



## 17th TechNet Conference

Panama City, Panama | October 16-19, 2023

Immunization Programmes That Leave No One Behind

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# Service Delivery Integration

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# Improving Efficiency of Service Delivery through Integration and Optimizing the Flow of PHC Sessions

## Results from a Facility-Based Multi-State Pilot in Nigeria

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# There is growing need for integration of health services at PHC level.

## WHO Definition

health services that are managed and delivered so that people receive a continuum of health promotion, disease prevention, diagnosis, treatment, disease-management, rehabilitation and palliative care services, coordinated across the different levels and sites of care within and beyond the health sector, and according to their needs throughout the life course.

### Integration usages<sup>1</sup>

Package of preventive & curative health interventions

Multi-purpose service delivery points

Continuity of care over time

Vertical integration of different levels of services with referrals across levels

Integrated policy-making, planning and management

Working across sectors

### Potential benefits

**Increased coverage** of a new intervention to level of existing intervention

Improved **system efficiency**, reduce redundancy/costs

Improved **user satisfaction**, convenience; able to meet multiple health needs of the patient

**Increased demand** through cross-promotion; may reduce missed opportunities for vaccination

### Potential risks

Negative **impact on overall coverage** rates or equity

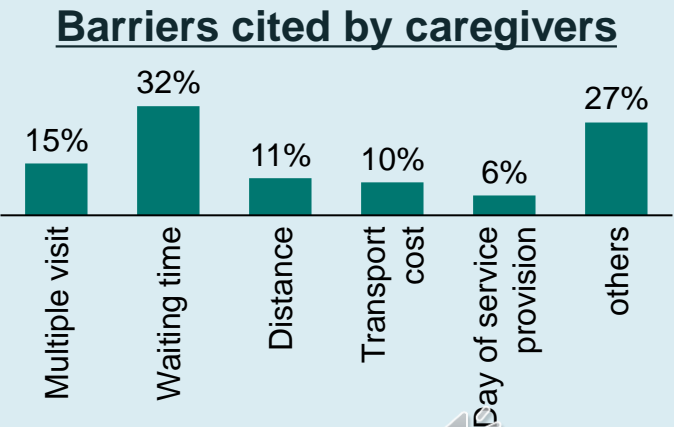
Reduced **quality of care** due to less health worker time available

**Health workers may not accept taking on additional responsibilities** or workload due to issues with pay, conditions, skills, knowledge or training

**Beneficiaries may not accept integrated services**, especially if stigmatized services are mixed with non-stigmatized (although this can also be a mechanism to reduce stigma)

# We have seen that facilities adopted different methods of integration of health services

In 2020, CHAI assessed PHC session flow in FCT, Kano, Lagos, Niger, and Yobe states to identify opportunities for improving the efficiency and integration of PHC service delivery.

Implementation of Integration	Approach to Service Delivery	Planning for PHC services	Major Barriers														
<p>Integration is happening in many facilities, borne out of the convenience of the service providers.</p>	<p>The approach to delivery of the services differs in terms of location, frequency, and targeted beneficiaries.</p>	<ul style="list-style-type: none"> <li>▪ <b>Each service has a different approach to planning</b> - RI services have the most structured way of planning</li> <li>▪ <b>The planning cycle varies</b></li> <li>▪ <b>Scheduling days of services</b> depends mainly on:                             <ul style="list-style-type: none"> <li>▪ Number of staff</li> <li>▪ Client turn-out</li> <li>▪ Peculiarities of community</li> <li>▪ Location of the facility</li> <li>▪ Seasonal changes</li> </ul> </li> </ul>	<p>Waiting time remains the major barrier cited by caregivers while providers cited barriers that include inadequate manpower and unavailability of services and equipment.</p> <p><b>Barriers cited by caregivers</b></p>  <table border="1"> <caption>Barriers cited by caregivers</caption> <thead> <tr> <th>Barrier</th> <th>Percentage</th> </tr> </thead> <tbody> <tr> <td>Multiple visit</td> <td>15%</td> </tr> <tr> <td>Waiting time</td> <td>32%</td> </tr> <tr> <td>Distance</td> <td>11%</td> </tr> <tr> <td>Transport cost</td> <td>10%</td> </tr> <tr> <td>Day of service provision</td> <td>6%</td> </tr> <tr> <td>others</td> <td>27%</td> </tr> </tbody> </table>	Barrier	Percentage	Multiple visit	15%	Waiting time	32%	Distance	11%	Transport cost	10%	Day of service provision	6%	others	27%
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<p><b>Resources required</b></p> <p>Resources required for planning across the services are the same</p>																	

**Three models of integration of services and improvement of the flow of sessions were developed and field-tested in four states in Nigeria.**

# Models of integration were piloted to assess their impact on service delivery efficiency



## Provider-based Model

This model entails provision of **multiple PHC services** by a **single service provider**. Example:

- A client's visit to a facility to access FP services can be leveraged to provide nutrition services or RI to her child
- RI visit for the child can be leveraged to provide FP services to the mother.

Implementation will be most applicable in where there is inadequate skilled health workers to provide a specific service



## Point-of-care based Model

This model enables provision of a **package of services** at a **specific location**. Example during outreach services.

This allows clients to access multiple services in the same location be it the facility or community, especially in underserved and nomadic settlements.

This will be most applicable in high-volume facilities and hard-to-reach areas where a facility covers a large catchment area.



## Schedule-based Model

This model allows for the provision of **different PHC services** based on a **schedule provided by the facility or provider**. This enables clients to schedule a day they want to access a particular service or service based on their availability, convenience, and agreement with the service providers.

This is applicable in facilities with adequate or inadequate service providers.






# Findings were recorded based on key indicators

#	Indicators/Expected outcomes	Point-of-care	Provider	Schedule	PHC Assessment
i	Availability of updated health facility micro plan	100%	100%	100%	-
ii	Average number of stages per PHC session	6	6	6	10
iii	Average waiting period (before and during service delivery)	18.4 minutes	9 minutes	10.1 minutes	-
iv	Average time of service provision	35.8 minutes	23.2 minutes	24.6 minutes	44.8 minutes
v	Client satisfaction	89%	92%	87%	-
vi	Satisfaction/model acceptability by provider	95%	100%	79%	-



# Lessons were learned for adoption and scale-up

	 <b>Process</b>	 <b>Outcome</b>	 <b>Recommendation</b>
<b>Point-of-Care</b>	Switch from provision of <b>general health talks to one-on-one health talks</b> to mothers at the point-of care	Significant reduction in <b>client waiting times</b> and significant client satisfaction.	Strengthen <b>health worker service knowledge</b> and <b>client communication skills</b>
<b>Provider-Based</b>	Focused on provision of <b>all services on the same day</b> and improving <b>health worker efficiency</b>	<b>Lowest waiting and service provision time</b> and health workers reported actively trying to manage client time	Increase <b>demand generation</b> ; Consider <b>increasing services offered</b> at lower client flow facilities
<b>Schedule-Based</b>	<b>Rearrangement of service provision schedule</b> to accommodate more integrable services	Spike in <b>client volume</b> in the facilities and recorded the highest % of clients accessing <b>integrated services</b>	Increase <b>health worker count</b> and <b>commodity availability</b> to cater to potential increased client flow

# The impact of integration of immunization and maternity services on timeliness of birth dose administration in Kano and Nasarawa, Nigeria

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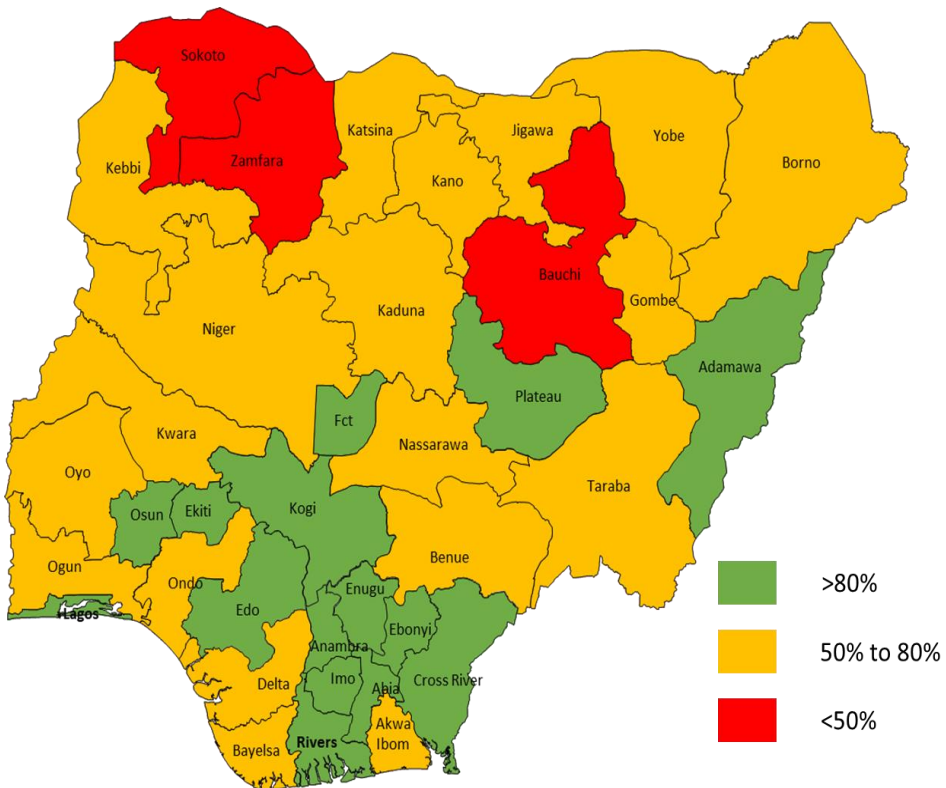




# Background

To improve coverage of birth-dose vaccines, a process evaluation was conducted in 18 selected health facilities in Kano and Nasarawa states.

## HepB0 Vaccination Coverage by States\*

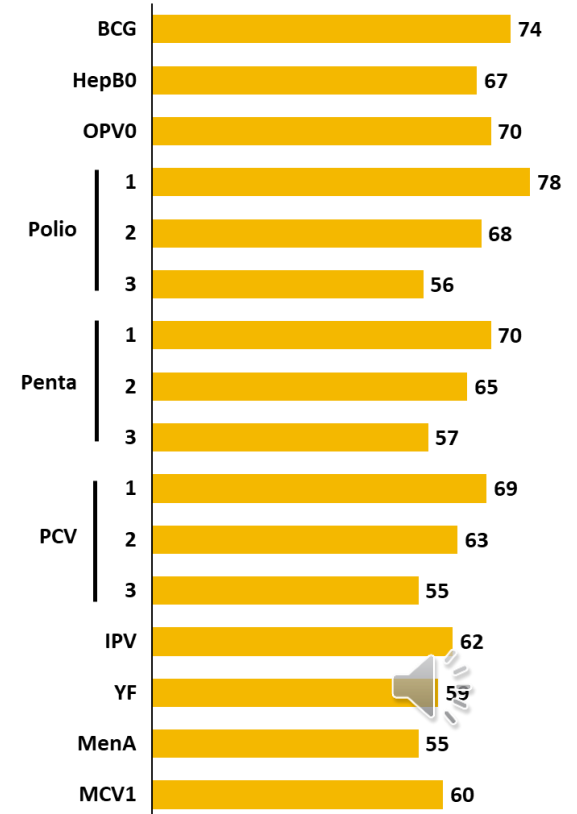


- The national coverage for HepB0 is 67%
- There are inequities in coverage across the states.
- Nasarawa state has a coverage of 71%
- Kano state has coverage of 52%



- Three antigens are given to children at birth: BCG, HepB0 and OPV0.
- Among the birth doses, HepB0 has the lowest coverage of 67%

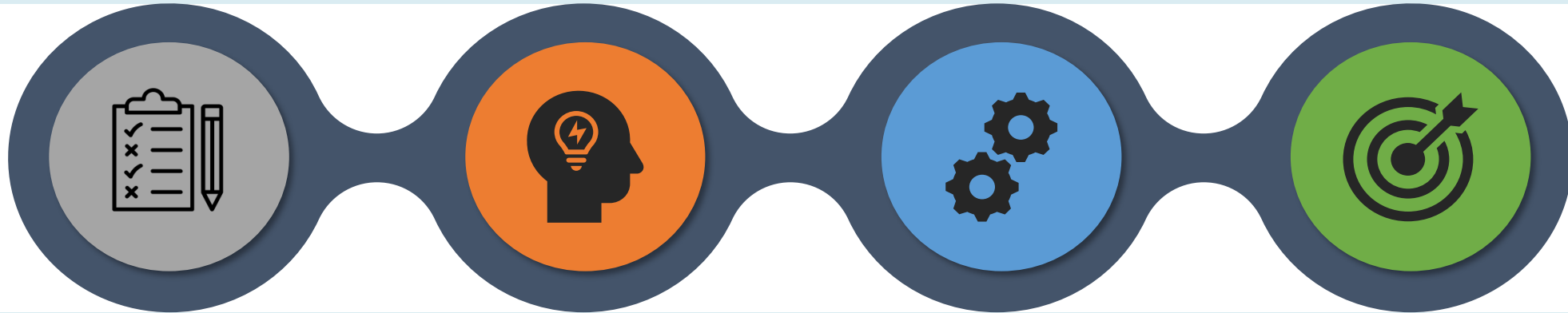
## Coverage for childhood vaccinations\*



Data Source: \*MICS /NICS survey 2021

# Methodology

The objective is to assess how integration of maternal services with immunization services will change timely administration of the birth dose vaccines



## Baseline Assessment

Was conducted in 18 selected sites where timing of birth dose vaccine administration was determined.

## Intervention Creation

Human centered design approach was adopted in identifying suitable interventions for implementation by each health facility. Some facilities adopted more than one intervention

## Intervention Implementation

The interventions were implemented for a period of 12-weeks to integrate birth dose vaccination into maternity and early newborn care processes

## Final Evaluation

Was conducted where changes in timing of birth dose vaccine administration was assessed and feedback through healthcare worker interviews was collected



This study was conducted over a period of 26 weeks not including planning phase

# Results

Through HCD approach, different strategies were identified, adopted and implemented by health facilities

## Strategy

## Average days of BD vaccination

## Remarks

### Delaying Discharge after Delivery

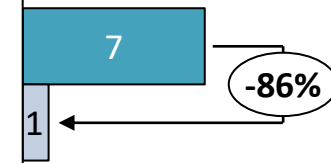
- Discharge from the maternity unit after delivery is delayed until the newborn receives BD vaccines



- Facilities that adopted this strategy were able to achieve the desired result of vaccinating newborns within 24 hours after birth

### Referral of Newborns to RI Unit

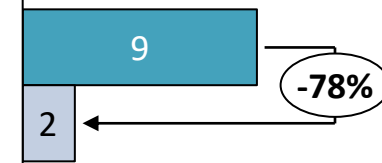
- Newborns were referred to the facility's RI unit for vaccination



- Facilities adopting this strategy were able to vaccinate newborns within 24 to 48 hours from a baseline of 7 days

### Training of Maternity Unit Staff on RI

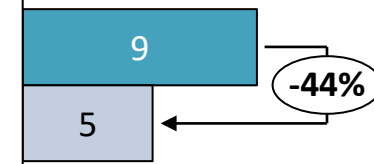
- The staff of maternity unit were trained to vaccinate the newborns



- Facilities adopting this strategy were able to vaccinate newborns within an average of 48 hours from baseline of 9 days

### Creation of RI Stand in Maternity Unit

- Facilities assigned RI service providers in the maternity unit to provide the BD vaccination

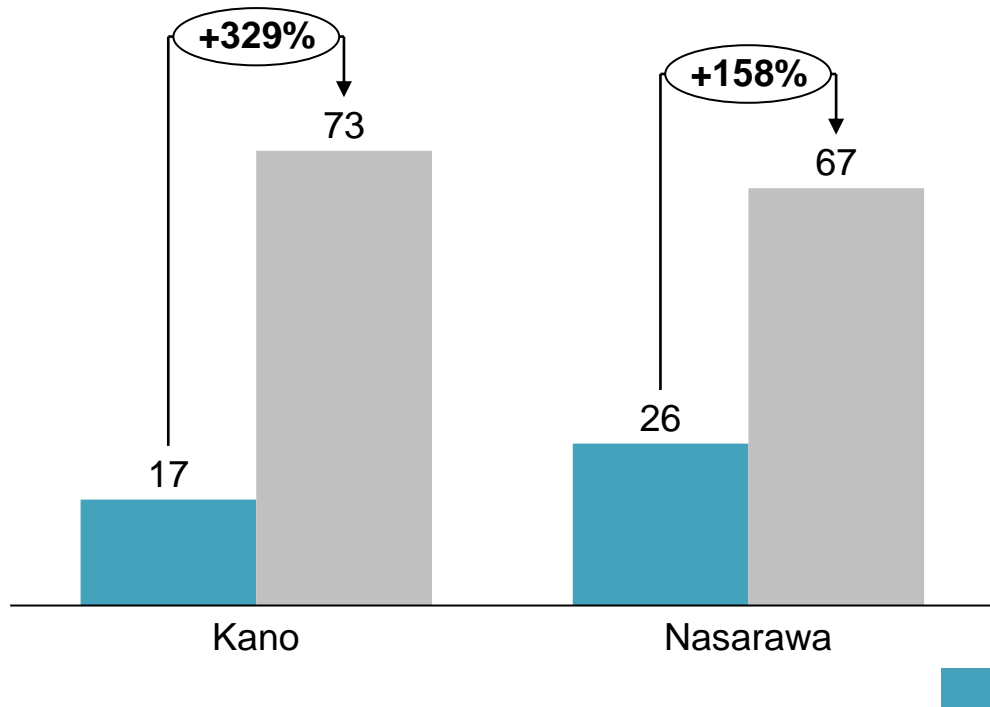


- Facilities adopting this strategy were able to vaccinate newborns within an average of 5 days from baseline of 9 days

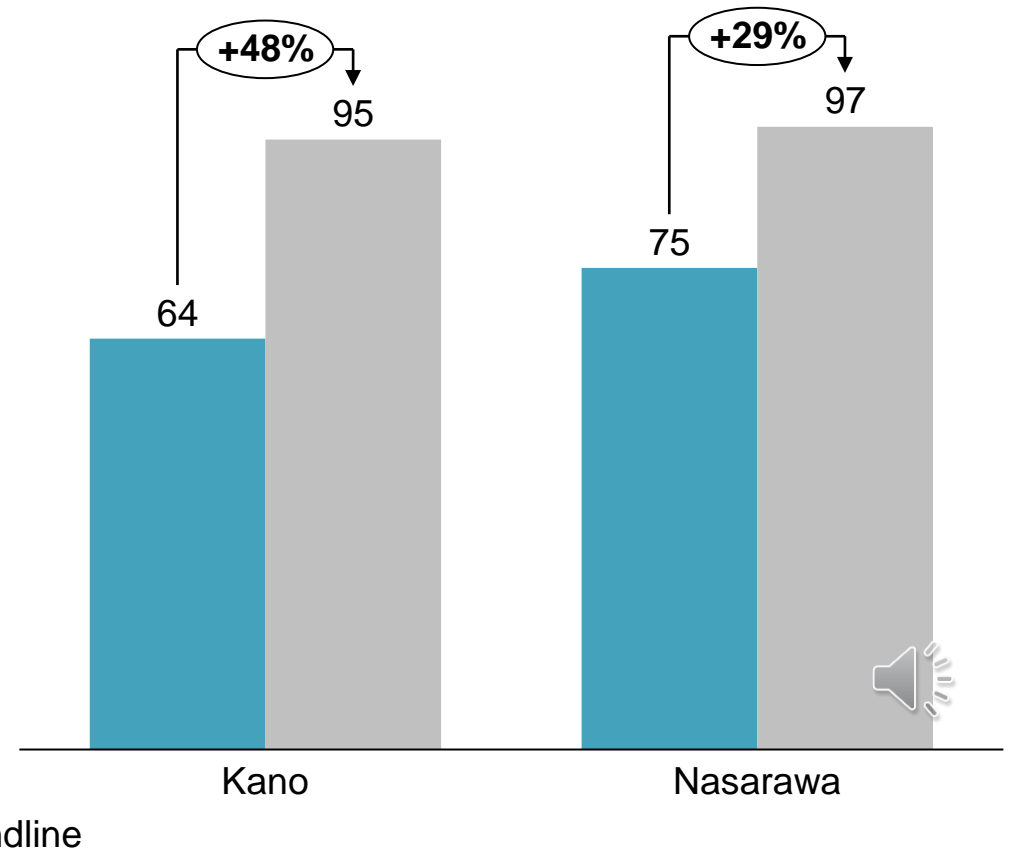
# Results

The proportion of newborn receiving BD vaccines within the maternity unit of the health facilities has significantly improved in both Kano and Nasarawa states

Proportion of children received birth doses <24hrs after birth (Kano: n=360,360; Nasarawa: n=180,178)



Proportion of children received birth doses <2 weeks after birth (Kano: n=360,360; Nasarawa: n=180,178)



# Conclusion

For successful implementation of these strategies, here are some recommendations

## Policy

- Policies that strengthen the provision of comprehensive post-natal care should include the provision of BD vaccines. This will include compliance with a recommended discharge time of 24 to 48 hours.
- Policies that allow task sharing for BD vaccines to be administered by maternity unit staff.

## Data

- Data tools that are being used in maternity unit should be updated with options of recording vaccines administered within the unit.

## Capacity building

- Capacity building for maternity unit staff to administer birth dose vaccines.
- MNCH guidelines and training modules should be updated with a module on BD administration.

## Device for vaccine storage

- Vaccine storage device to be deployed to maternity units to enhance vaccine availability to drive up birth dose vaccination.



# Integrating birth dose vaccination into maternal and newborn care services in Cameroon

**Dr. Yauba Saidu**



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# The introduction of the HepB BD vaccine remains a key priority for the Cameroon

Given the high prevalence of HBV infection among pregnant women (> 8%) and the elevated risk of mother-to-child transmission

## Background

The HepB BD vaccine is most effective when given within 24 hours of birth. However, in 2019, an initial diagnostic assessment by CHAI found that **less than 10% of children born in Cameroonian health facilities received current birth dose vaccines (OPV0 & BCG) within 24 hours of birth** as will be needed for HepB BD. Consequently, a **12-week pilot was conducted** in 13 health facilities within **3 regions** (Adamawa, Centre and West) and cutting across different settings, facility types and tiers of the Cameroonian health system pyramid.

## Objectives

Assess the feasibility of immunizing newborns with BCG and OPV0 (in anticipation for HepB-BD) within 24 hours of birth by integrating routine immunization into maternity and immediate new-born care.

Specifically, the pilot study sought to:

1. Integrate BD immunizations into maternity and immediate newborn care services.
2. Measure the change in proportion of newborn receiving BCG and OPV0 within 24 hours of birth.
3. Assess the operational feasibility and acceptability of interventions and describe any factors (barriers and enablers) that may influence further implementation of birth dose strategies

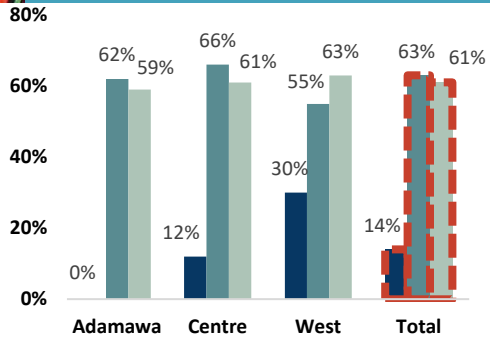
## Intervention design

The pilot interventions were designed to address challenges to timely administration of BD vaccines identified in the 2019 diagnostic assessment, and included the following :

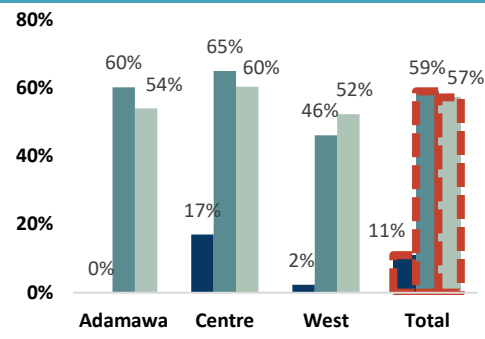
- Delivered knowledge reinforcement on topics relating to BD including Immunization basics (refresher), BD vaccine information for OPV0 and BCG including safety information and contraindications, directly addressing hesitancy surrounding opening a multi-dose vaccine vial and reinforcing incorporation of birth dose conversations into routine antenatal care visits
- Defined a detailed and tailored schedule to ensure 24/7 access to context appropriate vaccine storage options including after hours and during the weekends
- Outlined detailed roles and responsibilities for each HCW involved in birth dose vaccinations
- Developed and trained on facility-specific workflows which orient HCWs to how the birth dose administration fits into maternal and newborn care
- Developed a Newborn data tool to complement existing health facility data tools - birth and immunization registers, and ensured birth doses vaccines are properly recorded in health facility records

# Over the pilot, there was an increase in; the proportion of children receiving OPV and BCG within 24 hours of birth, the knowledge of HCWs on BD vaccines and the challenges HCWs experienced with BD vaccines

Proportion of in-facility births who received OPV within 24 hours of birth

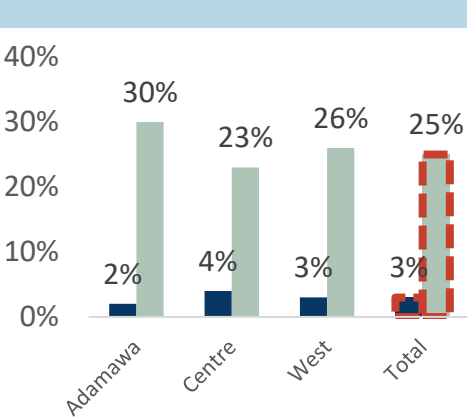


Proportion of in-facility births who received BCG within 24 hours of birth

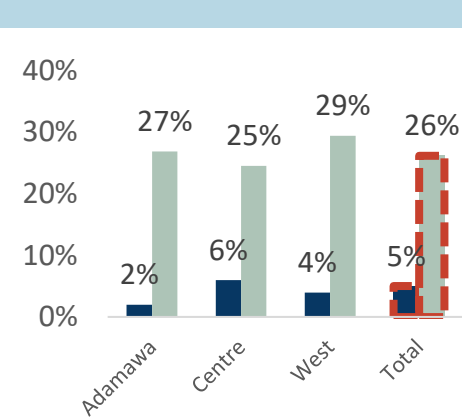


**Key finding:** The pilot led to an increase in the coverage and timely administration of birth dose vaccines for in-facility births

Proportion of children visiting the EPI unit who received OPV within 24 hours of birth (percent)

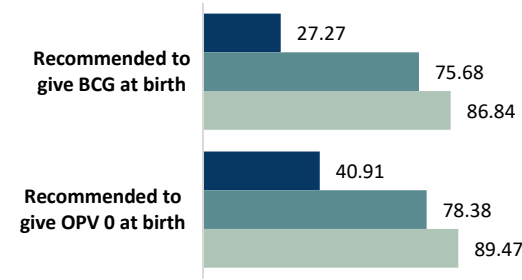


Proportion of children visiting the EPI unit who received BCG within 24 hours of birth (percent)

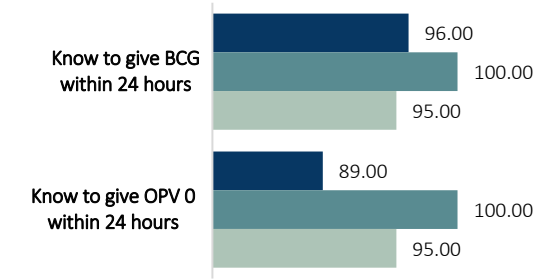


**Key finding:** There was a significant increase in proportion of out-of-facility born children who received BCG and OPVO within 24 hours

HCW improved awareness of vaccinating clinical stable, low birth weight children



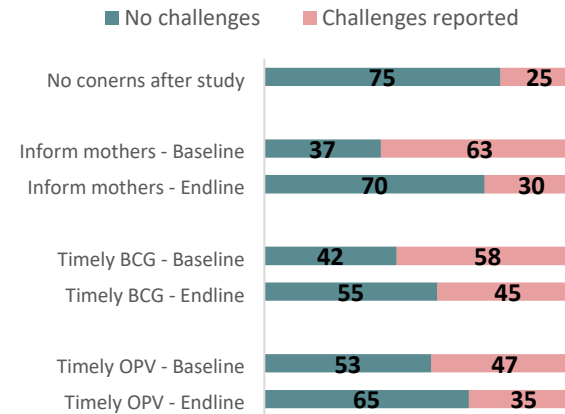
Trends in healthcare workers' knowledge on birth dose guidance



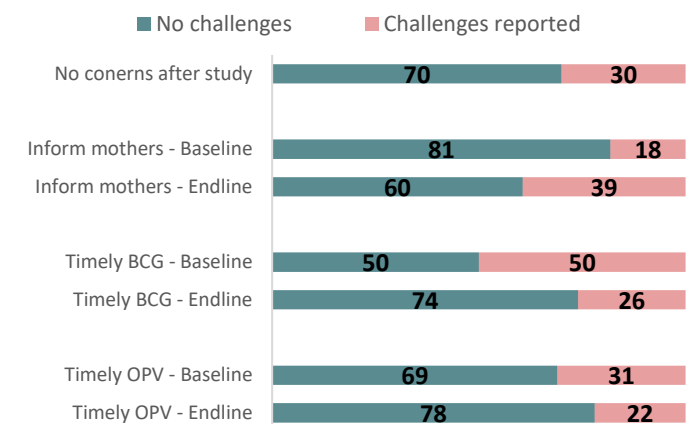
**Key finding:** The pilot resulted in a significant improvement in the awareness to vaccinate clinically stable, LBW children.

## Trends in challenges experienced by HCWs regarding birth dose vaccines

% of Maternity staff



% of EPI staff



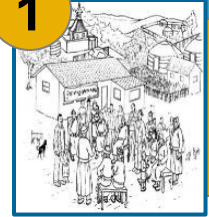
**Key finding:** Overall, both EPI and Maternity staff reported less challenges regarding birth dose vaccines at end line compared to baseline

# A qualitative debrief with a combined 20 HCWs and administrators from 6 of the 15 pilot facilities highlighted **HCW galvanization, caregiver sensitization and vaccine availability/accessibility** as key success factors.

Success factor	Description
<b>1</b> <b>HCW galvanization</b>	<ul style="list-style-type: none"><li>Participants attributed the pilot success to the constant reminders and verbal motivation from their supervisors through calls and WhatsApp messaging, and from the sense of responsibility to ensure no child born in-facility left without getting vaccinated <b>(Adamawa and West)</b></li><li>In some cases, HCWs carried out the interventions because they were mandated/pressured to do so by their superiors <b>(Centre)</b></li></ul> <p><i>“It is simply because we respected your instructions. But we also had daily and constant reminders from the general supervisor and the maternity head to vaccinate these children. They were always checking and putting in some pressure. In case we missed a child, they will remind you to get the child vaccinated. That was what helped to make it a success”</i> <b>Maternity nurse Centre</b></p>
<b>2</b> <b>Caregiver sensitization</b>	<ul style="list-style-type: none"><li>Counselling and sensitizing mothers on the importance of BD vaccines improved their awareness and willingness for their babies to be vaccinated.</li><li>Caregivers also preferred to take the BD vaccines immediately after delivery as it saved them multiple visits to the facilities</li><li>Mothers who had their children vaccinated after birth served as advocates for vaccination at birth to other women in the community.</li></ul> <p><i>“Communication was key. That is what made it a success. If a mother is well counselled about her child receiving BCG and OPV immediately after birth, what is certain is that she will not refuse or go home without the child being vaccinated. We really sensitized them”</i> <b>Administrator Centre</b></p>
<b>3</b> <b>Vaccine accessibility</b>	<ul style="list-style-type: none"><li>Vaccine accessibility was a major factor that influenced the success of the pilot</li><li>Prior to the pilot, maternities had limited access to vaccines, but during the pilot, facilities developed context specific ways to make vaccines available to maternity and other vaccinating staff during off work hours. Therefore, vaccines could be given daily as opposed to a few times a week, which is otherwise the status quo</li></ul> <p><i>“This is mostly due to the increased availability and accessibility of the vaccines during the project. The vaccines were available and accessible and most importantly we had the green light to vaccinate, even if it was just one child”</i> <b>Maternity nurse West</b></p>

# The qualitative debrief equally highlighted increased workload, concerns about wastage rates/stock outs, and collaboration difficulties between EPI and maternity staff as the major challenges to the pilot

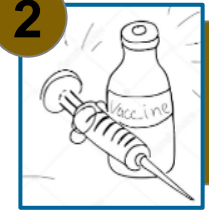
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## Increased workload

- Increased workload was the major challenge mentioned across all cadres. However, this was more skewed towards maternity staff. Some EPI staff reported a reduced workload

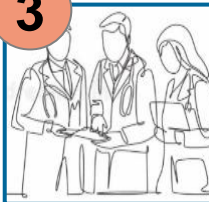
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## Stock outs and wastage rates

- Pilot sites received extra supplies during the intervention because districts inherently approved requisitions for greater than usual amounts of vaccines from pilot sites. As such, stock outs were not a major concern across all sites
- On the other hand, concerns about wastage rates particularly for BCG was extremely common among participants across all regions and facilities.

3



## Collaboration between EPI and Maternity staff

- Buy in from the maternity staff, a key component for successful integration proved to be difficult at the start of the implementation of pilot interventions.

To address these challenges and ensure sustainability, we proposed the following:

1

Capacitate hospital administrators to ensure effective implementation and supervision of birth dose vaccination in their facilities

2

Leverage on and expand the existing network of CHWs for community education and sensitization on birth dose vaccines. This will be particularly useful in regions with high out of facility or home births

3

Continuous advocacy, coaching and mentoring of maternity staff on birth dose vaccines to build their capacity and enhance their buy in towards the intervention

- Overall, the pilot demonstrated that facility-designed interventions that integrate EPI with MNCH services can significantly improve the timely administration of birth dose vaccines.
- Building the capacity of HCWs to design these facility workflows, manage some accompanying challenges and providing adequate supervision is critical to the success of these integrated interventions.





# Thank You!

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