



Lilongwe, Malawi

TRANSFORMING CARE DELIVERY

How World Telehealth Initiative is Providing Sustainable Medical Expertise to Vulnerable Communities Across the Globe

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WORLD TELEHEALTH
INITIATIVE

Executive Summary

Healthcare is a sacred human right that impacts us all. However, due to issues with availability, costs, and quality, many communities are left vulnerable and without access to essential healthcare services.

Non-profit organizations around the world are trying to address this problem. Some organizations deliver medical supplies to these geographic locations of need, whereas other organizations coordinate and fund healthcare experts to travel for periods of philanthropic work.

The unfilled chasm left by these solutions are:



Medical supplies alone solve only part of the problem, since often the local clinician is untrained in using these supplies effectively; and



With traveling healthcare experts, costs of these trips are high, and their limited stays do not create sustainable improvements in these societies.

A new method to solve the ongoing healthcare problem is required. World Telehealth Initiative does just that.

World Telehealth Initiative provides sustainable medical expertise to the world's most vulnerable communities to build local capacity and deliver core health services, through a network of volunteer healthcare professionals supported with state-of-the-art technology.

The Challenge

Inequity in healthcare access, costs, and quality have created a vast divide between populations in high- and middle- or low-income countries. In an increasingly connected world, the health of communities even oceans or continents away affects the global wellbeing of all peoples, elevating the urgency to close that gap and create lasting change.

Although healthcare inequality is a persistent issue, a growing population, ever-increasing costs, and looming provider shortage is creating a global healthcare emergency. Adding to this crisis, COVID-19 has fundamentally disrupted the global healthcare industry and economy, further exacerbating the inequity in healthcare.



Kutupalong Refugee Camp, Bangladesh

Access

An enormous portion of the world's population does not have access to proper healthcare. The World Health Organization (WHO) and World Bank [report](#) that half of the world's population does not have access to essential healthcare services because those services are inaccessible, unavailable, unaffordable, or of poor quality.

This disparity is not proportional; inaccessible healthcare services and facilities have created medical deserts. For example, [The World Bank](#) places the doctor-to-patient ratio in the U.S. at 1:400, but in Malawi—one of the poorest nations in eastern Africa—their doctor-to-patient ratio sits at 1:62,500.

Costs

Contributing to the growing inaccessibility of healthcare are costs, which have been steadily increasing at an unsustainable rate; COVID-19 further intensified this trend. [The WHO reports](#) that the developed world spends almost \$3,000 per person for healthcare—the U.S. is even higher, spending more than [\\$10,000 per person](#). In contrast, the under-developed world spends about \$41 per person—a difference of more than 70x.

Provider Shortage

Furthermore, [a shortage of providers is looming](#), yet demand is growing. Today, the world faces a shortfall of more than 7.2 million health workers. As the population ages, this number will only balloon higher, impacting middle- and low-income regions disproportionately.

In these vulnerable communities, patients must also compete with the brain drain phenomenon—the migration of healthcare workers from countries with low resources and immense need to areas of high resources and greater personal opportunity—which only widens the disparity gap.

A Historic 2020

2020 was a historically disruptive year that thrust healthcare center-stage. COVID-19 exposed the gaps, inequalities, and outdated systems within the healthcare system, casting a global spotlight on the disparities in care access, quality, and equity both in the U.S. and abroad. The consequences of these flaws were drastic.

Now, organizations across the globe are seeking new and better alternatives to bend the cost curve and make healthcare more affordable, and ultimately, more accessible.

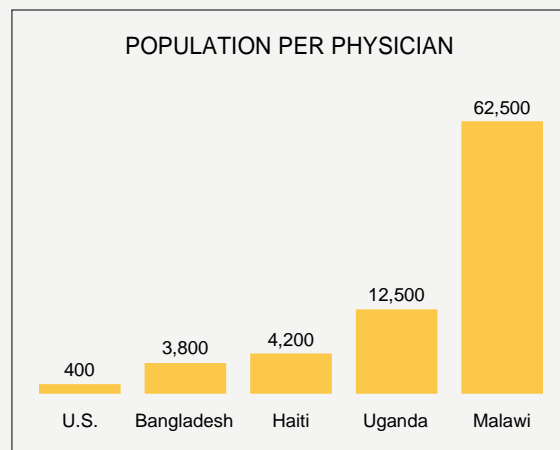
15 million

additional health workers will be needed by 2030 to meet the demands of the global population¹

8.6 million

people die from treatable conditions in middle- and low-income countries annually either from a lack of quality care or just plain lack of access²

The World Bank places the following doctor-to-patient ratios



¹ [Global Health Workforce Labor Market Projections for 2030. 2017.](#)

² [Mortality Due to Low-Quality Health Systems in the Universal Health Coverage Era: A Systematic Analysis of Amenable Deaths in 137 Countries. 2018.](#)

The Opportunity

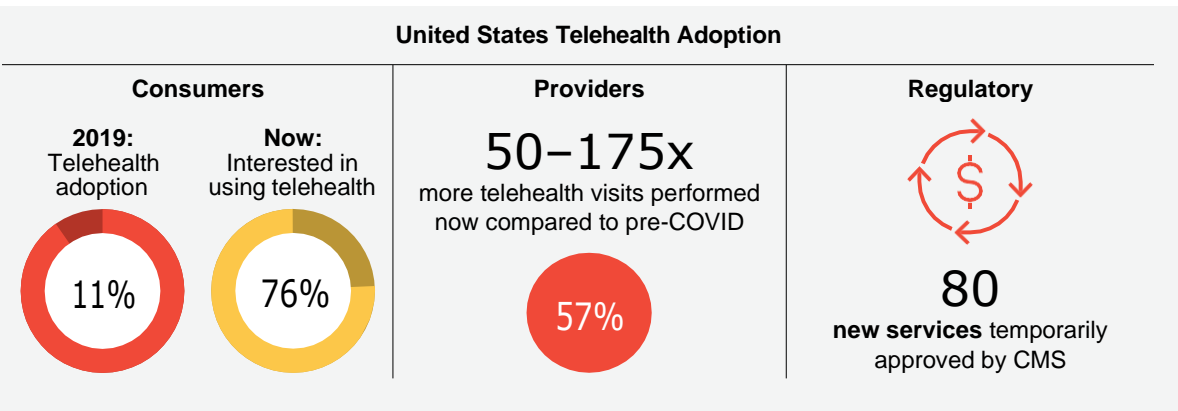
Despite these challenges, the future of healthcare for our most vulnerable populations does not have to be bleak. Innovative healthcare technology and strategies are proving their effectiveness. Virtual care and telehealth offer an opportunity to provide a cost-effective solution that ensures patients receive medical services where and when they are needed.

A New Virtual Care Delivery Model

Creating global access to healthcare is possible if we rethink these legacy models. Telehealth is purpose-built for healthcare and designed to overcome geography and shrink the distance between areas of high medical expertise and areas of need. Telehealth has the ability to be a transformative and equalizing force in healthcare access—the technology has shown the capacity to be easily deployed, adopted, and utilized across use cases, settings, and cultures.

World Telehealth Initiative (WTI), the leading nonprofit organization working to advance healthcare by providing telehealth technology, equipment, and services to impoverished communities throughout the world, uses telemedicine to match healthcare providers to underserved populations.

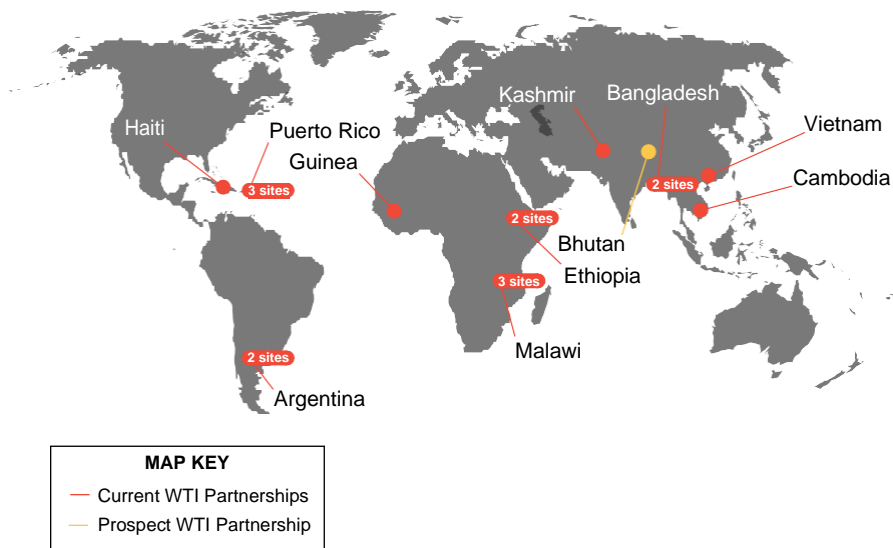
Telehealth adoption within the United States has grown expediently in the last several years. WTI seeks to extend this model of care globally to serve and treat patients worldwide in communities with limited access to care.



World Telehealth Initiative’s Mission

WTI currently enables access to care in more than 15 developing communities worldwide and plans to expand to 40 within the next two years. Through WTI, volunteer healthcare professionals utilize Teladoc Health (NYSE: TDOC) devices and its global cloud-based network to provide health services and build local capacity to treat patients. While telehealth in general is not new, the model WTI uses is a novel concept for global healthcare.

WTI Global Presence



Beyond donated medical equipment, what sets WTI apart is the growing network of volunteer physicians who partner with the organization to effectively treat patients, without the costs traditional charitable missions incur (trans-oceanic travel or a week's long time commitment). Staffed with a growing set of philanthropic and altruistically inclined health workers and powered by donated technology from Teladoc Health, WTI is able to efficiently bridge patients to providers who would never be able to meet previously due to geographic and cost constraints.



Dr. Charles Stolar beaming into Cox's Bazar, Bangladesh to help provide care.

“World Telehealth Initiative has an unprecedented capability to provide sustained healthcare expertise via telemedicine throughout the world. WTI already powers clinics across the Global South where limited access to healthcare providers is exacerbated by geography and resources. With donated, cutting edge virtual care devices located in vulnerable communities, on-site providers can access world-class medical expertise from clinical volunteers wherever they might be.”

- Sharon Allen, co-founder and executive director, World Telehealth Initiative

How It Works: Integral Partnerships

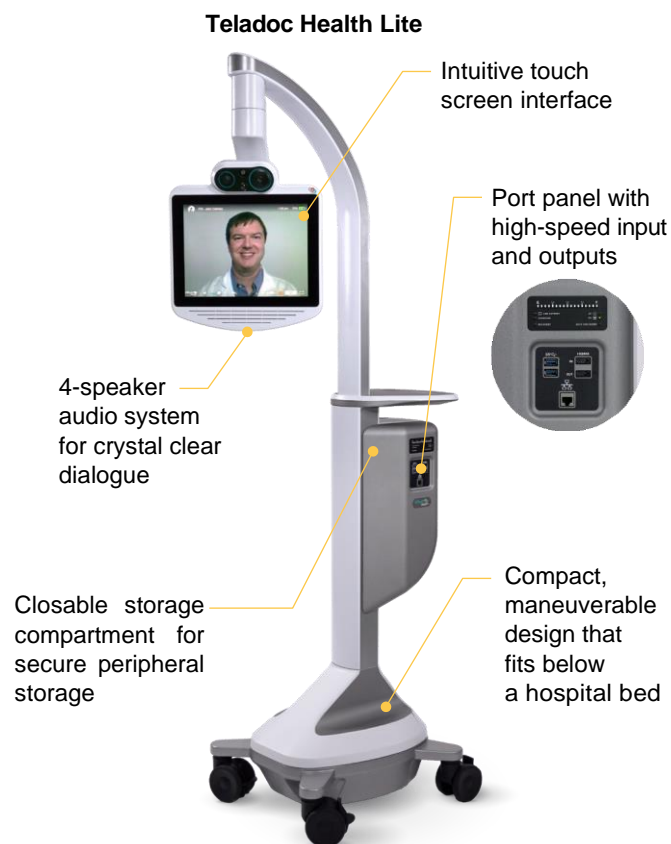
Technology

WTI is fortunate to partner with Teladoc Health. Using Teladoc Health devices and network enables the delivery of healthcare expertise anywhere in the world that has reasonable internet access. Additionally, Teladoc Health has the highest levels of connectivity and network performance available. Built for healthcare with proactive monitoring and alerts, connection optimization technology to manage highly variable network conditions, and routine maintenance and updates, a constant state of readiness is maintained for all devices and locations.

Teladoc Health donates virtual care devices, powered by Intel® processors, that are necessary for the telehealth program. Clinics primarily utilize the Teladoc Health Lite model which features:

- Authentic visualization of patient through pan-tilt-zoom head optimized for doctor viewing.
- Clear communication between doctor and patient enabled by, high quality live video, directional audio, and media tools designed for the clinical environment.
- Simple interface for stethoscope, privacy headset and I/O ports for peripherals.

Clinicians beam into the device remotely via their computers or mobile phones through the Teladoc Health software and are able to connect directly into the clinics and locations.



Teladoc Health Lite top-of-the-line audio and video capabilities, coupled with immersion design allows WTI's medical healthcare volunteers to provide sustainable medical expertise to vulnerable communities all over the world.

“The quality of the [Teladoc Health Lite] computer interface, especially the audio/visual components, is first rate. The speed of transmission from such a distant location is stunning, not to mention the ease of manipulating the telemedicine patient access device, located at the Bangladesh clinic, from my office in Santa Barbara, CA. This is an extraordinarily cost-effective system to deliver state-of-the art healthcare.”

- Dr. Charles J.H. Stolar, Columbia University Medical Center

Volunteering Physicians

WTI works with physicians who generously donate their time and clinical expertise to provide quality healthcare services to underserved communities. These physicians offer a wide range of specialties such as neurology, cardiology, infectious disease, pediatrics, and psychiatry.

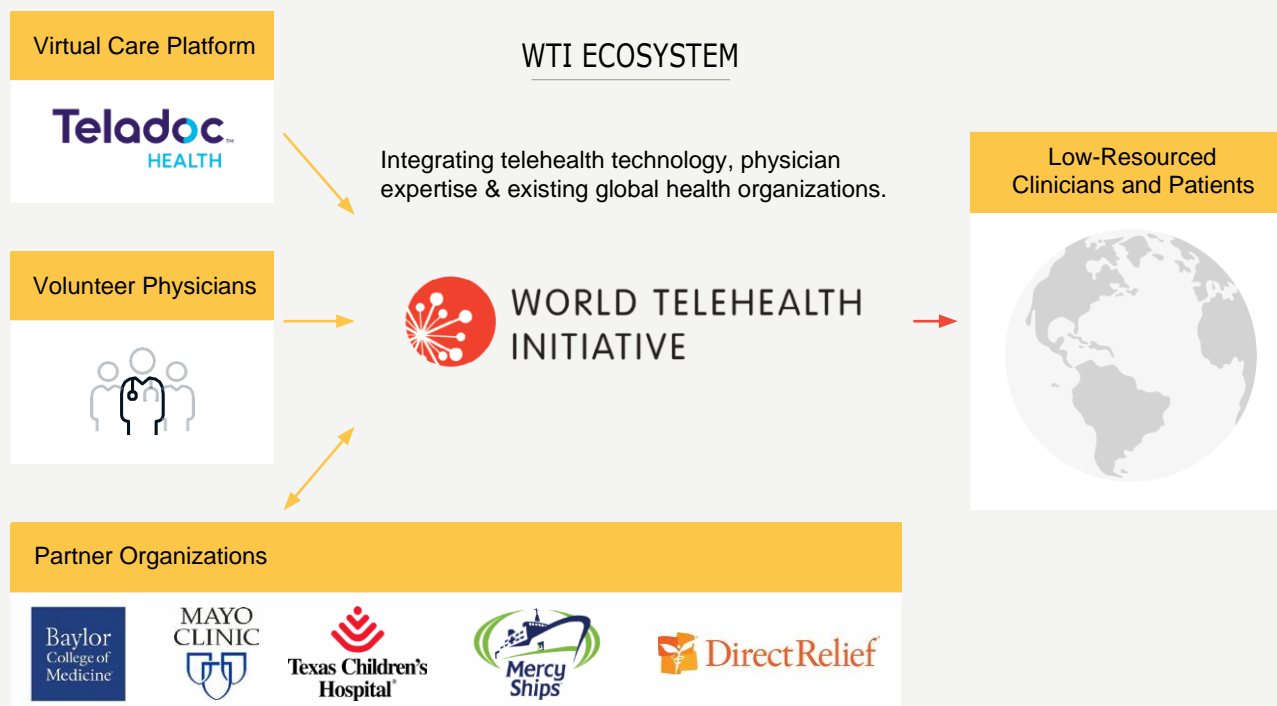
Access to a global telehealth system allows WTI doctors to volunteer their time more easily in hourly blocks right from their office or home, instead of costly and time-consuming international missions. This greatly increases the number of doctors who can contribute and, therefore, improves the delivery of sustained quality healthcare.



Dr. Marijke Westerduin beaming into Conakry, Guinea to help provide care.

Partner Organizations

WTI identifies global healthcare needs and provides logistical expertise to seamlessly work with partner organizations, governments, and NGOs to position the devices and volunteer physicians where needed.



“Telemedicine gives us a rare opportunity to truly make a lasting difference in the lives of others. By augmenting clinical capabilities through technology WTI is taking a necessary step to solving the healthcare delivery challenge. WTI can continue creating a cost-effective, scalable future for healthcare that ensures access does not have to be determined by where you were born.”

- Yulun Wang, Ph.D., head of research and development, Teladoc Health and co-founder and chairman, WTI

Use Cases

Already demonstrating a track record of success, WTI clinics have been deployed across four continents to treat a variety of medical complications.

Malawi

At the Freedom From Fistula Foundation in Lilongwe, Malawi, WTI is providing access to virtual care assistance to surgically repair obstetric fistulas in women. Obstetric fistulas occur due to prolonged, obstructed births, and women are left incontinent, creating a highly stigmatized and dangerous medical condition. In nations with convenient access to clinical assistance, fistulas are a rare occurrence as routine procedures, such as a Cesarean section, would erase these complications. Tragically, fistulas are still prevalent in underdeveloped regions, [affecting more than two million women](#) who lack access to appropriate medical expertise and services.

One of the hundreds of women treated in Malawi's clinic was Esperanza, a 19-year-old expectant mother who had to travel six-hours while in labor on the back of a bicycle to reach a clinic. After days of prolonged, obstructed labor, Esperanza suffered a stillbirth and incurred a fistula.

Women suffering from fistula complications often become socially ostracized. If it were not for WTI partnering with the local clinic to enable surgical consults via telemedicine, Esperanza's fate would have been similar. Fortunately, telehealth allowed Esperanza to recover and avoid becoming one of the millions of women who suffer for years, or even decades, from untreated fistulas.



Esperanza fully recovered from her fistula surgery.

Bangladesh

Outside the seaside city of Cox's Bazar, Bangladesh lies the Kutupalong Refugee Camp, home to nearly one million stateless Rohingya refugees. Victims of violent oppression, these refugees fled Myanmar and have settled in the largest refugee camp on earth, creating a humanitarian emergency. Within the camp and surrounding communities, this vulnerable population is at a high-risk of communicable and waterborne diseases; additionally, nearly 50,000 births are expected in the camps over the next year. The health sector is grossly underfunded and grappling to meet the needs of the affected population.

Inside the camp sits HOPE Field Hospital, the inpatient facility available to the Rohingya refugees. With the help of WTI and leading specialists from around the globe, HOPE Field Hospital, and its founder Dr. Iftiker Mahmood, is able to provide care in the areas of internal medicine, infectious disease, neurology, dermatology, mental health, and pulmonology to treat thousands of men, women, and children.



Dr. Trisha is a dedicated physician who is caring for her community of Cox's Bazar, Bangladesh. As the telehealth coordinator for our program at HOPE Hospital, Dr. Trisha hosts consultations with support from international specialists who share their expertise via telehealth.

“Telemedicine is magical. As a member of the physician community, I think we have a tremendous opportunity to take high quality care with telemedicine to some of the remotest parts of the world to offer equality of care.”

- HOPE Hospital's Founder and President, Dr. Iftiker Mahmood

Conclusion

WTI offers a unique, proven solution to address the healthcare crisis affecting millions of vulnerable patients across the globe. Powered by Teladoc Health's virtual care platform and volunteer physicians, WTI is able to assist local clinics and health workers to treat patients historically unable to access even rudimentary health services.

Additional benefits of this sustainable solution ensure generations of patients and providers can learn and grow from routine access to medical expertise, breaking the cycle deeply entrenched in a majority of these medical deserts.

To learn more about WTI's mission and how you can help, please visit our website, www.WorldTelehealthInitiative.org.

Additional Partnerships & Results

2017

- WTI established as a 501(c)3 by Dr. Yulun Wang, Executive Chairman, and Sharon Allen, Executive Director.
- Partnered with Freedom from Fistula Clinic for fistula surgery in Lilongwe, Malawi.
- Partnered with St. Luke Hospital in Port au Prince, Haiti to provide critical care in the ICU.

2018

- Partnered with HOPE Hospital to provide care and consultations in Cox's Bazar, Bangladesh.
- Partnered with Hospital Público Materno Infantil de Salta in Salta, Argentina to serve vulnerable women and children.
- Partnered with Centro Provincial de Salud Infantil in Santiago del Estero, Argentina to provide neonatology and pediatric care.

2019

- Partnered with American College of Surgeons to provide care and surgical mentoring in the OR and ICU at Hawassa University Hospital in Ethiopia.
- Partnered with Area 25 Maternal/Child Hospital in Lilongwe, Malawi to provide cesarean sections and extensive maternal care.
- Partnered with Sonja Kill Memorial Hospital in Kampot, Cambodia to provide OBGYN and wound care.
- Partnered with Hospital Castaner in Castaner, Puerto Rico to provide care in the areas of pulmonology, cardiology, ophthalmology, neurology and internal medicine.
- Partnered with CSF Arroyo in Arroyo, Puerto Rico to provide primary care, pediatric care and critical care.
- Partnered with CDT Jayuya in Jayuya, Puerto Rico to provide mental health to patients.
- Partnered with HOPE Field Hospital within the Rohingya Camp in Cox's Bazar, Bangladesh to provide care to migrants.
- Partnered with FTW - 108 Military Central Hospital in Ha Noi, Vietnam to support craniofacial surgery for children with birth defects.
- Partnered with Sadar Latif Khan Memorial Cancer Hospital to establish an oncology program in Rawalakot, Azad Kashmir.

2020

- Partnered with Mercy Ships and Gamal Dental School to bring dental and surgical expertise to the community of Conakry, Guinea.
- Partnered with Kamuzu Central Hospital in Lilongwe, Malawi to provide trauma surgery.
- Lined up respiratory and anesthesiology specialists for COVID-19 consultations in Haiti.
- Provided access to mental healthcare at sites in Puerto Rico in relation to distress due to hurricanes, earthquakes, and COVID-19.
- Helped partners establish COVID-19 isolation wards, get donated ventilators online, and train on acute respiratory distress.
- Preparing to support pediatric healthcare professions and those treating COVID-19 patients at the Jigme Dorji Wangchuk National Referral Hospital in Thimphu, Bhutan.



Cox's Bazar, Bangladesh



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World Telehealth Initiative (WTI) is a nonprofit organization that works to advance healthcare by providing telehealth technology, equipment, and services to impoverished communities throughout the world. By leveraging telehealth, WTI's network of philanthropic healthcare professionals provide world-class expertise and medical training to its partner clinics and hospitals in underserved areas of the world, resulting in higher quality of life and increased lifespans. WTI's management team and board of directors believe that telehealth has the potential to reform and transform global healthcare.

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