Improving data collection

with the District Health Information System 2 (DHIS2)

Key messages: **The revised DHIS2 is an online data management tool that improves access to information for health professionals.**

1. It provides a comprehensive system for capturing complete, correct and consistent data at all levels in both online and offline modes.
2. Information can be accessed from any location with a computer and an internet connection.
3. DHIS2 has revolutionised access to Health Management Information System (HMIS) data not just in the northern states, but across Nigeria, allowing real-time information to influence decision making.

The challenge: lack of complete, correct and consistent data

Routine health management information systems (HMIS) are plagued by a lack of the '3Cs':

- Complete data due to submission delays
- Correct data due to poor data capture
- Consistent data due to inadequate supervision and monitoring

Complete, correct and consistent data gives managers the confidence to use that data in decision-making.

Routine health information systems were strengthened by the DHIS under the Partnership for Transforming Health Systems (PATHS1) programme in 2002. The District Health Information System (DHIS) is free and open source software that is used in many countries in Africa such as Ethiopia, Botswana, Tanzania, Zambia, South Africa and Nigeria. The Federal Ministry of Health in Abuja has officially adopted the DHIS as the HMIS software for the country.

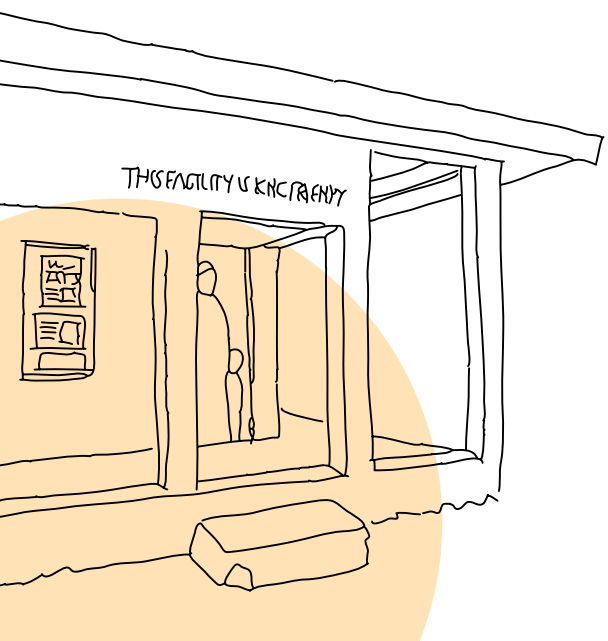
PRRINN-MNCH introduced version 1.4 of the software to three of its programme states (Katsina, Yobe and Zamfara) in 2007 while it built upon the work of PATHS1 in Jigawa. This led to significant improvements. For example, in Yobe, data collected became suitable for managers to compare trends over a year and between years.

However, there were still issues with the 3Cs and thus the timely use of data for decision-making.

The response: comprehensive online data capture

In 2010 Zamfara explored the use of version 2 of the DHIS software (web-based) to capture the national NHMIS summary form, known as NHMIS 001, with support from HISP Nigeria. The DHIS2 operates on a Java-based framework and can run in both online and offline modes. It provides a comprehensive solution for the reporting and analysis of health data at all levels. This led to the DHIS2 replacing the DHIS1.4 across the whole country.

Building local capacity: the capacity of state and all local government authority (LGA) HMIS officers has been built on the use of the DHIS software. HMIS officers/assistants in all 92 LGAs in the four states are now able to capture and retrieve data from the HMIS website while the state HMIS officers are able to generate reports which are usually presented to management as well as discussed during performance reviews.



THIS DOCUMENT IS ONE OF A SERIES OF KNOWLEDGE SUMMARIES THAT DRAW ON THE ACTIVITIES, RESULTS AND LESSONS LEARNED FROM THE PRRINN-MNCH PROGRAMME

Fig 1: Sample DHIS2 data charts

DHIS2 allows managers to analyse trends and patterns.

Infrastructure: all the state and LGA/Gunduma HMIS offices have the requisite infrastructure, notably laptops and modems which were provided by development partners or the state government.

Data quality self-assessment: introduced in all the states, and the capacity of the state HMIS has been built to conduct and analyse the findings of the data quality assessments.

Intra and interstate HMIS reviews: a system for regular HMIS reviews within the respective states has been introduced with varying degrees of success. Interstate reviews, which bring together HMIS officers and policy makers from all four states, provide a forum for cross-state sharing thereby promoting learning and knowledge transfer. The main focus is on reviewing progress in HMIS in terms of the whole information cycle.

The results: DHIS2 has revolutionised access to HMIS data

The DHIS2 software is now being used in all four PRRINN-MNCH states. The introduction has revolutionised access to HMIS data not just in the four states but across the country as a whole. Real time health statistics from the four states (and all other states), which hitherto was not readily available, is now accessible from any location provided there is a laptop and an internet connection. NHMIS data from June 2011 for Zamfara and from January 2012 for the other three states are now available online.

Building capacity, providing the tools, the reviews and the data quality self-assessments have all improved the completeness, the correctness and consistency of the data. For example, for completeness: the percentage of all health facilities in the state that have submitted their HMIS data has increased significantly. The rates are over 80% in Jigawa and Katsina and up to 92% in Zamfara. In Yobe rates are lower due to the recurrent security challenges. Similarly, timeliness of data submission is above 80% in the states except for Yobe.

Policy implications

Collaboration between PRRINN-MNCH and HISP-Nigeria catalysed the adoption and use of the web-based DHIS2 software in the whole country and marks a significant milestone in the history of strengthening HMIS in Nigeria.

Conclusion

Strengthening the completeness, correctness and consistency of health data, through the introduction of the DHIS2, has ensured that states across Nigeria are using real-time information to guide decision-making.

PRRINN-MNCH

Partnership for Reviving Routine Immunisation in Northern Nigeria; Maternal Newborn and Child Health Initiative

The PRRINN-MNCH programme works with federal, state and local governments and local communities to improve the quality and availability of maternal, newborn and child health services.

www.prrinn-mnch.org

Email: info@prrinn-mnch.org

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