PH 3D

Data-Driven Development in the Philippines

GOVERNMENT OF SORSOGON

DATA AVAILABILITY AND QUALITY FOR UHC IMPLEMENTATION
SORSOGON

SEPTEMBER 2022

DEVELOPMENT DATA LAB

The Province of Sorsogon is one of the pilot sites for Universal Health Care (UHC) advanced implementation in the Philippines. All efforts are devoted to reaching a certain level of health system maturity so that by the end of 2022, the province is ready for the full implementation of the UHC Law. That is, people should be able to avail "quality and affordable health care goods and services" while protected from catastrophic and impoverishing health spending.

The delivery of health care services that is centered on people's needs and well-being requires an explicit use of data into policy and decision-making processes.

With appropriate use of data health systems can better respond to public health crises, strategize to improve health outcomes, and allocate resources efficiently and equitably.

A salient feature in this approach is the use of technological tools that facilitate faster, reliable, and system-wide dissemination of data. Therefore, expanding UHC in the province is possible through data-informed and technology-enabled participatory decision-making.

The Data-Driven Development in the Philippines (PH3D) Project helps the provincial government lay the groundwork towards progress in UHC. The PLGU has started its digitalization of local health and health-related data such as, but not limited to, administrative, public health, medical, and health financing data. The data will then be processed to get actionable information for developing policies, standards, and plans to support UHC advances in the province. However, the availability, conditions, and characteristics of local data are critically important to draw effective insights. By having good quality data, policymakers and government officials will have the essential information they need to understand the provincial health system and develop relevant reforms. Therefore, high quality data translates into better opportunities to transform the lives of the people.

This report provides an assessment of Sorsogon's local health data, in terms of availability and quality, to effectively ensure reliable healthcare system performance and draw policy lessons for UHC implementation and monitoring. Towards the end of this report some recommendations and possible solutions are presented.

AVAILABILITY AND QUALITY OF HEALTH DATA IN SORSOGON

The UHC implementation strategies in the province are anchored on the six basic functions of the health systems as advocated by the World Health Organization: the provision of services, mobilization of health workers, adequate allocation of finances, procurement and distribution of medical products, vaccines and technologies, development of health information system, and effective leadership and governance. Table 1 shows some of the health and health-related data that the PLGU holds classified for each building block. At present, the available data somehow covers only five (5) areas – Service Delivery, Health Workforce, Financing,

Leadership and Governance and Health Information System. The Provincial Health Office (PHO) of Sorsogon uses the Field Health Service Information System (FHSIS) which is the designated national health statistics by the Department of Health (DOH) as the main source of indicators and measures to track progress in almost all of these domains. However, these are data collected from public health facilities only.

<table>
<tr><td>T A B L E
1</td><td colspan="3">## DATA AVAILABILITY AND QUALITY FOR IMPLEMENTING AND MONITORING UHC</td></tr>
</table>

BUILDING BLOCK	DATA	DISAGGREGATION	YEAR
1. SERVICE DELIVERY	Maternal care Intrapartum care and delivery Childcare immunization Nutrition services for infants Notifiable diseases Non-communicable	Municipality/City Age group *(under 1 population, 6 mos. old, 12-59 mos. old, etc.)* Sex *(Male/Female)*	2020* 2021
2. HEALTH WORKFORCE	Number of hospital staff	Permanent Job order/contractual Administrative services Medical services Nursing services Type of health professional *(i.e., doctor, nurse, nutritionist, medical technologist, Barangay Health Worker, etc.)*	2020 2021
3. FINANCING	Total health appropriations and expenditures	Personnel Services Maintenance and Other Operating Expenses Capital Outlays Health programs	2018 2019 2020 2021
4. LEADERSHIP AND GOVERNANCE	Client satisfaction	Provincial Hospital District Hospitals Medicare Hospitals	2021
5. HEALTH INFORMATION SYSTEM	Electronic Medical Record (EMR)	Patient type Case type Civil Status Religion City/Municipality Barangay PHIC Coverage PHIC Member Category Gender Diagnoses	2020 2021 Jan 2022

* not disaggregated per City/Municipality

BUILDING BLOCK	SOURCE	FORMAT	FREQUENCY OF DATA AVAILABILITY
1. SERVICE DELIVERY	FHSIS/ Annual Accomplishment Report/ Annual Statistical Report	xls	Quarterly
2. HEALTH WORKFORCE	FHSIS/ Annual Accomplishment Report/ Annual Statistical Report	ppt	Yearly
3. FINANCING	Budget Office	pdf	Yearly
4. LEADERSHIP AND GOVERNANCE	Clients Satisfaction Survey	xls	Monthly
5. HEALTH INFORMATION SYSTEM	EMR (Sorsogon Provincial Hospital)	xls	Daily

HEALTHCARE SERVICE DELIVERY

The FHSIS of Sorsogon follows the standard template of the DOH so the level of disaggregation of the collected data are well-defined. The data are disaggregated per City/ Municipality, age group (e.g., under 1 population, 6 mos. old, 12-59 mos. old, etc.), sex assigned at birth (i.e., Male or Female), and more. However, the province does not hold a good amount of FHSIS data in digital format. Since the start of its implementation, the data collection is mainly paper based except in recent years 2020 and 2021. But only the 2021 FHSIS data are disaggregated per City/Municipality. So, it cannot be determined whether the health conditions across the province improved over that period.

HEALTH WORKFORCE

A well-functioning health system also requires an efficient level of human resources. Still from Table 1, the PHO keeps an annual tally of hospital staff and categorizes them into administrative, medical, and nursing services or permanent and job order personnel or by type of health professional. These are few useful data to measure how well the health system is responding to the needed healthcare workforce such as the ratio of health professionals to total population. Consequently, the gap in essential manpower can be derived. Data are collected yearly.

LEADERSHIP AND GOVERNANCE

Customer feedback is collected through the monthly Client Satisfaction Survey. This is a good health sector governance practice to enhance system design and accountability. Currently, only the overall ratings are reported which can give little guidance on what functions and practices in the health sector need reforms. Another disadvantage is the collection of data digitally using paper forms. The responses are encoded manually which can become tedious. So, even if data are collected daily, they are consolidated monthly.

FINANCING

The PLGU keeps data on public health allocation and actual spending. These are essential data to ensure there are adequate funds for health. However, there is no data to find out whether the people are protected from catastrophic health expenditure and impoverishment which can be estimated if out-of-pocket (OOP) payments on consultations, laboratories, medicines or in overall health expenses are available.

HEALTH INFORMATION SYSTEM

Recently, much of the UHC efforts of the PLGU is focused on acquiring their own health information system for use of all health facilities. As of now, there is an existing electronic medical record (EMR) system utilized by Sorsogon Provincial Hospital (SPH) which will soon be deployed to the District Hospitals and Medicare Hospitals. Acquiring an EMR system is a good example of health care innovation that enhances data quality.

Unlike the traditional paper-based ones, using the digitally collected and stored patient data like the EMR has many advantages mainly because they have better quality. EMRs tend to be more precise, accurate, reliable, timely and less prone to errors. The EMRs generated from SPH are assessed based on these dimensions and the results are shown in Table 2. The EMR captures individual-level (or patient-level) health data and provides a more comprehensive and accurate reporting compared to survey results. It has a pre-developed coding system which reduces human errors in critical areas like diagnoses, procedures and services provided. Also, the protocols for data collection do not change so it reduces the incidence of medical error.

TABLE 2

EMR DATA QUALITY

DATASET	PRECISION	ACCURACY	RELIABILITY	TIMELINESS	INTEGRITY
ELECTRONIC MEDICAL RECORD (EMR	Captures individual-level (or patient-level) health data which supports the objective of improving patient health, providing quality of care, etc.	Provides more comprehensive and accurate data on patients as compared to data collected from surveys.	Protocols for data collection do not change and reduce incidence of medical error.	Data are up to date and obtained at the point of care which facilitates timely review of diagnoses and notification of emerging infectious diseases or any disease of public health significance.	Has a pre-developed coding system which reduces human errors in critical areas like diagnoses, procedures and services provided.

However, the completeness and accuracy of data relies on health practitioners' encoding. Based on the Data Processing template (Appendix 1) which documents the data quality or issues of the EMR, a significant number of patients still lack data on diagnosis (ICD10 Code) and procedures or services availed (RVSCode). It is equivalent to 32% of the patients in 2020 and 24% in 2021.

A major advantage of the EMR is that data are up to date and obtained at the point of care which can facilitate prompt review of diagnoses and notification of emerging infectious diseases or any disease of public health significance.

GENERAL RECOMMENDATIONS

The UHC implementation in Sorsogon is still in its early stage which makes a data-driven approach a timely intervention. As mentioned, there are many advantages to digitizing data or collecting data digitally. Basically, they increase data availability that allows for readily performing computations or data analysis and enhance data quality so that derived insights are reliable and effective. However, based on the previous discussions, there is a gap in the province's data. First, there are uncollected data from private hospitals which are beneficial to overall health system operations. Also, the EMR system is yet to be adopted by other public health facilities. To address the gap, the same data submission should be required from both public and private facilities. Alternatively, and more preferably is the use of a single health information system for all health facilities in the province. Failing this, the use of interoperable health information systems is an acceptable solution. Second, the existing data, mostly from the nine public hospitals, provides limited guidance on how well the desired health system performance and outcomes are achieved. The following are suggested:

1   ADOPT DIGITAL DATA COLLECTION METHODS

Digital data collection tools provide faster and more reliable data collection. There are free or open-source tools that are secured like KoBo Toolbox which the PLGU can use. Data are collected real-time and made available in machine readable format. It also readily provides basic analysis. Hence, shifting from paper-based to digital collection reduces costs and increases efficiency in health sector governance.

2   COLLECT DISAGGREGATED DATA

Data disaggregation is one of the key elements to finding underlying trends and patterns to enhance understanding of health situations. For example, age appears to be a critical determinant in monitoring coverage in childcare immunization, nutrition services, maternal care, oral health services, etc. The more disaggregated the data, the better. The general rule is the level of precision should be smaller than or the same level at which decision is made or policy is applied. Therefore, collecting health data per city/municipality is necessary if interventions are to be implemented across local government units within the province.

3 DETERMINE AND COLLECT ALL RELEVANT VARIABLES

There are missing variables which are relevant in UHC implementation and monitoring. Currently, the PLGU does not hold any data to measure whether people have access to quality, safe and cost-effective essential medical products, vaccines, and technologies. Also, vital to UHC implementation is not only to have a good number of healthcare workers but also good quality health practitioners. Again, there is no data to measure health care worker knowledge like the skilled health workers' continuing professional development. Such data will help ensure that the health workers' knowledge and skills stay

relevant and their capacities keep pace with current health standards. Data on out of pocket (OOP) expenses on health care costs is also lacking which is a main obstacle in determining the incidence of catastrophic health expenditure and impoverishment which are two most common indicators to monitor financial risk protection. For the EMRs, patient's date of birth, income, educational attainment, employment type, utilization costs for hospitalization, ER admissions, medicines, and others are not collected. These are some important variables used in many health research.

4 AVOID REDUNDANCIES AND KEEP HISTORICAL DATA

There are other sources of health data like the Annual Accomplishment Report and Annual Statistical Report. In some instances, the data do not match, perhaps due to encoding errors. It can be avoided if data are validated from all sources or consolidated to a centralized data storage. FHSIS is the main source of health data from all towns in the province so digitizing FHSIS data will also

help address this concern. Moreover, historical data, especially from the FHSIS should be maintained because it can provide critical information with high value to society. Among others, it can provide insights about health care use and its costs, the outcomes of public health interventions in the province, disease trends and risk factors, and patterns of care.

DATA PROCESSING TEMPLATE:
ELECTRONIC MEDICAL RECORD - SORSOGON PROVINCIAL HOSPITAL

DATASET NAME	YEAR	COLUMN NAME	VALID RANGE	NO. OF RECORDS	NO. OF NULL VALUES	% NULL VALUES	NO. OF INVALID VALUES	% INVALID VALUES	% TOTAL INVALID + NULL
SPH-EMR DATA 2020 TO 2022	2020	PATIENT TYPE	GREATER THAN OR EQUAL TO 0	14714	0	0%	0	0%	0%
SPH-EMR DATA 2020 TO 2022	2020	CASE TYPE	GREATER THAN OR EQUAL TO 0	14714	0	0%	0	0%	0%
SPH-EMR DATA 2020 TO 2022	2020	CIVIL STATUS	GREATER THAN OR EQUAL TO 0	14714	0	0%	0	0%	0%
SPH-EMR DATA 2020 TO 2022	2020	RELIGION	GREATER THAN OR EQUAL TO 0	14714	2015	14%	0	0%	14%
SPH-EMR DATA 2020 TO 2022	2020	CITY/ MUNICIPALITY	GREATER THAN OR EQUAL TO 0	14714	0	0%	0	0%	0%
SPH-EMR DATA 2020 TO 2022	2020	BARANGAY	GREATER THAN OR EQUAL TO 0	14714	1	0%	0	0%	0%
SPH-EMR DATA 2020 TO 2022	2020	WITH PHIC	GREATER THAN OR EQUAL TO 0	14714	0	0%	0	0%	0%
SPH-EMR DATA 2020 TO 2022	2020	PHIC PATIENT IS THE MEMBER	GREATER THAN OR EQUAL TO 0	14714	0	0%	0	0%	0%
SPH-EMR DATA 2020 TO 2022	2020	MEMBER CATEGORY	GREATER THAN OR EQUAL TO 0	14714	5	0%	0	0%	0%
SPH-EMR DATA 2020 TO 2022	2020	GENDER	GREATER THAN OR EQUAL TO 0	14714	0	0%	0	0%	0%
SPH-EMR DATA 2020 TO 2022	2020	FINAL DIAGNOSIS	GREATER THAN OR EQUAL TO 0	14714	0	0%	0	0%	0%
SPH-EMR DATA 2020 TO 2022	2020	ICD10 CODE	GREATER THAN OR EQUAL TO 0	14714	4678	32%	0	0%	32%
SPH-EMR DATA 2020 TO 2022	2020	ICD10 DESCRIPTION	GREATER THAN OR EQUAL TO 0	14714	4678	32%	0	0%	32%
SPH-EMR DATA 2020 TO 2022	2020	RVSCODE	GREATER THAN OR EQUAL TO 0	14714	4678	32%	0	0%	32%
SPH-EMR DATA 2020 TO 2022	2020	RVSDESCRIPTION	GREATER THAN OR EQUAL TO 0	14714	4678	32%	0	0%	32%
SPH-EMR DATA 2020 TO 2022	2021	PATIENT TYPE	GREATER THAN OR EQUAL TO 0	14053	0	0%	0	0%	0%
SPH-EMR DATA 2020 TO 2022	2021	CASE TYPE	GREATER THAN OR EQUAL TO 0	14053	0	0%	0	0%	0%
SPH-EMR DATA 2020 TO 2022	2021	CIVIL STATUS	GREATER THAN OR EQUAL TO 0	14053	0	0%	0	0%	0%
SPH-EMR DATA 2020 TO 2022	2021	RELIGION	GREATER THAN OR EQUAL TO 0	14053	2015	14%	0	0%	14%
SPH-EMR DATA 2020 TO 2022	2021	CITY/ MUNICIPALITY	GREATER THAN OR EQUAL TO 0	14053	3067	22%	0	0%	22%

DATASET NAME	COMMENTS	DO THE VALUES NEED TO BE PROCESSED OR CLEANED?	IF YES, DESCRIBE THE NATURE OF PROCESSING OR CLEANING DONE.	IS IT A PII COLUMN? DOES IT (POTENTIALLY) NEED TO BE MASKED?	FINAL VARIABLE NAME	FINAL VARIABLE TYPE
SPH-EMR DATA 2020 TO 2022	N/A	NO	N/A	NO	N/A	N/A
SPH-EMR DATA 2020 TO 2022	N/A	NO	N/A	NO	N/A	N/A
SPH-EMR DATA 2020 TO 2022	N/A	NO	N/A	NO	N/A	N/A
SPH-EMR DATA 2020 TO 2022	N/A	NO	N/A	NO	N/A	N/A
SPH-EMR DATA 2020 TO 2022	N/A	NO	N/A	NO	N/A	N/A
SPH-EMR DATA 2020 TO 2022	N/A	NO	N/A	NO	N/A	N/A
SPH-EMR DATA 2020 TO 2022	N/A	NO	N/A	NO	N/A	N/A
SPH-EMR DATA 2020 TO 2022	N/A	NO	N/A	NO	N/A	N/A
SPH-EMR DATA 2020 TO 2022	N/A	NO	N/A	NO	N/A	N/A
SPH-EMR DATA 2020 TO 2022	N/A	NO	N/A	NO	N/A	N/A
SPH-EMR DATA 2020 TO 2022	N/A	NO	N/A	NO	N/A	N/A
SPH-EMR DATA 2020 TO 2022	N/A	NO	N/A	NO	N/A	N/A
SPH-EMR DATA 2020 TO 2022	N/A	NO	N/A	NO	N/A	N/A
SPH-EMR DATA 2020 TO 2022	N/A	NO	N/A	NO	N/A	N/A
SPH-EMR DATA 2020 TO 2022	N/A	NO	N/A	NO	N/A	N/A
SPH-EMR DATA 2020 TO 2022	N/A	NO	N/A	NO	N/A	N/A
SPH-EMR DATA 2020 TO 2022	N/A	NO	N/A	NO	N/A	N/A
SPH-EMR DATA 2020 TO 2022	N/A	NO	N/A	NO	N/A	N/A
SPH-EMR DATA 2020 TO 2022	N/A	NO	N/A	NO	N/A	N/A

DATA PROCESSING TEMPLATE:
ELECTRONIC MEDICAL RECORD - SORSOGON PROVINCIAL HOSPITAL

DATASET NAME	YEAR	COLUMN NAME	VALID RANGE	NO. OF RECORDS	NO. OF NULL VALUES	% NULL VALUES	NO. OF INVALID VALUES	% INVALID VALUES	% TOTAL INVALID + NULL
SPH-EMR DATA 2020 TO 2022	2021	BARANGAY	GREATER THAN OR EQUAL TO 0	14053	2	0%	0	0%	0%
SPH-EMR DATA 2020 TO 2022	2021	WITH PHIC	GREATER THAN OR EQUAL TO 0	14053	0	0%	0	0%	0%
SPH-EMR DATA 2020 TO 2022	2021	PHIC PATIENT IS THE MEMBER	GREATER THAN OR EQUAL TO 0	14053	0	0%	0	0%	0%
SPH-EMR DATA 2020 TO 2022	2021	MEMBER CATEGORY	GREATER THAN OR EQUAL TO 0	14053	3044	22%	0	0%	22%
SPH-EMR DATA 2020 TO 2022	2021	GENDER	GREATER THAN OR EQUAL TO 0	14053	0	0%	0	0%	0%
SPH-EMR DATA 2020 TO 2022	2021	FINAL DIAGNOSIS	GREATER THAN OR EQUAL TO 0	14053	0	0%	0	0%	0%
SPH-EMR DATA 2020 TO 2022	2021	ICD10 CODE	GREATER THAN OR EQUAL TO 0	14053	0	0%	0	0%	0%
SPH-EMR DATA 2020 TO 2022	2021	ICD10 DESCRIPTION	GREATER THAN OR EQUAL TO 0	14053	3310	24%	0	0%	24%
SPH-EMR DATA 2020 TO 2022	2021	RVSCODE	GREATER THAN OR EQUAL TO 0	14053	3310	24%	0	0%	24%
SPH-EMR DATA 2020 TO 2022	2021	RVSDESCRIPTION	GREATER THAN OR EQUAL TO 0	14053	3310	24%	0	0%	24%
SPH-EMR DATA 2020 TO 2022	2022	PATIENT TYPE	GREATER THAN OR EQUAL TO 0	561	0	0%	0	0%	0%
SPH-EMR DATA 2020 TO 2022	2022	CASE TYPE	GREATER THAN OR EQUAL TO 0	561	0	0%	0	0%	0%
SPH-EMR DATA 2020 TO 2022	2022	CIVIL STATUS	GREATER THAN OR EQUAL TO 0	561	0	0%	0	0%	0%
SPH-EMR DATA 2020 TO 2022	2022	RELIGION	GREATER THAN OR EQUAL TO 0	561	147	26%	0	0%	26%
SPH-EMR DATA 2020 TO 2022	2022	CITY/ MUNICIPALITY	GREATER THAN OR EQUAL TO 0	561	0	0%	0	0%	0%
SPH-EMR DATA 2020 TO 2022	2022	BARANGAY	GREATER THAN OR EQUAL TO 0	561	0	0%	0	0%	0%
SPH-EMR DATA 2020 TO 2022	2022	WITH PHIC	GREATER THAN OR EQUAL TO 0	561	0	0%	0	0%	0%
SPH-EMR DATA 2020 TO 2022	2022	PHIC PATIENT IS THE MEMBER	GREATER THAN OR EQUAL TO 0	561	0	0%	0	0%	0%
SPH-EMR DATA 2020 TO 2022	2022	MEMBER CATEGORY	GREATER THAN OR EQUAL TO 0	561	0	0%	0	0%	0%

DATASET NAME	COMMENTS	DO THE VALUES NEED TO BE PROCESSED OR CLEANED?	IF YES, DESCRIBE THE NATURE OF PROCESSING OR CLEANING DONE.	IS IT A PII COLUMN? DOES IT (POTENTIALLY) NEED TO BE MASKED?	FINAL VARIABLE NAME	FINAL VARIABLE TYPE
SPH-EMR DATA 2020 TO 2022	N/A	NO	N/A	NO	N/A	N/A
SPH-EMR DATA 2020 TO 2022	N/A	NO	N/A	NO	N/A	N/A
SPH-EMR DATA 2020 TO 2022	N/A	NO	N/A	NO	N/A	N/A
SPH-EMR DATA 2020 TO 2022	N/A	NO	N/A	NO	N/A	N/A
SPH-EMR DATA 2020 TO 2022	N/A	NO	N/A	NO	N/A	N/A
SPH-EMR DATA 2020 TO 2022	N/A	NO	N/A	NO	N/A	N/A
SPH-EMR DATA 2020 TO 2022	WRONG SPELLING OF PREGNANCY- PREGNANY	NO	N/A	NO	N/A	N/A
SPH-EMR DATA 2020 TO 2022	N/A	NO	N/A	NO	N/A	N/A
SPH-EMR DATA 2020 TO 2022	N/A	NO	N/A	NO	N/A	N/A
SPH-EMR DATA 2020 TO 2022	N/A	NO	N/A	NO	N/A	N/A
SPH-EMR DATA 2020 TO 2022	N/A	NO	N/A	NO	N/A	N/A
SPH-EMR DATA 2020 TO 2022	N/A	NO	N/A	NO	N/A	N/A
SPH-EMR DATA 2020 TO 2022	N/A	NO	N/A	NO	N/A	N/A
SPH-EMR DATA 2020 TO 2022	N/A	NO	N/A	NO	N/A	N/A
SPH-EMR DATA 2020 TO 2022	N/A	NO	N/A	NO	N/A	N/A
SPH-EMR DATA 2020 TO 2022	N/A	NO	N/A	NO	N/A	N/A
SPH-EMR DATA 2020 TO 2022	N/A	NO	N/A	NO	N/A	N/A
SPH-EMR DATA 2020 TO 2022	N/A	NO	N/A	NO	N/A	N/A
SPH-EMR DATA 2020 TO 2022	N/A	NO	N/A	NO	N/A	N/A

APPENDIX
1

DATA PROCESSING TEMPLATE:
ELECTRONIC MEDICAL RECORD - SORSOGON PROVINCIAL HOSPITAL

DATASET NAME	YEAR	COLUMN NAME	VALID RANGE	NO. OF RECORDS	NO. OF NULL VALUES	% NULL VALUES	NO. OF INVALID VALUES	% INVALID VALUES	% TOTAL INVALID + NULL
SPH-EMR DATA 2020 TO 2022	2022	GENDER	GREATER THAN OR EQUAL TO 0	561	0	0%	0	0%	0%
SPH-EMR DATA 2020 TO 2022	2022	FINAL DIAGNOSIS	GREATER THAN OR EQUAL TO 0	561	0	0%	0	0%	0%
SPH-EMR DATA 2020 TO 2022	2022	ICD10 CODE	GREATER THAN OR EQUAL TO 0	561	145	26%	0	0%	26%
SPH-EMR DATA 2020 TO 2022	2022	ICD10 DESCRIPTION	GREATER THAN OR EQUAL TO 0	561	145	26%	0	0%	26%
SPH-EMR DATA 2020 TO 2022	2022	RVSCODE	GREATER THAN OR EQUAL TO 0	561	145	26%	0	0%	26%
SPH-EMR DATA 2020 TO 2022	2022	RVS DESCRIPTION	GREATER THAN OR EQUAL TO 0	561	145	26%	0	0%	26%

	COMMENTS	DO THE VALUES NEED TO BE PROCESSED OR CLEANED?	IF YES, DESCRIBE THE NATURE OF PROCESSING OR CLEANING DONE.	IS IT A PII COLUMN? DOES IT (POTENTIALLY) NEED TO BE MASKED?	FINAL VARIABLE NAME	FINAL VARIABLE TYPE
SPH-EMR DATA 2020 TO 2022	N/A	NO	N/A	NO	N/A	N/A
SPH-EMR DATA 2020 TO 2022	WRONG SPELLING OF PREGNANCY-PREGNANY	NO	N/A	NO	N/A	N/A
SPH-EMR DATA 2020 TO 2022	N/A	NO	N/A	NO	N/A	N/A
SPH-EMR DATA 2020 TO 2022	N/A	NO	N/A	NO	N/A	N/A
SPH-EMR DATA 2020 TO 2022	N/A	NO	N/A	NO	N/A	N/A
SPH-EMR DATA 2020 TO 2022	N/A	NO	N/A	NO	N/A	N/A

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Data-Driven Development in the Philippines

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ACTION FOR ECONOMIC REFORMS

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