions, followed by information conveyed during household visits, community meetings, or in churches. Informants from the LPHA mentioned that during market quizzes and couple meetings, and activities sponsored by VIVA!, child health information is conveyed. VIVA! also supports community radio spots to share information on a variety of health themes. Additional sources of health information mentioned by the FGD participants included the neighborhood chief and the radio which many women listened to on their phone.

Several FGD participants admitted that they do not follow many of the recommendations given by the health workers, particularly related to FP, exclusive breastfeeding and reducing workloads during pregnancy. Women considered the FP messages to be confusing—they also expressed concern about side effects associated with methods, mentioning infertility, weight gain, and excessive bleeding or that methods cause disease such as diabetes and cancer. Some reported that neighbors spread contradictory information, which many women took more seriously than instructions from health providers, causing concern. A woman from the LPHA said,

> *All this scares me, I have no one to explain the consequences and the advantages to me, we try hard to understand but they (health providers) end up confusing us. It would be better if someone told us about it clearly because when we talk about it in the neighborhood, it makes us panic. You will hear, 'Oh It brings cancer or other diseases.' We need clear explanations so that we can make decisions.*

Some expressed fear of family planning methods, with this participant in the HPHA stating,

> *What frightened me was one day during the session they brought pills and put them on the table, they also brought needles to the side, each needle with its instructions for use, each tablet the same, they showed us tablets to drink every week. We were shown the needle used for up to three years. What scared me the most was when they told us it gets lost in the body, and once lost, it just becomes a disease. It does not appeal to me; I find it is better to give birth because they (the methods) will not cure my fertility. This needle, if it gets lost in my body, I think it could kill me.*

It is important to note, however, that many participants underscored the benefits of birth spacing.

While women in both groups were aware of the benefits of exclusive breastfeeding up to six months, most indicated that poverty prevents them from following exclusive breastfeeding, stating that they must work in the agricultural fields to feed their families, forcing them to leave their babies at home over long stretches. This woman from the LPHA said,

> *There is something else that we do not follow, it is exclusive breastfeeding. As soon as the baby is 2 months or 3 months old, we give him porridge even though it is not recommended. We are aware that theporridge can cause problems in the baby's stomach.*

System Design

Role of CODESA Members

Informants described CODESA members as a bridge between the health structure and the community in charge of ensuring the exchange of information between community members and health personnel. Specifically, CODESA members obtain information from community members regarding patient care, and perceptions of HC activities and convey that information to facility workers during monthly review meetings. CODESA members maintain close liaisons with recently established CACs, where they obtain feedback regarding health services and community health, all of which is transmitted to the HC. The IT from the HPHA praised the work of the CODESA, stating,

> *The role of the CODESA members is capital. Because the IT works in the structure, he cannot know everything that is going on in the village; we get the information from CODESA members. Recently a woman who went into labor in her house ruptured her uterus, she did not want to go to the hospital, it was CODESA members who informed me. When I arrived, the woman was already anemic, I called the ambulance to take her to the structure where she arrived safely.*

CODESA members oversee the collection of CAC monthly reports of health-related activities compiled by the RECO which they transfer to the HC. ITs also rely on CODESA members to transmit the results from HC monthly monitoring sessions and other important health information to CAC committees who subsequently share information with community members. CODESA committees hold monthly meetings when they exchange information drawn from the community.

Additionally, CODESA members provide oversight into the use of HC supplies and medications. They are also tasked with engaging and mobilizing the population to take ownership of health-related activities aimed to improve the health infrastructure. CODESA members from the HPHA helped to secure land where the center could build new latrines and showers; the same committee raised funds to build an enclosure around the HC. CODESA members also assist with the organization of CPN, CPS, and advanced visits, and in the LPHA,

actively participate in listening clubs. In both HAs, CODESA members were involved in many activities officially assigned to RECOs, such as household visits. Correspondingly, CODESA member informants often described the work of the RECO and CODESA interchangeably.

A revitalization of the CODESA committee involving elections and training occurred in the Walungu HZ in early 2021 in all 23 HAs. Informants failed to mention attending other USAID IHP sponsored training except for a briefing related to the COVID-19 pandemic in September 2020. In addition, CODESA members participated in trainings as part of the VIVA! campaign. The IT from the LPHA reported that while CODESAs need capacity building, they rarely participate in training. It did not appear that ITs mentored CODESA members.

The HPHA had seven to eight members, including two women who served as vice president and secretary/treasurer, while the LPHA had a committee comprised of six people, including two women. The hospital physician informant said,

> *Generally, in our community organizations women are not granted major responsibilities, you will find that perhaps they are in positions as advisers, mobilizers, or treasurers, but to be granted the position of president is rare… There is the tradition, the culture itself, our culture tends to underestimate the skills of women.*

He stated that male youths are not interested in participating in CODESA activities due to the lack of financial rewards, adding that young females may be interested.

A formal CODESA committee evaluation had not taken place, although Breakthrough ACTION (BA) carried out an evaluation of CODESA committees in preparation of the VIVA! campaign. BA provided monthly incentives involving reimbursement for transport costs to CODESA members involved in their activities.

Role of RECOs

Informants stated that a main RECO role entails conducting household visits to monitor the health of community members, particularly children, and identifying and referring sick members to the HC. In the HPHA, several RECOs and the IT had been given a cell phone and credit so that the RECOs could contact the IT before referring a sick child sick to the HC. The MCZ reported that this was part of the “avadar” activity funded by another implementing partner. The RECO in the HPHA was supposed to visit 15-30 households, while the RECO in the lower performing area claimed to follow a total of 20 households.

Another key role of RECOs involves educating community members about essential health practices related to hygiene and sanitation, child nutrition, vaccinations, pregnancy, and FP; and conveying information on the primary causes of child morbidity and mortality, including malaria, diarrhea, and pneumonia during community or church meetings. Informants reported that since the start of the pandemic RECOs have also been involved in awareness raising related to COVID-19. RECOs are also responsible for informing villagers about health events such as CPN and CPS sessions, campaigns, and disease outbreaks. RECOs assist health personnel during CPN and CPS sessions and outreach visits when they lead education sessions and weigh infants and children. RECOs are also tasked with seeking out mothers and children who do not attend the CPN and CPS sessions and children who miss vaccinations. RECO informants reported involvement in community development activities, such as ‘salongo’ (Saturday morning community work activities) and

work on road infrastructures. They also mentioned that they convey community concerns or complaints regarding health services to facility personnel and promote utilization of facilities.

Informants reported that RECOs record data on household visits (numbers and topics conveyed), which is compiled and submitted to the HC at the end of each month. RECOs have registers to record their activities, which they keep in the HCs. The RECO from the HPHA mentioned that authorities visit them every three months to monitor their work activities.

In both HAs, RECOs had been elected in 2020 for a three-year term; elections occurred prior to the revival of the CAC structures in each HA community. After elections, selected RECOs participated in training designed to orient them on their role; they also attended training on the operations of CACs. While the MCZ mentioned that USAID IHP had made 15 trainers available in the DPS to lead RECO training, our CHW informants complained that trainings were few and included limited numbers of participants, although all RECOs had participated in training on COVID-19. While water, sanitation, and hygiene (WASH) training had been included in the annual operational plan it was never conducted. In addition, in the HPHA, RECOs had participated in skill building workshops associated with VIVA!. Training topics included TB, FP, child nutrition, CPS, and village hygiene. The IT from the LPHA mentioned that training has not been offered to RECOs in 2021, adding that RECOs need more training to be effective.

In the HPHA, the IT indicated that 70 RECO are active, while the RECO informant claimed that only 21 RECOs are active of which 15 are women and 3 are youth. Informants from the LPHA reported appropriately 40 active RECOs of which the majority were women. One RECO mentioned that RECO who are not engaged are dismissed.

Only one informant, a CODESA from the LPHA, recalled a time when a RECO behaved inappropriately towards a patient or child caregiver. He claimed that these events are rare, and when they occur, the CODESA committee meets to decide how to discipline the RECO.

Specific Services Offered

Mosquito Nets

Health worker informants indicated that RECOs share information on malaria prevention, including the correct use of bed nets, keeping households clean, and the importance of good water drainage to avoid proliferation of mosquitos. They reported that bed nets are distributed to pregnant women during the first CPN visit and to lactating mothers during CPS when children reach nine months and are fully vaccinated. FGD participants in the HPHA confirmed this approach, also mentioning that bed nets are given to women who deliver in the HC. However, several FGD participants added that they hadn’t received a bed net for over a year and that the nets they used were torn. FGD participants in the LPHA reported that only pregnant women who attend CPN during the first four months of pregnancy are eligible to receive bed nets. While all participants had children under five years of age, none had received bed nets during CPS and five of 10 had received a bed net after delivering in the HC. These women reported that they hadn’t received bed nets for a long time, with many adding that their bed nets were in poor condition. However, two participants mentioned buying bed nets in the market. While all FG participants in the LPHA claimed to sleep under a bed net, many stated that their children do not.

Mass distribution of nets to the public had not been conducted for several years. As a result, informants suggested that many people in the community do not sleep under bed nets, adding that because people share living quarters with domestic animals and that bed nets are poorly maintained and do not last long. It was also mentioned that bed nets are used for other purposes, such as sheltering chickens, restricting the movement of cows and goats, or catching crabs, frogs, or fish; or they can be sold, making bed nets a sought-after commodity. One RECO reported that some women declined to have their children sleep under bed nets due to the belief that they carry illness.

The IT in the HPHA mentioned that his HC had recently received a large shipment of bed nets. He stated that upon receipt of previous bundles delivered by the BCZS, he found that some bed nets were missing; other HC health workers blamed him for taking the bed nets. While informants reported that bed nets are highly valued, community members are generally unwilling to purchase them with their own money.

Vaccinations

The provincial director indicated that USAID IHP supports the Mashako plan, which aims to increase vaccination demand and identify children who missed vaccinations at the community level. The IT in the HPHC reported that vaccines are offered during CPS to children 0-11 months, while in the LPHA the HC offered vaccines to children 0-23 months as specified by improved CPS. Both ITs indicated that they make monthly requisitions for vaccines to the BCZS based on the number of children eligible to get vaccinated. HAs carried out outreach visits monthly in villages where they offered vaccines to children who live in distant villages.

Informants reported that RECOs and CODESA are involved in educating community members about the importance of vaccines at the community level and during CPS sessions. The IT from the HPHA also mentioned that he participates in community meetings when they discuss the importance of vaccines for the health of children. CHWs are responsible for announcing the day and time of vaccinations using a megaphone or during church sessions; CHWs are also involved in determining the number of eligible children, sensitizing populations, and helping to organize activities when vaccine campaigns are held. Informants reported two vaccine campaigns in 2020, but no mass campaigns had been held in 2021. We were told that campaigns facilitate vaccination of children missed during routine sessions, particularly those living in remote locations.

Neither HC had a refrigerator to store vaccines; the LPHA obtained vaccines from the BCZS, while the HPHC stored vaccines in another HC. The IT in the HPHA indicated that not having a refrigerator presents a challenge to ensuring that all children are fully vaccinated, stating,

> *Not having a refrigerator is a problem, the health zone promised that it would provide a refrigerator. They said we must vaccinate children during each contact, but we do not have this possibility because we cannot maintain the cold chain. You can identify children who missed vaccinations, but how to vaccinate the child is a challenge.*

When children miss vaccines, nurses request that RECOs let the parents know that the child needs to be vaccinated.

Informants delineated other challenges to improving vaccine coverage. CHWs in the LPHA reported frequent shortages of the BCG vaccine, which the CODESA mentioned had not been available for four to five months.

ITs from both HAs described obstacles convincing mothers to follow the vaccine calendar, particularly when three doses are required, which they attributed to a lack of understanding about the necessity of vaccines and side effects. The IT in the HPHA mentioned that sometimes nurses do not follow good techniques, causing abscesses or swelling where the shot was administered. It was also reported that during outreach visits, mothers living in remote locations often arrive late after vaccines are offered. A RECO in the HPHA reported that during recent outreach visits people fled due to beliefs that the COVID-19 vaccine or the virus were being administered, stating,

> *There are those who resist because they think that we have come to administer the COVID-19 vaccine and that we are coming to transmit COVID through our vaccines. We try to convince them that this is not the case, but some refuse categorically. We gave the IT a report and it is up to him to try to convince them. This is the difficulty we now run into often.*

Focus group participants in both HAs mentioned that BCG vaccines had not been offered for 6-12 months, and on occasions when the vaccine is received, the quantities are insufficient to cover all eligible children. FGD participants reported that their children had received all other vaccines they were eligible for at the time of the study. FGDs in the LPHA mentioned that some community members are reticent to get their children vaccinated due to the pain and fever vaccines cause.

The hospital informants reported that only child vaccines offered at birth, including BCG and VPO, are routinely given in the hospital. The medical doctor also mentioned periodic stockouts of BCG.

VIVA! Campaign Activities

Walungu is one of the HZs where VIVA! interventions were piloted by BA. Informants mentioned that both CODESA and RECOs had participated in capacity building workshops and trainings related to VIVA! interventions. Informants reported that VIVA! activities included listening clubs where groups dial in to a telephone number provided by VODACOM that gives information on health-related themes, theater skits followed by quiz sessions, discussions in the market setting, couple meetings when messages related to FP and maternal and child health are transmitted, and radio spots. The USAID IHP director also mentioned mini-campaigns focused on different health themes to increase community demand of services. As part of VIVA!, HA data on monthly attendance of activities such as CPN, CPS, and vaccinations are posted in the HC to highlight trends and areas in need of improvement. Informants also mentioned that VIVA! activities are incorporated into CAC workplans.

Focus group participants mentioned receiving information on child health and nutrition, exclusive breastfeeding, FP, and pregnancy care during VIVA! activities. The USAID IHP director reported experiencing some problems working with BA, including lack of communication by VIVA! provincial coordinators and the fact that VIVA! provides CHWs transport fees.

COVID-19

Informants reported that the most significant work change associated with the COVID-19 pandemic was related to restrictions on meeting participants to no more than 20 people. RECO informants indicated that awareness raising activities significantly increased since the start of the pandemic, particularly related to handwashing and barrier methods. One RECO mentioned receiving a mask, while the second RECO and one CODESA claimed they did not receive any materials related to COVID-19.

RECOs participated in training related to prevention and control measures and how to educate community members about the virus. Some religious leaders also participated in training on COVID-19. The IT and CODESA informants had attended a briefing on the COVID-19 vaccine, which was offered in the Walungu HZ.

CHWs reported that the pandemic raised new challenges. For instance, some people declined referrals to higher level facilities out of concern that they would be diagnosed with COVID-19 or given in injection containing the virus. As mentioned earlier, parents also declined to have their children vaccinated due to fears that they would receive the COVID-19 vaccine or an injection that transmitted the virus. The medical doctor stated,

> *Well, it's ignorance, the challenges especially when COVID-19 was here, with COVID-19 some women or those accompanying them thought that a vaccine equals COVID-19. They were afraid to get vaccinated against disease, there were people who no longer came for vaccination because of COVID-19, they started to stay at home fearing that health workers would vaccinate their children against COVID-19. They preferred to keep their child at home.*

Focus group participants reported receiving information on COVID-19 on the radio, in the HC, during community meetings such as listening clubs, and in church, with participants mentioning advice related to handwashing, social distancing, and mask wearing. They indicated that the closure of church and schools underlined the gravity of the virus. This participant in the LPHA said,

> *The Corona hit seriously, we heard about it on the radio, on Facebook and others. At the health center, we were told the same thing, but many people did not accept that there is a virus. One woman I recently talked to said, 'I have never seen a person die from Corona. We are told that Corona is contagious but people who return from trips have never seen it… We just hear about it, we hear it is a dangerous disease, but wonder how to confirm that it is there.'*

There was agreement among FGD participants that they did not change their behavior due to the pandemic and that many community members did not believe in the virus. A common belief was that the virus did not infect people younger than 60 years of age.

Community Health Worker Motivation

Health worker informants indicated that CODESA members and RECOs are motivated by small sums of money, typically US$10-20, provided during trainings. Additionally, we were told that VIVA! rewards CODESA members (some informants mentioned US$100 monthly) for their involvement in VIVA!. Some CHWs mentioned that they previously earned money during mass events such as vaccination or bed net distribution but claimed that more recently HZ leadership engages friends and relatives to participate in events that involve remuneration. While CHWs acknowledged that they had agreed to work as volunteers, all informants asserted that monetary support would motivate CHWs to devote more time to community interventions. Several mentioned that community workers are central to the success of the HC services but that the work is too arduous. One RECO from the LPHA stated,

> *They send you to the field to collect data and at the end of the month there is nothing. While the health staff get their local bonus, and central office workers get paid, there is nothing for us, that is the challenge… They should also think of us, what it takes to carry out the work. We cannot travel miles and miles to gather information for the HC staff without eating anything.*

GA CODESA from the same HA said, “We are not motivated, we suffer because we have no salary, the IT never gives us any of the money the health center receives, but we are the ones who raise awareness to improve health center utilization. The zone, the DPS, zero.”

CHWs suggested that they render satisfaction from assisting community members and seeing improvements in health service utilization and the health of community members. The CODESA from the LPHA stated, “We can be proud because we work for our community, we help so that the community can develop and move forward, it affects my pride when I see that our community members want to get treatment in our health structure.”

Another CODESA from the HPHA added,

> *I am satisfied with the work that CODESA members have accomplished. During my inauguration, the health center complained of low attendance, but since we have been working there has been a change, the population is starting to take ownership, little by little the structure improves, and the population begins to go for consultations, use health center care. This is what satisfies us.*

There was consensus that RECOs and CODESA members require more training to increase their knowledge and work performance. One IT mentioned that, while USAID IHP offers many trainings, only a small number of community workers are invited to participate, which discourages the CHWs. Moreover, data suggest that CHWs receive little or no mentoring from HC staff and zonal supervisors.

Contextual Factors

At the time of our study, the nursing strike had been in effect for over a week and HCs were not providing treatment. FGD participants reported that community members were purchasing medicines in the market or visiting small village treatment centers. The nursing strike continued for five months after the evaluation.

Miti Murhesa Health Zone, South Kivu

Background Information

The average age of informants interviewed was 47 years and the majority (7 out of 8) were men. One IT had a master's degree and the other had an A1 degree. The attending physician and hospital administrator had 19 and 17 years of schooling, respectively. Informants had an average of eight years of work experience in the same position. Informants were engaged in other activities including farming, teaching, or work as religious leaders. All informants were Catholic. An average of seven people lived in their family households.

Participants in the FGDs included a mix of mothers and grandmothers.

Facility-Based Services

Infrastructure

The HPHA included eight villages and a HC comprised of several buildings constructed of concrete; the HC was located three km from the reference hospital. Constructed in 1948 and originally a health reference center, the facility later became a hospital before being converted into a HC. The IT reported that the building had benefited from many renovations but needed additional work. The center was supplied with power from the government-run electrical company. Because electricity was not provided daily, the HC rented two solar panels for US$16 monthly. The HC had tap water provided by the government water systems. The HC had a maternity ward located in a separate building with basic equipment to assist safe deliveries.

The LPHA consisted of 12 villages and an HC. Constructed in 2010, the HC was originally operated by an association of churches and subsequently acquired by the government. Located about 22 km from the reference hospital in an isolated, hilly area, the poorly constructed wooden structure was exposed to weather elements and had cramped quarters, forcing workers to treat adults and children in the same room. The maternity ward, which was in the same building as the HC, had limited space to accommodate women in labor and perform deliveries. Due to the poor state of the building, the IT suggested that renovations were not practical. In 2020, the Global Fund promised to finance the construction of a new HC and requested that the community provide a plot of land. In response, the community obtained land about 5 km from the current HC. At the time of the evaluation, no progress had been made on the construction of a new HC.

The IT in the LPHA stated that when he arrived 18 months prior to the qualitative evaluation, the HC staff used flashlights to carry out procedures at night such as assisting deliveries. Since then, the HC purchased solar panels, batteries, cables, and light bulbs for US$180, but the IT reported that the lighting provided was insufficient. The HC used an old storage tank to collect rainwater.

General Reference Hospital

The reference hospital was built in 2013 and 2014 and became operational in 2014. Since construction, the hospital had not been renovated; however, informants felt that renovations were necessary. They also underlined the importance of constructing additional buildings so that key services such as surgery and internal medicine could be offered in separate locations. While the hospital had taken initiatives to obtain funds for renovations, at the time of the evaluation, funds had not yet been secured.

Services Offered

Health Centers

ITs reported that health services devoted to children included CPS, growth monitoring and nutritional counselling, treatment for severely and moderately acute malnutrition involving administration of therapeutic milk, vaccinations, distribution of insecticide-treated bed nets, delivery services, CPN, FP, vitamin A distribution, and treatment consultations. Adults and children were treated in the same consultation room, despite the spacious quarters in the HPHC.

Flowcharts for treatment of childhood illnesses were used by nurses in both HCs. Informants reported that they received training from USAID IHP on how to use the protocols, which they followed according to the age and weight of the treated child. The IT in the LPHA mentioned that health workers did not know how to use the flowcharts prior to the training. Since the LPHC did not have a functioning laboratory, the IT stated that treatment protocols provided critical guidance on provision of care, stating: “The treatment protocols are very useful. The health center does not have a laboratory which would allow us to do all the necessary tests, but the flowcharts help us determine the appropriate treatment.”

In the HPHC, which did have a functioning laboratory, nurses combined results from clinical assessments and laboratory results to diagnose illnesses and prescribe medications. When asked about the integration of curative and preventive care, both nurses described integrated curative services (e.g., providing zinc and ORS for children suffering from diarrhea) and integrated preventative services (e.g., screening for malnutrition, growth monitoring, and vaccinations during CPS). However, the data suggested little integration of counselling on preventive care during treatment consultations. Due to the nursing strike, we were unable to corroborate the extent to which preventive care was introduced during treatment consultations.

An evaluation of the availability of integrated quality health services had been carried out by the DPS in the HPHA, but not in the LPHA. According to our informants, results from the evaluation had not been shared with the HPHC nurses.

Reference Hospital

Hospital staff followed standard pediatric protocols for common pathologies such as malaria, diarrhea and pneumonia affecting children; pediatric protocols, which informants described as extremely useful, were introduced four years prior to our study. Informants mentioned that only curative child services and not preventive care is integrated, indicating that preventive care is a focus of HC activities but not hospital care.

Informants reported that an assessment of quality integrated health services took place six months prior to our data collection. While hospital informants reported that the evaluation results provided a score of 78 percent, no additional information or follow-up actions had been carried out after the evaluation.

Equipment

The HPHC had a working laboratory and incinerator, while the LPHC did not. Both HCs had functioning refrigerators. The HPHC appeared to have adequate beds and mattresses for sick patients under observation and enough beds but inadequate mattresses in the maternity ward. The LPHC had two beds with mattresses for sick patients; the HC lacked an appropriate delivery bed and the beds and mattresses in the maternity

ward were insufficient. The HPHA had several separate latrines for men and for women, which were in were clean and in good condition, while the LPHA only had one latrine, which was old and poorly maintained.

Both HCs had a consultation table for infants and children. HCs had basic equipment such as thermometers, stethoscopes, and blood pressure machines; the HPHC had a functioning microscope, while the IT in the LPHC reported that the microscope functioned poorly. Both HCs had a scale for newborns and infants, hanging balances with trousers for small children, and height measures, although the LPHC lacked an adult scale and growth monitoring kits.

Regarding hygiene and sanitation and other measures to protect against infectious disease, HCs had handwashing stations and gloves and hand sanitizer for health workers. Both HCs had a thermometer to check the temperature of people entering the center. During data collection, health workers did not wear face masks.

The IT in the HPHC mentioned urgently needing a second delivery bed, asserting that maternity staff faced challenges when two women gave birth at the same time. The cost of a delivery bed was US$1000, making it prohibitive for the HC to purchase. The same IT also mentioned the need for an incubator for low birthweight babies. Otherwise, he reported that the HC possesses most of the essential equipment to care for children. The IT in the LPHC reported major deficits in supplies and equipment, with his primary concern related to materials for delivery services. This IT indicated that the center does not have a functioning delivery bed and only has one delivery kit, and that the maternity ward lacks sterilizing equipment. He stated, “In the maternity we have a delivery bed which is not functional and only one delivery kit which only includes two clamps and two scissors. Sometimes we manage 15 to 16 deliveries per month. We sterilize the clamps with povidone, a detergent, and then dry it.”

The IT in the LPHC also mentioned that the limited space in the maternity ward prevents workers from adhering to delivery standards and makes it difficult to maintain hygienic conditions for newborns. He also reported that essential materials for child services are frequently out of stock, such as rapid malaria tests, which were not available during our evaluation. To improve the situation, in March 2021 the IT made a formal request to the BCZS, the appropriate channel to relay requests to implementing partners for essential materials. However, no action was taken. The IT did, however, report receiving some assistance from local partners such as infection prevention and control materials for COVID-19, baby scales, and food aid for the prevention of malnutrition.

Regarding equipment repairs, the HPHA used local technicians who were paid using HC revenue. The IT from the LPHC said that it was difficult to get malfunctioning equipment repaired due to a lack of qualified local technicians.

Reference Hospital

Hospital informants reported that basic equipment maintained by the hospital for treatment of children included one pediatric blood pressure monitor, a pediatric pulse oximeter, an oxygen concentrator, an incubator, and a heating lamp. The hospital had scales for newborns and infants, hanging balances with trousers for small children, height measures, and growth monitoring kits. Rapid malaria tests were not available. Hospital informants reported that they had adequate patient beds in the child ward. The most

pressing equipment need mentioned by informants was a second oxygen concentrator so that clinicians could treat more than one child in need of oxygen at a time.

When in need of equipment, hospital staff first reached out to implementing partners, although informants reported that implementing partners never respond. If available and affordable, the hospital purchases equipment locally. Sometimes the hospital receives equipment from donors, which is channeled through the BCZS; for example, informants reported receiving an ultrasound scanner, a heating lamp, and an incubator in 2014. Unfortunately, the ultrasound never worked because the hospital did not have the equipment to convert to the appropriate voltage. When equipment breaks down, it is the responsibility of the hospital to identify a technician and to pay for repairs.

Medication

Informants reported that the medicine supply chain is plagued with problems. While the delivery of medications to the BCZS is supposed to follow a schedule, IT informants mentioned that drug deliveries frequently arrived late and did not coincide with the HC requisition, with ITs stating that it is possible to receive fewer or more drugs than requested. Informants indicated that drugs can also be obtained from implementing partners working in the HZ who take drug requests over the phone. In these cases, the implementing partner purchased drugs in Bukavu pharmacies and delivered the medications to the HC, which reimbursed the partner at the end of the month. When stockouts of specific products occur, ITs purchased drugs in depots and pharmacies located in Bukavu. Informants reported that on two occasions a parliamentary member bought and delivered drugs to the HPHA, although in small quantities.

HCs obtained drugs from the BCZS at a rate of 30 percent while products purchased from private sources were bought at full price using HC revenue. Informants maintained that drug supplies in the BCZS pharmacy are limited, with IT informants accusing the BCZS of poor management of drug supplies.

ITs reported frequent drug stockouts, with informants agreeing that vitamin A is the medicine provided to children that has the most shortages. Correspondingly, the LPHA had not had vitamin A for two months. Even when the BCZS delivers vitamin A, informants reported that it is in small quantities which does not coincide with their requisitions or meet HC needs. ITs also mentioned chronic shortages of the BCG vaccine, which at the time of our study had not been available in the LPHA for six months. The IT in the LPHA added that the BCZS sometimes delivered small quantities of other vaccines that did not coincide with the HC needs; he also reported shortages of the 0.05ml syringes needed to administer certain vaccines.

Hospital drug stocks

Focus group informants in both HAs indicated that health facilities often ran out of medication, forcing caregivers to seek alternative sources of treatment. One mother explained “Sometimes we come here for treatment, and we are told that the health center does not have the medication needed for treatment, so we are obliged to get it elsewhere.”

Reference Hospital

Hospital informants reported that 20 percent of revenue is allocated for drug purchases which are made monthly. They added that certain medications are

provided quarterly by USAID IHP but that these drugs are delivered in small quantities. The hospital assessed drug inventories at the end of each month, and around the 10th of each month, replenished stocks from pharmaceutical depots in Bukavu. Medicines for children reported to frequently experience shortages included supplies for the treatment of malnutrition. Otherwise, informants asserted that they had essential child medications.

Utilization of Services

Informants cited poverty as the biggest barrier to healthcare utilization. ITs mentioned belief systems, which influenced care seeking with traditional and religious providers, as another obstacle, although CHWs were less forthcoming about the use of traditional care. The IT in the LPHA noted that supernational beliefs encouraged residents to visit prayer rooms involving spiritual treatment. Informants in the HPHA reported that self-medication with pharmaceutical products was also common, and informants in the LPHA specified that residents in remote villages especially chose to frequent low-cost pharmacies. The RECO from the same area mentioned that negative perceptions of the quality of HC care also influenced care seeking.

Distance and impassability of the roads, particularly during the rainy season when mud can cause slippery and dangerous road conditions, was cited as another major obstacle in the mountainous and isolated LPHA where villages are dispersed and inhabitants in remote villages must travel between five to six km to reach the HC. This was not considered a problem in the HPHA where residents lived in proximity to the HC and reference hospital and the surrounding roads were good.

Informants reported that acceptance of referrals to the reference hospital and utilization of hospital services, which is far more expensive than care offered in HCs, was particularly hampered by the inability of residents to bear costs. We were told that many sick patients requiring hospital care opted for cheaper, private facilities, and that child guardians often chose to visit ‘pirate’ structures or prayer rooms or provide medication at home even when the condition was severe. One informant mentioned that parents may not understand the merits of having a sick child examined and treated by a trained doctor who can offer higher quality care. Ambulance fees were also cited as a deterrent to use of hospital care. Informants in the LPHA noted major difficulties accessing the reference hospital during the rainy season due to the poor condition of three bridges along the route. However, roads are passable in the dry season, allowing patients to be transported by motorbike. Another mentioned obstacle to hospital referrals related to the fact that, when patients were referred, care administered in the HC was not paid for, causing a loss in earnings for the HCs. Hospital informants emphasized that few patients are referred from HCs to the hospital.

Focus group participants from both HAs cited high healthcare costs and the financial strain on their families as a main reason for forgoing facility services even though they were aware of the benefits. One mother in the HPHA said,

> *….it is difficult when we become sick, everyone falls ill at the same time, and it can really be a problem. I treat my children at home, which can result in them getting sicker. We try to follow health recommendations but most of the time we don’t have the financial resources to stick to it. I don't have the money to care for 6 sick children.*

A second mother added,

> *…Lack of means justifies not going to the health facility. A person who does not have money may say, 'I am not going to the consultation when I know I need to earn money to buy flour so we can eat.' A mother will forego going to the health center to get money, she may think that if I go to the consultation, we will sleep hungry because we don't any have money.*

Mothers in both HAs also mentioned the inadequate health facilities as another obstacle to service use. Specifically, they described issues with insufficient water supply, poorly constructed buildings, and lack of electricity as factors that influenced service utilization. One focus group participant from the HPHA shared,

> *…another challenge is the lack of electricity. If a seriously ill person arrives in the health facility when there is no electricity, the person may be in danger, because they don't have the functioning equipment to perform certain services such as a blood transfusion. If there is no electricity, an ambulance must be called to transport the patient in need of blood to another place. If we had everything including electricity … no one would need to seek care elsewhere, and all treatment and care could be provided on the spot.*

Focus group participants in both HAs considered inadequate hospital beds as an important deficiency especially related to maternity care, and those in the LPHA added that, along with staff shortages, served as a deterrent to facility utilization. One mother said, "… and another thing, the hospital is too small. In the maternity ward, sometimes two or three women find themselves on the same bed after childbirth. This is really a problem for us."

Another mother added,

> *…. in relation to the problems with childbirth, only one bed may be available, or there is only one midwife. Three pregnant women ready to deliver may arrive at the same time. We [pregnant women] ask ourselves who am I going to deliver with? There is only one bed and only one midwife. The nurse will wonder who to start with.*

In the HPHA, mothers also described subpar hygiene and lack of essentials such as showers as influencers of service utilization. One mother shared,

> *…sometimes you sleep on the bed with dirty blankets which can be infested with insects. You worry about being bitten by the insects in addition to the illness/sickness you are in the hospital for. In the end, you must take everything off and sleep without blankets.*

Another service utilization obstacle mentioned by FGD participants in both HAs was transportation, particularly in the LPHA where women confirmed that bad roads in the hilly terrain made it difficult to access the health facility. One mother said,

> *…a challenge is the lack of good roads. A nurse can see that a patient is in danger and should be quickly referred elsewhere. However, when he calls the ambulance and the paramedic realizes that he must travel in hilly terrain with bad roads, he may refuse to come …*

Management and Governance

Coordination

ITs stated that zonal meetings were held monthly, during which HA personnel shared and validated data collected during the month. Reported participants included BCZS personnel, hospital staff, and ITs, but not

community workers. The CODESA president from the LPHA reported that CODESA members participated in monthly zonal meetings prior to the COVID-19 pandemic, but due to COVID-19-related restrictions, it was decided that CODESA members would no longer attend. CHWs expressed frustration that they were not included in meetings held in the BCZS.

ITs agreed that monthly meetings presented opportunities to exchange best practices and challenges, mentioning that there were times when ITs from HPHAs described practices that helped ITs working in LPHAs. All informants emphasized the benefits of exchanging information and learning from their health worker counterparts about improved practices, which can help to strengthen both facility and community activities. However, the IT from the LPHA contended that discussions focused more on treatment of pathologies rather than effective service approaches. The same IT claimed that during monitoring meetings ITs were interrogated about their monthly data and sessions were dominated by BCZS staff, suggesting that the ITs had little opportunity to discuss the realities of field experiences. Another mentioned forum that facilitated exchanges of information were training workshops. The IT from the LPHA recommended reinstating a former practice which involved holding a separate meeting with other ITs to exchange information on effective approaches and difficulties faced in the HCs.

Informants made little reference to HA meetings, which are attended by facility staff, CODESA members, and some RECOs. During monthly HA meetings, HA data is compiled and prepared for the monthly zonal monitoring meeting.

Only one informant, a RECO, reported participating in meetings with DPS staff when they travelled to the HZ to evaluate activities. Both ITs claimed to have never participated in formal meetings with DPS representatives, stating that they only met with DPS personnel when they passed by the HC. Only the RECOs and CODESA members participated in meetings related to community development, which they reported focused on activities such as combatting malnutrition, road development, and village sanitation and involved village chiefs.

Reference Hospital

Hospital informants participated in several meetings with the DPS or HZ staff such as the BCZS board of directors meeting held twice annually and chaired by the DPS, management board meetings of the BCZ, meetings devoted to the development of the zonal and reference hospital PAO and involving DPS staff, and monthly zonal meeting attended by ITs, hospital physicians, and the hospital nursing director. They added that during monthly zonal meetings participants reviewed facility data, shared field experiences, and discussed the status of patients transferred to the hospital. Workshops that the implementing partners organized to develop PAOs were considered good opportunities to share field experiences with partners and other NGOs and resolve problems.

Hospital informants had never participated in meetings focused on the development of community approaches, although they valued community activities and recommended that hospital workers be invited when meetings with community relays are convened.

Accountability Mechanisms

The data suggested that mechanisms to address negative interpersonal behaviors were limited. Health workers in the HPHA had recently participated in a training on inappropriate health worker behaviors. During

the training, it was recommended that HCs post suggestion boxes where complaints from community members could be submitted. Our key informants also stated that posting suggestion boxes in HCs was encouraged. One RECO from the HPHA mentioned that suggestion boxes had been used in the past; however, she doubted if the suggestions were ever read, mentioning that she had submitted a complaint that had never been addressed. Other approaches designed to facilitate oversight of community members in health facility activities, such as community score cards, had not yet started.

IT informants reported that negative attitudes and practices manifested by health providers were discussed during special or monthly monitoring meetings attended by facility providers and CODESA members. Another approach was to directly inform the IT that a health worker has exhibited bad behaviors—subsequently, the IT would talk to the person concerned about the accusations and recommendations for improved behavior. When asked whether there were concerns about reprisals from the person accused, we were told that the person in question generally accepts what transpired. The IT from the HPHA emphasized that, if the behavior continues, negative actions towards the worker can ensue. Informants agreed that negative attitudes and inappropriate behavior were relatively rare in the HCs.

Reference Hospital

The hospital posted a suggestion box to monitor negative attitudes or practices exhibited by health providers. Neither a telephone line nor community score cards had been introduced.

Referral Systems

The referral system for sick patients included the community level, HCs, and the reference hospital, with each level playing a specific but complementary role. At the community level, RECOs were responsible for identifying sick members during household visits and orienting and accompanying those in need of care to the HC. According to our informants, CHWs sometimes assisted with the organization of transport to reach the HCs. Upon arrival at the HC, informants indicated that sick members were evaluated by HC staff, and referrals were decided by the IT or other qualified nurses. We were told that referrals are conducted when patients experienced conditions that go beyond the HC capabilities, which offered a package of minimum care. ITs specified that referrals were made for patients who spend three days in the HC without showing signs of improvement, patients who required surgery for serious injuries often related to machete accidents or falls, women experiencing delivery complications, and patients with suspected infectious disease such as cholera, severe dehydration, or in need of blood. ITs added that absence of drugs for treatment or equipment to make an appropriate diagnosis could also trigger a referral. The IT from the HPHA mentioned that some patients requested a referral due to a preference to receive hospital treatment. No mechanisms were in place for health workers to accompany patients to the hospital.

Regarding transport, informants reported that the IT may call the hospital ambulance, particularly when the patient is in critical condition, or the patient was transported by motorcycle or public transport, with costs borne by the patient's family. One CODESA member added that CHWs played a role in mobilizing community members to assist with transport of sick patients. In the LPHA, informants indicated that community members may transport sick patients on a chair to get to the paved road to access public transport. The RECO in the LPHC said: “We don't even have a stretcher, it is a request that we have been making for a long time. Because we don’t have a stretcher, we use a chair, but this is not a good way to transport a sick patient.”

Transport costs from the HPHA were relatively low, at US$5 for transport by ambulance and CF 1000 by motorcycle. Data collectors did not collect information on transport costs from the more distant LPHA.

Informants indicated that, due to lack of telephone credit, information on referred patients was most frequently obtained during BCZS monthly review meetings when hospital doctors shared information on transfers and patient admissions. Alternatively, ITs sometimes visited the hospital to collect information about referred cases. While hospitals were supposed to make counter referrals, we learned that they are rarely done.

Neither IT had received training on referrals. RECOs and CODESA had been trained on identifying sick patients, explaining the importance of accessing biomedical care, and convincing ill members to seek care in the HC. The RECO in the HPHA, which received support from the NGO Mercy Corps, mentioned that RECOs and Mother Leaders (local women who head up women's health groups) provided vouchers for free healthcare to sick community members who stayed at home due to lack of money.

ITs reported that vulnerable members are exempt from paying consultation and medication fees. Reported criteria for vulnerable community members included people living under extreme poverty, residents more than 60 years of age and without family support, and homeless residents. However, the HPHA were unable to share how many vulnerable members they covered or show us a list of vulnerable members. The LPHA had a list of 15 vulnerable residents eligible for free care, with the IT suggesting that some of these people would have died if they had not been provided free care. However, we were told that the referral hospital ignored the status of vulnerable members, charging all patients the same hospital fees.

Reference Hospital

Hospital informants described three types of cases referred from HCs to the reference hospital, which included patients experiencing serious conditions requiring immediate care, patients who required future advanced care such as surgery, and patients requiring an exam or service that did not exist in the HC such as an x-ray, ultrasound, or physiotherapy. Informants emphasized that few patients are referred from HCs to the hospital, indicating that the hospital ambulance was primarily used for delivery complications, severe malaria, or anemia. Ambulance fees were charged only after the patient had recovered. We were told that difficulties occurred when the ambulance was called to respond to two emergencies at once. Patients not requiring immediate care walked or used a bicycle or motorcycle to reach the hospital. Hospital informants had never received training on referrals.

Healthcare Financing

HCs relied on generated revenue to cover costs for the functioning of the structure and remuneration of health personnel. The low and irregular income of residents, who informants described as poor, constituted a major obstacle to financing HCs. Informants added that most residents relied on agriculture, which over time had become less productive and had little financial means.

> Low and irregular income of villagers constitutes a major obstacle to the utilization of health faculties, and, in turn, the financing of health structures.

Facilities offer reduced fixed price consultation fees, which are posted in the centers.

An assessment examining how to finance HCs, which had occurred several years prior to our evaluation, resulted in fee reductions to make healthcare more affordable for poor members. ITs from both HCs reported that reduced fees increased healthcare utilization. In the HPHA, fees for adult and child consultations were CF 8,000 and CF 5,000, respectively, and patients under observation were required to pay US$15 a night. In the LPHC, child consultations were CF 2,000 and adult treatment was CF 5,000, but the IT stated that only 60 percent of the population could pay these costs. However, the CODESA member contended that fee reductions were a major step to increase healthcare access, stating: “Here at the health center, we don't charge a lot, we charge less because we have seen that the situation for families is very difficult, that's why we made a reduction in costs.”

Both ITs confirmed that some patients who are treated on credit did not return to the HC because they were unable to pay their debts. The IT from the HPHA said,

> *There are patients who arrive without money, they come for consultation, when they are prescribed drugs, they do not even have CF 100. They are given the medicine and told to come the following day or to pay later. Some stay at home to avoid paying their debts.*

Costs for overnight stays were particularly difficult for patients to absorb, as the CODESA member from the HPHA reported: “Some patients secretly leave the center at night to avoid the 15 USD overnight fee. You wake up in the morning and notice that a patient ran away with her child without paying. She will not come back.”

The HPHC had a health mutual partially financed by the Catholic parish that hosted the HC. The IT reported that the mutual covered half of costs incurred by vulnerable patients, with the remaining costs covered by the HC. However, when vulnerable patients were referred to the referral hospital, the hospital did not offer financial assistance. The HC also accepted care vouchers, but details on the vouchers were not collected. The LPHA had no additional financial support for treatment of vulnerable patients, with costs absorbed by the HC as needed. The IT in the LPHA reported that community residents refused to accept health mutuals because of a perception that mutuals multiply charges instead of reducing them.

Reference Hospital

Hospital informants explained that an assessment was carried out three to four years prior to our evaluation to explore ways to reduce healthcare costs for the poorest members. According to informants, reduced hospital fees influenced an increase in utilization of hospital care, although economic constraints continued to be the main obstacle to healthcare seeking. Hospital informants maintained that the hospital decreased costs for vulnerable patients who could not afford care, although this contradicted information collected from the ITs. They also mentioned the existence of health mutuals for community members.

Resources for Facility Workers

Training

In August 2020, ITs participated in training organized by USAID IHP on the use of flowcharts. Both ITs stated that prior to the training they did not use the treatment protocols properly and that the flowcharts allowed

them to better diagnose illnesses of sick children and appropriate drug regimens. Particularly in the LPHC, which did not have a functioning laboratory, the IT asserted that the use of the flowcharts was critical.

Three nurses from the HPHA had benefited from training on prevention and control of infectious disease with a focus on COVID-19. The IT reported that a session was held to brief other HC workers on lessons learned during the training, and that since the training, infectious disease measures practiced in the HC had improved. The IT from the LPHA reported participating in a USAID IHP training on how to combat malnutrition, with an emphasis on the first 1,000 days starting from conception. Informants recommended increased training to ensure quality healthcare for children.

Reference Hospital

Hospital informants reported that hospital staff had participated in several training sessions organized by USAID IHP including training on blood transfusions, management of mental illness, finance management, and prevention and management of COVID-19. Informants valued the information attained which they reported helped staff make corrections in their work. One informant mentioned that training on COVID-19 improved protective measures against infectious disease in the hospital.

Access to Continuing Education

Informants reported that the primary mechanism to receive current information was through training. They emphasized the need for increased access to health-related information to improve health services. The ITs also mentioned the importance of regular exchanges between the ITs and their superiors in the health system hierarchy. In this regard, the IT in the LPHA suggested that meetings with other ITs in the HZ be resumed to facilitate the exchange of information regarding HA activities.

Informants reported that accessibility to information has not improved since the start of USAID IHP and that exposure to new information is extremely limited, with trainings the primary source for rural health workers.

Reference Hospital

Hospital informants mentioned that they routinely received health related information that enabled them to be more effective in their work but did not provide the source.

Attitudes of Health Workers

Informants generally described attitudes and behaviors of HC staff towards parents or guardians as positive. One RECO from the HPHA said: “When we arrive with sick patients, they are received very well. Even when we do not accompany them, we get positive reports.”

However, they agreed that health workers occasionally used inappropriate language or even refused to treat patients, which one IT attributed to misunderstandings related to language differences. The IT in the HPHA reported that the HC had recently received complaints about HC workers, and that community members had threatened to stop using services. In response, the IT reprimanded the concerned nurses; he also provided feedback to community members about how the situation had been addressed. Also, in the HPHA, the CODESA reported a recent instance when a health worker delayed patient treatment, which caused a harsh exchange of words between the health worker and patient.

Poor infrastructure of health facilities and limited medical equipment and supplies creates a poor working environment for facility-based health workers.

A RECO in the LPHA indicated that community members complained that one HC nurse smoked and drank during work. The BCZS was notified and in response sent another nurse to the HC to minimize patient interactions with the health worker in question. The same RECO suggested that improvements in the working environment, including the facility infrastructure, would improve health worker behaviors. One IT also reported inappropriate language used by community members towards health workers.

Informants described several mechanisms to address reports of inappropriate behavior, which involved holding discussions during HC meetings or carrying out separate talks with the health worker(s) concerned to learn about what had transpired and the changes required. If the problem did not get resolved, the BCZS could be notified. Informants insisted on the urgency of addressing inappropriate behavior quickly, particularly when community members threatened to decrease healthcare utilization, with the IT from the HPHA stating: “If we don't talk to him (the health worker), he will continue to carry out the same behavior, which will impact on patient utilization of our services.”

A CODESA member from the LPHA said,

> *If you do not advise the nurse to act, the community will no longer visit the health center. In a recent altercation, we provided advice to the health staff immediately and there was a change in the provider behavior. We also went to the community to explain that the health staff would change their behavior.*

The IT in the LPHA contended that regular contact with community members helped relations.

Both ITs had attended training on health worker behavior, although the IT from the LPHC suggested that behavior is complicated and sustained changes require more than training. The IT in the HPHA had also participated in a “good governance” training led by MC that dealt with attitudes and behaviors of healthcare providers, as well as a discussion group focused on health worker behaviors. RECOs and CODESA members had never received training related to attitudes and behaviors when interacting with community members.

Reference Hospital

Hospital informants were unable to report inappropriate behaviors of hospital workers toward child caregivers, contending that the hospital requires that staff behave well. They emphasized the desire to increase hospital utilization which involved establishing a reputation for providing quality care. However, informants mentioned inadequate motivation as a possible trigger for inappropriate behavior.

Health Worker Sources of Motivation

The ITs interviewed, who at the time of data collection were on strike in protest of lack of salaries and broken government promises, suggested that they are primarily motivated by good ethics and a commitment to save lives. The IT from the HPHA stated,

> *The primary motivation of nurses is to provide care. You can be financially motivated and not do the job well. The energy to do your job well comes from courage, only courage. Remuneration of health agents is not sufficient to even provide for our basic needs.*

They confirmed that the poor income received from revenue generated through service provision is a source of demotivation and contributed to a mediocre performance by some health staff. The IT from the LPHA said: “We are unable to produce even 500 dollars a month, you work many nights on call and many days and earn 20 dollars, 10 dollars. That won't even cover family necessities for one week.”

He added that poor HC revenue is further depleted when drugs must be purchased at full price.

The IT from the LPHA also noted that the poorly built, under-equipped HC contributed to low health staff performance and utilization of services. Interestingly, this IT, who had previously worked in the private sector, suggested advantages to working in the public sector related to training opportunities not available in private facilities. He added that the private sector must obtain costly documents to justify their existence with government officials and was exposed to ongoing harassment by government authorities.

Training was cited as a way to improve health worker skills, performance and motivation.

ITs suggested no possibilities for professional advancement. Opportunities to improve work conditions included training aimed at strengthening health staff performance, with one IT noting that community members utilized health services when they believed staff were well trained. It was also mentioned that trainings facilitated opportunities to exchange experiences with government partners and obtain per diem. While they agreed on the benefits, the ITs raised questions about the determination of training themes and agendas, which they did not always consider highly relevant.

Other recommendations to improve performance included strengthening HC infrastructures and equipment and paying staff salaries and premiums, with the IT from the HPHA mentioning that since starting work eight years earlier, he had never received the risk premium. He asserted that improvements depended on the government, stating: “We can only ask the state, if it still exists, to reinforce the little nothing we receive at the health center, because staff don't even receive risk premiums, state salaries.”

Informants reported gaining satisfaction by treating sick patients and ensuring that community members maintain good health, but not from their remuneration or the working environment.

According to the nurses, health staff rendered satisfaction from treating patients, with the IT in the LPHA reporting: “The only satisfaction I get from my work is when I see patients recover. But on the income side, I am working like an apostolate. I become rejuvenated when I save a life.”

Reference Hospital

Hospital funds were used for staff remuneration, with informants mentioning that 60 percent of monthly revenue was allocated for health worker pay; the lowest paid agent earned US$50, and the highest paid workers received US$350 per month. Hospital informants considered monthly payments insufficient. Regardless of remuneration, informants felt that the hospital had skilled workers who provided quality care, adding that if the government paid a decent and regular salary performance would improve. They recommended practical, on-the-job training to improve patient care.

Hospital informants emphasized that under normal conditions they would be satisfied by treating patients and receiving a monthly salary, but that work conditions negate satisfaction. They added that many patients were unable to pay for treatment, thus decreasing hospital revenue. Informants stressed the need for other funds or resources to compensate for poor health worker remuneration.

Perceptions of Health Workers and the Quality of Health Services

Several focus group participants had favorable perceptions of healthcare service quality. Many participants reported that the staff were welcoming and provided necessary care to the sick regardless of their ability to pay for services. One woman said: "… when we arrive here with sick children, they welcome us without any problems. They take care of our children…"

Another focus group participant added, "…I have never had the IT ask me for any money before he treats my child. The IT treats the child and asks for the money afterwards. I can come with only 500 Cf and they will let me keep the money and come and pay later."

A third woman stated, "…you can come without money, and they will take care of you. You can pay the cost of your health care service once you are well. This is why we come here regularly. They are not going to abandon you if you don't have any money."

Several mothers in both HAs believed that the health providers went an extra mile to ensure that patients received the necessary care, with one mother stating,

> *I have been coming here often and for a long time, and that is why I can testify that the nurses here are good. Once I almost died, but they were there and did everything to treat me. After it got complicated, they referred me to Miti in the ambulance and that's where I was healed. I always come here for my care and that of my children and I have never seen a bad nurse here.*

However, this mother reported a mixed experience, depending on the health worker, reporting,

> *… there are good and bad nurses. Sometimes we come to the hospital, we meet a nurse who doesn't care about you or what you say. The nurse is grumpy, and you don't know how to engage him. However, there are also good ones [nurses]. They will welcome you and diagnose the illness, making the patient feel at ease.*

Several mothers in both HAs had positive perceptions of the service quality, claiming that the health providers had the knowledge to diagnose and provide treatment for various ailments and were also able to determine when a referral was necessary.

Unfavorable views about the healthcare quality were linked to negative perceptions of the facility infrastructure, with some focus group participants stating that the poor building structure and inadequate supplies and equipment could be indicative of poor services. One mother in the LPHA FGD said:

> *…you believe that a facility that is well built is good. Here, we know we can go and be treated in this clinic; however, we also think that it is possible that the child will catch a disease while being treated because the facility is not well built and equipped. It doesn't have electricity, or other essentials that a dispensary must have.*

One mother in the LPHA focus group mentioned that the failure of health providers to treat her child on one occasion caused negative perceptions about the healthcare services:

…one time, I had a child who was very sick, and I went for a consultation [at the health facility]. I spent the entire day there before we were turned away. I was shocked when we were turned away. I returned home late in the evening around 6 o'clock without the health providers assessment of my child. I found this troubling and regretted going…

Community Health Services

Infrastructure

Health Areas

All types of informants reported that community activities included awareness raising about health problems and associated prevention and treatment, stating that these services are carried out during household visits and community discussions. During household visits, CHWs also assessed the health of community members and identified and referred sick members to health facilities. Health messages were also disseminated during church services and on the radio. Other reported community activities included vaccination campaigns, bed net distribution, and outreach CPS consultations and vaccinations. None of the informants mentioned the presence of iCCM sites. CACs had been revitalized in the LPHA; informants indicated that the role of the CAC was to educate the population on the benefits of treatment in a HC or hospital.

According to all informants, RECOs and CODESA members identified health problems within the community, which they shared with the ITs, and generally supported the functioning of HCs by being present during activities such as CPN, CPS, and campaigns. CHWs and health workers disseminated health messages during CPN and CPS discussion sessions. Messages were also shared widely during outreach sessions using megaphones. During the COVID-19 pandemic, CHWs were tasked with raising awareness about COVID-19 prevention strategies (such as hand washing and social distancing) and dispelling myths and misconceptions about COVID-19. However, it was unclear how many of these activities were conducted. In the LPHA, the RECO mentioned that other awareness raising activities that were usually conducted were reduced because of COVID-19. We were also told that CHWs were trained to treat moderate cases of malnutrition and diarrhea in the community and to refer more severe cases to health facilities.

ITs shared that facility nurses participated in community activities, including community outreach involving vaccinations and well-baby visits. In a few instances, nurses provided treatment services during outreach visits to villages.

Informants reported that frequency of mass campaigns varied according to the purpose. Bed net distribution campaigns were organized approximately every three years and had most recently been held in 2015 and 2018. The HPHA reported mini-campaigns involving the administration of vitamin A in 2020 and 2021, but there were no reports of mini-campaigns in the LPHA. HAs had not established champion communities.

Focus group participants reported receiving health-related information during treatment consultations, CPS, and community activities related to hygiene, handwashing, common childhood illnesses (diarrhea, malaria, pneumonia, and bronchitis), child feeding, FP, and COVID-19. Some also mentioned receiving deworming tablets, vitamins, and porridge during community events. Many from the LPHA had attended activities organized as part of the Programme National École et Village Assaini (National Healthy School and Village program) but had not participated in other community meetings. Mothers in the HPHA mentioned attending village meetings when they received information on childcare, COVID-19, and childhood illnesses. FGD

participants reported that RECOs performed home visits but did not share the frequency of the home visits, and that RECOs used megaphones to invite community members to events at the HC and in the community. Mothers also reported receiving health messages from mass media and in church and that information was also provided to school children.

System Design

Role of CODESA Members

All informants reported that the CODESA was a health development committee that served as a bridge between the HC and the community. Informants in the HPHA reported that CODESA members provided oversight to drug and vaccine management in the HC. ITs, as well as the CODESA informants, stated that the CODESA members helped to raise awareness in the community and provided child health counseling, along with RECOs, during home visits. Home visits by CHWs were conducted twice a week in the HPHA, according to the IT. In addition to the aforementioned roles, CODESA members from the LPHA participated in outreach activities and accompanied nurses during CPS. CODESA members reported that they hold meetings with RECOs, as well as community leaders such as pastors and chiefs, about health activities.

Prior to the COVID-19 pandemic, CODESA presidents participated in monthly zonal meetings in which HAs presented performance data. Informants also shared that some CODESA members participated in HA meetings when data were compiled and prepared for the zonal meetings. In the HPHA, we were told that CODESA members were present during drug deliveries, and in both Has, CODESA members were reported to oversee the work of nurses and monitor RECO visits. While CODESA members reported that they did not have an official role in referrals, we were told that they may assist in the transportation of community members to the HC. Since the start of the COVID-19 pandemic, CODESA informants shared that the frequency of activities and meetings had reduced as well as the number of people who attended regular meetings.

In the HPHA, informants said there were four to five women in the CODESA committee including the vice-president, treasurer, and advisors (two). The IT from the LPHA suggested that two out of the seven members were female, and they occupied the treasurer and advisor positions.

Our sources indicated that in the HPHA, CODESA members have participated in several trainings since the start of USAID IHP including training on CODESA revitalization (January 2021), nutrition, child vaccination, bed net distribution, TB, and development of management plans. Four CODESA members from the HPHA also received training on COVID-19; we were told that participants were provided masks, raincoats, and hand sanitizer. In the LPHA, it was unclear if CODESA members had participated in any of the above-mentioned trainings.

According to informants, the frequency of training for CODESA members had reduced significantly since the start of the COVID-19 pandemic. In general, CHWs appeared to have limited access to information, with some suggesting that they were desperate for new material. CODESA members expressed discontent that when training was held, the selection process of HAs and individuals was unclear, and participants were few. The CODESA president from the LPHA stated,

> *We have always suggested that the whole committee must be trained in relation to this or that, but we do not know how it works or how participants are chosen. You will learn in passing that a training is in*

> *progress, you are not included, and you wonder how USAID IHP organizes training in the health zone, why does it exclude certain health areas?*

He continued,

> *It is a problem. PROSANI (USAID IHP) was holding a training for RECOs, CODESA, Saturday to Sunday, the CACs and the ITs, but I was not invited. I even arrived at the training location, but I was turned away. Other CODESA presidents wrote me text messages asking about my absence. I told them that I was not invited, as soon as the HZ agent saw me, he told me that I was not welcomed.*

This CODESA president recommended more inclusiveness in trainings, suggesting that only including a few CODESA members in a HZ of 18 HAs is ineffective, particularly since there are no other forums to receive information and share field experiences. He also suggested that the zone be transparent about how CHWs are selected to participate in training.

Regarding evaluations of the CODESA committee performance, our sources suggested performance evaluations were not conducted in the LPHA. In the HPHA, there were no performance evaluations in 2020 or 2021. However, in March 2022, an evaluation was conducted in collaboration with the BCZS.

Role of RECOs

Informants reported that RECOs educated community members on health themes and when to seek facility care, identified sick patients and oriented those in need of care to the health structure, assisted CPS and CPN sessions, and screened for malnourished children. RECOs noted that these activities were not being conducted as often as normally scheduled due to the COVID-19 pandemic. Informants reported that RECOs shared information about bed net use, malnutrition, healthy eating, hygiene and handwashing, and COVID-19 during CPN and CPS at both the community level and in churches.

During home visits, we were told that RECOs educated household members on health-related topics, identified sick children, and assisted with the organization of transport to the HC. The RECO and IT shared that RECOs had received some training enabling them to treat nonserious health issues before referring the sick person to the HC. The RECO said, “We have instructions to follow when we encounter a child who has diarrhea before we take him/her to the health center. First, we prepare an oral serum [ORS] and give it to the child. Only after doing that, do we take the child to the health center.”

In cases where sick community members declined to seek care, we were told that RECOs try to convince family members about the importance of healthcare and provided referral slips. One RECO from the LPHA said,

> *We were trained on referrals to the health center. If we meet a sick person in the neighborhood, we educate them because many refuse treatment. You educate them on the importance of going to the health center for care. The sick person may tell you that they don’t have money, they can refuse. So as a RECO, you give them the paper [referral slip] and if necessary, accompany them to see the nurse.*

We were told that there are no official referral slips and that RECOs write on a sheet of paper when making referrals.

The three informants from the LPHA reported 115 to 116 RECOs with about 40 to 80 of them active, while in the HPHA, informants reported that 20 to 50 RECOs were active. Of the estimated RECOs, informants in the

LPHA mentioned that 30 to 47 were women and in the HPHA 17 to 20 were women. CHW informants shared that Mother Leaders, who lead women's groups, performed the same duties as the RECOs. Mother Leaders were mostly involved in nutrition activities as part of Mercy Corps activities.

RECOs from the HPHA visited 15 households, whereas in the LPHA, the RECO informant reported that each RECO was assigned about 10 houses, although she admitted not participating in any home visits in 2021 due to government restrictions introduced during the COVID-19 pandemic. Conversely, the IT from the LPHA shared that each RECO was assigned 30 to 50 households but that the number of RECOs was inadequate. The same IT explained that there were over 1,000 households in the HA and many villages that RECOs serviced were more than five km from the HC, which is the maximum distance officially recommended in the national community strategy for RECOs to travel. Due to the hilly terrain, it could take three to five hours to arrive at the HC from the furthest village.

In the HPHA, informants reported bi-monthly RECO meetings, while in the LPHA, they met once monthly to participate in review meetings at the HC. RECOs in both HAs shared that their performance was evaluated at monthly review meetings. Additionally, RECOs attended occasional meetings with ITs when they were provided educational material or technical support on topics such as nutrition, referrals, hygiene and handwashing, and COVID-19. RECOs reported that they had previously attended more meetings, including the monthly zonal review meeting. The RECO from the LPHA said, "In past years, we held meetings, shared experiences…. at the health zone level, we were able to find out what was working in the other 18 HAs. We found that there were some HAs that were not functioning normally. So, we shared ideas to help other HAs improve."

While informants in the LPHA suggested that the RECOs had not participated in any USAID IHP sponsored training, in the HPHA, RECOs had attended training on nutrition, vaccinations, bed net distribution, and TB. Furthermore, Mercy Corps provided capacity development opportunities for RECOs from the HPHA. Overall, attended trainings were described as an important way to learn new material and as being beneficial, allowing RECOs to improve their capacity to serve the community. These informants stressed the importance of sharing lessons learned from training with other CHWs who did not participate, although it wasn't clear whether this was done.

Only the IT from the HPHA reported observing inappropriate behavior exhibited by a RECO, who after getting a full-time job, poked fun at the voluntary status of active CHWs. He said, "It was a woman, the treasurer, when we were involved in the FHI360 project. She told the community that she had found a job and that they [community members] did absolutely nothing for her. We told her she should never say such things."

Mothers participating in the FGDs said that RECOs provided health information during outreach activities and participated in healthcare provision in the community and sometimes at the HC. They mentioned receiving information on vaccinations, FP, nutrition, hygiene management, and symptoms and prevention measures for malaria, pneumonia, bronchitis, and diarrhea. Within the community, these health messages, or announcements about upcoming activities, were disseminated widely by megaphone and through radio or in church. They reported that RECOs conducted home visits, and together with the nurses, distributed deworming medication, vitamins, and vaccines in the community during campaigns targeting children under five years of age.

Hospital informants reported that RECOS were the liaison between the community and the HC, adding that the hospital did not have direct contact with the RECOs. They reported that RECOs were sometimes involved in requesting an ambulance to transport sick patients from the community to the closest health facility or reference hospital.

Specific Services Offered

Bed Nets

All informants reported they had been involved in the distribution of bed nets during CPN and CPS visits. In both HAs, children attending CPS and who had completed the vaccination's schedule at nine months of age were eligible. For pregnant women, all women attending CPN in the HPHA could receive a bed net, while those in the LPHA had to complete the malaria prevention regimen. The IT explained that eligibility restrictions in the LPHA were due to supply issues, stating, "We restrict (distribution of bed nets) because what we have is insufficient."

Informants also mentioned mass distribution of bed nets based on the number of children and people in households. Once again, informants from the LPHA mentioned insufficient bed nets during campaigns, with the IT explaining that the population size used to allocate nets was underestimated and that the determination of the number of nets needed was often not completed until the day of distribution. Another mentioned challenge was that community members sometimes lost the token needed to claim a bed net. Informants from the HPHA did not report any challenges with the distribution of nets, mentioning that they had adequate supplies and work went as planned. We were told that community members attending the event lined up, presented their tokens, responded to questions to complete the necessary paperwork, and were given their nets. The CODESA member from the HPHA shared: "There were no obstacles, everyone was served. In the most recent mass campaign, there were some left over because we had been given a lot compared to what was expected."

The hospital doctor reported that the bed nets were sometimes used for other purposes such as fencing in chicks and fishing.

In both HAs, focus group participants shared that bed nets were distributed during campaigns and at the HC, but the timing of the campaigns varied. Informants in the HPHA reported annual distribution campaigns, with the last in April 2020, while in the LPHA, the last distribution was three years earlier and the frequency was reported to be irregular. Mothers confirmed that bed nets were distributed during CPN and CPS and sometimes after delivery in the HCs. FGD participants also reported that the entire family, including children, slept under the bed nets but at times they had to stop using the nets due to wear and tear.

Vaccinations

Informants reported that vaccinations were provided during campaigns and routinely in the HCs. In the LPHA, vaccines were administered during eight monthly sessions, of which two were held at the HC during CPS and the remaining six were held in villages during outreach events, although the IT reported difficulties transporting vaccines to distant villages. Additionally, informants mentioned a "recovery" session organized at the HC for those who missed vaccinations. The CODESA informant in the LPHA stated that during outreach sessions injectable vaccines were administered by nurses at a specific location while oral vaccines were given by CHWs in community members' homes. In the HPHA, informants mentioned routine vaccinations in the HC

and in villages close to the HC; for remote villages, RECOs were provided a supply of oral vaccines to distribute, but it was not clear how injectables were given.

During vaccine administration, informants shared that mothers were educated on the importance of the vaccine, as well as the different types of vaccines available. Aside from regular BCG stockouts, informants stated that vaccines were generally available for measles, polio, yellow fever, and pneumonia. Vaccinations of infants occurred for at least nine months from birth in both HAs, and in the LPHA, the IT indicated that vaccinations were provided to children up to 59 months of age as part of the revitalized CPS strategy.

According to CHWs and ITs, the biggest challenge of vaccine administration were stockouts of the BCG vaccine and related materials. The IT from the LPHA further added that at the time of the interview, while they had supplies of the BCG vaccine, there was short supply of the 0.05mL syringe needed for its administration. This syringe is much smaller compared to the 0.5mL syringe used for other vaccines, and the lower supply of the 0.05mL syringe had impeded the distribution of BCG vaccine for close to six months. Another challenge faced in the LPHA was the transportation of the vaccines from the BCZS to the HC, with the IT having to pay for these costs with his own money. The IT also shared that the CHWs were not always motivated to participate in vaccine administration during outreach visits because they considered the work and time involved too demanding for volunteers.

Another challenge faced in both HAs involved parents declining to vaccinate their child. The CODESA from the LPHA shared: “When we encounter parents who refuse to vaccinate their children, we report to the village chief. The chief summons the parents and educates them on the consequences of refusing to take the vaccine.”

The CODESA from the HPHA shared that sometimes parental hesitancy related to religious reasons: “In the community we have Christians we call Branhanists and Jehovah's Witnesses, it is more the Branhanists who refuse. We have four families here who persist (in refusing vaccines).”

In other instances, refusal occurred because parents feared their children would be vaccinated with the COVID-19 vaccine. The IT from the HPHA said: “There are mothers who refuse to give their children the vaccines, for example during the COVID period, mothers would say that we are going to give their children the COVID vaccine, and the children would die…”

The RECO from the LPHA also shared that vaccine side effects caused mothers to question the purpose of the vaccination and threaten the CHWs, stating, “… the only problem is when a child falls ill after receiving the vaccine. The mother claims that we have bewitched her child. She may threaten us by saying, ‘See how sick he is now… if she/he dies you will see!’ …”

Focus group participants were knowledgeable about the eligibility, frequency, and benefits of vaccinations, stating that they protected children against disease, but were unable to name most of the vaccinations provided. Most mothers reported that their children were up to date on vaccinations, asserting that the majority of mothers in their community had vaccinated their children. Mothers with unvaccinated children cited reasons related to stockouts of vaccines (specifically BCG vaccine), lack of financial means to travel to the HC, forgetfulness, and an inability to access vaccines due to local unrest. Several mothers from the LPHA shared that visiting the HCs was time consuming, adding that mothers with other children at home faced constraints traveling to the HC. One mother shared,

> *It's poverty, deficiency, as my sister-in-law said, famine can cause us not to do what we should. I have a young child who has 8 older brothers and sisters. I have absolutely nothing in reserve to feed them. If there is an announcement that there are vaccines today, I question whether I should bring this child to the consultation. They will certainly give him some medicine (vaccinations); however, the other children will be hungry. It is better for me to take my hoe and find work to make money and buy flour to satisfy the hunger of the children.*

Another mother said,

> *There are times when you may find yourself overwhelmed with work, you don't have anything to feed the child. You ask yourself whether you should go to the health center to spend an entire day rather than going to get something to eat for the child. This dilemma can make the mother choose not to go to the vaccination consultation.*

One mother reported refusing to have her child vaccinated when members from outreach teams were unfamiliar. She said, "My two children were with their grandparents, and we refused to have them vaccinated because the workers were not from our health center. They absolutely must be from the same health center for us to accept the vaccine."

The hospital doctor also mentioned that refrigerators to maintain cold chains were not available in all facilities, which presented a challenge when providing essential vaccines. The doctor confirmed stockouts of the BCG vaccine, as well as limited parental knowledge about the benefits of vaccinations. The doctor said,

> *There are families who hesitate to have their children vaccinated. It is because of ignorance; some people are not educated. There are also those who think that the vaccine contains bad medicine, maybe they think the vaccines will not protect the children, or the vaccines will even cause a disease instead of protection; that's why I call it ignorance.*

Community Health Worker Motivation

Informants reported that they are primarily motivated by the desire to share health-related information and help community members access healthcare. One RECO suggested that, because he was elected by community members, he felt an obligation to fulfill his role. Some mentioned that they only receive monetary payment when they participate in training.

All informants stated that CHWs require capacity strengthening to be more effective in their work, with communication skills cited as an area that needed to be strengthened. One RECO added that trainings are offered to few participants, recommending that more CHWs are included in trainings. There was a consensus that offering training sessions to all CHWs and offering increased supplies would improve motivation.

Most CHWs stated that they are satisfied with their work even though they do not get financial compensation. Some specified that satisfaction is derived from the fact that the population is benefitting from healthcare, while others mentioned that strong collaboration with health workers and other CHWs rendered satisfaction. One CODESA president referred to the positive recognition he gets from community members, stating: "I'm satisfied, because as a CODESA president, people seek my advice on how to do this or that in relation to the health of their children. That makes me proud; being responsible for a community is a source of pride."

It is important to add that one IT noted that the regular turnover of RECOs indicates that they are not satisfied with their work.

Kasai Oriental Province

Evaluation Methods and Informants

We conducted the midline evaluation in April 2022. Key informants included the USAID IHP provincial director, the DPS director, the head of the provincial inspection office, and chief medical officers of the HZs, the MCZs. Four of five of the key informants were men.

The evaluation was carried out in the HZs of Kasansa and Bipemba in a HPHA and a LPHA based on child health indicators, including HC attendance for major child diseases and immunization. In each HA in-depth interviews were conducted with the IT, a CODESA member, and a RECO. Interviews were administered with RECOs in charge of integrated community case management posts. We also conducted in-depth interviews at the General Reference Hospital ("Hôpital Général de Référence", or HGR) with medical doctors or hospital administrators. Observations of facility infrastructures, equipment, and medication were another component of the evaluation.

We carried out FGDs with 6-12 mothers and grandmothers of children under five years of age in each of the four HAs to assess perceptions and utilization of child health services.

Introduction

The province of Kasai Oriental is comprised of 19 HZs. According to the DPS Director, USAID IHP initially operated in 15 of the 19 HZs, with 10 HZs considered priority. The European Union supported the remaining four zones. After the start, USAID IHP added Kasansa HZ, which is also supported by the European Union and included in our evaluation.

One health official considered improved internet access to be a significant contribution made by USAID IHP, mentioning that the project provided routers to the DPS offices and installed VSAT systems in all 19 HZs to facilitate data coding and reporting as well as disease monitoring. He also felt that USAID IHP's support of meetings and workshops was critical to the provincial health systems planning, coordination, and data monitoring; this included bi-annual and annual reviews, quarterly data validation workshops, monitoring meetings, supervision visits, and meetings to develop operational action plans at the HA, HZ, and provincial levels.

Informants reported that PICAL assessments had positive impact on institutional planning and financial management.

Two key informants reported that PICAL assessments had been conducted at the provincial level and in six HZs, although all HZs were initially scheduled. PICAL assessments are designed to improve planning, administration, and financial management at the institutional level and to strengthen leadership; both key informants asserted that PICAL led to significant changes. One of these key informants reported,

> *We conducted a midterm evaluation in September 2021, through which every component was closely reviewed. There were significant changes at the DPS level related to its leadership. At one point, the DPS had been criticized for being prone to political interference or influence. The DPS office was really under the control of politicians. That was reflected in their staffing decisions… Another change related to*

interim leadership. When the Director was absent, his or her substitute would be arranged based on cronyism. This is not the case anymore; the interim Director role is filled by someone who has been pre-appointed. The situation has clearly improved. Through the PICAL evaluation tool, IHP USAID significantly improved how DPS, IPS, and BCZS institutions operate.

Key informants reported that USAID IHP also implemented strategies to improve the transparency of health service administration and financing. These strategies included fixed per diem rates for travel missions, use of a mobile app for direct payment to individuals, supervisory visits at the different administrative levels, and a hotline for community members to report abuses and fraud, although at the time of our evaluation the hotline was not fully implemented. A health official also talked about the fixed price strategy applied by USAID IHP for consultation visits, which he claimed was not working well because some treatment costs, particularly related to medications, are not adequately covered through the flat fee. USAID IHP is one of three partners contributing to IPS activities, which has the mandate to carry out quarterly audits in the 19 HZs. These audits serve as an important mechanism to reduce corruption.

One health official reported that USAID IHP supported all HZs with supplies to combat COVID-19, and that more recently USAID IHP had provided equipment, such as motorcycles and ultrasound scanners, although he added that the province continued to face significant equipment challenges. The province also received USAID IHP support for the acquisition and distribution of medicines, including drugs for common child illnesses such as malaria, diarrhea, and pneumonia. For supply chain management, USAID IHP supports stakeholder meetings to discuss the supply chain system, capacity building on supply chain data reporting, and the installation of a computer software called INFOMED to allow health workers to manage drug supplies at all levels, including in centre de distribution régional (regional distribution centre) [CDRs] and DPS and HZ central offices. Key informants reported that USAID IHP ensures the availability of certain medicines in CDRs and their delivery to health facilities. Regarding strategic disease monitoring and data collection, key informants mentioned that USAID IHP's role focuses on the coordination of relevant stakeholders. At the DPS level, USAID IHP supports weekly monitoring meetings of infectious diseases including COVID-19.

Drug stocks in CDR

Key informants reported that when the project initiated work in Kasai Oriental, community engagement was limited or nonexistent in most HZs. USAID IHP funded the revitalization of CODESA and CAC activities. According to our key informants, members of CAC and CODESA, as well as RECOs, regularly participate in HA monitoring meetings with health facility teams where they collectively review health indicators, including community-based indicators. One informant also reported that CHWs received training to strengthen their understanding of their responsibilities and to improve performance when carrying out community activities. Informants mentioned that mini-campaigns designed to enhance utilization of health services such as child vaccinations and FP have been implemented in the HZs. Efforts to involve women in leadership roles have been less successful, according to one health official, who stated that village women are often unwilling to take on positions of authority.

Bipemba Health Zone, Kasai Oriental Province

Background Information

Data collection was carried out between April and May 2022 in the HZ of Bipemba, in Mbuji-Mayi, which is the capital city of the Kasai Oriental province and headquarters of the provincial government's offices including the DPS. The DPS office has been operating in Kasai Oriental for decades, as Mbuji-Mayi became the province's capital city in 1966. However, the province of Kasai Oriental that is referred to in this report was founded in 2015 when the former province of Kasai Oriental was divided into three separate provinces, including Kasai Oriental, Sankuru, and Lomami, under the Democratic Republic of Congo (DRC)'s reorganization into 26 provinces.

This evaluation was conducted in two HAs, including one HPHA and one LPHA. It was conducted according to child health indicators such as service use at HCs for major child diseases and vaccination. In each HA, in-depth interviews were first conducted with the IT, one member of CODESA, and one RECO. Later, they were conducted with the RECO in charge of the iCCM. We also conducted in-depth interviews with a primary care physician from the Reference Hospital, as well as the MCZ of the HZ of Bipemba who participated as a key informant. Finally, we evaluated the infrastructure of all three facilities.

The mean age of our informants was 28, and the majority of them (8 out of 10) were men. One IT had level-A1 training, while the other was level A2. The IT, CODESA member, RECO, and lead RECO in charge of the iCCM all had an average of 14 years of training, while the 2 primary care physicians both had completed 18 years of training. The informants had seven years of work experience as health professionals on average. All informants but two had other occupations, most often related to agricultural work. Seven informants were members of the Church of Revival and two were Catholic. On average, informant households included nine members.

Focus group participants were all mothers of young children.

Facility-Based Services

Infrastructure

The HPHA included five CACs located in peri-urban neighborhoods on the outskirts of Mbuji-Mayi; none of them were located in villages. There were no other health facilities in this HA, not even an iCCM site. However, there were numerous pharmacies. The total population was 19,200. The HC was located 5.5 km from the HGR. As a private facility working in partnership with the HZ, this HC was located within a working-class neighborhood in Mbuji-Mayi.

The building was built in 2002 and was most recently renovated in July 2021. The HC comprised two buildings. The first building included the IT's office, a pharmacy, and a laboratory. The second building had separate rooms for counseling and medical visits and a maternity ward. This HC did not have a separate area for child health services. All patients would be seen in the same area, including children. There was a waiting room; however, it was not separate from the area where pre-school medical visits would take place. With the exception of serious cases, patients were seen on a first-come, first-serve basis. The building did not have improved sanitation facilities. There were separate toilets for men and women, but they were made from sheet metal and did not have water. The facility did not have any functional incinerator. Instead, medical

waste was buried in a hole. The facility had a functional laboratory consisting of one room with light, a microscope, and other supplies. Electricity was available in the HC from 6 p.m. to 4 a.m. through 6 a.m. through solar panels. The HC did not have a regular source of water. Water had to be purchased; tap water was available nearby, and one of the female cleaning staff was responsible for fetching water.

The LPHA included seven CACs, four of which were located in peri-urban neighborhoods on the outskirts of Mbuji-Mayi and three were in villages outside of the city. This HA included four other private health facilities, one iCCM, and its total population was 32,000. The HC was located eight km from the HGR.

As a public facility, this HC was located in a peri-urban neighborhood on the outskirts of Mbuji-Mayi and included a standalone building built in 2020 out of adobe bricks. The HC did not have a separate area within the building for child health services, so all patients were seen in the same room. Only newborns would be seen on a table in the birth room, while other children would be carried by their mothers. The facility had a laboratory with a window for natural light. The evaluation team observed that the HC facility floor was unfinished, and the building did not have a ceiling or separate bathrooms for men and women. The bathrooms were not improved sanitation facilities. The paint on the walls seemed old, although the building was renovated in July 2021. The IT stated that the HA had obtained a plot of land where they planned to build a new and more modern HC. The facility did not have any incinerator; instead, medical waste was buried in a hole. The HC had electricity through solar panels from 7 p.m. to 6 a.m. and one refrigerator. The HC did not have a regular source of water. There was a water tank to collect rainwater, and they were at risk of running out of water should there be a drought.

Reference Hospital

The Reference Hospital was built in 1968 and inaugurated in 1972. All facilities were under renovation during the evaluation. The hospital provided curative, maternity, surgery, pediatrics, internal medicine, HIV screening and treatment, TB screening and treatment, and obstetrics care. One building was dedicated to pediatrics, with a bathroom for newborns and the office of pediatrics. The pediatric department did not have a waiting room. A straw hut was used as a waiting room, although it was located in the emergency area. There was no incinerator. The HGR had electricity 24h/7d through solar panels. Although these solar panels could sustain lighting 24h/7d, our respondents reported that they did not have enough power to run the blood bank.

Services Offered

Health Centers

Health services provided at the evaluated HCs included treatment of malaria, diarrhea, ARI, TB and HIV, minor surgery, and prevention activities. The HCs had a maternity ward with traditional midwives/birth attendants. There were no trained midwives. The HCs provided a minimum package of curative services and were fully staffed with level-A1 and A2 nurses, a laboratory, and laboratory technicians. Diagnosis and curative care capacity was basic. The two HCs of Bipemba had serious issues with TB diagnostics.

The HCs adhered to the norms outlined in the national guidelines and conducted malnutrition screening as well as community-based sessions to raise awareness on best practices to prevent malnutrition. Despite these efforts, none of the HCs have been treating malnourished children since 2018, which is when their contract with the Social Development Center, an NGO that was reportedly supported by Save Children, came

to an end. There were no technical and financial partners supporting nutrition at these HCs anymore. The HCs would organize vaccination sessions during pre-school visits at the HC and outreach sessions with mothers on exclusive breastfeeding during the first six months after birth, among other topics. The HCs distributed insecticide impregnated bed nets during prenatal visits.

The focus group participants recognized that they received information on their children's nutrition at the HC during their prenatal or pre-school visit from nurses, and at times, from birth attendants. The focus group participants from the LPHA reported that they did not receive any information on their own health or their children's. Instead, they obtained advice on prevention and medical care for their children in their respective neighborhoods or among themselves.

Reference Hospital

Informants from the Reference Hospital reported that child health services were provided through neonatal, obstetric, and pediatric services. The latter also included a nutrition center for children with various levels of malnutrition, providing Plumpy'nut, therapeutic milk, and nutritional counseling for mothers. The hospital also had an area dedicated to TB treatment for children. The pediatrician followed the official guidelines established by provincial and national authorities in 2021, which were displayed in consultation rooms. Compliance with these protocols increased after the arrival of the new hospital director. Our informants highlighted the importance of following protocols and their role in guiding medical visits and improving quality of care. The primary care physician stated that compliance with protocols for child diseases—including malaria, ARI, and diarrhea—based on the acuteness of the disease, the patient's age, and the patient's weight, increased recovery rates.

Equipment

Both HCs had a refrigerator. Both HCs also had adequate beds and mattresses for sick patients in observation and in the maternity ward. The LPHC did not have adequate delivery beds, nor did it have adequate beds and mattresses for its maternity ward. Both HCs had private birthing rooms. The LPHC had an examination table for newborns and children, but the HPHC did not have one.

Both HCs had basic equipment, including thermometers, stethoscopes, and tensiometers. The HCs had sterilization supplies, and both also had microscopes. The LPHC had a scale for newborns and babies, while the HPHC did not have any. Both HCs had Salter scales and wooden measuring rods to measure children's height. Additionally, both HCs had an area with chairs for patients waiting for services. The HPHC did not have an examination table for babies. Neither of the HCs had gloves for workers' use. Posters on TB, FP, vaccination, and COVID-19 were displayed on the HPHC's walls. However, the research team found that the lowest-performing HC did not have any such posters.

Regarding hygiene, both HCs had handwashing and glove-washing stations. Neither had hand sanitizer. They had a non-contact thermometer to check people's temperature as they entered the HC, but it was not used systematically. Within the HC, health workers were no longer masked as they all had received their COVID-19 vaccine. Regarding supply issues, the IT at the LPHC reported that his HC needed support with supplies and equipment, including an x-ray machine, ultrasound device, and autoclave, while the HPHC needed a proper examination table for children. As for continuous maintenance, the two HCs reported that repairs of defective equipment such as refrigerators, solar panels, etc., were costly and difficult to afford for the HC. When a piece of equipment broke down, it was simply set aside.

Reference Hospital

The Reference Hospital had all the basic equipment needed to treat children, including essential medicines, scales for newborns and children, measuring rods, sterilization supplies, thermometers, stethoscopes, and timers. Respondents from the hospital did not mention having any sophisticated pieces of equipment. The HGR also had orthopedic foam mattresses, but not in sufficient quantity as the pediatric ward had capacity for 50 beds but had only 20 mattresses. The other beds did not have foam mattresses. Because of the lack of foam mattresses, when there were more sick children than mattresses, the providers would place them two by two on one bed with a foam mattress. The informants reported that they needed equipment such as a pulse oximeter, foam mattresses, and blankets for newborns. Regarding repairs, the hospital worked with a handyman. When he was unable to repair something, the hospital would call in higher-skill technicians from the city of Mbuji-Mayi.

Health center pharmacy

Medication

Both ITs reported that USAID/IHP provided supplies of medicine to the BCZS on a quarterly basis. However, the two ITs would not typically wait until the end of the quarter to place an order. Orders are placed monthly based on their monthly use. If the BCZS had medicines in its warehouse, it could supply them, but otherwise they would have to wait until the next quarterly shipment. The MCZ of Bipemba reported that getting PROSANI supplies was challenging due to the irregularity of some essential medicines and products' supply chain, gaps in quantities compared to reported needs, and failure to fulfill some orders. The MCZ stated,

> *Regarding the main barriers, there are some products that we just cannot provide, or that we cannot provide on a regular basis. Paracetamol is an example of these products that we just don't provide or that we don't provide regularly. It's an essential medicine, but we don't get it regularly, and if we get it, we usually don't get enough to meet the demand. Another challenge is that we never receive what we ordered. It's the "lip" system –in other words, they'll bring you what they have, whether you ordered it or not. They decide what they'll give us.*

The IT in the LPHC reported writing prescriptions for medicines when stockouts occurred, and his HC could not afford to resupply the out-of-stock drugs in the local market. The IT of the HPHC reported that when the BCZS did not have medicines available to resupply HC drugs, he would buy replacement drugs on the market. The IT at the HPHC stated,

> *For medicines that the BCZ[S] does not have available, in this case, I go buy them myself on the market. I procure them myself. There is a well-known pharmacy at the market here. That's where I resupply. When I pay, they give me a receipt. That's how I get the supplies. I made a point of never running out of stock. When I see that stocks are running low, just like right now, I just sent a nurse to the market. For subsidized medicines, in this case we depend on the BCZ[S]. When we have some, we provide them. When there are none, we must go buy them.*

Regarding frequency, both ITs believed that the decision to supply products on a quarterly basis was not realistic. The IT of the HPHC stated,

> *The norm is that the facility should be resupplied in sufficient quantity to cover three months of supply, with a one-month buffer, but this is done monthly. So, every month, it is our job, at the health facility level, when you see that your stocks are running low, you should place an order; but even then, you won't be resupplied until the end of the quarter. In the meantime, people can't wait until the end of the quarter to take their medication. This is not realistic.*

The interviews found that there were no stockouts during data collection, and our observations revealed that many essential medicines were indeed available, as both HCs had just been resupplied a few days before this evaluation. Available medicines included artemisinin-based combination therapies (ACTs) (pills and injections), artemether, quinine (drops and pills), aspirin, oral rehydration solution (ORS), zinc, mebendazole (syrup and pills), metronidazole, SP, penicillin, ceftriaxone, amoxicillin, ciprofloxacin, simba, cefalexin, (cough), iron, multivitamins, ibuprofen, polygel, oxytocin, medication to treat TB, and anti-retroviral therapy. Both ITs reported that these medicines were never supplied in sufficient quantity and that stockouts were frequent. The IT of the HPHC stated,

> *These medicines, they don't give us enough of them. When you count how many of these generic medicines we distribute, it doesn't even cover a month. Now, you have no choice to keep the Health Center running than getting your supplies elsewhere. Otherwise, you'll always have stockouts. There are even essential medicines that PROSANI does not provide, like Ceftriaxone.*

Regarding the quality of medicines bought in the market in comparison to those purchased in pharmacies, the IT of the HPHC reported medicines bought in the market were low quality: "Normally, we should not buy medicines on the market as they are not good quality compared to the partner's medicines. First of all, just based on the conservation conditions at the CDR, the facility that delivers the medicines, they are better."

Reference Hospital

The HGR had all essential medicines to treat child diseases in sufficient quantity, including zinc, ORS, amoxicillin, ACT and other anti-malaria medicines, vitamin A, and mebendazole. The primary care physician reported that these medicines were never out of stock. Hospital staff established a threshold for each product and as soon as they hit the threshold, the hospital would place an order. According to this informant, only Plumpy'Nut and the F100 and 75 milk to treat malnutrition were likely to be out of stock among children's medicines.

Utilization of Services

According to all respondents, there were four main barriers to care seeking in the two HAs, which were self-medication, traditional medicines, seeking advice from churches, and lack of financial means. Distance did not constitute a barrier as the population served by these HA live around the HCs. All roads were accessible, even at night.

The IT of the LPHC stated,

> *In terms of barriers, we can see it has a lot to do with money. Distances are short, not necessarily long. Everyone is already here, in the Health Center's surroundings, even at midnight people won't have any problem to get here. Other barriers include, for instance, self-medication because they think that this*

> *disease they have, they can treat it with five, ten thousand Francs, but if they see that it doesn't work, that nothing has changed, then they'll go to the Health Center to be diagnosed and to receive care. They may also reach out to a priest/pastor and ask him to pray for them. If they pray and the child feels better, they won't come to the Health Center. If they go see a traditional healer, and he gives them a traditional remedy, and the child recovers, they won't come to the Health Center. They only come to the Health Center when they have failed everywhere else!*

The IT of the HPHC stated,

> *In this Health Area, first distance, and when I talk about the Health Area, it doesn't go beyond 5 kilometers. There isn't any ravine in this Health Area. Travel is not a barrier. The real barriers are traditional medicines, and churches. Some churches in this Health Area act like hospitals. So, people take their sick ones there. And it's when they see, for instance, that oh! this case needs a transfusion, then it becomes… then they come here. Sometimes, you do a transfusion, and they tell you "No! oh! The Holy Spirit said we should do a transfusion, but let's take him to church. In the end, you can't impose. People are free. So, you do a transfusion, and they'll go home regardless. It's their faith, so you have to. Actually, it is part of our oath, we must respect that.*

Women who participated in the FGDs from both HAs reported that cost (or lack of funds) was the main barrier to seeking care from the HC.

A woman from the focus group held at the LPHC stated,

> *Affordability is the main barrier to seeking care from the Health Center. This is why I prefer to treat my children at home, with paracetamol, which costs 50 or 100 Congolese Francs. When I go to the Health Center, the first question the nurses ask me is how much money I have. I prefer to go to the Health Center to give birth. Deliveries cost 2,000 Congolese Francs for girls, and 15,000 Congolese Francs for boys.*

A female participant from the focus group held at the HPHC stated,

> *When you get there, you are first asked to pay the intake form, you buy the form. And it's paying this form that's challenging. If you have the money to pay for the intake form and the lab exams, then you can get your treatment, and payment for the treatment will follow. You get a 7-day treatment.*

Women who participated in group discussions indicated that the cost for delivery care had changed at the beginning of 2022. Previously, they had paid CF 9,000 for delivery assistance for a girl, and CF 12,000 for delivery assistance for a boy. The gender-based price difference exists because a fee for circumcision is included for boys. They also reported that the price also depended on the outcome of the birth. If the birth was difficult, the bill could reach up to CF 20,000.

Management and Governance

Coordination

The ITs had been attending monthly monitoring meetings with the BCZS only. Neither of the two ITs had yet participated in a meeting organized by the DPS. During these monitoring meetings, the ITs were always encouraged to share their field experiences, including both good practices and any challenges they might face. The IT from the LPHA gave an example of HPHAs, explaining that weak HAs had to copy what their colleagues with better results do. He called this "experience sharing." According to both ITs, there were no other means to disseminate or discuss field experiences with other health providers or with other health

facilities. Both ITs believed that these discussions were very important. To support this point, the IT from the LPHA reported that sharing their experiences allowed them to know what challenges others had faced and how they were overcome. The IT from the LPHA believed that these meetings were well designed and that nothing needed to be improved on in the way information was shared. However, while the IT from the HPHA believed that these meetings were well designed, they could still be improved. He stated:

> *The BCZS is the higher level. They know, for instance, what health areas have a good performance, and what other health areas don't. Instead of waiting until the end of the month to share experiences, we could decide that for a certain period of time, the low-performing staff will go to high-performing sites. Perhaps you can spend some time to see how they work? What did they improve and how did they do it, specifically? How do they manage to increase their indicators? It's much better that way.*

The IT from the LPHA had already participated in meetings aimed at developing community-based activities. He mentioned the meetings were designed to draft community-based activity plans. However, the IT from the HPHA never participated in such meetings. For the IT from the LPHA, these meetings did have an impact as they boosted demand for services and increased visits to their HC.

CODESA members and RECOs had participated in several meetings at the community level, organized by the HC, or the HZ with the MCZ or other supervisors. None of these CHWs had yet participated in a meeting convened by DPS. At the HC level, members of CODESA and RECOs would participate in meetings with their ITs monthly to evaluate data and plan the next month's activities.

Accountability Mechanisms

Only the LPHC had a suggestion box through which community members could submit their comments on health providers' attitudes and behaviors. The submitted suggestions were reviewed during monthly meetings. When these boxes were created, it was decided that suggestions would be anonymous to avoid individual health workers being singled out and criticized. According to the IT of the LPHC, the suggestions that were submitted in the beginning were related mostly to prices, but for over a year, there had not been any suggestion submitted through the suggestion box and he did not understand why. However, the research team found that this IT might constitute a barrier to accountability, preventing community members from submitting feedback through the suggestion box. The IT of the LPHC stated:

> *When a patient sees an inadequate behavior, they should address the IT directly because he is in charge. [The IT] is responsible for deciding how to manage this. This is the primary whistle-blowing mechanism to flag a behavior issue. As to how to proceed, they might write a letter and hand it to me in person or submit it to the suggestion box. In my opinion, it's better to hand out the letter to the IT. I know if someone leaves a note in the suggestion box, they cannot be criticized because people don't know what they wrote. There is no reason for people to be afraid. [I] don't understand why people are not submitting feedback because I don't have to be present when we open the letters. I think people have nothing to say, this is why we've never had any letter in this suggestion box since I've been here.*

The IT of the HPHC had never heard of the suggestion box and did not know of any partner who might have supported a HC using one. Neither of the two HCs had ever introduced a community scorecard or a hotline to strengthen accountability from health providers, and no other accountability mechanism involving CHWs was reported. This was an interesting factor to note in comparison with the data collected in other provinces.

At the community level, no CAC in either HAs had a suggestion box. The CODESA member from the LPHA explained that, regarding the suggestion box at the HC level, community members could not share feedback

on health providers in their HC anymore because the latter did not like to be criticized. He stated:

> *If someone would see a provider behaving badly, they could not use the suggestion box available at the Health Center because the health providers are afraid of criticism; and if someone saw you, on that day we'll open the box and if there is a letter criticizing a provider's behavior, this person would be threatened by the provider. This is why there aren't any letters in this box anymore. If we can place a suggestion box in each one of our CACs, that would be a good thing.*

Reference Hospital

The Reference Hospital has not had a suggestion box for a very long time, and the respondent did not remember when the hospital removed it. He reported that for several months, each time he opened the box, he would only find slurs addressed to specific providers and not others. This is why the leadership decided to remove the suggestion box. The hospital had already started raising awareness in the community around the benefits of this suggestion box and was considering reinstating it. None of the informants knew about the community scorecard (BCP) activities, and none of the health facilities had a hotline.

Referral Systems

Patients coming from the community were either referred by someone who had already received care from the HC or came after they attended a talk led by a RECO. Patients coming to the HGR from a HC were referred by the IT if their case could not be managed at the HC level. Both ITs mentioned cases such as acute cases of malaria in both children and adults, births with complications that may need a c-section, hypertonia, fractures, and transfusion as being among the cases requiring advanced care. The IT of the highest-performing HC reported that in many cases patients did not follow up on these referrals. She gave the example of a woman who had a difficult birth. While the IT had referred her to the HGR, she learned that the woman went instead to a different clinic near the HC.

HCs may refer a patient in two ways. The first way is through a referral form in which the IT includes all the information needed by the HGR's primary care physician or nurse regarding the patient and the facility that referred them. This form includes two sections: one with information on the patient and the referring facility, and another section used for counter referrals. The patient information provided guides health providers in their handling of the case by indicating what care the patient has already received. The information on the referring facility is meant to document where the patient is coming from and the need to provide the patient with emergency care; this information may also be used for counter referrals. According to the IT of the LPHC, as soon as the patient's health is stable, the same referral form can be used for counter referrals to allow the referring facility to fulfill its monthly report requirements.

In addition to the referral forms, the second way a patient may be referred is that the ITs may call the hospital directly prior to the patient's arrival or even before referring the patient. The IT of the LPHC confirmed that counter referrals might be done on the referral forms or by phone. The IT of the HPHC stated that the issue of referrals and counter referrals had always been on the agenda of all monitoring meetings. According to this IT, at the most recent monitoring meeting, the nursing director said that phone calls for counter referrals were sufficient, while the MCZ recommended doing this in writing, mentioning that communicating by phone only could be challenging as one did not always have phone credit. This IT said he was waiting to see whether people would comply with the MCZ recommendation to support all counter referrals with a written document.

Regarding barriers to referrals, our research findings show that financial factors are a major challenge for both HCs. Most of the population in both HAs live in poverty. When someone gets sick and needs to be referred to a different facility, this becomes a challenge as they usually do not have the financial means to pay for health services. According to the IT from the lowest-performing HC, people tend to believe that a referral means that the illness is serious, and in turn, that the bill will be higher. However, patients and their families also forget that referrals contribute to the patient's recovery.

The second barrier lies in that both HCs do not have any means of transportation for sick patients who are unable to move easily. For the LPHC, distance was an added obstacle as the HGR was located seven km from the HC. These challenges further increase the patient's financial burden as they need to find their own means of transportation and pay for it. Consequently, some people refuse to be referred to a more advanced facility. The IT of the HPHC also reported that some patients may refuse to be referred to a hospital as there is a lot moving between different wards at the HGR, whereas at a smaller facility, everything is more concentrated. Therefore, when a patient with this perspective is referred, they will likely prefer a private clinic rather than the HGR.

In both HAs, there were no mechanisms to support the transportation needs of community members. Patients must look to their family members to help with transportation. However, if a patient is found to be vulnerable or in need, CODESA members are obliged to go among the community and collect funds for transportation to the hospital. Sometimes, a benevolent individual will agree to give the patient in need a ride or to pay for their transportation; otherwise, this remains an issue. Regarding people who have an unpaid balance at the HC, health providers in both HAs never refuse to refer a patient who is in debt.

Both ITs reported that there were vulnerable families in their HAs, although they did not have a roster identifying them. The IT of the LPHC reported that people with a disability, orphans, and poor families were visible, and RECOs were responsible for screening for them during outreach activities. RECOS were also responsible for finding out who might know which people in the community are orphans or indigent. This is not an issue when it comes to providing care to children for malaria, diarrhea, ARI, or even TB, as health services for all these diseases are free. Issues may arise at two levels: when a referral is needed, and when a vulnerable individual is diagnosed with a disease other than those mentioned above, as they then need to pay to treat the additional disease. In this case, the HC refuses to be liable as there is no plan for these populations in the case of other diseases and referrals. However, this IT highlighted that he had not yet seen any vulnerable individual with a disease other than those covered by the HC since he was appointed to this HA:

> *Since I came to this Health Center, I have not yet seen any vulnerable individual with a different disease than the ones I just mentioned, or even with acute malaria that would need to be referred [to a more advanced facility]. Should this happen, I would not do anything because I would not have the capacity to do anything.*

Both ITs and the primary care physician at the HGR received training on referrals. This capacity building session was focused on emergency triage assessment and treatment for child health services specifically. During this training session, participating health providers were informed that their HC should not keep patients in observation beyond 48 hours. If the HC has not resolved the medical issue after 48 hours, health workers should refer the patient.

Reference Hospital

The respondent from the Reference Hospital reported that the hospital does not receive all patients that should be referred from the HZ. In his opinion, their partner, USAID IHP, should have all HCs in the HZ of Bipemba refer sick patients to the Reference Hospital, but this is not the case. Each HC is free to refer their patients wherever they see fit. The research team found that the vast majority, or 18 out of 19 HCs in the HZ of Bipemba, were owned by private individuals, not the state. These are private entities who work under an agreement with the BCZS. Regarding referrals, these HCs prefer to refer their patients elsewhere than their affiliated HGR in the HZ, because most patients decline to be referred to the HGR due to the high cost of care.

Healthcare Financing

Respondents from the LPHA reported that the cost of care was negotiated between the DPS, the HC personnel, and CODESA members representing the community. After this meeting, the RECOs were deployed in the community to inform people on payment conditions for healthcare at the HC. During these talks, they were tasked to demonstrate that the set prices were affordable. Exams and medicines for malaria, diarrhea, HIV, ARI, and TB are free and other exams cost CF 500. A birth costs CF 8,500, including the intake form. The RECO from the LPHA stated:

> *The intake form costs 500 Congolese francs; for malaria exams, we do this for free. For the rest, we pay 2,000 Congolese Francs; so, the form plus the exams, that's 2,500 Congolese Francs. Rates are displayed. A birth will cost you 8,500 Congolese Francs if it is a normal birth, but if there are any complications, then it depends on the provider. The provider determines what the woman will need to pay as (s)he is the one assisting the birth.*

The HC in the LPHA did not negotiate its price list. According to the IT from this HA, medicines on the market are expensive, and they have to pay taxes as a private HC. The personnel need to be paid and the HC needs to be operational, making it challenging to offer reduced prices. This IT reported that they held a meeting to explain these reasons to CODESA members, who in turn went to the community to explain the situation in their respective HAs. The intake form costs CF 1,000 and treatment costs CF 7,500 for children and 10,000 Congolese Francs for adults. This price is affordable for the population served by this HC according to the IT. If he did not receive free medicines from the BCZS, healthcare would cost even more than the prices that are displayed and charged, he argued.

The IT from the HPHC reported that he provided care for TB, HIV, malaria, diarrhea, and ARI free of charge. However, he indicated that in Mbuji-Mayi, it was rare for a patient to be diagnosed with only one disease. For instance, his experience taught him that there were always other pathologies associated with malaria cases. In view of this IT, healthcare is not completely free as when a sick patient comes to the HC, health workers will treat all pathologies found in the patient and apply the corresponding rate. Should a patient only have malaria, which is rare, this patient would need to pay CF 2,000 in addition to the intake form, which costs CF 1,000. In the IT's point of view, the patient in this case would have only paid for the consultation, and the anti-malaria medicines would be provided for free. This is what she meant by "free services," but in most cases, any child will pay CF 7,500 and any adult will pay CF 10,000. On the day of the evaluation, the research team observed that parents were charged CF 1,000 for the intake form and CF 7,500 for a one-week treatment.

As the research team learned that this HC was private but worked in partnership with the BCZS, we tried to understand how the HC was benefiting from this partnership. The IT of the HPHC reported that there were many benefits, including training and free medicines.

The research team found that both HCs charged the same prices for treatment, although the IT, CODESA, and RECO from the LPHC all reported that they charged negotiated rates. Only the intake form costs less (CF 500) at the LPHC. We discovered this during the FGD with women living in the LPHA. One of the participants reported:

Reduced fixed price consultation fees are not always applied.

> *In our Health Center, prices for health services are displayed but not applied. When we get there with a sick child, the providers give us other prices than the rates that are displayed. A simple case of malaria costs 7,500 Congolese Francs per week. If there is a typhoid fever, the cost can increase up to 11,500 Congolese Francs. Adding 100 Congolese Francs per syringe per day for the once-a-day treatment. But if it is twice a day, then it is 200 Congolese Francs per day. Regarding prenatal visits, the first time, the expecting mother pays 1,000 for the intake form, and then at each follow-up monthly visit up until birth she needs to bring 500 Congolese Francs.*

Both ITs reported that they were able to treat sick children on credit. All women who participated in the FGD in the HPHA corroborated the IT's statement.

However, women who participated in the FGD in the LPHA rebutted the IT's statement; one of them explained in the following terms:

> *Once, I had a child with a fever in the middle of the night and I didn't have anything. In the morning, I took the child to the Health Center with a cloth diaper to leave it on consignment. The nurses told me to go sell the cloth diaper and come back with the money, because they were not going to eat the cloth diaper. I took the child back home, and after that we went to church. God's Servants interceded through prayers and the child recovered.*

There is no mutual health insurance available in these two HAs. Both ITs highlighted potential financial and cultural challenges introducing health insurance to community members. The IT from the LPHC said, "This is the problem. Paying a regular fee is not an easy concept for people in these health areas, it is not in people's mindset."

Resources for Facility Workers

The MCZ had been supervising the HZ of Bipemba since 2006 and his entire staff was at the level of the BCZS per the Congolese Government's norms. The personnel of the HPHC included one A1 nurse and two A2 nurses, one A1 lab technician, two birth attendants, one receptionist, and one security guard. The LPHC had one A1 nurse, three A2 nurses, one A3 nurse, one A2 lab technician, two cleaning staff members, and one custodian.

Training

Providers from both HAs have attended a small number of training sessions with USAID/IHP since 2021. The IT from the highest-performing HC participated in three separate trainings on obstetrical care and

emergency neonatal care related to SONU1 and one training on TB. The personnel from the LPHC attended two training sessions, including one on the use of flow charts and one on medicine management.

Access to Continuing Education

Facility based health workers reported that they primarily receive health-related information during meetings when they exchange experiences with other health workers, trainings, and through the internet which they accessed on their personal phones. While they agreed that their work would benefit from ongoing access to new information, they stated that a strong reliance on meetings and trainings limits access to updated health information, which, in turn, affects their work capacity.

CHWs mentioned training as their primary source of information. One CODESA mentioned that when a rare health event occurs, such as the COVID-19 pandemic, they may receive written material in the form of brochures or leaflets.

Informants did not report on changes in access to health information since the start of USAID IHP.

Attitudes of Health Workers

All health providers at the HPHC, including the IT, were women. The IT stated that it was hard for a female health provider to behave badly with a patient unless a parent of the patient is drunk. However, at the LPHC, the IT, CODESA, and RECO reported that several parents of patients had been treated inappropriately. Prior to the current IT's appointment, health providers would frequently fail to report to work, particularly when replacing the only on-duty provider after a night shift. Once, the provider on duty did not wait until his successor arrived to leave his post. This type of behavior may affect attendance levels at the HC as once one person sees what happened, they might tell what they saw to someone else; through word of mouth, the entire community may hear about the incident, thereby undermining the credibility of the HC and the frequency of visits. The IT from this HA stated:

> *It is imperative that the Health Center never be unattended. That means if you are on duty, you can't leave your post without having someone to replace you. But this was not the case before. In the meantime, if you are on duty and you spent the night there, and quite importantly, if today is a Sunday and you need to go to church now, but you weren't able to hand over your post to the person who will be on duty next. Now, what about if a sick patient shows up? They'll find the doors closed. What kind of reputation does that leave us with in the community? So now, ever since I have been appointed here in 2019, things have begun to change, little by little, because it's not easy to rebuild a reputation when you've lost it. Each time someone experiences an inappropriate behavior, they might be thinking of the Health Center, or they might even be talking about the Health Center, and the first thing that will come to their mind is that bad behavior. This person needs to come back and see for himself [that things have changed] to be convinced. As you know, it's not easy for someone to come back to a place where they've been mistreated, especially now that we have dispensaries and hospitals everywhere in Mbuji-Mayi.*

CODESA members and RECOs considered inappropriate behaviors to be part of human nature. One member said that they still had to avoid inappropriate behaviors because once one person had a bad experience, the entire community could then know, and this could deter many people from seeking care at the HC. The RECO from the LPHA said,

> *This is really about a few things that you cannot avoid in human life. In any case, the current IT always tries to correct it. This worker only talked to one individual. But you know, when we see sick patients at the Health Center here, they come here through different paths. They may come to you directly. Or they may come through the IT's, or the CODESA President's. Now, as soon as a patient comes to me, and he finds what didn't work, he shouldn't keep this to himself. He'll tell other people. This is how a bad review will spread in the community and how they'll also undermine visitor numbers at the Health Center. Before this IT joined, there were a lot of inappropriate behaviors from providers.*

Several activities occurred in the LPHA to reform inappropriate behaviors among health providers, including being more disciplined in the transfer of duties between shifts, holding weekly staff meetings, ensuring strict compliance with medical ethics, and regular visits from the MCZ to the HC for more accountability from providers. In both HAs, VIVA! activities were an opportunity to discuss providers' attitudes and behaviors. None of the respondents received training on health providers' bias or on how to improve provider-client interactions.

According to women who participated in FGDs in the LPHA, male nurses and other staff members at the HC were reported to be unwelcoming. Patients who have money are treated very well, while those who do not have money are often ignored. This creates difficulties, especially when a parent brings in a child who requires expensive care, such as a transfusion due to significant blood loss. In desperate cases such as this, prices increase dramatically, reaching sums way beyond family means, and the women participating in the FGDs reported that these price increases were nonnegotiable. Additionally, focus group participants from the LPHA reported that health providers had used offensive words with patients. One participant said,

> *Male nurses easily insult patients who ask questions. If you ask a question, they may tell you to go ask your husband. Male nurses don't like when mothers or other patients ask questions about things they don't know. You are expected to just accept what they say without questioning it. They treat us like illiterate people.*

General Reference Hospital

At the hospital level, the primary care physician did not identify any inappropriate behavior among health providers regarding a sick child or even adults. This physician explained that the HGR was affiliated with the Catholic Church and that proper behavior was part of their hiring requirements. Due to its standards, this hospital would not hire just anyone. The person in charge of recruitment is required to conduct due diligence on any prospective employee.

Health Worker Sources of Motivation

According to the two ITs and the hospital's primary care physician, remuneration is what motivates people to work hard. If health providers must work for an inadequate pay, this would be discouraging, and their performance will be lower. As mentioned earlier, the HPHC is a private entity working under an agreement with the BCZS. None of these providers are paid by the state. A request has been submitted and is under review to enroll the health workers in government benefits. The IT explained that what each health provider receives is considered a bonus until they are paid by the state. However, this IT did not wish to reveal the amount of his bonus or even that of other health providers. He only reported the following revenue distribution: 40 percent is allocated to bonuses for health providers, 10 percent to investment, 20 percent to the purchase of medicines, and the remaining 30 percent to the owner of the facility.

At the LPHC, only the assistant IT and the A3 nurse are enrolled on the official list of government employees and receive a salary and a bonus paid by the government. They have been employed in their position for a long time. The IT and two nurses only receive the bonus provided by the government. The lab technician, the cleaning personnel, and the guard receive a monthly honorarium (referred to as a local bonus) based on the HC revenue. According to the IT, discrepancies in the way health providers are paid is an extremely poor practice. In his words:

> *Our remuneration is very inadequate –some receive a salary, a government bonus, and a local bonus, while others get the government and local bonuses, and yet other workers only get the local bonus. It is really a bad way to remunerate people. I think this system would not exist anywhere else in the world. I don't understand where this way of remunerating human resources from the same institution came from. I think it's also a way to demotivate workers.*

Local revenue is distributed by percentage: 10 percent for the BCZS, 20 percent for operational costs, 10 percent for investment, and the remaining 60 percent for the personnel. However, the research team noted that nothing was done with the 10 percent allocated to investment. Moreover, the 60 percent-share is not broken down into percentages because most of the time it is insignificant. With CF 200,000, for instance, which is typically about 60 percent of the HC's revenue, the IT will be paid CF 30,000; the deputy IT will be paid CF 27,000; the two A2 nurses and lab technicians will each receive CF 24,000; the A3 nurse will be paid CF 21,000; the two cleaning workers will receive CF 17,000 each; and the sentinel worker will be paid CF 16,000. The CF 200,000 amount is used as a reference. As such, if they have CF 400,000 in revenue, they would each double their bonuses compared to what they would get with CF 200,000 in revenue. When the HC's revenue is lower, their share is reduced. The IT stated that they continue working because it is their calling. Because they took an oath, they believe they cannot disavow their work because they are paid inadequately. The IT believes that if they were in a private facility, their situation might be better, but they are in a public facility with a lot of expectations. Regarding revenue distribution, the IT emphasized that there had never been any complaint among health providers, which he appreciated:

> *Here In our Health Center, no one has ever complained because in each staff meeting, I show what we earned, what we have already spent, if anything, and what our balance is. Everyone knows that this is what we have right now. We try to share [the money]. People are happy with what they get. It's not like other places where someone comes and distributes the money, saying: "There you go". No, no. Everyone needs to know how much money was generated and then we distribute it.*

The respondent from the HGR received a salary and a government bonus. At the hospital level, for each service provided and submitted under his name, he received 40 percent of what the patient paid.

The IT from the HPHC stated that although his HC performed well, they could not rely on bonuses to improve performance. They always worked hard to ensure good performance. However, the IT from the LPHC said that the state should start paying all of its health workers for them to work even harder and to see improvements in performance.

Regarding the need for capacity building, both ITs mentioned that USAID IHP should organize more training sessions for health providers. The IT from the LPHC recommended that the Congolese State improve their health facilities as their building did not comply with health facility norms; ensuring good remuneration for the personnel and providing equipment to health facilities is also key.

Community Health Services

Infrastructure

Health Areas

Respondents reported that community-based services included various outreach activities aimed at addressing health issues, such as using megaphones to disseminate information, conducting in-home visits to assess the health status of community members, identifying and referring sick patients (especially children) to appropriate health facilities, identifying unvaccinated children, promoting advanced strategies for child immunization, conducting community-based talks, and organizing CAC meetings to discuss and introduce health issues. Informants from both HAs reported that their community-based infrastructure mainly consisted of CAC committees, CODESA committees, and RECOs. The DPS established CAC committees in 2020 when communities elected committee members. A training was organized for CAC, CODESA, and RECOs regarding the importance, organization, and role of CAC. The training was organized by the DPS. Several VIVA! activities were held in both HAs. CODESA members serve as focal points between the community and the HC.

Nurses working at the HC and other health providers from the two HAs have conducted in-home visits, especially during large-scale activities such as mass vaccination campaigns, mosquito net distribution, etc.

Only the LPHA had a functional iCCM, which was created in 2014. A female RECO was appointed to the site, and she received training on Integrated Management of Childhood Illness. This RECO valued the training she received as it provided a lot of new information on how to provide care for diarrhea, simple malaria, and ARI. This RECO was also in charge of screening for malnutrition using the MUAC method. After screening, she would refer malnourished children to the HC for the appropriate care. Most of the children she had seen were diagnosed with malaria. Concerning medicines, the site received new supplies on a quarterly basis. During the evaluation, the RECO had all medicines available for malaria, diarrhea, and ARI, but she reported that the quantity of medicines was never enough. She saw 20 children in April 2022, but not all children treated in April were referred to the HC. As supplies and equipment, the iCCM site had a cabinet, a register/logbook, a counseling form, a notebook where the RECOs record patient reports of medication side effects, a timer, gloves, and a thermometer. The IT conducts monthly supervision visits to this site. The challenges reported at this site were a lack of places for sick children and their parents to sit and a lack of examination table or a dedicated area to see sick patients, who were instead seen under a tree, which created problems when it rained. The iCCM site stayed open during the COVID-19 pandemic, observing safety measures, though this RECO did not receive any training on COVID-19. She was given a face mask and 25-liters (6.6 US gallons) of hand sanitizer as COVID-19 prevention supplies.

Although the MCZ and the Director of USAID/IHP reported that several other community activities such as champion communities and mini-campaigns were being conducted, respondents from the two HCs only mentioned the mini-campaigns and not any other activities held in those communities. Respondents did not mention any local organization currently working in the health sector and identified USAID IHP as the only technical and financial partner in both HAs.

Focus group participants reported that they appreciated the work of CODESA and RECOs as they learned a lot from them about their children's health. One female respondent from the HPHA stated:

> *In our households, the CODESA comes regularly to talk about child health, to get them to be vaccinated. They also show us how to feed them. There are a lot of things that CODESA and RECOs only teach us in our homes. They tell us about poliomyelitis, malaria, the need to sleep under a mosquito net, to go to prenatal visits when we get pregnant, as well as family planning, how to space our births, for instance by waiting two years before giving birth again.*

System Design

Role of CODESA Members

All respondents agreed unanimously that CODESA constituted a bridge between the health facility and the community. The CODESA is responsible for ensuring information sharing between community members and health providers. More specifically, CODESA members collect information on the needs of community members regarding patient care and relay this information to health facilities; they then go back to the community to share the health facility's responses or concerns. CODESA members are also responsible for monitoring supply and medicine use at the health facility level. CODESA members mobilize the community for greater ownership of health activities, including in-facility services and disease prevention. CODESA members also help organize prenatal, pre-school, and advanced health visits.

Elections of CODESA members were followed by training throughout the HZ of Bipemba in 2020. CODESA's president and vice-president in both HAs participated in a training session on the role of CAC and the president of the LPHA participated in a training on iCCM sites.

The two HAs each had an eight-member committee, including two female members serving as treasury and adviser. In the committee of the HPHA, the president was a woman.

Role of RECOs

According to respondents from both HAs, the primary role of RECOs is to conduct home visits to monitor the health status of community members, particularly children, and to identify and refer sick members of the community to the HC. Other responsibilities include informing the community regarding health, hygiene, and sanitation practices; child nutrition; vaccination; pregnancy and FP; and the main causes of child morbidity and mortality, including malaria, diarrhea, and pneumonia. RECOs assist health providers during prenatal, pre-school, and advanced health visits; they also facilitate educative sessions and weigh newborns and young children. In both HAs, respondents reported that a RECO usually visits 50 households.

The RECOs in both HAs were provided with cellphones to organize support groups. These phones contained recorded information on various topics. To establish support groups, PROSANI created a phone-based system that allowed the RECOs to schedule their activities based on the different topics. They developed a weekly schedule of activities, elected a topic to introduce to the community, and at the end of each week, they evaluated their progress and planned for the following week.

The HPHA included 75 RECOs, 45 of whom were female and there were several young men and young women. The LPHA included 56 RECOs, including 30 female and 26 male RECOs. There were 10 male RECOs between 19-24 years old. In the HPHA, 40 RECOs were active, while in the lowest-performing HA, 36 RECOs were active.

No RECO interviewed in this evaluation reported witnessing inappropriate behavior from either a CODESA member or a RECO. However, a RECO from the HPHA said that it could happen, as these kinds of issues were

not as rare when men are involved. The individual also noted that inappropriate behaviors were currently unlikely to occur since providers, including CODESA members and RECOs, have grown more conscious of the importance of good conduct as a result of various meetings organized at different levels under VIVA! Interventions.

The president of CODESA in the HPHA reported that RECOs would typically encourage community members to go back to the HC if there had been an inappropriate behavior; otherwise, he explained, the HC could not stay open. He added that RECOs must be on their best behavior to attract patients. The president of CODESA from the LPHA reported that they helped each other out (CODESA and RECO) with advice and mutual support to avoid inappropriate behaviors:

> *We always give each other advice, and we hold staff meeting at the Health Center level to ask them to observe good conduct with patients particularly, and with the community in general, because if our conduct is unfriendly, the Health Center will have a bad reputation, and no one will go there anymore.*

Specific Services Offered

Mosquito Nets

Informants from the HZ indicated that mosquito nets were distributed to pregnant women during their first prenatal visit and to breastfeeding mothers during their pre-school visit when their child is nine months and completely vaccinated; however, at the HC, only women who come to prenatal visits, to give birth, to pre-school visits, and whose children are fully vaccinated are eligible.

Out of the nine women who participated in the FGD in the LPHA, only one had a mosquito net adequately installed in her house and was sleeping under the mosquito net, while four of them did not have any mosquito net, and the remaining four had one but were not using it. The four women who did not receive a mosquito net had a home birth. In the HPHA, all women who participated in the FGD were sleeping under a mosquito net with their children. According to female informants from the LPHA, it was extremely challenging for a woman who had a home birth to obtain a mosquito net. Women who have a home birth do not receive a mosquito net at their pre-school visit. In fact, many women who gave birth at the HC still did not receive any mosquito net. One of the participants stated:

> *If you had a home birth, you need a lot of luck to get a mosquito net, or for the IT to be in a good mood, because in most cases, we are always told that the mosquito nets are out of stock. In my case, for instance, I gave birth here last December, and I was discharged without any mosquito net. They said they ran out of it. And since then, even to this day, I have still not received any mosquito net.*

During the mass distribution campaign, all households in the HA are eligible to receive a mosquito net. Members of CODESA and RECOs were involved in the community-based distribution of mosquito nets. Informants from the LPHC reported that their greatest challenge in distributing mosquito nets was insufficient supplies. They rarely receive enough mosquito nets to meet the demand, i.e., the number of clients who come to the HC for prenatal and pre-school health visits. The BCZS always provides less than the requested quantities, which, in turn, exposes RECOs to many issues in the community as not everyone is able to get a mosquito net.

Vaccination

All vaccines were provided at the HC, except the BCG vaccine which was out of stock between October 2021 and March 2022. However, when this research was conducted, all vaccines were available. Only babies from birth to 11 months were eligible to be vaccinated. Health providers faced various challenges in providing essential vaccines for children, including mothers being late taking their children to pre-school visits and stockouts of some vaccines, all of which prevented them from reporting some children as being fully vaccinated (as was the case with the BCG vaccine when it was unavailable). For respondents from both HAs, the vaccination cold chain did not present any issues. The president of CODESA from the LPHA reported:

> *We have the vaccines and the refrigerator, which is powered by solar panels. When the IT places an order, we can go to the central office to get the vaccines without any issue. Sometimes you get to the central office, and they don't have them, and sometimes stockouts may last more than 3 months. Like last time, which was the case with the BCG vaccine.*

Our observations revealed that all essential vaccines were available on the day of the interview, including BCG, VPO, VPI, DTC, PCV13, Rotavirus, VAR, VAA, TD (VAT), and COVID-19 (Johnson) vaccines. Both HCs organized mini-campaigns targeting children who missed a vaccine shot. These campaigns are conducted in the last week of each month. A RECO travels to the community with a megaphone to ask mothers to visit the HC with their children if they missed a vaccine shot. One of the women from the LPHC reported that they did the same during mass activities, too, as they had done in April 2022 when CHW carried out outreach to raise awareness in the community and encourage people to visit the HC to get their COVID-19 vaccine.

According to respondents from the LPHA, many women fail to bring their children for vaccination. Some women would say that if their children took the vaccine, they would get sick with fever, and they could not afford bringing them to the HC for treatment. Other women would not vaccinate their children because of their religion. Many churches are opposed to vaccines and their leaders say that vaccines destroy children's intelligence.

VIVA! Campaigns

The VIVA! activities, including those related to the quality of care at the HC, couples' communication, and savings, are all part of a larger Behavioral Change Campaign.

One activity examined quality-of-care and involved a community assessment of the HC based on the following aspects: hospitality, cleanliness, service delivery, and health provider-patient relations. This activity was carried out under the leadership of CODESA and CAC members. They reported that the activity contributed to improving the LPHC's hospitality. The HC had had serious hospitality issues, but after this meeting, it became more welcoming.

Another activity centered on improving couples' communication at the household level. A third activity focused on savings sought to teach households how to save and manage their money. Under this activity, it was observed that men sometimes would spend a lot of money on alcohol, while women would spend a lot on hairdressing, but were unable to take their children to the doctor. Breakthrough Action distributed small cash boxes to help households save money. The CODESA member and RECO were responsible for reaching out to the community and for raising awareness on the need for health savings. Informants reported that the

activity helped a lot of women in the community, particularly with the savings box, as many of them did not know how to save money before.

COVID-19

The RECOs attended two training sessions on COVID-19 facilitated by the BCZS. They were then charged with raising awareness in the community regarding safe practices, including how to safely greet people, the importance of wearing a mask, social distancing, and handwashing after each task to prevent the virus from spreading. As supplies, they received a flipchart, soap, and masks for each CAC member on a weekly basis (they would meet on Saturdays).

Focus group participants were familiar with COVID-19. They said that it was a disease that killed many people in Kinshasa and Europe. They all learned about the disease on the radio in 2019, and some of them who had family members in Kinshasa reached out to them and told them to be careful with this disease as it was deadly, and to watch out for primary symptoms, namely cough and fever. For these women, the HC staff only started to talk about it when everyone had already heard about it on the radio or from other people. In their opinion, the health providers, too, did not know anything about it in the beginning. However, they pointed out that nurses and RECOS had recently gone to the community with a megaphone to ask everyone to go to the HC to get their COVID1-9 vaccine.

Community Health Worker Motivation

Community-based workers reported that their primary motivation was based on a desire to help the community understand the importance of health facility care and to improve health service uptake, particularly among children. The President of CODESA from the higher-performing HA stated, “I like this work which I’ve been doing since 2013. I love this work—I don’t do it for money, because as volunteers, we’ve been told that there is no monthly salary. This is why I came today, even on a Sunday, the Day of the Lord!”

The RECO from the lower-performing HA explained what motivated him in these terms:

I like being a RECO. I really like it. I cannot walk up a street without checking in on at least two households. I need to know if they slept well, whether their child get his vaccine. I don’t let a week go by without referring people to the health center. Whether they are sick patients or women who are going to have a baby, but particularly sick patients.

The RECO from the HPHA reported that some RECOs were currently unhappy because, while they used to be remunerated for some activities such as providing family planning services, since USAID/IHP started, these payments have been discontinued. Moreover, no one has explained why they are no longer receiving these payments. He added that since this change, several RECOs have stopped working.

Kasansa Health Zone, Kasai Oriental Province

In the HZ of Kasansa, the assessment was conducted in a HPHA and a LPHA based on child health indicators such as HC attendance for major child diseases and immunization. In each HA, in-depth interviews were conducted with the IT, a CODESA member, a RECO, and the RECO in charge of the iCCM. We also conducted an in-depth interview at the HGR with a medical doctor. We held one interview with the MCZ of the HZ of Kasansa who participated in the evaluation as a key informant. All informants except one were men.

All FGD participants were mothers of young children.

Background Information

The mean age of respondents participating in the in-depth interviews was 26 years old, the majority of whom – 8 out of 10 – were men. Both ITs had level-A2 training. The ITs, CODESA members, RECOs, and the RECO in charge of the iCCM had an average of 16 years of education, while the medical doctor completed 18 years of education. Respondents had an average of eight years of work experience in their positions. All but four respondents had other occupations, most often related to agricultural activities. The average number of people living in informants' households was eight.

Facility-Based Services

Infrastructure

The HA of Lukalaba East, with an estimated total population of 22,675 inhabitants, had 14 CACs, including 4 CACs serving in the large city of Lukalaba and 10 CACs representing the 10 villages in this HA. The large city of Lukalaba is divided into two HAs: Lukalaba West and Lukalaba East. The HC is attached to the HGR. The IT reported that his HA did not have a functional iCCM post.

The HC structure, made of adobe bricks, was built between 2017 and 2018 by the World Health Organization (WHO). This building was originally used as a warehouse during a campaign to fight malnutrition. At the end of the project, the HZ repurposed the building to serve as an HC. This development is how the Lukalaba East HA came to exist.

The IT reported that the building had not been renovated since it was built and that renovations were critically needed as the facilities were too small and the walls of adobe bricks not well suited for a health facility. The building has only two rooms, including one used as a reception and care area and one used as the IT's office and as a pharmacy. This HC lacks a separate area for child health services, with all sick patients seen in the same location. There is no maternity ward or laboratory. Although the HC organizes prenatal visits, women in labor are referred directly to the HGR. Additionally, all prescribed lab tests are done at the HGR. A tank collects rainwater which is used in the HC. According to the IT, the HC has begun taking steps to build a new building that would comply with medical norms.

The Lac Lomba HA, with an estimated total population of 15,434 inhabitants, includes 9 villages comprising 6 CACs. The HC is located eight km from the HGR serving the HZ of Kasansa, which is in the city of Lukalaba. The building of the LPHC was built between October 2019 and October 2020 by Save the Children and was inaugurated in April 2021. The HC consists of separate rooms for consultations and care, a pharmacy, a laboratory, and a maternity ward, which was spacious and complied with national norms. Both adults and children were treated in the same consultation room. The laboratory was functional, and a microscope was

available. The HC had separate latrines and showers for men and women made from cement and was recently painted. The LPHC had two water tanks with a 1,000-liter capacity each. This HA had a functional iCCM site.

The HGR was built in 1947 and inaugurated in 1951 and has a separate ward for pediatric care. Informants reported that the building was in poor condition and many renovations were necessary. Although the hospital has electricity, it is powered by a low-capacity generator and solar panels with worn-out batteries often insufficient to power certain medical equipment. The generator runs for 3 to 4 hours a day, while the solar panel provides electricity 24 hours a day. The hospital had seven tanks to collect rainwater.

Services Offered

Health Centers

Hospital

The two ITs reported that the available services were: outpatient consultations, minor surgery, prenatal care, growth monitoring, postnatal care, FP, vaccinations, integrated management of acute malnutrition, malaria, diarrhea, and ARI, and screening and treatment of HIV and TB. According to the IT of the HPHA, USAID IHP assessed the availability of quality services in 2021. As for the LPHA, an evaluation of the quality of care is conducted on a quarterly basis.

The two HCs followed flowcharts and protocols for child disease management, notably malaria, diarrhea, and ARI. According to both ITs, the flowcharts and protocols were introduced in 2021 when they received training and tools from USAID IHP which improved their capacity for case management. The IT of the LPHC stated:

> *The flowchart is our Bible here at the health center. Because you should never treat anyone outside of the flowchart. As soon as a new case comes in, we must screen for symptoms. Based on the main symptoms, we now can go to the flowchart, and it's the flowchart that must tell us what to do. If the case should be treated at the health center, and if we should not admit them, we'll refer the case… The flowchart is very useful; it helps us reduce the number of drugs or molecules to prescribe.*

The two ITs reported that curative and preventive child health services are integrated during treatment consultations, with health workers also providing counseling to mothers on important preventive measures such as the importance of exclusive breastfeeding, complementary feeding involving dietary diversity, the use mosquito nets, handwashing with soap, and the proper use of sanitary latrines.

General Reference Hospital

According to the respondent from the HGR, available health services included: internal medicine, surgery, pediatrics, maternal health, HIV and TB testing and treatment, and integrated management of acute malnutrition. When discussing treatment for childhood illnesses the respondent stated the following:

> *Malaria, diarrhea, and pneumonia are the most common illnesses in our area, and these have received a lot of attention at the local level, at the intermediary level, and at the partner level. Case management protocols are in place to guide us and standardize disease management consistent with national policy; medicines are sufficiently supplied. For preventive care, such as for malaria, we receive mosquito nets, so this is also at the center of our management.*

The hospital had an integrated therapeutic protocol for all services, including pediatrics, and all specific diseases have protocols, most recently updated in 2016. This physician thought the protocols useful and explained so in the following terms: "Protocols are useful because they allow for treatment standardization. To avoid having each provider treat patients in their own way, standardization allows us to monitor how the condition changes."

Equipment

The HPHA had a functioning solar powered refrigerator. The HC had a growth monitoring kit including a height measure, two Salter scales and a MUAC tape, and a scale for adults. The facility had a stethoscope and a blood pressure monitor but was missing some basic equipment including an infant scale and sterilization equipment. Other equipment missing related to treatment for children included a treatment table and pediatric blood pressure monitor. The HC had a motorcycle to support the IT's travel needs.

The LPHC had two refrigerators, one of which had been out of order since 2021. The facility had a consultation table for infants. The facility maintained sterilization equipment and had other basic equipment including two blood pressure monitors, four stethoscopes, and one thermometer. Other equipment included a fetoscope, a microscope, an electric centrifuge with all reagents, growth monitoring kits including two height measures, three Salter scales and MUAC bands, and two adult scales. The HC did not have any bulbs to provide light at night, forcing health providers to use flashlights when giving care at night. The HC had one motorcycle for travel needs.

Both HCs had a functional incinerator. They also had handwashing stations. HAs had communication materials including flip charts for community-based outreach activities focusing on a variety of thematic areas, posters providing information on COVID-19, sleeping sickness, and sexual violence, and megaphones to disseminate messages more broadly.

Both ITs reported that if they needed equipment, they had to submit a form to their superiors, starting with the BCZS. The IT in the HPHA reported that they are not authorized to buy missing equipment or material based on the agreement they had with their partner, the European Union, stating:

> *We cannot buy with the health center's money because the European Union, our partner, prohibits us from paying for things like that on the market. We must wait for the regional distribution center (CDR) to supply equipment. You can place as many orders as you want with the CDR, but they generally don't have it (the requested equipment).*

ITs explained that the contract they had with the European Union included a clause to earmark a percentage of the HC revenue to support equipment maintenance.

When medical equipment is needed to be repaired, both ITs reported that they must send the piece of equipment to the BCZS, which contacts provincial level authorities who are responsible for deciding who to contact to carry out the necessary repairs:

> *If we have equipment that is out of order, we must first inform our superior, we inform the health zone's central team, who in turn they will inform the health team at the provincial level. Decisions are made at this level. We have a fridge over there that broke down. We reported it to the central office, they reported it up to the DPS, and they sent technicians who came to assess the situation and see what could be done. Since they've left, there hasn't been any follow-up–we're still waiting.*

Regarding missing equipment deemed necessary to provide essential health services to children specifically, both ITs reported that the HCs did not have medical forceps or a child blood pressure monitor. Regarding the forceps, the IT of the HPHC reported, "The forceps are very important because we use them on children in the case of circumcision, and suturing and treating of a wound, among many other things. It is not normal for a health facility to lack such basic things."

At the time of the evaluation, neither HC had received equipment from USAID IHP. The LPHA reported receiving equipment from other donors.

General Reference Hospital

The HGR had an infant consultation table at the maternity ward and an infant scale in the labor and delivery room. The hospital had all basic equipment such as sterilization equipment, blood pressure monitors, stethoscopes, thermometers, timers, and growth monitoring kits. Several handwashing stations were available, but providers did not wear masks, and the hospital did not have gloves. Educational materials included posters, flip charts, and a megaphone to convey messages. The respondent from the HGR reported that other equipment constituted a microscope, a resuscitation device, nasogastric tubes with syringe, an oxygen concentrator, and the Dienexpert (for in-depth diagnostic of TB); the hospital also had a blood bank. The hospital refrigerator was in the affiliated "niche" HC. The radiology center was closed as the machines were out of order.

This HGR last received equipment three years ago. A maintenance service was available to repair equipment.

Medication

According to both ITs, medicine procurement is a long process that has many challenges. They reported that the wait time between ordering and delivery is generally three months or longer and that the delay often leads to recurrent medicine stockouts. These ITs explained that to start the procurement process, they place an order based on a needs assessment. The order is submitted to the BCZS and DPS before reaching the CDR, and at each step, the order must receive approval, which is time consuming. The IT of the HPHA reported:

> *Drug orders need to be reviewed and approved by the BCZS and DPS, one at a time. When the BCZS agrees, they submit the order to the DPS. It can take two or three months before reaching the CDR, and we aren't supposed to buy medicines on the market in the meanwhile.*

The two ITs reported that their partner, the European Union, transfers funds for each facility into their respective account at the CDR when orders are made. The IT from the LPHA explained this in the following terms:

> *We do not provide the funds to order supplies. Each facility has a CDR account, and our partner, the European Union, deposits the funds for each facility in an account on a quarterly basis. For instance, our health center is allocated 2,300 euros every quarter. Within the limits of this budget, we can get new medicines, but we cannot go over [budget] by any means.*

The IT of the HPHA reported,

> *Every three months, we are supposed to fill out the purchase orders. I draft my order, then we submit it to the health zone's central team, they review it, then they submit it to DPS, which in turn reviews it and submits it to the CDR. Not until then will the CDR make the medicines available to us. We cannot do this with the health facility's revenue. The European Union already transferred a set amount to each facility's CDR account to purchase medicines.*

While they are supposed to get resupplied on a quarterly basis, the ITs reported that their health facilities faced frequent medicine stockouts due to the long ordering process, often getting resupplied only twice or three times per year. The HPHA IT reported: "Theoretically, we should be resupplied on a quarterly basis. In reality, sometimes we may get resupplied twice, sometimes three times, but we rarely get drugs four times (a year)."

Under the partnership with the European Union, the IT of the HPHA reported that amoxicillin and quinine were the pediatric medications most frequently out of stock, while the IT of the LPHA mentioned paracetamol, mebendazole, and amoxicillin. Since USAID IHP arrived, he added, antimalaria medicines have already been out of stock for as long as two months. The IT of the HPHA reported that, in case of a stockout, they referred the patient to another facility, while the LPHA would provide prescriptions for which the patient must pay. At the time of the evaluation, both HCs had essential medicines for treatment of childhood illnesses.

In addition, the ITs reported that the HCs received supplies based on the drug availability at the CDR, rather than based on the order. The IT from the HPHA said: "We may order the drug we need and when it is submitted to the CDR, it turns out it is not available. And since we aren't allowed to buy drugs on the market, we remain [without]."

Transport of drugs by Chemonics can be slow and cause additional delays.

Because the European Union was closing its activities in the HZ, the ITs anticipated many future challenges related to drug acquisition, as they would have to start buying the medicines from the CDR using HC revenue. The ITs reported that medicines sold by the CDR are too expensive. The IT from the LPHA shared the following concerns:

> *We don't know what we are going to do because the European Union has suspended its interventions. I think things are going to start to be challenging, since we won't have any money with the CDR, we will have to start buying medicines ourselves. And CDR's prices are very high.*

When inquiring about the quality of medicines provided by the CDR compared to those bought in local pharmacies, the same IT felt that the CDR had misled them, stating that both have similar healing effects.

General Reference Hospital

The respondent from the HGR reported that the hospital was resupplied in two ways: via donations and via the CDR. The supply chain via the CDR followed the same process as for the HCs. If a medicine was out of stock at the CDR, the DPS reportedly authorized the HGR to obtain supplies from an identified source with quality assurance. The HGR informant explained that the facility never had stockouts, stating: "The HGR has never had any medicine stockouts because it has priority at the CDR, and central office in Kasansa has a warehouse where the HGR also has priority."

According to the respondent, the supplies they received were not always the same as what was ordered: "Even if the fulfillment rate is acceptable, there are always medicines that we must buy outside of the CDR. That occurs when the CDR doesn't have a medication or does not have enough of a medication."

Utilization of Services

The most common obstacle to seeking care in the HCs was poverty, with all types of informants mentioning that many people in the HZ are unable to afford the set consultation fees, particularly with the decrease in the value of the Congolese franc to the U.S. dollar. The RECO from the LPHA said,

> *The biggest obstacle we encounter is the poverty that characterizes our villages. You may find a very sick child in a household, and when you ask the parents to take him for care, they tell you that they have no money or food. This is why we have introduced the system of tokens, when children are bought to the center, we treat first and recovery of the costs for care will follow thereafter, because what is most essential for us is to save lives, especially those of children.*

The IT from the HPHA said,

> *The biggest obstacle is the pricing, because before when the community paid 4 USD for treatment the exchange was 1100 Fc per USD or something like that, the consultation fee was about 4 times 1100, which came to a little over 4000 Fc. Now the exchange rate is up to 2000, 2100 which comes to over 8000 Fc for the treatment consultation. Anybody over 5 years old must pay 8200 francs, and for children under 5 years old it is 4200 francs.*

We were told that community members assume that the increase in price is instigated by the HC, when in reality it is due to the devaluing of the Congolese franc.

Informants from both facilities considered distance as another obstacle, particularly for pregnant women or children experiencing severe conditions such as anemia. Distances for villagers living in the LPHA were particularly long, with the farthest village 10 km away compared to 4 to 5 km in the HPHA. Informants also considered the tendency to opt for traditional medication or to seek treatment with religious leaders as a major barrier to care seeking in health facilities. Self-medication was also mentioned to cause dangerous delays in healthcare seeking. The RECO from the HPHA said, "There are many who buy drugs in the city, but when they see that the health of the child is deteriorating, they come to the health center sometimes late. The consequence of the delay can sometimes be death (of the child)."

Other constraints mentioned were related to the stockouts that occur due to late delivery of medications, which can force health workers to give alternate prescriptions that some community members are unwilling to pay, thus reducing healthcare utilization. The IT from the LPHA claimed that health indicators are often poor due to low availability of drugs, stating,

> *Indicators are low mostly due to problems with stockouts in medications. People avoid the health center because we must give prescriptions. People say: "We came here to be treated, we are given prescriptions even for paracetamol, what kind of center is this!"*

The ITs also mentioned that patients previously treated on credit are no longer eligible to receive treatment until they pay their past debts. The IT from the HPHA said,

> *You will find that in the community there are always problems, a parent who comes, he brings 500 francs, you provide treatment, the child recovers in two or three days, it is finished, and he leaves with the 500 francs (without paying). The next time the child is sick he has problems coming to see us again (because the caregiver never paid for the previous treatment).*

FGD participants mentioned that community members with a previous debt are too embarrassed to seek care in the HC. In their view, the bigger obstacle to care seeking in the HC related to poverty, which encouraged community members to self-medicate before seeking facility care. One participant in the LPHA said,

> *If a child is sick and the family only has 500 FC, the household in crisis will first buy a measure of corn flour at 300 FC to feed the family and then buy 200Fc of tablets to tranquilize the child to sleep. If the fever persists the next day, they will take the child to the health center.*

Informants from both HAs mentioned that RECOs are tasked with discouraging community members from using indigenous medicines or self-treatment due to the dangers of ingesting toxic substances and/or inappropriate doses.

General Reference Hospital

The physician informant considered the subsidized assistance, provided by the partner Programme de Reinforcement de l'Offre et de Développement de l'Accès de Soins de Santé (PRODES), as a factor in reducing patient costs to an affordable price. He viewed religious and traditional beliefs as major obstacles to hospital utilization, noting that low educational levels and local beliefs often guide care seeking with indigenous healers or religious based providers. He also mentioned roadways and a lack of suitable means of transport as being major barriers to hospital care, noting that rivers between the HCs and hospital often overflow, making it difficult to traverse the waterways and reach the hospital. The IT from the HPHA also mentioned that people avoid hospital care due to the administrative hassles. The IT in the LPHA noted that health personnel refer vulnerable patients suffering from uncomplicated conditions to the hospital due to the subsidized care offered to indigent patients.

Management and Governance

Coordination

Informants including ITs, CODESA presidents, and RECOs reported participating in monthly HA meetings attended by HC personnel, CAC presidents, CODESA members, and RECOs to review topics such as monthly facility- and community-based activities, disease prevalence, medication stocks, and the financial report. During monthly meetings, health services are reviewed, and plans are made regarding activities for the subsequent month. A RECO from the HPHA said, “We evaluate all the activities carried out by all the stakeholders of our health area, we identify the strengths and weaknesses, we evaluate the progress of the recommendations of the previous meeting, and we plan the activities for the subsequent month.”

CACs also hold meetings at the village level, which are attended by CAC presidents, RECOs, and members of the CODESA committee to review activities.

ITs mentioned participating in monthly BCZS monitoring meetings attended by other HA nurses, as well as collaborating partners such as provincial level program (e.g.. PEV, PNMLS) representatives when HA indicators are presented and nurses exchange experiences. We were told that these meetings present an

opportunity to learn about approaches used in other HAs and improve facility performance. The IT from the HPHA mentioned that monthly monitoring meetings present an opportunity to share needs and challenges with BCZS staff and other partners.

Monthly health zone monitoring meetings present opportunities to exchange best practices and challenges.

ITs did not participate in DPS meetings, which are only attended by the BCZS executive team, who are supposed to relay information shared during the DPS meetings to BCZS meeting participants.

ITs and CODESA presidents reported attending community development meetings to discuss project initiatives established by partners such as UNICEF, USAID, or GAVI. The CODESA president from the HPHA also participated in community development meetings convened by civil society leaders.

General Reference Hospital

The medical doctor reported participating in occasional DPS meetings focused on specific themes such as hospital management or quality of care. As a member of the BCZS executive team, he also participated in other meetings including the weekly coordination meeting when supervisory visits are discussed, a meeting convened to examine disease prevalence, and the BCZS monthly monitoring meeting where he reported on hospital indictors and shared information gathered during supervisory visits related to diagnostics and ways to improve treatment. The hospital informant considered interactions with less qualified health personnel during supervision visits as a critical way to identify healthcare weaknesses such as the tendency to make unnecessary hospital referrals and to improve services. For the medical doctor, BCZS meetings also presented an opportunity to share experiences with partners.

The medical doctor mentioned that PRODES encourages hospital workers to visit and share medical experiences with other hospital personnel outside of the HZ. He viewed quality of care evaluations carried out by partners as an excellent way to learn about new medical recommendations and to make improvements.

Accountability Mechanisms

The HC in the HPHA had one suggestion box, which the IT said was more often used at night when people submitting complaints are less likely to be detected. A committee had been established to review complaints monthly. The LPHA had three suggestion boxes all supported by different partners, with two posted in the HC and one posted at the community level. The IT in the LPHA mentioned that the suggestion boxes are used by community members to report instances of abuse in the health structure or that implementing partners may submit complaints about the health services. The LPHA had established a committee led by the CODESA treasurer which met monthly to oversee the review of complaints and how they should be addressed; the IT was not involved in the process. The IT added that most people in the HA cannot write and are reluctant to ask somebody who is literate to write a complaint on their behalf, thus limiting the effectiveness of the approach.

The HPHA had one green line while the LPHA had three green lines funded by different partners, one of which was used to report cases of sexual violence. The IT from the LPHA added that cases of sexual violence had previously been handled by village chiefs and treated inappropriately, stating,

> *For example, when there was a case of sexual violence involving a minor, chiefs took charge and told the perpetrator: "No, you have to pay the dowry and then have the wedding". It is now forbidden now, a minor cannot be forced to marry under these circumstances, and now we can use the (green line telephone) number.*

In addition, informants reported that community members were encouraged to report perceived problems with health services to the CODESA president and that CODESA members who assisted in overseeing CAC operations intervened when problems regarding HC accountability arose. FGDs did not reveal concerns about retaliation for reporting inappropriate health personnel behaviors or practices.

Community performance bulletins had not been introduced in the HAs.

General Reference Hospital

The hospital also had a suggestion box and green line, but no additional information was collected.

Referral Systems

Informants described referral systems as having different layers, starting at the community level where RECOs are tasked with referring sick members to the HC for care. The RECO from the LPHA mentioned that the HC had introduced a system whereby referred community members are given a token which they present at the HC. Once patients arrive at the HC, the clinician providing treatment decides whether referral to a higher facility is needed, with the IT from the HPHA indicating that health providers consult treatment flowcharts. The same IT reported that if the patient does not show signs of improvement after three days of treatment, the HC is obligated to refer to the referral hospital. The IT from the LPHA mentioned that some patients insist on being rapidly referred to the reference hospital due to a preference for physician treatment.

If a referral to a higher-level structure is deemed necessary, the health worker completes a referral form and enters the patient's name in the HC referral notebook. Health workers in the HPHA attach a red card to the referral form when the case is urgent. The IT from the HPHA mentioned that to make sure that the patient arrives at the hospital, the HC tries to have somebody accompany the patient. If nobody is available, the IT called the hospital doctors to prepare them for the patient's arrival, particularly if the patient needs immediate surgical care. Upon arrival at the hospital, the patient is assessed and treated. ITs may call the hospital to monitor the patient's condition or visit the patient in the hospital.

Once recovered, a counter referral is made for those patients who require additional treatment in the HC. If no additional treatment is required, the hospital is supposed to report to HC personnel on the hospital treatment; this occurs during monthly BCZS monitoring meetings and can be weeks after the patient was released from the hospital.

Commonly reported conditions that required hospital referral included anemia associated with severe malaria and requiring blood transfusion; dystocia, hemorrhage, or other complications associated with childbirth; typhoid fever; infectious diseases; injuries incurred during fights or beatings; and conditions that require surgical intervention such as an appendicitis.

Reasons for refusals included lack of transport, transport costs, and treatment costs, although the IT from the HPHA claimed that newly instituted interventions promoted by implementing partners such as fixed hospital fees and better explanations by health workers regarding the necessity of hospital care has increased acceptance of referrals, claiming that less than 5 percent of referral cases refused. The IT in the

LPHA also considered the reception given to patients in the reference hospital to be a major obstacle, adding that if patients are not well received, they will refuse future referrals. The IT from the HPHA mentioned that in the past patients were afraid of hospital care, but they now have a better appreciation of the benefits. It was also reported that administrative procedures in the hospital can overwhelm patients and their families.

Informants mentioned that transport is particularly difficult when a referral is needed in the middle of the night, especially in the LPHA which was 14 km from the hospital. Furthermore, many people cannot afford to travel by motorcycle, and other options (travel by foot or bicycle) may not be possible due to the patient's condition. The LPHA had recently decided to set aside funds to cover transport costs of people unable to pay to get to the hospital.

Neither HC received funds from partners to cover costs for vulnerable members, but the hospital did get funds from PRODES and the European Union for indigent patients. The IT from the LPHA denied that hospitalized patients are retained for longer periods in the HC due to concerns that, if referred, they will not pay for care already received in the HC.

Recommended ways to improve referrals included making referral forms available, with the IT from the HPHA mentioning that the HC is required to purchase registers and forms because partners often do not provide funds on time. He also highlighted the need for a stretcher which would facilitate transport for patients living in proximity to the hospital. The IT in the LPHA recommended that hospital workers improve the reception of patients and avail transport means, particularly for patients referred at night.

General Reference Hospital

The medical doctor reported that patients first go to HCs for care and that people with more severe conditions are referred to the hospital. He insisted that counter referrals, which include information on the patient's care, are always made. A hospital staff member maintains a register of referrals and counter referrals.

When the reference hospital is not equipped to provide treatment, the patient is referred to the provincial hospital in Mbuji-Mayi. This occurs when the hospital lacks certain equipment to treat or diagnose the condition or when personnel lack the skills to give appropriate treatment, such as complex surgery. Patients in need of neurological treatment, patients/children experiencing respiratory distress, or patients in need of an EKG must be referred to Mbuji-Mayi. Doctors make decisions about the need for referrals, with the informant mentioning that it is up to the referring physician to convince the family about the importance of getting a higher level of care.

The hospital informant stated that the biggest barrier to referrals relates to the costs, although the hospital has a policy to first treat urgent cases without asking for money. In addition, PRODES has funds to partially cover costs for vulnerable patients, and treatment for some conditions such as malnutrition, TB, and Trypanosomiasis (sleeping sickness) is free of charge.

The hospital informant also underlined the challenges families faced obtaining and paying for appropriate transport to the reference hospital and higher-level care. He added that villagers are often galvanized when a community member requires emergency transport, stating,

> *In communities people always take action when someone is sick, someone is suffering. There is a saying, 'We don't party at home when there is a fire at the neighbor's." You will see that those people who*

> *transport a patient, may not be family members, they may be a president of the CAC or a RECO; we often see RECOs accompany the sick.*

He later reported,

> *That's the biggest problem. I cannot tell you how many times we have talked about the need for an ambulance which is presently not available at the hospital. It hurts when we start to think of a referral for a patient who is in very bad shape, and who does not have enough means to pay for transport, it hurts very much. We have 18 HAs; for the most urgent cases, the ITs are obliged to help.*

He added that some ITs transport patients on their personal motorcycles or the HC motorcycle, and if the HZ vehicle is available, it can also be used to assist with difficult cases. He explained that ITs often call the hospital to make sure that the patient has arrived, especially when conditions are life threatening, but that some patients get lost along the way. He said,

> *Most of the time, we don't lose patients, because there is a good explanation at the health center level, why the patient must go the hospital, and the prices are well explained, because most of the time it's the finances that are the biggest obstacle…. We tell them, for your problem it may be necessary (to go to the hospital), and here we have a system, for urgent cases you do not have the right to ask for payment upfront. They get treatment first and hospital workers ask for the money afterwards. Even with this system, some people are unable to pay.*

He added that some references are made due to fear, stating,

> *References and counter-references provide information, I can realize that the diagnostic was not well done by the nurse. I can see that the reference was not needed, it was only done out of fear. I can later tell the health provider, no, you simply had to do this, you could have taken charge of the case in this way.*

When asked about ways to improve referrals, he stated that the hospital needs an ambulance to ensure that the patients experiencing serious conditions that are unable to travel by motorcycle can be transported in the company of a health worker and arrive at the hospital safely.

Healthcare Financing

HCs received a set fee per month from the European Union to cover personnel payments (40%), purchase medications (40%), and cover ongoing HC operational costs and investments (20%). Additionally, HCs used 80 percent of monthly center revenue for health personnel salaries and 20 percent of HC revenue for ongoing operations. European Union funding was scheduled to end in March 2022, at which time HCs would have to rely fully on their revenue to cover HC costs.

HCs used fixed consultation fees which were posted at the reception area in both HCs and had been determined by the European Union based on consultations with DPS and BCZS health officials, facility-based studies, and negotiations with community members. Fees had been set at US$4 for adult and US$2 for child consultations, with the European Union subsidizing costs for medications and supplies at both the HC and hospital level. When first implemented, fixed fees were less expensive than prior healthcare costs, but due to inflation of the Congolese franc, they were no longer considered reduced by the population. Although facility personnel preferred the set fees, which when initially instituted increased HC utilization, informants reported at the time of our study that many community members found HC costs too expensive. The CODESA President from the HPHA said,

> *You may think that we charge a small amount but there are always complaints. The prices are fixed at the center, we came to an agreement based on discussions with the community. When they say that prices are not affordable, we remind the community how we fixed the prices. For children, the price is fixed at 4500 Fc, unless the drugs required (for treatment) are not available; we treat the child for a week.*

While drugs were supposed to be included in the lump fee, frequent drug stockouts forced health workers to give drug prescriptions, thus increasing patient costs. The IT from the HPHA said,

> *It can take a long time to receive the ordered drugs, the order must be reviewed and accepted, it can take even two or three months, and we are forbidden to pay for drugs in the market. When we don't have certain medications, we are forced to write a prescription. They will tell us you asked me for $4 or $2, and you still give a prescription, it is a problem.*

Both HAs used a system whereby RECOs provided parents of sick children unable to pay for healthcare with a voucher indicating that they had been referred to the HC and that payment could be given later. The IT in the LPHA regularly treated patients on credit, and the HC maintained a register detailing money owed by patients. Neither HC had special funds for the treatment of vulnerable community members. The IT from the HPHA noted that the HC care is subsidized by the European Union and already very low, adding that the HC cannot afford to provide additional assistance to vulnerable community members.

Health mutuals had not been introduced, with the IT from the LPHA stating that the approach was not accepted by the population. No other payment schemes were being used by the HCs.

General Reference Hospital

The physician informant mentioned that the hospital always offered treatment to urgent cases without first requesting payment. He added that the hospital received funds from PRODES to cover costs for medications and supplies incurred by indigent patients, while the patients were required to pay for the health provider costs. The hospital informant reported that several health conditions, including TB, Trypanosomiasis (sleeping sickness), and child malnutrition, are subsidized by partners, and treated for free. He added that care for children in the pediatric ward involved a low co-payment or was given for free. Our informant stated that reductions in patient payments had resulted in increased hospital utilization.

The hospital did not offer health mutuals, although the physician mentioned that they are in the process of introducing the approach.

Resources for Facility Workers

Training

IT informants reported that facility personnel had participated in different trainings organized by USAID IHP, including training on national guidelines concerning treatment of malaria, hygiene, environmental sanitation, and waste management (HPHA); integrated management of child and neonatal illnesses (HPHA); water management (LPHA); drug and supply management, financial management (LPHA); and iCCM sites (LPHA). Both ITs also mentioned that staff participated in training on management of severe malnutrition, which was sponsored by Save the Children. Informants reported that training improved facility-based treatment, noting that after training treatment protocols were more rigorously followed and that standardized care improved. The IT from the LPHA also noted that USAID IHP made essential tools available during trainings.

CODESA presidents and RECO informants had not participated in any recent trainings, with the RECO from the LPHA stipulating that when trainings in the HZ are held, only a few RECOs are selected to attend. The CODESA President of the HPHA reported that all CODESA presidents in the HA had participated in the CODESA revitalization training held in December 2021. The RECO in the same HA reported that he had never attended training in his role of RECO, adding that his only interaction with higher level health officials was when he participated in a meeting and that all directives he received came from the CODESA president.

General Reference Hospital

The physician informant mentioned that in 2021, personnel had participated in many trainings sponsored by USAID IHP, including training on treatment of malnourished children, treatment of children with TB, treatment and monitoring of malaria cases, integrated management of child and neonatal illnesses, gender, gender-based violence and STIs, WASH and hospital hygiene, and SONU C. The informant raved about SONU C training, underlining that attendees learned about improvements in life saving emergency obstetric practices such as c-sections. He also cited the training on WASH and hospital hygiene as highly pertinent to hospital needs, adding that the training propelled the youth committee to become more active.

Access to Continuing Education

Informants reported that their main source of new information was meetings and emphasized the need for more regular health related information. The IT from the HPHA mentioned that access to computers and Android phones would improve access to essential health information. CODESA members and RECO uniformly mentioned the need for more training to improve their knowledge and work capacity.

There was general agreement among health workers that improved access to health-related information would strengthen health services and quality of care.

General Reference Hospital

The physician informant mentioned receiving information during meetings and trainings, noting that access to information has improved with the start of USAID IHP. He felt that health workers required more capacity building to keep abreast of the constant evolution of medicine and science, noting that health personnel information needs are vast, and more people should be invited to attend trainings.

Attitudes of Health Workers

All respondents acknowledged the potential for inappropriate behavior, whether from a provider or a patient, especially if someone is under the influence of alcohol. Informants reported that some negative behaviors were observed, but that they were infrequent. The RECO from the LPHA stated: “That doesn’t happen here, except that some patients are sometimes uncompromising with nurses, they don’t respect the first-come, first-serve rule. This could lead to a provider responding badly.”

All respondents understood that inappropriate behaviors could affect care seeking. The IT from the LPHA stated:

> *In health, we are told that if only one person is told of a provider’s bad behavior, rest assured that you have told 10 people. But if you’ve told 10 people, how many do you have? A hundred! And if you are told a*

> *hundred, it's a thousand. So, if you behaved inappropriately with only one person, you should know that the entire community will know, and there will always be resistance.*

One focus group participant from the HPHA reported:

> *We have never heard of any inappropriate behavior from a head nurse, a nurse, or a community-based worker. You know, these types of things cannot be hidden. It only takes one person in the whole population to learn about it. If someone had behaved inappropriately, we would all know about it.*

According to informants, inappropriate attitudes and behaviors can be improved through training and staff meetings. The CODESA member of the HPHA reported: "If a provider behaves badly, we call a CODESA meeting, and during the meeting we tell them face to face, transparently, so they may improve."

The respondent from the HGR added: "If someone behaved badly, it is better to tell them face to face so they may change in the future. Their behavior can damage the reputation of the entire institution, just like that."

None of the providers, CODESA members, or RECOs had participated in group sessions during which providers' attitudes and behaviors were discussed, other than routine staff meetings in which supervisors may remind staff about work ethics and deontology from time to time. Only the HGR respondent had participated in training where health provider behaviors and attitudes were discussed. He described it as follows:

> *Yes, in various capacity building activities, when we talk about providing care for such or such pathology, there always are different levels of care. There are soft skills and technical skills. Regarding soft skills, we focus on behaviors. This is much more emphasized in gender-based violence (GBV) and sexual violence trainings. There is an emphasis on behaviors. Once we went to an ETAT (emergency triage assessment and treatment) training. That one was good because even the cleaning staff participated in the training. They talked about how to make people feel welcome. The front desk staff was also part of the training, even the security guard who was at the front door because we emphasized being more welcoming to patients.*

Health Worker Sources of Motivation

ITs reported that health workers are primarily motivated by remuneration. At the time of the evaluation, payment was based on a performance-based financing scheme supported by the European Union, which provided a monthly sum of money to the HCs according to European Union-specified services. Health facility revenue was also used for personnel salaries, which are allocated according to the personnel grade, with the IT and ITA receiving the largest percentage and the cleaner receiving the lowest percentage. Informants reported that European Union payment often arrives late, which prevents HCs from maintaining salary payment schedules.

At the time of the evaluation, the European Union was about to stop activities, raising concerns regarding health personnel salaries. In the HPHA, none of the health personnel received government bonuses or salaries, even though they are officially on the government payroll. The IT and ITA from the LPHA received government salaries, with the IT stating that the combination of government salary, HC revenue, and the European Union payment makes for a livable wage, but that the government salary alone was very poor.

The second most frequently mentioned source of motivation included the commitment health workers made to providing healthcare. The IT from the HPHA said: "We have a professional conscience. When we completed

our studies, we took an oath that we would work for the community, for the nation. It motivates me to work, but financially, it's a problem."

However, the IT from the LPHA poked fun at the expectation of working for the "love" of the community. Both ITs believed that there is room for advancement in their careers, mentioning that they have the possibility to become HZ supervisors. Despite poor payment, they stated that health personnel are generally satisfied with their work but require more training to perform better.

General Reference Hospital

The hospital informant considered his commitment to care for people and to save lives as his biggest motivation. His salary was based on the hospital revenue and EU support, of which 50 percent was divided among hospital personnel, including eight doctors. He stated that 20 percent of hospital staff receive government salary and bonuses, adding that salaries are variable but that bonuses are better structured and higher, with the highest bonus around US$500 being for a doctor. He added that hospital workers are generally not satisfied with payment, stating that the government should be responsible and not rely on donor organizations. Regarding future advancement, the informant reported that he has the possibility of becoming a medical specialist with his expertise.

Community Health Services

Infrastructure

Health Areas

According to the informants, routine health services in the community involve various outreach activities that provide preventive and curative care, such as in-home visits, community discussions, and CAC meetings. In-home visits are conducted to assess the health status of community members, identify sick patients, particularly children, and refer them to health facilities for further care. Health workers also engage in outreach activities in remote areas such as well baby visits and vaccination sessions.

Informants from both HAs reported that the community health system was composed of CAC committees, CODESA committees, and RECOs. The HZ created CAC committees in 2021 when communities elected their members. Subsequently, a training of the CAC, CODESA, and RECOs was held on the topic of the organization and role of the CAC committee at the HZ level. Several informants pointed out that the community health system was under the control of community members who voted for CAC members, RECO representatives, and CODESA members all in the presence of the village chief and other local leaders. In their capacity, community members are encouraged to monitor the HC's activities.

Informants considered the CACs as a central component of the community health system in all villages in the HZ; village RECOs are affiliated with the CACs. CODESA members serve as an intermediary between the community and the HC, supervising the collection of monthly health activity reports compiled by the RECOs and sharing other relevant information regarding community-based health activities or concerns with ITs. ITs rely on CODESA members to report key health information to CAC committees, who, in turn, share this information with community members. CODESA members and RECOs reported that CAC's community-based activities were essential as they raised awareness among the population on health issues and promoted HC attendance.

Regarding health campaigns, informants at the HC level mentioned vaccination, Vitamin A, and deworming campaigns. There was no mention of champion communities made by any respondents who participated in

the in-depth interviews. In-depth interview informants mentioned the conduct of mini-campaigns related to exclusive breastfeeding and community hygiene, and the MCZ reported that the HZ organized mini-campaigns on diarrhea management and referrals, identification of children who had missed vaccinations, WASH activities, and screening for TB cases. The MCZ also reported that since the arrival of USAID IHP, the HZ had regularly celebrated world thematic days, stating: “Ah, since PROSANI (USAID IHP) is with us, we celebrate international days like World Latrine Day, World Water Day, World Breastfeeding Day, and World Handwashing Day. We don’t run out of these days!”

Only the LPHA had a functional iCCM site, which was created five years earlier and located 18 km from the HC. According to the female RECO posted in the site, the iCCM unit had received a cabinet, basic medicines such as ACT for malaria and zinc for diarrhea, a register for sick children, RDT kits for malaria testing, a pediatric scale, and referral slips to give to parents when referring their children to the HC. The RECO could provide care for mild cases, and all serious cases were referred to the HC. The iCCM site had gone through a long period of stockouts prior to this assessment, and during this time, all patients, even noncritical cases, were referred to the HC.

System Design

Role of CODESA Members

All respondents had a common understanding of the role of CODESA members, who they described as a bridge between health facilities and the population tasked with ensuring information is shared between community members and health providers. Consequently, CODESA members collect information from community members regarding patient care, share this information with health facilities, and then return to the community to report on the health facility’s responses or concerns. CODESA members are also responsible for monitoring the use of supplies and medicines at health facilities, allowing them to act as the eyes and ears of the community. They play a role in mobilizing the community to take ownership of health activities, including in-facility health services and disease prevention. Additionally, CODESA members help organize prenatal and growth monitoring outreach activities.

In the HZ of Kasansa, CODESA members were elected in 2021, followed by training in all HAs within the HZ. The presidents and vice-presidents of the two assessed HAs participated in a capacity building session on CAC functions and iCCM. The HPHA had an eight-member committee, including two female members who served as vice-secretary and treasurer, while the LPHA had a seven-member committee, including one female member serving as treasurer.

Role of RECOs

Respondents reported that the primary responsibility of RECOs is to conduct in-home visits to monitor the health status of community members, with a particular focus on children, and to refer sick individuals to the HC for care. In both HAs, the respondents reported that a RECO is tasked with visiting 30 households. The RECOs from the LPHA had a journal in which they would log the names, addresses, and observations of each household.

Additionally, RECOs raise awareness about health, hygiene, and sanitation practices; child nutrition; vaccination; healthy pregnancy; FP; and the main causes of child morbidity and mortality, such as malaria, diarrhea, and pneumonia. Furthermore, RECOs track the vaccination status of children in their assigned

households and ensure that each child receives the appropriate number of vaccinations. They also identify pregnant women who require adequate prenatal care visits. At the facility level, the RECOs assist health providers during prenatal and growth monitoring visits, and during outreach visits they facilitate educational sessions and weigh infants and young children.

Informants were not aware of any inappropriate behavior manifested toward a parent of a sick child, whether by a CODESA member or a RECO.

The HPHA included 60 active RECOs, 11 of whom were female. There also were a few young men and women. The LPHA included 38 RECOs, 15 of whom were female and 12 of whom were youths between 19 and 23.

Specific Services Offered

Bed Net Distribution

Informants at the HZ level reported that bed nets were distributed at two levels: the community level during campaigns when all households are targeted, and in HCs. At the health facility level, bed nets are provided to women during their first prenatal visit, to child caregivers attending well baby visits and when children are completely vaccinated, and to women giving birth at the facility's maternity ward. All HC personnel were involved in the bed net distribution during mass campaigns, while distribution at the health facility level relied on the IT and RECOs who helped during prenatal and grow monitoring visits. The IT from the LPHA reported,

> *We give them to the mother at the prenatal visit, during the first visit. We give the mother a mosquito net and we explain how to use it. After that, during growth monitoring visits and at the last VAR vaccination visit in the ninth month, we also provide a mosquito net for the child, and when a woman gives birth at the health center, on the day she is discharged, she also has the right to receive a mosquito net. We always have the RECOs' support.*

The President of the CODESA is involved in monitoring bed nets, as reported in the LPHA:

> *Regarding mosquito nets, upon reception I must be there to receive it, and I am also there during distribution. At the end of the month, we check the stock. Based on what we receive, we monitor our stocks to know how many we had, how many we distributed, how many there are left.*

Regarding mass distribution, the IT from the HPHA reported,

> *For mass distribution, as soon as bed nets are available at the health zone's central office, a quota is sent to the health center, based on our population size and needs. The bed nets are sent to the CAC, which starts distribution under the supervision of the health center. I am the designated person to ensure that operations are carried out correctly.*

All respondents who participated in the FGDs had mosquito nets at home, except for one woman in the HPHA who had given birth in a private facility that is not integrated with the HZ of Kasansa. Focus group participants from both HAs reported that the most recent mass distribution of bed nets had taken place in 2018.

All types of informants reported having no difficulty with the distribution of bed nets but did report that there were significant challenges regarding their use, as some people do not like sleeping under them. Others use the mosquito net for other purposes, including as a fishing net, a yard fence, or to cover vegetable produce in

gardens. Focus group participants further reported that, because they are considered a valuable resource, nets are stolen when set out to dry in the sun.

General Reference Hospital

The respondent from the HGR admitted that he had never been involved in the distribution of bed nets, although he knew the criteria for eligibility at the health facility level.

Vaccinations

All respondents reported that vaccinations are free, with some vaccines provided as a combination vaccine, while others are provided as separate shots. Informants from the HPHA mentioned that they organized 12 vaccination sessions per year, including 8 sessions at the HC, and 4 outreach sessions, whereas informants from the LPHA reported that they organized only 7 sessions the previous year, including 4 sessions at the HC and 3 outreach sessions in remote villages. All respondents agreed that children between 0 and 9 months were eligible for vaccines.

Informants reported many challenges when providing essential vaccines to young children in remote villages. The most significant challenge according to them, was BCG vaccine stockouts, which occurred during the entire year of 2021. Another challenge, which seemed to be constant, was difficulty in traveling during outreach visits with all their equipment (e.g., scale, vaccine cold box, registers, growth monitoring cards, etc.). Additionally, while the HCs had motorcycles, both ITs reported a lack of fuel to use them.

Focus group participants from both HAs agreed that vaccines were very important for young children because they help develop children's immune system to better resist various diseases. One mother respondent from the HPHA stated,

> *Vaccines are very important for children, because for a child who has been vaccinated, his organism will develop a defense system because we have introduced "the fighters" (these are in the vaccine and are like an army) in his body to defend himself against any external attack, that is to say diseases and epidemics. A vaccinated child may get the disease but will not be affected by it compared to an unvaccinated child. In brief, vaccines provide immunity to children and a vaccinated child won't get poliomyelitis.*

General Reference Hospital

The respondent from the HGR reported that vaccine acceptance is a challenge due to misconceptions in the community. He added that many people believe, particularly in rural areas, that white people use vaccines to disrupt black people's organisms.

Community Health Worker Motivation

Community-based workers reported that they were motivated to perform their work because the community deemed them capable and gave them this mandate as a RECO or CODESA member. They added that they perform their job out of love for their community and country, which motivates them to help community members understand the importance of health facilities and improving health service use, especially for children. The President of CODESA from the HPHA stated the following:

> *I belong to the community and I am only interested in helping the community understand the importance of the health center services. This is a renewable 3-year mandate that my brothers entrusted me with. I must work in good conscience, knowing that I work for God through the community. This is my mandate.*

The RECO from the LPHA stated:

> *I work out of love for our village and for the well-being of my country, not for any other specific interest. Through this work, I seek to improve people's well-being. Here we have a local motto that says: "Muna usama bulaba busama, ni ubukila, nganyi, ni bukila bulaba?" which means "If the child and the earth are sick at the same time, what should we heal?" And the answer is the earth, because if the child dies, he will be buried in the earth. As an individual and in the community, we have needs. I cannot prioritize my own needs at the expense of the community. This is why we serve, regardless of our needs.*

Although the community health workers recognized that they agreed to work as volunteers, all our informants, including the ITs, reported that some financial support would motivate them to dedicate more time to community-based health interventions. The IT from the HPHA put it in these words: "Although we always told the RECOs that their activities are voluntary, and they know it, some activities always require a little bit more motivation. Some are satisfied with their work, others are not – or get demotivated from time to time."

All informants reported that the RECOs, and especially CODESA members, needed more capacity building to increase their knowledge and the quality of their work. Both ITs reported that training of the community health workers was critical to the HA performance and general functioning of HCs. The IT from the HPHA mentioned that, although USAID IHP offered various trainings for RECOs, only a small fraction of RECOs were invited to participate, which was discouraging them. Moreover, our data suggest that CHWs are not supervised by the HC staff or by any HZ supervisors. RECOs tend to believe that these health officials do not see CHW activities as important, which is why they are not supervised.

Our research suggests that there is no regular contact between HGR staff and CHWs, and the HGR respondent knew almost nothing about how CHWs worked.

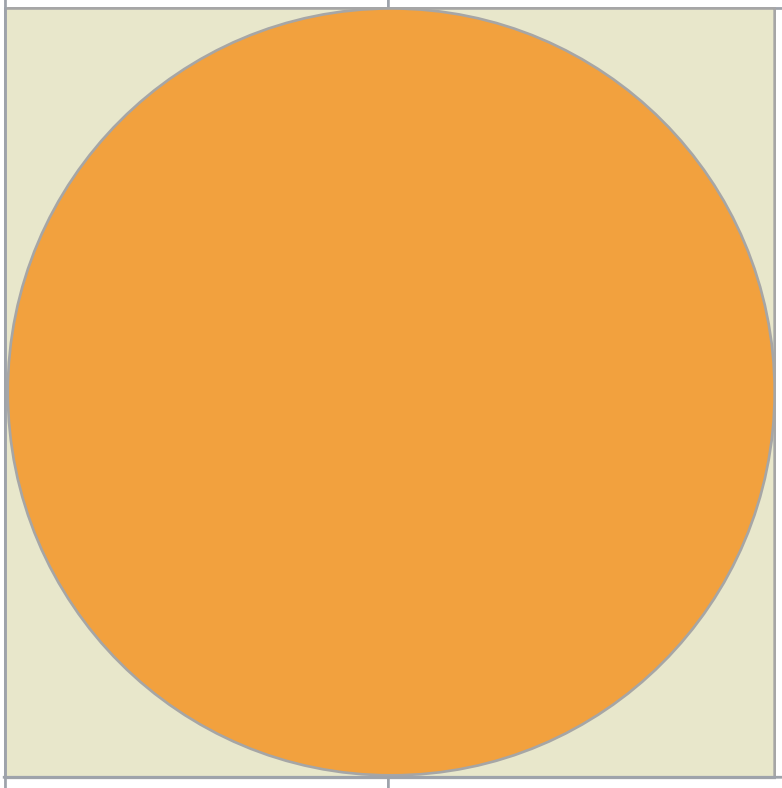
VIVA!

Informants reported that there had not been any VIVA! activities in the HZ of Kasansa.

COVID-19

According to the CODESA and RECO informants, the beginning of the COVID-19 pandemic disrupted aspects of their work. For instance, when COVID-19 emerged, it was impossible to conduct outreach activities because everyone had to stay home. The most significantly altered aspect was access to the HC. According to one RECO, when people resumed going to the HC, there were personal safety practices in place such as greeting from a distance and avoiding large gatherings. The CHWs reported that they did not receive any training related to COVID-19. However, they did receive materials such as hand sanitizer, liquid soap, face masks, non-contact thermometers, and leaflets.

All focus group participants had knowledge of COVID-19, including its origin, signs, and symptoms; how it spread; and how to prevent it (personal protection practices). Focus group participants reported learning about the disease from people in their communities, including RECOs, and on the radio. One participant mentioned that most community members knew about it, since it was a deadly disease, and everyone was scared. Focus group participants unanimously reported that COVID-19 not only changed their use of health services, but also other aspects of their lives, as schools, churches, and restaurants were closed; and markets were restricted. Additionally, access to the HC was regulated by temperature checks, handwashing, mask wearing, and social distancing.



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