UNFPA assessment of Lao PDR's
Health management information system

An overview of data collection practices, quality, and completeness for sexual, reproductive, maternal, newborn, child and adolescent health indicators for improved SRHR monitoring and implementation of corrective actions

February 2024

The report, from which this technical brief is based, was conducted in July 2022 with support from the Department of Foreign Affairs and Trade (DFAT), Australia.

Key takeaways:

The majority of SRMNCAH data is collected and entered manually directly at facility level, however, different data collections forms exist causing confusion and the number of facilities entering data is not clear

A total of 76 out of 124 data elements are routinely collected by the national HMIS, with no standardised mechanisms for routine data quality review and analysis and no feedback mechanism to facilities

Limited staff capacity for data collection and analysis, no clear job description, hence analysis and use of data to inform programme were limited

01 | Context

United Nations Population Fund (UNFPA) Asia and Pacific Regional and Lao PDR Offices have been working jointly with national health partners to encourage countries to use real-time health management information systems (HMIS), such as the DHIS2 platform, to enable the monitoring of sexual, reproductive, maternal, newborn, child and adolescent health (SRMNCAH) service usage and system disruptions as well as changes in mortality and morbidity outcomes. Having a responsive HMIS is critical as it allows for regularly and timely adjusted strategies to realise accessible and quality care. In order to paint a comprehensive picture of SRMNCAH data in Lao PDR, UNFPA initiated an assessment of national data collection practices, data quality and completeness, as well as local capacity needs and gaps of the HMIS. This was achieved with a comparison of national practices against the World Health Organization-recommended DHIS2 data collection package.

02 | Health Management Information System in focus

Lao PDR has been using the DHIS2 platform as its national health management information system since 2014. It acts as an integrated data warehouse to collect data from multiple health programmes encompassing SRMNCAH, in-patient data/out-patient data, malaria, tuberculosis, HIV and disease surveillance. The system is hosted in the cloud and managed by HISP[1] Viet Nam, Lao PDR's HMIS technical partner, rather than hosted locally within a government data centre.

SRMNCAH data picture

The Ministry of Health (MoH) has invested in expanding data collection for SRMNCAH through the DHIS2 platform. SRMNCAH data is submitted as a monthly aggregate, following a well-defined protocol to assess data completeness and timeliness. The MoH is currently piloting a switch to case-based individual registries for some SRMNCAH data, to remove the need for aggregation. As such, all health facilities are being trained to report on the first antenatal care visit and deliveries using the DHIS2 case-based register. Currently, a well-defined timeline for collecting and reviewing SRMNCAH data from the previous month exists, with the review process to be completed within 25 days the following month. Timeliness rates for reported SRMNCAH data are high, at more than 90 per cent on average for each monthly report. Data quality reviews, using DHIS2 Data Quality App, are performed on request. In each province, core teams have been established to provide on-site training and local support to ensure system implementation and address local capacity-related challenges.

03 | Key findings of the assessment

To gain an accurate and meaningful overview of Lao PDR's health management information system, particularly data collection practices, quality and completeness for SRMNCAH health indicators, a joint team comprised of members from the HISP Vietnam and Lao PDR offices as well as the Ministry of Health assessed HMIS functionality in five areas: 1) current status of HMIS, 2) SRMNCAH health data collection and use, 3) human resource capacity for data collection and review, 4) supplemental data sources that contribute to SRMNCAH programmes and 5) key challenges and future plans for strengthening SRMNCAH data.

Data collection practices for SRMNCAH

MoH has invested in expanding data collection for SRMNCAH through DHIS2 which is submitted as a monthly aggregate, following a well-defined protocol to assess data completeness and timeliness. The system will be moving to case-based individual registries for some SRMNCAH data, to replace the need for aggregation which is currently being piloted.

The majority of SRMNCAH data is collected and entered directly at facility level using electronic forms.

Different SRMNCAH forms exist in parallel, causing data quality and duplication issues.

Copies of aggregate reporting forms and individual registers are sent, in some cases, to district offices for manual entry on a monthly basis.

As an unknown number of health facilities directly enter data, it should be mapped to pinpoint gaps in capacity for direct data entry.

Routine information on SRMNCAH services coverage and utilisation is supplemented by survey data from demographic, health and Multiple Indicator Cluster (MICS) surveys.
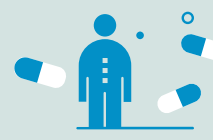
m-Supply stock data is used by programme to look at stocks of reproductive and maternal health commodities and drugs available within the health system.

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[1] HISP Vietnam is a member of the global HISP network, coordinated by the Informatik Department at the University of Oslo. Located in Ho Chi Minh City, Vietnam, HISP Vietnam provides services related to the development, implementation, and training of health information management systems (HIMS) using DHIS2 software. DHIS2 is an open-source, web-based HIMS platform developed by HISP.

Data quality, analysis and reviews

A well-defined timeline for collecting and reviewing SRMNCAH data collected in the previous month exists, with over 90% on average for each monthly report and Data quality reviews are performed when requested.

- SRMNCAH data elements and indicators reviewed against the World Health Organization module revealed that a total of 76 out of 124 data elements are routinely collected by the national HMIS and 61/114 indicators can be routinely calculated on demand based on the set-up of the current DHIS2 programme dashboard.

- Challenges among programme staff in understanding collected data and calculating appropriate indicators are apparent.

- Defined mechanisms standardised for routine data quality review and analysis are absent.

- Presentation of SRMNCAH data to stakeholders is ad-hoc without recurring meetings or timeframes to discuss this information.

- The Department of Planning and Coordination is planning to re-start quarterly meetings with partners and monthly meetings occur at lower levels of the health system.

Human resources capacity for data collection and reviews

Core teams in each province in Lao PDR have been set up to provide on-site training and provide local support to ensure system implementation and address challenges with local capacities.

- Clear job descriptions for data collection, monitoring and evaluation, and analysis of SRMNCAH programme data are absent.

- Health workers and programme staff reported high volumes of data requests and to manage data collection and reporting processes.

- Limited capacity building planning and training to address improved data collection, analysis and usage issues.

- Despite a limited structured approach to define key responsibilities and tasks for programme monitoring and evaluation, some programme capacity to work with DHIS2, analyze programme data and produce reports exists. However, the frequency of such activities by SRMNCAH programme staff is unclear.

Key Challenges

During the process of determining these key findings, three key challenges emerged:

There are no plans to revise Lao PDR's data collection tools or procedures.
This is compounded by key burdens for health workers and programme staff who reported a high volume of data requests and time pressures in managing data collection and reporting processes. As a result, adding new variables or indicators for data collection will be onerous based on current work practices.

The process of referencing multiple logbooks to create monthly summary reports was reported as cumbersome by health workers and can increase risks of inaccurate data collection and reporting with in the national system.

There are limited routine data quality reviews and no clear mechanisms outlining how data can be reviewed and shared.

04 | Recommendations

In response to the three groups of assessment findings outlined above, as well as the key challenges, the overarching recommendation is to develop a plan of action by UNFPA in consultation with Lao PDR's Ministry of Health to determine optimal solutions based on current capacity and time constraints faced by programme staff and health workers. This shall take into consideration well-established SRMNCAH and HMIS policies and procedures for data collection, while focusing on reviewing other sub-optimal procedures and practices. Further recommendations are as follows:

Data collection practices for SRMNCAH

01
Data collection procedures implemented to collate SRMNCAH information at health facilities should be reviewed, with a focus on mapping facilities where paper-based data collection still takes place.

02
Systematization of data quality checks: a data quality dashboard could be added with an institutionalised procedure touse DHIS2 data quality tools on a monthly basis.

03
Support transition from aggregate level data to individual case-based data, while taking care to avoid duplications or omissions.

Data quality, analysis and reviews

01
SRMNCAH areas in need of additional data elements and indicators are: antenatal care, postnatal care for mothers and newborns as well as screening, such as for cervical cancer.

02
Addition of data elements and indicators would ensure improvements in data availability on essential SRMNCAH services.

03
Strengthening data collection on some elements and indicators already available (maternal deaths) could improve determination of key national indicators (MMR) and reduce duplication in other data sources.

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Human resources capacity for data collection and reviews

01 Conduct a capacity building needs assessment to determine long-term capacity needs of the SRMNCAH programme focussed on performance issues (staff job descriptions, staff evaluation) and learning issues (staff training, mentoring)

02 Refresher courses on DHIS2 skills for improved use of data would be helpful, as well as joint DHIS2/SRMNCAH training on appropriate data analysis and improved interpretation of data.

03 UNFPA-supported training for HMIS and SRMNCAH programme officers (online webinars to address topics DHIS2 analytics features, data quality and reviews, SRMNCAH data use).

04 UNFPA-backed in-person training programmes, DHIS2 academy-style, to consolidate initial knowledge gained through virtual capacity-building sessions, and bring together country teams for hands-on practice with a focus on understanding common principles associated with reviewing data quality for SRMNCAH in DHIS2, utilizing data quality features available within DHIS2, explaining and constructing DHIS2 core items for data analysis and quality reviews and using SRMNCAH data to create interpretation frameworks based on global programme guidance.