



Institute for Health Metrics and Evaluation

Data Release Information Sheet

Data Summary

Dataset name: Nicaragua Salud Mesoamérica Initiative First Follow-Up Health Facility Survey 2014

Project name: Salud Mesoamérica Initiative Evaluation

Date of release: February 27, 2019

Summary:

The Salud Mesoamérica Initiative (SMI) focuses on reducing inequalities in maternal and child health in Mesoamerica. This dataset is the product of an SMI impact evaluation. It includes results of a follow-up health facility survey conducted in five departments in Nicaragua. In total, 60 facilities were surveyed. These represent facilities that provide ambulatory-, basic-, and complete-level Essential Obstetric and Neonatal Care (EONC) services. Surveyors collected data through interviews with facility personnel and direct observation. They recorded information on general facility characteristics, infrastructure, staff, supplies, equipment, and the availability of key maternal and child health care services. They also performed medical record reviews, extracting retrospective data on record-keeping, family planning, treatment practices related to uncomplicated births and medical complications experienced by mothers or infants during delivery, and child medical services.

Relevant publications and visualizations:

Mokdad AH, Palmisano EB, Zúñiga-Brenes P, Ríos-Zertuche D, Johanns CK, Schaefer A, et al. Supply-side interventions to improve health: Findings from the Salud Mesoamérica Initiative. *PLoS ONE*. 2018 Apr 16; 13(4): e0195292. doi: 10.1371/journal.pone.0195292.

Mokdad AH, Colson KE, Zúñiga-Brenes P, Ríos-Zertuche D, Palmisano EB, Alfaro-Porras E, et al. Salud Mesoamérica 2015 Initiative: design, implementation, and baseline findings. *Popul Health Metr*. 2015 Feb 7; 13:3. doi: 10.1186/s12963-015-0034-4.

Acknowledgments

Contributing organizations:

- Institute for Health Metrics and Evaluation (IHME)
- UNIMER

Funders:

- Bill and Melinda Gates Foundation (BMGF)
- Carlos Slim Health Institute
- Spanish Agency for International Development Cooperation (AECID)
- Inter-American Development Bank (IDB)

File Information

Data Files

File Name	Description	Data structure
IHME_SMI_NIC_HFS_2014_C ASAS_Y2019M02D27 [CSV, DTA]	NIC casas maternas (maternity homes) medical record review	Each row represents one record. The datstat_altpid record uniquely identifies a record. This variable consists of the facility id (Fxx) + “_” + a number assigned to the medical record.
IHME_SMI_NIC_HFS_2014_H FQ_Y2019M02D27 [CSV, DTA]	NIC health facility questionnaire and observation	Each row represents one health facility. The unique facility identifier is named datstat_altpid.
IHME_SMI_NIC_HFS_2014_N O_COMP_Y2019M02D27 [CSV, DTA]	NIC antenatal care, uncomplicated delivery, and postpartum medical record review	Each row represents one record. This record contains either ANC visits, delivery care, postpartum care, or any combination of the three. The datstat_altpid record uniquely identifies a record. This variable consists of the facility id (Fxx) + “_” + a number assigned to the medical record.

Additional File Information

Inventory

A file inventory (**IHME_SMI_NIC_HFS_2014_FILE_INVENTORY_Y2019M02D27.XLSX**) contains a list of all files and information on each. This information includes file name, format (CSV, PDF, etc.), type (data, codebook, questionnaire, or documentation), description, and version date.

Language

The questionnaires and codebooks for all Belize surveys are in English. The questionnaires and codebooks for the El Salvador Baseline Health Facility Survey are in English. The questionnaire for the El Salvador Baseline Census and Household Survey is in both English and Spanish, while the codebooks are in Spanish. Questionnaires and codebooks for all other surveys are in Spanish. Some questionnaires and codebooks also include indigenous languages.

Codebooks

These contain variable names, questions (variable labels), numeric values and labels for coded values, and question types. Accents have been removed in SMI codebooks, which affects Spanish and indigenous language translations. Some codebooks, however, contain other special characters that do not display properly if a CSV is opened in Excel. Therefore, codebooks are provided in both the machine-actionable CSV format and, for reference, the human-readable XLSX format.

There are nine major types of questions found in the codebooks: calculated, checkAllItem, checkAllSummary, comment, hidden, poplist, preload, radioGroup, and text. These question types are determined by the survey software program and can be grouped into the following categories:

- Check all that apply: The check all that apply questions are labeled as either checkAllItem or checkAllSummary
- Single response option: The single response options are labeled as either poplist, preload, or radioGroup. These are defined by the type of table that was used in the DatStat survey.
- Text response: The text response is labeled as either text or comment
- Calculated or pre-populated variables: Any variable that is created by the survey software system, such as time it takes to complete the survey, is labeled as either calculated or hidden. For the purposes of this study, no birth dates or identifiable information is collected, but internal survey calculations were done based on the date of birth to determine age in years. Other examples of pre-populated variables include geographic information piped into the survey from external census data.

The codebooks contain the most accurate list of variables asked in the survey. The PDF questionnaires produced do not reflect questions that were hidden from participants and interviewers after the initial survey was published for testing and piloting purposes.

Questionnaires

For some health facility surveys, the interviews of facility personnel and direct observations of facilities were performed by two different individuals. In these instances, the data are still combined into a single data file and codebook: health facility questionnaire and observation (HFQ). However, there are separate questionnaires for the facility personnel interviews (HFQ_FAC_QUESTIONNAIRE) and observations (HFQ_OBS_QUESTIONNAIRE).

Methodological Statement

Data Collection

Data collection for the SMI-Nicaragua first follow-up measurement was conducted by UNIMER. All surveys were conducted using a computer-assisted personal interview (CAPI). The CAPI was programmed using DatStat Illume and installed onto computer netbooks. CAPI supports skip patterns, inter-question answer consistency, and data entry ranges. The aim of introducing CAPI to the field was to reduce survey time by prompting only relevant questions, maintain a logical answering pattern across different questions, decrease data entry errors, and permit rapid data verification.

The SMI Nicaragua First Follow-Up Health Facility Survey was carried out between June 2014 and September 2014 in each of the selected health facilities. Two data collection teams, consisting of a total of 6 surveyors with a medical background (physicians and nurses), were deployed to conduct the SMI Health Facility Survey.

Data were collected using computer netbooks equipped with CAPI software. Field team leaders monitored the implementation of the survey and report feedback. Data collection using CAPI allowed data to be transferred instantaneously once a survey was completed via a secure connection to IHME. IHME monitored collected data on a continuous basis and provided feedback. Suggestions, surveyor feedback, and any modifications were incorporated into the instruments and readily transmitted to the field.

The research protocol was approved by the Internal Review Board of the University of Washington. All data collection instruments and procedures were approved by the Ministry of Health of Nicaragua.

Sampling/Population

The study design for the SMI-Nicaragua health facility survey provides representative estimates of key health interventions and indicators for a geographic area that approximates the lowest wealth quintile of the population of Nicaragua.

The primary administrative unit in Nicaragua is the department. Nicaragua has 15 departments, including two autonomous regions. Five departments were purposefully selected for the SMI-Nicaragua initiative: Costa Caribe Norte, Costa Caribe Sur, Jinotega, Madriz, and Matagalpa. From those five departments, IDB identified 19 intervention municipalities in which to conduct the baseline SMI health facility survey for the Initiative on the basis of their high concentration of residents in the country's lowest wealth quintile.

Health facility sampling

The sample of 60 health facilities was selected from a list constructed according to a referral network provided by the Nicaragua Ministry of Health. All facilities providing basic- and complete-level Essential Obstetric and Neonatal Care (EONC) services, as well as all ambulatory-level health centers, were included in the sample with certainty, due to the small number of these facilities operating in the area. Among health posts (which are ambulatory-level facilities), 50% of the remaining sample was drawn randomly from the list of health posts located in SMI intervention areas that were interviewed at baseline. The other 50% was drawn from the remaining ambulatory facilities in SMI areas that were not visited at baseline. One complete-level facility and one basic-level facility were replaced with ambulatory facilities, due to problems with safety and access in the areas. In addition, seven ambulatory units were replaced due to accessibility issues. The replacement facilities were selected from a designated list of back-up facilities within the respective municipalities.

Medical record sampling

The uncomplicated deliveries and immediate postpartum care records were collected from basic and complete level facilities, while antenatal care records and records of maternity home stays in the last 18 months were evaluated at ambulatory, basic, and complete level facilities.

Medical record review quotas are set per facility by dividing the total number of records to be reviewed in intervention and comparison areas by the number of data entry modules to be completed at each level of care, and then among all sampled facilities at each level.

Weighting

The data are not weighted.

Imputed Variables and/or Constructed Variables – What was Imputed/Constructed and How

There are no imputed variables in the data.

Known Data Quality Issues

Sampling errors & Design Effects for Key Indicators

N/A

Public Use Dataset Notes

This is a public use dataset. The data have been de-identified. Variables determined to contain identifiable private information, or potentially identifiable private information, for health facilities, health workers, and/or other individuals have been removed in accordance with IHME's microdata release protocol. The protocol's determination for variables that constitute identifiable private information is based primarily on [HIPAA'S De-identification Standard](#).

No personally identifiable information was collected for this study; however, these data were stripped of comments and information on who conducted the interview. Some variables in the dataset do not contain data, such as date of birth, because this information was not stored on the survey or sent to IHME. The date of birth was entered into the survey and an internal calculation was done to provide age. The surveys have also been stripped of the facility name, and in particular cases, facility location. Throughout the study, health facilities are guaranteed anonymity and the exact facility name cannot be released. Additional challenges with facilities include changes in facility type or classification over time.

Additional Information

Terms and Conditions

<http://www.healthdata.org/about/terms-and-conditions>

Contact Information

To request further information about the Salud Mesoamérica Initiative (SMI), please contact IHME:

Institute for Health Metrics and Evaluation

2301 Fifth Ave., Suite 600

Seattle, WA 98121

USA

Telephone: +1-206-897-2800

Fax: +1-206-897-2899

Email: data@healthdata.org

www.healthdata.org

These files may be updated periodically, so we appreciate hearing feedback or additional information about how these data are being used.