# Promoting Good Data Through a Data Competition in Mali

## Background

The quality of health data is fundamental to a health information system (HIS). In 2013, the HIS in Mali was assessed using the Performance of Routine Information System Management (PRISM) tool and it was determined that Mali should deploy an integrated platform to improve the HIS. A plan to strengthen the HIS then became part of the country's Ten-Year Health and Social Development Program (PRODESS II).

Soon after, in August 2015, the country chose the DHIS 2 platform to house its health data—a big step forward toward a stronger HIS. The platform first was deployed nationwide at the district, regional, and national levels and in the health facility level in 2016. The implementation of DHIS 2 has resulted in improvements in data collection, data transmission, processing, analysis, security, availability, and data quality.

MEASURE Evaluation Chief of Party Aminata Traoré congratulates a representative of the Ministry of Public Health and Hygiene in Bamako, Mali.

To take advantage of the enthusiasm among decision makers and others in the health sector, and to reinforce the value of good-quality data, Mali initiated a competition in December 2017 among all data producing units at all levels of the health system. The goal was to foster the production of high-quality data, promote excellence in skills, foster a culture of data use, and provide consistency in data management. Other goals were to create friendly competition among health units and to motivate health units to be timely in reporting data.

MEASURE Evaluation, funded by the United States Agency for International Development (USAID), had assisted with the deployment of DHIS 2 and helped plan the competition, assisting representatives from the central level of the health system to establish rules for the competition, judging, and awarding of prizes to the winners.

## Competition Details

The competition was built on data reporting for specific health indicators (see Annex 1), for example:

- *At facilities:* the percentage of pregnant women receiving intermittent preventive treatment (IPT) for malaria, the percentage of live births with active management of the third stage of labor, and the recovery rate for severe cases of malnutrition
- *In districts:* the proportion of births assisted by skilled attendants, percentage of malaria cases confirmed from cases tested in health facilities, and rate of completion of maternal
- *At hospitals:* the number of hospitalizations, the number of hospital visits, and the violation of data validation rules

Each participating health unit (all country districts and hospitals, and 96 percent of health facilities using DHIS 2) was ranked according to an average "score" from 2017 data reporting. The score for all levels was based on completeness of reports (minus points for missing data) and report timeliness—with points subtracted for improper data validation.

## Awards Ceremony

The awards ceremony was chaired by a MOH senior technical advisor. Also attending were the assistant director of the USAID health team, a representative of the Mayor of Commune IV, the chief of party of the MEASURE Evaluation project, the head

of the cabinet of the Ministry of Woman Promotion, Family and Infants, and a representative of the Ministry of Solidarity and Humanitarian Actions. The competition followed and participants heard interactive presentations on HIS management practices at all levels.

Some of the HIS management challenges and solutions discussed were:

- Lack of internet connectivity
- Interruption in electrical supply
- Conflict and insecurity
- Lack of supervisor involvement
- Need for additional staff training

Presenters offered solutions for the improvement of data quality and use, including more regular trainings, data entry in DHIS 2 during monthly meetings in more secure locations, and management training for supervisors.

The event closed with awards given to the winning health units and the presentation of certificates of recognition to regional health directorates (DRS) in Kayes, Koulikoro, Sikasso, Ségou, and Mopti. Government units and groups that supported the deployment of DHIS 2, implementing partners, and members of the technical team were also recognized.


In addition to certificates, winning participants were awarded prizes to support continued improvement in data management and use. Some received external hard drives, digital tablets, printers, laptops, video projectors, or tuition scholarships for the MEASURE Evaluation routine health information system (RHIS) management course at the University of Bamako's school of public health. Following the competition, the Hôpital du Mali expressed its commitment to data quality for routine health systems and provided scholarships to the RHIS course at the school of public health for two of its data officers. The hospital also trained its data managers in the use of DHIS 2 to improve the collection, quality, and use of data.

## Conclusion

This first annual data competition fostered positive "rivalry" among health units and contributed to their appreciation for good data quality. The health units that participated in the competition and those that won have become champions in sharing and promoting good health information practices.


## Annex 1. Evaluated criteria

| Structures | Reporting performance | Data quality | Performance indicators (weight = 100 per indicator) |
|---|---|---|---|
| **Health facilities** | Completeness of the reports: 100% (weight = 50)<br><br>Timeliness of reports ≥ 80% (weight = 150) | **Missing data:**<br>Number of CPN1 and Penta 1 (Weight = - 50 points per missing data)<br><br>Data validation rules: Reproductive Health and Vaccination Form<br>-50 points per violated rule | • % of pregnant women who received 3 or more doses of intermittent preventive treatment (IPT)/sulfadoxine-pyrimethamine (SP) during their last pregnancy<br>• % of delivery with active management of the third stage of labor (application of the Gestion Active de la Troisième Période de l'Accouchement (GAPTA)<br>• % confirmed cases of malaria on cases tested in health facilities<br>• recovery rate of severe acute malnutrition |
| **District** | Completeness of the reports: 100% (weight = 50)<br><br>Timeliness of reports: ≥ 50% (weight = 150) | **Missing data:**<br>Number of CPN1 and curative consultation (NC + AC)<br>(Weight = lose 50 points for missing data)<br><br>Violation of validation rules: Reproductive Health Form and Curative Consultation<br>-50 points per violated rule | • (weight = 100 per indicator)<br>• Proportion of deliveries assisted by qualified personnel<br>• % of malaria cases confirmed on cases tested in health facilities<br>• Rate of completion of maternal death audits<br>• Recovery rate of severe acute malnutrition |
| **Hospital** | Completeness of the reports: 100% (weight = 50)<br><br>Timeliness of reports: ≥ 40% (weight = 150) | **Missing data:**<br>Number of hospitalizations<br><br>Number of hospital visits (Weight = lose 50 points for missing data)<br><br>Violation of data validation rules: Hospital information report; lose 50 points per violated rule | **Missing data:**<br>• Number of hospitalizations<br>• Number of hospital visits (Weight = 50 points for missing data)<br>• Violation of data validation rules: Hospital information report -50 points per violated rule |

The evaluated criteria in Annex 1 included data from 1,370 health facilities, 74 districts, and 13 hospitals. The technical commission selected the winners for 2017 having the best quality data in DHIS 2—five health facilities, two districts, and one hospital.

## Annex 2. Select good practices (by level) that were shared during interactive sessions and presentations at the data competition:

### Health facility level

- Involvement of all stakeholders (the City Council, ASACO [the Community Health Association], village chiefs, and community health workers) in carrying out the activities of the health center
- Division of tasks and responsibilities among staff members of the health center
- Motivation of the staff
- Communication between the community and the health center
- The collection and analysis of reporting data at the right time
- Completion of all forms in the DHIS 2
- The involvement and accountability of all staff in the reporting of data center activities
- The interest of decision makers (ASACO and management committee) in data reporting

### District level

- Use of mobile phones for improved connection to DHIS 2 in certain areas
- Regular control of the data entered by the local health information system (Système Local d'Information Sanitaire, or SLIS) officer with a system of feedback to the health center technical director (directeur technique du centre) and the chief medical officer
- Ad hoc technical assistance of SLIS support physician and SLIS officer to director of the health facilities with difficulties in using DHIS 2
- Preparation of unit reports from the first to the fifth of the month, followed by entry into DHIS 2
- Entering reports in DHIS 2 before the deadline (the 10th of each month)
- Systematic analysis of data entered to correct outliers
- Verification of accuracy, completeness, and timeliness of data submitted to DHIS 2
- Comprehensive collection and analysis of data at the end of each month
- Purposefully monitoring indicators over time
- Feedback provided to all levels every month

### Hospital level

- The public health and medical informatics unit play an important role in data quality in DHIS 2
- The availability of data entry staff and data entry upon receival of reports
- The availability of computers
- Strong and frequent interaction between the service supervisors, the public health department, and the hospital management
- CPS's feedback to the hospital on data quality
- Frequent feedback
- Verification and correction of data when necessary
- Periodic analysis of data through graphs and cross-tabulations

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