#### Optimizing the monitoring of RMNCAH+N program implementation in Northern Nigeria using a data visualization dashboard: the Kaduna state experience

**Centre for Integrated Health Programs** 

Presented at the Big Data Health Science Conference, South Carolina, USA <sup>by</sup> Collins Imarhiagbe, PhD Director, Strategic Information, CIHP 02.02.2024



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### Background (Intervention setting)

Centre for Integrated Health Programs (CIHP)	<ul> <li>Indigenous NGO based in Abuja, Nigeria since 2011</li> <li>Partnerships (GON, CDC, Bill and Melinda, ICAP, ITAD UK, USAID, MTNF foundation, SABIN institute, Unitaid/Aurum Institute, Government of Nigeria, UoSC, Global Fund)</li> <li>Projects (TB/HIV, Vaccination, RMNCAH+N, SDI_SI Evaluation, HSS)</li> </ul>	Sokoto Zamfara Zamfara Katsina Jigawa Kaduna Bauchi
Kaduna state	<ul> <li>Location: North western Nigeria</li> <li>Estimated Population : 9.4 million</li> <li>Ethnic Groups : Predominantly Hausa and Fulani tribe</li> <li>Religion : Islam and Christianity</li> <li>Heightened security challenges including banditry, kidnapping and terrorism in the last 10 years with over 5000 thousand of men, women and children as in the last 10 years</li> </ul>	Women age 15-49 2million NBS 2020.

victims



#### **Background** (Abstract Issues)



Multiple Stakeholders across 23 LGA in Kaduna State supporting the RMNCAH programs

Multiple excel spreadsheets adopted by state health officials

#### Challenges

Difficulty in data collection, reporting, visualization of key RMNCAH+N indicators through the official national District Health Information System (DHIS)

Fragmented tabular data presentation

Tedious process of analysis, and minimal data visualization



# Background (intervention)

Technical partners Technical Advice Connect, with funding from Bill and Melinda Gates Foundation, supported Centre for Integrated Health Programs to create a centralized dashboard on RMNCAH+N performance as part of interventions to scale up uptake of RMNCAH+N interventions through the Group Antenatal Care model in Kaduna State.

#### Solution



# **Project Description**

#### Design (January 2021)

- ✓ Dashboard development commenced using Tableau Embedded Analytics integrated into a web portal (45 days)
- ✓ Over 250 indicators, using data from 2017-2021

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- ✓ The dashboard linked to DHIS2 via an Application Programming Interface (API)
- Data analytics on RMNCAH+N displayed as storyboards

Iteration (3 phases)

 ✓ 3 review meetings involving key government health agencies and officials



State and TWG consultation (January 2021)

 ✓ Consultative process with RMNCAH+N technical working groups to identify KPI

# Results

- **250** plus indicators were reported successfully from all components of the RMNCAH+N interventions respectively
- 27 state officials who were trained on its use.
- Near real-time review and automated analysis
- Program specific dashboard (family planning uptake, hospital delivery by pregnant women, and immunization)







#### **Results** (before and after)



Figure 1: G-ANC monitoring using a manual excel, limiting stakeholders' effective access to program performance.

Figure 2: G-ANC monitoring using automated dashboard, aiding real-time access to stakeholders with access control to dashboards.

### **Lesson Learned**

Access was provided to 27 state officials who were trained on its use.

Post-RMNCAH+N dashboard implementation in April 2022, at least 250 plus indicators were reported successfully from all components of the RMNCAH+N interventions respectively.

Potential to significantly improve monitoring of the MNCH interventions by state officials and process ownership for overall improvement of maternal outcomes.

The dashboard was useful for near real-time review and automated analysis of data for improved program decision making, tracking, and monitoring of RMNCAH+N outcomes such as family planning uptake, hospital delivery by pregnant women, and immunization uptake.



#### **Training and Consultation**



Training of Kaduna state health officials



Technical Working Group Consultation



### Conclusion

The RMNCAH+N dashboard was a successful digital intervention which has increased the visibility of, and accessibility to data critical for improving decision-making among stakeholders responsible for the health of populations.

#### **Acknowledged Contributors**

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### Appreciation





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# "We cannot **solve** our **problems** with the same thinking we used when we created them." – Albert Einstein



### **THANK YOU**



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