JSI and World Education:

Improving Services through Technology Innovation

Geographic Information Systems

eLearning / mLearning

Health Information Technology

mHealth

Mobile Data Collection

JSI AND WORLD EDUCATION are deeply committed to improving the health and education of individuals and communities worldwide—a commitment that leads staff to constantly explore new technologies to address longstanding public health challenges and to improve the quality of life through education.

With the rapid advance of mobile, web, mapping, and other technologies, there has been a corresponding increase in tools that can be adapted for use in even the most difficult environments. We leverage the best innovations, combined with our years of experience, to make a lasting and sustainable difference to the people we serve. Technology enables us to tackle the most difficult obstacles creatively, from identifying stockouts of crucial medicines as they occur to improving children's literacy through mobile learning, and from mapping disease outbreak at the village level to slowing the spread of HIV through education.

As the world changes, JSI and World Education will continue to use technology to make a difference in education and health systems and, ultimately, people's lives.

GIS contribute to rational planning of service expansion

Iriniga is a high-priority region in Tanzania for HIV-prevention activities, due to its 15% HIV prevalence rate (2007-08 Tanzania DHS). Though information was available on the array of prevention services offered in the region, there was no concrete data on the reach and coverage of these services. JSI and Futures Group generated maps by combining paper and markers with GPS devices, digital cameras, and Quantum GIS software to estimate coverage and identify gaps.

During key informant interviews at facilities, data collection teams presented interviewees with printed, reusable maps of the facility and surrounding area, on which they marked the reach of the facility using dot stickers. On-the-ground key informants sketched out program reach. Integrating these reach maps in Quantum GIS with modeled target population estimates and service statistics has generated actionable maps of HIV service coverage. The computer-generated maps were then shared with stakeholders using an online mapping service, leading to better planning.

- *Low-cost, high-efficiency initiative makes geospatial data collection and analysis viable in resource-limited environments*
- *Innovative combination of old and new technology*
- *Maps help rationally allocate resources for additional HIV-prevention services in the region*

PROJECT: MEASURE EVALUATION

COUNTRY: Tanzania

FUNDER: USAID

PARTNERS: Tanzania Ministry of Health and Social Welfare, Futures Group
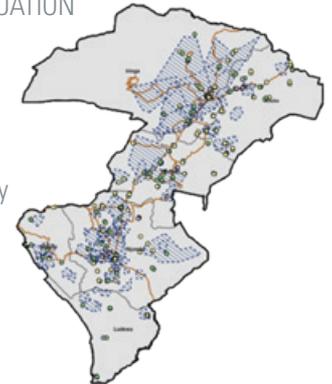
# GIS technology helps to estimate the potential local impact of federal policy decisions

The Office of Shortage Designation is updating the primary care shortage and underservice designations for communities across the U.S. These vitally important designations are at the foundation of the federal safety net, determining which communities are eligible to receive key federal resources to improve access to care. JSI is assisting in revising the methods for designation, and modeling the potential impact on communities and federal programs nationwide.

To permit evaluation of a range of incongruent service areas—many not conforming to census geography—JSI used a spatially based, census-block level, small-area estimation method to assign a wide range of demographic and community health status data to areas of interest. Population-weighted mean-center and drive-time proximity network analysis were also employed. National mapping results and interactive Web maps provide a picture of both the national and local impact of designation revisions.

PROJECT: Revision of the Federal Rules for HPSA/MUA/P Designation

COUNTRY: United States

FUNDER: Health Resources and Services Administration
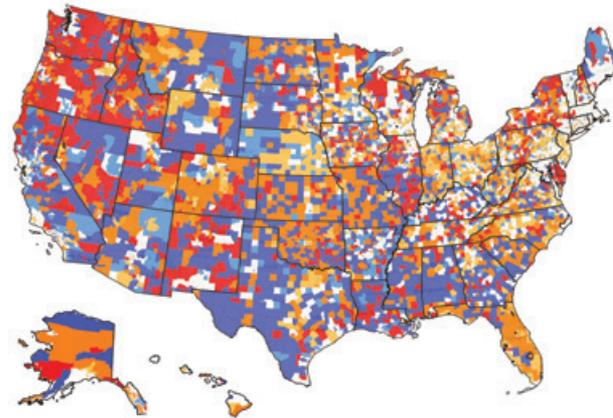
- *Spatial data allocation techniques permit testing of different service area configurations*

- *Co-location analyses identify programmatic connections between providers and federal programs*

- *Impact is quantified through spatial matching of various types of program resources to potential designation areas by category*

Geographic Information Systems

Community mobilization combined with mapping technology reduces childhood diarrhea in Laos

- *50% reduction in diarrhea cases since the project began*

- *All four villages are on track to become Model Healthy Villages—a government of Laos designation for rural villages that have met 25 criteria regarding health, sanitation, environment, clean water, and improved living conditions*

- *Monitoring process raises awareness of diarrhea causes and mobilizes Community-Led Total Sanitation activities*

Diarrheal diseases are the second-most common cause of child deaths worldwide. The Reducing Childhood Diarrhea (RCD) project in the four villages of Xieng Khouang province, in northern Laos, combines community mobilization, education, and simple technologies to reduce the impact of diarrhea on children's health. The project uses a behavioral change intervention proven to have impact in rural Lao communities—Community-Led Total Sanitation (CLTS)—with a low-cost approach to disease mapping.

World Education has trained eight community health technicians, half of whom are women, to identify diarrhea cases in the province and use low-cost mobile phones to send this information by SMS to a central database. Provincial and district health staff and World Education project staff monitor the information on a Dynamic Resource Map created by InSTEDD and provide an emergency response if necessary, thus reducing incidence of diarrhea.

PROJECT: Reducing Childhood Diarrhea

COUNTRY: Laos

FUNDER: World Education private donor

Mapping community health center service areas allows visualization of program needs

The Community Health Center program has become the backbone of the federal government's health care safety net for medically underserved communities and populations nationwide.

This success has brought challenges and opportunities for the agency running the program, as well as for communities and organizations that are current or potential future recipients of the available resources. Understanding the geographic scope of the program and its relationship to underlying community demographics and other safety net resources became an imperative.

JSI now builds an annually updated nationwide analysis of the program at the Census Zip Code Tabulation Area level. The program is capable of quantifying and visualizing concepts such as program penetration, grantee overlap and dominance, annual growth/contraction, core organizational service areas, distance to other provider resources, and unmet need.

JSI's analysis is now shared publicly via an interactive online mapping tool (*www.udsmapper.org*) and has become a key resource for evaluation, planning, and resource allocation.

PROJECT: Uniform Data System Management and Analysis - Community Health Center Service Area Mapping

COUNTRY: United States

FUNDER: Bureau of Primary Health Care

PARTNER: Robert Graham Center

- *Current and potential health centers can identify unmet need*

- *Program staff can assess program reach and review requests for resources based on direct community-level data*

- *Collaboration is improved and conflict avoided by identifying areas of shared service delivery*

GPS data leads to timely delivery of health supplies

- *Digital road network doubled*

- *Estimated travel speed now available for all roads, up from only 5% of roads*

- *Road network can be used to optimize routes to reduce transportation costs*

- *Exact location of all 200 health centers confirmed with GPS coordinates plus new road maps*

A lack of information on secondary roads, road conditions, travel speeds, and the exact location of health centers in Ebonyi, Nigeria, made commodity delivery time estimates unreliable. To address this, JSI collected global positioning device (GPS) data from devices already installed in the rented delivery trucks, and overlaid the data onto existing maps. In addition, the travel speed recorded on the GPS was used to calculate the average travel speed along the roads.

Where the travel speed could not be determined by GPS, JSI estimated travel speeds based on similar roads in the nearby area. This method doubled the digital road network in the region, and provided an estimated travel speed for all roads. We are now in the process of optimizing routes. The project will make the digital road network maps available to government agencies and other NGOs.

PROJECT: USAID | DELIVER PROJECT

COUNTRY: Nigeria

FUNDER: USAID

PARTNER: Ebonyi State Ministry of Health

Online lessons in logistics make training cost-effective across continents

Building local capacity in supply chain logistics is a crucial element in strengthening in-country supply chains and ensuring commodity availability for clients.

JSI developed a set of eight dynamic online learning modules, accessible to users either over the internet or on an interactive CD, to improve access to logistics training for public health supply chain professionals around the world.

The e-learning sessions enable supply chain professionals who lack the time and/or funding to attend intensive face-to-face trainings and learn about a variety of supply chain logistics topics, and work through the sessions at their own pace.

The goal of this course is to increase the learners' understanding of the fundamentals of logistics management and to strengthen their ability

to implement improvements to basic elements of their own logistics systems.

Lessons in Logistics Management for Health Commodities is accessible free of charge via the JSI eLearning Website at *elearning.jsi.com*. LINGOs (a consortium of nonprofits that share learning resources with other members) also makes the course available for member organizations on the LINGOs Learning Management System at *lingos.org/ngos/courses.php*.

PROJECT: USAID | DELIVER PROJECT

COUNTRY: Promoted in all project countries

FUNDER: USAID

PARTNER: LINGOs

- *Cost-effective and time-efficient professional training*

- *Dynamic modules allow learning at one's own pace*

eLearning/mLearning
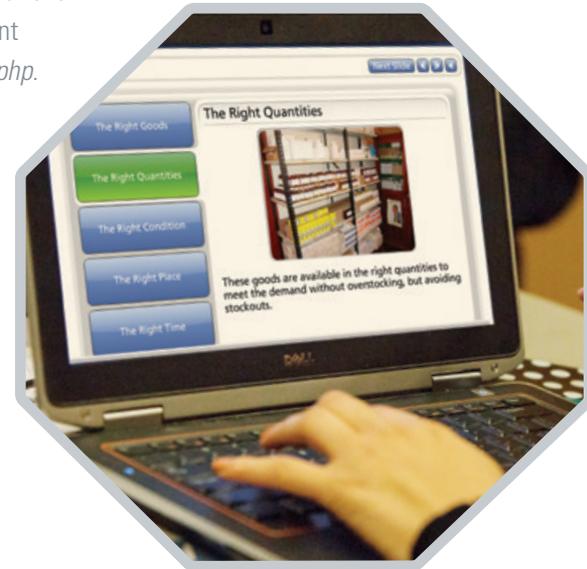
Human-mediated digital learning impacts nutrition and hygiene

- *Reached an estimated 2,000 farmers, including 300 pregnant women and mothers of children under the age of two*

- *Recorded 1,397 adoptions of high-impact behaviors*

Social and behavior change communication is an integral element in the delivery of JSI's interventions to prevent undernutrition during the critical first 1,000 days of life.

JSI, in keeping with its commitment to innovation, has adapted a "human-mediated digital learning approach" pioneered by Digital Green for the promotion of improved agricultural practices. Using low-cost, community-produced videos and battery-operated pico projectors, the approach allows local farmers to record and share new ideas and successful experiences with other farmers in their community.

Under a strategic collaboration, JSI has leveraged this mobile technology model and supported the production of videos designed by a local NGO to promote high-impact nutrition and hygiene practices. These videos, disseminated by trained community agents using a participatory "reflective" process, feature community members speaking in their own language about their individual experiences. Topics include handwashing with soap, nutrition during adolescence and pregnancy, managing exclusive breastfeeding when working, and the importance of dietary diversity.

PROJECT: Strengthening Partnerships, Results, and Innovations in Nutrition Globally (SPRING)

COUNTRY: India

FUNDER: USAID

PARTNERS: Digital Green; Voluntary Association for Rural Reconstruction and Appropriate Technology (VARRAT); and SPRING's partners: International Food Policy Research Institute, Save the Children, The Manoff Group, Helen Keller International

Online institutes build capacity in HIV prevention

In the era of high-impact HIV prevention, organizations must use prevention funding for strategies that are likely to avert the most infections at the lowest cost. The traditional training model, which requires participants to travel, miss work, and use increasingly limited agency resources, is outdated.

JSI created an online institute to build HIV-prevention capacity, drawing on new capabilities in online education as well as insights from proven approaches in higher education.

The institutes comprise three one-week modules. Each module focuses on a specific topic, and is designed to require about four hours of work. Throughout the week, students participate in Webinars (either live or archived), read relevant articles, watch videos, and engage in online discussions with the facilitators and their institute colleagues.

PROJECT: CBA@JSI

COUNTRY: United States

FUNDER: U.S. Centers for Disease Control and Prevention

- *Allows training to be done on one's own schedule, within established weekly deadlines*

- *Retains what is best in traditional model: engagement with instructors, faculty, students*

- *Captures advantages of eLearning: convenience and cost effectiveness*

eLearning/mLearning

mLearning application teaches literacy through interactive media activities

In response to disappointing national literacy scores among grade-school children, Cambodia's Ministry of Education, Youth, and Sport recently shifted to a phonics-based reading curriculum for children in grades one through three.

In support of the new reading curriculum, World Education has developed the Total Reading Approach for Children mLearning Application.

The app teaches Khmer language reading skills through interactive media activities linked to skills required by the national curriculum. Literacy games and stories use sound, phoneme, consonant, vowel, and word recognition via mobile devices.

Eight primary schools in Kampong Cham and Siem Reap provinces have received tablets and smartphones with the mLearning application, which measures student diagnostics against the national curriculum. Literacy coaches tailor students' practice to meet individual learning needs, and parents can check out materials for continued practice at home.

- *Uniquely supports students in reaching national reading benchmarks*
- *Widespread use of mobile phones makes this open source app deployable, inexpensive, and scalable*
- *Accessible learning increases opportunities for parent-child learning interactions*

PROJECT: Total Reading Approach for Children

COUNTRY: Cambodia

FUNDER: All Children Reading Grand Challenge for Development, a joint initiative of USAID, World Vision, and AusAID

PARTNERS: Education Technology for Development; Kampuchean Action for Primary Education; Cambodia's Ministry of Education, Youth, and Sport
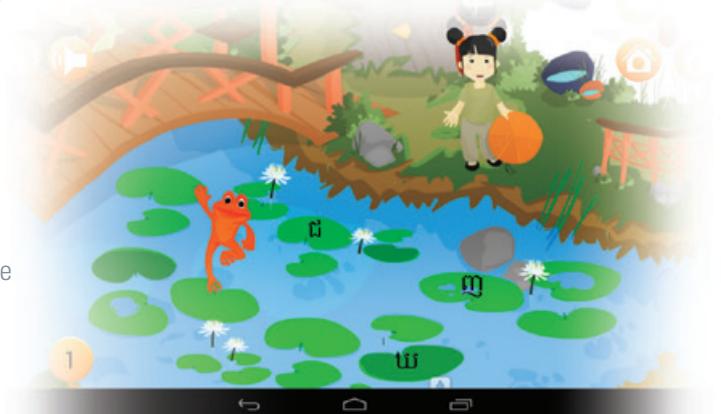
Apps developed through mobile learning platform accelerate learning

Classrooms can be more engaging and learning enhanced when teachers have real-time information on students' progress. World Education is tapping the full range of mobile technology to develop apps that allow students to study outside the classroom and then submit their progress to teachers. Teachers are able to monitor students' progress on outside work, adjust course planning to do more review where necessary, and move forward more quickly when possible.

The recently developed Words2Learn vocabulary app allows teachers to take advantage of the flipped classroom approach, so that they can use class time for additional support and opportunities to extend and apply what students have previously learned from the app. The flexible technology holds potential to make mobile learning feasible and affordable internationally.

PROJECT: World Education Mobile Learning Project

COUNTRY: United States

FUNDER: Nellie Mae Education Foundation

- *Platform simplifies app creation*
- *Apps are accessible via iOS and Android mobile devices, other phone browsers, and the Web*
- *Apps can be downloaded and accessed without an internet connection*
- *Detailed reports of student progress help teachers plan for class*

eLearning/mLearning

Streamlining data collection for family planning services

Family planning service providers in the U.S. collect and report extensive data to qualify for federal and state reimbursements. Reporting accurate data—client demographics, medical services, and much more—is a public health need, but a daunting prospect for the mostly small, nonprofit agencies involved.

JSI introduced a health information technology system for data collection and reporting that seamlessly collects health-planning data as patient records are created.

A key element is a central registry into which the data flows, providing analysis and reporting functions. One component of the software translates client data into a standard format and enables the family planning agencies to transfer it securely to a centralized office. Another component stores the data and provides data analysis and reporting tools. A third component enables secure messaging to support communications among collaborating health care providers.

PROJECT: Region I Title X Family Planning Data System

COUNTRY: United States

FUNDER: Department of Health and Human Services/Office of Population Affairs

- *Enhances the accuracy, timeliness and efficiency of data collection and reporting*
- *Broadly adaptable to other public health program areas*
- *Highly flexible—supports evolving public health data analysis and reporting needs*

Automation ensures accuracy, security, and efficiency for physician referrals

Until recently, a doctor referring a patient to QuitWorks—a model Massachusetts health systems change program that provides tobacco treatment—had to do so by completing and faxing a form. The doctor had to confirm that QuitWorks received the fax. A return fax was sent once either the patient outreach or tobacco treatment services were provided.

The eReferrals technology developed by JSI, also called Health-e-link, is a Web-based eReferral system adopted by several of the health care organizations using QuitWorks. The system enables a doctor to refer a patient with the click of a button in the provider electronic medical record (EMR) system. After services are provided, feedback reports are entered directly to the patient's EMR. At the heart of the Health-e-link system is a secure network for sharing patient information between systems.

PROJECT: Smokers Helpline and QuitWorks Programs

COUNTRY: United States

FUNDER: Massachusetts, Rhode Island, and New Hampshire departments of health

- *Physician referrals are less cumbersome and more reliable*

- *Broadly adaptable to other public health program areas*

- *Highly flexible—supports evolving public health data analysis and reporting needs*

Health Information Technology

Delivery Team Topping Up system ensures timely and efficient delivery of health commodities

- *Facilities do not need to place orders*

- *National-level consumption and stock-on-hand data are immediately available*

- *Only need to train team leaders (65 people), not the facility staff (1,300 people)*

A key step in ensuring the availability of public health supplies is the assembly and maintenance of reliable supply chains with effective in-country distribution systems. The Delivery Team Topping Up (DTTU) system is an innovative distribution paradigm in which investments are made to ensure that reliable vehicles, drivers, technical staff members—or a combination of these—will directly provide or "top up" facilities with the needed health products.

In Zimbabwe, DTTU teams leave the warehouse with the products to deliver to facilities, as well as a laptop to enter facility data. At the facility, the team and staff physically count commodities and ask staff about stockouts and other challenges, then enter the data into the AutoDRV software. The software calculates the quantity required, and the team delivers that amount on the spot. Data from the laptops is then used to generate reports on supply chain indicators, ensuring accurate and timely information.

DTTU has been so successful that the USAID | DELIVER PROJECT is piloting the same concept in Nigeria's Ebonyi and Bauchi states. Through the DTTU model (called Direct Delivery and Information Capture), the project currently delivers 24 public health commodities to 365 selected service-delivery points in the states and is scheduled to be scaled up in 2014.

PROJECTS: USAID | DELIVER PROJECT, Supply Chain Management System

COUNTRIES: Zimbabwe, Nigeria

FUNDER: USAID

PARTNERS: Zimbabwe National Family Council, Crown Agency of Zimbabwe, Ebonyi State Ministry of Health, Bauchi State Ministry of Health, General and Health Logistics International, Limited

Web-based logistics management information systems ensure delivery of family planning and other health supplies

- *Facilitates access to accurate and timely data for decision making*

- *Relieves the burden of paper-based systems for collecting, aggregating, and analyzing logistics data*

- *Improves visibility into stock status of commodities at health facilities*

  - *Reduces lead-time for resupply of commodities*

JSI is working with ministries of health, medical stores, and other stakeholders to improve the collection, management, and use of logistics data for health commodities by enhancing paper-based logistics management information systems (LMIS) with technology.

In Bangladesh, Nepal, and Pakistan, Web-based LMIS have been implemented at the district level and above to manage the supply chains for family planning commodities. Tanzania and Zambia are partnering to build a common Web-based technology platform for the entire public health supply chain across both countries. This electronic LMIS (eLMIS) is configurable to each country's needs, including integration with existing systems in use in each country.

Automating the LMIS informs policy makers, implementation planners, population and health managers, and researchers with forecasting, accurate quantification, procurement planning, budgeting, and responding to stockouts.

PROJECT: USAID | DELIVER PROJECT

COUNTRIES: Bangladesh, Nepal, Pakistan, Tanzania, Zambia

FUNDERS: USAID, The Bill & Melinda Gates Foundation, Rockefeller Foundation, PATH, UN Commission on Life-Saving Commodities for Women and Children via UNICEF

PARTNERS: VillageReach, PATH, ThoughtWorks Inc., ministries of health of each country

Health Information Technology

Text message system provides real-time supply chain data from health facilities

- *SMS for instant reporting of supply chain logistics data by health facilities*

- *Dashboard interface allows decision making based on real-time data*

- *National scale-up is underway in Tanzania, and is planned in Ghana*

A public health supply chain requires accurate, real-time data to ensure that health facilities have a regular supply of the health commodities they need to successfully treat patients.

JSI is building systems that enable health facility personnel to use their personal cell phones to send logistics data via text message to a toll-free short code. These data are then transmitted to a Website that analyzes and displays key information for timely decision making.

In Tanzania, the ILSGateway provides key decision makers with access to detailed logistics information on the reporting rates, inventory, supervision, and delivery timeliness of essential health commodities in the Integrated Logistics System (ILS) from more than 3,972 users at public health facilities.

In Ghana, the Early Warning System allows health workers at more than 230 health facilities across 10 regions of the country to routinely submit messages to alert decision makers of potential stockouts of family planning, malaria, and anti-retroviral therapy medicines in the public health supply chain.

PROJECTS: Ghana Focus Region Health Project, USAID | DELIVER PROJECT, Supply Chain Management System

COUNTRIES: Ghana, Tanzania

FUNDER: USAID

PARTNERS: Dimagi, Tanzania Ministry of Health and Social Welfare, Ghana Ministry of Health

Improving supply chains at the community level with text messages

Community health workers (CHWs) need a consistent supply of medicines to treat sick children. cStock is an SMS-based reporting and resupply system for CHWs that allows for monitoring and managing essential medicines and commodities used at the community level.

In Malawi, CHWs manage up to 19 essential medicines for child health, family planning, and HIV testing. They report their logistics indicators for these products via formatted text message to cStock. cStock gathers the data, calculates resupply quantities, and sends SMS messages to health centers to facilitate rapid and accurate resupply. The health center notifies the CHW via cStock when the order is ready. CHWs only travel to the health center to pick up their medications when they know their order is ready.

cStock is being used by more than 2,300 CHWs in Malawi and is being scaled up country-wide by the Ministry of Health with support from WHO, SSDI, Innovations Working Group, and Save the Children.

PROJECTS: Supply Chains for Community Case Management (SC4CCM)

COUNTRY: Malawi

FUNDER: The Bill & Melinda Gates Foundation

PARTNERS: Ministry of Health of Malawi, Dimagi, WHO, Save the Children
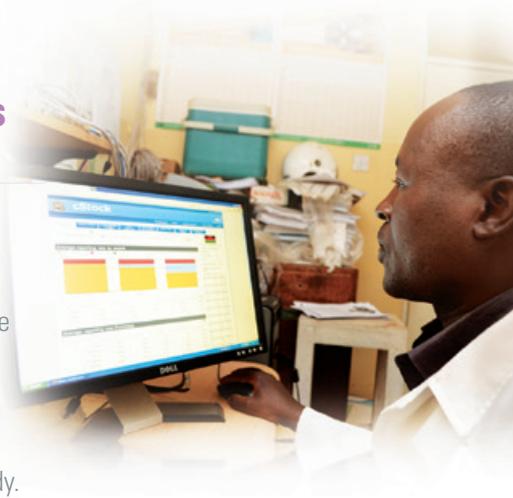
- *System allows CHWs to report on 19 essential medicines*

- *cStock both collects data and facilitates resupply at the CHW level*

mHealth

Helping more people quit smoking with texting

In New Hampshire, about 17 percent of adults smoke. While the state's smoking cessation program had an email tip service and online forum to help people to quit, they needed to reach more people without a significant increase in costs. JSI developed a text messaging (SMS) system to expand the options and reach more people.

A smoker who wants to quit texts a short message, and the information is transferred to a live text Web-based interface. The smoker receives a text message response stating that a quit coach will call within one business day. Clients are then offered helpline services including free telephone counseling and can sign up to receive daily text messages through the Customized Quit Tips program.

The messages are organized into nine platforms based on the client's stage of change (thinking about quitting, want to set a quit date, already quit) and type of tobacco use (cigarettes, chew/snus/dip, or combination user).

- *Messages are evidence-based*

- *Services are customized to the target population*

- *Programming allows effective collection and evaluation of demographic data in real time*

PROJECT: New Hampshire Tobacco Helpline

COUNTRY: United States

FUNDER: New Hampshire Department of Health and Human Services, New Hampshire Tobacco Prevention and Control Program

PARTNER: Sumotext

Extending agricultural services to remote farmers through CocoaLink

and livelihoods. Messages have also included information on child labor and public health, such as malaria prevention. The project is also piloting a mobile phone-based monitoring system to track, analyze, and share improvements and results across communities.

■ *More than 40,000 farmers reached*

■ *Over 730,000 SMS messages delivered*

Farmers in remote locations often cannot access farmer extension services provided by the local government. In response, World Education developed CocoaLink, which uses mobile technology to communicate practical, timely, and important agricultural and social information to cocoa farmers by text message.

CocoaLink delivers farmer extension services to cocoa farmers through a cost-effective mechanism that enables the cocoa farmers to request and obtain timely farming, social, health, and marketing information to improve their incomes

PROJECT: CocoaLink

COUNTRIES: Ghana, Côte d'Ivoire

FUNDERS: The Hershey Company and World Cocoa Foundation

PARTNER: Ghana Cocoa Board (COCOBOD)

mHealth

Getting past stigma to ensure at-risk populations receive HIV-prevention messages

- *Nearly 1,700 people living with HIV reached with a prevention package*

- *225 support group members in 15 support groups reached*

- *More than 3,000 people are receiving text messages*

In Ghana, stigmatization of at-risk populations, such as female commercial sex workers (FSWs) or men who have sex with men (MSM), prevents people from accessing and receiving support for HIV prevention. In response, World Education employed a bulk text messaging campaign to communicate confidential HIV prevention and treatment messages to subscribers. Text messages also provide treatment information and best practices for physical and psychosocial health.

SMS subscribers can also join local people living with HIV support groups, where members can discuss text message content and healthy living practices. The groups provide additional context and explanation of text messages, which is especially valuable for illiterate subscribers. All EMPower II support groups receive coaching from World Education.

They provide safe settings for MSM and FSWs to discuss issues and barriers to care that are specific to their demographics, in addition to support for income-generation activities.

PROJECT: Empowering and Mobilizing People Living with HIV II (EMPower II)

COUNTRY: Ghana

FUNDER: USAID

Every Dose, Every Day application helps people living with HIV stay on daily regimen

Adherence to anti-retroviral therapy (ART) is critical to the success of HIV treatment. From the time of diagnosis, people living with HIV must adhere to their HIV medication regimen to achieve viral suppression. Despite advances in ART, more than 800,000 of the estimated 1.2 million people living in the United States with HIV do not have a suppressed viral load. Thus, an important challenge is to support adherence among people who are prescribed ART.

The CDC worked with JSI to create a mobile app designed for both Android and iOS to help provide this support in a way that is both meaningful and easy to use. Every Dose, Every Day allows users to know when they have taken or missed a medication dose, add a photo to the home screen as a reminder of their reasons to stay healthy, receive tips and inspirational messages, and add a support buddy.

**PROJECT:** Prevention with Positives

COUNTRY: United States

FUNDER: U.S. Centers for Disease Control and Prevention

- *Set custom reminders*

- *Track lab values and monitor adherence*

- *Track appointments and refills*

mHealth

Mobile Data Collection
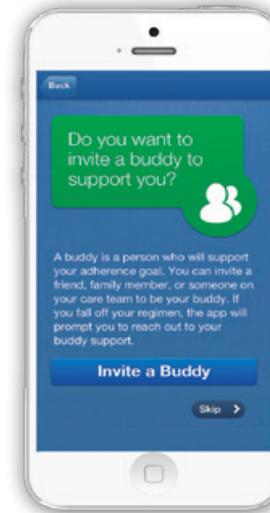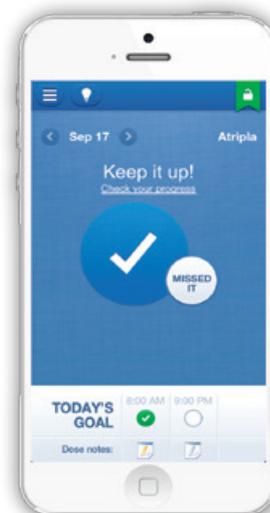
Complex household survey data collection on mobile phones improves efficiency and rigor

- *Build surveys with the ease of Microsoft Excel*
- *Simple wizards enable creation of efficient surveys with complex skip patterns*
- *User-friendly app requires minimal training*

Population-level baseline assessments are a necessary first step in the process of structuring a successful health intervention and measuring its impact. JSI recently conducted a baseline assessment in Sierra Leone to measure utilization of maternal, newborn, and child health services. The baseline assessment was conducted among 850 households across nine chiefdoms in Bo District.

To deploy household surveys with up to 400 items, the team used mobile devices equipped with the SurveyCTO application to collect data. SurveyCTO is a survey platform based on the Open Data Kit (ODK) open-source system.

It proved to be a fast yet simple solution to collecting high-quality data with minimal reliance on internet availability, particularly in Bo District, where internet is scarce. The program also enabled the use of complex skip patterns, which made it easier and more efficient for data collectors to administer surveys.

PROJECT: Essential Newborn Care Corps, under the *Innovations for Maternal, Newborn and Child Health Initiative*

COUNTRY: Sierra Leone

FUNDER: The Bill & Melinda Gates Foundation

PARTNERS: Concern Worldwide U.S., Nestbuilders, Inc., Health Poverty Action

Registering beneficiaries via mobile phone cuts wait times for food aid

Since 2010, the Liberian Agricultural Upgrading Nutrition and Child Health (LAUNCH) program has been distributing monthly supplemental food rations to pregnant and lactating women, as well as children under age two in two Liberian counties. Initial program challenges included the slow registration of beneficiaries into the LAUNCH Beneficiary Database, which in turn delayed distribution of food rations to new families.

JSI supported transition to a mobile-based registration process that uses Magpi, an open-source mobile application, on Nokia E63 and E6 phones. This new system links with a Commodity Information Management System, also designed and managed by JSI, to carefully track over 9,000 beneficiaries and 140 metric tons of food rations each month. The mobile-based system greatly improved overall program management. In the first five months of implementation, the average wait time for new beneficiaries receiving rations decreased from 14 to 5 weeks. A year and half later, these shorter wait times have been sustained.

PROJECT: Liberian Agricultural Upgrading, Nutrition and Child Health (LAUNCH)

COUNTRY: Liberia

FUNDER: USAID

PARTNER: ACDI/VOCA (prime), Project Concern International, Making Cents International

- *Fast data transfer has led to faster data processing, and faster delivery of rations to new beneficiaries*

- *One-time data entry and logic patterns within the mobile app led to improved data quality for the project as a whole*

- *The costs to achieve a high increase in speed and accuracy are low*

Mobile Data Collection

Mobile health facility surveys reduce time between data collection and response

- *Enables real-time data monitoring*

- *Reduces the time between collection and analysis*

- *Eliminates transcription errors from data entry*

Because many countries lack reliable and timely reporting mechanisms from the point of care, it is often difficult for decision makers and program managers to know what is going on at the health facility and village level in terms of patient load, disease burden, medicine availability, and diagnostic practices.

The recent spread of inexpensive and open-source software, the rapid advance of sophisticated mobile devices, improved telecommunications infrastructure, and falling prices, have led to great advancements in mHealth initiatives.

JSI has led the adoption of mobile technology for health facility surveys in more than a dozen countries in Africa and Asia, training ministries of health on its use, and making mobile technology a routine part of the PMI End-Use Verification Activity, the Logistics Indicator Assessment Tool, and other health facility surveys.

The use of mobile technology to conduct health facility surveys empowers decision makers such as program managers, civil society advocates, and donor representatives with robust, independent information collected and analyzed rapidly to better represent what is currently happening at the point of care. This information informs policy and program management, leading to better health outcomes.

PROJECT:	USAID | DELIVER PROJECT
COUNTRIES:	More than a dozen countries in Africa and Asia
FUNDER:	USAID