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Fatou Fall, Regional Director of Digital Health, Francophone Africa Region, Digital Square, Dr Aboubacar Sadou, USAID Malaria Resident Advisor, Cheikh Tidiane Gueye, MSAS (MOH) Technical Advisor for Cooperation, Adama Carvalho, CSSDOS Representative. Photo: Digital Square

## Driving Senegal's digital health transformation

Digital Square supported the Ministère de la Santé et de l'Action Sociale (Ministry of Health and Social Action, or MSAS) to launch a health enterprise architecture (HEA) for community health for Senegal as it lays the foundation for the country's digital health transformation. CSSDOS (Cellule de la Carte sanitaire et sociale, de la Santé digitale et de l'Observatoire de la Santé), the MSAS division responsible for digital health programs, spearheaded the event.

HEA is crucial for health care systems, as it ensures interoperability, data integration, efficiency, and cost-effectiveness. It enables scalability, security, and privacy while promoting standardization and supporting innovation. Currently, Senegal's digital health landscape faces challenges due to fragmented interventions using various tools without adequately considering interoperability and security. Many applications cannot be integrated with other systems, leading to a disordered and insecure environment for health data.

Digital Square has been supporting the development of the HEA through training MSAS staff in design using The Open Group Architecture Framework (TOGAF®)

Additional training, like TOGAF Level 2 and ArchiMate® modelling, will allow a skilled architecture team comprising business, application, and security architects to ensure the effectiveness and sustainability of the approach. The architecture will include a vision for digital transformation, business analysis for each project, data architecture, digital application architecture, and infrastructure mapping.

The implementation will start with community health and later extend to the entire health system. The event provided an opportunity for Digital Square to showcase how enterprise architecture will enhance health program performance, reduce costs, and improve health equity.

According to Fatou Fall, Regional Director of Digital Health, Francophone Africa Region, Digital Square: "In Senegal, digital transformation started with community health. We want to extend it to the whole country. For this, we need strong leadership, commitment, and good governance. We will do our utmost to support the development of the enterprise architecture."

## About this project

The U.S. President's Malaria Initiative (PMI) launched its Digital Community Health Initiative (DCHI) with a vision to strengthen quality health delivery at the community level. Led by USAID and co-implemented with the U.S. Centers for Disease Control and Prevention (CDC), this initiative aims to invest in the scale-up of digitally enabled community health platforms. DCHI is implemented by PATH's Digital Square initiative and its subawardees, including John Snow International, Last Mile Health, and Population Services International. Learn more about Digital Square and the DCHI Initiative.

## Inside this issue

- Spotlight on Burkina Faso, Senegal and Tanzania.
- Personal and team event highlights.

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## Facilitating Zanzibar's insecticide-treated bed nets (ITNs) distribution system

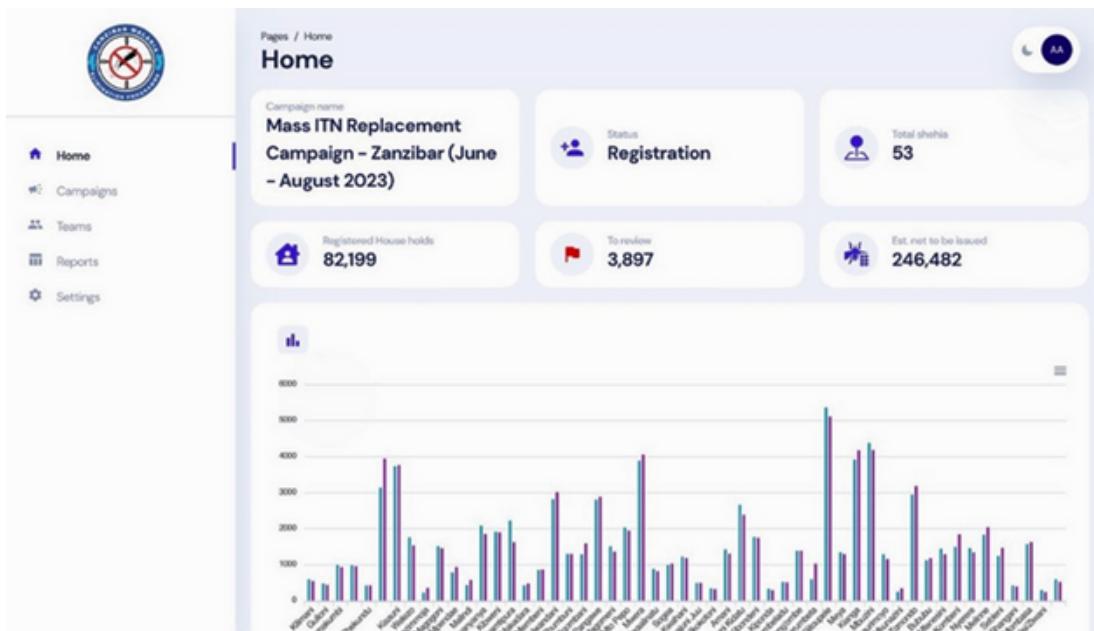
The Digital Square team, in collaboration with Zanzibar Malaria Elimination Programme (ZAMEP), Tanzania Vector Control Activity (TVCA), and Breakthrough Action (BA), supported deployment of a digital system for its mass ITN distribution campaign.

This year's registration and distribution process used an Android-based mobile digital system, unlike previous years, which used a paper-based process. ZAMEP also used a digital process in its mass ITN distribution campaign in the Mjini Magharibi region. The transition to digital technologies streamlined the process of household registration and the distribution of Insecticide-Treated Nets (ITNs), making ITNs more readily available, minimizing distribution delays, and ensuring that a larger number of people could reap the benefits of ITNs.



All households within the selected Shehia (a ward or collection of many villages) were successfully registered under the supervision of a Sheha (ward supervisor) and four registration assistants. Data were centrally saved in a live system/database for efficient management. Digital Square created WhatsApp groups to maintain communication among stakeholders during the campaigns.

- **82,199 households** were registered, representing all households within selected Shehias.
- **246,483 ITNs are expected to be issued** during the planned net distribution activity, pending approval by ZAMEP after the quantification process.



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## Strengthening the digital community health system in Burkina Faso

Digital Square supported the Ministry of Health (MOH) in Burkina Faso to hold a June 2023 workshop to develop the community health indicators dictionary that will feed into mHealth, a CommCare-based application for community health worker (CHW) management and care provision decision support.

Participants came from the MOH central directorates in charge of health information systems, data management, and monitoring and evaluation. Participants also included subnational level staff from the South Central and South West regions.

The community health indicators dictionary provides a standardized set of health indicators, definitions, and metrics that help ensure consistency and comparability across regions. Community health indicators dictionaries are designed to improve communication among stakeholders,



leading to more effective collaboration and problem-solving and improved decision-making.

The dictionaries standardize data collection and set targets so that data can be collected consistently according to the definitions. The table on page 4 shows a subset of indicators designed for mHealth users to strengthen community health systems by measuring inputs, processes, outputs, and outcomes.



"This workshop to identify the indicators of the community health digitization project, [in] which we are benefiting from the technical and financial support of PATH, is the starting point of a process aimed at strengthening the skills and capacities of players in data analysis and use. Ultimately, community health workers and actors at all levels of the system will have visualization elements that call for action, as well as the skills to interpret and use them to solve day-to-day problems."

Dr. Mahamadi Tassembedo, Director of Monitoring, Evaluation, and Capitalization at the Burkina Faso MOH, and the technical chairperson of the workshop

## Staff Highlights



Hassan Mtenga, Digital Square's Regional Director for Anglophone Africa, and Bindiya Patel, Digital Square's Former Managing Director, at the Sixth Women Deliver Conference in Kigali Rwanda

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## Strengthening the digital community health system in Burkina Faso

The workshop provided an opportunity for participants to reflect on how to effectively integrate the new cohort of 15,000 community health volunteers (CHVs) the government hired to cover the host sites for internally displaced persons (i.e., people living in Burkina Faso who have relocated because of security challenges) and also the peri-urban areas of the big cities like Ouagadougou and Bobo Dioulasso.

Digital Square, in collaboration with the Ministry of Health and Public Hygiene (MHSP), conducted a visit to Boromo Health District in July 2023 to provide support during the start-up phase of the mHealth pilot activities. This included teaching representatives from five Centres de Santé et du Promotion Sociale (Centers for Health and Social Advancement, or CSPS) and 58 CHWs to learn to work with

phones and installed applications (e.g., CommCareSMS, Headwind) and to support community health service delivery. Additionally, Digital Square and MHSP coached the head nurses and supervisors to resolve bugs and malfunctions related to the phones and applications. The project serviced 73 phones, which involved tasks such as reinstallations, reconfigurations of applications, and general device maintenance.

Insights and outcomes gleaned from this visit will be used to provide better, more precise mHealth software and technical support. This includes creating standardized procedure manuals that will benefit the entire community health system using the mHealth tools and applications.

Input Indicators	Process Indicators	Output Indicators	Outcome Indicators
<ul style="list-style-type: none"> <li>• <b>Indicator:</b> Proportion of community health workers (CHWs) with a smartphone with the up-to-date mHealth app</li> <li>• <b>Definition:</b> Number of CHWs equipped with a smartphone containing the up-to-date mHealth app relative to the number of CHWs</li> <li>• <b>Objective:</b> Measuring the coverage of CHWs using the up-to-date mHealth app to ensure that CHWs have access to the correct version of the digital data collection and reporting tools</li> <li>• <b>Mode of Expression:</b> Percentage (%)</li> <li>• <b>Numerator:</b> Number of CHWs equipped with a smartphone containing the up-to-date mHealth app</li> <li>• <b>Denominator:</b> Number of CHWs per Centre de Santé et du Promotion Sociale (Center for Health and Social Advancement, or CSPS)</li> </ul>	<ul style="list-style-type: none"> <li>• <b>Indicator:</b> Proportion of CHWs trained to use the mHealth app</li> <li>• <b>Definition:</b> Number of CHWs trained in the use of the mHealth app relative to the number of CHWs</li> <li>• <b>Objective:</b> Measuring the number of CHWs trained to use the mHealth app to assess the readiness and capacity of CHWs to use the app's features and functionalities in their daily work</li> <li>• <b>Mode of Expression:</b> Percentage (%)</li> <li>• <b>Numerator:</b> Number of CHWs trained to use the mHealth app</li> <li>• <b>Denominator:</b> Number of CHWs</li> </ul>	<ul style="list-style-type: none"> <li>• <b>Indicator:</b> Proportion of malaria cases referred in children under 5 years of age</li> <li>• <b>Definition:</b> Number of malaria cases in children under 5 years of age referred by CHWs relative to number of malaria cases treated plus number of malaria cases referred</li> <li>• <b>Objective:</b> Measuring the number of malaria cases in children under 5 years of age referred by CHWs to assess the effectiveness of the community health care system in identifying and responding to malaria cases</li> <li>• <b>Mode of Expression:</b> Percentage (%)</li> <li>• <b>Numerator:</b> Number of malaria cases in children under 5 years of age referred by CHWs</li> <li>• <b>Denominator:</b> Number of malaria cases treated plus number of malaria cases referred</li> </ul>	<ul style="list-style-type: none"> <li>• <b>Indicator:</b> Proportion of CHWs submitting monthly input management reports via the mHealth app</li> <li>• <b>Definition:</b> Number of CHWs submitting monthly input management reports via the mHealth app relative to the number of CHWs trained in using the app</li> <li>• <b>Objective:</b> Measuring the share of CHWs transmitting monthly input management reports via the mHealth app to assess how well CHWs are adhering to data collection guidelines</li> <li>• <b>Mode of Expression:</b> Percentage (%)</li> <li>• <b>Numerator:</b> Number of CHWs submitting monthly input management reports via the mHealth app</li> <li>• <b>Denominator:</b> Number of CHWs trained to use the mHealth app</li> </ul>

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## Staff Highlights



Nina Getachew, Digital Square's Project Administration Officer, visited the beautiful medieval town, Gruyere, Switzerland with her mother.

## For more information, contact:

- Gracey Vaughn, Global Project Lead, gvaughn@path.org
- Fatou Fall, Regional Director of Digital Health - Francophone Africa , ffall@path.org
- Hassan Mtenga, Digital Square Regional Director, Anglophone Africa, hmtenga@path.org
- Simret Habtezgi, Project Manager, shabtezgi@path.org
- Nina Getachew, Project Administration Officer, ngetachew@path.org