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Conclusion: This review indicates that there are few publications that reflect specifically on the role of mHealth and teleoncology in cancer prevention, and even fewer that describe or evaluate interventions. Although articles suggest that mHealth and teleoncology can enhance the implementation and utilization of cancer prevention interventions, more evidence is needed.

Abstract #: *1.017_TEC*

Stanford-India Biodesign: Outcomes from an eight year collaboration with the government of India to promote medical technology innovation in India

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Background: Begun in 2007, the Stanford-India Biodesign (SIB) program represents a first-of-its-kind collaboration between Stanford University, the All India Institute of Medical Sciences (AIIMS), and the Indian Institute of Technology (IIT) Delhi. Supported by the Department of Biotechnology (DBT), Government of India, the program is now in its eighth year. The goals of this ambitous program are threefold: train the next generation of medical technology innovators in India; commercialize novel medical technologies for India's medically underserved; and help catalyze the Indian medical technology industry. The primary offering of the program is a 1-year fellowship in which Indian nationals are trained in our Biodesign process of need-driven innovation at Stanford and then return to AIIMS in New Delhi to identify clincal needs and create India-specific solutions and business models.

Results: This international collaboration has resulted in the training of 32 fellows. Rights to eight separate technologies have been licensed to third parties including to seven startup companies that have been founded by SIB fellows. One product, a leg immobilization device for road traffic accidents is now commercially available in India. A second product has received FDA clearance and is being jointly commercialized in both India and the US. Inspired by the success of the SIB program, several other Biodesign programs located across India have been created and funded by DBT, with more planned. The program has coordinated eight nationwide medical technology summits in India, aimed at developing the medical technology ecosystem in India. Finally, methodologies created and disseminated by the Stanford-India Biodesign program are now being used by global health agencies and both Indian and multinational companies to create products and services for India's underserved population.

Conclusion: Now in its eighth year, Stanford-India Biodesign represents a novel international collaboration to advance medical technology innovation in India. The success of the program may serve as a model for the development of sustainable healthcare innovations in India and other developing nations.

Abstract #: *1.018_TEC*

Increasing access to quality health care using health technology to 'cut-out' urban communities in Nigeria

John Ede[1]; Presidents Malaria Initiative[2],The Nigerian Demographic and Health Survey (DHS) 2013 report[3],Food and Agricultural Organisation of the UN Nigeria profile[4],Nigeria Communications Commission November 2015[5],The Leadership Newspaper[6],[1]Ohaha Family Foundation, [2]http://www.pmi.gov/docs/default-source/default-document-library/malaria-operational-plans/fy-15/fy-2015-nigeria-malaria-operational-plan.pdf?sfvrsn=6, [3]https://dhsprogram.com/pubs/pdf/FR293/FR293.pdf, [4]http://www.fao.org/countryprofiles/ index.asp, [5]http://ncc.gov.ng/index.php?option=com_content&view=article&id=125&Itemid=73, [6]http://leadership.ng/features/488139/nigerians-benefit-ohaha-hospital-project-soon

Program/Project Purpose: Quality health is a fundamental right of all citizens. While primary health care (PHC) centres are relatively uniformly distributed throughout local government areas (LGAs) in Nigeria, the rural people tend to underuse the basic health services, while those in urban communities crowd the already stretched health facilities that are either understaffed, or underfunded. Unfortunately, there is a huge gap in the implementation of medical breakthroughs due primarily to distance to health centers and rugged topography to access quality healthcare centers. With a population of about 178 million and reporting more deaths due to malaria than any country in the world, Nigeria became the seventeenth PMI country in 2010. Malaria accounts for 60% of outpatient visits and 30% of hospitalizations among children under-five in Nigeria. The main goal of this article is to take a critical look at how to build local/traditional capacities to reach the 'cut-out' populations and communities, "marginalized" in the health coverage.

Structure/Method/Design: The Nigerian Demographic and Health Survey (DHS) 2013 reported an infant mortality of 69 per 1,000 live births and an under-five mortality of 128 per 1,000 live births in the preceding five-year period. Our primary focus is on Northern Nigeria with covering places like Madala - Niger State, Abuja-FCT, Kujipi - Nasarawa State, and Ancha - Kaduna State. Other communities focused on are communities in the troubled North East Nigeria, but with this region, data figure changes rapidly and thus we may not get accurate data. Interviews were conducted, test results were analysed to determine access and use health facilities and ease of use and the quality of services provided in the visited medical facilities.

Outcome & Evaluation: The goal of primary health care (PHC) was to provide accessible health for all by the year 2000 and beyond. Unfortunately, this is yet to be achieved where about two-thirds of Nigerians reside in rural according to the FAO report, therefore slowing the pace of health coverage to all. From the focus groups and communities under review, it was discovered that most people in 'cut-out' communities rarely have access to quality health services and the other population matrix who reside in urban settlements complain of high cost of accessing quality healthcare services at the underserved health facilities thus leaning towards traditional medicine, or unprofessional, unqualified medical services.

Going Forward: According to Nigeria Communications Commission, there are over 152 Million active phone lines and this mobile communication technology a great tool to disseminate text messages providing health and wellness tips, provide information on availability of medical supplies and professional services at the various locations in order to ensure full implementation and use of medical services. To further push for quality access to healthcare for all, I lead the team that initiated the construction of high-tech hospital in Ancha, Kaduna State, Nigeria.

Funding: None yet. But through the generous donations of individuals, and material supports from some government agencies, we have been able to expand health coverage to 4 states in Nigeria.

Abstract #: *1.019_TEC*

Bottom-up design of information and communications technology in an era of transdisciplinary global health & disruptive social innovation

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Background/Methods: Information and communications technology (ICT) is making significant impacts on global health worldwide. The introduction of new and emerging technologies in low-resources settings has increased the availability of health information in impoverished communities to improve population health. An innovative transdisciplinary initiative at the Center for Global Public Health at UC Berkeley aims to unite faculty and students across the campus together with their international partners, to explore not just what new ICT tools can be developed, but how they can be developed and implemented in transdisciplinary, sustainable, relevant, and impactful ways to promote global public health.

Results: The initiative explores innovative ICT tools as well as "Media from Below" created in and between diverse silos at UC Berkeley together with community partners in the arenas of public health, human rights, public policy, behavioral economics, advanced media studies, anthropology, and information technology. We discuss examples of innovative platforms that are successfully engaging populations to actively improve health. For example, HIV researchers in Tanzania are using human-centered design concepts to create novel approaches to improve treatment compliance. Syrian physicians, with support from their colleagues at the Human Rights Center and other institutions, are using mobile devices to collect and disseminate real-time data on attacks against hospitals and health clinics. In Nicaragua, tools such as "Dengue Chat" motivate communities to participate in mosquito control by integrating mobile technology, entomological data collection, education, and game concepts. In Brazil, local community stakeholders are using dynamic media approaches to engage and encourage urban slum populations to overcome obstacles to healthcare access.

Findings: ICTs should ensure that social innovations are imbued with core values that promote equity, sustainability, and human rights. Our new initiative supports ICTs that are evidence-based; transdisciplinary in nature; necessitate high levels of community engagement and participation; are built from the bottom-up and thus promote bi-directional knowledge generation; encompass local values, involvement, leadership and implementation; and incorporate human-centered design, communications, and advanced media concepts.

Abstract #: *1.020_TEC*

HIV treatment initiation and retention strategies for rural populations: Follow-up care at the far end of the road

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Program/Project Purpose: In rural Malawi access to health care facilities is limited. For many who are HIV+, frequent visits to a fixed health center for HIV testing, CD4 counts to determine ART eligibility, and treatment maintenance and adherence is unmanageable. GAIA mobile clinics have helped fill the testing gap, but follow-up for initiation on treatment and adherence support remain challenging. In 2014 GAIA initiated a follow-up program for individuals who are known or suspected to be HIV+. Nurses travel by motorbike to provide education and support as clients move through the treatment cascade.

Structure/Method/Design: Seven follow-up nurses (one per clinic) were engaged to serve approximately 250 villages. Nurses are trained in ART and HTC. During mornings, they provide health education at the mobile clinics and village gatherings and during afternoons each makes patient follow-up visits, conducting 54 client visits on average per month. Clients are recruited primarily through the mobile clinics but also through village health committees or community health workers. Adherence counseling, health information, and referral are provided by coordinators, and clients are followed until stable on ART.

Outcome & Evaluation: Outcomes for 211 clients to date: 74% discharged with health improving, 8% died, 7% opted out of care and 12% were lost to follow-up. Of the 87% of clients eligible for treatment according to WHO treatment guidelines for resource-limited settings, 97% were on ART and 91% were adhering to treatment when discharged. 85% of all HIV clients were on ART regardless of eligibility compared with a national estimate of 49% on ART.

Going Forward: The program's success can be attributed to the commitment of the follow-up coordinators going to the end of the road to reach those in need of HIV care. Challenges remain as nutritional intake in rural villages is often insufficient for ARVs to be optimally effective. We plan to incorporate a nutrition component into the program by linking those in need to food supplementation programs. Support groups and medication adherence clubs could also improve long term adherence after clients are discharged from the intensive follow-up care.

Funding: The mobile clinics and follow-up nurse coordinator program are funded by The Elizabeth Taylor AIDS Foundation.

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