can safely do so. In addition, a version of the program with more traditional EHR capabilities is under development. We aim to make the program available to any groups interested in using this system.

Detection of malaria parasitemia for hotspot identification: employment of loop-mediated isothermal amplification (LAMP) in remote clinics in Kenya

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Background: Identification of asymptomatic populations that may be reservoirs for malaria transmission is key to ensuring eradication. The lack of ability of current diagnostic tools to screen for asymptomatic malaria infection at a field level has made identification of these hotspots of transmission difficult. Molecular methods necessary to detect the low-density parasitemia in asymptomatic malaria, such as polymerase chain reaction (PCR), require considerable training to perform and remain too complex for use in field. Loop-mediated isothermal amplification (LAMP) has proven a cost-effective technique for identifying asymptomatic malaria in resource-limited field settings.
Structure/Method/Design: Student scientists from UC Berkeley and faculty from UC San Francisco Malaria Elimination Initiative informed research scientists at Maceno University about the use of LAMP to detect malaria parasitemia in asymptomatic cases. Early results indicate progress in the use of LAMP for the creation of a hotspot identification map, which will be completed by January 2015. The UC Berkeley-UC San Francisco-Maceno University collaboration continues to build capacity of local research scientists to perform the experimental phase of a hotspot identification campaign and, by default, gain understanding on the evolution of the Plasmodium parasite, change in its species, and hotspot characterization.
Results (Scientific Abstract)/Collaborative Partners (Programmatic Abstract): University of Califonia, San Francisco Global Health Group & Malaria Elimination Initiative

    Maceno University Kenya

    Dr. Eva Harris, UC Berkeley
Summary/Conclusion: Berkeley students have trained interested clinicians in LAMP diagnostics. They have compared successful diagnoses obtained using former RDT methods alongside LAMP tests to determine differences in detection capabilities that have been conveyed to clinicians and researchers. This has been instrumental in identifying asymptomatic populations and building an efficient drug distribution model for targeted ACT treatment.

    Data has been collected regarding trends of infection, efficacy of LAMP testing, and potential areas for improvement at every step in our initiative. ACT treatment of individuals who test positive for malaria via LAMP tests will begin as soon as possible, and as will the analysis of whether this corresponds with a drop in infection rates. A local team is carrying out experiments year round to test for variations in P. falciparum populations or emergence of drug-resistant strains, which will provide important information about fluctuations in parasite populations and emergence of drug-resistant strains that can be used to tailor anti-malarial strategies.

Anti-Jiggers pilot intervention program and rural health systems strengthening in Western Province, Kenya

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Background: Students for International Development (SID) conducted four global health development projects in summer 2012 in rural Western Kenya: infrastructure development at two rural health care dispensaries, one public health camp, and an anti-Jiggers four-phase prevention/treatment campaign in partnership with the Kenyan Ministry of Health. Jiggers is a neglected tropical disease endemic to Western Province that can debilitate the use of one's limbs. Neglected tropical diseases such as Jiggers have largely been ignored by the Millennium Development Goals development agenda and have led to highly inaccessible funding mechanisms to address these issues.
Structure/Method/Design: Initial needs assessment meetings were conducted with two rural health dispensaries in Western Province, Kenya, namely Nadanya and Likindu dispensary. Staff, board members, community members, and Ministry of Health officials were consulted, which helped to develop a greater understanding of local health priorities. This informed the rural health systems strengthening projects that were developed, which included infrastructure development and health promotion programming.
Results (Scientific Abstract)/Collaborative Partners (Programmatic Abstract): Infrastructure renovations included repairs and upgrades to water catchment systems, sewer systems, maternity wards, and diagnostic labs at Likindu and Nadanya dispensaries. In the Nadanya sublocation, a public health camp was organized, which served over 660 residents within the surrounding Nadanya locality. Patients had access to consultations with doctors and nurses, vaccinations, medications, and referrals. The camp also included workshops facilitated by community health workers (CHWs) about local health concerns such as maternal health facilities, pit latrines, and infectious diseases. The anti-Jiggers intervention treatment and prevention program began with identifying critical patients to treat using a toolkit to assess severity of Jiggers. Over 35 patients were invited to an anti-Jiggers camp where they were treated with potassium permangante, the current best practice for treating this disease. Afterward, CHWs conducted educational sessions on the myths and realities of Jiggers and all homes of patients were fumigated to remove Jiggers parasites.
Summary/Conclusion: Overall, the projects were successful because they were sustainable and community driven due to extensive consultation with local stakeholders and CHWs. Project limitations include lack of funding for medication shortages and lack of qualified personnel.

    Future priorities include monitoring and evaluation, scale up, and research into best practices to further improve the efficacy and integration of the anti-Jiggers intervention with local health units. Improving the evidence base enables public health practitioners to advocate for more funding for the development of treatment and prevention interventions for Jiggers and other neglected diseases.

Rapid Internet-based review of point-of-care ultrasound studies at a remote hospital in Uganda

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Background: Rural hospitals in low-income countries have limited diagnostic imaging resources. Clinician-performed bedside ultrasound (US) is portable, low-cost, and easily deployed in such settings. Since 2009, Global Emergency Care Collaborative has trained midlevel Emergency Care Practitioners (ECPs) at Nyakibale Hospital in rural Uganda to incorporate bedside ultrasound into their practice as a core skill. During the first year of training, ECPs undergo 80 hours of symptom-based lectures, including 7 hours of US didactics. Daily oversight and continued US training for ECPs is difficult due to the lack of regular physician presence.