

2022  
**ANNUAL  
REPORT**

JANUARY - DECEMBER 2022  
JACARANDA HEALTH



▶ Mary Njoki speaks to her neighbor Mary Njogu outside her home in Dagoretti, close to the hospital where she plans to give birth. Mary has been using PROMPTS, Jacaranda's two-way SMS companion mothers, to ask questions throughout her pregnancy. Image Credit: Jjumba Martin



**Our vision is a world where all mothers experience childbirth safely and with respect, and all newborns get a safe start in life.**

**We partner with governments to deploy affordable and scalable solutions that improve quality of care in public hospitals, where the majority of underserved mothers and babies receive care.**

## Letter from our LEADERSHIP

### Dear Friends,

In early March, a frontline nurse remarked to our field team that ‘all milestones make new targets, but it’s the learning in between that makes them happen’. It felt a perceptive reflection on 2022 as a whole. Last year, we made things happen. We also learnt a great deal.

The mothers relying on our digital health tool PROMPTS exceeded 2 million, our network of nurses leapt from 500 to 700 in 12 months, and we forged partnerships with five additional county governments, bringing us to a total of 20.

**This scale is an encouraging reflection of increasing demand for our solutions and a growing government confidence in their ability to achieve impact (p7).**

But real impact is best conveyed through the stories on the ground.

We’re thinking of nurses like Sylvia who provided lifesaving support to a hemorrhaging mother in the morning and trained her colleagues on her experience that same afternoon. Or of hospitals like Alupe in Busia reporting zero maternal deaths since introducing routine, peer-to-peer training (p6).

#### **At the root of everything is our mothers.**

Moms like Mary who shared feedback on her experiences of care with PROMPTS over 30 times because she believed in its potential to drive real improvements in nearby clinics.

#### **Last year has never felt more reflective of our hallmark approach to innovation;**

test, adapt, then test again. Our work with Kakamega’s county government has shown that our solutions can ‘plug into’ and effect change on wider maternal health systems (p4).

Our PROMPTS pilots in Eswatini and Ghana are indicative of our ability to adapt solutions to support government priorities in new contexts, while maintaining focus on our core mandate towards mothers and babies.

Our growing research capacity is a lynchpin to this approach, driving new thinking around how we engage with mothers (p8), increase government ownership of solutions (p10), and do more with the data we collect (p14).

We’re hugely grateful for the continuous support our partners provide here in Kenya, and overseas. Thank you, as always, for accompanying us on this journey.

**Nick Pearson**, Co-Executive Director

**Sathy Rajasekharan**, Co-Executive Director

**Cynthia Kahumbura**, Country Director

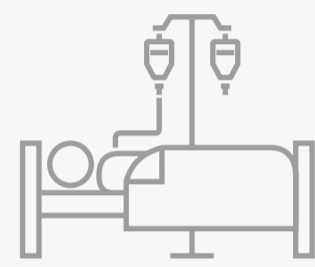


▲ Esther Gathoni cradles her baby in her home in Waitihaka, Nairobi. Image credit: Jjumba Martin.

# 2022

## Snapshot of Scale

In 2022, we rapidly grew our footprint across Kenya and into new geographies, powered by innovations to our technology and data infrastructure and the increasing buy-in and support from our government partners.



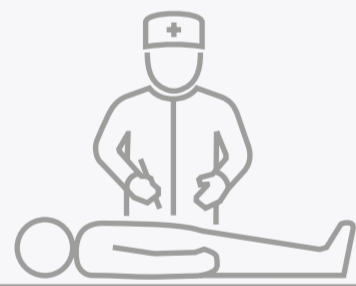
**1,100+**

high-volume partner facilities across 20 Kenyan counties



**2+ million**

expecting and new mothers reached with information through PROMPTS



**10,900+**

frontline government nurses trained in basic and emergency care



**3,680+**

government nurses learnt lifesaving skills remotely via DELTA

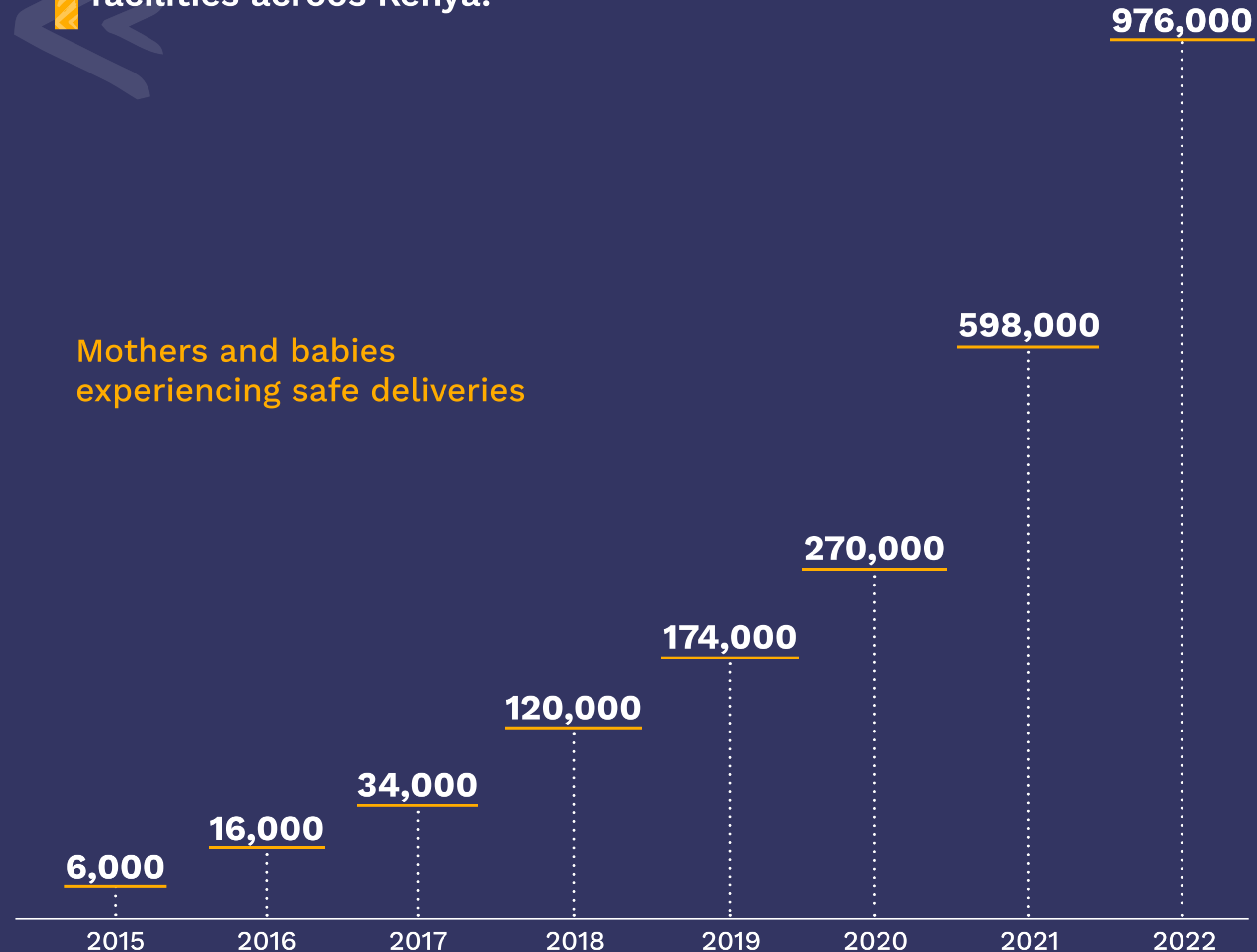


**2**

new countries piloting our solutions (Eswatini and Ghana)

Since 2015, we have grown to support our government partners provide safe deliveries for **976,000** mothers and babies across 1,110+ public health facilities across Kenya.

Mothers and babies experiencing safe deliveries



## What's Ahead in 2023 and Beyond?

Read our 2025 Strategic Plan to learn how we plan to help government partners improve outcomes for 3 million mothers across Kenya, demonstrate impact in three new countries, and lay foundations for global scale.

[Read our 2025 Strategic Plan.](#)

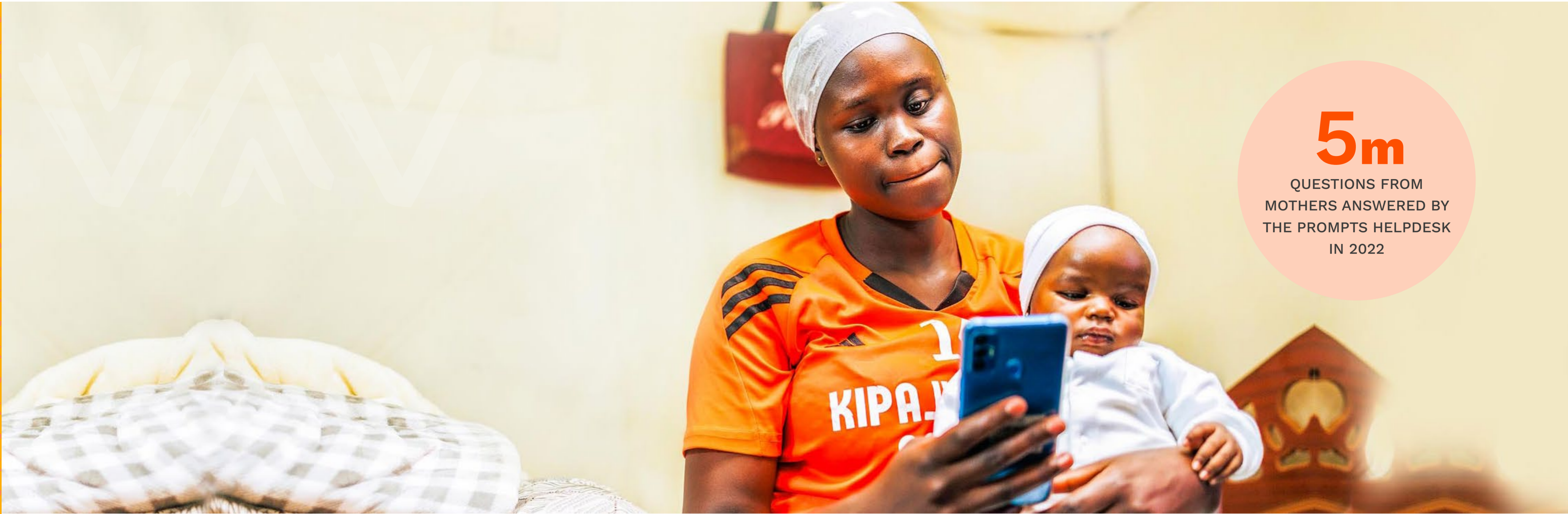
# Program Highlights

Our core solutions - a digital health service PROMPTS and a facility-based mentorship program - have proven to improve the pregnancy journeys and outcomes for women in government hospitals across Kenya.

In this section you'll read how we strengthened our ties with county and facility partners to increase the scale and longevity of these solutions, and enhanced our technology to get mothers faster, more targeted support - especially during emergencies.

▼ Head Nurse Evangeline Karambu acts the part as her colleagues simulate a delivery. Jacaranda's MENTORS program combines theoretical learning with practical simulation-based exercises within facilities to help providers improve their skills as they deliver services.





**5m**  
QUESTIONS FROM  
MOTHERS ANSWERED BY  
THE PROMPTS HELPDESK  
IN 2022

▲ New mother Esther signed-up for PROMPTS early in her pregnancy, and has been using the service ever since to guide her around newborn care, nutrition, and family planning. Image Credit: Jjumba Martin

**A MACHINE LEARNING APPROACH to connecting mothers with information and referral**

PROMPTS started out as a one-way, information service for mothers. When these mothers started messaging back, we saw potential for it to serve a wider, more impactful use case; as a two-way channel to empower moms across pregnancy, and a means of collecting client-side data to improve health systems.

**Our helpdesk now capably serves 2m mothers across two countries.**

In 2022, the AI-enabled powerhouse underpinning PROMPTS grew in both size, with an expanded team of trained human agents, and capacity.

Our locally-developed machine learning was trained to read and send personalized responses to 5,000+ incoming messages daily - in different languages and across 100+ different message categories.

Importantly, faster detection of urgent cases - like bleeding during pregnancy - now means our agents offer customized referral during emergencies in 15 minutes or less.

Read about our tele-triaging approach in a newly-published paper from Jacaranda and Pennsylvania State University.



**5,000**

questions from mothers  
answered by the helpdesk daily



**1 minute**

response time for high-risk cases



**90%**

of high-risk moms now report  
receipt of care in a referral facility

“

If it wasn't for PROMPTS, I  
might've waited until morning.  
But my husband messaged  
that I was bleeding a lot, and  
in minutes PROMPTS referred  
us for an urgent check-up.  
It was a lifeline. I miscarried  
but was safe in the hands  
of nurses. We'll continue  
using PROMPTS as we try for  
another baby.

”

**PROMPTS User,**  
Kakamega County

## A MEANINGFUL CONNECTION

with mothers - at scale

**We are always exploring ways to drive engagement with PROMPTS moms. The data from these exchanges helps improve the service, screen for risk, and offers a unique window into client experience of care.**

The data from these exchanges, including questions asked and survey responses, helps improve the service, screen for risk, and offers a unique window into client experience of care.

In 2022, we used data from PROMPTS and qualitative research to test the credibility and content of messages to drive a personalized exchange with the 2m mothers on the platform.

A focus was on building user trust. In Q3, we piloted new opt-in and welcome messages, with simplified language and a reference to the enrollment facility, resulting in a 600% increase in engagement on some messages.

**By winning trust, amplifying mothers' voices, and providing relevant information, PROMPTS offers an increasingly-personalized service that caters to the unique pregnancy journeys of women and ensures they get the right care at the right time.**

**300k**

MOTHERS REPORTED  
ON QUALITY OF CARE AND  
RESPECTFUL TREATMENT  
IN 2022



▲ At five months pregnant, Mary Kimani is shown how to enroll to PROMPTS by a Community Health Volunteer (CHV). Mothers typically sign up to PROMPTS in public health facilities, but CHVs have more recently been trialled as an enrollment mechanism to reach more mothers.





**The essential skills for  
SAFE DELIVERY**

**Bringing new life in the world  
relies on a range of skills to  
cater for different eventualities.**

Our facility-based MENTORS program equips frontline midwives with a set of life-saving interventions that prevent the leading causes of maternal and neonatal mortality, including hemorrhage and birth asphyxia.

Across 2022, nurses in 350 facilities participated in 3,900+ classroom- based trainings, or CMEs, and applied this knowledge within 700+ simulation-based drills. Our field team helped co-develop workplans with facilities for routine training and prioritized support to poor performing, yet high-volume facilities.



**TRANSFORMING PROVIDER  
CONFIDENCE AND PATIENT CARE IN  
BUSIA'S MATERNITY WARDS**

When COVID-19 hit, the once-thriving maternity wing at Alupe Sub County Hospital in Busia, stalled. In April, the unit reopened, but with fewer patients and many new faces on the ward.

Nurse and program mentor Prudence took action, setting up routine training via CMEs on topics where she saw skills gaps. One example is post-abortion care, a sensitive topic for many nurses in Kenya. Prudence saw perceptions change when her colleagues linked post-abortion care with better client outcomes.

**Since April, Alupe has recorded just one maternal death.** Stillbirths have dropped to the lowest level in five years, and nurses are now spotting warning signs earlier, and comfortably managing complex cases.



**Last week we had two ‘near misses’ with hemorrhaging mothers. Our whole team had done CMEs and drills countless times on PPH, and managed both cases well. For if you do something repeatedly, you don’t forget. We were so proud to see these mothers and their babies safely discharged.**



**Prudence Yawetsi**  
Nursing Officer Incharge  
& Program Mentor,  
Alupe Sub County  
Referral Hospital

## Increasing GOVERNMENT OWNERSHIP and cost share of MENTORS

We're working with governments to operate and finance our programs in their health systems.

By Q4, our county partners were covering 65% of total running costs for MENTORS, an encouraging reflection of their increasing trust in our solutions to deliver real impact on priorities.

In August, the Kenyan elections rotated leadership across 70% of our partner counties. Our Partnerships team rapidly re-sensitized incoming teams with our programs to continue the trajectory of cost share and ownership. Jacaranda is currently one of the few implementing partners in Kenya achieving this level of government cost share.



### DRIVING DEEPER PROGRAM OWNERSHIP IN NAIROBI

In Nairobi, we've seen how deeper, implementation-based partnerships with government could increase ownership. In Q1, the capital's governing body expressed an interest in co-implementing MENTORS with its own cadre of EmONC trainers.

Six county Reproductive Health Coordinators were converted into mentors under our EmONC curriculum, cascading skills like problem solving and respectful care to their peers. For the first time, county representatives could quantify our program data with firsthand experience. **By Q4, the county had taken on 82% of the program's running costs.**



# 65%

OF THE RUNNING COSTS OF  
MENTORS ARE COVERED BY  
OUR COUNTY GOVERNMENT  
PARTNERS

▲ Nurse Collins Kiptoo takes a moment to greet a returning mother and the baby he helped deliver some months back. Image credit: Jjumba Martin



# Reaching Mothers & Babies in Other Countries

Scaling beyond Kenya not only increases our opportunity for impact, but also tests how contextual variations of our approach can support governments in new countries.

This year, we announced partnerships with the Ministries of Health and local implementing partners in Eswatini and Ghana, bringing us a step closer to our mission of transforming health outcomes for all mothers and babies.





Ghana

Eswatini

## Growing our GLOBAL PARTNERSHIPS

Adapting programs to new contexts and laying foundations for global scale.

We are working with the Ghana Health Service (GHS) to test the feasibility, acceptability, and effectiveness of PROMPTS to support government MNH strategic priorities, including the use of digital health platforms to enhance access to and quality of care. In October, we recruited our first two in-country staff who will help spearhead the operational study expected to launch early next year.

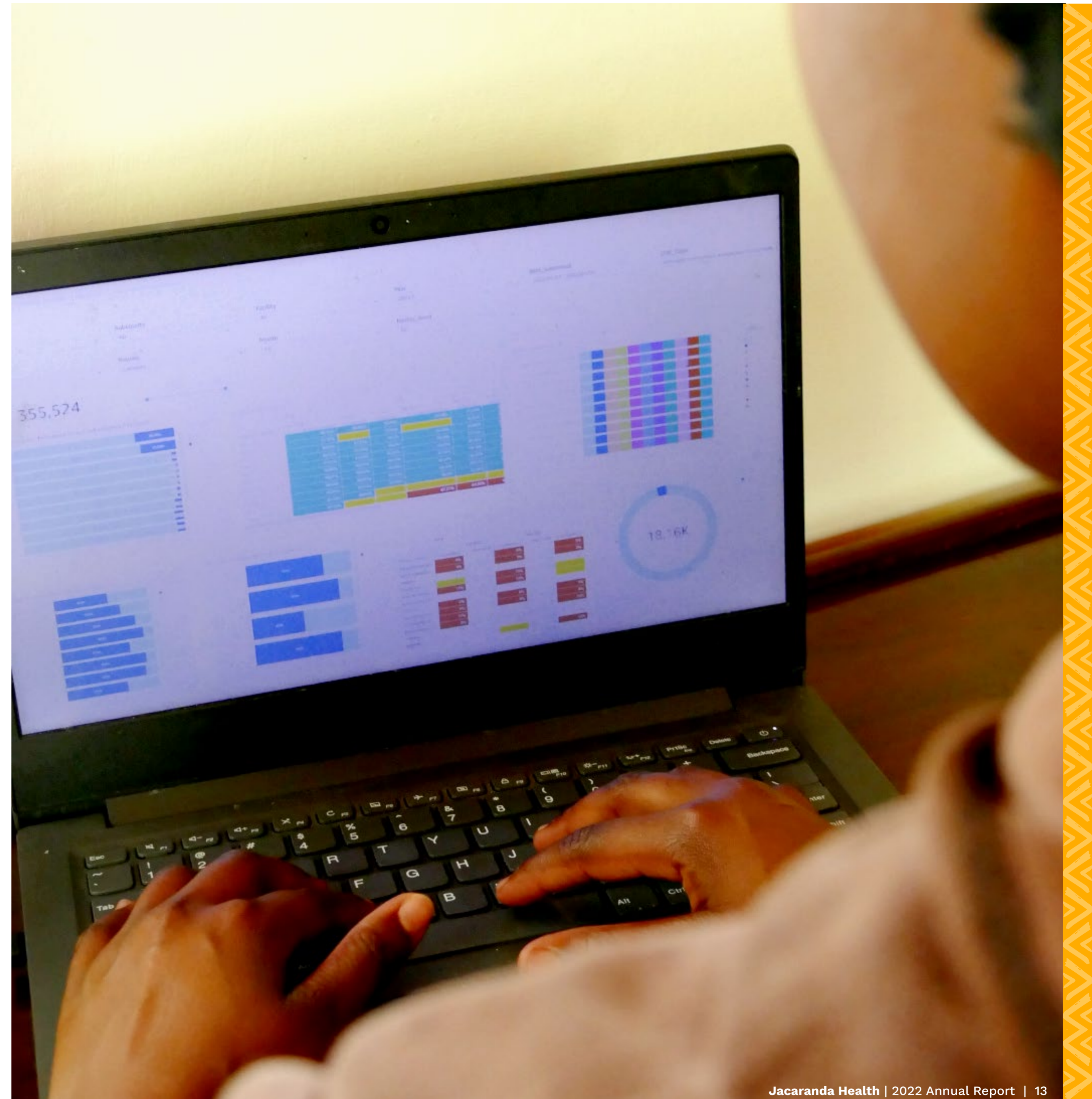
In March, we launched a partnership with Eswatini's Ministry of Health and the Clinton Health Access Initiative, centered on using PROMPTS to improve infant immunization tracking and identify hotspots of low coverage. **The combination of mHealth and sourcing information directly from mothers offers a unique approach to identifying under-immunized children in high coverage areas.** The increasing demand for and uptake of PROMPTS in the country marks an encouraging step towards greater government ownership of the platform in 2023.

# Data & Insights

The data tools we co-design with our government partners help inform respectful care, improve its quality, and direct resources to where they are most needed.

They also give mothers greater agency in the health system by linking their experiences of care with those making decisions about its improvement and financing.

In this section, you'll hear about how our enhanced data tools have helped address persistent bottlenecks in a Nairobi health facility, and how 'pulse-like' data is offering Kakamega County's government real-time visibility on gaps across its health system.



# USING DATA

to identify and address bottlenecks in service delivery

Client experience of care is a vital, yet under-utilized benchmark for quality in health systems. In 2022, we had the chance to seamlessly link what PROMPTS moms were reporting on uptake and experiences of care with data on its provision from our network of nurses, with the aim of offering better visibility across connected issues in government health systems.

The launch of sophisticated new data tools in April meant that, for the first time, we could easily qualify issues like hotspots of low infant immunization coverage with data around vaccine stock-outs in facilities, or track reported danger signs on PROMPTS to their outcome in hospitals.

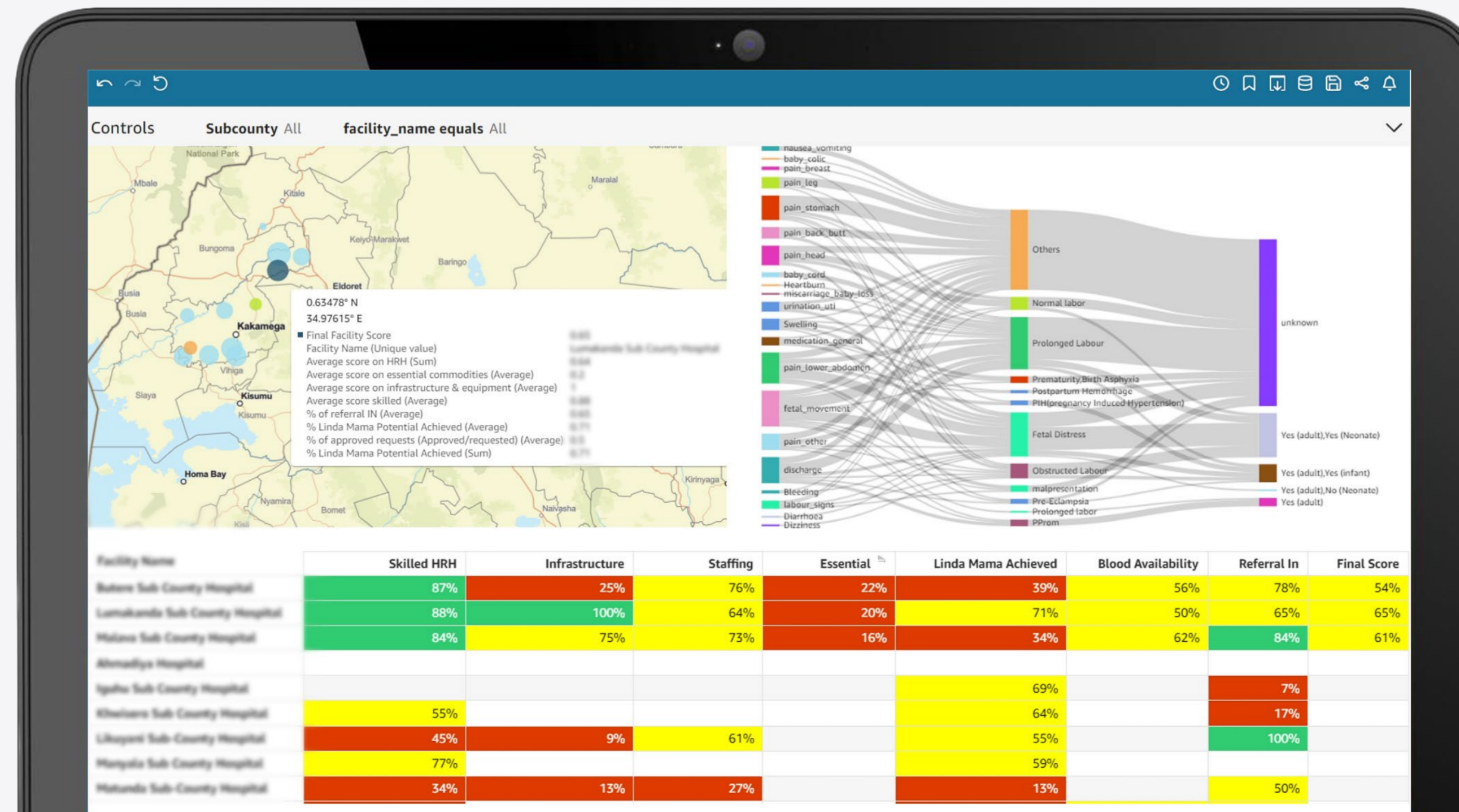
Importantly, it meant we could get granular with the many potential issues preventing timely, quality care in facilities.

In October, deep discussions with nurses and county partners informed the design of a new 'Quality Reporting Tool', whereby a simple 'traffic light' code could help them easily identify specific issues impacting service provision, such as staffing shortages, specific skills gaps, or blood availability.



## DATA IN ACTION

When the Head Nurse at a Nairobi clinic noticed reports of women being turned away without services or explanation, she mobilized a quality improvement team to investigate. Commodity and staff shortages emerged as leading drivers. The team used data from Jacaranda's Quality of Care report to lobby for funds to stock their lab and pharmacy, conduct follow-up calls with mothers to understand their experiences, and maintain consistent staff at the prenatal clinic. **Between March and October, prenatal care coverage rose from 42% to 85%.**



**Using data to ensure  
RIGHT  
PLACE CARE  
for mothers in  
Kakamega County**

When, late at night, Beth noticed blood in her third trimester, she sent a message PROMPTS. In minutes, a response flashed up, advising referral and asking for consent to send an ambulance. The team at Rescue, a private ambulance dispatch service, were quick to mobilize, arriving in 20 minutes and calling ahead to her nearest hospital, Lumakanda, to explain her condition.

*'If it wasn't for PROMPTS, I might've waited til morning until the clinic opened'. she said. 'I was hemorrhaging, but the nurses were ready to support. My baby and I left the hospital safe that day.'*

Beth is part of a first wave of mothers in Kakamega County experiencing a more seamless journey through the health system.

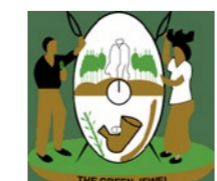
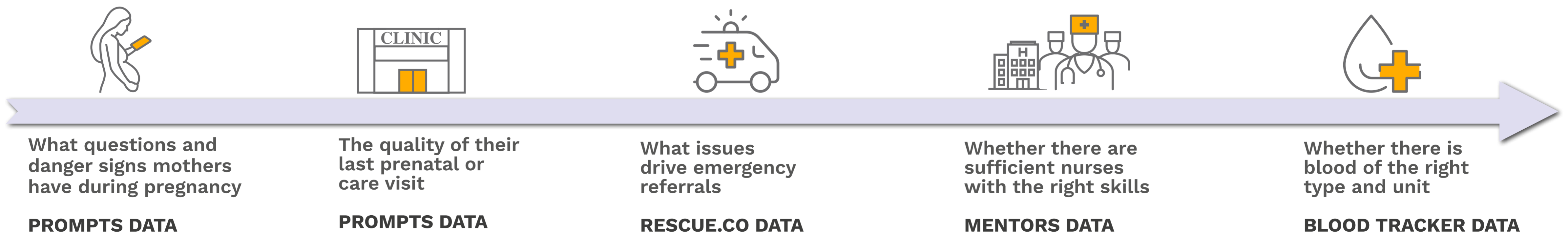
Since 2019, Jacaranda and a local coalition of partners have supported the county government improve maternal survival by shifting where and when mothers access care.

The strategy, a Gates Foundation-funded Service Delivery Redesign initiative, supports Kakamega's government to use data to better understand mothers' journeys through the health system, ensure deliveries take place in well-equipped hospitals, and limited resources are allocated to priority gaps.

Between 2021 and 2022, improvements to staff count, bed capacity, and maternity services mean three of the county's major hospitals now capably and safely handle more deliveries.

Watch Cynthia Kahumbura speak on the importance of locally-led, integrated solutions to strengthen maternal health systems at UNGA77.

**Real time, integrated data builds visibility across a mother's journey through the health system. What can we learn from thousands of mothers' journeys across this network?**



# Research

We use evidence-based approaches to help our government partners improve quality of care in maternal health services and systems.

**Continuous, rigorous research sits at the heart of this.**

In 2022, we finalized a large-scale USAID-funded independent Randomized Control Trial with Harvard University, IPA, and the University of Nairobi to generate deeper, cross-cutting insights into the impact of our programs.

We developed new research approaches to listen to the evolving challenges faced by mothers and frontline nurses, and applied these insights to comprehensively and cost-effectively address them through our core solutions. Two such studies are included in this section.

▶ Terry Ngare attends to a prenatal mother in her third trimester in the maternity ward of a Busia- based hospital. Image Credit: Jjumba Martin.





**SMS to empower**  
**ADOLESCENT**  
**MOTHERS**  
**through pregnancy**  
**and postpartum**

**Adolescent pregnancy is both a health and social concern, but in fragile, often-fragmented informal settlement environments, these issues are compounded.**

In early 2022, we spoke to adolescent women across two informal settlements in Nairobi, to understand their lived experiences, and their emotional, informational, and primary care-based needs for a safe, healthy pregnancy. A common thread in discussions was the lack of access to clinically-accurate information.

In March, we used these insights to develop context and age-relevant message content on PROMPTS, to empower these mothers with information across their pregnancies and offer a channel for feedback on issues like stigma at facilities.

While qualitative work continues to refine these approaches, the messages have shown early signs of increasing health seeking behavior and knowledge of supportive schemes among these mothers, like free maternity care and counseling.

*This qualitative study was part of a three year USAID-funded MNCH implementation research project - Kuboresha Afya Mitaani - which unites typically-siloed actors in the quality of care space around MNCH solutions.*

This project is made possible by the generous support of the American people through the United States Agency for International Development (USAID) under the cooperative agreement no. 7200AA19CA00026. The contents of this implementation research project are the sole responsibility of the “Kuboresha Afya Mitaani: Urban MNCH Project” and Jacaranda Health and do not necessarily reflect the views of USAID or the United States Government.



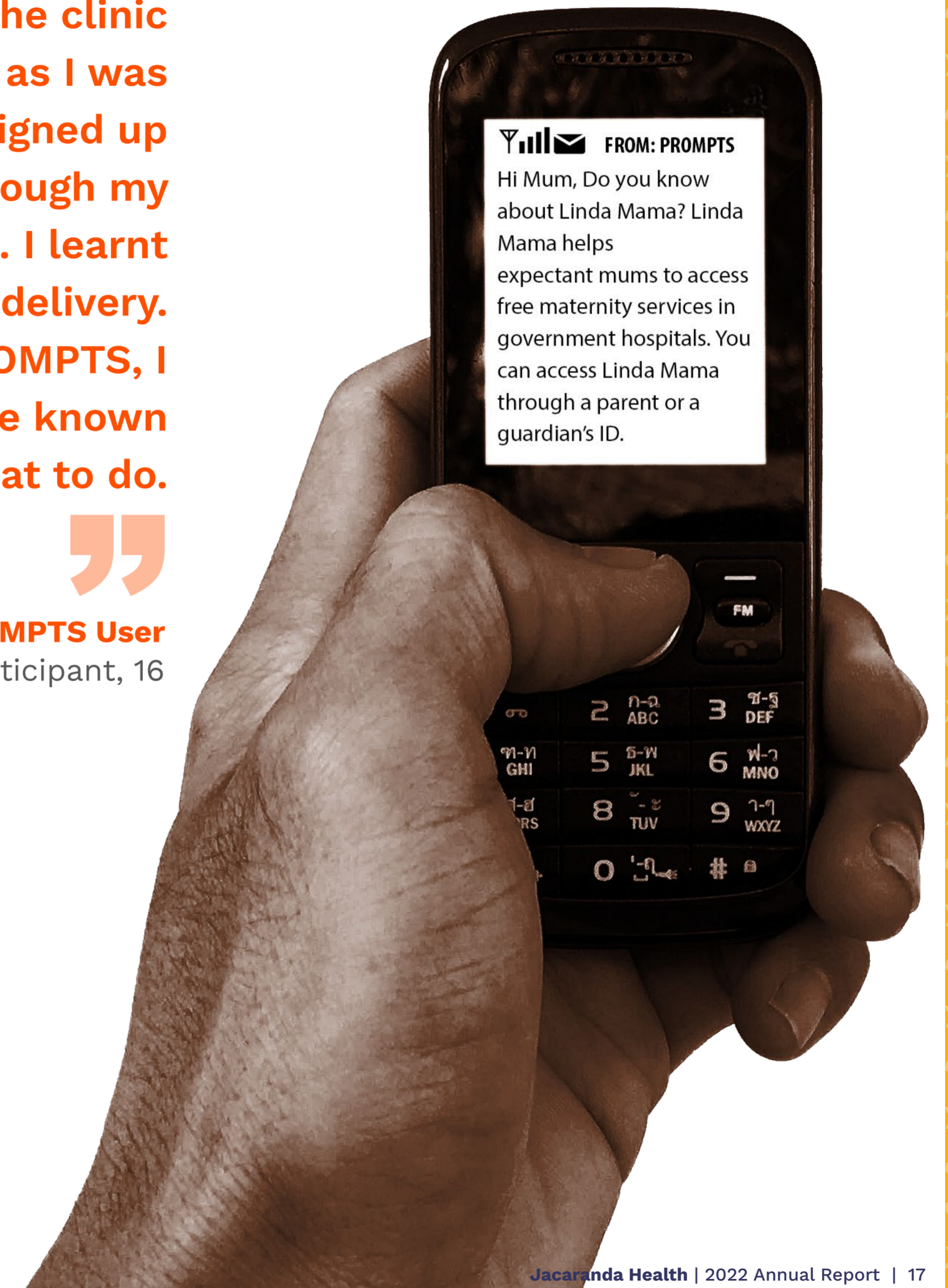
**USAID**  
FROM THE AMERICAN PEOPLE



**I couldn't attend the clinic during pregnancy as I was still at school. I signed up to PROMPTS through my mother's phone. I learnt how to prepare for delivery. Without PROMPTS, I wouldn't have known what to do.**



**PROMPTS User**  
Study Participant, 16



## Supporting Postpartum FAMILY PLANNING (PPFP) through PROMPTS

**Healthy birth spacing is linked with improved perinatal outcomes, but in Kenya, half of pregnancies occur before the recommended 24-month interval.**

In February, we began a qualitative study with postpartum mothers in Nairobi and Kajiado County to understand behavior change barriers to family planning uptake adoption, and how PROMPTS could support.

Under USAID's MOMENTUM Country & Global Leadership project, we prototyped PPFP messaging with PROMPTS mothers, accounting for their complex social contexts, the role of partners in decision-making, and the delicate norms impacting PPFP perceptions.

Preliminary findings indicate that both mothers and their partners are receptive to PPFP support through PROMPTS, especially when engaged soon after delivery and 'counseled around' not 'told about' family planning methods.

Our next steps will be to evaluate the impact of these messages and helpdesk counseling on shifting knowledge and awareness for return to fertility and, ultimately, incentivizing healthy birth spacing.

“

**[The messages] have really helped advise on the best method to use, even before you get to the clinic. Family planning is now of equal importance to us as a couple.**

”

**Study Participant**  
receiving PROMPTS  
prototype messages

▶ A three month old baby takes in her surroundings at her home in Machakos County. Image Credit: Jjumba Martin





# Our People

We are committed to developing strong local capacity to deliver long-term impact for mothers at scale. In 2022, we embraced time together in person, at team buildings, trainings, strategic planning retreats, and global health conferences, and welcomed 27 new colleagues from diverse disciplinary backgrounds.



▶ Cynthia Kahumbura, Jacaranda's Country Director in Kenya, speaks to government officials at a consultative meeting held in June last year. Image Credit: Kenny Photography



# Our PEOPLE

The growth and diversification of certain teams throughout 2022 - Partnerships, Product, Data, Research - is an apt reflection of our commitment towards program innovation and deep government partnership, as the crux of how we deliver solutions.

Introducing some of the new faces in 2022



**Anneka Wickramanayake**  
Director of Research  
Evaluation & Design



**Christine Njuguna**  
Head of Product



**Javan Waita**  
Head of Programs



**Rebecca Nakidhambya**  
Head of Human Resources



**Stanslaus Mwangela**  
Senior Developer

▼ Jacaranda Health colleagues gather in Nairobi in June for a team building event.



**We don't compromise when it comes to improving outcomes for mothers and babies.**

Thanks to the continuous support from our partners we don't have to.

We're grateful to our funding partners who challenge us to dig deep to achieve impact, for the guidance our advisory board provides across multiple timezones, and the many local public and private sector partners who fuel a wider ambition to change the course of women's pregnancy journeys, here in Kenya and beyond.

📖 Read our 2025 Strategy

🌐 [www.jacarandahealth.org](http://www.jacarandahealth.org)

✉ [hello@jacarandahealth.org](mailto:hello@jacarandahealth.org)

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*Disclaimer: This report discusses pregnancy and motherhood. While we use the term "mother" throughout the piece to mirror the language of the community we are collaborating with; we also acknowledge that not all pregnant people identify as "mothers." We would like to recognize that pregnancy and motherhood can be experienced by people of all genders.*

