

The title text is set against a background of overlapping orange and red geometric shapes. The word "DIGITAL:" is in red, while "TRANSFORMING REFUGEE HEALTHCARE" is in black.

**DIGITAL:**  
**TRANSFORMING**  
**REFUGEE**  
**HEALTHCARE**



**NATASHA SUNDERJI | PRAT PANDA | ELIZABETH P. FERGUSON**



# MEET NOOR

Noor is a 45-year-old mother of three from Damascus who has been living with her children in the Za'atari refugee camp in Jordan since 2013. A teacher in a daycare center prior to the conflict, her family was uprooted from their home and had to use all their savings to escape the violence.

**“I had a beautiful, quiet life. My job gave me independence, and we had security and stability. After the war started I saw a lot of horrible things; rockets and bombs; that’s when the fear and anxiety began.”**

After a year in the camp, Noor was diagnosed with depression, the most common clinical condition affecting refugees. She was prescribed antidepressants and attends therapy sessions. But these drugs and counseling sessions are not widely available to refugees. The nature of refugee camps makes it difficult to meet patient needs for continuity of care and access to basic health services. <sup>1</sup>

# HEALTHCARE HANGS IN THE BALANCE

There is an unprecedented number of displaced people in the world today. The resulting mass population movement, resettlement in temporary locations, and overcrowding in refugee settlements has created a global healthcare challenge.

Governments and humanitarian agencies are often unable to provide adequate support to communities overwhelmed by the influx of new populations. This can mean increased incidence of communicable diseases and otherwise preventable ailments. Refugee communities also face increased prevalence of non-communicable diseases—including psychosocial disorders, reproductive health issues, newborn mortality, substance abuse, nutrition disorders, and exposure to violence.<sup>2</sup>

Regardless of their healthcare needs, refugees like Noor rely on services and supplies provided by governments and NGOs. Yet national policies, language differences and cultural barriers often leave refugees feeling excluded from host country health services and suspicious of the few health resources that are available to them.<sup>3</sup>

**65.6** There are **65.6 million forcibly displaced people** in the world.

**10x** Refugees are **10 times more likely to have PTSD** than the general population.<sup>5</sup>

**46%** Between 2008 and 2012, **nearly half (46%) of all deaths in refugee camps were the result of respiratory tract infections or malaria**, both preventable diseases.<sup>6</sup>

# DIGITAL AND COMMUNITY HEALTH WORKERS

**Challenges like this with unprecedented scale require solutions that scale. By combining leading practices in community-based healthcare delivery, advances in digital connectivity, and novel mobile learning (mLearning) solutions, partners from across sectors can address refugees' unique healthcare challenges.**

In regions where healthcare access is limited, community health worker (CHW) programs are a sustainable and effective channel to provide both healthcare and employment and livelihood opportunities for often economically isolated populations. CHWs are chosen from local communities to provide basic health services and refer patients to more advanced points of care as needed.

These frontline health workers fill an important gap, extending healthcare provision and knowledge beyond traditional facilities. Their impact has been far reaching. For example, in Ghana, CHWs reduced the prevalence of malaria in children from 25 percent to three percent. And in India, food safety interventions from CHWs reduced diarrhea in children by about 53 percent.<sup>7</sup>

At the same time, global connectivity is driving innovative ways to address refugee healthcare needs through telemedicine and easier information access. The impact of increased connectivity in developing economies is profound. It has changed much more than how aid organizations operate. The proliferation of mobile phones—combined with greater 2G, 3G and Wi-Fi coverage—is changing how refugees interact with the world around them.

Refugees use smartphones to plan travel, coordinate aid, contact family and friends, combat boredom and even conduct video interviews for asylum applications. In 2016, UNHCR commissioned Accenture to study refugees' access to mobile and Internet connectivity and develop a strategy to bring connectivity to them. The study reveals that refugees see connectivity as critical to their very survival—and they will make big sacrifices for it. Consider that some refugees in Tanzania sold up to one-third of monthly food rations to buy mobile phone airtime and data.<sup>8</sup>

Connectivity coverage and device ownership pave the way for new technology applications that address refugees' needs, including health. There is increased adoption of mLearning, electronic learning delivered through portable devices. One example is Vodafone's Instant Network Schools, which have improved education opportunities for thousands of refugees in Kenya, Democratic Republic of Congo, South Sudan, and Tanzania by connecting them to a tablet-based "school in a box."<sup>9</sup>



**“While rural connectivity still lags behind urban areas, 93 percent of all refugees live in areas that are at least covered by a 2G network, and almost two-thirds (62 percent) of refugees live in locations covered by 3G networks.”<sup>10</sup>**

However, there are many more digital solutions that currently exist for development impact that are not currently being used in refugee settings. One example is Leap, Amref's mLearning platform, which uses digital tools in CHW trainings to improve knowledge acquisition, retention, and ultimately, health outcomes of the communities served (see next page).

Technological developments in artificial intelligence (AI) and machine learning can enable even smarter and more powerful decision making for such health interventions. mLearning solutions like Leap gather extensive data on community health indicators and learning outcomes. Machine learning algorithms can analyze this data to improve learning and workflows and track health trends across geography and time. In addition, an AI platform could assess data from platforms like Leap on CHW knowledge retention and recommend custom trainings or discern population-level trends to proactively address disease outbreaks.

# THE STORY OF LEAP

## Community health workers in Sub-Saharan Africa make an impact with mLearning tools

Leap is a leading mLearning application designed for basic mobile phones and ubiquitous in Sub-Saharan Africa. The combined world-class expertise and funding from a cross-sector partnership between Amref Health Africa, Accenture, M-Pesa Foundation, Safaricom and Mezzanine helped to make this project a reality.

Facilitated by Accenture Development Partnerships, nine learning topics were initially created in collaboration with experts and built on a multi-channel mobile platform. This was rolled out to 300 community health workers and 18 community health extension workers to test the application.

Following the success of this initial pilot, over 30 additional topics for community health workers were created and an application was developed that allows supervisors to track the learning progress of their community health workers. Through Leap, community health workers can access continued training through their mobile devices, peer learning through social engagement, strengthened supervision through direct access to supervisors, and updates and campaign messages to rapidly mobilize and respond to outbreaks.

Since piloting, Leap has **successfully trained over 3,000 CHWs** across Kenya, and **over 300,000 households have benefited** from the improved knowledge and services of their CHWs. In addition to reducing attrition among CHWs by up to 85 percent, anecdotal evidence suggests that Leap has achieved significant health outcomes, such as a **26 percent increase in antenatal clinic visits** and a **25 percent increase in immunization** coverage in some rural and nomadic sites.<sup>11</sup>

Amref Health Africa is in the process of scaling Leap across Kenya, and expanding to other countries in Sub-Saharan Africa. The unique public-private partnership between government, telecommunications companies and technology developers has enabled sustainable impact, and has measurably improved CHW engagement, knowledge retention and health outcomes.

A recently published study conducted by Amref, and approved by the Kenyan Ministry of Health, concluded that mLearning through Leap was equally as effective as face-to-face training of CHWs. It was also a more cost effective and efficient approach for refresher training and continuous engagement of CHWs, which is critical for knowledge retention.<sup>12</sup>



# A POWERFUL SOLUTION

## Refugee challenges

## mLearning and Community Health Worker benefits



**Trust or cultural barriers between refugees and the health system and/or providers**

Properly trained CHWs chosen from the community can develop rapport and establish credibility with refugee populations.



**Language barriers between refugees and healthcare providers**

Local CHWs can communicate effectively with refugees while mLearning can be conducted in refugees' native languages.



**No infrastructure for healthcare training, such as long distance to training centers**

Delivered with a basic phone and 2G connectivity, mLearning bypasses infrastructure constraints, widening access to training and strengthening and scaling the CHW network.



**Lack of employment opportunities and challenges providing income to refugees**

Training CHWs give refugees an opportunity to improve their livelihoods and earn additional income, where income generation is allowed, while lowering barriers to access for their community. Various INGOs have developed creative approaches that allow payment to CHWs in countries where income generation by refugees is restricted. Mobile payments can be integrated into mLearning applications.



**Limited scalable and real-time support and guidance for CHWs**

mLearning makes it possible and efficient to train more people quickly. CHWs can complete training on a more flexible schedule without traveling.

# STRENGTHENING PEOPLE AND COMMUNITIES

**Mobile-based training eliminates challenges to classroom education related to remote locations and poor physical infrastructure, while providing CHWs with real-time support. A recent study by the Kenya Ministry of Health and Amref Health Africa on the Leap platform concludes that mLearning effectively complements traditional CHW training and helps rapidly scale CHW networks.<sup>13</sup>**

mLearning can multiply the impact of community health programs by empowering refugees themselves as healthcare providers. Well-trained community healthcare workers are better prepared to navigate cultural sensitivities and trust barriers to increase quality of care. And training and employment opportunities can bring a sense of purpose to disenfranchised refugees, giving them an opportunity to improve their livelihoods and earn more income in some cases.

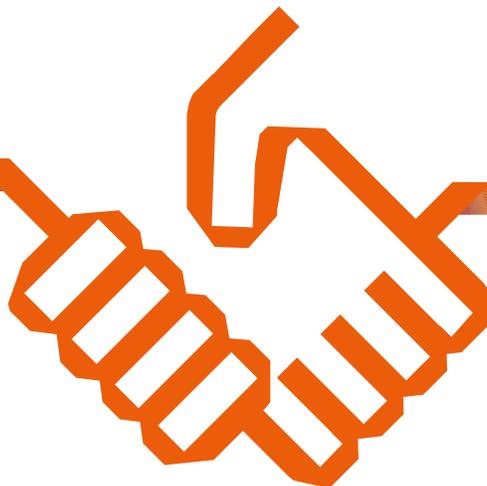
Program benefits go beyond refugee communities. A healthier and self-sufficient refugee population is a more stable addition to host countries. Moreover, improved infrastructure created for refugees can serve host communities too. According to UNHCR, while investments following a displacement event initially focus on serving refugees in affected regions, host communities benefit as well. For example, increasing connectivity for refugees can improve the economic and social constraints that host governments face via improved communications infrastructure and increased access to programs that improve affordability and deliver services and training.<sup>14</sup> This focus can be a catalyst to opening up a region to development investments that otherwise might not have reached it.<sup>15</sup>

# OUTCOMES START WITH PARTNERSHIPS

**Digital solutions like mLearning help CHWs deliver meaningful health outcomes to refugees. But success requires stakeholders from various sectors working together to address refugees' needs holistically. Building these bridges is at the heart of what we do at Accenture Development Partnerships.<sup>16</sup>**

NGOs, governments, the private sector—and refugee communities—each have a vital role to play. NGOs that train CHWs on the ground can incorporate mLearning to rapidly scale program effectiveness and scope. Governments can integrate CHWs by reevaluating accreditation and employment policies. Pharmaceutical companies can strengthen supply chains to provide vaccines and medications as demand increases. Telecommunications and other technology companies can enhance connectivity infrastructure to support mLearning platforms requiring mobile data (3G+ or Wi-Fi) and smartphones.

When CHW networks and mLearning tools come together, Noor and refugees like her can enjoy improved health in stronger communities while they determine the next step on their journey.



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