

Pivot ambulance driver Alex Razafindramarinasolo joins the 93% of Pivot staff to have received their COVID-19 vaccination before the end of 2021.



QUARTERLY IMPACT REPORT

October 1 - December 31, 2021

Dear Pivot community,

As co-leaders of Pivot's clinical team in Madagascar, we are honored to present the first Quarterly Impact Report of FY22. We kicked off the new fiscal year in October with a great deal of programmatic momentum, getting new initiatives off the ground and implementing innovative solutions to persisting challenges. While the period was marked by an uptick in COVID cases in the region (and the world), our clinical team remained unwavering in the delivery of routine care throughout the district alongside pandemic response. We were especially proud to support the MOPH's rollout of another campaign that resulted in nearly 1,000 more people in Ifanadiana District getting vaccinated against coronavirus.

With ambitious plans for the new fiscal year, we spent the quarter making headway on challenges innate to our public health system strengthening mission. We focused on our partnership with supply chain providers to ensure greater availability of essential drugs and supplies district-wide, moved forward with the construction and rehabilitation of some of the district's most remote health facilities, and identified ways to increase diagnostic capacity and laboratory efficiency for our hospital patients.

Building upon the geographic expansion accomplished during FY21, a major FY22 focus across all Pivot teams is reaching more people with the care they need. This means not only broadening our physical footprint, but also expanding and deepening the health services available throughout the district. Initiatives launched this quarter include: establishing a diabetes program as part of a broader strategy to implement noncommunicable disease management at the primary care level; partnering with local organization Ny Tanitsika to implement water, sanitation and hygiene (WASH) activities with a focus on preventing common diarrheal diseases and other waterborne illness; and launching a new engagement with UNITAID to improve oxygen access throughout the country, building on last year's national-level work to ensure #PPEforAll.

We hope to see you in the upcoming "Voices From the Field" virtual panel event we will be co-hosting in February to discuss FYQ1 activities and get to know you, our steadfast supporters, as we move forward this transformational work together as partners.

In gratitude,

Giovanna Cowley
Medical Director

Luc Rakotonirina
Associate Medical 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.

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



District referral hospital



Primary care health centers

15 receiving Pivot support



Community health

175 community health workers (CHWs)



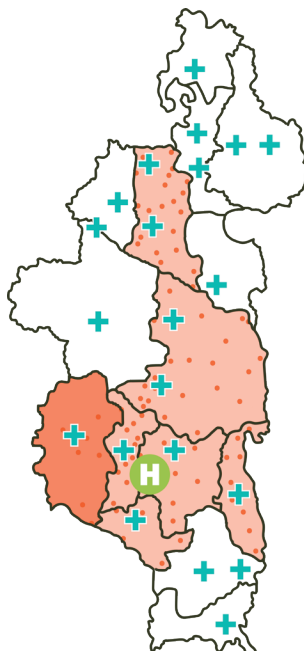
Proactive community health

Including case-finding and household-level care



Community health sites

80 structures where CHWs receive patients



Total District Population: 187,571

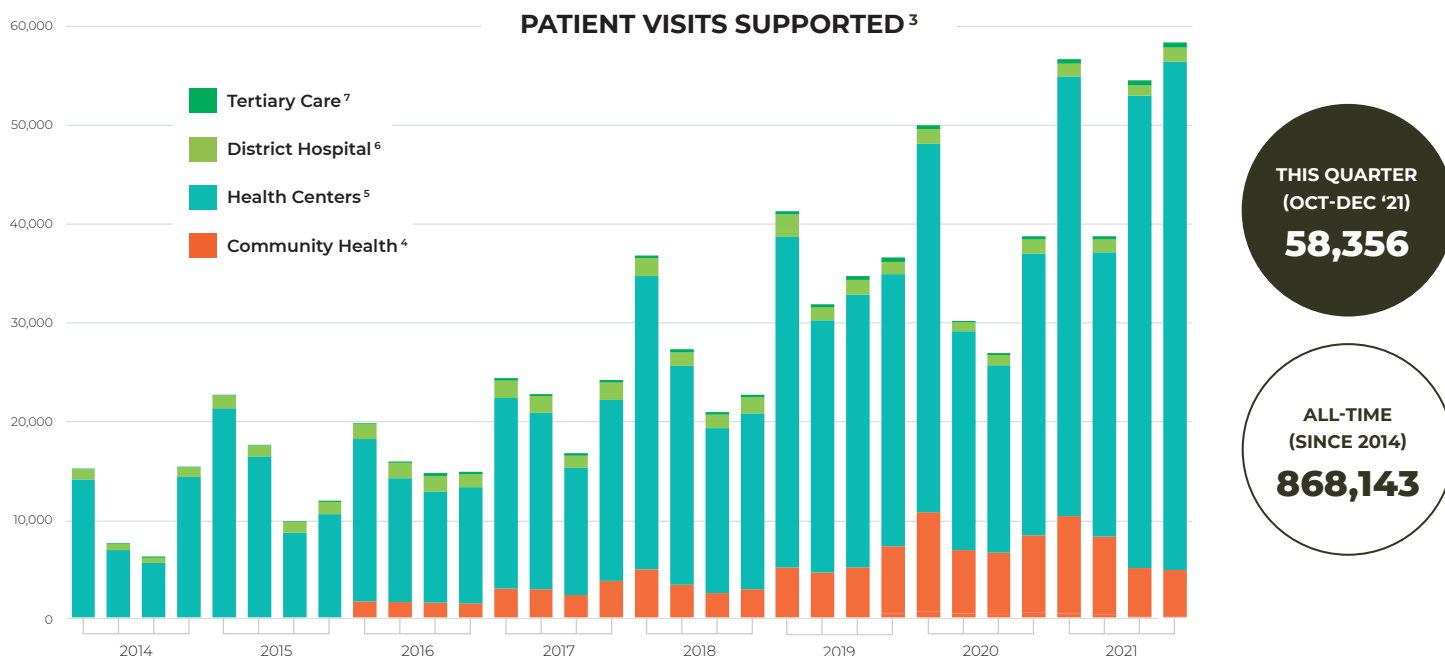
- Hospital catchment: 187,571
- Health center catchment: 157,196
- Community health catchment: 82,223
– which includes –
- Proactive care catchment: 12,287

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

HIGHLIGHTS & CHALLENGES

- **Participated in a series of national community health workshops** where Associate Medical Director Luc Rakotonirina represented Pivot **at the central level**; prepared to receive delegation of officials from the Ministry of Public Health (MOPH), the World Health Organization, and UNICEF, who will visit Ifanadiana District to observe our enhanced community health pilot in action in early 2022; and continued to seek sign-off from the highest levels of government to expand this pilot program.
- **Supported a third MOPH COVID-19 vaccination campaign**, resulting in vaccination for an additional 968 people in Ifanadiana District and 93% of the Pivot staff fully vaccinated.
- Moved forward with the building of **maternal waiting homes in three additional rural communes**, aimed at supporting women from remote communities during the final stage of pregnancy to avoid having to walk to care during active labor.
- Launched a **new collaboration with local partner organization Ny Tanitsika focused on Water, Sanitation & Hygiene (WASH)** activities in communities where such initiatives have never been implemented. With a focus on preventing schistosomiasis and diarrheal disease, the first goal of the initiative is to establish a baseline of population health behaviors and disease burden in order to measure resulting impact and cost.
- Carried out our **most remote series of cervical cancer screenings to date**, located in communities more than 50 kilometers from the tarmac.
- While preparing for the launch of microbiological testing capacity at the district hospital, **established new empirical antibiotic protocol to ensure they are being rationalized and prescribed appropriately when necessary** (avoiding overuse, which can result in drug resistance).
- **Completed six-month evaluations for the 37 new clinical recruits hired jointly by the MOPH and Pivot** to provide feedback on performance and strengthen HR practices across district health system's blended teams.
- Collaborated with major supply chain providers to establish a **new procurement approach that ensures greater availability of several essential medicines** in response to ongoing stock-out issues at the national level.
- Given challenges with biochemical testing equipment at the district hospital, **implemented a system for outsourcing patient samples while maintaining ability to receive same-day results**, thus strengthening collaborations at the tertiary level.
- In collaboration with Partners In Health, received a UNITAID grant for **improving oxygen access and distribution throughout Madagascar**; an important, national-level programmatic intervention scheduled to launch in early 2022.
- As expected following the removal of financial barriers at eight additional health centers in July, observed an **increase in patient volume at the primary care level**; continued work to address persistent challenge of ensuring essential medicines are in stock across all facilities.
- In response to an **increase in the number of HIV cases at the district hospital**, **launched efforts to improve contact tracing and increase testing** starting in antenatal clinics throughout the district.
- Following the launch of tuberculosis (TB) management activities in additional communes in October, **carried out clinical field supervision in five newly-established TB centers**.
- Working with partner organization Chaîne de l'Espoir, where cardiac surgery patients have been referred in the past, **two hospital physicians received training in congenital cardiology** to facilitate early diagnosis of pediatric heart disease and reduce risk of late identification.



Community Health

VISITS (CHILDREN UNDER-5)
5,030 (Target: 6,761)
74% of target achieved
PER CAPITA UTILIZATION ⁹
1.4 visits per child under 5 (annualized)

Community Health Outcomes in Proactive Care Pilot Commune vs. Non-Pilot Communes		
	Proactive Care Pilot	Non-Pilot Communes
Percent of Households Visited	83%	0%
Per Capita Utilization Rate	1.7	1.3
CHW Adherence to Protocol	99%	86%
CHW Supervision Rate	92%	94%



Health Centers

EXTERNAL CONSULTATIONS ¹⁰ (ALL AGES)
51,421 (Target: 50,706)
101% of target achieved
PER CAPITA UTILIZATION ⁹
1.1 visits per person (annualized)



District Hospital

VISITS (ALL AGES)	
1,375 (Target: 1,100)	
125% of target achieved	
HOSPITALIZATIONS	BED OCCUPANCY ¹¹
761 (Target: 542)	55% (Target: 50%)

CLINICAL SPOTLIGHT: LAUNCHING PRIMARY CARE FOR NONCOMMUNICABLE DISEASE



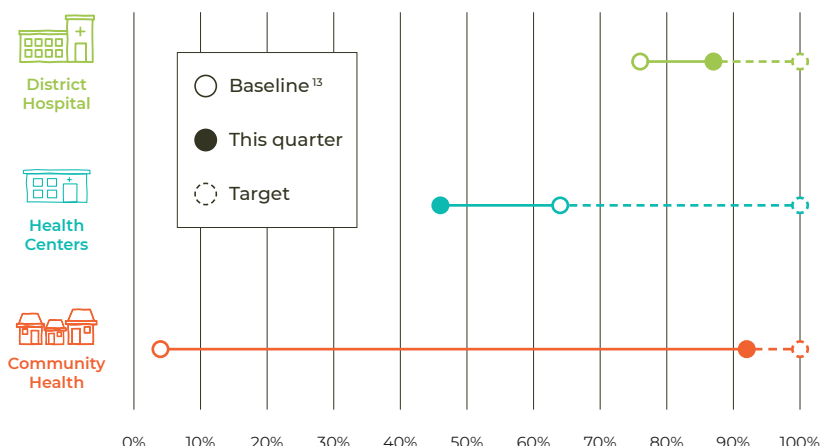
In Madagascar, diabetes affects about 4% of the population and accounts for approximately 1% of mortality nationwide (WHO, 2016). Given the prevalence of infectious diseases, the public health system – even at the highest levels of care – is commonly ill-equipped to treat complications associated with noncommunicable illnesses such as diabetes, including conditions like heart disease, chronic wounds, or stroke. The best way to reduce morbidity and mortality from diabetes is to detect it early and treat it before complications arise.

This quarter, Pivot's Noncommunicable Disease (NCD) team began diabetes management activities at the primary care level. Previously, diabetes was only detected and treated at the hospital, which severely limited the access of rural diabetic patients to care. To launch the diabetes program, Pivot's clinical teams collaborated to organize mass screenings in three of the district's most populous communes. Of the 800 people screened during this initial campaign, 37 people were enrolled in treatment. Those with high blood pressure or blood sugar levels immediately started on medications, while the remainder were scheduled for follow-up at their local health center.

To implement the new procedures and manage the new medicines and supplies now available for diabetes patients at health centers, 26 clinical personnel (including community health workers, health center doctors, and Ministry of Public Health staff) received intensive training in diabetes management.

"The inclusion of NCD management is key to attaining true universal health coverage," says Pivot NCD Manager Dr. Fanja Rasoanaivo. **"It moves Pivot away from treating [just] infectious diseases, toward being able to treat all diseases. We are starting with the most common ones now, like diabetes and hypertension, but this will be a platform to manage more complex chronic diseases [in the future]."**

AVAILABILITY OF ESSENTIAL MEDS¹²



CONTINUUM OF CARE



34%
transferred by Pivot ambulance

28%
transferred by taxi bus
with transport fees covered by Pivot

37%
by other mode of transport
on foot, or by car, tractor, stretcher, etc.

STAFF

- 240** total Pivot employees
 - **98%** Madagascar-based
 - **97%** Malagasy
 - **10:3** female:male leadership
- 299** MOPH personnel supported
 - **65** district hospital staff
 - **59** health center staff
 - **175** community health workers



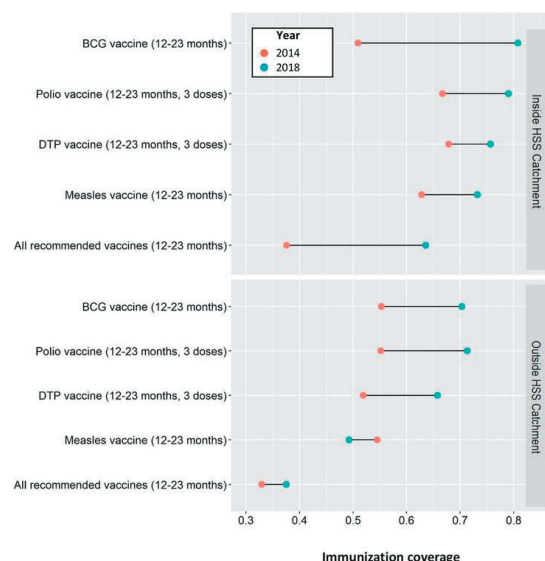
SCIENCE SPOTLIGHT: IMPACTS OF HEALTH SYSTEM STRENGTHENING ON VACCINE COVERAGE

In Madagascar, as in many other countries, efforts to meet national vaccine coverage targets are challenged by financial and geographic challenges to accessing care.

In Ifanadiana District, PhD student Elinambinina Rajaonarifara and team used data from health center records and Pivot's ongoing longitudinal cohort study to estimate the impact of health system strengthening (HSS) work on vaccine coverage. They determined that, **in parts of the district where Pivot and the MOPH have partnered to implement HSS activities, vaccination coverage rates in children improved more than in non-intervention areas** (as shown in the figure to the right). Notably, the study found that children living in Pivot's catchment area were 22% more likely than children outside of the catchment to have received the measles vaccine, and 49% more likely to have received the Diphtheria-Tetanus-Pertussis vaccine.

While economic inequalities in access to vaccines (e.g., whether a family must leave their source of income behind to reach a facility that provides the vaccine they seek) have clearly reduced in HSS areas, Rajaonarifara and team caution that a similar impact has not been seen with regard to geographic inequalities, and they recommend targeted clinical programming to proactively reach children in more remote areas. Their findings offer important lessons about health system activities in rural Madagascar and settings like it to address inequalities in the coverage of essential interventions.

For more details on child immunization in Madagascar, [access the full study here](#).



MATERNAL & REPRODUCTIVE HEALTH

This quarter, we saw a
98% maternal survival rate¹⁵
at Pivot-supported health facilities.

In addition to this, we achieved:

COMING SOON *
contraceptive coverage rate¹⁶
(Target: 45%)

37%
facility-based delivery rate¹⁷
(Target: 40%)

45%
antenatal 4-visit completion rate¹⁸
(Target: 50%)



SINCE 2014, PIVOT
HAS SUPPORTED
10,457
FACILITY-BASED
DELIVERIES

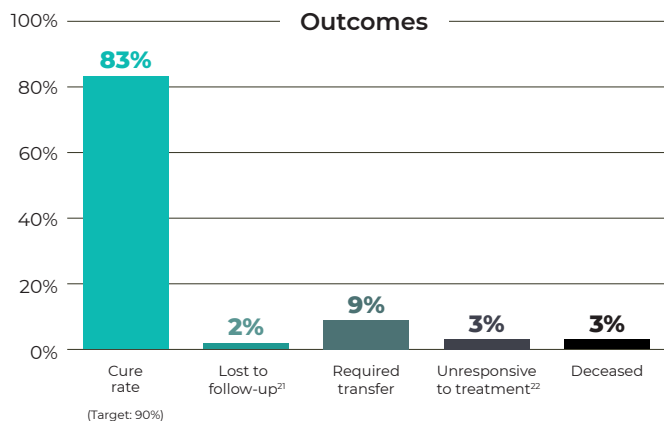
* Due to delays in field data collection, this quarter's contraceptive coverage rate is not yet available

MALNUTRITION



HEALTH CENTERS

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



DISTRICT HOSPITAL

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

VALUES IN ACTION



Waste sorting bins installed by Pivot's Population, Health & Environment team promote communal health and hygiene practices in high-traffic areas (as seen here, outside of Ranomafana Health Center) with signs saying "Healthy people, clean towns. It is our responsibility to remember."

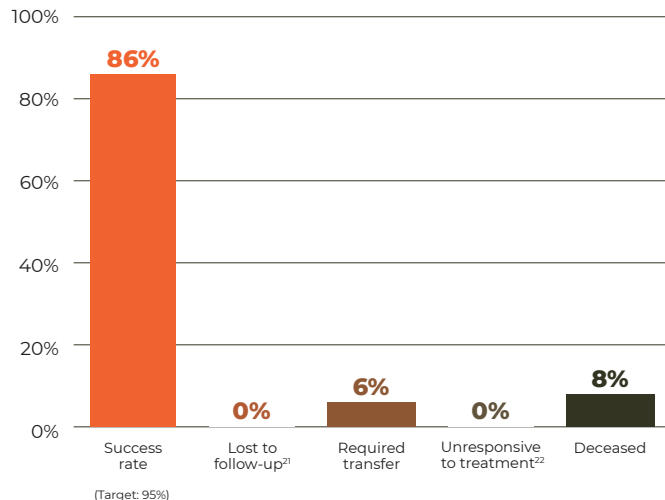
TUBERCULOSIS

This quarter, **84 patients** were enrolled for TB treatment.

- 100% smear positive
- 0% smear negative
- 0% extrapulmonary

Cohort Outcomes

for **50 patients** completing 1 year of treatment:



SOCIAL SUPPORT

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

116 psycho-social sessions provided for hospital patients

2,109 reimbursements provided for transport to/from care

30,299 meals served to hospitalized patients and their *accompagnateurs*²³

PATIENT SPOTLIGHT: NIRINA

Nirina lives with her husband and five children in the fokontany of Ambodirano, which is located about 2 hours on foot from the closest health facility, Androrangavola Health Center. Nirina gave birth to her first four children at home with the help of her village's matron, or traditional birth attendant. During her fifth pregnancy, she visited the health center for regular prenatal consultations, where Pivot-supported midwives encouraged her to give birth in the facility, which she did without complications.

As a 22-year-old mother of five, Nirina decided in 2020 that she wanted to focus on raising her children and tending her farm (the family food source) rather than further growing her family. Back home in Ambodirano, Nirina learned about family planning (often referred to in Madagascar as “fianakaviana sambatra” or “happy family”) from other women in her village. One woman shared her positive experience using an implanted contraception method, which is inserted into a woman's upper arm and can help prevent pregnancy for up to 4 years.

Nirina tried this method for the next year and a half, but she was not satisfied with the results, which unpleasantly affected her menstrual cycle. She spoke with a community health worker in her village to explore other potential options, and learned of the existence of an injectable contraceptive method. At that time, however, the cost was 2000 Ariary (about \$0.50) per injection, every three months, which was not something she could afford.

In mid-2021, after Pivot's expansion of free health services to patients in Ifanadiana District, Nirina learned that the injectable method she hoped to try was now available to her at no cost. Upon hearing this, she enrolled in family planning services at Androrangavola Health Center. Satisfied with the results, Nirina now visits the health center on a quarterly basis to receive the injection. She says her husband supports and encourages her choice and she intends to continue using it indefinitely.

Nirina says that, now, almost all the women of childbearing age in her village now use the injection method for contraception as well, and that they are satisfied with their results. We are proud to serve women like Nirina by offering services that support women's agency in reproductive health.



MORE FROM THIS QUARTER:

CLICK TO
REGISTER

You're invited: RSVP to attend our next virtual panel session (February 16, 2022)

Back by popular demand, our virtual panel series “Voices From The Field” will recommence in February 2022! Join us each quarter as members of Pivot's health and science teams discuss highlights and challenges from the most recent quarter and answer your questions in a live Q&A moderated by our Executive Director, Tara Loyd. First up, spend time with Dr. Giovanna Cowley (Medical Director) and Luc Rakotonirina (Associate Medical Director).

CLICK TO
ACCESS THE
FULL STUDY

Malagasy-led research on geographic barriers to accessing care continues

In December 2021, *BMJ Global Health* published another study led by Dr. Felana Ihantamala, postdoctoral researcher for Pivot and Harvard Medical School. The research demonstrates the utility of combining geographical and health facility utilization data to adapt accessibility models in order to improve referral efficiency and overall access to hospital care.

CLICK FOR
THE FULL
REPORT

Our FY21 Impact Report is now available!

It was a landmark year in Pivot history, marked by expansion to Ifanadiana's most remote areas, amplifying the voices of our Malagasy leaders, sharpening our focus on scientific research, and continuing to respond to the COVID-19 pandemic. As we begin our ninth year on the ground and prepare for further expansion, we carry forward lessons from our first eight years. Check out the full report for more!

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
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