

Members of the Pivot, Centre ValBio, and Ministry of Public Health teams gather for a tour of Ranomafana's newly-outfitted molecular biology laboratory; a year-long effort to establish RT-PCR testing capacity in Ranomafana.



QUARTERLY IMPACT REPORT

April 1 - June 30, 2021

Dear Pivot community,

We are proud to share our second Quarterly Impact Report of 2021.

The months of April through June in Madagascar were marked by the declaration of a second wave of COVID-19 infections. In May, the arrival and distribution of vaccines began, bringing hope that – despite confirmation of new variants present in the country – Madagascar will be equipped to avoid a more widespread outbreak. Throughout the quarter, our teams reinvigorated response efforts, ramping up safety procedures in facilities and awareness-raising campaigns to help prevent the spread of disease at all levels of the health system in Ifanadiana District, with a focus on encouraging eligible patients to pursue vaccination.

The quarter was also marked by the realization of two major milestones in Pivot's longer-term pandemic response. First, the year-long process to establish RT-PCR testing capacity in Ranomafana culminated on May 14th, when partners from Centre ValBio (CVB) and the Ministry of Public Health (MOPH) convened for the inauguration of a newly-outfitted molecular biology laboratory. Housed in CVB's existing biosafety level II lab, it is the first of its kind outside of the nation's capital. This new testing site will not only enhance the ability of the public health system to adapt to the spread of COVID-19 cases in Madagascar's more rural regions, but will also provide the foundation for future innovation in infectious disease diagnostics for the region's human and wildlife populations.

Meanwhile, a landmark collaboration to procure personal protective equipment (PPE) for every one of Madagascar's almost 40,000 community health workers (CHWs) has been underway with our partners at the COVID-19 Fund for Africa and the Community Health Impact Coalition (CHIC), who have been leading an international effort to provide #PPEforAll over the past year. During the quarter, millions of masks, face shields, gloves, and gowns began to arrive in Madagascar's capital, with enough to provide every CHW in the country with six months' worth of PPE. As CHIC-led research demonstrates, "CHWs who were equipped and prepared for the pandemic were able to maintain speed and coverage of community-delivered care during COVID-19." Having spent the majority of the pandemic focusing on protecting Ifanadiana District's CHWs and clinical personnel, we are proud to serve as the conduit for advancing this crucial initiative throughout Madagascar. We expect distribution to be carried out next quarter, with plans being made for CHWs to gather their supply during regular monthly reviews at their local health centers. We look forward to this initiative shining a light on the importance of community health as the foundation of the public health system, strengthening our case for paying and professionalizing all CHWs in Madagascar.

As always, we hope the report that follows serves as a useful tool for you to engage with our work, as we use it to foster our own transparency and accountability. Thank you for your continued partnership.

Onward together,


Tara Loyd
Executive Director


Matt Bonds
Co-Founder & Scientific Director

IFANADIANA DISTRICT

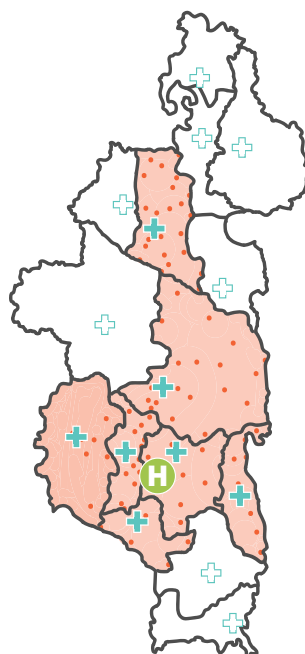
In partnership with Madagascar's Ministry of Public Health, we are transforming Ifanadiana District's public health system into an evidence-based model for universal health coverage that can be sustained, replicated, and scaled.

Total District Population: 187,571

Current Catchment Area: 93,653

Baseline Statistics (2014):

- **1 in 7** under-5 mortality
- **1 in 14** maternal mortality
- **71%** of the population lives >5km walk from nearest health facility
- **49%** of the population lives >10km walk from nearest health facility

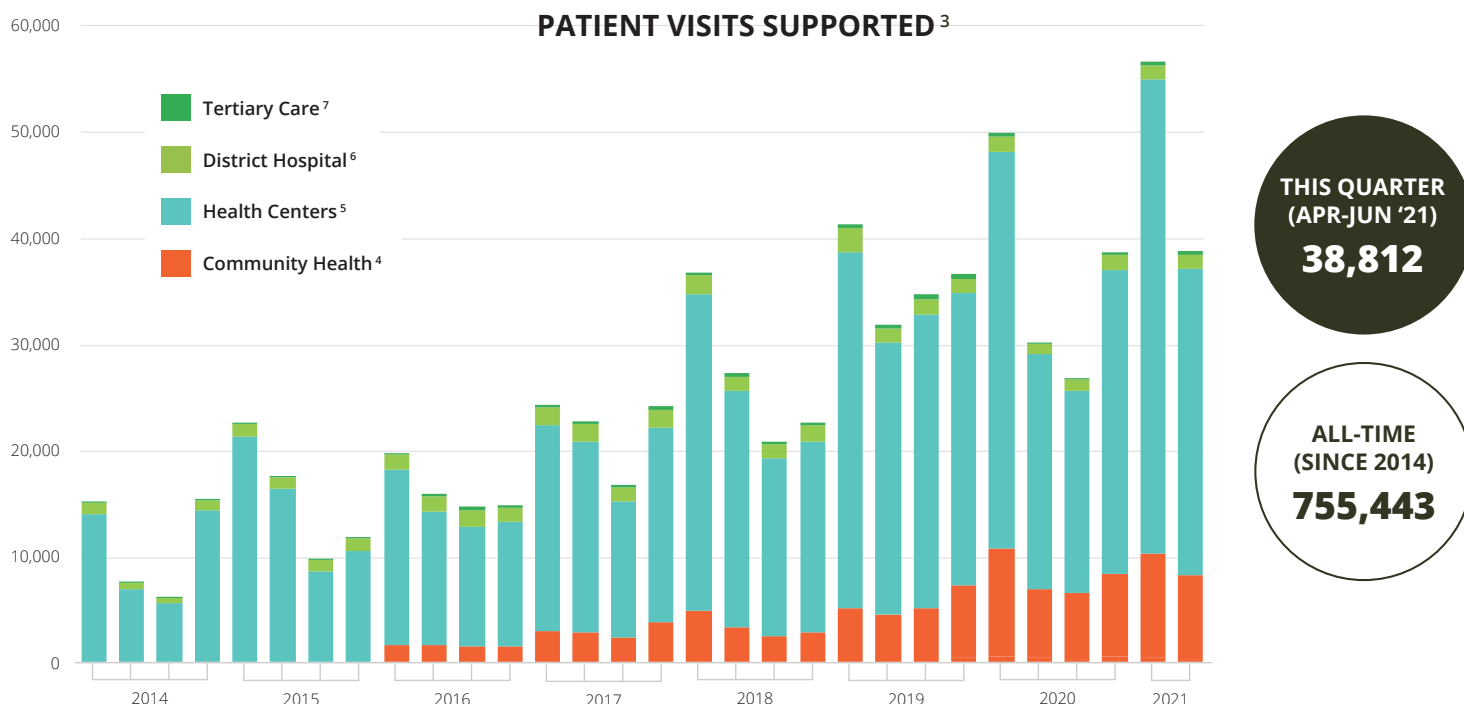


Pivot's current support to the health system at each level of care:

- H** 1 district referral hospital
- +** 7 health centers receiving Pivot's full model support package¹
- +** 8 health centers receiving partial support² to receive full support by 2022
- 175 community health workers (CHWs) serving throughout shaded communes
- 81 community health sites basic structures where CHWs receive patients

HIGHLIGHTS & CHALLENGES

- The first wave of Pivot's biggest-ever expansion was successfully completed, with **six primary healthcare facilities renovated** to better serve patients in dignified spaces. Planning began for the next round of health centers in need of rehabilitation.
- Observing a decrease in child vaccination coverage, **launched proactive transport of vaccines** to communities where needed most.
- Following the postponement of plans to conduct surveys for the Pivot Science longitudinal cohort study in 2020, began **household data collection to measure population health outcomes** inside and outside of our programmatic intervention area.
- In preparation for the formal launch of universal health coverage (UHC) in Ifanadiana District, organized several **trainings for Pivot and MOPH about the principles and practices of our UHC strategy**, co-written with the government.
- Successfully completed the **installation of solar panels** on eight of the district's fifteen health centers.
- At the community level, rates of adherence to care protocol decreased due to ongoing challenges with national **malaria drug stockouts**.
- Community health supervisors were **unable to achieve targets for supervising every CHW due to major rainfall** making many rural routes and rivers impassable.
- A **new mobile application called CommCare** rolled out in **Ranomafana Commune**, where CHWs delivering proactive household care are piloting the process of reporting patient data electronically.
- Challenges with COVID-related staffing shortages led to the **recruitment of four temporary clinical personnel** – one doctor and three nurses – who are now in rotation at the district hospital.
- Following the growing success of the maternal waiting homes at two health centers, the **sensitization team ramped up community education on the importance of safe, facility-based deliveries** and birth planning where more such structures are to be built.
- In response to geography presenting **recurring challenges to reliable transport of tuberculosis tests and samples**, a moto driver is now available at all times to drive the route between the hospital lab and select rural facilities on a more regular, timely basis.
- In continuation of the effort to improve service accessibility and continuity of care, **donated 3 rolling stretchers to rural villages** (>10km from care) to support communal patient transport.
- The social work team **launched support for patients with HIV**, including targeted facilitation of access to care, connection to psychological health services, and provision of food staple kits.
- In partnership with Madagascar's Ministère de la Population, de la Protection Sociale, et de la Promotion de la Femme, **initiated provision of safe shelter and essential supplies to victims of gender-based violence** in Ifanadiana District.
- The **sensitization team reached over 46,000 people** in person (plus thousands more via radio) to engage the population on key public health topics, such as COVID prevention, blood donation, and more.



Community Health



Health Centers



District Hospital

VISITS (CHILDREN UNDER-5)
8,443 (Target: 6,761)
125% of target achieved
PER CAPITA UTILIZATION ⁹
2.3 visits per child under 5 (annualized)

Community Health Outcomes in Proactive Care Pilot Commune vs. Non-Pilot Communes		
	Proactive Care Pilot	Non-Proactive Communes
Percent of Households Visited	90%	0%
Per Capita Utilization Rate	2.4	2.3
CHW Adherence to Protocol	98%	88%
CHW Supervision Rate	92%	96%

EXTERNAL CONSULTATIONS ¹⁰ (ALL AGES)
28,730 (Target: 41,565)
69% of target achieved
PER CAPITA UTILIZATION ⁹
1.2 visits per person (annualized)

OUTPATIENT VISITS (ALL AGES)	
1,277 (Target: 2,200)	
58% of target achieved	
HOSPITALIZATIONS	BED OCCUPANCY ¹¹
597 (Target: 602)	54% (Target: 75%)

CLINICAL SPOTLIGHT: COVID-19 VACCINATIONS BEGIN IN MADAGASCAR



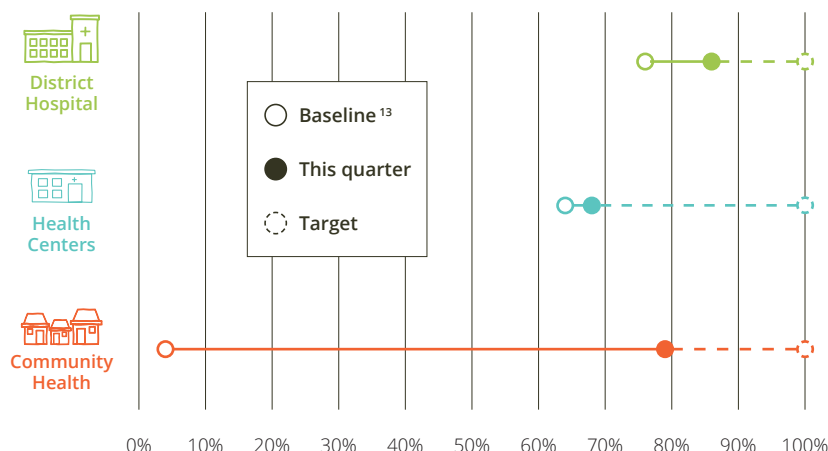
At long last, COVID-19 vaccines began arriving in Madagascar during the month of May!

While the country had initially chosen not to participate in COVAX (the WHO's equitable vaccine distribution strategy), a second wave of cases ultimately prompted the government to opt in. After a first shipment of 250,000 Covishield / Astrazeneca doses arrived in the capital the second week of May, the nation's Minister of Public Health and proponent of Pivot's work, Prof. Jean Louis Rakotovoao, was the first member of the government's executive branch to receive the vaccine. This was an important moment for the nation's leadership to serve as an example, demonstrating the vaccine's importance and safety to a population in which vaccine hesitancy is common.

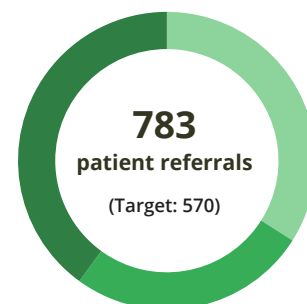
Following suit, **Pivot's two interim national directors, Bénédicte Razafinjato (pictured on the left) and Benjamin Andriamihaja, were among the first on our staff – and in Ifanadiana District – to receive their dose.** So far, over 80 Pivot staff members have received theirs as well.

Meanwhile, we have been actively supporting district health officials in their efforts to coordinate distribution, as well as trainings to prepare personnel who are administering the vaccine. Our social work and sensitization teams have also augmented their regular health campaigns to focus on encouraging eligible patients to pursue the vaccine, sharing all of the pertinent information about the vaccine's safety and ultimate necessity for the wellness of the population.

AVAILABILITY OF ESSENTIAL MEDS ¹²



CONTINUUM OF CARE



40%
transferred
by Pivot
ambulance

26%
transferred
by taxi bus
with transport fees
covered by Pivot

34%
by other mode
of transport
on foot, or by car,
tractor, stretcher, etc.

STAFF

- **235** total Pivot employees
 - **98%** Madagascar-based
 - **95%** Malagasy
 - **9:4** female:male leadership
- **292** MOPH personnel supported
 - **61** district hospital staff
 - **56** health center staff
 - **175** community health workers

VALUES IN ACTION



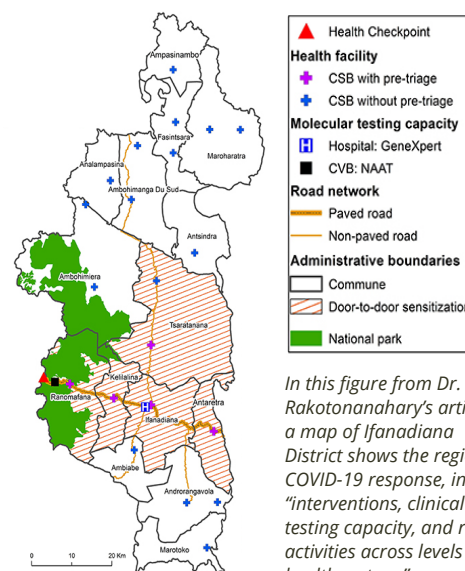
Every week, Veronique, a Pivot-supported community health worker in Ranomafana, spends three of her workdays trekking through forests, rivers, and mountains to reach the homes on her proactive care circuit. Responsible for visiting 95 households each month, she focuses on the essential health needs of children under 5 and pregnant women, treating them at home, or accompanying them to higher levels of care (health center or hospital) when needed.

SCIENCE SPOTLIGHT: PANDEMIC CHALLENGES IN UNDER-RESOURCED SETTINGS

There are many outstanding questions about how to control the global COVID-19 pandemic. The information void has been especially stark in the WHO's Africa Region, which has relatively low per capita reported cases, low testing rates, low access to therapeutic drugs, and the lowest supply of vaccines. As with all disease, the central challenge in responding to COVID-19 is that it requires integrating complex health systems that incorporate prevention, testing, frontline health care, and reliable data to inform policies and their implementation within a relevant timeframe.

To shed light on both the process and the challenges of such an integrated response in an under-resourced rural African setting, a [recent article by Dr. Rado Rakotonanahary](#) and team presents the unique COVID-19 clinical and research strategy underway in Ifanadiana District. These efforts touch every level of the health system, which includes the establishment of the only RT-PCR lab for SARS-CoV-2 diagnosis outside of the capital, launched in partnership with Centre ValBio and the Ministry of Public Health in May.

Due to data limitations, many questions remain unanswered. To address this, a widespread population-based seroprevalence study has been conducted through Pivot's long-term cohort study. Lab analysis is currently underway at the Institut Pasteur de Madagascar that will soon offer critical insights into COVID-19's epidemiology in Madagascar and the region.



In this figure from Dr. Rakotonanahary's article, a map of Ifanadiana District shows the region's COVID-19 response, including "interventions, clinical care, testing capacity, and research activities across levels of the health system."

MATERNAL & REPRODUCTIVE HEALTH

This quarter, we saw a **100% maternal survival rate**¹⁵ at Pivot-supported health facilities.

In addition to this, we achieved:



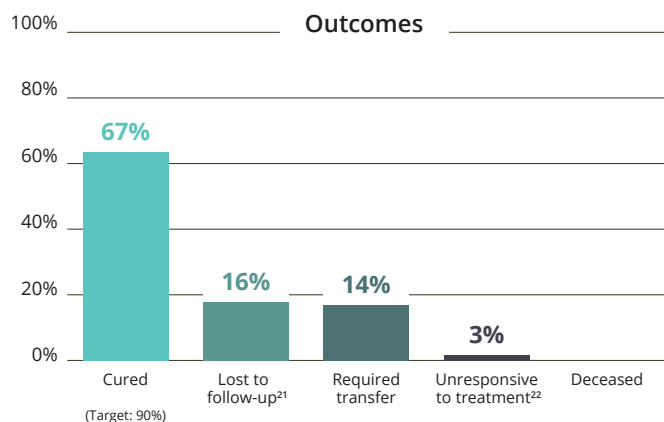
SINCE 2014, PIVOT HAS SUPPORTED
9,470
FACILITY-BASED DELIVERIES

MALNUTRITION



HEALTH CENTERS

- **42 children** began treatment for severe acute malnutrition¹⁹
- **60 children** were discharged from treatment



DISTRICT HOSPITAL

- **21 children** were admitted for treatment of severe acute malnutrition with complications²⁰
- **23** were successfully discharged from intensive treatment (either cured or referred to a health center for continued care)



This quarter, eight of Ifanadiana District's fifteen health centers were outfitted with solar panels to aid in the crucial functionality (light, refrigeration, etc.) and network connectivity of rural primary care facilities.

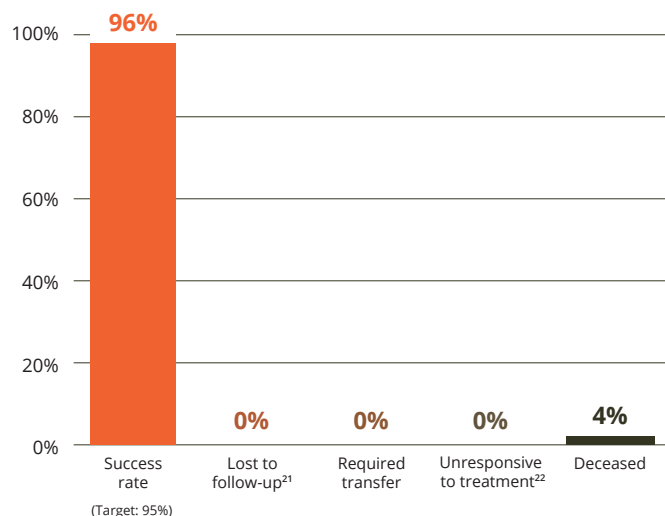
TUBERCULOSIS

This quarter, **43 patients** were enrolled for TB treatment.

- 74% smear positive
- 19% smear negative
- 7% extrapulmonary

Cohort Outcomes

for **24 patients** completing 1 year of treatment:



SOCIAL SUPPORT

1,120 social kits (food and household essentials) distributed to vulnerable patients at the district hospital

173 psycho-social sessions provided for hospital patients

2,053 reimbursements provided for transport to/from care

34,911 meals served to hospitalized patients and their *accompagnateurs*²³

PATIENT SPOTLIGHT: KATY, RIVO & VOLOLONA

Katy and her husband Rivo are farmer-breeders living in Amboasary village with their 6 children, who range in age from 2 months to 12 years. **When Katy discovered that she was pregnant with their sixth child, she and Rivo made their first trek to Ranomafana Health Center, which is a 3-hour walk through hills, rivers, and rainforest.** Katy followed her prenatal care schedule faithfully, visiting the health center throughout her pregnancy on a monthly and then weekly basis, accompanied by her husband each time.

For her previous pregnancies, Katy had always delivered at home with help from her mother. Though Katy has been fortunate to have successful deliveries in the past, the health center staff presented the idea of staying in the health center's maternal waiting home for the final few weeks of her pregnancy.

"Our midwife advised us that, for us who live in the countryside, it is better to give birth at the health center, rather than risk going into labor [without access to a health facility]," Katy explains. "Since I followed my prenatal care schedule at the health center, I was already familiar with the setting, and agreed that it would be better to stay there [for the birth]."

Katy was joined by her husband and mother during her stay in Ranomafana Health Center's maternal waiting house, about which the couple said, "the reception was peaceful and pleasant." Their stay lasted 3 weeks, starting in April and extended into May, with Katy's father looking after the children at home while they were away. They were able to relax knowing that there was no risk of Katy going into labor without access to care.

On May 11th Katy gave birth to a healthy, 8-pound baby girl, Vololona. After a successful delivery, they received a newborn and mother's kit (including diapers and other essentials) from Pivot's social work team. They were "delighted" to find that the health center was also able to carry out the process for the child's civil status certification.

Katy now says, "If we have another child in the future, I will only deliver in the health center!" And Rivo adds, "Not only is it safer, but also more enjoyable – so much [of what we need] is taken care of." The family remains in good health, and they intend to return to the health center with Vololona and their other children for essential vaccines and general care in the future.

MORE FROM THIS QUARTER:

CLICK
TO READ

Meet Our Malagasy Board Members!

We have welcomed four new Malagasy members to our Board of Directors over the past year! Coming from a diversity of professional backgrounds, this growing cadre of leaders share a passion for transforming their country's national health system until it reaches every last one of the island's 26 million people with quality, accessible care.

CLICK
TO READ

Staff Spotlight: Natacha Rajaona

Natacha joined the Pivot team just before the onset of the COVID-19 pandemic. Now, a year and a half in, Natacha serves alongside Eliane Solo Hery as one of the two directors of our 70-person Operations Department, and is boldly heading up the rehabilitation of rural health centers throughout the district as a foundational step to our largest-ever expansion of services.

CLICK
TO READ

Field Note: Finding Resilience During COVID's Second Wave

Following her latest trip to Madagascar, which happened to coincide with what the country deemed an official second wave of COVID-19, Dr. Alishya Mayfield reflects on the complexity of everyday challenges faced by those living and working in a setting where so much remains uncertain for the future of the pandemic.

On May 14th, Pivot, Centre ValBio, and the Ministry of Health jointly inaugurated an RT-PCR testing laboratory in Ranomafana – the first site of its kind outside of the capital.

The event was covered by national Malagasy news outlet, TV Sofia: [watch the 12-minute segment!](#)

DEFINITIONS

1. **Pivot full support (for health center):** a health center that receives Pivot technical and financial support to ensure that: it is staffed at or above Ministry of Public Health standards; fees for patient visits are covered; facility infrastructure is improved; and the data system is supported through data quality assessments and feedback
2. **Pivot partial support (for health center):** a health center that receives Pivot's financial and technical support to hire staff, perform routine data collection, and address urgent district-wide or facility-specific issues as needed
3. **Supported patient visit:** a patient visit to community health worker, health center, or hospital for which costs of care are reimbursed by Pivot; patients are not charged a consultation fee
4. **Community health:** disease prevention and health promotion conducted by community health workers (CHWs) outside of health facilities and within a community
5. **Health center:** a health facility offering primary care services for the population of a geographically-defined commune, ranging from 4,500 to 20,800 people (*Note: In Madagascar, every health center or centre de santé de base (CSB) is designated as either a CSB1 or CSB2; CSB2s are larger and staffed with at least one advanced level clinician; CSB1s are staffed by nurses and midwives; Pivot support currently focuses on CSB2s.*)
6. **District hospital:** a secondary health facility offering inpatient care and specialized clinical services (including dentistry; emergency obstetric care, including caesarean sections; laboratory and radiology; infectious disease treatment; and inpatient malnutrition for children) for the district population; to access care at the district hospital, patients are referred from the health center
7. **Tertiary care:** specialized medical care provided at regional or national health facilities outside of the district
8. **Community health worker (CHW):** an elected community member trained to provide care for common illnesses in their home communities and to refer patients in need of higher levels of care to health facilities; patients served are primarily pregnant women and children under five
9. **Per capita utilization:** annualized rate at fully-supported health centers is calculated using the total number of quarterly health center visits multiplied by four and divided by total catchment area population
10. **External consultation:** new and follow-up outpatient visits with a clinician at a fully-supported health center or hospital
11. **Bed occupancy:** percentage of total hospital beds available that are occupied by admitted patients
12. **Essential medicines:** a subset of total medicines supplied (7 medicines at the community level, 15 medicines at health centers, and 31 medicines at the district hospital) that, informed by international standards, are necessary for providing basic health care in our setting
13. **Baseline:** the assessment of the availability of essential medicines before Pivot intervention, which was: 2018 at the district hospital, 2014 at health centers, and 2015 at the community level
14. **Standard referral:** a non-emergency referral from a community, health center, or hospital in which patients are counseled to seek specialized care, but are not provided transport by ambulance
15. **Maternal survival rate:** the percentage of health center births in the last quarter for which the mother was discharged alive following delivery
16. **Contraceptive coverage rate:** the percentage of women between the ages of 15-49 in Pivot's catchment area who use any method of birth control as documented at the health center for a three month period (adjusted for reporting delays)
17. **Facility-based delivery rate:** the percentage of the estimated number of infants expected to be born in the review period who were born at a fully-supported health center
18. **Antenatal 4-visit completion rate:** the percentage of women who gave birth at a fully-supported health center who attended at least four antenatal care visits prior to delivery
19. **Acute malnutrition:** weight for height between -2 and -3 z-scores according to growth standards
20. **Severe malnutrition:** weight for height below -3 z-score according to growth standards
21. **Lost to follow-up:** a patient whose treatment has been interrupted and who has not completed a program of care
22. **Unresponsive to treatment:** a patient whose health outcomes do not improve with treatment for specified disease
23. **Accompagnateur:** a family member, friend, or community member who accompanies a patient to seek care; often to cook, clothe, or otherwise provide necessary day-to-day support for the patient