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# Redefining learning approaches for immunization staff in Nigeria



# Executive Summary



**In 2020, Immunization Academy and CHAI partnered to roll out the Immunization Academy platform in Nigeria** with the aim of integrating it into the country's capacity-building process for health workers and managers.

Within 15 months of implementation, health workers who used Immunization Academy tools more frequently had greater improvement in their overall immunization knowledge and practices.

This case study details our approach to contextualize the platform for Nigeria, its impact, and moves towards ensuring sustainability following the successful rollout.



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# The Challenge

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1 Traditional capacity building approaches limit the reach and impact of training efforts

2 Immunization skill and knowledge gaps exist across states in Nigeria

# 1 A tale as old as time: Limitations of traditional capacity building approaches



**Many countries, including Nigeria, rely on training in a live classroom setting to refresh and teach their health workforce new skills.** This approach—removing staff from their workplaces and bringing everyone together for in-person training, often many days at a time—can limit the reach of training efforts.

Taking people out of their work environment for training disrupts services and does not allow them to learn or practice in their real-world environment, at their own pace. As many countries have experienced in the last year, the COVID pandemic presents additional challenges for physically bringing staff together for in-person training like the need for social distancing, personal protective equipment, and adequate ventilation of meeting spaces.

Traditional training efforts are often limited in their ability to target each person’s specific learning needs because it is not usually possible to find out what people do and do not know prior to providing training and resources. Immunization program leaders often wonder if the “right” people, or those most in need, are attending training. This results in programs that expend time and resources to train everyone on everything rather than focus on individual strengths and knowledge gaps. Traditional training efforts do not usually have the tools to determine whether a program had an impact and whether additional training and support is needed. Finally, attendance—rather than skill or knowledge acquisition—is emphasized and there is no built-in motivation to learn or improve skills and knowledge.

These factors amount to a system of traditional capacity building that costs a lot to reach the health workforce (at an average cost range of \$20 to \$50 per person per year <sup>1</sup>), does not target individual learning needs, does not generate practical or actionable data for decision-making and action, disrupts services, and lacks incentives that motivate people to learn or improve skills and knowledge.

## Traditional capacity building:

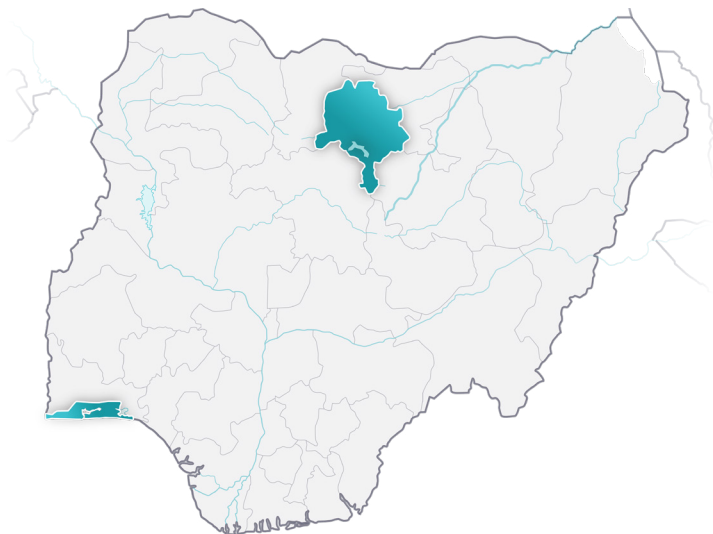
- ✗ costs a lot
- ✗ does not target individual learning needs
- ✗ does not generate practical or actionable data
- ✗ disrupts services
- ✗ lacks incentives

1. <https://www.clintonhealthaccess.org/how-peer-led-learning-is-improving-vaccine-delivery-in-nigeria/>;  
<https://www.thisdaylive.com/index.php/2021/02/24/usaid-invests-19m-in-training-of-health-workers-in-nigeria/>

# 2 Immunization skill and knowledge gaps exist across states



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Despite ongoing capacity-building efforts, Nigeria's National Primary Health Care Development Agency (NPHCDA) recognized that immunization skill and knowledge gaps exist among immunization managers and health workers across the country.

**A needs analysis conducted by the Clinton Health Access Initiative (CHAI) in Kano and Lagos states revealed:**

- ✓ Self-evaluation identified skill gaps in vaccine handling and management, data management, cold chain management, and microplanning.
- ✓ Observatory evaluation of health worker practices identified gaps in temperature monitoring (8% knowledge gap), vaccine handling (7% knowledge gap), delivering 6 key messages (11% knowledge gap), and data entry (11% knowledge gap).



...the COVID pandemic made the need for an alternative to lengthy, in-person training even more vital and necessary.

Additionally, the COVID pandemic made the need for an alternative to lengthy, in-person training even more vital and necessary. CHAI and Immunization Academy and NPHCDA partnered together to provide a training alternative for Nigeria's health workforce to address the limitations of traditional capacity building and reinforce the government's efforts.

Kano and Lagos were selected as the pilot states to test how the Immunization Academy training solution performed in two different settings - one in which participants may experience technology challenges (Kano) and one with better access to technology (Lagos). In addition, Kano and Lagos are the most populated and demographically diverse states in the country and were selected to provide a representation of the country.



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# The Solution

Introducing an innovative approach to training that brings learning closer to the moment of need

The image illustrates the IA WATCH application interface across different devices. The desktop view shows a video player for 'Administering the AstraZeneca COVID-19 vaccine' with a progress bar at 00:00 / 04:48. The left smartphone displays a quiz question: '2021 Cold-Chain Test' due 1 March 2021, asking how to prepare a control vial. The right smartphone shows the main dashboard with a 'Choose a topic' menu and various training modules like 'New Videos', 'SIAs', 'Cold Chain', 'Stock Management', etc.

# Goals

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Immunization Academy offers instant access to skill-based video lessons on essential immunization topics in English, French, Swahili, and Hausa. Nigeria is in the top 10 countries for Immunization Academy use, with over 37,000 users. Immunization Academy's suite of tools is a recognized resource in the country. Some immunization managers and health workers from Nigeria are among the most active users on the global IA leader board.

The Clinton Health Access Initiative (CHAI) is an established and trusted immunization partner, providing support to the country's immunization program at both national and state levels.

Based on priority gaps identified in the needs analysis, Immunization Academy and CHAI designed and implemented a capacity-building initiative to assess and remediate the vaccine delivery and data monitoring skill and knowledge gaps of immunization managers in Kano and Lagos states.

Nigeria is in the top 10 countries for Immunization Academy use, with over 37,000 users

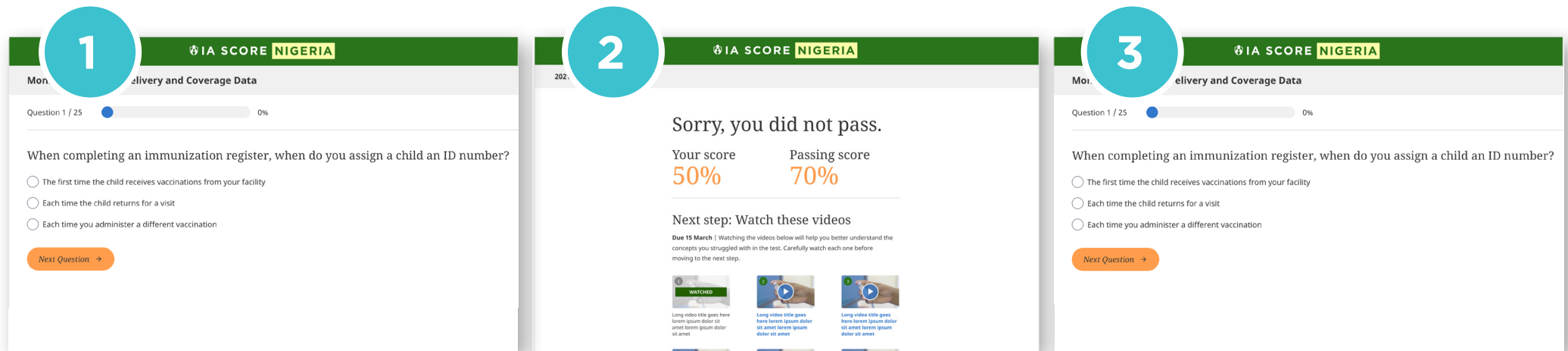
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## The goals of the program were two-fold:

- 1 Measurably build sub-national manager capacity, and
- 2 Empower immunization managers with data to monitor their programs and take action.

# What we did

Immunization Academy created a custom interactive tool for Nigeria, called IA Score Nigeria, which provided a personalized training approach to target and remediate each person's gaps.



The image displays three sequential screenshots of the IA Score Nigeria interface.   
1. The first screenshot shows a pre-test question: "When completing an immunization register, when do you assign a child an ID number?" with three radio button options. A progress bar indicates 0% completion.   
2. The second screenshot shows a failure message: "Sorry, you did not pass." with a score of 50% and a passing score of 70%. It includes a "Next step: Watch these videos" section with three video thumbnails.   
3. The third screenshot shows a post-test question identical to the pre-test, with a progress bar indicating 0% completion.

First, the tool allows health workers or managers to take a pre-test to identify their strengths and weaknesses.

Next, it generates personalized learning plans to address each person's knowledge gaps identified by the pre-test.

Finally, learners take a skills-based post-test to demonstrate proficiency.

The training program was offered in both English and Hausa, so each person could select the most comfortable language.



# What we did



Based on needs analysis data, CHAI identified “**Monitoring Vaccine Delivery and Coverage Data**” and “**Vaccine Management in the Cold Chain**” as the two competency areas in greatest need of training.

The program **offered certification endorsed by NPHCDA** upon achieving a passing score of 70%, to motivate healthcare professionals to participate and complete the program.

Additionally, a **dynamic dashboard** was created to allow managers to review State, Local Government Agency (LGA), and individual learner data. With this data in a practical and actionable dashboard, managers could easily see where skill and knowledge strengths and gaps existed—geographically, by specific competency, and by individual—and provide targeted support, coaching and supervision.

**Communication resources, such as WhatsApp message templates, were also provided** to support rollout and encourage participants to complete the program.

CHAI led the extensive stakeholder engagement efforts, national and state level program implementation, and provided technical program guidance—all of which were vital to the introduction of Immunization Academy in Kano and Lagos states.

## 1st Assessment

**Competency area:**  
Monitoring Vaccine Delivery and Coverage Data

**Target audience:**  
Managers

## 2nd Assessment

**Competency area:**  
Vaccine Management in the Cold Chain

**Target audience:**  
Managers and health workers



# How it worked



**The results:** Managers and health workers in Kano and Lagos states **measurably improved their skills and knowledge.**

# The Results

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# The more they watched, the more they improved.



In both states, the average increase in score was correlated to the amount of learning effort. **Learners who watched more of their assigned video lessons had a greater increase in post-test score.** Learners who watched most (76-100%) of their assigned video lessons had an average score improvement of 13%.

## Another notable highlight:

 **14.71%**

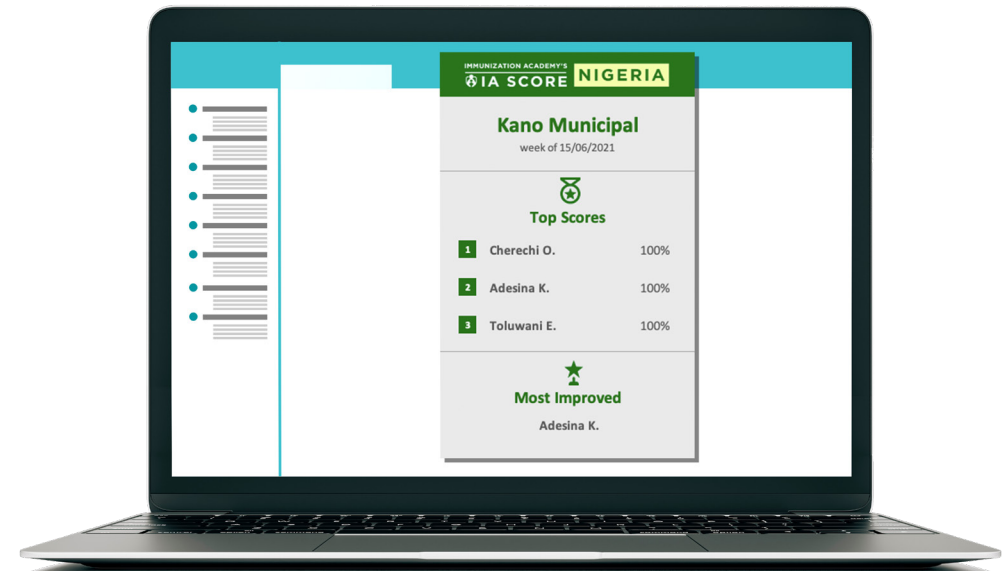
For learners with a pre-test score less than 50%, the average increase in knowledge was 14.71%

# Leaderboards offer a motivational boost



Incorporating lessons learned implementing the first assessment, we added some new motivational elements for the “Vaccine Management in the Cold Chain” assessment.

**We learned from the first assessment that learners who watched more of their assigned videos learned more.** Therefore, for the second assessment, managers provided additional support and encouragement to staff to watch their assigned video lessons. We also instituted a leaderboard to highlight immunization professionals in each LGA who had high scores and those who showed great improvement in their post-test scores. These leaderboards were presented at LGA review meetings and sent in WhatsApp messages to encourage and motivate staff to participate in the program.



All participants across Kano and Lagos states watched at least two video lessons, representing **at least 60% of their assigned videos.**

# Data-driven approach addressed some of the traditional challenges of training



The Immunization Academy initiative in Nigeria tackled many of the challenges associated with traditional capacity building efforts.

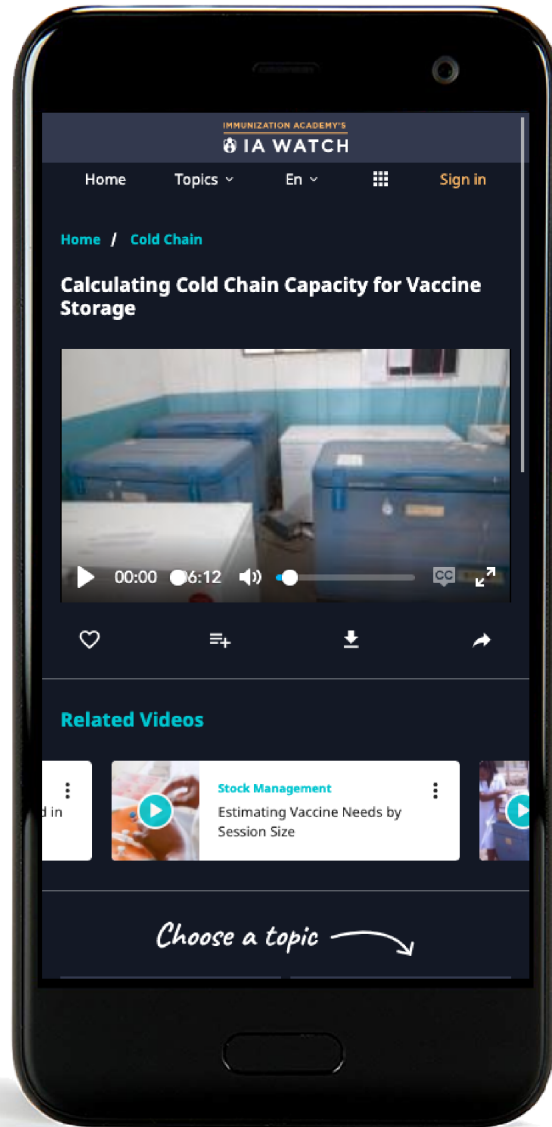
- ✓ **Generated measurable improvement.** Immunization managers improved their skill and knowledge by an average of 10.5% after spending about 15 minutes watching IA video lessons.
- ✓ **Reduced the resources required to deliver training.** The inputs required by learners and system managers to implement the IA Score Nigeria initiative were minimal compared to traditional, resource-intensive training strategies.
- ✓ **Enabled managers to see where coaching is needed.** With actionable learning data, managers could see where the greatest skill and knowledge gaps were, then prioritize sites and individuals for additional support and targeted coaching.
- ✓ **Relieved some of the training burden on managers.** And enabled a system in which staff were empowered to improve their knowledge with the technology they had on-hand.
- ✓ **Targeted support and resources based on need.** Learners received individualized learning plans that addressed their specific knowledge gaps rather than a one-size-fits all training approach in which every learner receives all of the training regardless of their specific learning needs.
- ✓ **Reduced disruption to service delivery.** Staff were able to learn on their own schedules, at their own pace, and in their work environment.
- ✓ **Quickly disseminated training resources.** The program allowed NPHCDA to quickly get capacity building resources to the people who needed them without waiting for the time, resources, and person-power required to cascade material through in-person training.



IA is really an academy in one's pocket and will benefit not only the health workers but even us, the managers.

-PHC COORDINATOR (KANO)

# What does it tell us about using digital tools for building capacity?



The results demonstrate that **IA Score assessments and learning plans effectively assess, address, and monitor skill and knowledge gaps**, particularly for the lowest-performing sites (where some of the most remarkable improvements in post-test scores were observed). And supporting learners with encouragement and motivational elements increases the effectiveness by ensuring more people watch more of their assigned video lessons.

The model and tools could be applied to assess and address other skill and knowledge gaps beyond immunization by expanding to other cadres of the workforce, other priority technical areas, and other states—thereby enabling a continuous cycle of performance improvement.



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# Impact

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The Immunization Academy initiative had an impact on the immunization program beyond these assessments as well.



# Service Delivery



CHAI worked with the governments of Kano and Lagos states to conduct an end line assessment to identify the impact of Immunization Academy on immunization service delivery.

The assessment was conducted through observatory evaluation of health worker practices, focus group discussions, and key informant interviews. In both Kano and Lagos states, health workers in high uptake facilities had double the improvement in immunization practices compared to those in low uptake facilities.

**Health workers in high uptake facilities had a 27% improvement in service delivery** compared to the baseline and those in low uptake facilities had a 13% improvement. In addition, the assessment found that **health workers who used Immunization Academy tools more frequently had greater improvement in their overall immunization practices.**

The assessment has revealed that the introduction of IA in Nigeria has resulted not only in an improvement in knowledge but also in improvement of health workers' skills and service delivery in Kano and Lagos states.



I used to store vaccines anyhow in the CCE, however, I now know how to properly arrange vaccines and diluents in the refrigerator based on their freeze sensitivity.

-HEALTH WORKER (KANO)



Through watching IA videos on supervision, I am now able to identify gaps and mentor health workers on the job without scolding them.

-MANAGER (LAGOS)

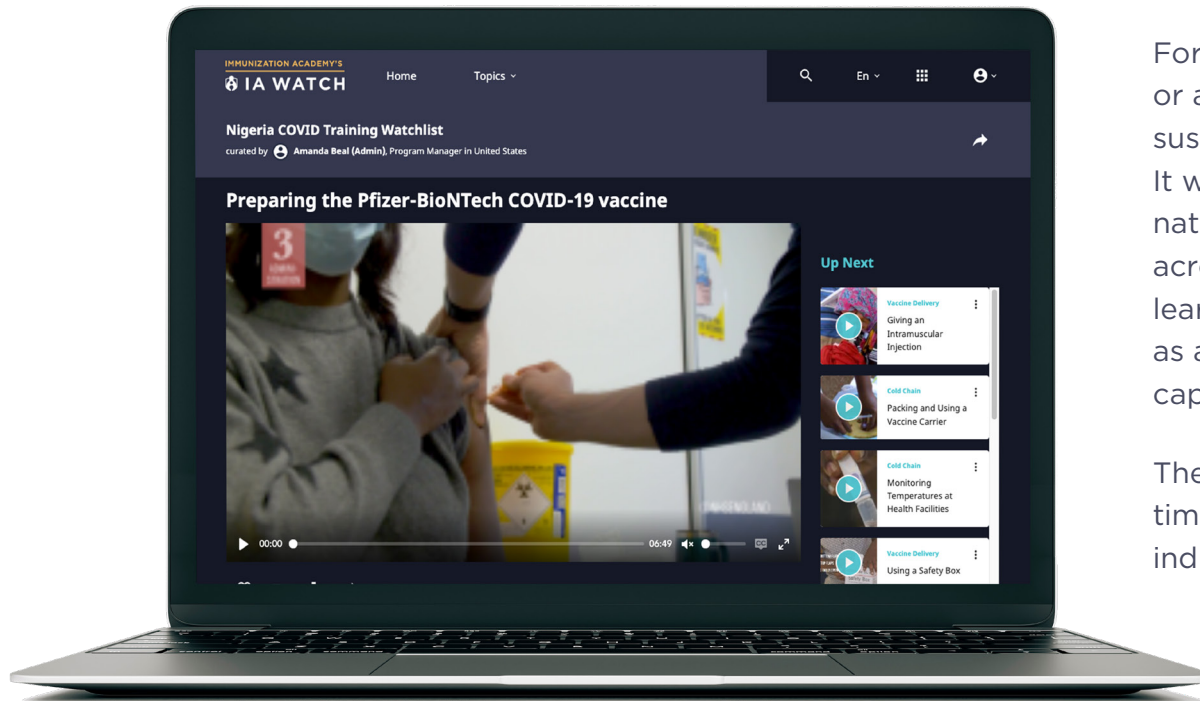
# COVID-19



**Immunization Academy tools were used throughout the country during COVID-19 vaccine introduction trainings,** which served as an opportunity to further cement and establish the presence of IA at both national and state levels in Nigeria.

For instance, a COVID-19 vaccine introduction watchlist, or a curated set of video lessons, complemented and sustained learning provided during in-person training. It was adopted by the government and included in the national training of trainers for immunization managers across all 36 states. The watchlist was provided as pre-learning, incorporated into training presentation, sent as a post-training resource, and used to build manager capacity prior to cascade training.

The videos were played and watched more than 3,000 times within the first week of the introduction, which indicated high acceptance and utilization of the platform.



# System Changes

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# A new approach to training



**Immunization Academy has been institutionalized within Nigeria's existing capacity-building systems and has shifted how training is done in the country.** Managers now have data-driven insight into specific skill gaps among the health workforce that could contribute to service delivery problems. Managers also have a practical and actionable guide for how to use Immunization Academy in supportive supervision, to complement training or a review meeting, and for individual learning.

NPHCDA has incorporated Immunization Academy into their peer-led learning approach and created a calendar of learning for health staff that includes IA video lessons and peer discussion.

Throughout this initiative, Immunization Academy tools have been accepted and adopted among learners and key stakeholders and working groups at both the national and state levels. IA now complements their existing capacity-building efforts.



# Continuous Professional Development



CHAI partnered with the Community Health Practitioners Registration Board, the agency responsible for the regulation of the training and practice of community health workers in Nigeria, to organize a 1-day workshop on using Immunization Academy for continuous professional development.

## The workshop focused on:

- 1 The adoption of IA tools as a resource for the assignment of Continuous Professional Development points for in-service community health practitioners
- 2 How to incorporate IA into classroom learning for pre-service students across the country

**About 70 attendees participated in the workshop** which included Board leadership including the Registrar/CEO, Directors of the Board, Zonal Technical Officers, Community Health Officer Training Program Coordinators, PHC Tutors Training Centers, President and Secretary of PHC Tutors Welfare Association, representatives of Federal Ministry of Health, and CHAI staff. Attendees were representatives from across the country with all six zones from the Community Health Practitioners Board.

A communique was raised on the introduction of eLearning to the Community Health Practitioners Registration Board which highlighted the adoption of Immunization Academy into the training methodology of the Board for use in assignment of Continuous Professional Development points and incorporation into classroom-based learning.



For the first time I have the opportunity to choose what I want to learn and when.

-HEALTH WORKER (KANO)

# Contact Us

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Interested in learning more about the Clinton Health Access Initiative's global health work in Nigeria and around the world?

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Interested in learning how Immunization Academy could support your capacity building strategy?

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