Africa Regional Workshop on Improving Routine Data for Child Health in National Health Information Systems

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**Digital Circuit Presentations
Brief Systems and Tools Descriptions**

Living Goods: Medic Mobile SmartHealth™ App

Living Goods partnered with Medic Mobile to develop an open source SmartHealth™ app that allows Community Health Workers (CHWs) to register and track pregnancies, diagnose and treat childhood illnesses on site, and follow up with customers. The platform integrates a performance management system that helps CHWs track their performance against targets, and enables supervisors to use real-time data to track CHW performance. The Living Goods SmartHealth™ app is proven:

For CHWs: Increase treatment accuracy and improve quality. Living Goods smartphones offer menu-guided iCCM assessment, dosage guidelines, automated treatment and pregnancy follow-up reminders, and household registration. It also flags danger signs and high-risk cases for referral.

For supervisors: Mobile dashboards improve performance and monitoring. Dashboards show field staff how CHWs are performing in real time, track instances of illnesses, and identify CHWs that need support.

For customers: Health education delivered by SMS. After CHWs register a treatment, their client receives free automated treatment adherence reminders. Pregnant women receive automated stage- and age-appropriate SMS messages to promote healthy pregnancy and safe delivery. This free SMS service improves health impact and helps CHPs build stronger customer relationships.

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World Vision: CommCare

Leveraging the CommCare solution, World Vision in collaboration with Dimagi created various applications based on standard Community Health Worker (CHW) programme models and approaches. WV's flagship application was created to facilitate case management for Ante-natal, Post-natal and Newborn Care, and was implemented in Afghanistan in 2008. Additional applications for Timed & Targeted Counseling - MNCH (ttC), Integrated Community Case Management (iCCM), Positive Deviance Hearth (PDH), Growth Monitoring & Promotion and Community Management of Acute Malnutrition (CMAM), were subsequently designed globally, then locally configured and have been implemented in numerous countries across

Africa, Asia and Latin America starting in 2013. This overall suite of solutions provides functionality to facilitate behavior change communication, data collection and reporting, registries and vital-events tracking, electronic health records, electronic decision support, and provider-to-provider communication.

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Malawi MOH: cStock

cStock is an automated digital information system that includes transmission of logistics information via mobile phone text messaging (short message service, SMS) to a computer application that: responds with information for product resupply, displays product information on a web-based dashboard, and produces reports that can be used to monitor Health Surveillance Assistants (CHWs) product availability and Supply Chain performance.

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Malaria Consortium: upSCALE

In Mozambique CHWs (locally referred to as APEs - Agentes Polivalentes Elementares) provide comprehensive health services at community level. In order to link APEs with the national health information system, Malaria Consortium worked in collaboration with Ministry of Health (MOH) and UNICEF to develop the upSCALE platform – a digital strategy to strengthen health systems and community health delivery. upSCALE integrates the entire APE curriculum into one platform: an interactive mobile phone application that covers all community health services, guiding them through patient registration, routine health checks, diagnosis, treatment, referral and follow-up. The upSCALE platform also has a tablet-based application for supervisors which enables them to improve APEs' performance and strengthen communication and feedback to APEs. upSCALE integrates APE level indicators into Mozambique's DHIS2 platform, enabling access to and visualisation of real-time community data, allowing for data-driven decision-making around investments for APE programmes, surveillance and responses to infectious diseases including malaria, and early detection of disease outbreaks. The upSCALE platform is currently being implemented in the provinces of Inhambane, Cabo Delgado and soon Zambezia, with government commitment to scale up to all provinces to create a national mHealth system led by the Ministry of Health.

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Ona: OpenSRp

OpenSRP is an open source Android application that allows frontline health workers to electronically register and track the healthcare services of all women and children in their communities, and to coordinate their work through information sharing. OpenSRP fits readily into existing national-level health information systems, including DHIS2, and replaces legacy paper systems used by health workers. With OpenSRP, health workers' data becomes accessible and actionable, leading to better performance, and giving national-level and local officials the information they need to improve health outcomes.

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Terre des Hommes: IeDA

Since 2013 Terre des Hommes partners with the Ministry of Health in Burkina Faso to implement the IeDA program (Integrated e-Diagnostic Approach) aimed at improving the quality of child care, providing visibility to managers and users on performance, and supporting quality improvement processes. Tablet devices with a job aid for the Integrated Management of Childhood Illnesses (IMCI) protocol are used in more than 398 facilities. To date, 2,651 healthcare workers have used the tool in 1,173,868 consultations to children under five, with a high adherence to using the tool. Interim results from the evaluation study show an improvement of healthcare workers' performance and high acceptability by healthcare workers and district managers.

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PSI: HNQIS

PSI has developed the Health Network Quality Improvement System which is used by Quality Assurance Officers (QAOs) as their daily management tool to assess, improve and monitor health workers' skills and knowledge on provision of health services including family planning, post abortion care, HIV, tuberculosis, hypertension, IMCI, and malaria. The app works offline and serves as a job aid and helps QAOs plan supervision routes by prioritizing visits to health workers with low quality scores and a high client volume to target resources where they have the greatest health impact. HNQIS is an Android open source app in sync with DHIS2 that helps managers to more effectively manage large networks of health workers. HNQIS has been adapted to monitor quality in diverse groups of health workers, such as drug sellers, social franchise workers, private clinicians, pharmacists, and mobile malaria workers, and it is currently used in 4,400 outlets in 12 countries.

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PSI: MCS app

Simple and user-centric, the Malaria Case Surveillance (MCS) app is built to replace paper-based reporting forms from health workers to report malaria cases. The MCS app is presented in the local language and its clear visuals and intuitive interface guides the health worker through an eight-step data collection process: test result, gender, age, malaria species, treatment administered, occupation, local vs imported transmission, previous history of travel and phone number. Data is transmitted in real time into DHIS2 to support project managers and public health officers use surveillance data for planning case surveillance activities. As an open source, "plug and play" tool, the MCS app is available to stakeholders in malaria burden reduction and elimination settings and is easily adaptable to other health contexts.

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