Strategic Plan 2023-2028

Our 5-year strategy for regional expansion

TONGA SOA!

Welcome!

CONTENTS

FOREWORD

In 2012, Pivot's co-founders made their first visit to a health center in Ranomafana, Madagascar. They found a girl suffering from cerebral malaria, yet not receiving treatment. While responding to save her life, it became clear that this was not an isolated case. Similar situations were playing out on a regular basis across much of the island nation, and little international effort was effectively working to solve the problem.

Even in countries with broad multinational global health support, the incidence of diseases like malaria has been on the rise for much of the past decade. The evidence for programs that work at scale is shockingly scant. Many of the world's most pressing challenges – poverty, disease, environmental degradation – are especially acute in Madagascar, where the majority of the 27 million people live below the poverty line, and which has among the lowest investment in healthcare in the world.

Why, despite the existence of modern technologies, domestic policies, and international standards of care, do millions of people die annually from such preventable and treatable illnesses? The answer is, in part, that **even simple solutions require complex delivery systems that must align at the point of care**. Critically, the reported measures of illnesses and deaths are not what they seem. Those are rough estimates from crude data taken at spatial and temporal scales that are useless to healthcare providers in a relevant time frame. The shortfalls of the modern global health movement, in other words, are due to both general breakdowns in the systems of care, as well as failures in the science necessary to inform that care.

Pivot was created in 2014 to address these failures by establishing a model system of healthcare based on the integration of science and service delivery at a district level. Then, the local under-five and maternal mortality rates in Ifanadiana District were among the highest in the country. We have since worked alongside Madagascar's Ministry of Public Health (MoPH) to sustain rapid and lasting change in health outcomes. We have seen a 20% reduction in under-five mortality alongside a 200% increase in utilization of essential services and changes in quality of care. With unprecedented data systems and the most rigorous analyses of local health system change that we are aware of, we have shown that transformation is possible by being closest to the patient, while also serving as a true partner to the government.

Pivot is now in an inflection moment. At the invitation of the government, we are expanding across the region of Vatovavy, quintupling the catchment population. We will continue our work with the government to support their vision for Universal Health Coverage (UHC). Combined with truly novel data systems, we aim to lead in the next era of modern analytics integrated with rights-based, patient-centered, quality care for the most vulnerable.

This strategic plan presents our successes, challenges, and vision for Pivot's next five years, based on the following strategic objectives:

1. **Strengthen pillars of the health system** at all levels of care
2. **Improve quality of services** across medical programs and clinical specialties
3. **Integrate social protection** to ensure equitable access to care
4. **Advance partnerships** to scale impact
5. **Strengthen organizational capacity** to aid in replication and sustain growth
6. **Revolutionize global health science** to rapidly generate a new kind of evidence base

Pivot is committed to pioneering solutions that will leverage tangible and lasting changes in health outcomes. We hope you will join us and that collectively we can save lives, transform health systems, and catalyze global change.

RAISON D'ÊTRE

OUR MISSION

We save lives, transform health systems, and catalyze global change.

OUR GUIDING PRINCIPLE

"Ny fahasalamana no voalohan-karena."

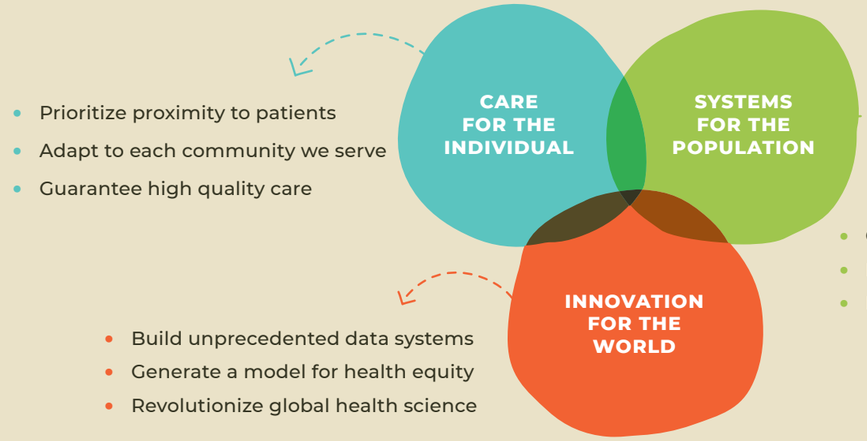
"Health is the first wealth."
– Malagasy Proverb

OUR VALUES

- Health as a human right
- Solidarity
- Bias towards action
- Sustainability
- Humility
- Accountability
- Curiosity
- Embracing complexity

OUR APPROACH

WE COMBINE:



- Prioritize proximity to patients
- Adapt to each community we serve
- Guarantee high quality care

- Cultivate meaningful partnerships
- Inform public health policy
- Drive population level impact

- Build unprecedented data systems
- Generate a model for health equity
- Revolutionize global health science

...TO IMPROVE HEALTH OUTCOMES FOR ALL

STRATEGIC OVERVIEW

OPPORTUNITY FOR IMPACT

Madagascar faces some of the lowest health outcomes in the world with people dying regularly from preventable and treatable illnesses. Pivot is committed to creating measurable and lasting impact by identifying limitations in design, resources, delivery, and science to address these most basic problems. Our aim is to transform the local health system and provide a model for how science can be integrated with service delivery to meet the needs of vulnerable populations, from the communities of Ifanadiana District and Vatovavy Region to the entire nation of Madagascar, and beyond.

Founded by scientists and clinicians with a common vision, Pivot believes that the combination of data, clinical care, and partnerships can substantially change health outcomes. Created as a mission partner to Partners In Health, Pivot expanded on their health systems strengthening (HSS) model and adapted it to Madagascar's context. With science at the core of our identity, our first activities included a true baseline study from which we would build our model to advance change in Ifanadiana District and for Madagascar.

2014 BASELINE FINDINGS

In 2014, Madagascar health expenditure was **$20 per capita, one of the lowest in the world** – stagnating around 4.6% of the GDP since 2000.

Health indicators in Ifanadiana District were worse than the national average, with **1 in 7 children dying before the age of 5 and, for women, a 1 in 14 lifetime risk of maternal death**.

Only 18% of deliveries occurred in a health facility, fewer than one-third of children under five sought care when ill, and just 35% of children received all recommended vaccines.

Starting in Ifanadiana District

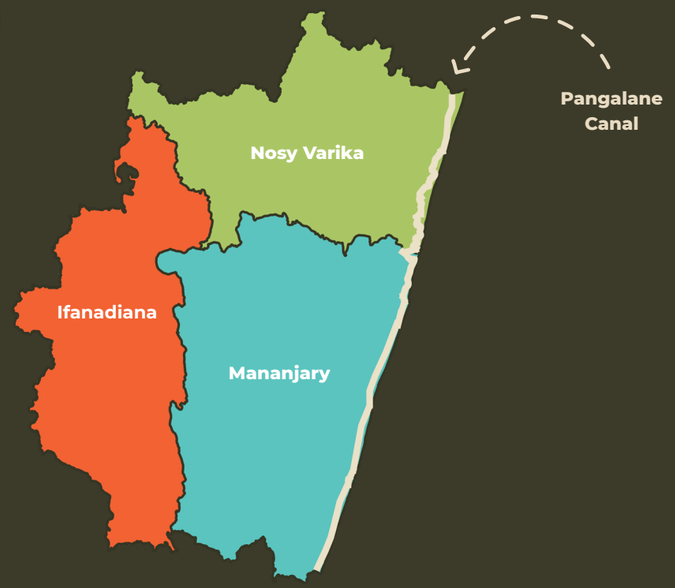
With an invitation from the MoPH in 2014, we aimed to transform the health system at a scale of particular relevance to Madagascar's government. We set out with the goal to create a model health district – to understand how the complexities of a whole system amount to more than the sum of their parts and how this influences service provision and impact – which can be adapted for national scale-up. Over the last 10 years, we have implemented a number of clinical initiatives and led ground-breaking scientific investigation that allowed us to refine solutions.

Expanding to a Region

Our path to expansion materialized with the creation of the new Vatovavy region in November 2021. Already working in one of its three districts, Ifanadiana, Pivot was invited to support the newly formed region. This regional expansion is a momentous shift for Pivot, as we move from intervening in 1 of 114 districts to 1 of 23 regions. We will be quintupling the population we serve from 200,000 to 1 million people, and tripling our geographic reach. This expansion offers the opportunity to understand the replicability and scalability of our collaboration with the MoPH.

Vatovavy Region is composed of three districts: Ifanadiana, Mananjary, and Nosy Varika.

It has both mountainous terrain and low lying grounds crossed by the fluvial Pangalane Canal.



Supporting the whole region will mean shifting our operations to cover:

People:	200,000 → 1,000,000
Health centers:	21 → 87
Hospitals:	1 → 3
Community health posts:	195 → 715

AN EVOLVING STRATEGY

In order to support this expansion, we must necessarily adapt our strategy. We have led an organization-wide review of research findings, policies, procedures, and strategy, from program implementation to organizational capacity. Based on evidence of successes in key strategic objectives including increased utilization, greater coverage of essential services, higher performance and improved quality of care and ability to address geographic and financial barriers to care, we plan to adapt our implementation approach to support operations at a regional level.

#1 Strengthen pillars of the health system at all levels of care

#2 Improve quality of services across medical programs and clinical specialties

#3 Integrate social protection to ensure equitable access to care

#4 Advance engagement and partnerships to scale impact

#5 Strengthen organizational capacity to aid in replication and sustain growth

#6 Revolutionize global health science to rapidly generate a new kind of evidence base

"Let's work together for the good of the people of Vatovavy Region."

- Dr. Jocelin Mbimbisoa,
Vatovavy Regional Health Director

QUESTIONS WE SEEK TO ANSWER

Our work over the past decade has continuously focused on refining answers to the following questions that are important for Madagascar and beyond.

- What model of UHC is effective at ensuring access to health care for all, while remaining financially sustainable for the government and individuals across a region? How much does it cost and what are the essential components?
- What programs are necessary to increase equitable access to care in a rural region? How can these simultaneously overcome geographic, social, and financial barriers to health care?
- How do we durably and efficiently improve the quality of care and patient satisfaction at different levels of the health system?
- How do we combine health system strengthening interventions with innovation to optimize the delivery of quality care in rural, resource-poor settings?
- How can the integration of science and program implementation help build a resilient health system that is responsive to current and future threats, such as extreme weather events, environmental degradation, epidemics, and emerging diseases?

These questions continue to guide our work as we engage in regional expansion.

A DECADE OF DATA

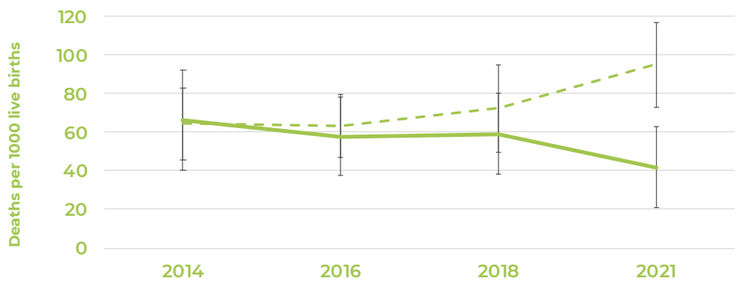
Transforming the health system requires transforming how data are generated and used. Our health care activities are integrated with an unprecedented array of data sources from all levels of care within and beyond the health system. Together, this forms both a model of care delivery and a revolution in global health science. Our data measure impact on population health and intervention coverage, health system functioning and utilization, and the intersection of various components – environmental, biological, economic, health system – to deepen our understanding of problems and generate solutions.

POPULATION HEALTH

Since 2014, the Ifanadiana Health Outcomes and Prosperity longitudinal Evaluation (IHOPE) has measured population health and intervention coverage in a cohort of approximately 8,000 individuals in 1,600 households. The first round of data collection established a true baseline for the intervention and comparison areas allowing for the unique quasi-experimental ability to measure the impact of Pivot's work across Ifanadiana District.

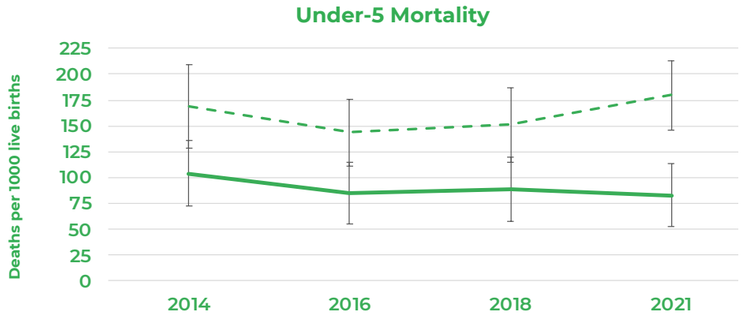
KEY: inside catchment area | outside catchment area

Infant Mortality



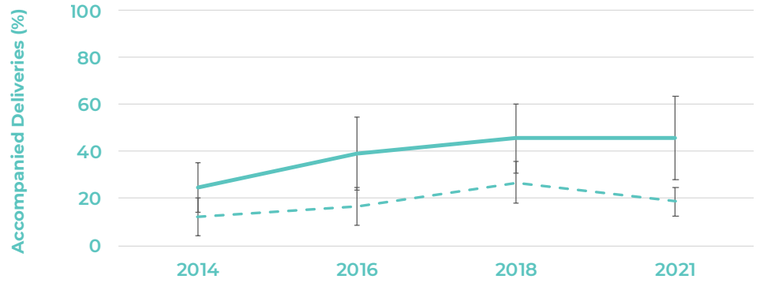
Infant mortality **fell by 5.3% annually**[a] in Pivot's intervention area.

Under-5 Mortality



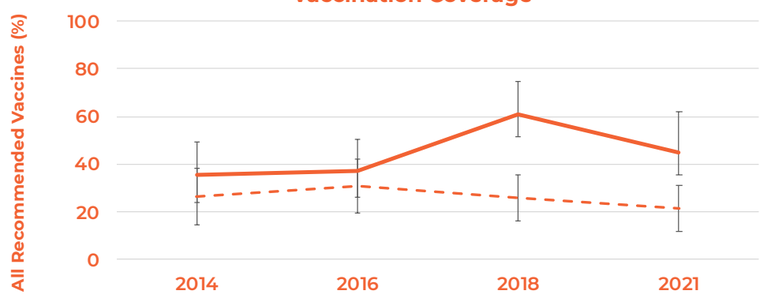
Under-5 mortality **fell by 2.9% annually**[a] in Pivot's intervention area.

Deliveries Accompanied by a Skilled Birth Attendant



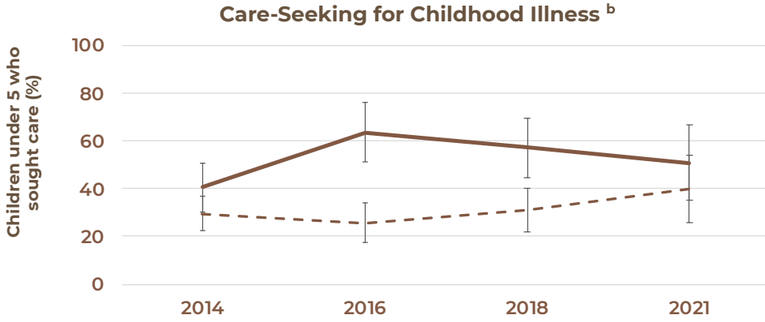
Use of skilled birth attendants **increased by 85% in Pivot's intervention area** from 2014 to 2021.

Vaccination Coverage



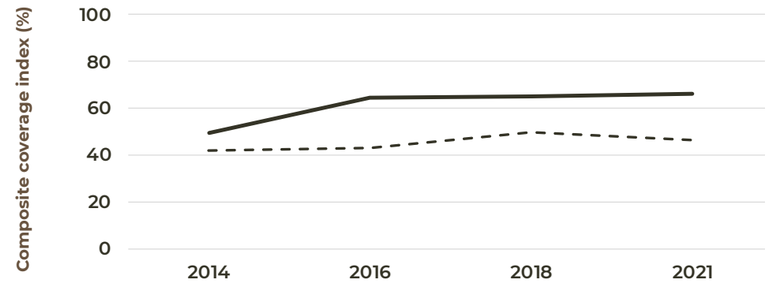
Vaccination rates were **twice as high in Pivot's catchment** than in comparison areas in 2021.

Care-Seeking for Childhood Illness [b]



Care-seeking **fell by 11%** from 2018 to 2021 in the Pivot intervention area, **but showed an overall increase of 25% compared to 2014.**

Coverage of Essential Interventions [c]

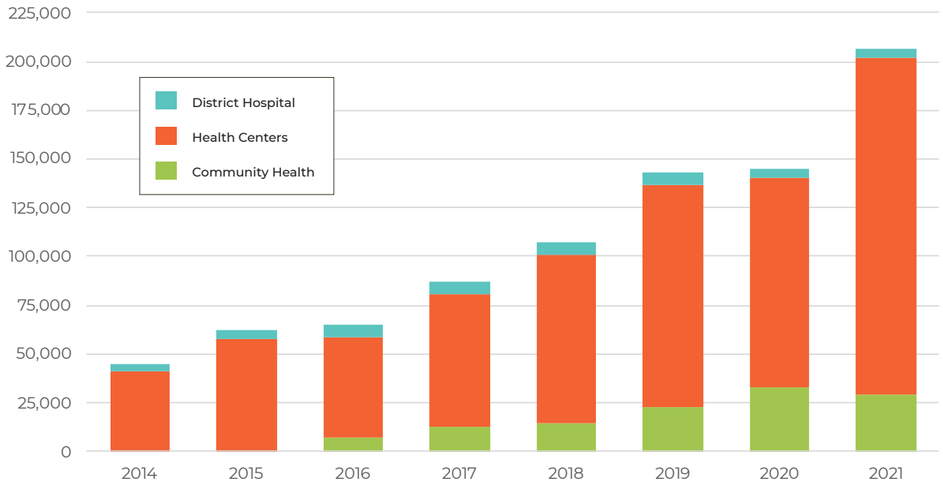


Coverage of essential interventions has **remained above 60% in the Pivot intervention area** since 2016.

HEALTH SYSTEM CAPACITY

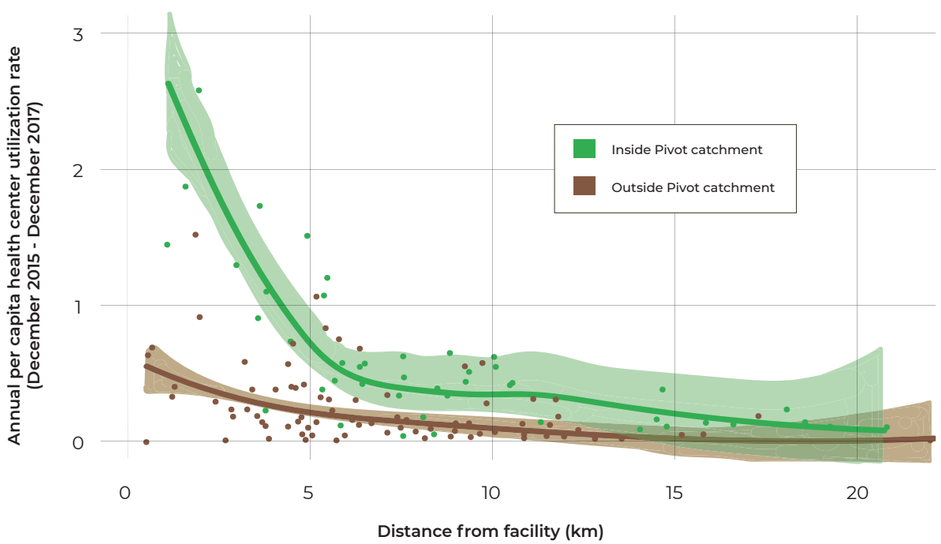
Data from the MoPH's health information system, combined with Pivot's routine programmatic data, provide continuous monitoring of health system operational capacity, utilization, and quality of care.

Annual Outpatient Visits Supported



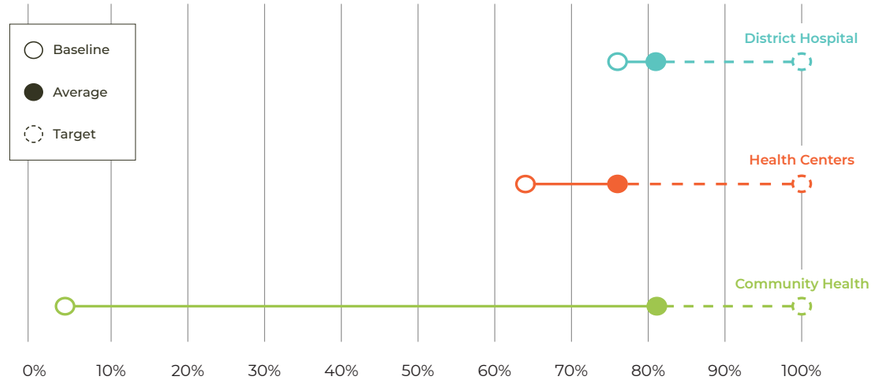
Outpatient visits supported by Pivot **increased by more than 350%** from 2014 to 2021.

Utilization Rate by Distance from Health Center Following a Health Systems Strengthening Intervention



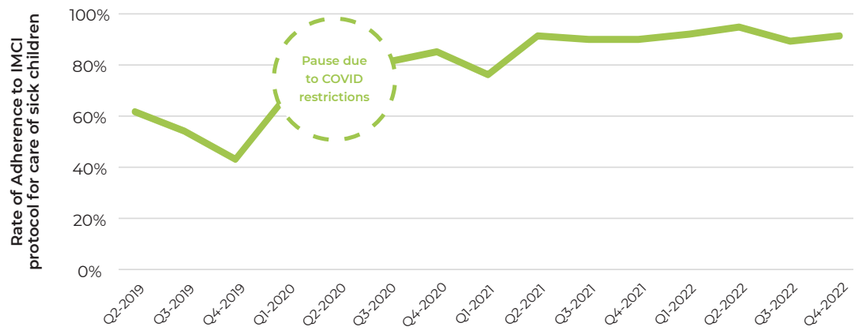
After HSS activities, primary care utilization rates remained at **less than 1 visit per capita per year in communities more than 5km from a health facility**.

Availability of Essential Medicines



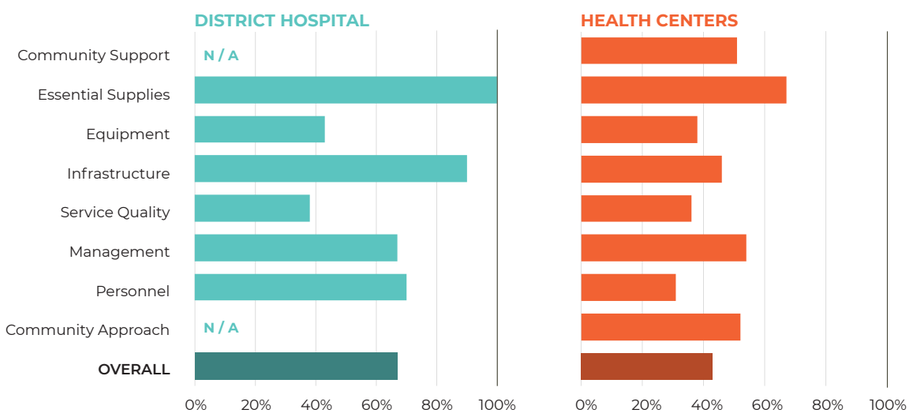
With Pivot's support, **availability of medicines has improved across all levels of care**. However, availability continues to remain below the target of 100%.

Quality of Care by Community Health Workers



Community health workers provide **high quality care close to home** for sick children, preventing severe illness and decreasing deaths.

Health Facility Readiness Assessment (2020) [d]

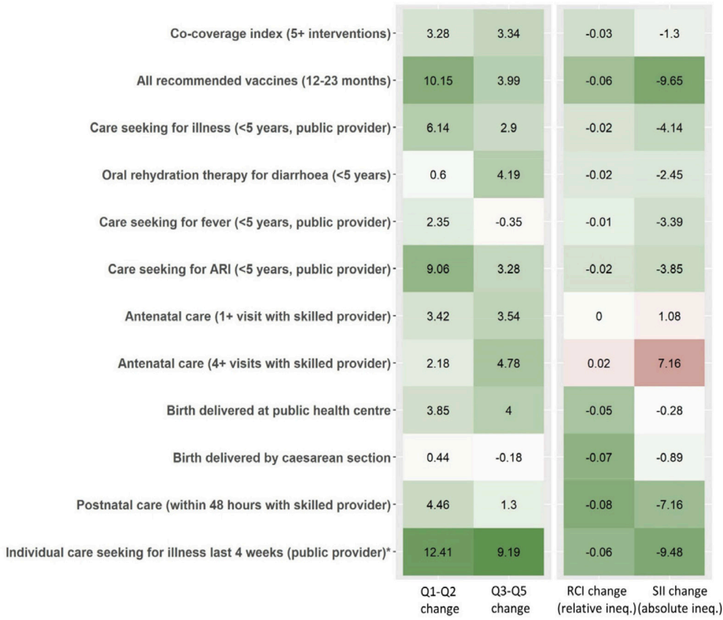


Hospital and health centers score highly on essential supplies, but more support is needed to meet MoPH standards for equipment and service quality.

DATA INTEGRATION FOR DEEPER INSIGHT

By combining multi-modal data we explore the complex relationships that underlie the health system in Madagascar and around the world.

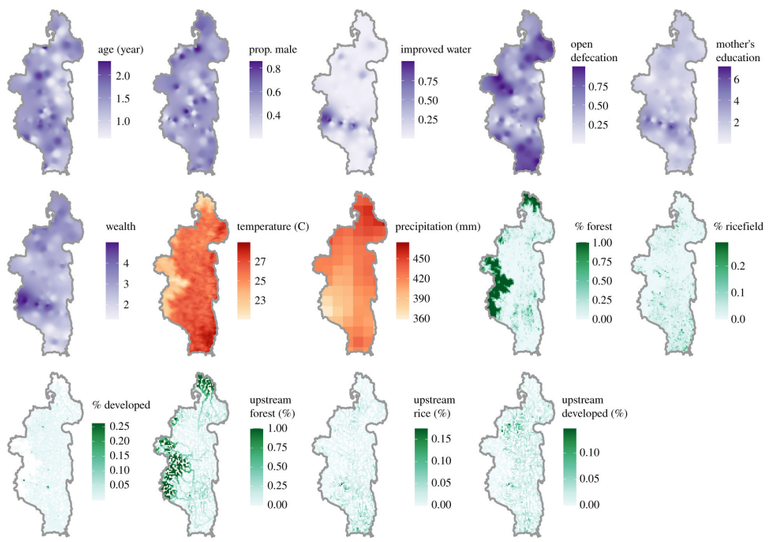
Annual Change in Inequalities



Annual change in inequalities for key coverage indicators in Pivot's intervention area from 2014 to 2018. **Most life-saving interventions demonstrate a reduction in inequalities in coverage.** Q1-Q2 and Q3-Q5 represent the change in the two worst-off and three best-off quantiles respectively. RCI and SII represent the change in relative concentration index (measure of relative inequality) and in slope index of inequality (measure of absolute inequality). Color scale is based on scaled values for each variable, with red representing a worsening over time (reduction in quantile coverage, increase in inequalities) and green representing an improvement.

Garchitorena, et al. (2020). District-Level Health System Strengthening for Universal Health Coverage: Evidence From a Longitudinal Cohort Study in Rural Madagascar, 2014-2018. *BMJ Global Health*; 5:e003647.

Determinants of Diarrhea

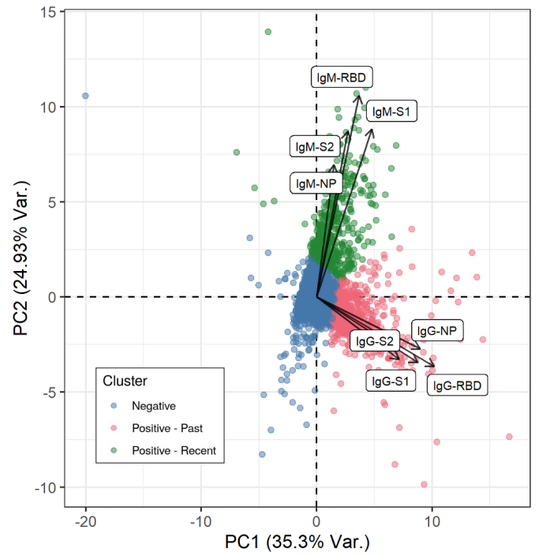


Socio-ecological variables mapped across Ifanadiana district **explore the relationship between climate, environment, demographics and disease burden**

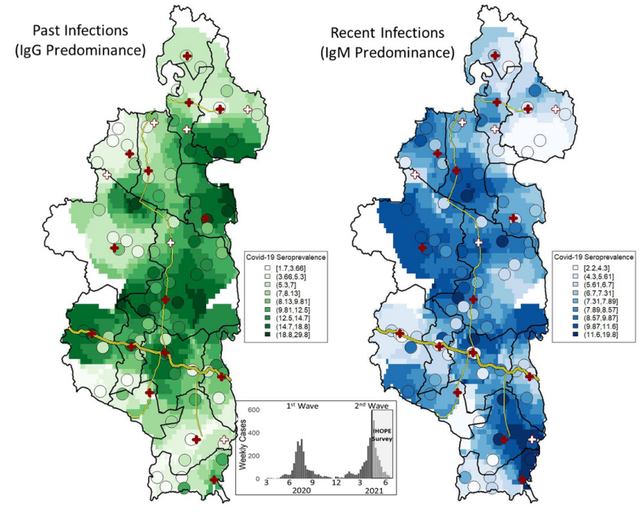
Evans, et al. (2021). Socio-demographic, Not Environmental, Risk Factors Explain Fine-Scale Spatial Patterns of Diarrhoeal Disease in Ifanadiana, Rural Madagascar. *Proceedings of the Royal Society B*, 288: 20202501.

COVID-19 Analysis

Seroprevalence of COVID-19 in Ifanadiana District was estimated at 27.4% in 2021 using K-means clustering of seven antibodies against SARS-Cov2. The principal components analysis explains 70% of the variance in these antibodies.

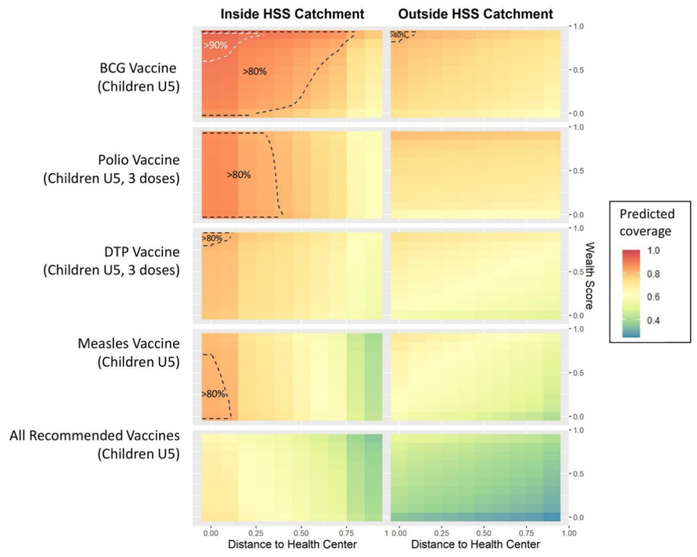


Spatial distribution of SARS-Cov-2 seroprevalence in Ifanadiana District examining past infections (IgG predominant, map on left) and recent infections (IgM predominant, map on right). The study was embedded in the 2021 IHOPE cohort and is one of the few population-representative studies in a rural African setting.



Garchitorena, et al. (2023). Morbidity and Mortality Burden of COVID-19 in Rural Madagascar: Results From a Longitudinal Cohort and Nested Seroprevalence Study. *Manuscript in preparation.*

Vaccination Coverage



Predictions for achieving vaccination coverage targets for different populations in Ifanadiana District. **Households within the Pivot intervention area are more likely to reach vaccination coverage targets.** Graphs show in-sample predictions of vaccination coverage for 2018. Areas with predicted coverage greater than 90% or 80% are surrounded with white dashed lines or black dashed lines, respectively.

Rajaonarifara, et al. (2022). Impact of Health System Strengthening on Delivery Strategies to Improve Child Immunisation Coverage and Inequalities in Rural Madagascar. *BMJ Global Health*, 7(1): e006824.

KEY SUCCESSES

Over the last decade, we have celebrated a number of successes across medical programs leading to significant increases in access to services, quality of care, and most importantly, changes in health outcomes.

INCREASED ACCESS TO CARE

When Pivot first started, health facility utilization was extraordinarily low. In 2022, we reached the major milestone of financially supporting more than 1 million unique patient visits across all levels of care since 2014. Annual utilization rates have increased by more than 200% across much of the district. Mothers, children, adolescents, and whole communities are now accessing care when they need it.

"[Pivot's] actions have greatly encouraged the community to go to the health center when they are sick, and have truly relieved difficulties within the community both socially and in terms of health."

- Henry De Gonzag Rakontondrasoa
Fokontany Chief,
Ranomafana Commune

A STRENGTHENED HEALTH SYSTEM

Investing in the Health Workforce
In 2014, a number of health facilities in Ifanadiana District were not functional, and there was often a sole healthcare provider serving the entire community. Investing in human resources was a key priority. Our Human Resources for Health project has been a pillar of our model – jointly hiring clinicians with the MoPH, paying for their salaries for 2 years and supporting their integration into the government health workforce. This has been recognized by the Malagasy government as a sustainable approach to the human resource crisis. Overall, more than 100 clinicians and technical staff have been recruited through this initiative.

Dignified Spaces
We have supported significant improvements in infrastructure, ensuring people have access to health facilities with basic medical equipment, solar power, latrines, and potable water. We do not let distance and geographic barriers slow such efforts – rather we treat this as an opportunity for substantial changes in health equity and access. Over 90 community health posts were constructed in collaboration with the community and 15 health centers have been renovated or completely rebuilt (example pictured below). We aim for the district hospital to become a center of excellence and have contributed to the transformation of the hospital campus with the creation of three new buildings and extended services, including a center for infectious diseases, a new maternal and pediatric wing, and an area for accompanying family members.

Ambiabe Health Center rehabilitation

Expanded District Hospital campus

IMPROVED QUALITY OF CARE

Capacity-Building
In addition to increasing the number of healthcare providers, we actively increased the availability of basic services and quality of care being provided to patients. We have led varied quality improvement activities and organized many capacity-building initiatives, from government-organized health trainings, to bedside learning and ongoing clinician mentorship. For the last decade, our efforts have focused on maternal and child health, alongside critical emergency care and infectious diseases.

Supporting National Programs
Pivot has supported the implementation of key national programs, including malnutrition, maternal health, under 5 child care, tuberculosis (TB) and malaria. For example, Ifanadiana District went from having no programmatic activity in malnutrition detection and treatment to malnutrition services in all primary care centers, including an inpatient ward for severe complicated malnutrition. The TB control program has become one of our most successful projects. We supported the creation of 11 TB treatment centers and improved the diagnostic capacity of the two diagnostic centers; with treatment success rates evolving from 55% (2017) to 92% (2022). Increased social support and proactive deployment of community health workers (CHWs) have resulted in significant improvements in access to care and patient outcomes. Pivot has also built a district-wide ambulance system for individual patient transfer, which has supported nearly 7,000 emergency patient transports since 2014.

Adaptability to Respond to Emergencies
Although Pivot is not an emergency response organization, Madagascar has faced a number of epidemics and natural disasters which forced us to adapt our programming. Strong health systems are essential for responding to disasters. We successfully supported the MoPH in their response to pulmonary plague (2017, 2018), measles (2019), and COVID-19 (beginning in 2020), as well as increasingly severe cyclone seasons. Our interventions focused on strengthening prevention measures, operational capacity, increasing laboratory capacity, and readiness to build resiliency as well as technical and clinical support.

INTEGRATED DATA SYSTEMS

Deployment of Mobile Technology
Pivot strongly believes in the power of data and e-health solutions to improve health outcomes. We prioritized support of the health information system to promote data availability, quality, timeliness, and ultimately to improve quality of care. Pivot led the roll-out of mobile technology for CHWs, using the government preferred platform CommCare, for more than 138 CHWs. We also collaborated with the MoPH and WHO on national deployment of digital monthly reporting. Pivot is actively involved in development of the National E-Health Strategy for Madagascar and is about to launch a new One-Health surveillance module.

Rigorous Evaluation of Population Impact
We are driven by the belief that the best intervention must be built on the backbone of scientific rigor and have, from the beginning, embedded research and evaluation in our work. Through our longitudinal cohort, we demonstrated some of the most rigorous population-level impacts of local health system change in Sub Saharan Africa.[1,2] The results from the IHOPE cohort have been incorporated into Pivot's dashboard, enabling program managers to review data tables and figures, including exploring differences across geography, intervention area, time, and socioeconomic status of households.

Understanding and Overcoming Geographic Barriers to Care
Our work did not begin by seeking to answer questions about geography and access to care, however a preliminary analysis of the impact of health system strengthening activities on per capita utilization showed a marked relationship between distance and health system access: a facility-based HSS intervention had little to no impact on per capita utilization rates of people living more than 5km from a health facility. This finding has shaped our research and implementation. Facility- and community-based programs are designed with geographic barriers in mind. We seek to implement solutions to bring care to those unable to access it under more traditional HSS models. Since our initial work to quantify the distance decay in accessing primary care,[3] we have also explored geographic barriers to community[4] and hospital-based services.[5]

ORGANIZATIONAL CAPACITY

Pivot's organizational culture has evolved over the last decade. We are true believers of inverted hierarchy – reporting to the community we serve and strive to apply our core values in our day-to-day and program implementation. We reached key milestones by prioritizing the professional development of our management cadre through mentorship, technical training, and leadership workshops. As a result our senior leadership team has been more than 75% Malagasy since 2021 (90% in 2022). Furthermore, by actively creating a work environment that supports gender equity, we have seen many women take on greater responsibility in the organization, with at least 50% of our leadership team being female since 2019 (80% in 2022).

"The culture at Pivot is something special. There is an air of mutual support and respect across the entire staff and leadership team, toppling the limitations of hierarchy in a way that feels full of hope and possibility."

- Dr. Barbara Vololonarivelo
Pivot Director of Partnerships

REMAINING CHALLENGES

Ten years of successful program implementation in partnership with the MoPH have produced a body of evidence of what has worked, what needs to improve, and which questions remain unanswered. The following challenges remain key focal areas for implementation and research.

PATIENT-CENTERED APPROACH

We strive to apply the Malagasy ethos that "***the patient is king***." Much remains to be done to support the evolution of quality of care and systematize a patient-centered approach. We aim to create a platform that considers the patient's experiences and gives voice to beneficiaries as part of quality assurance initiatives.

GEOGRAPHY

We are committed to the full coverage of our interventions across the entirety of the areas we serve and to go "the last mile" even in the most remote communes. Nevertheless, the incredibly dispersed population poses logistical challenges. The data show that the majority of patients cannot access health care due to geographic barriers. As patient distance from health centers increases, utilization decreases exponentially.[3] Geographical barriers impact the timely referral of patients, the systematic transport of medicine and consumables, and limit human resources retention. As we expand to Nosy Varika district, where 40% of health facilities are accessible only by foot, we must continue to adapt our approach to overcome these obstacles.

RESPONSIVE, MOTIVATED, WELL-TRAINED HEALTH WORKFORCE

Removing geographical and financial barriers to healthcare have resulted in a multifold increase in utilization of services at facilities. Even with the success of our HR for Health project, the substantial rise in utilization can overwhelm a health facility or community health post. Systems of performance-based financing (adding financial motivation for the health workforce for high performing facilities and individuals) were implemented in a pilot phase in late 2021. We recognize that this is only the first pilot of financial motivations and will need to undergo multiple revisions with the MoPH to be able to lead to a successful, replicable, and sustainable system.

PHARMACY SUPPLY CHAIN

Stockout rates have persisted at around 50% and have not adequately improved since 2021. The central challenge is the unavailability of certain tracer medicine at the central level, combined with the financial capacity of the district pharmacy. We tried a number of different approaches to improve this pillar of the health system – from direct donations to outsourced management of pharmacies. Yet, over time we found these measures were not as replicable or sustainable as intended. Moreover, we are conscious of the extra burden of the increased utilization of care on an already weak supply chain, following the roll-out of our financial protection scheme. Finding an approach that will effectively support procurement links between the national and district pharmacy units is crucial as the availability of essential medicine is a basic prerequisite for a well-functioning health system. Our solution is to engage new conversations with the MoPH to develop a new strategy for zero stockouts of essential medicines in the region.

GOVERNANCE

Good governance is at the heart of strong and effective health systems. There is scope to further strengthen this pillar of the health system. We are committed to dedicating more funds to support external governing structures and further invest in MoPH leadership to strengthen management practices. Transparent systems and community accountability will be important cornerstones going forward. Moreover we must engage and empower civil society around the right to health.

SUSTAINABILITY

We must continue to find a balance between finding immediate solutions for the patients and community we serve, while also strengthening the system in the long term. Our programs need to be built for continuity with clear transition plans. Madagascar spends approximately $21 per capita on healthcare (2018, IHME). This is roughly equivalent to the average Sub-Saharan African country spending in the year 2000, whereas today spending in most of Sub-Saharan Africa spends about $80. Despite low current spending, Madagascar is committed to the Sustainable Development Goals and aims for a health expenditure of $86 per capita by 2030. A key step will be to collaborate with the MoPH to identify a target for regional health spending and ensure our implementation feeds into that model.

Strategic Objectives

Following an organization-wide review of research findings, policies, procedures, and strategy, we set out to adapt our implementation approach. We took the opportunity to analyze what could be replicated and what would have to be adapted.

OBJECTIVE #1

STRENGTHEN PILLARS OF THE HEALTH SYSTEM

For clinical programs to thrive and our health care strategy to be successful – the health system must be functional. We support the pillars of the health system to enable and foster quality service delivery.

KEY AREAS OF WORK

Human resources for health:
- Augment the health workforce by supporting the MoPH to hire healthcare workers – clinicians (doctors, nurses, and midwives), lab technicians, and CHWs
- Provide ongoing mentorship, formal and informal training, and capacity building of healthcare workers
- Adapt and expand our financial motivation scheme to increase productivity and quality of services through performance-based financing

Infrastructure:
- Construct or rehabilitate public health facilities to meet basic health and sanitation standards and provide dignified spaces
- Equip public health facilities to provide all basic medical services
- Enhance telecommunication and connectivity solutions

Biomedical & supply chain:
- Support a robust supply chain for essential medicine and medical consumables availability to achieve a successful “zero stockout policy”
- Participate in continuous review of MoPH standard national medication formulary
- Strengthen diagnostic capacity at all levels of care for all services provided

Governance:
- Support functionality of local ministry entities
- Increase engagement on development and review of national protocols and strategic documentation
- Enhance local governing entities to advocate and implement a patient-centered approach
- Promote public health facility financial autonomy
- Strong collaboration with the MoPH to support effective oversight, monitoring and evaluation, and accountability of implemented programs

Health financing:
- Support costing initiatives to better understand per capita health expenditure
- Support development and implementation of the national health financing strategy

Information systems:
- Strengthen the availability, quality, and timeliness of health information data
- Support deployment of mobile technology and electronic medical record systems at all levels of care
- Facilitate the production, analysis, dissemination, and use of health information that monitors population health status, determinants of health, and health system performance

OBJECTIVE #2

IMPROVE QUALITY OF SERVICES

Pivot is committed to the delivery of high-quality health care for all. At the center of our values is ***health as a human right:*** patients should have access to care, no matter the complexity or burden of disease. Pivot's programs span clinical specialties to improve the availability and quality of all services across all levels of care – from community health posts, to primary care facilities, up to secondary and tertiary hospitals.

KEY AREAS OF WORK

Child health and nutrition:

- Support the systematic diagnosis and treatment of predominant illnesses for children under five
- Expand the availability of malnutrition services to every health facility to combat severe acute and moderate acute malnutrition.
- Increase our engagement to battle the global downward trend of childhood vaccination rates

Maternal, neonatal, and reproductive health:

- Diversify our efforts to increase the number of safe and timely deliveries with skilled birth attendants
- Expand the network of neonatal & obstetrical emergency care centers
- Collaborate with traditional birth attendants to refer and accompany patients for antenatal care and delivery
- Launch new initiatives to improve postpartum care

Infectious diseases:

- Respond to the growing incidence of HIV/AIDS in Madagascar through education, screening, and treatment
- Expand comprehensive tuberculosis services to every health facility
- Support implementation of the national malaria program to ensure no stockouts of key malarial consumables and medicines

Non-communicable diseases:

- Support systematic, timely, decentralized screening and care of common non-communicable diseases including hypertension, diabetes, epilepsy, asthma, and others
- Collaborate with tertiary level hospitals to improve the timely diagnosis and care for cardiovascular disease and stroke

Cross-cutting initiatives:

- Support implementation of quality improvement projects
- Promote patient-centered health care delivery and build capacity on humanized care
- Collaborate on continuous improvement of clinical protocols
- Continue to support critical care and strengthen referral networks in the most remote areas
- Increase focus of interventions on disease prevention

"Improving quality of care means raising the standard of care and broadening the availability of services beyond vertically-funded programs, even in the most rural districts of Madagascar. True to our values, it also means being there for our patients, going above and beyond so that the communities we serve have full access to their right to health – whether they require basic primary services or more complex care."

- Laura Cordier
Pivot Executive Director

BUILDING A RESILIENT HEALTH SYSTEM: COMMUNITY-BASED CARE

Community-based care is a foundational element of a resilient health system. With thousands of miles of footpaths separating rural communities from the formal healthcare system, a network of professionalized, proactive CHWs is the key to connecting people to the care they need. In Madagascar, CHWs provide essential health services for sick children and pregnant women close to home. They accompany patients in accessing key health services and support the health of communities.

KEY AREAS OF WORK

- Human resources:
  Grow the CHW network to increase proportion of population with access
- Infrastructure:
  Collaborate with the community to build community health posts
- Governance:
  Engage with local authorities and associations to better coordinate community-based activities
- Health information:
  Deploy mobile technology for all CHWs
- Quality of care:
  Launch peer CHW supervisors and continuously improve supervision methods; integrate household visits as part of routine care
- Research:
  Integrate program delivery and research to answer questions about implementation and geography of health care access

Supporting the Deployment of the New National Community Health Strategy

Over the course of 2022, Pivot collaborated with the MoPH and financial and technical partners to update the national community health strategy. Key components of our Community Health Pilot Project were adopted as part of the new strategy, including our efforts toward increasing the number of CHWs per commune, building community health sites, and use of mobile technology and proactive care to reach the most remote communities.

The financial compensation of CHWs was at the forefront of the conversation, which is a momentous milestone in and of itself. Though the Malagasy government is not yet ready to formally compensate CHWs, as nurses and doctors remain in volunteer capacity at health centers throughout the country, they have committed to harmonizing their financial motivation across partners through performance-based financing. In light of this, Pivot will adapt its CHW financial motivation and actively support roll-out of the new strategy.

Continuing Advocacy

As a member of the Community Health Impact Coalition (CHIC) we are committed to "making professional community health workers a norm worldwide."[6] We will continue to engage in this discourse both locally and internationally, through advocacy, implementation, and research.

Community Health Impact Coalition

Design Principles for Optimizing Community-Led Health Systems

In order to achieve Health for All, CHWs must be:

- *Accredited*
- *Accesible*
- *Proactive*
- *Continuously Trained*
- *Supported by a Dedicated Supervisor*
- *Paid*
- *Part of a Strong Health System*
- *Part of Data Feedback Loops*

OBJECTIVE #3

INTEGRATE SOCIAL PROTECTION

Social protection is at the heart of Pivot's approach to enable equitable access to quality care. With 81% of Madagascar's population living below the poverty line,[7] the Malagasy government has re-engaged its commitment to preventing, managing, and overcoming situations that adversely affect people's wellbeing. Social protection provides a rights-based approach to reaching the objectives of UHC.[8]

A new and promising collaboration: The last decade of work to integrate social and clinical care, along with the research we have generated on the impact of removing user fees and district-level costing, has positioned us as a unique partner to engage with the Malagasy government on questions of social protection in the context of UHC2030. Pivot is launching a new collaboration with the Ministry of Population, Social Protection and Women's Promotion to further engage on key issues around social justice and health equity.

KEY AREAS OF WORK

- Financial protection: Launch a new financial protection scheme that combines the elimination of user fees for vulnerable and targeted populations including pregnant women, adolescents and children, with the roll-out of pre-payment mechanisms

- Social protection: Continue to provide financial and material support to patients and their families to cover indirect costs for care

- Accompaniment: Expand psycho-social support and grow social worker networks

A stronger engagement towards health promotion and disease prevention: Pivot's focus over the past decade has been on HSS and improving medical treatment. We believe, as we work with the government to roll out UHC, that our model must more heavily include a prevention component. We will launch a new health promotion program that will roll out a range of social and environmental interventions designed to promote health behaviors and protect personal health.

Advancing women's health: Pivot is committed to reducing health disparities and gender barriers to health care. Women are at the center of a number of our initiatives and programs, with reducing maternal mortality as a key long-term objective. It is essential to go beyond maternal health and address additional issues such as gender-based violence and gaps in reproductive health services and access.

OBJECTIVE #4

ADVANCE ENGAGEMENT & PARTNERSHIP

Partnerships are the foundation of Pivot's success. The core of our model is a beneficiary-centered approach, which allows us to balance being closest to the community that we serve and to the government entities with whom we collaborate.

KEY AREAS OF WORK

- Community engagement: Pivot aims to increase its community engagement and grassroots activities with a greater focus on listening and the amplification of community voices. We will launch a new "dream fund" that will allow each municipality to pave the way for the development of their community. We look to support communities in identifying their own challenges and solutions, promoting community ownership of the implementation of new initiatives and agency in determining the future of their health.

- Government collaboration: Pivot will continue to actively partner with government entities. As we strive toward UHC, further engagement following a multisectoral approach will be key, including close collaborations with additional ministries and government entities, such as the Ministry of Population, Ministry of Telecommunication, and Ministry of Water and Sanitation. We plan to continue to establish shared objectives and encourage joint evaluation of our programs and health system performance.

- Institutions: Pivot partners with local and international institutions and organizations to maximize the efficiency of resources and leverage expertise. We truly believe in the importance of collaboration with all partners to achieve common objectives.

Supporting national scale: Our collaboration with the Malagasy government has evolved as we are proactively working together to design and implement programs. After a decade of work, we are now providing technical assistance on a variety of themes (e.g. digital health, community health, non-communicable disease management) and collaborating to change national policy and practice. As members of key technical working groups on HSS, we will continue to support the evolution of national strategy and integrate our lessons learned towards scale.

A delegation of Pivot and MoPH leaders (including the Secretary General) gathered in July 2022 to reflect on key lessons learned from the last decade of work in Ifanadiana District and discuss strategies for expansion across Vatovavy Region.

OBJECTIVE #5

STRENGTHEN ORGANIZATIONAL CAPACITY

Evolving, effective, and efficient internal procedures and operations systems are key to our growth and long term success as we transition from operating in one to three districts, including a regional capital.

KEY AREAS OF WORK

Organization and site structure

- Madagascar-based Executive Leadership and Senior Management Team, with our headquarters closest to the community
- Support the transition of decentralizing day-to-day management of programs from district to site teams (district coordination teams with multiple sites supporting 4 to 5 communes)
- Expansion of offices to new locations, with a small team in Tana and district coordination team working in the closest proximity possible to local health representatives

Fiscal performance and compliance

- Strengthen our internal operating procedures with a special focus on compliance for complex funding
- Continue our detailed budgeting & planning process in collaboration with the MoPH
- Increase the size of our HR, finance, grants & compliance teams proportionally to needs
- Leverage a more powerful financial software and increase investment in strategic finance initiatives to pursue greater precision in revenue and expense tracking, allowing for stronger management and strategic insights
- Continue to strongly implement a zero-corruption and harassment-free policy in the workplace

Professional development

- Continue to promote our values in all of our programs, operating procedures, and throughout the employee experience
- Actively address principles of diversity, equity, inclusion, and justice in our programs, management, and structure
- Strengthen our performance management and evaluation system
- Continue internal capacity building and development of management and leadership cadre
- Develop and maintain a talent pipeline for our emerging leaders by investing in education and exchange opportunities

OBJECTIVE #6

REVOLUTIONIZE GLOBAL HEALTH SCIENCE

Pivot aims to advance a new science of health system transformation that achieves better health outcomes and scalable solutions through rigorous research and a robust Monitoring and Evaluation (M&E) program built upon integrated data systems. We believe that transforming the health system requires transforming how data are generated and used. In serving as a model system, our health care activities are integrated with a range of data sources from all levels of care, within and beyond the health system. In doing so, we create not only a model for delivery care, but a model for conducting science for the needs of the poor.

We combine diverse multi-modal data – from patients, households, communities, the environment, and the health system – with advanced analytics to understand health and health care delivery in a rural region of Madagascar and identify the most impactful interventions. We build on the existing data collection systems, including the MoPH's Health Management Information System (HMIS). The data are used for routine evaluation that is directly built into operational planning and follow up, in addition to hypothesis-driven studies and open-ended investigations.

Together, this approach enables cutting-edge nimble research to be responsive to local needs while addressing gaps in the global evidence base. It supports creative approaches to addressing key questions including answering new questions as they arise such as the COVID-19 pandemic and other emerging pathogens. The intertwining of science and care delivery is at the core of our work.

"When programs addressing complex problems are supported by rigorous data and science, good things happen."

- Dr. Matt Bonds,
Associate Professor, Harvard Medical School
Department of Global Health and Social Medicine,
Pivot Science Scholar and Co-Founder

KEY AREAS OF WORK

- Monitoring and evaluation
  Our integrated approach to M&E is the backbone of Pivot and links continuous monitoring and routine evaluation with program implementation. Our M&E program uses existing data whenever possible, provides timely feedback of results, and supports implementers in interpreting and using data for programmatic change.

- Population impact
  Our quasi-experimental study design measures the impact of our intervention on population health, including changes in mortality and intervention coverage.

- Geographic analysis of barriers to care
  From granular open source mapping data we identify and quantify the impact of geography on care-seeking, informing where and how healthcare is delivered.

- Community health
  We investigate how best to operationalize global best practices for community health, the geography of care delivery, and improvements in quality of care.

- Eco-epidemiology and surveillance
  Combining environmental information (remote sensing, environmental surveillance) with spatially-granular HMIS and population survey data, we have developed models of disease transmission. This allows us to understand and forecast local disease dynamics. We have begun incorporating lab-based molecular diagnostic research to complement existing MoPH efforts and modernize and strengthen diagnostic capacity of clinical laboratories.

- Operations research on UHC
  We use operations research and program evaluation to inform UHC implementation in partnership with the MoPH. Operations research answers questions about how programs are functioning, their reach, quality of care, and their impact on health outcomes. We are developing a health financing research agenda in partnership with the UHC department of the MoPH to understand and optimize the costs of health care delivery from a societal perspective and determine the cost-benefit of key clinical programs.

- Research training
  Through workshops and mentored research projects we engage Pivot staff and MoPH collaborators in research projects, building local expertise and research capacity.

Household Survey to Assess Population Impact: 2023 Data Collection Plan

VATOVAVY REGION: ~4,800 total households to be visited across three districts to establish regional baseline of population health and intervention coverage ahead of expansion

IFANADIANA DISTRICT: ~1,600 households to be visited in 5th wave of IHOPE cohort study to measure impact of Pivot's work since 2014

EXPANDING THE RESEARCH AGENDA

Pivot is committed to deepening our understanding of the communities in which we work. In the coming years, we'll explore the growth and integration of new methods and areas of focus into our research.

- Qualitative research and medical anthropology: We will increase our emphasis on qualitative research and mixed methods. A new area of work for Pivot is the integration of medical anthropology – qualitative research into the intersection of individuals, systems, and the environment to create health and illness – into our research agenda.

- Clinical research: Investigating the safety and effectiveness of clinical programs on individual patient outcomes will complement existing program evaluation and population impact research.

BUILDING A RESILIENT HEALTH SYSTEM:
POPULATION, HEALTH & ENVIRONMENT

Madagascar is one of the countries most vulnerable to the impacts of climate change due to its geography and chronic poverty. Increasing temperatures and changing precipitation patterns are expected to increase the risk of vector-borne diseases, particularly malaria. At the same time, extreme climate events, such as cyclones and drought, are predicted to increase in their frequency and strength. It is also a country rich in biodiversity, with 90% of species endemic to the island. Our work presents an opportunity to transform the health system to better meet the needs of the people and the environment in a time of global change.

In the Vatovavy Region, health is closely tied to the surrounding environment and climate. The region is home to the UNESCO World Heritage Site - Ranomafana National Park. The majority of people live in extreme poverty, rely on subsistence agriculture and are exposed to environmental pathogens due to precarious living conditions (e.g. lack of safe drinking water, sanitation, etc.). Malaria, diarrheal disease, respiratory infections, and neglected tropical diseases are all endemic in the region. In the aftermath of Cyclone Batsirai in 2022, we witnessed the devastating effects that cyclones have on peoples' lives and the ease with which it can bring the health system to a halt. The impact of the environment on population health is only expected to increase in future years.

At Pivot, we have spent the past several years combining program implementation with a research program to respond to these threats and better understand and predict the impact of the environment on population health, with the ultimate goal of building a resilient health system for a changing world.

"Climate change is the single biggest health threat facing humanity."
- World Health Organization [9]

KEY AREAS OF WORK

- Climate change adaptation in the form of investing in a climate-resilient health system
- Preventive and curative programs which respond to a changing disease burden including a water and sanitation program
- Stewardship of resources through deliberate operations practices of eco-responsibility
- Collaboration across different disciplines (environment, human, and animal health) for research and implementation
- Pandemic response through HSS integrated with scientific inquiry

Pandemic response: In response to the COVID-19 pandemic, Pivot collaborated with the MoPH and Centre ValBio to establish a molecular laboratory with RT-PCR capacity in Ifanadiana District.[10] The laboratory supported the MoPH's efforts to decentralize testing services from the capital – essential work as the disease burden shifts and pandemics increase in frequency. Through COVID-19 sample collection, the partnership was able to create a bank of biological samples which will provide specimens for metagenomic sequencing. Initially envisioned as a research project, the training on sequencing and analysis of samples will institutionalize the technical capacity among the partners and make future work – to improve patient diagnosis, estimate disease burden, identify emerging pathogens, and more – possible.

Environmental determinants of health: Building upon work that explored drivers of localized diarrhea incidence,[11] we are developing methods to understand the climate's impact on infectious diseases. We combine field measurements with satellite imagery, contributing to an ever-growing collection of environmental data available at spatio-temporal scales relevant to local health programs. We are using these data to build geo-statistical models to better understand and predict the effect of the environment on infectious disease dynamics of malaria, diarrhea, and acute respiratory infection to forecast disease in Ifanadiana District. We will measure the impact of this disease forecasting system on health system readiness and health outcomes in real-time, a first of its kind. The research results will support health systems to better respond to changing disease burden and improve preparation for climate impact.

Climate accountability and eco-responsibility:
In 2021, Pivot became one of the four founding members of Climate Accountability in Development, a group of international development organizations committed to charting a new path forward for climate accountability in the development sector.
After calculating our baseline CO_2 emissions, we are committed to continuing to measure and better understand our carbon footprint. We have assembled a dedicated team that is responsible for building and implementing a plan to reduce Pivot's emissions. In 2022, we invested in mitigation strategies at a value of $50 / tCO_2e in order to fully offset our measured output. We are committed to mitigating 100% of our measured CO2 emissions annually.

CLIMATE ACCOUNTABILITY IN DEVELOPMENT

KEY PERFORMANCE INDICATORS

In 2023, we will collect baseline data across all three districts of Vatovavy Region before the start of expansion activities. The data will provide an estimate of population health, intervention coverage, service availability, costs, and health system readiness ahead of Pivot's expansion. We will update these key performance indicators by setting targets in collaboration with the MoPH once baseline information is analyzed and available.

POPULATION OUTCOMES

- Under-five mortality rate
- Infant mortality rate
- Maternal mortality rate [e]
- Composite coverage index [f]
- Per capita health facility utilization

IMPLEMENTATION AND COVERAGE

OBJECTIVE	PROGRAM	KEY PERFORMANCE INDICATOR
#1 - STRENGTHEN THE PUBLIC HEALTH SYSTEM	Human resources	• % of health facilities meeting basic HR norms • % of health workforce with access to a financial motivation scheme • Physicians density (per 10,000 population) • CHW density (per 10,000 population)
	Infrastructure	• Health facility operational capacity rate • # of health facilities renovated / built • Hospital beds (per 10,000 population)
	Biomedical	• Essential medicine availability rate • % of health facilities meeting basic laboratory norms
	Governance	• Platform to promote transparency and amplify patient voices exists within the health system
	Health financing	• Per capita cost of health system model • Mean out-of-pocket expenditure on health care
	Health information	• % of health facilities with electronic monthly reporting system • % of health facilities with electronic medical record system
#2 - IMPROVE QUALITY OF SERVICES	Maternal and reproductive health	• % of births attended by skilled birth attendant • % of antenatal care coverage: at least one visit • % of antenatal care coverage: at least four visits

	Child Health	• Care-seeking for children under five for:
		  • Diarrhea
		  • Cough/difficulty breathing
		  • Fever
		• % of children aged 12-23 months who received all basic vaccinations

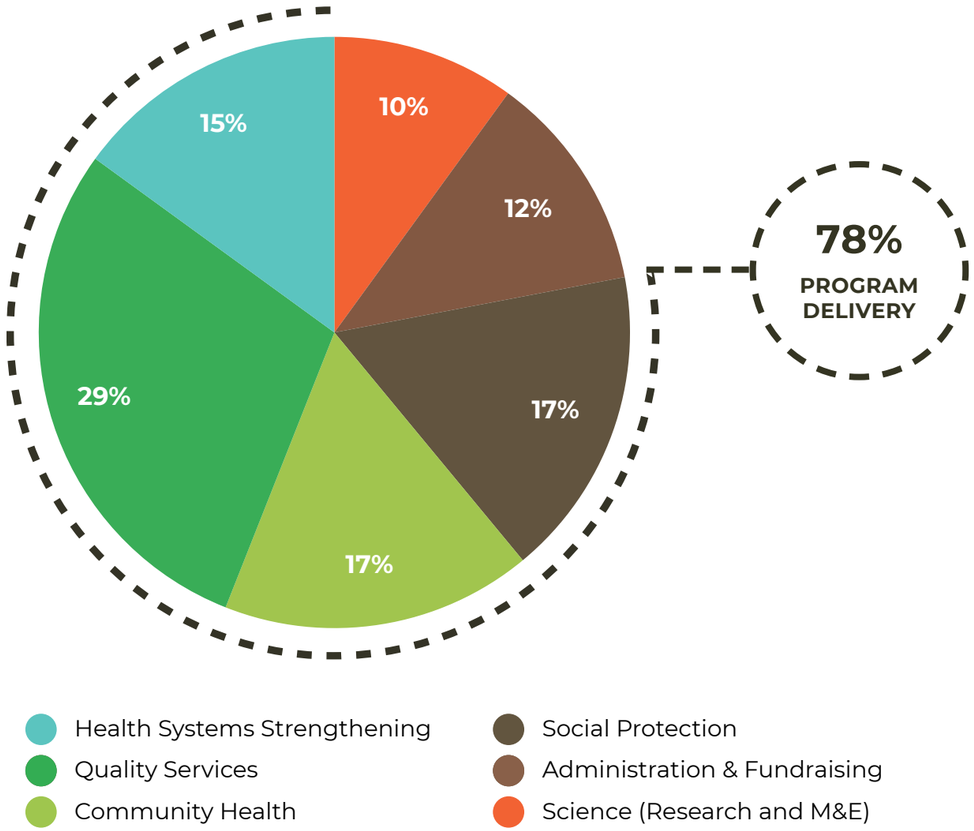
#2 CONTINUED	Nutrition	• Prevalence of stunting and wasting among children under five • Malnutrition treatment outcomes: success & death rates
	Infectious diseases	• Prevalence of tuberculosis • Tuberculosis treatment outcomes: success & death rates • Prevalence of HIV • % of HIV patients linked to medical care
	Non-communicable diseases (NCD)	• % of health facilities with a functional NCD program • Prevalence of hypertension • % of diabetes patients with blood glucose reading in normal range
	Quality improvement	• Patient satisfaction score • % of health facilities where quality of care meets or exceeds MoPH norms
	Community health	• Per capita utilization of community health services for children under five • % of visits with correct application of childhood illness protocol by CHWs
#3 - INTEGRATE SOCIAL PROTECTION	Financial protection	• % of population enrolled in financial protection program • % of beneficiaries directly covered by Pivot (no out-of-pocket expense) • Mean out-of-pocket expense (direct costs) covered by Pivot
	Social protection	• Change in relative and absolute inequality of care-seeking, by wealth quintile and geographic access • # of beneficiaries of social protection schemes
	Health promotion	• # of social and environmental innovations implemented to support disease prevention • # of sensitization campaigns supported
#4 - ADVANCE PARTNERSHIPS	Partnerships	• # of new or updated MoUs with government entities • Co-constructed multi-year operational plan and KPI targets set with regional health office • # of national health task force meetings with Pivot as an active member of working group
#5 - STRENGTHEN ORGANIZATIONAL CAPACITY	Leadership	• % of leadership positions held by Malagasy staff • % of leadership positions held by female staff
	Operations	• Annual budget variance • Updated operating procedures • 100% compliance with funder requirements
	Site structure	• # of field sites
	Governance	• An active and diverse Board (with variety of nationality, age, experience, and expertise among membership) • 100% giving each fiscal year by Board (at a level appropriate for each member)
#6 - REVOLUTIONIZE GLOBAL HEALTH SCIENCE	Research outputs	• # of publications in peer-reviewed journals • % of Pivot-led publications with Malagasy first, second, or last author • # of new research grants awarded • # of Malagasy students trained (Master's and Doctoral level)

FUNDING PERSPECTIVES

In 2022, Pivot made a commitment to the MoPH to invest a minimum of $35M in Vatovavy Region's public health system over the course of 2023-2028 – a direct reflection of our confidence in a strong and productive partnership with the government.

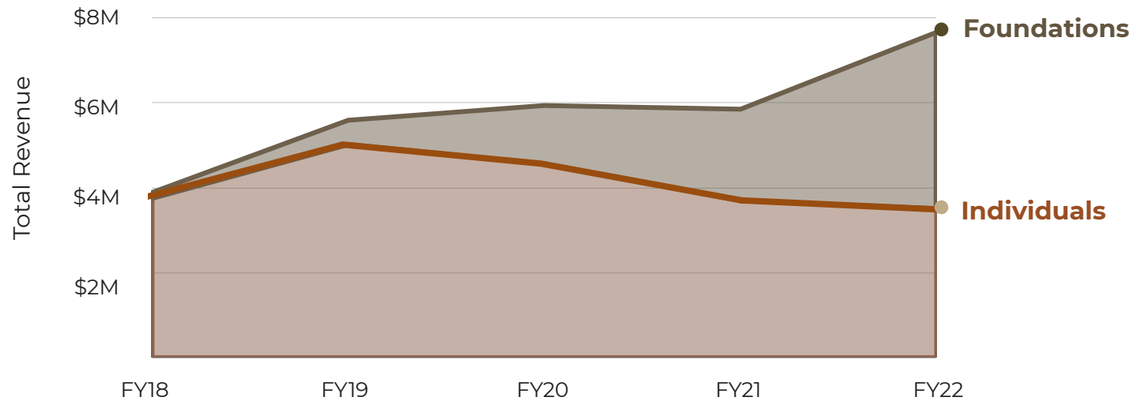
While maintaining a $7M annual budget from FY23-FY27 would fulfill this commitment, the Strategic Plan outlined in this document represents a more ambitious program, aimed at maximizing impact on population health at a regional level. We are confident that the objectives laid out by this plan are not only attainable, but represent the best approach to replicating our district-level model to serve all one million residents of Vatovavy.

Based on the current global economic landscape, we estimate that $42.5M will be needed to reach the objectives set out by this 2023-2028 Strategic Plan. **At the time of publication, our approximate 5-year projection for allocation of funds is as follows:**

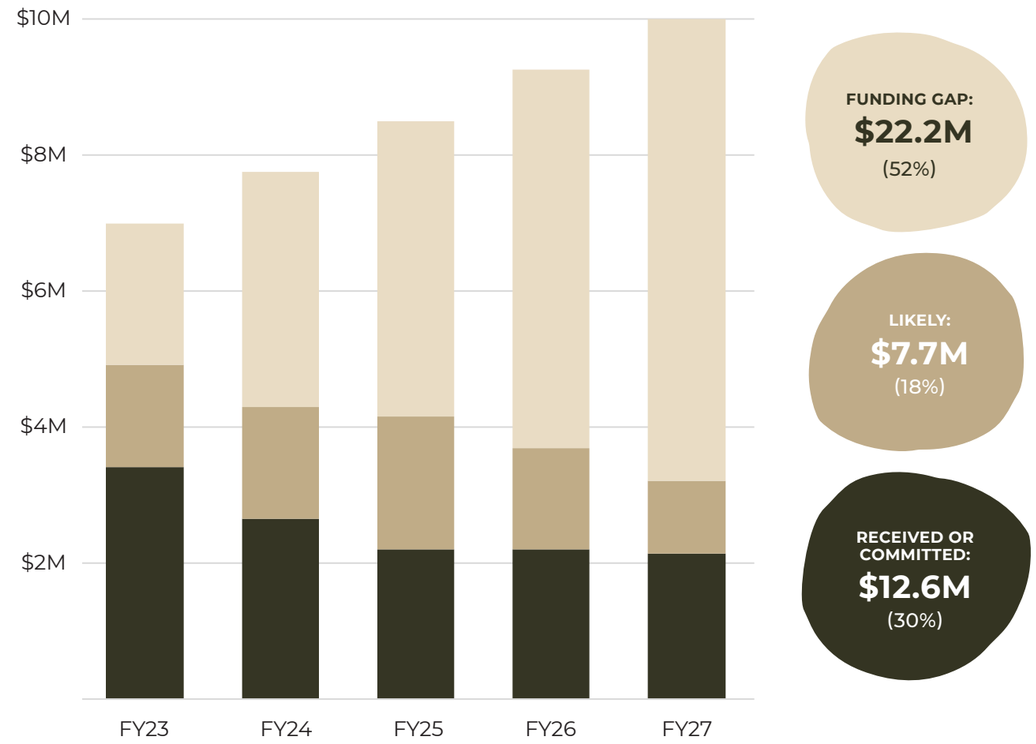


Precise annual budget-setting over the next five years will be done in partnership with the MoPH and will be guided by a multi-year internal Operational Plan (available upon request).

Building on **historical fundraising achievement** (below), we will continue to expand the base of both individual and institutional investors and diversify our revenue sources. As expansion rolls out, we will also consider pursuing multilateral funding opportunities to accelerate impact at scale.



Based on our best estimates for incremental budget growth from $7M to $10M over the next five years, we present the following **projected breakdown of funding sources and needs**:



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KEY PUBLICATIONS

Over the last ten years we have developed a growing body of evidence on the impact of HSS, how to deliver care in a rural health district, and how to respond to Madagascar's evolving health needs. These results are peer reviewed and shared with a global audience through publications in top scientific journals. Below are a few highlights:

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A coastal community in Vatovavy Region as seen from a boat on the Pangalane Canal – a common mode of transport for the local population.

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FOOTNOTES

a Average annual relative change

b Of children under-five who were reported to have cough/difficulty breathing, fever, or diarrhea in the two weeks preceding the survey, the percentage who sought care.

c The index is a weighted average of preventive and curative interventions, and measures access to 8 essential health services for women and children: at least one antenatal care visit with a skilled provider, skilled birth attendant at delivery, BCG vaccination for children, DTP vaccination for children (3 doses), measles vaccination, oral rehydration therapy, and care-seeking for suspected pneumonia.

d Measuring the hospital and health centers against MoPH national norms identifies areas for continued support in Ifanadiana District. The MoPH facility assessment was introduced in 2019. Pivot's baseline health system data were collected using the WHO SARA survey and are not comparable; however, facilities have shown marked improvement in readiness since the start of Pivot's intervention.

e Globally, subnational estimation of maternal mortality without comprehensive vital events registration is challenging given the relatively rare occurrence of maternal deaths. Maternal mortality rate will be estimated at the regional level; the sample size will not be sufficient to see a statistically significant change in the maternal mortality rate from 2023 to 2028, but we will be able to provide a cross-sectional estimate of maternal mortality.

f This indicator is a weighted average of the coverage of essential maternal and child health services.

ONWARD TOGETHER

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