

# Lessons learned from developing, testing and scaling innovative interventions to strengthen the birth platform in Cameroon and Nigeria

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## 1. BACKGROUND

- With **296 million people living with chronic Hepatitis B Virus (HBV) globally**, 828k deaths associated with HBV and 1.5 million new HBV infections (70% through vertical transmission), HBV remains a major global health problem.
  - Hepatitis B Birth Dose (HepB BD) is critical to reduce mortality from HBV infections and should be included in routine immunization programs. However, **global coverage for timely Hep B birth dose vaccine remains at 43%**. Across several countries that have introduced and report overall high coverage, timeliness of HepB BD administration remains often lower than ideal for efficacy
- Key barriers to timely HepB BD administration include:** Challenges with reaching out of facility births, Limited HepB knowledge among mothers and caregivers, Lack of coordination & allocated responsibilities between MNCH & EPI programs, Inadequate HepB-BD knowledge among health care workers, especially around guidelines and contraindications, Unavailability of cold chain storage and fear of vaccine wastage among health care workers.

## 2. CHAI APPROACH

CHAI supported governments in Cameroon & Nigeria to design interventions anchored on strengthening linkages between RI & MNCH programs **to improve timely administration of birth dose (BD) vaccines for in & out of facility births:**

- In Cameroon, we conducted a pilot intervention in 15 HFs aimed at assessing the feasibility of immunizing newborns with BCG and OPV0 (in anticipation for HepB-BD introduction) within 24 hours of birth by integrating routine immunization into maternity and immediate new-born care
- In Nigeria, we deployed an integrated HBsAg screening and BD vaccination approach to assess how the integration of RI into the maternity and early newborn care services in health care facilities changes timely coverage of birth dose vaccines in Kano and Nasarawa states

Through this effort, we developed programmatic learnings that are critical in the reopening for the VIS 2018 and would also have broader implications for other pipeline antigens targeting the maternal/birth timepoint e.g., RSV & GBS

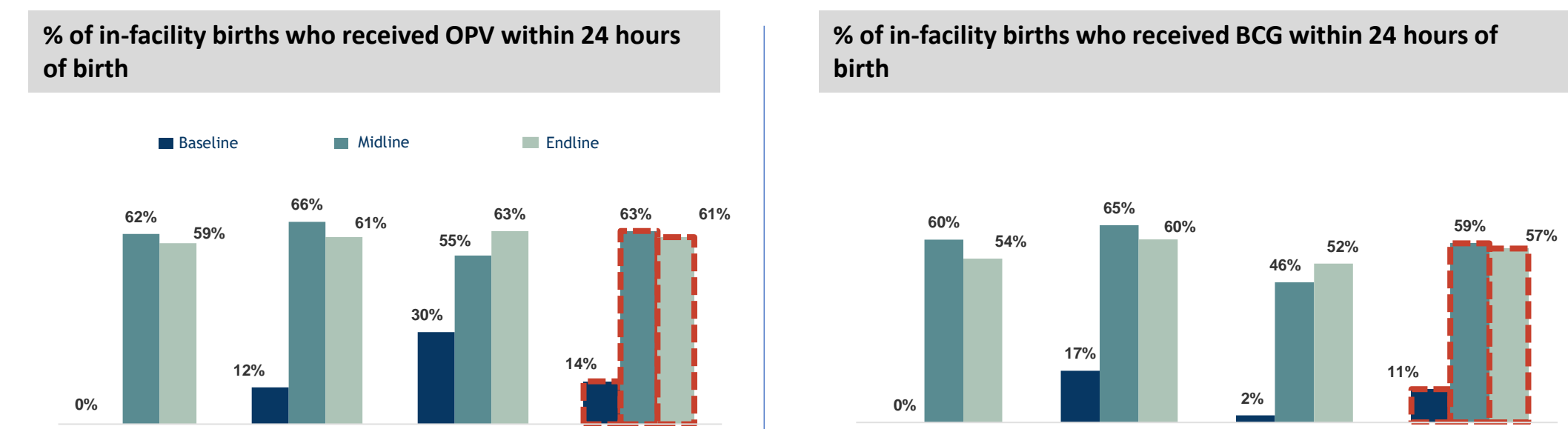
## 3. INTERVENTIONS AND KEY RESULTS

### Cameroon

To achieve the integration of routine immunization with maternal and newborn care, following an initial diagnostic<sup>1</sup>, **CHAI implemented 5 key interventions in 15 facilities across three regions of Cameroon, between August 2021 and February 2022:**

- BD refresher trainings** and addressing hesitancy around opening multi-dose vaccine vials by giving sites green light to open even for just one child.
- Incorporating BD conversations into routine antenatal care visits** to create caregiver awareness for BD vaccines
- Developing facility specific workflows** (and staff capacitated on redesigned workflows) to ensure 24/7 access to vaccines.
- Outlining detailed **roles and responsibilities for healthcare workers** involved in BD vaccinations.
- 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

The pilot led to an increase in the coverage and timely administration of BD vaccines for in-facility births.

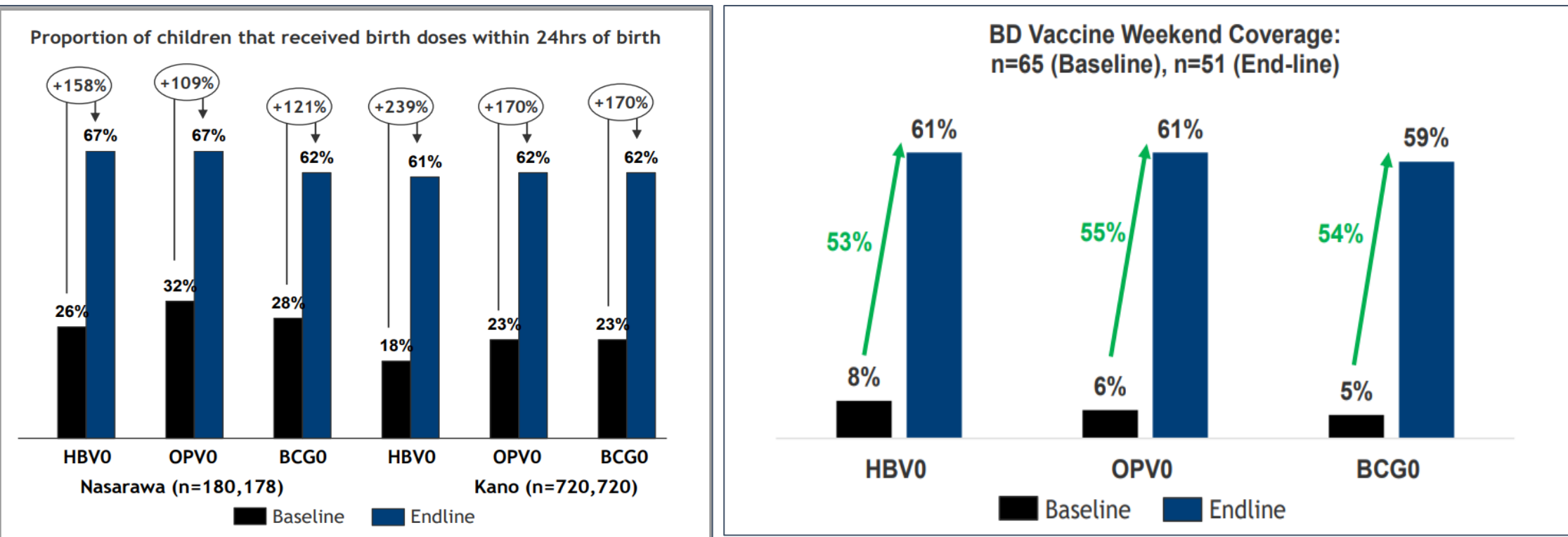


### Nigeria

In Nasarawa and Kano states in Nigeria, following an initial diagnostic<sup>2</sup>, CHAI deployed a myriad of strategic interventions to improve HepB BD coverage focused on:

- Improving caregiver (pregnant women) awareness and knowledge of HepB BD and HBsAg screening at ANC and RI clinics & the community
- Service delivery integration of RI and MNCH units e.g., creation of an RI stand in the maternity unit, Referrals to RI unit
- Delayed discharge post delivery
- Deployment of CCE (e.g., geostyles) in maternity units

Over 100% increase in timely administration (within 24hrs) of the BD vaccines was recorded with a significant increase in HBV0. With vaccination of children born during the weekend contributing a significant portion of the increase in BD coverage.



## 4. LESSONS LEARNED

**Key lessons for improving timely administration of birth dose vaccines:**

- Facility workflow redesign** reinforced by change management practices can have significant effects on coverage and timely administration of birth dose vaccines for in-facility births and possibly out-of facility births
- In Cameroon, **HCW awareness of timeliness of birth doses does not appear to be a main barrier in the administration of BD vaccines;** however, HCW and caregiver perspectives on adverse events, multiple administrations, and administering BDs to clinically stable LBW children need to be continually addressed in culturally and contextually appropriate manner
- Addressing structural barriers** (e.g., access to CCE, monitoring/reporting challenges) in a context specific manner is critical for sustainability
- Finally, It is pivotal to address additional elements that could impede the timely and sustained coverage of birth dose vaccines, such as **increased workload/joint accountability, stockouts/wastage rates, LBW children, HCW concerns around adverse events and multiple administrations, caregiver hesitancy etc.**

**Enablers for impact:**

- Jointly designing & implementing interventions in collaboration with govt; starting with a detailed diagnostic in Cameroon promoted visibility and ownership by the government.
- Facilitating multisectoral collaboration by creating a multi-stakeholder task team with participation from EPI and MNCH stakeholders enabled sustainability and joint accountability at national & subnational levels.
- Leveraging HCD principles to co-design facility-specific workflows with HCWs improved their capacity, willingness to implement and ownership.
- Building on existing processes and leveraging existing data and tools, familiar to HCWs enabled smooth implementation of the interventions.

**Challenges and limitations:**

- The pandemic resulted in an abrupt pause in the building momentum on operationalizing the 2018 VIS window; which has since then been overshadowed by other priorities at GAVI e.g., COVAX and RTSS introduction.
- In Cameroon specifically, pandemic related disruptions led to delays in implementing the pilot and gleaning lessons required for finalizing the introduction plan.

1- key insights revealed that less than 10% of newborns received the available birth dose vaccines (OPV0 and BCG) within the 24 hours that will be required for Hep B BD. Some cited reasons included low awareness among caregivers about the vaccine, maternity staffs & wards ill equipped to provide birth dose vaccines, and existing vaccine handling policy.  
2 – key findings from the diagnostic revealed: (1) infants receive HepB BD vaccine at the average age of 12 days on average which is more than the recommended 24hrs or at birth; (2) Despite over 90% compliance with the administration of BCG, 19% of the same cohort of newborns miss the BD vaccines who are at a 70% risk of developing HBV (3) 25% of newborns who received their HBV0 after 24 hours were delivered of mothers not screened for HBsAg, including 3 newborns who were born of mothers reactive to HBsAg

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