DRC-IHPplus
TECHNICAL HIGHLIGHT

Integrated Health Project Plus

in the Democratic Republic of Congo

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msh Management Sciences for Health

Photo by Warren Zelman

Strengthening Health Data Reporting and Improving Data Quality Use by Integrating National and Project DHIS 2 Instances
Experiences from the DRC

Context and Justification

The availability of timely, high-quality health data remains a challenge in the Democratic Republic of the Congo (DRC), despite some significant progress. DRC is a vast, landlocked country where the distances between health facilities, especially at different levels of the health system, are often great. Data flow, and consequently data- and information-driven decision making, is therefore challenging.

To tackle these challenges, in 2014, the Ministry of Health (MOH) adopted DHIS 2 as the only software used at the national level for health data management. The National Health Information System (NHIS) was then rolled out in three phases: a pilot and learning phase (March 2014 to June 2015), the scaling-up phase (July 2015 to June 2016), and the finalization phase (July 2016 to December 2016). The complete rollout of the NHIS improved data quality and timeliness, but additional advances were still needed. Further progress was limited, mainly due to poor internet connectivity, a lack of suitable computers to enable use of DHIS 2, and the low skills of data managers and other stakeholders.

In 2015, the US Agency for International Development (USAID)-funded Integrated Health Project Plus (IHPplus) also adopted DHIS 2 as its in-house data management system. Approximately 80% of the project's monitoring and evaluation (M&E) data are also being reported through the NHIS, resulting in an increased reporting burden, both for MOH data managers at the health zone level and for IHPplus M&E staff. Health zone data managers entered data that they received from health facilities (the NHIS reports) into the NHIS, and then also entered it on spreadsheets that were provided to IHPplus. The project's M&E staff then transferred data from those spreadsheets, entering it manually into the project's DHIS 2 instance. These duplicative steps presented opportunities to simplify data flow by aligning the project's DHIS 2 with the NHIS DHIS 2 instance.
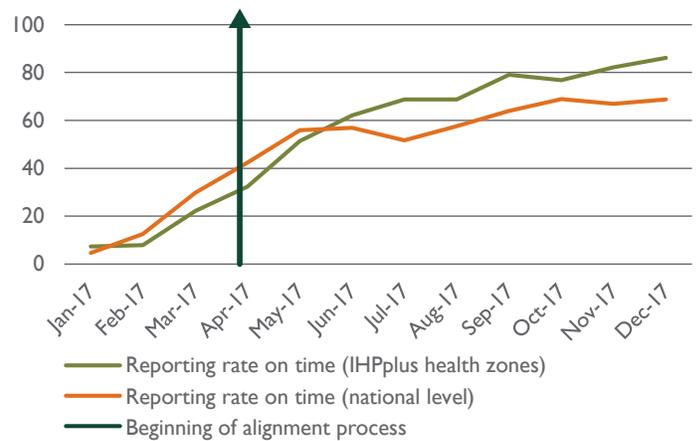

Figure 1. On-time reporting rates

Implementation Approach and Output (Data Availability and Reporting on Time)

On the basis of an in-depth assessment to identify bottlenecks and propose a more streamlined process to improve the availability of timely data, IHPplus and the MOH's national health information division:

- Developed a complementary module within the MOH's DHIS 2 that enables collection of data related to project indicators that are not currently captured in the NHIS (April 2017)
- Equipped 78 health zones covered by IHPplus with IT equipment and a consistent internet connection to ensure ongoing use of the NHIS (June-August 2017)
- Stopped filling in spreadsheets for IHPplus and began pulling data from the NHIS (June 2017)

- Added "80% on-time reporting rate" to the list of indicators used for IHPplus's monthly grant payments to health zones (June 2017)
- Trained and built capacity of health zone data managers on the complementary module (June 2017)
- Completed interoperability between the NHIS and IHPplus DHIS 2 instances (November 2017)

These implementation actions improved the availability and timeliness of routine health data from the project-supported health zones. The on-time reporting rate has now surpassed the national rate (figure 1).

Implementation Approach and Output (Data Analysis and Use)

Improving the availability of data through DHIS 2 by effectively integrating and aligning project data flow has significantly improved on-time health reporting (figure 1). Because the data are now available in a timely manner, improving data quality, data analysis, and data demand and use at every level of the health pyramid is now possible.

To achieve these improvements, IHPplus collaborated with the NHIS division to develop and implement the following activities:

- With the NHIS division, developed and adopted a tool called the "*Outil de Supervision de la Qualité des Données*" (OSQD, or in English, Data Quality Supervision Tool) that has been integrated into the MOH DHIS 2 instance (figure 2) with the possibility of using it on a tablet through DHIS 2 data capture extension. This supervision tool should be used monthly by health zone teams in selected health facilities.
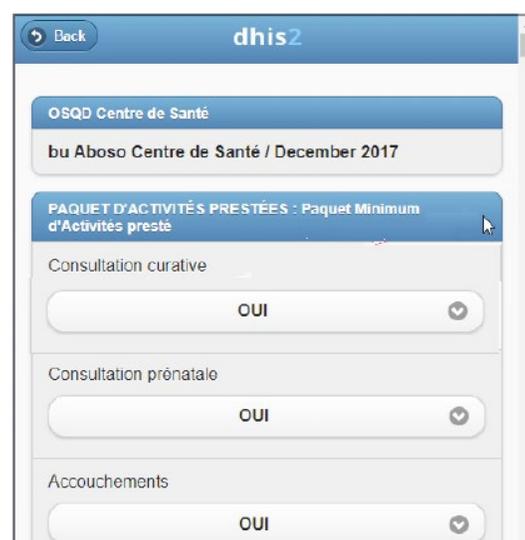

Figure 2. Screenshot of OSQD

- Developed dashboards in the MOH DHIS 2 instance to show trends in data quality improvement over time at the facility, health zone, the provincial health division (DPS), and national levels (such as that presented for family planning in figure 3).

IHPplus and the MOH developed dashboards, guidelines, and tools to improve data quality, analysis, and use to facilitate quarterly monitoring meetings and reporting. These tools and guidelines have been rolled out at the project's target health zones and DPS, and 240 staff have been trained.
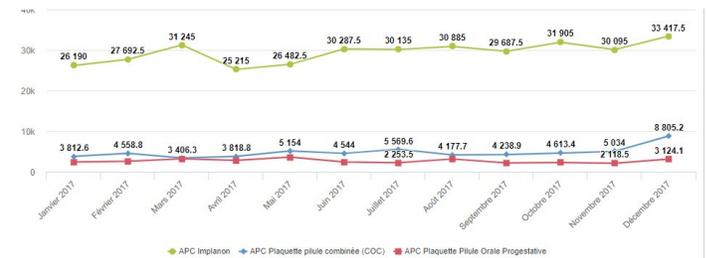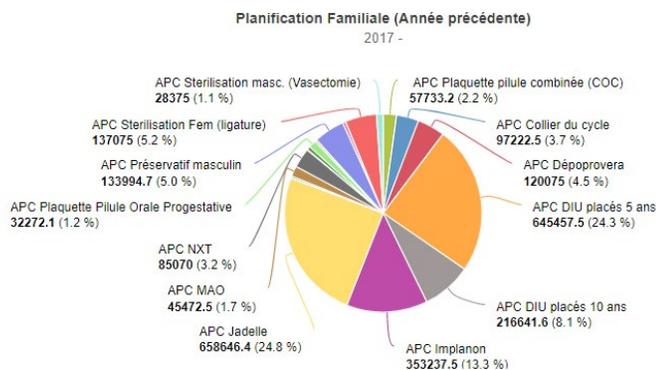

Figure 3. Screenshots from DHIS 2

Challenges

The main challenges included the following:
- Health facilities are often created and closed down within a single year due to political instability. For this reason, IHPplus mapped data elements and organizational units to pull data from the MOH's DHIS 2 at the health area level rather that at the health facility level
- The manual entry of health center data in DHIS 2 by health zone data managers does not consistently follow the DSNIS protocol, including verification, correction, and approval during the monthly monitoring meeting, and may result in data errors
- The culture of analyzing data to understand what they mean for the program or service, and to inform decisions at each level of the system (health facility, health zone, DPS, central level) should be prioritized

- Lack of mobile data coverage in some health zones (since available satellite-based data solutions are not cost-effective)
- High turnover of health zone data managers
- Unclear job descriptions: although health zone teams adopted the new complementary module as part of the MOH DHIS 2 instance, it took some time for data entry to begin because they did not realize this new task was part of their job
- Slow adoption of new tools and guidelines by DPS and health zone teams: after the training, it took some time to institutionalize their use because people were continuing to work with the previous tools and old guidelines

Conclusions

This effort to align the IHPplus DHIS 2 with the MOH's DHIS 2-based NHIS strengthened the NHIS and contributed to better health care through data-driven decision making. The integration and development of guidelines and tools:
- Reduced the burden of parallel reporting and promoted more efficient use of resources
- Improved timeliness of data
- Improved data quality both for data-driven decision making within the national health system and for measuring project performance
- Created better conditions for data analysis and use at every level of the health pyramid

- Created better coverage of health facilities on supervision of data quality
- Made available a dashboard for effective monitoring of data quality trends at every level of the health pyramid
- Made data more consistent among health sector stakeholders
- Created an important data sharing and collaborative framework for health sector stakeholders
- Created ongoing opportunities to further improve data quality, analysis, demand, and use