



Amref Health Africa

Leap data analytics project

Location: Kenya

Target group: Community health workers in Africa

Budget: in kind.



Primary outcome

Improving the effectiveness of community health worker training by leveraging the power of data harnessed through Amref's Leap mlearning platform.

Background

Only 48% or 615 million people in Africa receive the healthcare services they need. While health outcomes in Africa are slowly improving, they remain low: the continent has 17% of the world's population, but accounts for 23% of the global burden of disease.

Sub-Saharan Africa is also facing a chronic lack of well-trained front line health workers who can play a pivotal role by reducing the impact of diseases such as COVID-19. Social distancing measures further limit the ability to deliver and scale traditional face-to-face learning methods. For vulnerable and under served populations in low- and middle-income countries, Community health workers (CHWs) are often women and offer the first point of care.

Amref's mobile or mlearning solution Leap, aimed at equipping CHWs with essential skills, can address this challenge. Leap operates in 9 sub-Saharan countries including Kenya where it has been operational for over five years, training over 70,000 community health workers across the nation.

Description

As a major, African-driven health NGO, Amref is well-positioned to develop data analytics services. It operates between local communities and healthcare systems and develops proprietary tools (such as Leap) that facilitate data gathering and treatment.

In 2021, Elsevier has provided technical expertise and coaching through skills-based volunteering. The collaboration, led by Elsevier Foundation's Health Advisor Mev Samarasinghe, VP and Technical Fellow at Elsevier, assessed the feasibility of using Leap data to determine the retrospective and predictive analytics of learner behavior. A team of Elsevier and Amref data scientists reviewed detailed learner behavior captured from sample learners. For each learner, multiple spreadsheets were analyzed comprising quiz data, job aids, SMS communications, and more. By providing guidance on how to develop an efficient 'data first' mindset, the project represents a necessary step for Amref to be able to scale up Leap in different countries.

Goals

- Determine the efficacy of data collection systems to improve Leap programming and deployment
- Conduct a data audit of a comprehensive learner data set to understand the quality and availability of data, and whether it can be used to answer key questions (Q2-3 2021)
- Develop data visualization & analyst skills: (Q1-3 2022)

Milestones

- Elsevier's data science team contributed to:
 - Conduct a feasibility analysis of Leap mLearning data
 - For each of Amref's business objective, identify the data coverage and any gaps to meet the objective
 - Recommend concrete next steps in how to use data to draw the conclusions and meet the objectives
 - Conduct a technical training session for the Amref technology and product team
- Amref engaged a key county government within Kenya to leverage the insights from the dashboard in their decision making processes.

Challenges

- Engineering and deploying an efficient data model in a production environment that enables continuous data input and output represents a significant challenge.
- Accessing data has often proven challenging given restrictions from a third-party Amref vendor due to Personally Identifiable Information (PII) that needs to be handled with care.

Level of evidence

1. Quasi-experimental
2. Pre-post or cross-sectional
3. Point-in-time study
4. Performance metrics/stats
5. Anecdotal evidence

Additional partners

Verdonck, Klooster & Associates performed a parallel data analytics exploratory project on Leap data related to COVID-19 training for community health workers, further increasing Amref's understanding of the possibilities inherent in the data.

Future Plans:

This project is anchored on the Leap mlearning platform. Once Amref has refined its data analytics approach in Kenya, it will be expanded to the 8 other sub-Saharan countries which currently use Leap.

In 2022, the Elsevier Foundation and Amref teams will explore an additional collaboration with DataKind, an organization which helps non-profits to evolve their use of data to advance the UN SDGs. Ultimately, our goal is to help Amref to advance a more sustainable, data-driven approach to the healthcare and training they provide across Africa.

In addition to Leap, Amref also deploys other digital platforms including M-Jali, which is used to gather and leverage data at the household level. Currently, there are parallel data analytics projects underway with M-Jali. Amref hopes to integrate these different projects to create one integrated view of community health workers and their communities.

