

2022 ANNUAL REPORT

Maya Health Alliance

Wuqu' Kawoq





FROM OUR CHIEF EXECUTIVE OFFICER

Dear Friends,

This was a year of building back better. As Guatemala began to re-open after the worst of the Covid-19 pandemic, we were more than ready to resume full services in our communities. At the height of the pandemic, we had to pull back on community workshops, research, and non-essential activities. We used this time to assess and redesign our workshops on health and human development to make them even more effective and relevant. We also looked across our core programs and made plans for future improvements, which we incorporated into our new Five-Year Strategic Plan.

We're excited to be launching our 2022-2027 Strategic Plan. The plan includes creating an Institute for Health Education, Equity, and Leadership to share our knowledge and build capacity in community health, particularly among indigenous women, to help achieve health equity across Guatemala. The Plan also articulates our intention to build awareness, understanding, and action around the environmental factors that contribute to better health.

One of the greatest joys of 2022 has been reconnecting with each other, our patients, and our larger community. In February, we held our first-ever leadership retreat in Santa Cruz La Laguna. This was a chance to weigh in on the Strategic Plan, learn new skills, and build trust, confidence, and communication among team members. In October, we held our second Insight Trip to offer supporters a close-up look at our work. The small group accompanied a midwife on prenatal visits in the rural community of Pamezul, visited our new lab for testing HPV samples to prevent cervical cancer, and enjoyed the All Saints Day Giant Kite Festival at the Santiago Cemetery. Finally, we brought our Guatemalan and US Board members together for a joint meeting at our headquarters in Tecpán.

Throughout the year, the residual effects of the Covid pandemic, followed by global economic turmoil, have continued to ripple through the communities where we work. Many children have lost years of education or dropped out entirely. Public Health services are patchy and weaker than before. Rates of acute and chronic malnutrition continue to rise, especially in rural indigenous communities. At the same time, we have grown stronger and more determined than ever to take on these challenges to transform health in rural Guatemala.

I am so pleased to share this year's remarkable progress with you!



Anne Kraemer

**Maya Health Alliance | Wuqu' Kawoq
2022 Annual Report**



OUR WORK

We transform the health of communities in Guatemala by creating high-quality solutions to close critical gaps in care. Our community health care providers work collaboratively with patients in Mayan communities and languages to develop practical, sustainable approaches to break down barriers to health and well-being.

We are a global leader in research and treatment models for chronic diseases, including child malnutrition, diabetes, heart disease, and cancer.

Over more than 16 years, we have demonstrated that building capacity among Maya women health care workers provides access to high-quality health care and improves health outcomes. It also fosters dignity, opportunity, choice, and the promise of a better future for Guatemala's Maya women and their families.

Mission

Building equity and transforming health in rural Guatemala.

Vision

Everyone has access to high-quality care, no matter where they were born or what language they speak.



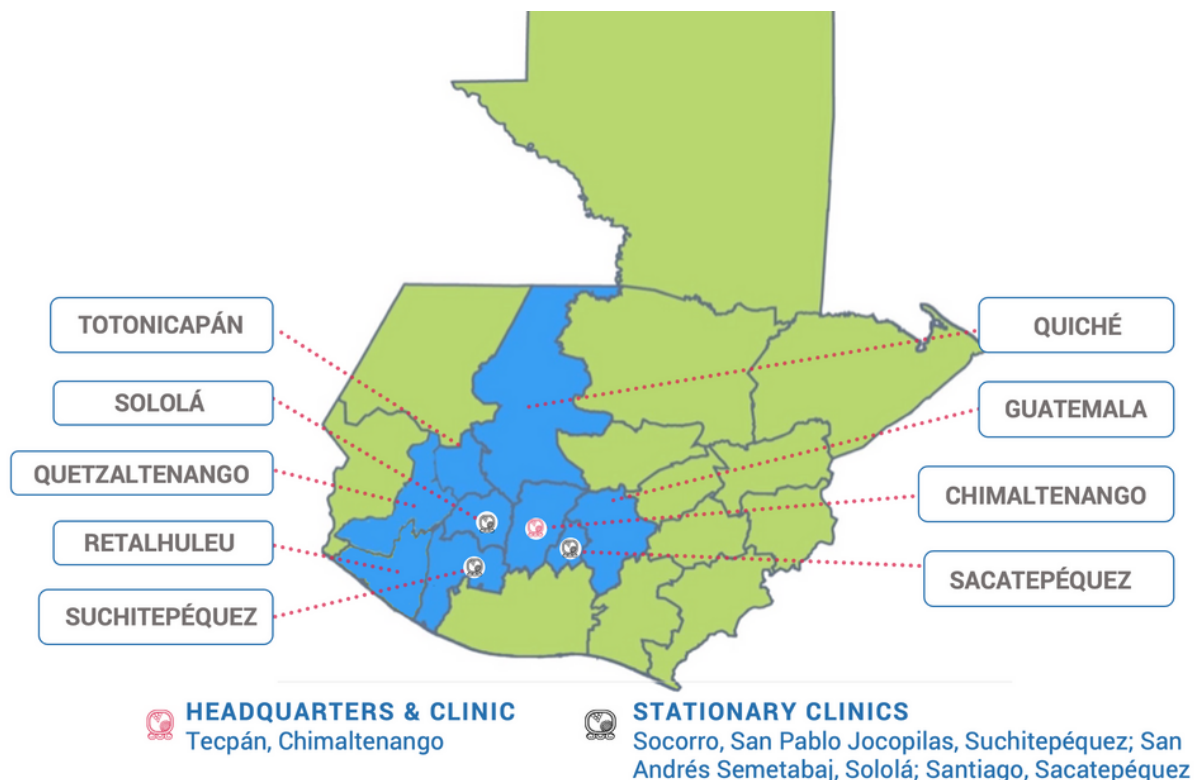
WHERE WE WORK

Guatemala is home to some of the poorest communities in the Western Hemisphere and has one of the greatest income gaps in the world. The public health system is vastly under-resourced. Most health care is delivered in Spanish despite the fact that nearly half of the population speaks a Mayan language. These barriers, along with long-standing discrimination, prevent many indigenous people in rural areas from accessing basic health services.

Health outcomes reflect these disparities:

- As many as 70% of children in rural Maya communities suffer from malnutrition.
- Maternal mortality rates among indigenous women are three times as high as those of non-indigenous women.
- The rate of type 2 diabetes and pre-diabetes among indigenous people is 25% - more than double the national rate.

We are working in hundreds of rural communities in nine states in Guatemala to close these gaps.



2022 IMPACT

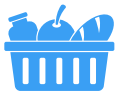
As one of the only organizations providing comprehensive healthcare in indigenous Mayan languages, Maya Health Alliance | Wuqu' Kawoq serves nearly 10,000 patients annually in hundreds of rural communities. About 90% of patients identify as women or girls. In addition to partnering with patients to improve their health and wellbeing, we work for systems-level change with a range of community, government, and civil sector partners. Additionally, we are committed to building understanding and driving change through ongoing research and evaluation. We use a rapid cycle, "plan-do-study-act" quality improvement model in which we continually collect data to determine what's working and what's not and make adjustments accordingly. Our Center for Indigenous Health Research has published more than 100 articles in peer-reviewed publications sharing what we have learned.

HEALTH SERVICES PROVIDED IN 2022

9,041 patients

29,556 visits

Including:



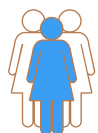
NUTRITION

797 patients
8,416 visits



PRIMARY CARE

837 patients
1,794 visits



WOMEN'S HEALTH

6,482 patients
14,696 visits



DIABETES

126 patients
1,692 visits



MATERNAL HEALTH

712 patients
2,332 visits



COMPLEX CARE

87 patients
266 visits

SUSTAINABILITY GOALS

Working in rural Guatemala with historically marginalized populations, Maya Health Alliance | Wuqu' Kawoq is at the forefront of the Sustainable Development Challenge.

Since we began in 2007, we have strived to create a self-sustaining, holistic approach to healthcare that recognizes the many layers of human well-being.

The United Nations' Sustainable Development Goals are a natural fit with our philosophy and we have used them to refine our vision of healthcare in Guatemala.

Currently, we are taking meaningful steps to fulfill many of the 17 goals:





2022 INSIGHT TRIP

Over four action-packed days, we had the chance to offer an up-close look at our work to a small group of friends and supporters from October 30 - November 1. Insight Trip participants joined our team on visits to maternal health and child nutrition patients, stopped at our headquarters in Tecpán, and toured our new microbiology lab that supports state-of-the-art cervical cancer testing. We also enjoyed visits to Lake Atitlán, the magnificent All Saints Day Giant Kite Festival at the Santiago Cemetery, and the Mayan Folk Saint Maximón!

It's been quite impressive, in fact stunning, what Maya Health has been able to accomplish in the last 15 years. They are having a huge impact on their patients' lives, improving their health, their overall livelihoods, and the communities they live in.

- participant Herb VanHook



In June, the team spent a day planting trees in the community of Chuatzunuj to help slow climate change and nurture the health of our planet, which is inextricably linked to human health.





OUR TEAM

96% Guatemalan
90% Indigenous Maya
80% Women

We are a diverse 70+ member team of physicians, nurses, anthropologists, linguists, teachers, nutritionists, engineers, public health practitioners, lawyers, designers, accountants, entrepreneurs, and community health workers. We are united by our dedication to improving health and well-being in Guatemala.

BOARD OF DIRECTORS

We have two boards, one based in the US and one in Guatemala. Each board serves different legal and organizational functions. The US board focuses principally on fundraising, financial management, and strategic direction, and the Guatemalan board focuses on program implementation and strategy. We are so grateful to our dedicated board members and the time and resources they contribute! In the coming years, we intend to increase opportunities for collaboration between our two boards.

ANNE KRAEMER

Executive Director
Anthropologist
Antigua, Guatemala



PETER ROHLOFF

Medical Director
Physician
Antigua, Guatemala
Boston, MA



KARA ANDRADE

US Board Member
PhD Candidate
American University
North Carolina



JUAN COJ

**Guatemala Board
Secretary**
Agriculture Worker
Tecpán, Chimaltenango



MARCELA COLOM

US Board Member
Family Physician
Albuquerque, NM



CHRIS DAVIES

US Board Member
Property Manager
San Francisco, CA



MARK DOERR

US Board Member

Attorney
New York, NY



BRENT HENDERSON

US Board President

Associate Professor
Gainesville, FL



CLAIRE MELVIN

US Board Member

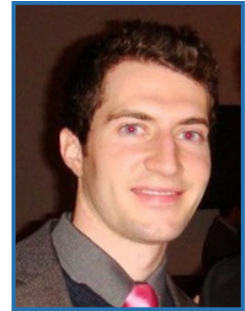
Attorney
New York, NY



TOM MELVIN

US Board Treasurer

Financial Analyst
New York, NY



FELIPA MUS

Guatemala Board Member

Health Committee
Volunteer
Santa Lucía Utatlán,
Sololá



RUSSELL ROHLOFF

US Financial Controller

Engineer
Bethel, VT



HEIDY ROQUEL

Guatemala Board Treasurer

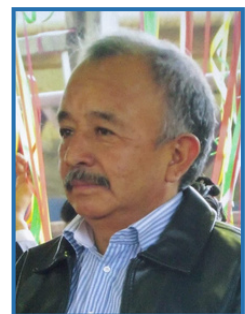
Community Volunteer
Tecpán,
Chimaltenango



ANTONIO SIMAJ

Guatemala Board Secretary

Retired Firefighter,
Community Volunteer
Nahualá, Sololá



SANDY SUDWEEKS

US Board Member

Retired Professor
Costa Mesa, CA



I've seen many NGOs and done projects with NGOs, and none of them have been built so completely on the well-being culturally and in a way that's sensitive to the people they have been helping.
- Board Member Sandy Sudweeks

HONORING BOARD MEMBER EMERITUS PATRICK JENNINGS

After 10 years of service on the Board, including as Secretary and in numerous other roles, Patrick Jennings became an Emeritus Board Member in 2022. He remains a key advisor and highly valued friend and supporter. We are so grateful to Patrick for sharing his healthcare business experience, and for his tremendous wisdom and insight, positive energy, and immense dedication. Patrick has been a wonderful guiding force at Board meetings, including many retreats in Guatemala, and has been a generous host and supporter and gracious ambassador for our work in the US.



Patrick enjoys a moment with patient Josue and his parents on our 2017 Insight Trip.

TOGETHER AT LAST!



In November, we had our first in-person Board retreat since the Covid pandemic. Board members from the US and Guatemala gathered in Tecpán to hear from our managers about our progress, plans, and work to come.

INSTITUTE FOR HEALTH EDUCATION, LEADERSHIP, AND EQUITY

In recent years, the Covid pandemic, climate change, and migration have underscored our interconnections as a global community and demonstrated the importance of striving to ensure that everyone has the best possible chance for health and well-being. We are creating an Institute for Health Education, Leadership, and Equity dedicated to making this vision a reality.

Since we began working in rural Guatemala in 2007, we have seen the transformative power of hiring, training, and empowering local health workers to provide care for their own communities. Our health workers come from the communities and speak the languages of the patients they serve. They work alongside patients, families and communities to find practical, sustainable solutions to their most pressing health problems. We measure and evaluate everything we do so our team can adjust course to respond effectively to local needs and conditions. We share what we learn in convenings and publications from our Center for Indigenous Health Research.





This community-driven, data-informed approach is working. In the communities where our programs operate, rates of child malnutrition and deaths from childbirth have dropped. More people are able to manage their chronic conditions like diabetes, heart disease, and epilepsy. Cervical cancer is being detected earlier and treated more effectively. Women have access to family planning information and resources.

The Institute will scale this impact by sharing knowledge and fostering collaboration across Guatemala. Community health workers will learn how to use innovative, high-impact, culturally appropriate, patient-centered care to improve health in their communities. They will discover how to attack the root causes of health inequities and eliminate barriers to high-quality care across Guatemala. At the same time, they will take away the knowledge and skills to advance their own job opportunities and become the health care leaders of tomorrow.



WAWASAN ALAM
WUQU' RANGU

REPORTS FROM THE FIELD

Year-round, our community health workers, care navigators, nurses, doctors, nutrition technicians, drivers, and other team members are in the field working with patients to help them reach their health goals.

When you're heads-down, making it happen, it can be hard to grasp the transformative nature of this gradual, steady effort. So we are grateful when we have the opportunity for someone to bring a fresh perspective that allows us to fully appreciate all that makes our work special and effective. Karun Krishnamurthy, a Vassar College student, joined us for two months in 2022 to observe field visits and share what he found. His stories and photos follow.





FAMILY-CENTERED NUTRITION

Fighting malnutrition continued to be a major focus of our work in 2022. As global economic and climate events drove up costs of food, fuel, and fertilizers, we saw more children fall into acute malnutrition. In a typical year, most of the children we care for have chronic, rather than acute, malnutrition. Chronic malnutrition is a significant concern, as it can limit brain development and have lifelong consequences for a child's health, education, and future prospects. Acute malnutrition is life-threatening.

To meet this crisis, we have been working across all levels: partnering one-on-one with families, offering one-on-one counseling for caregivers, enhanced food supplements, and personalized plans for each child; helping to train health workers across Guatemala; and advocating for coordinated national and international initiatives to prioritize better nutrition for our children. As always, we are evaluating and adapting our strategies and services so they are as effective as possible. Just one example: in response to feedback from mothers, our nutrition technicians are now using common household items such as mugs, bowls, and different sized fruits to make it easier to understand recommendations for portion sizes. We also are incorporating more developmental milestones and education into our counseling to help parents provide responsive, stimulating care to support their children's development.

NURTURING BETTER HEALTH

BY KARUN KRISHNAMURTHY

His voice brimming with pride, he shows me pictures of his children at home with him, and at the fair. I peer at the smudged phone screen and extend the usual politeness. Once the impromptu slideshow has concluded, he turns to me and says, "They are the reason I do all this. I work to support them so they can have a great life."

As I was to learn, his own life had not been easy. Like so many people in Guatemala, the father I met while on my trek up Volcan Acatenango had immigrated to the US when he was younger. When he was only my age, 21, he made a far more perilous, expensive, and lengthy journey than I was making that day. And like so many, he was eventually deported, after starting a family there. Slowly, he rebuilt his life in Guatemala. He began running horses up the mountain to deliver groceries to the tiendas along the way. One of the things he said that stuck with me was how his son in the US has towered multiple inches over him from a young age. When I asked why (perhaps his wife was tall?), he instantly replied, "No. They eat good over there."

Malnutrition is one of the greatest challenges facing Guatemala, especially in rural areas. The availability of cheap, quick, processed food; structural inequalities widened by the pandemic; and devastation from increasingly more frequent hurricanes have combined to amplify the problem. I had a chance to see firsthand how Wuqu' Kawoq is taking on this seemingly intractable issue. I walked with nurse Mirza Chan past fields of corn destroyed by the recent tropical storm Julia to visit a mother and child in the town of Panimacoc, near Tecpán, Chimaltenango. With great care, Mirza weighed and measured the baby, all the while putting the mother at ease with jokes and asking about her life. She then guided the mom through a pamphlet on nutrition, and the importance of diet, and showed her how to track her baby's progress. She reminded the mom that she needed to keep feeding her baby the strange tasting "Chispitas" (nutritional and vitamin sprinkles) to support her physical and mental development. As we left, Mirza assured the mom that we will be delivering groceries to them that upcoming Friday, and confirmed the meeting point (as close as the organization car could get to her house, which was not accessible by road).



Nurse Mirza Chan takes measurements and the whole family gets involved!

This is the profound impact of Wuqu' Kawoq: Going to those who have been left out of the system, empowering them with knowledge, and working with community health workers. Wuqu' Kawoq are working to change the idea that adequate nutrition and health are within reach only in the "promised land" up north. Wuqu' Kawoq staff go above and beyond to show families that they are cared for and to instill in them the responsibility for their own children's growth. By showing parents how much diet impacts growth and development, they help parents realize that they have the power to raise their children into healthy adults.



WOMEN'S HEALTH

Our Women's Health Program continued to thrive and grow in 2022, staffed by highly trained, community-based nurses dedicated to providing ongoing services in Mayan languages. We completed construction of a microbiology lab that allows us to move to more accurate HPV testing for cervical cancer prevention and treatment. We have retooled our free, six-session Women's Health community workshops to focus more broadly on human development to help mothers raise their daughters and sons as well as care for themselves. The revised course covers everything from anatomy and the menstrual cycle to fostering loving relationships, along with cancer screenings and family planning services.

We have added a male peer counselor, who focuses on engaging male partners through classes, education, and counseling. Research shows that one of the primary barriers that women in rural Guatemala face in using long-acting contraception methods is resistance from their partners; the aim is to help open the conversation.

Finally, through our wonderful, ongoing partnership with Friendship Bridge, a microcredit organization serving women, we've expanded the Salud Para la Vida (Health for Life) program to new communities to provide comprehensive care and preventive services for microcredit clients in their homes.

EMPOWERING WOMEN WITH ACCESS AND KNOWLEDGE

BY KARUN KRISHNAMURTHY

The atmosphere in the municipal park in the village of San Pedro Sacatepequez was buzzing. Women from all over the village, with an assortment of husbands, partners, and family members in tow, had gathered under the large tent that the local municipality had put up in front of their tiny office. People chatted, shared delicious packed food, and waited patiently. From the office emerged Glendy, one of four Wuqu' Kawoq field nurses there that day, clad in scrubs and gloves, and called in the first two ladies. The jornada de planificación (family planning clinic) had begun.

I watched as the nurses bantered with elders, patiently talking through family planning methods with unsure young people. The nurses created what I had come to realize was the Wuqu' Kawoq standard of a comfortable atmosphere, where the ladies of San Pedro felt at home. After reading and speaking to so many people about taboos against contraception in Guatemala and women being suppressed and not given a choice when it comes marital roles, one could imagine my amazement just being at this workshop conducted by Wuqu' Kawoq in partnership with the local municipality in this tiny rural town. Not only were these taboos and gender norms being challenged, they were being done so publicly, with the inclusion of local government! The main reason this was possible was because Wuqu' Kawoq nurses had labored long and hard to gain this village's trust,



Field Nurse Glendy worked tirelessly at the Jornada before catching a bus at the city at the end of the day to pick up her college certificate. An avid reader and writer, she aims to be a midwife and an author.

becoming "conocido" (known) by visiting this town regularly, making home visits, offering women's health workshops, and getting to personally know so many of the townspeople.

"There are no other healthcare providers who work like this for us," said Carla, who was there to receive an injectable contraceptive. "I'm happy to see the attention they give to everyone."

A mother who was struggling to take care of her kids while trying to grow her tiny business of selling her beautiful knitted blouses, Carla was truly happy to be at this pop-up clinic. Not just happy, but empowered. When I asked her why she felt clinics like these in her town were important she said, "Of course I think women need to take care of themselves and know how to take care of themselves." This was the general sentiment of the women at the workshop, and one of the reasons that Wuqu' Kawoq exists.



SALUD PARA LA VIDA: WOMEN WITH WOMEN

BY KARUN KRISHNAMURTHY

I struggled to follow Brenda as she wove through the streets of the fourth village we had visited that day. A nursing technician in the Salud Para La Vida (Health for Life) team, she happily chatted with me about work, her pets, and her passion for different kinds of plants and fruits. However, this idle chatter did not distract her from her task at hand; she makes the most of each day, visiting as many patients as she can.

Brenda is aware that, often, she is the only medical professional who patients in these small communities can access, or trust. At one house we visited, her patient told me in Spanish: "It makes me really happy that they [Wuqu' Kawoq] care for women's health, because no one else looks out for us. We live in an indigenous village, and there are a lot of taboos, and no one wants to talk or knows much about these things. Wuqu' Kawoq educates us." She goes on to tell me that just knowing that there is an organization working for them, where the majority of health workers are women too, is empowering and comforting. She explains the fear and shyness surrounding women's health, and how many women really appreciate the care and patience Wuqu' Kawoq's workers dedicate to them. She underscored the importance of interactions being "mujer con mujer," women with women, especially when it comes to caring for indigenous women.



Brenda talks with a patient in her home.

Brenda provides a spectrum of care for her patients: conducting check-ups, explaining medical and test reports, exploring family planning options, and even accompanying patients to the hospital to serve as a mediator and translator (for the many women who prefer speaking in their indigenous language). One of Brenda's patients, who has been with Wuqu' Kawoq for 12 years, tells me in Mayan Kaqchiquel, "She attends to me, cares for me, and worries about me. No other doctor has ever gone to the extent she goes for me. Not only does she give me the pills I need, but she also calls me up to make sure I am taking them, and asks how I am!"

One of the things that really surprised me that day was that whenever I asked someone if they were scared when they first met people from Wuqu' Kawoq, they responded in no uncertain terms that they were not. They explained that from the get-go, Wuqu' Kawoq nurses were kind and friendly, and more importantly, they knew them and trusted them.

I think one of the patients that day summarized the importance of Wuqu Kawoq's work beautifully when she told me in Spanish: "Right now, the times are changing, and we (women) have to change as well, and empower ourselves. Wuqu Kawoq' helps us with this."



MOBILE MATERNAL HEALTH

Guatemala has among the highest rates of maternal deaths in Latin America. The vast majority of these deaths could be prevented if mothers received timely, quality hospital care. But a variety of barriers limit indigenous Maya women from accessing this care in the public hospitals, including language, medical and travel costs, and fear of disrespectful and abusive treatment and unwanted surgeries, such as cesarean birth and sterilization.

Through our Mobile Maternal Health Program, we are eliminating avoidable maternal and neonatal deaths by repairing the disconnects in the care referral chain. We equip indigenous midwives with a smartphone application to detect high-risk complications early and provide Maya care navigators to accompany mothers when hospital services are required. This solution was created to improve, not replace, the cultural practice of giving birth at home with a midwife, surrounded by friends and family. Everything from the phone app to the navigation strategies was co-designed and continues to be run by the communities it serves: indigenous Guatemalan women.

Since the program began as a pilot in 2017, successful hospital referrals have increased by more than 50% among the approximately 800 births attended annually by participating midwives, and maternal deaths in the pilot region have dropped from 8 a year to 0-2 a year.

BLENDING ANCIENT WISDOM & MODERN TECHNOLOGY

BY KARUN KRISHNAMURTHY

We're huddled by the tiny bed, listening intently to the little speaker emit static. Sunlight seeps through the only window in the room, illuminating the figure of Doña Elizabeth, bent over her patient lying on the bed, her face a mask of concentration. We chuckle nervously about this and that, just to hear something other than static. And then, suddenly, out of seemingly nowhere, we hear it —the throbbing heartbeat of a child yet to be born. It's unlike anything I have ever heard before, a beautiful proof of humanity. All our faces light up while Doña Elizabeth begins to measure the beaming mother's heartbeat on her app. Soon it is over, she is wiping the belly, and asking a few more questions, but I cannot hear them. All I hear is that quick lub-dub of the baby's heart over and over again in my head.

Later, I'm sitting across from Doña Elizabeth, renowned midwife and matriarch of Panimacoc, Tecpán, enjoying the delicious arroz con pollo chapin she insisted on serving us, and she shares a bit of her story. She has been a midwife for 42 years, and her calm, knowing presence emanates power. I think back to how earlier that day everyone greeted her with joy and respect as we navigated the nooks and crannies of the town to visit her patients, all of whom were overjoyed to see her as she chatted and joked with them in fluent Spanish and Kaqchikel.

"Of course, I was very scared at first!" she says to me when I ask about how she began working with Wuqu' Kawoq. She had been a midwife for so many years, she was reluctant to change her ways and begin using an app on a smartphone for her visits. Since she had dreamt of being a midwife when she was 12, she thought she had seen everything there was to see. Learning through observation and other dreams that instructed her on her duty, she had mastered the practice. But over time, as with many other midwives and community



members in Guatemala, Wuqu' Kawoq won her confidence. "They really supported us [midwives] to save patients and to accompany them to the hospital and to pay for the ambulance in emergencies. I could tell they really cared," she tells me. "With the organization, my patients feel comfortable and happy. They are very grateful for them."

Slowly, with the help of her family and Wuqu' Kawoq staff, she learned how to use the Mobile Maternal Health smartphone app, and has seamlessly incorporated it into her visits, enabling a much more thorough examination. With the monitor and equipment that Wuqu' Kawoq provided her (and all the other midwives in the program) she is able to track the baby's progress and listen to its heartbeat, take the mother's blood pressure, and be on the lookout for any complications. If problems arise, she can alert Wuqu' Kawoq, which provides the support of medical staff, along with care navigators who accompany the mother to the hospital when needed.

When I ask her what she thinks about Wuqu' Kawoq, she breaks into a large smile. "I am very grateful and pray to god that our partnership does not end because they really do help me and my patients." She smiles even more broadly as the interview ends and I ask about the electric guitar and the amp in the back of the room. She began playing five years ago and loves to play whenever she gets the chance.

I am still reveling in her power as Doña Elizabeth quickly poses for a picture, brushes away my "muchas gracias" for everything, and takes off at a sprint to catch a bus to another town, where more patients await. I cannot help but be moved by this 60-year-old woman, still in her absolute prime, a vision of skill, power, energy, and kindness.

I finally began to understand the brilliance of Wuqu' Kawoq that day. We are not just there to provide healthcare to people in different communities in Guatemala — there are already a lot of incredibly skilled and talented workers doing so. We're there to support them, learn from them, and work with them to create a brighter future and a more sustainable system of healthcare for all of Guatemala.





CHRONIC DISEASE CARE

We are revolutionizing the care of chronic diseases in rural Guatemala, making it possible for patients to receive care from medical experts and learn how to better manage their conditions at home. Ordinarily, many of these patients would not have access to care, leaving them vulnerable to avoidable health problems that limit their ability to participate in work and family life.

Our approach to chronic disease care integrates clinical care, health education, and linguistic and cultural sensitivity. By working over the long-term with patients and their families, and by investing in the skills of our nurses and community health workers, we are able to achieve excellent results.

We are experts in the management of both adult and pediatric chronic diseases, including diabetes, heart disease, cancer, kidney failure, epilepsy, and rheumatoid arthritis. We partner with patients on self-care for diabetes in rural regions across multiple health districts in central Guatemala.

PRESCRIPTION FOR HOPE: EDUCATION, MOTIVATION & HEART

BY KARUN KRISHNAMURTHY

“The truth is, I was dying.” Kevin spoke casually, as though he was not talking about his own life. He described his experience as a Wuqu’ Kawoq patient with diabetes. “They really helped me over this past year. Most importantly they motivated me to get better. They gave me medicines and visited, but also helped me feel like I was worth saving, and helped create a regimen for me to live by.”

Damaris, an educator with Wuqu’ Kawoq’s diabetes team, sat next to me nodding silently, overwhelmed with emotion. I could see how proud she was of this case, of this family, and how far they had come. She spoke of them as though they were her own family.



Kevin’s mother seemed to feel the same way. “We went to hospital but they only treated him for a short time, and did not tell us anything about diabetes, and how to combat it,” she said to me. “Not only did they (Wuqu’ Kawoq) help us, they gained our trust, they were “conocido.” They were our people. We knew them, so we knew they would be there for us.”

That entire day, I had been going to various villages around Tecpán with Damaris, visiting patients. The care she exhibited for each of them and the intimacy of their relationships blew me away. This seemed to me the ideal practice of healthcare, where both the health and the care aspect of the word get equal recognition and due respect. Damaris made conversation with elderly abuelas in Kaqchikel, chatted with mothers, and played with little kids. She took care that patients were always at ease, and pushed nutrition advice and regimen planning on them the way only a relative who really cares about you would.

“When I asked Kevin and his mother about the work Wuqu’ Kawoq does, his mother earnestly responded, “As a mother they were a great help to me and my son. I think the work they do is very important. He (Kevin) was depressed, did not eat, complained of headaches, did not sleep or work and was always tired. She (Damaris) explained the disease, why all these things were happening to my son, and how it was not his fault.”

Kevin added, “She told us about the importance of diet, exercise, planning, and finding alternatives, and provided us with medicines.”

They told me about how they were terrified of the insulin injection, and how Wuqu’ Kawoq caregivers explained how it works. “They taught us a lot and helped us so much. These nurses work with their corazon [heart],” said Kevin’s mother. “I still think of Damaris as an angel, and will never forget how she helped us, how she saved my son.”



COMPLEX CARE

Too often, people with complex health problems in rural Guatemala have nowhere to turn. The advanced care required to diagnose and treat their illness is too far away, too expensive, or delivered only in Spanish, when they may speak a Mayan language. We are committed to making high quality care available for adults and children with complex conditions, no matter where they live or what language they speak.

One way we do this is by connecting patients with expert clinicians who can visit them at their homes and communicate with them in their own languages. When advanced care is required, our care navigators accompany patients to the hospital and provide coordination, translation, advocacy, and support, whether that's medical information, a ride, or a smile. We have been able to successfully treat children and adults facing a range of conditions, including congenital heart disease, inborn errors of metabolism, cerebral palsy, Down syndrome, seizure disorders, end-stage kidney disease, complex surgical cases, and advanced cancers.

THE HEALING POWER OF CONNECTION

BY KARUN KRISHNAMURTHY

Irma smiles at me as she's wheeled out of the operating room, her eyes crinkling behind her mask, looking as composed as she was when she walked in. We sit down and she's clearly in discomfort. I stumble over words in my second-hand Spanish to ask if she's okay, and reiterate that we do not have to talk right now. "No tenga pena," (don't worry) she says reassuringly, explaining that the process she just underwent was a bit uncomfortable.

Soon enough, I'm seeing pictures of her beloved nephew Melvin and of all her pets, and she is gushing over pictures of Indian saris she just loves, and asking how I maintain my "beautiful" coloches. I can feel her exuberance bursting through her currently weakened exterior and cannot help but feel a pang of sadness when she mentions she wanted to be a maestra (teacher), but never had the opportunity to follow that passion. To me, battling chronic illness often seems to be such an uphill battle—you cannot just lead a regular life outside of your treatment; it permeates every aspect of your life.

But Irma will not so easily be written off. Inspired and supported by Wuqu' Kawoq workers whom she says she has come to love and trust completely, she routinely makes the three-hour-long trip down to Guatemala City for tests and treatment for cervical cancer. "When the Wuqu' team told me that they detected possible HPV through a routine test, and they would like to accompany me to the City to get a colposcopy, I almost did not go," she confessed. She was only 32! Only her trust in Wuqu' staff like Merida Coj, whose knowledge of the public health system is only surpassed by her kindness and compassion for patients, eventually led her to make the trip down.

I had seen for myself how Irma's face lit up when Merida, flitting between multiple Wuqu' Kawoq patients she had accompanied to the hospital, would check in on her. Grinning behind her mask, Irma told me about how she was studying to be a nurse, so she could help and be there for people the way Wuqu' Kawoq and Merida were for her.

One of the ways Wuqu' Kawoq really stands out to me is the personalized nature of their approach. Team members are fueled by passion and love, and all their patients feel this. It is part of the reason so many people in rural Guatemala, forsaken by the public healthcare system, have such faith in them. That day in the INCAN Hospital in Guatemala City, I watched Merida honestly and earnestly explaining a test to a nerve-wracked mother and daughter who were not even Wuqu' Kawoq patients but happened to be sitting nearby during breakfast in the hospital canteen. I watched her crack jokes to ease the discomfort of Wuqu' patients, ask about their family, and chat with them about this and that, making them feel at home in this alien place.

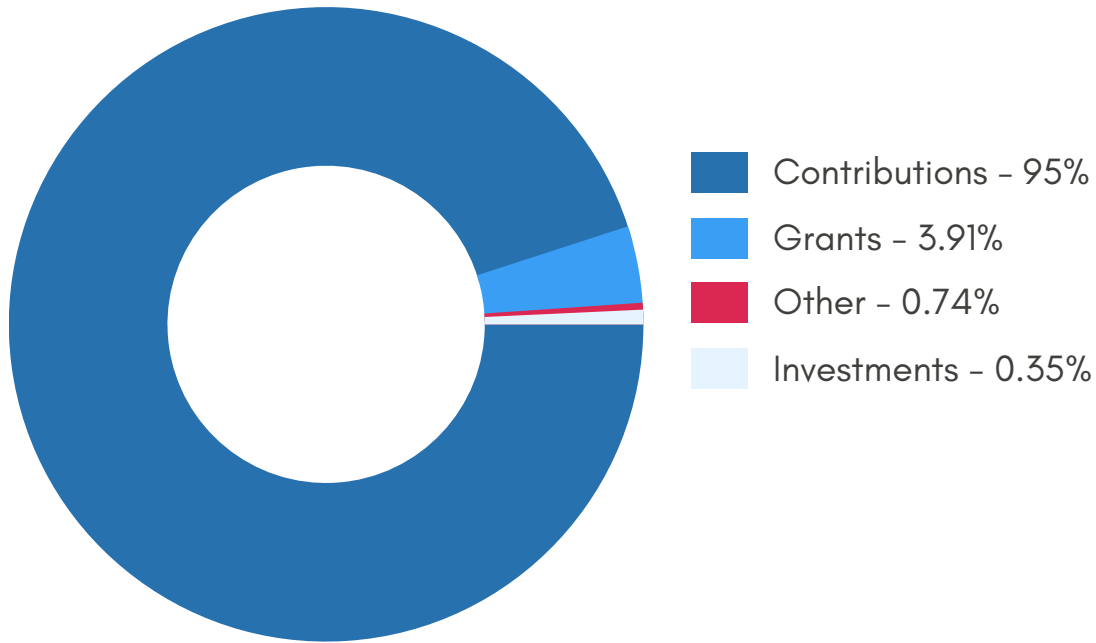


Irma and Merida
outside INCAN

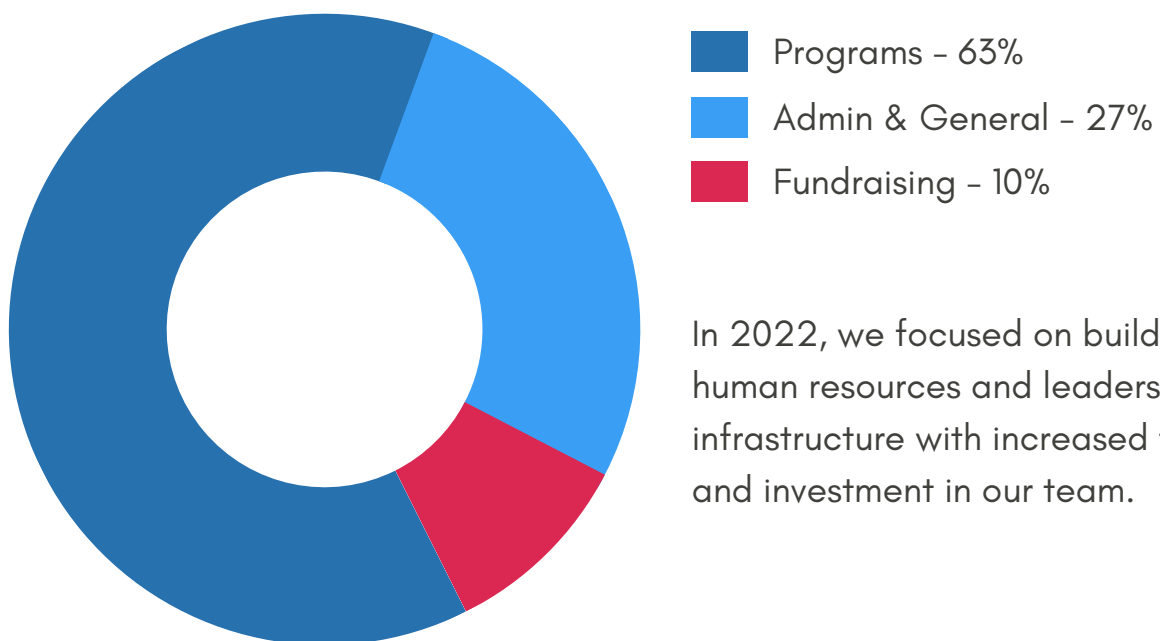


2022 FINANCIALS

REVENUE: \$1,916,173

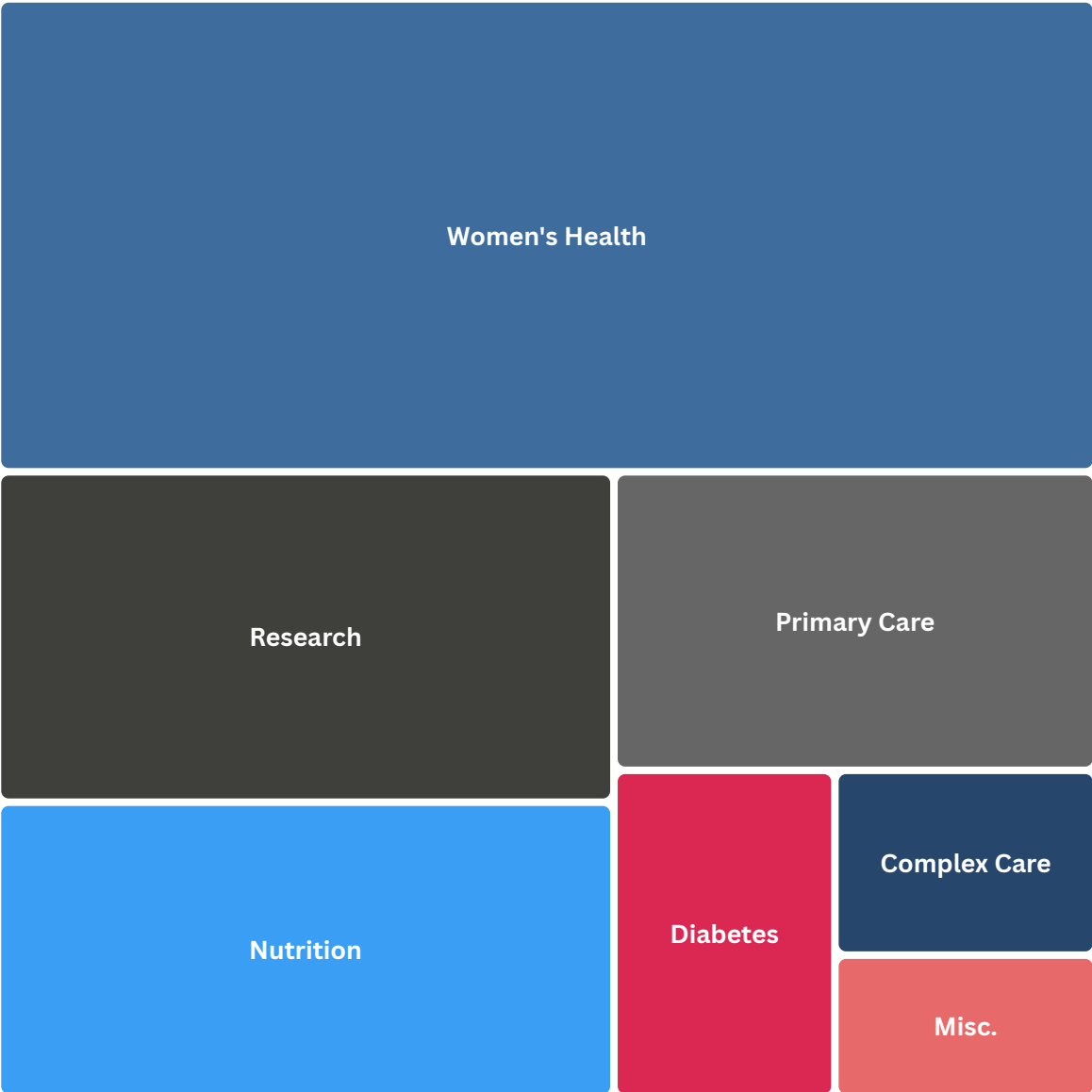


EXPENSES: \$1,884,079



In 2022, we focused on building our human resources and leadership infrastructure with increased training and investment in our team.

PROGRAM EXPENDITURES





PARTNERS

Maximizing impact through collaboration
Our rich network of partnerships is key to our success!



2022 PUBLICATIONS

The Center for Indigenous Health Research, founded by Maya Health Alliance | Wuqu' Kawoq, is a leader in global health research. Below are some of the publications our research team produced in 2022 in areas including pediatric care, diabetes, COVID vaccines, and cervical cancer.

Choonara I, Escobedo AA, Olusanya BO, Raj M, Rohloff P, Zeng L, Zhao W. BMJ Paediatrics Open and the Global South: an open call towards editorial diversity and inclusion. *BMJ Paediatr Open*. 2022 Oct;6(1):e001679. doi: 10.1136/bmjpo-2022-001679. PMID: 36645794; PMCID: PMC9621182.

Flood D, Brant LCC, Sussman JB. The triglyceride glucose index and cardiovascular disease outcomes. *Lancet Healthy Longev*. 2023 Jan;4(1):e2-e3. doi: 10.1016/S2666-7568(22)00269-0. Epub 2022 Dec 12. PMID: 36521499.

Chary A, Hawkins J, Flood D, Martinez B, Colom M, Austad K. Medical students' experiences of compulsory rural service in Guatemala: a qualitative study. *Rural Remote Health*. 2022 May;22(2):6582. doi: 10.22605/RRH6582. Epub 2022 May 26. PMID: 35617739.

Steinbrook E, Flood D, Barnoya J, Montano CM, Miller AC, Rohloff P. Prevalence of Hypertension, Diabetes, and Other Cardiovascular Disease Risk Factors in Two Indigenous Municipalities in Rural Guatemala: A Population-Representative Survey. *Glob Heart*. 2022 Nov 22;17(1):82. doi: 10.5334/gh.1171. PMID: 36578912; PMCID: PMC9695220.

Rohloff P, Miller AC, Barnoya J, Montano CM. Indexing Estimates of GFR to Body Surface Area in Low-Resource Settings With a High Burden of Malnutrition: Evidence From Guatemala. *Kidney Int Rep*. 2022 Apr 11;7(7):1707-1710. doi: 10.1016/j.ekir.2022.04.007. PMID: 35812277; PMCID: PMC9263247.

Abascal Miguel L, Lopez E, Sanders K, Skinner NA, Johnston J, Vosburg KB, Kraemer Diaz A, Diamond-Smith N. Evaluating the impact of a linguistically and culturally tailored social media ad campaign on COVID-19 vaccine uptake among indigenous populations in Guatemala: a pre/post design intervention study. *BMJ Open*. 2022 Dec 13;12(12):e066365. doi: 10.1136/bmjopen-2022-066365. PMID: 36523220; PMCID: PMC9748511.

Flood D, Geldsetzer P, Agoudavi K, Aryal KK, Brant LCC, Brian G, Dorobantu M, Farzadfar F, Gheorghe-Fronea O, Gurung MS, Guwatudde D, Houehanou C, Jorgensen JMA, Kondal D, Labadarios D, Marcus ME, Mayige M, Moghimi M, Norov B, Perman G, Quesnel-Crooks S, Rashidi MM, Moghaddam SS, Seiglie JA, Bahendeka SK, Steinbrook E, Theilmann M, Ware LJ, Vollmer S, Atun R, Davies JI, Ali MK, Rohloff P, Manne-Goehler J. Rural-Urban Differences in Diabetes Care and Control in 42 Low- and Middle-Income Countries: A Cross-sectional Study of Nationally Representative Individual-Level Data. *Diabetes Care*. 2022 Sep 1;45(9):1961-1970. doi: 10.2337/dc21-2342. PMID: 35771765; PMCID: PMC9472489.

Bonilla K, Romero-Oliva C, Arrechea S, Ortiz N, Mazariegos F, Alonzo M, Orellana-Corrales G, del Valle A, Montenegro-Bethancour G. Engaging the Guatemala Scientific Diaspora: The Power of Networking and Shared Learning Front. Res. Metr. Anal. 7:897670. doi: 10.3389/frma.2022.897670.

Alajajian S, Guzman-Abril A, Proaño GV, Jimenez EY, Rohloff P. Mixed-methods implementation study of a home garden intervention in rural Guatemala using the RE-AIM framework. J Acad Nutr Diet. 2022 Mar 8:S2212-2672(22)00134-4. doi: 10.1016/j.jand.2022.03.005. Epub ahead of print. PMID: 35276414.

Marcus ME, Manne-Goehler J, Theilmann M, Farzadfar F, Moghaddam SS, Keykhaei M, Hajebi A, Tschida S, Lemp JM, Aryal KK, Dunn M, Houehanou C, Bahendeka S, Rohloff P, Atun R, Bärnighausen TW, Geldsetzer P, Ramirez-Zea M, Chopra V, Heisler M, Davies JI, Huffman MD, Vollmer S, Flood D. Use of statins for the prevention of cardiovascular disease in 41 low-income and middle-income countries: a cross-sectional study of nationally representative, individual-level data. Lancet Glob Health. 2022 Mar;10(3):e369-e379. doi: 10.1016/S2214-109X(21)00551-9. PMID: 35180420; PMCID: PMC8896912.

Garcia A, Juarez M, Sacuj N, Tzurec E, Larson K, Miller A, Rohloff P. Loss to Follow-Up and the Care Cascade for Cervical Cancer Care in Rural Guatemala: A Cross-Sectional Study. JCO Glob Oncol. 2022 Feb;8:e2100286. doi: 10.1200/GO.21.00286. PMID: 35113733; PMCID: PMC8853617.

Flood D, Guwatudde D, Damasceno A, Manne-Goehler J, Davies JI; Global Health and Population Project on Access to Care for Cardiometabolic Diseases (HPACC). Maximising use of population data on cardiometabolic diseases. Lancet Diabetes Endocrinol. 2022 Mar;10(3):154-157. doi: 10.1016/S2213-8587(21)00328-4. Epub 2022 Jan 10. PMID: 35026159.

Spending time with Wuqu' Kawoq was, without exaggeration, the most pivotal experience of my residency so far.

I experienced firsthand the tremendous impact that a home-based, language-concordant, community-centered program can have on a population's trust in the healthcare system and the community's understanding of medical conditions. There is no way to adequately describe the strength of connection without seeing it in person.

-Patrick Liu, MD, resident, Brigham and Women's Hospital/Boston Children's Hospital/Boston Medical Center



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