Data Release Information Sheet

Data Summary

Dataset name: Costa Rica Salud Mesoamérica Initiative Health Facility Survey 2015

Project name: Salud Mesoamérica Initiative Baseline

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 health facility survey conducted in the socioeconomic regions of Huetar Atlántica and Brunca in Costa Rica. 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 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:


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

<table>
<thead>
<tr>
<th>File Name</th>
<th>Description</th>
<th>Data structure</th>
</tr>
</thead>
<tbody>
<tr>
<td>IHME_SMI_CRI_HFS_2015_A</td>
<td>CRI adolescent medical record review</td>
<td>Each row represents one medical record. The datstat_altpid record uniquely identifies a record. This variable consists of the facility id (Fxx) + &quot;_&quot; + a number assigned to the medical record.</td>
</tr>
<tr>
<td>IHME_SMI_CRI_HFS_2015_A</td>
<td>CRI health facility health area survey</td>
<td>Each row represents one EBAIS within an administrative office of CCSS. The unique facility identifier is named datstat_altpid.</td>
</tr>
<tr>
<td>IHME_SMI_CRI_HFS_2015_A</td>
<td>CRI health facility Local Coordinating Unit (UCL) survey</td>
<td>Each row represents one local coordinating unit (UCL). The unique facility identifier is named datstat_altpid.</td>
</tr>
<tr>
<td>IHME_SMI_CRI_HFS_2015_A</td>
<td>CRI health facility questionnaire and observation</td>
<td>Each row represents one health facility. The unique facility identifier is named datstat_altpid.</td>
</tr>
<tr>
<td>IHME_SMI_CRI_HFS_2015_A</td>
<td>CRI no delivery complications medical record review</td>
<td>Each row represents one medical record. The datstat_altpid record uniquely identifies a record. This variable consists of the facility id (Fxx) + &quot;_&quot; + a number assigned to the medical record.</td>
</tr>
</tbody>
</table>

Additional File Information

Inventory

A file inventory (IHME_SMI_CRI_HFS_2015_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.

Methodological Statement

Data Collection

Data collection for the SMI-Costa Rica Health Facility 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 Costa Rica Health Facility Survey was carried out in July 2015 in each of the selected health facilities. Two data collection teams, consisting of a total of six surveyors, had backgrounds in medicine (physicians) 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 Costa Rica.

**Sampling/Population**

The study design for the SMI-Costa Rica 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 Costa Rica.

Costa Rica has six socioeconomic regions. Two socioeconomic regions (Huetar Atlántica and Brunca) were purposefully selected for the SMI-Costa Rica initiative. From those two regions, IDB identified 11 cantons in which to conduct the first follow-up 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 units were selected from a list constructed according to a referral network provided by the Costa Rica Ministry of Health. Twenty-two administrative offices, comprised of 11 health areas of the Costa Rican Department of Social Security (CCSS) and 11 UCL units of the Ministries of Health, were included in the sample in order to measure indicators related to administrative records and pharmacy/family planning methods stock-outs. A referral networking diagram outlined by the Ministry of Health was used to select five of the seven hospitals in the two regions. All three top-level hospitals were selected with certainty, two in the Huetar Atlántica region and one in the Brunca region. Two of the four remaining smaller hospitals, all located in the Brunca region, were selected at random. One CAIS (Centro de Atención Integral de Salud), was also selected with certainty. Furthermore, a stratified random sample of 32 Equipos Básicos de Atención Integral en Salud (EBAIS) were then selected to reach the sample size of 60 units.

The facility list contained 18 facilities (EBAIS concentrados) located inside of an administrative office building of CCSS or the Ministry of Health; two of these facilities were selected separately from the other EBAIS in order to ensure enough diversity was captured in the sample. The remaining 30 facilities were sampled from EBAIS not located in the administrative offices (EBAIS desconcentrados). Considering that interventions conducted in Costa Rica have two modalities (Group A and B), these facilities were stratified by treatment group: 10 were selected from Treatment Group A, 10 from Treatment Group B, and 10 from control areas.
Medical record sampling

For the medical record review, a systematic sampling method was used to select delivery records in each facility. Records for specific conditions (adolescent care, deliveries, and antenatal and postpartum care) were selected according to a quota set considering the Essential Obstetric and Newborn Care (EONC) level that each facility provides. When available, antenatal care records pertaining to the health facilities were selected from the institutional health information system. No medical records were collected from the one basic facility (CAIS) in the sample, as this unit only has external consultants for specialties.

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, facility location, and sometimes facility level. Throughout the study, health facilities are guaranteed anonymity and the exact facility name cannot be released. In particular, the Area de Salud and UCL surveys are stripped of the majority of the data. These surveys were created to measure specific indicators for the initiative, however, much of the data collected identifies units through communities and locations. These indicators were reported at the aggregate level only to the country and funders.
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.