

Data collectors from the National Institute of Statistics make their way across Vatovavy Region to administer household surveys that will establish a baseline of population health ahead of Pivot's expansion.



QUARTERLY IMPACT REPORT

April 1 - June 30, 2023

Dear Pivot community,

Every two years since 2014, we have revisited 1,600 households across Ifanadiana District to administer a survey that tracks the impact of Pivot's work on health and well-being over time. The information collected includes data on mortality, access to health care, vaccination rates, economic disparities in intervention coverage, and geographic barriers to care. This ongoing study, known as the Ifanadiana Health Outcomes and Prosperity Longitudinal Evaluation (IHOPE), provides insights that have shaped our collaboration with the Ministry of Public Health (MoPH) to strengthen the public health system in Ifanadiana District during the past decade. In partnership with Madagascar's National Institute of Statistics, the fifth wave of IHOPE data collection was completed in June of this year.

Drawing on our experience with the IHOPE study, **we are proud to share that this quarter marks the start of a new era for Pivot: the launch of our Vatovavy baseline survey.** With data collection underway in 4,800 households across Vatovavy Region, the information gathered over the course of three months will provide a baseline of population health ahead of our regional expansion. The new survey demonstrates Pivot's ongoing commitment to rigorous research into the impact of our programs and on using the findings for data-informed health care. The unique challenge of the process is illustrated by one data collector, who explains that "most of us have already taken part in other similar [national] surveys in different regions of Madagascar. The particularity of the survey with Pivot is the difficulty of geographical access. All trips are made on foot, which can take up to three days to go from [survey] cluster to cluster."

The household survey process not only illuminates the reality of the population's geographic challenges – the results will inform our collaboration with the MoPH and aid us in setting targets for key performance indicators as well as the strategy for the rollout of activities across Vatovavy Region. Our approach creates a unique opportunity to integrate science with service delivery to maximize our impact on population health, and we look forward to keeping you apprised of further developments as expansion gets underway.

As always, we invite you to think of this report as a tool by which you can engage with our work, as we use it to foster our own transparency and accountability. Mankasitraka amin'ny fiaraha-miasa! (We appreciate your partnership!)

In solidarity,

Karen Finnegan
Managing Director of Pivot Science

Hobisoa Razanadranaivo
Population Impact Research Manager

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 ¹



Primary care health centers ²
21 receiving Pivot support



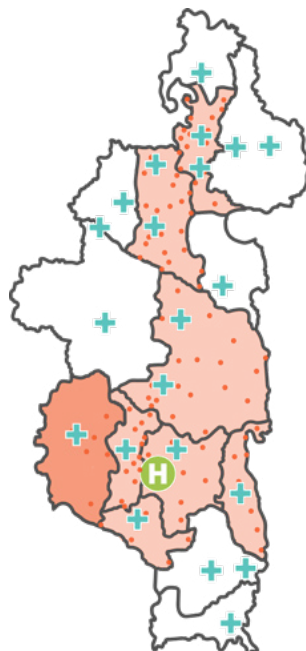
Community health ³
199 community health workers (CHWs) ⁴



Enhanced community health
Including case-finding and household-level care



Community health sites
93 structures where CHWs receive patients



Total District Population: 203,426

- Hospital catchment: 203,426
- Health center catchment: 203,426
- Community health catchment: 99,146
– which includes –
- Proactive care catchment: 13,324

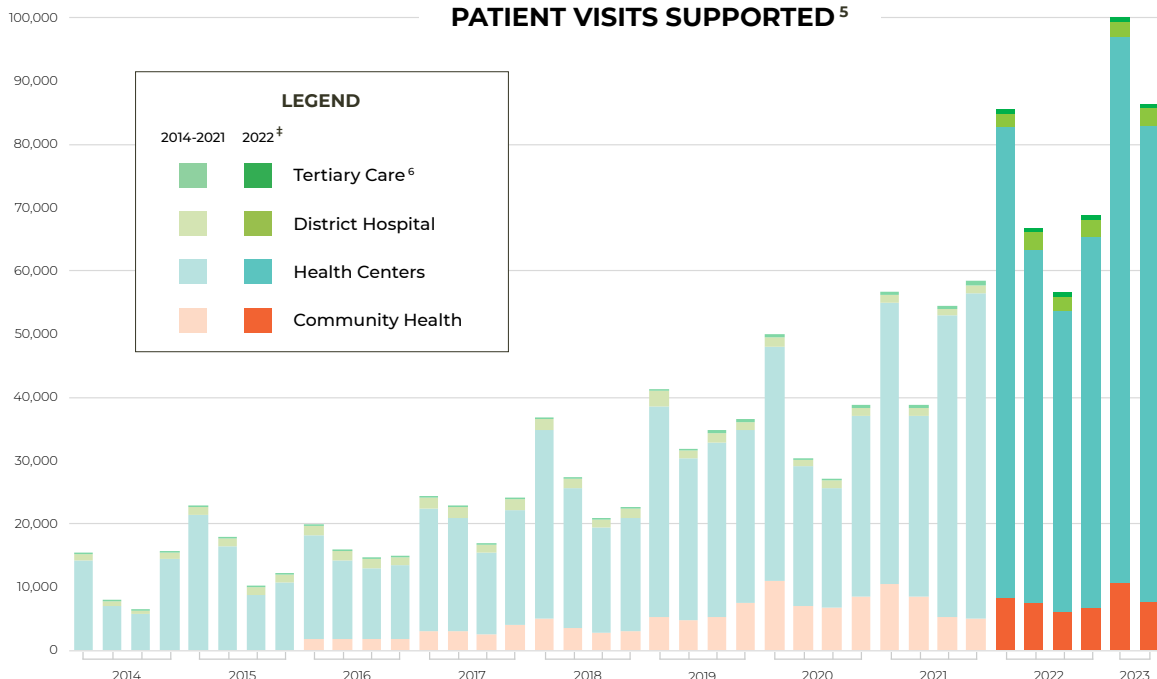
Baseline Statistics (2014):

- 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

- Continued **final phase of infrastructure work to renovate/construct five health centers**, with inaugurations scheduled for August
- As part of the effort to increase facility-based deliveries, **inaugurated a new maternal waiting home** in Marotoko Commune, with 4 additional structures to be completed and inaugurated by the end of the year
- **Participated in MoPH planning workshops and visited expansion districts alongside regional health officials** to continue advancing our partnership ahead of regional-level implementation
- Supported rehabilitation of two Listening & Legal Counseling Centers geared at providing **critical resources for women and survivors of gender-based violence** ([MORE ON PAGE 3](#))
- As part of the BRING O2 project, **completed repairs to oxygen generator equipment** at the university hospital in Fianarantsoa (neighboring city where patients are referred for tertiary care) and began repair process at one of the hospitals in the capital
- **Donated IT equipment to support operations at MoPH offices** at the district, regional, and central levels
- At the MoPH's invitation, **participated in several central-level workshops, collaborating to develop new national strategies** for 1) reducing maternal mortality, 2) strengthening contraceptive coverage, and 3) responding to the malnutrition crisis brought about by the ongoing famine in Madagascar's southeastern region
- **Launched diabetes management program in two additional communes** with a mass screening of >700 community members, immediately enrolling those who tested positive
- Marked World Malaria Day by supporting a **region-wide malaria screening and mosquito net distribution** organized by Vatovavy Region's public health office
- **Completed the 5th wave of IHOPE data collection in Ifanadiana District** and continued baseline data collection across Vatovavy Region; data and reports are expected from the National Institute of Statistics (INSTAT) by the end of the year
- **Supported the MoPH's National Polio Campaign**, transporting vaccines and other resources to health centers across the district
- **Expanded acute malnutrition treatment program to five additional communes** in Ifanadiana District, launching the Newborn & Young Infant Feeding Practices **training for healthcare workers to support mothers in providing infant nutrition**
- **Organized a blood drive at Ifanadiana District Hospital** in recognition of World Blood Donor Day
- **Contributed updates to national protocol for malnutrition emergency response**, now under review with the central MoPH
- Participated in "Research Days" event at University of Fianarantsoa, where **Pivot researchers were awarded with first and second place for presentations** of their research ([MORE ON PAGE 6](#))
- Internally **launched new platform to link with DHIS-2 (MoPH's database)**, building upon Pivot's history of supporting existing government systems rather than creating anything in parallel
- **Stockouts of essential medicines remained a challenge at all levels of care**, contributing to notably lower-than-usual utilization rates at the community level in Ranomafana Commune
- Madagascar-based leaders **visited US for a week to engage with peers, partners, and funders** about our ongoing work and upcoming expansion
- Strengthened our network of global health peers and partners by attending **Skoll World Forum (Oxford, UK) and Innovations in Healthcare (Washington, D.C., US)** in April

PATIENT VISITS SUPPORTED⁵



THIS QUARTER
(APR-JUN'23)
86,351

ALL-TIME
(SINCE 2014)
1,332,575

[‡] As of January 2022, we are using a new method to calculate patient visits that better reflects all clinical encounters supported by financial, technical, or human resources from Pivot. Faded colors represent 2014-2021 totals calculated using the previous method.



Community Health

VISITS (CHILDREN UNDER-5)

7,776

(Target: 6,761)

115% of target achieved

PER CAPITA UTILIZATION⁷

1.7 visits

per child under 5 (annualized)

Community Health Outcomes in Enhanced Care Commune vs. Non-Enhanced Communes

	Enhanced Care Pilot Commune	Non-Pilot Communes
Percent of Households Visited	94%	0%
Per Capita Utilization Rate	1.4	1.8
CHW Adherence to Protocol	94%	94%
CHW Supervision Rate	100%	91%



Health Centers

EXTERNAL CONSULTATIONS⁸ (ALL AGES)

72,153

(Target: 80,982)

89% of target achieved

PER CAPITA UTILIZATION

1.7 visits

per person (annualized)



District Hospital

VISITS (ALL AGES)

2,348

(Target: 2,660)

88% of target achieved

HOSPITALIZATIONS

764

(Target: 620)

BED OCCUPANCY⁹

58%

(Target: 65%)

PROGRAM SPOTLIGHT: SUPPORTING MADAGASCAR'S FIGHT AGAINST GENDER-BASED VIOLENCE

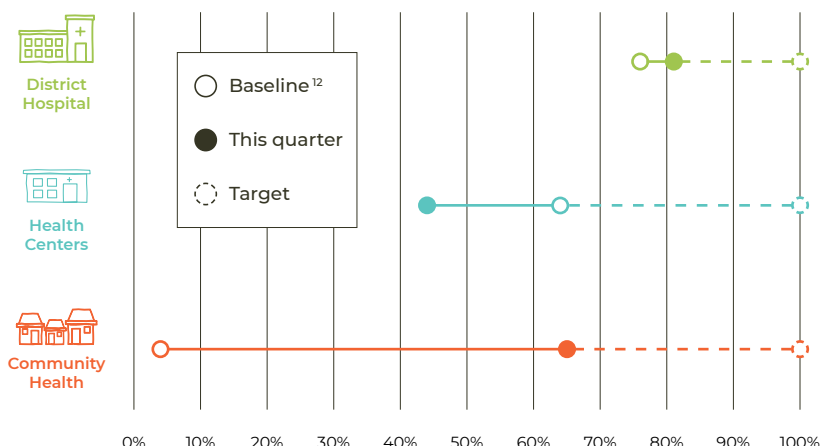


Addressing the many facets of women's health in Madagascar has always been one of Pivot's top programmatic priorities. In partnership with the Ministry of Population, Social Protection & Promotion of Women, **we are joining the fight against gender-based violence (GBV) in Madagascar.** Program activities launched this quarter with training for 35 MoPH-appointed social workers and 15 members of the Pivot team to build skills related to the identification, counseling, and referral of GBV survivors. Additionally, we supported the rehabilitation of two Listening & Legal Counseling Centers that operate with the specific aim of providing resources for women facing GBV (*grand reopening pictured on the left*).

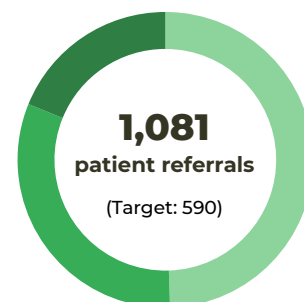
"This program highlights the importance of ensuring that women have equitable access to medical care and health services," explains Niavo Randrianantenaina, social worker and Manager of our Women's Health Promotion Program. "It includes measures to remove financial, geographic or cultural barriers that may prevent some women from receiving the care they need. As GBV is a multi-dimensional problem that encompasses legal, social, cultural, economic and health aspects, addressing it requires a collaborative and coordinated approach involving multi-sectoral partnerships. This approach maximizes the chances of success and creates a deeper, more lasting impact within society."

Next steps will include training health workers across all 21 health centers and the district hospital, and revitalizing Ifanadiana District's GBV working group to ensure that all women are able to exercise their right to a safe and healthy life.

AVAILABILITY OF ESSENTIAL MEDS¹⁰



CONTINUUM OF CARE



19%
transferred
by Pivot
ambulance

32%
transferred
by taxi bus
with transport fees
covered by Pivot

49%
by other mode
of transport
on foot, or by car,
tractor, stretcher, etc.

STAFF

- **249** total Pivot employees
 - **99%** Madagascar-based
 - **98%** Malagasy
 - **5:2** female:male leadership
- **336** MoPH personnel supported
 - **71** district hospital staff
 - **66** health center staff
 - **199** community health workers

VALUES IN ACTION



SCIENCE SPOTLIGHT: EXPANDING PIVOT'S RESEARCH CAPACITY

Building capacity for scientific research in Madagascar is one of the cornerstones of Pivot Science's agenda. This quarter, the team **launched a research training program for Pivot staff** that includes didactic sessions and mentored research projects, supporting participants through all phases of conducting a rigorous study, from conceptualization through analysis, review, and dissemination.

In May, Pivot Science Managing Director Karen Finnegan and Research Manager Rado Rakotonanahary hosted a 3-day intensive research training attended by 20 members of the Pivot staff in Ranomafana. This participatory workshop, intended as the first of a series, covered key research methods and provided hands-on training with research and writing tools.

Participants then split into working research groups and were asked to develop a study protocol related to Pivot's work. The topics that this cadre of trainees will investigate identified include:

- Impact and cost-effectiveness of WASH activities
- Quality of maternal health services at health centers
- Drivers of public health workers' satisfaction and motivation

Over the course of the next year, this researcher cohort will work together, accompanied by the Pivot Science team, to complete their projects and prepare manuscripts. By providing resources to build research skills among our staff, **we are proud to contribute to the essential diversification of voices in the field of public health research.**

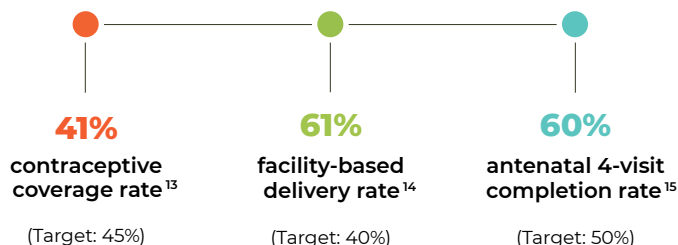


MATERNAL & REPRODUCTIVE HEALTH



SINCE 2014, PIVOT
HAS SUPPORTED
16,080
FACILITY-BASED
DELIVERIES

This quarter, we achieved:



And maternal survival rates¹² were:

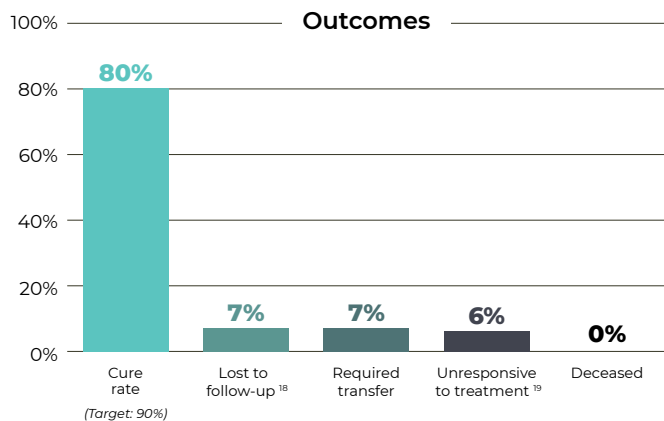


MALNUTRITION



HEALTH CENTERS

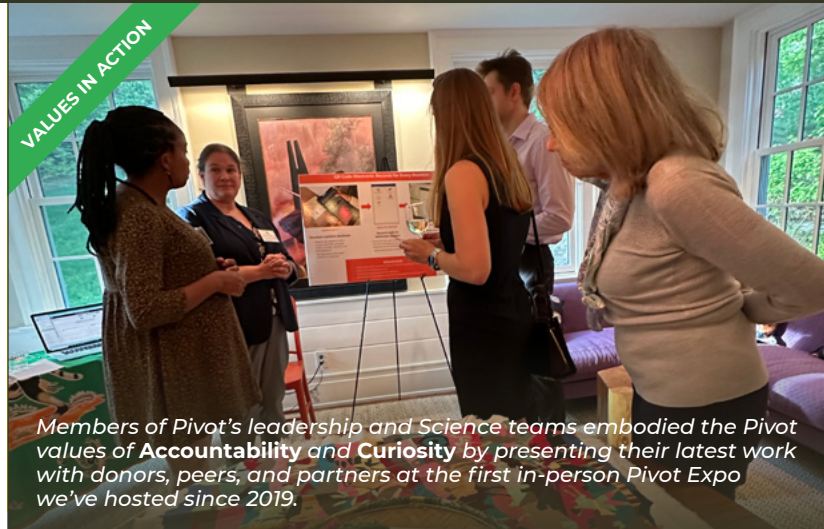
- **204 children** began treatment for acute malnutrition¹⁶
- **213 children** were discharged from treatment



DISTRICT HOSPITAL

- **31 children** were admitted for treatment of severe acute malnutrition with complications¹⁷
- **32** were successfully discharged from intensive treatment (either cured or referred to a health center for continued care)

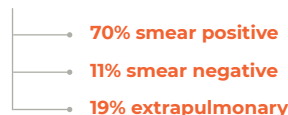
VALUES IN ACTION



Members of Pivot's leadership and Science teams embodied the Pivot values of **Accountability** and **Curiosity** by presenting their latest work with donors, peers, and partners at the first in-person Pivot Expo we've hosted since 2019.

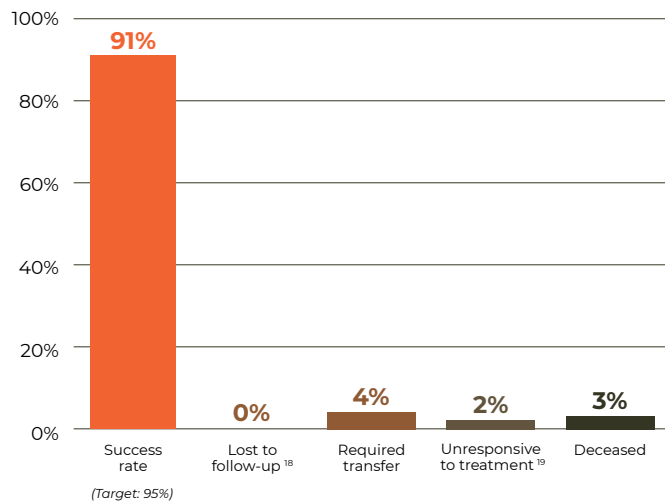
TUBERCULOSIS

This quarter, **77 patients** were enrolled for TB treatment.



Cohort Outcomes

for **79 patients** completing 1 year of treatment:



SOCIAL SUPPORT

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

75 psycho-social sessions provided for hospital patients

4,312 reimbursements provided for transport to/from care

32,854 meals served to hospitalized patients and their *accompagnateurs*²⁰

PATIENT SPOTLIGHT: MÉLINE, DERICK & VEROSOA

Méline lives in the village of Antonkazo with her teenage son Derick and infant daughter Verosoa. It became evident to Méline that her health was compromised when she had to take two days to recover after one day of work. However, with the nearest health center being a two-hour walk from her home, the long journey to care would expend more than she could afford, both physically and financially.

When Pivot's community health team carried out a series of home visits in her village, they found that all three members of the household were exhibiting signs of malnutrition and tuberculosis (TB). Méline and both children were visibly underweight and often breathless from severe bouts of coughing. After assuring Méline that she and her children would receive the treatment they needed at no cost, their local CHW referred and accompanied them to Tsaratanana Health Center.

Upon examination, baby Verosoa was diagnosed with severe acute malnutrition and tested positive for malaria. At 9 months old, she was enrolled in the health center's malnutrition treatment program and, over the course of two months, reached her target weight, recovered from malaria, and exited the program as a success.

Meanwhile, Méline and Derick were referred to the Ifanadiana District Hospital, where they were tested for a spectrum of diseases, and were both diagnosed with TB. Derick was also diagnosed with severe malnutrition, weighing just 16kg (~35lbs) at the age of 16. Upon discharge from the hospital and counter-referral to their health center back in Tsaratanana, both enrolled in the TB treatment program, and Derick followed a therapeutic nutrition regimen in parallel.

Together, Méline and Derick have completed the first phase of TB treatment over the course of the past six months, making steady progress on the path to recovery. With six months to go in the program, Méline says she is "eager to continue treatment because we have already improved so much."



MORE FROM THIS QUARTER: PIVOT RESEARCH RECEIVES ACCOLADES AT REGIONAL SHOWCASE

In May, the University of Fianarantsoa hosted a "Research Days" event designed to showcase the work of Malagasy researchers and foster cross-institutional collaborations. Under the banner of "research at the service of the population, for the development of the nation," the event had a clear vision: to champion scientific exploration in and for Madagascar.

In a display of success, the team garnered a series of accolades throughout the event:

- The evaluation committee recognized ***Geographical Barriers to Accessing Community Care in a Rural District of Madagascar*** as one of the standout projects. This research initiative, spearheaded by Pivot Research Associate Michelle Evans, received third position among the top-tier poster presentations.
- Mauriciannot Randriamihaja (right), a dedicated doctoral student and Pivot's GIS and informatics technician, captured second place for his oral presentation, ***Development of Geomatic Tools to Enhance Community Health Programs in a Rural District of Madagascar***.
- Toky Randrianjatovo (left), presenting ***Monitoring the Spatio-Temporal Dynamics of Rice Field Flooding for Enhanced Malaria Control***, clinched the first prize for the most exceptional presentation overall.

Additionally, Executive Director Laura Cordier was invited to join a panel for a session on the topic of multisectoral collaboration, particularly between academia and industry.

With collective gratitude for their important work, we are proud to celebrate the high-quality contributions that our research team is making to their respective scientific fields while simultaneously serving to advance Pivot's mission.



DEFINITIONS

1. **District hospital:** a secondary health facility offering inpatient care and specialized clinical services (e.g., dentistry; emergency obstetric care, including cesarean sections; laboratory and radiology; infectious disease treatment; and inpatient malnutrition for children) for the full district population
2. **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
3. **Community health:** disease prevention and health promotion conducted by community health workers (CHWs) outside of health facilities and within a community
4. **Community health worker (CHW):** a community member trained to provide care for common illnesses in their communities and to refer patients in need of higher levels of care to health centers; patients served are primarily pregnant women and children under five
5. **Supported patient visit:** a patient visit to community health worker, health center, or hospital for which costs of care are reimbursed by Pivot
6. **Tertiary care:** specialized medical care provided at regional or national health facilities outside of the district
7. **Per capita utilization:** an annualized rate of utilization calculated using the total number of quarterly community or health center visits multiplied by four and divided by the total catchment area population; only fully supported health centers are included in the calculation
8. **External consultation:** new and follow-up outpatient visits with a clinician at a fully-supported health center or hospital
9. **Bed occupancy:** percentage of total hospital beds available that are occupied by admitted patients
10. **Essential medicines:** a subset of total medicines supplied (7 at the community level, 15 at health centers, and 31 at the district hospital) that, informed by international standards, are necessary for providing basic health care
11. **Baseline [availability of medicines]:** 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
12. **Maternal survival rate:** the percentage of facility births and miscarriages in the last quarter after which the mother was discharged alive
13. **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
14. **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
15. **Antenatal 4-visit completion rate:** the percentage of women who gave birth at a fully-supported health center who attended four antenatal care visits prior to delivery
16. **Acute malnutrition:** weight for height that falls between -2 and -3 standard deviations below the mean weight for height according to international growth standards
17. **Severe malnutrition:** weight for height below -3 standard deviations below the mean weight for height according to international growth standards
18. **Lost to follow-up:** a patient whose treatment has been interrupted and who has not completed a program of care
19. **Unresponsive to treatment:** a patient whose health outcomes do not improve with treatment for specified disease
20. **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