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SM2015 – COSTA RICA
Study Protocol

11 January 2013

Table of Contents

This protocol on the SM2015-Costa Rica surveys was produced in agreement with the Inter-American Development Bank (IDB). All analyses and report writing will be performed by the Institute for Health Metrics and Evaluation (IHME) at the University of Washington.

About IHME

IHME monitors global health conditions and health systems and evaluates interventions, initiatives, and reforms. Our vision is that better health information will lead to more knowledgeable decision-making and higher achievements in health. To that end, we strive to build the needed base of objective evidence about what does and does not improve health conditions and health systems performance. IHME provides high-quality and timely information on health, enabling policymakers, researchers, donors, practitioners, local decision-makers, and others to better allocate limited resources to achieve optimal results.

CHAPTER 1: INTRODUCTION

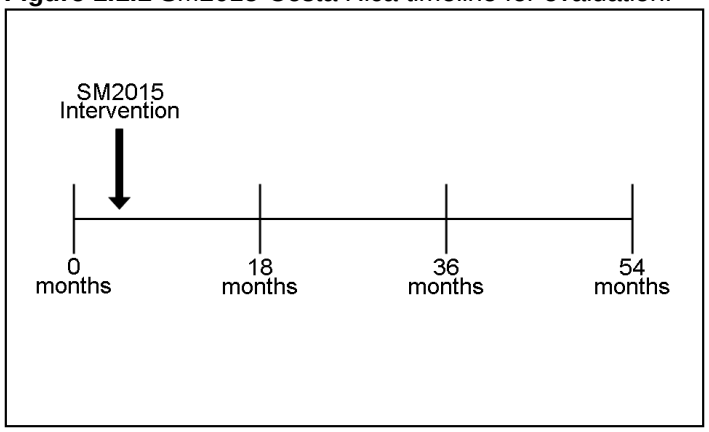
Salud Mesoamérica 2015 (SM2015) is a regional public-private partnership that brings together Mesoamerican countries, private foundations and bilateral and multilateral donors with the purpose of reducing health inequalities affecting the poorest 20 percent of the population in the region. Funding will focus on supply and demand-side interventions, including changes in policy, evidence-based interventions, the expansion of proven and cost-effective healthcare packages, and the delivery of incentives for effective health services. One of its defining features is the application of a results-based financing model (RBF) that relies on serious performance measurement and enhanced transparency in reporting accountability and global impact assessment.

The initiative will focus its resources on integrating key interventions aimed at reducing health inequalities resulting from the lack of access to reproductive, maternal and neonatal health (including immunization and nutrition) for the poorest quintile of the population. A key element of SM2015 is the evaluation. In general, the evaluation will track the progress of the countries to reach a set of goals of the intervention, and will also estimate the impact of specific components of the intervention. The Inter-American Development Bank has contracted IHME to conduct this evaluation. In Costa Rica, the University of Costa Rica will be in charge of data collection.

1.1 Data Collection

In order to monitor efficacy of interventions and the status of indicators, data collection efforts are utilized. The overall data collection method employed in the initiative involves an in-school Youth Knowledge, Attitudes and Practices (KAP) survey. This survey is designed to capture most accurately prevalence estimates of select key indicators. Indicator goals are established as a cooperative effort between IDB and the Costa Rica Ministry of Health following the collection of baseline information. Periodic waves of data collection will allow for continued monitoring of indicators among the population. These evaluations will occur at 18, 36, and 54 months following baseline surveys (Figure 1.1.1).

Figure 1.1.1 SM2015-Costa Rica timeline for evaluation.



The principal objective of the SM2015-Costa Rica KAP Survey is to collect data on numerous reproductive health, tobacco and alcohol use, health education, and health care access indicators related to the strategic areas of the initiative in Costa Rica. Performance for these indicators will be evaluated after the baseline and each subsequent data collection wave.

1.2 Objectives in Costa Rica

1.2.1 Health Issues and Health System Constraints in Costa Rica

Although Costa Rica has in general better health indicators that other countries in the region, some pockets of undeserved population are still present in the country. The regions of Huetar Atlántico and Brunca in Costa Rica have been selected as targets for SM2015-Costa Rica because of the current health status, health inequalities, and capacity for interventions. The goal of the initiative in this region is to increase the coverage of quality reproductive, maternal, neonatal and child health care in the poorest geographic areas and increase the use of information in decision making to reduce neo-natal death and increase the use of family planning among adolescents. It is expected that there will be an increase in coverage, quality, and use of reproductive, maternal, newborn, and child health services, and an improvement in the health status and nutrition of women of reproductive age and children under 5 years old.

1.2.2 Targets for Improvement

Goals for maternal, newborn, and child health will be achieved through a network of community interventions, health system improvements, and education. Aligning incentives, promoting integrated interventions, and strengthening the use of information in all levels of decision making are primary channels for SM2015-Costa Rica target achievement.

CHAPTER 2: METHODOLOGY

2.1 KAP Survey Methods The sample for the SM2015 Costa Rica Survey is designed to provide estimates of the coverage of key health interventions and indicators among the lowest wealth quintile of the population. In the regions of Huetar Atlántico and Brunca, target districts have been selected (Table 2.1). The survey will be administered to about 1,000 children attending middle schools. All children in these schools will be eligible to complete the questionnaire. In addition, one school administrator and one school counselor will be asked to complete complementary questionnaires regarding the health and behaviors of their students. For ethical reasons, it is proposed to select groups within each school, including all the grades of interest, and apply the questionnaire to all students in the selected classrooms. The questionnaire to students will be a self-administered questionnaire, to be answered in the classroom, distributed by school staff in one session after consent from parents and students has been obtained.

Table 2.1. Target districts in Costa Rica.

Region	Canton	District
Huetar Atlántico	Matina	Matina, Batán, Carandi
Huetar Atlántico	Limón	Valle de la Estrella
Huetar Atlántico	Sarapiqui	Llanuras del Gaspar, Rita, Roxana, Cariari, Colorado
Huetar Atlántico	Talamanca, Limón	Valle de la Estrella, Bratsi, Sixada, Cahuita, Telire
Huetar Atlántico	Siquirres	La Alegria, Siquirres, Florida, Germania, El Cairo, Pacuarito
Huetar Atlántico	Pococi	Colorado
Brunca	Osa, Golfito	Sierpe, Piedras, Golfito, Puerto, Guaycará, Pavón
Brunca	Buenos Aires	Brunka, Volcán, Potrero, Grande, Boruca, Pilas, Colinas, Buenos Aires, Changuena, Biolley
Brunca	Corredores	La cuesta, Corredor, Canoas, Laurel
Brunca	Osa	Puerto Cortés, Palmar, Sierpe, Bahía, Piedras
Brunca	Coto Brus	San Vito, Sabalito, Aguabuena, Limoncito, Pittier

CHAPTER 3: INSTRUMENTS

3.1 Paper Data Entry

The SM2015-Costa Rica Surveys are conducted using a pen-and-paper personal interview. The data will be entered electronically by a team of data entry personnel in batch.

3.2 KAP Survey

There are three components of the SM2015 Costa Rica survey: a KAP survey for students, a school counselor questionnaire, and a school administrator questionnaire. The combination of these surveys is designed to capture most accurately the prevalence estimates of select key indicators.

The content of the questionnaire is developed to measure the coverage of key health interventions and indicators, and many items are adapted from Youth Risk Behavior Surveillance System (YRBSS). The questionnaires are initially developed in English, then translated to Spanish. To best reflect the issues most relevant to the region under study and the local language, the Spanish-language questionnaires are revised following input from key stakeholders and at the conclusion of the pilot study (described below). The revised Spanish-language surveys are then back-translated to English. Study areas include a substantial proportion of indigenous populations; many of them are also Spanish speakers. Although it is expected that it will be possible to apply most surveys in Spanish, the survey will be also translated and back-translated to the most common indigenous languages in the study areas. All data for the survey is captured by paper surveys completed by students, administrators, and counselors.

The KAP survey captures the students' demographic characteristics, smoking and tobacco use, alcohol use, mental health status, behaviors related to sexual activity, health education,

health care resources, and recent experience at a health facility. The school counselor and school administrator questionnaires similarly capture information regarding the student population's school attendance rates, pregnancies, academic performance, sexual education curriculum, counseling resources, school policies, and perceived barriers for receiving reproductive health care.

CHAPTER 4: TRAINING AND MONITORING OF DATA

4.1 Training of Field Personnel

Individuals are recruited and trained to serve as supervisors who will be in charge of the distribution of surveys to schools, the supervision of the informed consent obtainment and questionnaire administration and the collection of questionnaires once they have been applied. The training will focus on the proper conduction of the procedures for the application of questionnaires. Staff from the University of Costa Rica and invited experts from IHME lead the training, which is conducted mainly in Spanish and includes a variety of lectures, presentations, demonstrations, and role-playing exercises.

During the classroom training sessions, supervisors and interviewers are briefed on the Salud Mesoamerica 2015 Initiative (SM2015) and the specific survey instruments developed for the Initiative. After the training, a pilot will be conducted to test the application procedures.

All field staff are evaluated on survey procedures by means of short, periodic quizzes and tests following completion of the classroom training sessions and field training sessions. In addition to these evaluations, all field staff are observed by the trainers in order to fully assess their ability to administer the questionnaires.

4.2 Data Monitoring

Information that is collected by each survey component is monitored by both field supervisors and analysts at IHME to ensure data quality and adherence to survey protocols. Supervisors are responsible for reviewing all questionnaires for quality and consistency prior to departing each school. Paper data collection is followed by electronic data entry; all data are entered twice. Data files are uploaded to a secure FTP site where they can be accessed by the data analysis team at IHME. After data is received, data is rigorously reviewed for quality with regards to consistency, clarity, and completeness. Prompt evaluation of data quality allows for clarification from data collectors regarding inadequacies and irregularities, and rapid correction of procedural errors.

CHAPTER 5: PLAN FOR ANALYSES

Analyses done by IHME are tailored to evaluate the collaboratively predetermined indicators. These indicators are detailed in Appendix A. Data collection is designed to cover all the initiative indicators.

In the data analysis, frequencies of indicators and variables of interest will be obtained at baseline. Cross-tabulations with some demographic characteristics (education, age, etc.),

will be also calculated for selected variables. Baseline information will be used later to assess changes when comparing against data collected at 18, 36 and 54 months, and estimating the effect of interventions.

All analyses are performed by IHME using STATA Version 11.2 (StataCorp, College Station, Texas), incorporating survey weights developed by IHME and robust standard errors to account for intra-class correlation within clusters (segments).

CHAPTER 6: REPORTS

A report will be published in the middle point and end of baseline, 18 month, 36 month, and 54 month SM2015-Costa Rica survey waves. These reports will highlight the status of the survey, data quality measures, and indicators of interest.

CHAPTER 7: ETHICAL ISSUES AND CONFIDENTIALITY

All SM2015-Costa Rica surveys, protocols, and procedures are reviewed by Institutional Review Boards (IRB). IHME activities are monitored by the IRB of the University of Washington; at the national level, FES obtains approval from its own institutional IRB. In addition, authorization from the Ministry of Health has been obtained to collect information from medical units. Previous to data collection, authorization to collect data in the community is also obtained from local authorities. This is especially relevant in the Huetar Atlántico and Brunca regions of Costa Rica, where some indigenous communities rule themselves by uses and traditions. Signed informed consent letters are obtained from informants and especially their parents prior to collecting any information at the school level.

The confidentiality of study participants' information is of critical importance. Any personal information captured is treated with the paramount concern for the participant's privacy. Assurance of confidentiality can provide more accurate data from respondents who are certain their personal information will remain secure. Interviewers are trained to present the SM2015-Costa Rica confidentiality agreement and address the concerns of the participants. Participation is completely elective, and efforts are made for each individual to be adequately informed when making the decision to participate. All data that is uploaded to IHME from survey sites lack personally identifiable information; there are no names, dates of birth, or addresses of study participants.

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APPENDIX A: SM2015-COSTA RICA INDICATORS

Indicator	Months	Source of Verification
Births to teenage mothers between 10-19 in the last year	0, 18, 36, 54	Administrative records vital statistics / population census projections, not verified by external survey
Adolescents who report at the time of the survey who know that in the EBAIS they can obtain a method of contraception / protection	0, 18, 36, 54	Independent survey of self-administered schools - KAP
Teens who report receiving counseling in sexual and reproductive health in their last visit to EBAIS	0, 18, 36, 54	Independent survey of self-administered schools - KAP
Teenagers can identify 4 signs of a sexually transmitted infection (STI)	0, 18, 36, 54	Independent survey of self-administered schools - KAP
Teens who can correctly identify the three protective measures to reduce the risk of sexually transmitted infections (STIs)	0, 18, 36, 54	Independent survey of self-administered schools - KAP
Teens who know about the proper use of modern methods of protection / contraception selected	0, 18, 36, 54	Independent survey of self-administered schools - KAP
Teens who report having requested and received some form of contraception and protection in EBAIS	0, 18, 36, 54	Independent survey of self-administered schools - KAP
Adolescents who were satisfied with the care received in their last visit to EBAIS	0, 18, 36, 54	Independent survey of self-administered schools - KAP
Sexually active teenagers (and / or their partner) currently using a modern method of family planning	0, 18, 36, 54	Independent survey of self-administered schools - KAP
Adolescents served by EBAIS, recorded SSR receiving counseling on file	18, 36, 54	Medical records in health units
Pregnant adolescents receiving prenatal education differentiated according to the norms and Operating Manual	18, 36, 54	Medical records in health units