

## WHO ARE WE?

The Sustainable Sciences Institute (SSI) is an international non-profit dedicated to supporting scientific capacity building around priority health problems in limited resource settings. Our primary office is based in San Francisco, California, USA with regional Centers of Excellence in Managua, Nicaragua and Cairo, Egypt.

## WHAT IS OUR MISSION?

The Sustainable Sciences Institute (SSI) is an international non-profit dedicated to supporting scientific capacity building around priority health problems in limited resource settings. Our primary office is based in San Francisco, California, USA with regional Centers of Excellence in Managua, Nicaragua and Cairo, Egypt.

Our work is based on the premise that global health depends on local health care workers and local public health scientists that are able to recognize and resolve priority disease issues in their own communities without being overly dependent on foreign aid or research capacity.

## WHAT DO WE DO AND HOW?

At SSI we work with partners and collaborators around the world to help facilitate access to knowledge where it's needed most to combat priority diseases and global health issues. We work with local researchers and health care professionals, offering both short- and long-term mentoring assistance to help them advance in their respective fields.

To this end, we actively work to help local beneficiaries gain access to training, funding, information, equipment and materials so they can better address local priority health challenges in *their* communities. We focus on methodologies and technologies that are accessible and applicable to local context issues. We facilitate information exchange and collaborations to strengthen "South-South" networks and research partnerships.

## WHAT ARE ICTs FOR PUBLIC HEALTH?

Since 2004 SSI has been working with various information and communication technology (ICT) tools to support clinical and epidemiological data management needs for the Pediatric Dengue Vaccine Initiative cohort study, in collaboration with the Nicaraguan Ministry of Health (MoH). We currently partner with MoH researchers in the Office of Information Systems, the Epidemiology and Surveillance Office and the Virology Laboratory of the National Diagnostics and Reference Laboratory Center (CNDR) in Nicaragua. In Nicaragua we also work directly with health care providers in the public pediatric hospital, "Manuel de Jesús Rivera," and the public-sector health center "Sócrates Flores Vivas" in Managua (serving ~60,000 people in an urban district).

In 2008 we organized our ICT research into 3 main areas to apply our experience in eHealth across a range of other projects in a more sustainable way. We have a "**Solutions Laboratory**" with our partners in the MINSa Nicaragua at various primary care and research sites. We always focus on **strengthening and building collaborations** between specialists to develop links between the computer science and health research sectors. At the base of our program is always a focus on **training and local capacity building** to support key stakeholders in the health informatics field in the Latin America region.



## OUR TEAM

SSI has personnel based in our Nicaragua office with experience in the design, development and implementation of information systems and informatics tools for public health. We have **a team of Developers / Programmers** with experience in a range of technologies as well as in the testing and implementation of multiple tools and systems at various scales. Our Director of Informatics (since 2005) is **William Avilés**, who has worked as an informatics specialist at the Nicaraguan Ministry of Health (2000-2005). William has directed the design and implementation of all ICT components currently used in the various research studies and clinical data management projects that SSI is involved with. William has a B.S. degree in Electrical Engineering from the Universidad Nacional de Ingeniería (UNI) in Nicaragua and additional emphasis in computer telecommunications, computer networks, and clinical and epidemiological data management. William helped to coordinate the creation of SSI's ICT for Health program in Nicaragua in early 2008 and has been involved in evaluating SSI's eHealth and mHealth implementations, and has facilitated several research methods workshops on the topic.

## PROJECTS

The terms “eHealth” and “mHealth” broadly refer to electronic technologies (mobile in some cases) that can provide support to the health informatics sector. Since 2007 we have worked to adapt, test and implement multiple ICT tools in 20+ projects to improve more timely and efficient access and use of health information for a range of key stakeholders and primary end users:

- 2015 University of California, Berkeley, School of Public Health – **“Tools to Facilitate the Implementation of ICTs in the Health Sector in Latin America”**
- 2013 – 2015 Bill & Melinda Gates Foundation / Instituto Carlos Slim para la Salud – **“DENGUE-FIRST: A Low-Cost ICT Tool Kit for Improved Dengue Surveillance, Laboratory Management and Clinical Decision Support In Nicaragua”**  
CIES / Red Cross / World Bank – Project Advisory Group **“ChatSalud: Improving Access for Youth (through mobile phones) for Key Information About Sexual and Reproductive Health in Nicaragua”**
- 2004 – 2015 National Institutes of Health (NIH) / Centers for Disease Control (CDC) / University of California, Berkeley / others – **Supporting multiple longitudinal studies (clinical, epidemiological and laboratory-based) about dengue, influenza and Chikungunya in Nicaragua**
- 2014– 2015 PAHO Washington, DC / WHO, Geneva – Technical Advisory Group Members **“Improving the Quality of Immunization Information”**
- 2013 – 2015 ReCAINSA – **Organizing Committee for the Central American Health Informatics Network (Red Centroamericana de Informática en Salud)**
- 2012 – 2013 Oxfam Canada / ORMUSA – **“Development of an Information System to Support Research in El Salvador on Domestic Violence, Sexual Abuse and Gender Equality Issues”**  
PSI/PASMO – **“Information Tools for Research on Gestational Diabetes in Managua, Nicaragua”**
- 2011 – 2012 CONASA / Coop. Luxembourg – **“Development of a National Blood Services Information System, MoH Nicaragua”**
- 2010 – 2012 USAID/ 4th Sector Health – ABT Associates / Catholic Relief Services, Nicaragua / MINSA Nicaragua - **“Identifying and Evaluating ICT Tools With High Impact Potential for Improving Maternal and Child Health in Nicaragua and the LAC Region”**  
Norwegian Research Council mVAC Consortium – **“mVAC: Mobile Innovations in Recording Child Vaccination and Health Data in Immunization Registers”**
- 2011 UNICEF / MINSA Nicaragua – **“Development and Evaluation of an HIV results reporting module for the National Diagnostic Reference Laboratory, MoH Nicaragua”**  
OPS-Nicaragua / MINSA Nicaragua – **“Tuberculosis results reporting module for the National Diagnostic Reference Laboratory, MoH Nicaragua”**
- 2010 IDRC / OpenMRS / OpenROSA – **“2010 Informática Médica Código Abierto (IMeCA) Community regional meeting and workshops - Granada, Nicaragua”**  
OPS – Guatemala / PATH - **“Project OPTIMIZE: Technical Advisory Support for MoH Guatemala for Nominal Vaccine Registry Design and Implementation”**  
IDRC / eHealth Systems, Chile – **“Latin American eHealth Landscape Analysis: eHealth situational analysis”**
- 2009 CEGA / UC Berkeley / INSP México – **“Center for Evaluation for Global Action Train-the-Trainer Workshop: Impact Evaluation in Public Health (Nicaragua)”**  
IDRC / CDC / OpenMRS / OpenROSA – **“2009 Informática Médica Código Abierto (IMeCA) Community regional meeting and workshops - Lima, Perú”**
- 2008 CFHF – **“Expanded Program on Immunization National Information System (Nicaragua)”**
- 2007 El Hefni Training Foundation – **“Healthy Pregnancy Patient Tracking and Follow-Up Information System (Nicaragua)”**