Name *EMR* *Contact Information* *Date of capture* *Date of Birth* *Fingerprint* *Place of Birth* *Revalidated By NDR*

Enhancing Patient Identification with PIMS: A Step Towards Streamlined Healthcare Management

In this current edition, we bring you exciting news from the world of healthcare innovation. The Patient Identity Management System (PIMS) is poised to revolutionize the way patient data is managed and ensure a seamless experience for patients receiving antiretroviral therapy (ART).

Building on the foundation of the existing NDR patient biometric system utilized by Government-led Electronic Medical Records Systems (EMRS) across Nigeria, PIMS aims to refine and enhance the process of patient identification. Its primary objective is to offer ART clients a seamless experience, ensuring their medical records remain consistent regardless of their place of registration, or where care services is being sought. This novel approach is designed to tackle the prevalent issue of duplicated patient records, thus, elevating the standards of client management.

Recognizing the potential challenges of implementing the patient identity management system, a Supersite Readiness Assessment was conducted across the country. The assessment measured the infrastructure and human resource capacities of the selected facilities, evaluating their suitability as model sites for the implementation of PIMS.

The feedback from the assessment was constructive, highlighting several improvement areas. Notable recommendations included ensuring consistent power for computer servers, procuring functional tablet chargers, and replacing inadequate infrastructure components, such as malfunctioning inverters. The assessment also identified the need for more hands-on-deck, with a call for additional staff, and technological upgrades, like transitioning from laptops to dedicated servers for hosting EMRs.

To bolster PIMS's efficacy, the assessment offered tangible recommendations. This encompassed enhancing fingerprint capture quality, refining the capture environment, and making user-friendly tweaks to systems like LAMIS-Plus EMR. Suggestions like displaying fingerprint quality, visualizing hand and finger images during capture, and indicating internet strength were proposed.

The journey of PIMS promises to be a significant milestone in the advancement of healthcare technology.

Editorial

Welcome to another edition of the NDR Quarterly Newsletter. In this issue, we dive into topics crucial to our mission of combating HIV/AIDS and viral hepatitis in Nigeria. From enhancing patient identification with the Patient Identification Management System (PIMS) to streamlining HIV data reporting through NHMIS and NDR integration, we are making substantial progress toward streamlined healthcare management. The introduction of the Electronic PMTCT (E-PMTCT) module empowers data collection in PMTCT programs, while our strategies for advancing HIV disease care and a spotlight on Nigeria's ongoing battle against HIV/AIDS and viral hepatitis underline the importance of our collective efforts.

The NDR Quarterly Newsletter is a testament to the commitment and achievements of our community, and we hope that the knowledge and insights shared in this edition will inspire and inform your work. Thank you for your ongoing support and dedication to improving healthcare in Nigeria. Together, we are making a difference, one step at a time.
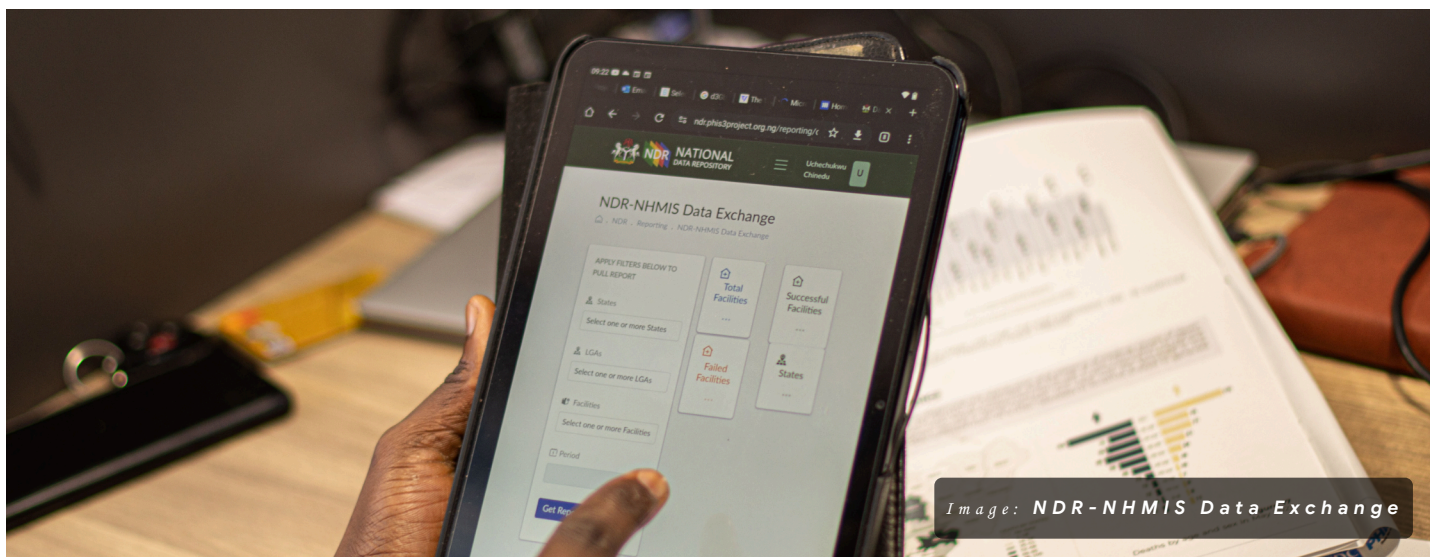
- Nnamdi Umeh

Streamlining HIV Data Reporting: NHMIS and NDR Integration

In the realm of healthcare data management, a significant milestone has been reached with the integration of the National Health Management Information System (NHMIS) and the National Data Repository (NDR). This endeavor was undertaken to ensure a unified and accurate source of HIV data at the national level.

The NHMIS, primarily operating as a DHIS2 instance, serves as a vital platform housing aggregate health data for the entire country, encompassing crucial HIV data. However, the NDR emerges as the primary and more up-to-date source of HIV data. This is attributed to all healthcare facilities offering HIV care utilizing Electronic Medical Records (EMR) systems, regularly uploading their data to the NDR. Consequently, the NDR provides a near real-time stream of data.
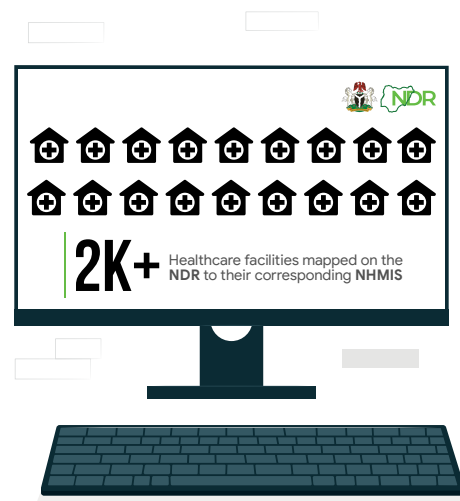
To establish a single source of valid HIV data reported at the national level, the integration of both systems, NDR-NHMIS, became imperative.

The primary purpose of this integration is to periodically synchronize the National DHIS2 platform with HIV data directly sourced from the NDR. This harmonization ensures that the HIV numbers reported on the NHMIS align seamlessly with the data on the NDR. To achieve this, three critical datasets were chosen: HTS (HIV Testing Services), ART (Antiretroviral Therapy), and PMTCT (Prevention of Mother-to-Child Transmission).

The integration process commenced with a meticulous mapping of over two thousand healthcare facilities on the NDR to their corresponding facilities on the NHMIS. Subsequently, a background service was developed to efficiently retrieve data from the NDR based on these designated datasets. This data was then meticulously mapped to their respective data elements on the NHMIS platform.
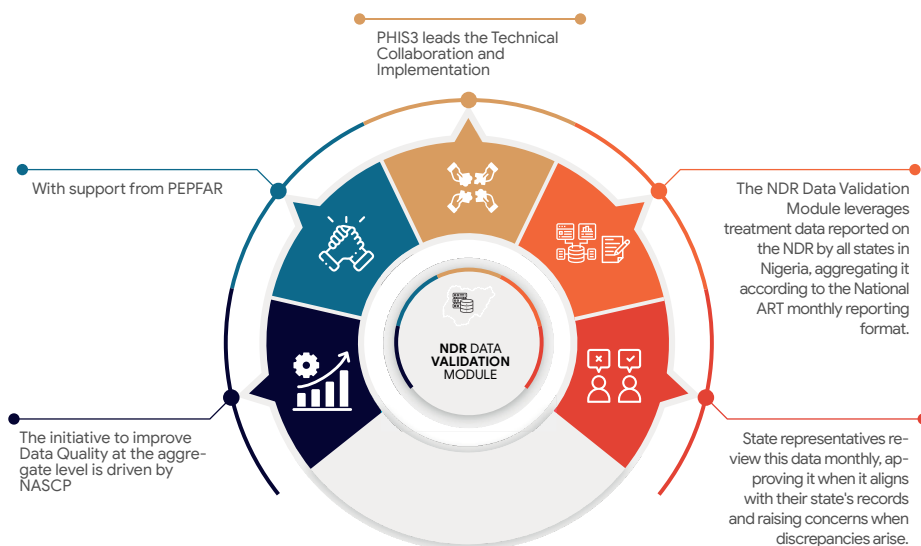
We are pleased to announce that the integration has been successfully completed, marking a significant advancement in healthcare data management. Final checks are currently underway to ensure the system's readiness before it is deployed live. This integration not only guarantees consistency and accuracy in HIV reporting but also represents a remarkable achievement in healthcare technology, promising a more streamlined and data-driven approach to addressing critical health issues. Stay tuned for further updates as we continue to forge new pathways in healthcare data management. we look ahead, we anticipate further developments and refinements in the system, ensuring that patients across the nation receive the highest quality of care with a streamlined and efficient approach to their medical records.

2K+ Healthcare facilities mapped on the **NDR** to their corresponding **NHMIS**

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PHIS3 leads the Technical Collaboration and Implementation

With support from PEPFAR

The initiative to improve Data Quality at the aggregate level is driven by NASCP

NDR DATA VALIDATION MODULE

The NDR Data Validation Module leverages treatment data reported on the NDR by all states in Nigeria, aggregating it according to the National ART monthly reporting format.

State representatives review this data monthly, approving it when it aligns with their state's records and raising concerns when discrepancies arise.

Precision Data for Health: NDR Data validation module

The National Data Repository (NDR) in Nigeria, a crucial component of the healthcare system, has been managing records for over two million patients and is continually growing. The focus has recently shifted towards improving data quality, especially at the aggregate level, as the NDR expands to accommodate various programmatic and reporting modules.

This initiative is driven by the National AIDS and STIs Control Program (NASCP) and supported PEPFAR, with technical collaboration and implementation led by PHIS3. The innovative module leverages treatment data reported on the NDR by all states in Nigeria, aggregating it according to the National Antiretroviral Therapy (ART) monthly reporting format. State representatives review this data monthly, approving it when it aligns with their state's records and raising concerns when discrepancies arise.

Collaborative efforts among PHIS3, NASCP, CDC Nigeria, and other stakeholders have led to successful integration of this module within the health information system. It's important to highlight that this module is the result of coordinated technical collaboration between PHIS3's Health Informatics and Monitoring and Evaluation arms, guided by the Government of Nigeria's (GoN) vision under NASCP.

The module is now fully operational on the live NDR server, following rigorous testing and feedback sessions with NASCP field officers. With their input, the module is ready for deployment. The Government of Nigeria is prepared to launch this transformative product for use across all states, marking a significant advancement in ensuring accurate and reliable healthcare data at the aggregate level.

This initiative represents a collective effort to enhance data quality in Nigeria's healthcare system, promising to play a pivotal role in advancing the nation's public health initiatives. It underscores the commitment to precision and excellence in healthcare data management, shaping the future of healthcare in Nigeria. Stay tuned for further updates as this transformative module is officially rolled out.

Empowering PMTCT Reporting: The E-PMTCT Module Revolutionizes Data Collection
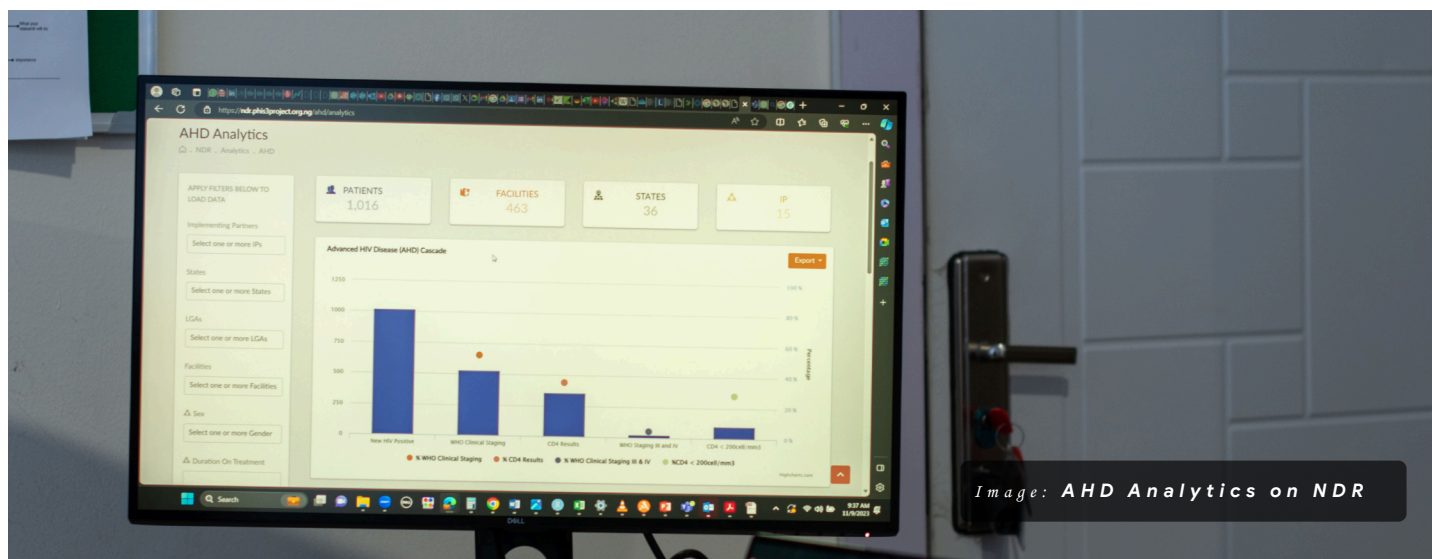
In a bid to enhance the Prevention of Mother-to-Child Transmission (PMTCT) program, the National AIDS and STIs Control Program (NASCP) took the initiative to optimize data collection. NASCP entrusted the task to the PHIS3 team, resulting in the creation of the E-PMTCT module on the NDR Lite. This module serves a vital purpose, coordinating PMTCT reporting for Primary Healthcare Centers (PHCs) lacking the capacity to report via the DHIS.

The E-PMTCT module consists of a user-friendly data entry page featuring validation rules to ensure data accuracy and quality. Additionally, it incorporates a data extraction table that enables stakeholders to download the entered data for further analysis. This module is seamlessly linked to the National Data Repository (NDR), allowing data to be effortlessly pulled from the reporting table into the NDR. The NDR also provides analytical tools, offering a snapshot of reported PMTCT data from the NDR Lite.

The success of the E-PMTCT module has been remarkable, with implementation across all 36 states and the Federal Capital Territory (FCT). PHIS3 played a pivotal role in supporting this expansion in states such as Imo, Benue, Abia, Adamawa, Bauchi, Rivers, and Sokoto, providing ongoing technical assistance to NASCP in module usage.

NDRLite - PMTCT
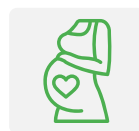
PMTCT

> *The success of the E-PMTCT module has been remarkable, with implementation across all 36 states and the Federal Capital Territory (FCT).*

Local Government Monitoring and Evaluation officers have undergone comprehensive training on utilizing the E-PMTCT module. Their role is pivotal in coordinating PMTCT reporting for PHCs lacking reporting capabilities through the module.

Since the module's inception, an impressive 1,018 sites across 30 states and the FCT have reported data through this streamlined system. The E-PMTCT module stands as a testament to the power of innovation in improving data collection for critical healthcare programs. Stay tuned for more updates on how this module continues to advance PMTCT efforts across Nigeria.

Image: *AHD Analytics on NDR*

Advancing HIV/AIDS Care in Nigeria: Progress, Challenges, and Collaborative Solutions

In the field of Advanced HIV Disease (AHD) care, the last two years have brought forth a mix of advancements and obstacles. Biannual gatherings of AHD stakeholders have been pivotal in uncovering programmatic challenges and crafting effective remedies. The nationwide expansion of the AHD package of care across supported states has played a critical role in addressing these program gaps.

The most recent gathering in September 2023, featuring the participation of funding agencies, technical support partners, and relevant bodies like USAID[1], DoD[2], CHAI[3], NEPWHAN[4], PMU, and the TB[5] unit of the FMoH[6], underscores a collective commitment to advancing AHD care in Nigeria.

An evaluation of the NDR data sheds light on current AHD data reporting and the achievements of implementing partners. While there have been notable improvements, some partners have faced challenges in reporting CD4 counts for new clients. Despite CD4 cell count testing no longer being mandatory for treatment initiation, its significance in identifying individuals with AHD necessitates continuous improvement.

To bolster AHD care, EMRs such as LAMISPlus and NMRS have integrated screening fields to capture cryptococcal screening status on the Care Card. These updates significantly enhance AHD diagnosis and treatment.

In alignment with WHO recommendations, the National HIV Treatment Guidelines emphasize a comprehensive package of interventions for individuals with AHD, including screening, treatment, prophylaxis for opportunistic infections, rapid ART initiation, and intensified adherence support.

To further advance AHD care, several key recommendations have been put forward:

*   Stakeholder Engagement: Increasing awareness of AHD implementation and reporting at all levels.

*   Monitoring: Intensifying monitoring efforts by all stakeholders and implementing partners.

*   Capacity Strengthening: Regularly enhancing service providers' capabilities through site visits and training.

*   Scale-up and Optimization: Expanding and optimizing AHD implementation and data reporting.

Partners are encouraged to perform concurrent checks between their EMR-generated data and NDR data for client-level analysis and gap correction.

The next steps in advancing AHD care involve addressing the issue of low AHD data reporting by some IP partners on NDR, enhancing AHD analytics on NDR with facility reporting rates, reviewing data-pulling scripts for AHD on NDR, and collaborating with the Government of Nigeria to establish quarterly AHD stakeholders' meetings.

This collaborative effort promises to elevate the quality of AHD care in Nigeria, ensuring that individuals receive the care and support they need in the ongoing fight against HIV/AIDS. Stay tuned for further updates on these critical initiatives.
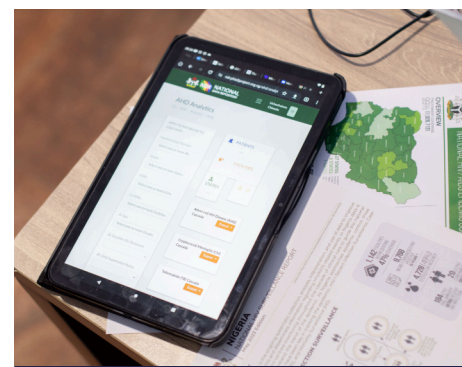
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Biannual gatherings of AHD stakeholders have been pivotal in uncovering programmatic challenges and crafting effective remedies. The nationwide expansion of the AHD package of care across supported states has played a critical role in addressing these program gaps.

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NDRLite - Viral Hepatitis

PMTCT

Viral Hepatitis

Results/Expected Outcomes

The Viral Hepatitis application is currently operational on the NDR Lite staging platform and will soon be fully functional for live data management by stakeholders at all levels of GoN reporting, including Federal, States, and Local Government Areas (LGAs). This significant step forward in data management underscores Nigeria's commitment to tackling HIV/AIDS and viral hepatitis, providing a robust platform to monitor and respond to these critical public health challenges.

Empowering Viral Hepatitis Data Management: A Pivotal Step in Addressing Public Health Challenges in Nigeria.

The Government of Nigeria (GoN), through the National AIDS and STIs Control Program (NASCP), continues its pivotal role in overseeing the national management of HIV/AIDS—a pressing public health concern due to its prevalence and impact. NASCP has expanded its scope to encompass emerging program areas, including the increasingly important battle against viral hepatitis. Globally, over 170 million people suffer from chronic hepatitis C virus (HCV) infections, contributing to over 100,000 cases of liver cancer annually, along with numerous episodes of digestive hemorrhage and ascites. Alarmingly, even developed nations are witnessing a rise in hepatitis C-related deaths due to inadequate detection and treatment. Nigeria is highly endemic for Hepatitis B virus (HBV) infection, and although data on HIV/HBV coinfection is limited, studies have shown coinfection rates ranging from 7.7% to 19% in Nigerian children. Pediatric HBV-HIV coinfection rates may even be higher as most HBV infections occur in African children within their first five years of life. Hepatitis B is a highly infectious blood-borne virus that poses a significant global public health threat, contributing to liver cirrhosis and hepatocellular carcinoma, the third leading cause of cancer-related deaths worldwide.

Interventions

In response to these critical health challenges, PHIS3 has developed an application to support the data management process of viral hepatitis (VH) reporting, aligning with the Monthly Summary Form (MSF) on the NDR Lite platform. This application integrates generated data seamlessly into the National Data Repository (NDR). The collaboration with Data.FI has further supported the development of the MSF on the LAMIS Lite platform, facilitating integration into the NDR.

The mobile and web applications underwent rigorous review, and are ready for NASCP's final approval, followed by version release and the eventual full rollout. PHIS3 has actively engaged with NASCP to ensure continuous improvement and alignment with data management needs. Standard operating procedures have been established to guide users effectively once the module is deployed.

Public Health Information, Surveillance Solutions, and Systems (PHIS3)

PHIS3 is a project of APIN, a non-governmental organization devoted to designing and harnessing innovations in advanced analytics and technologies to provide reliable, accurate data to aid decision making, plan sustainable programs and develop public policies that reach and benefit underserved populations.

By consistently adapting to evolving and emerging trends in public health, information management, and research, we are able to provide quality services that are responsive to the ever-changing needs of our clientele

Our Vision

To be a leader in the provision and management of public health information systems and solutions that are resilient and adaptable to enable efficient delivery of quality services to the populace.

Our Mission

To expand the frontiers of reliable public health information and solutions for decision making at all strata and to be the hub for highquality, timely, and usable health information for stakeholders especially the Government of Nigeria

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