

Cost and Cost-effectiveness analysis of HCD-based targeted interventions for ZD children in high-burden regions of India (Ongoing Project)

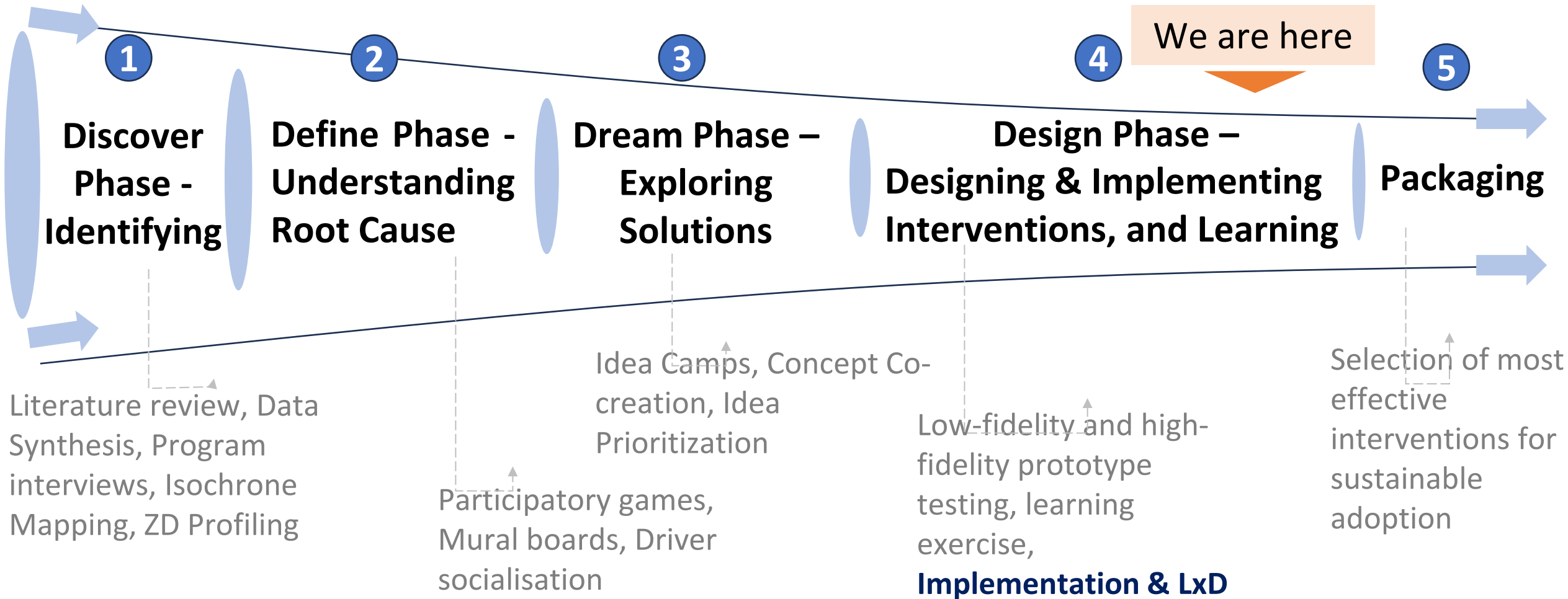
July 2025

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Clinton Health Access Initiative, India



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Our approach towards the Zero Dose Learning Agenda

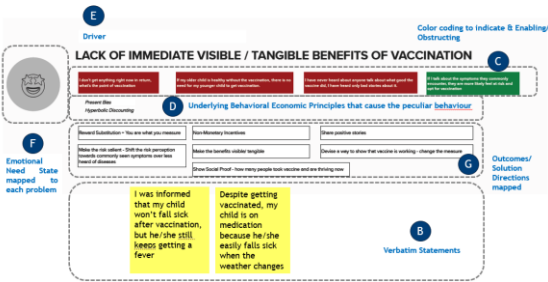


Leveraging human-centered design and behavioral science principles



Deep-dive with Communities

Unlock System 1 for deeper engagement through participatory games with caregivers and HCWs (extreme users)



Clustering for RCA

Cluster and categorize verbatims to themes, identify peculiarities obstructing and enabling vaccine uptake



Co-creation of Ideas

In-person solutioning sessions with caregivers, community influencers and HCWs/FLWs

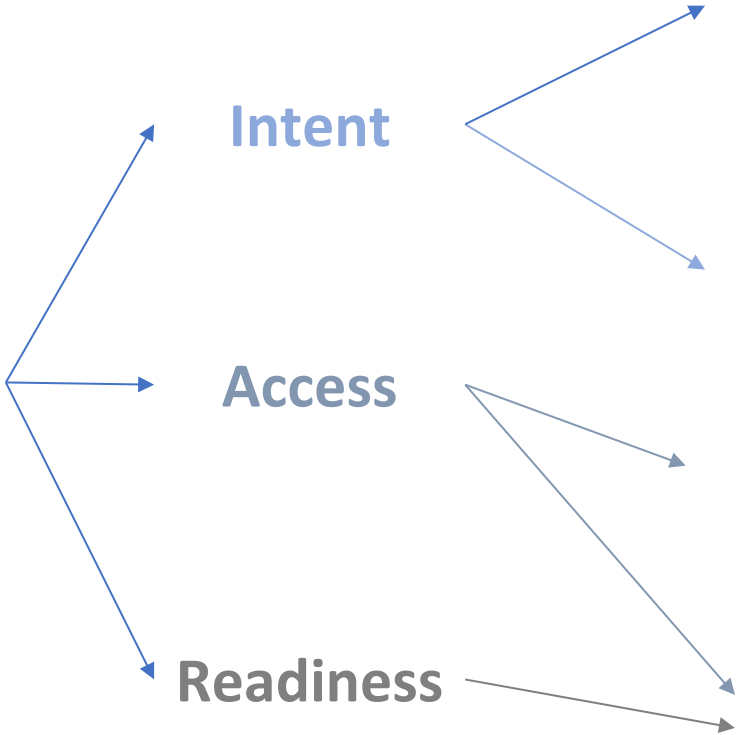


Prioritization of Ideas for testing

Workshops with program managers and govt. stakeholders for prioritization of ideas

Hyperlocal interventions developed and deployed in 120+ focus health facilities in high ZD burden regions

Exemplars for Global Health (EGH) Framework



Helping understand the importance and urgency of vaccination while allaying AEFI fears

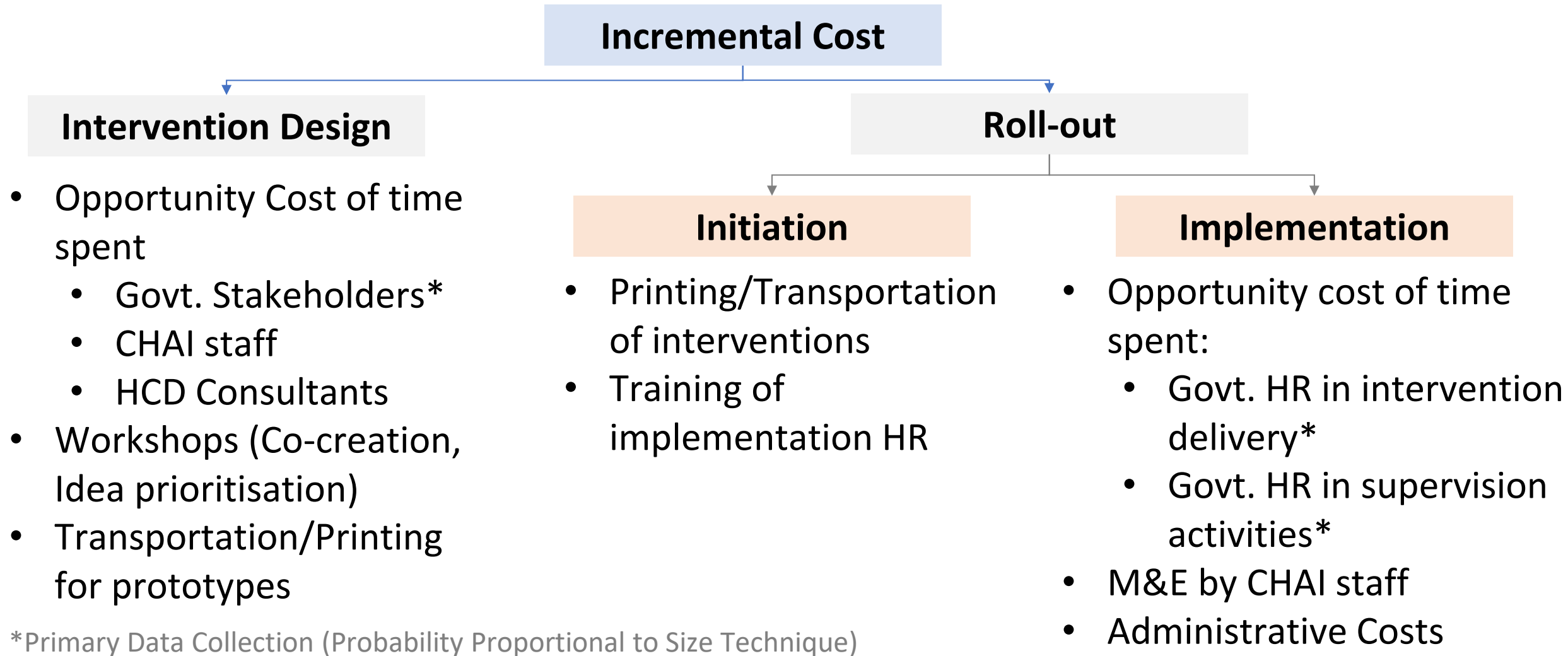
Making it easier to track the vaccination journey

Increase awareness on where and when to seek services

Improving HCW/FLW Capacity for Service Delivery

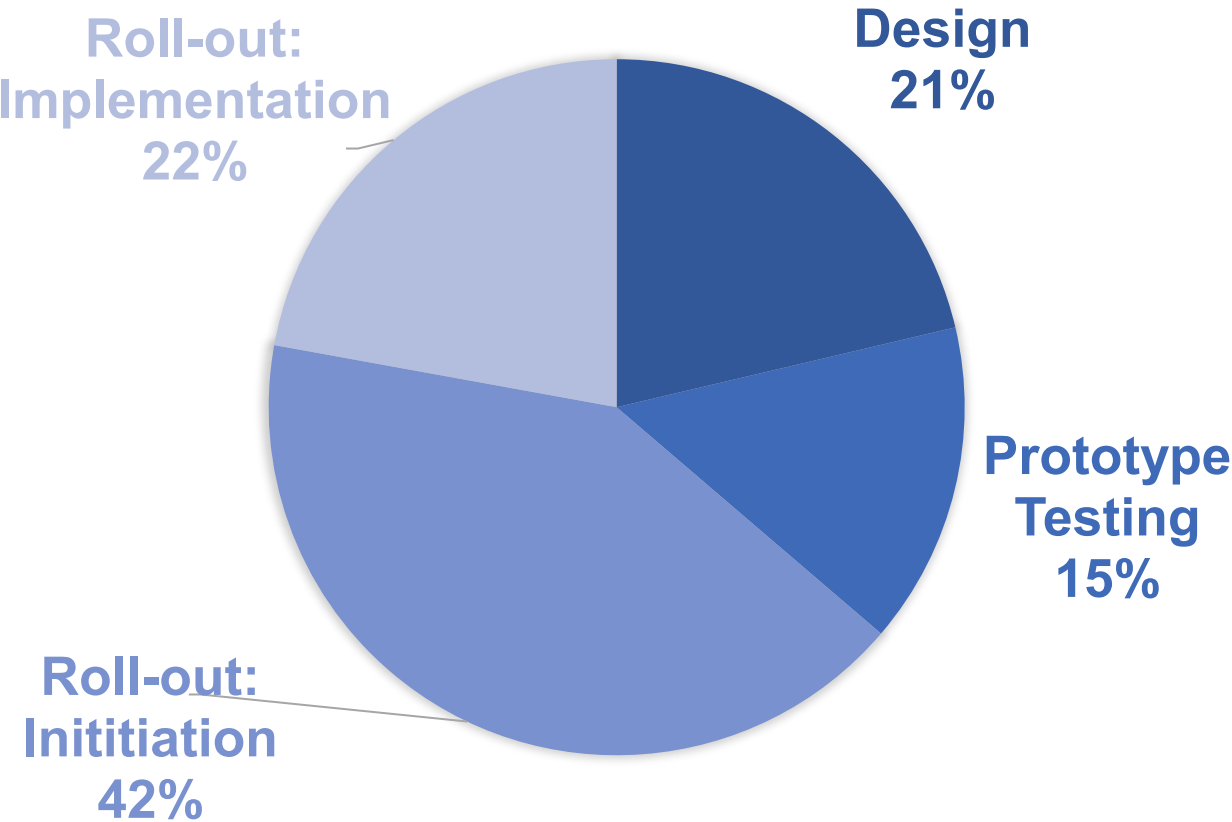


Framework for Estimation of Incremental Cost of HCD-based Interventions

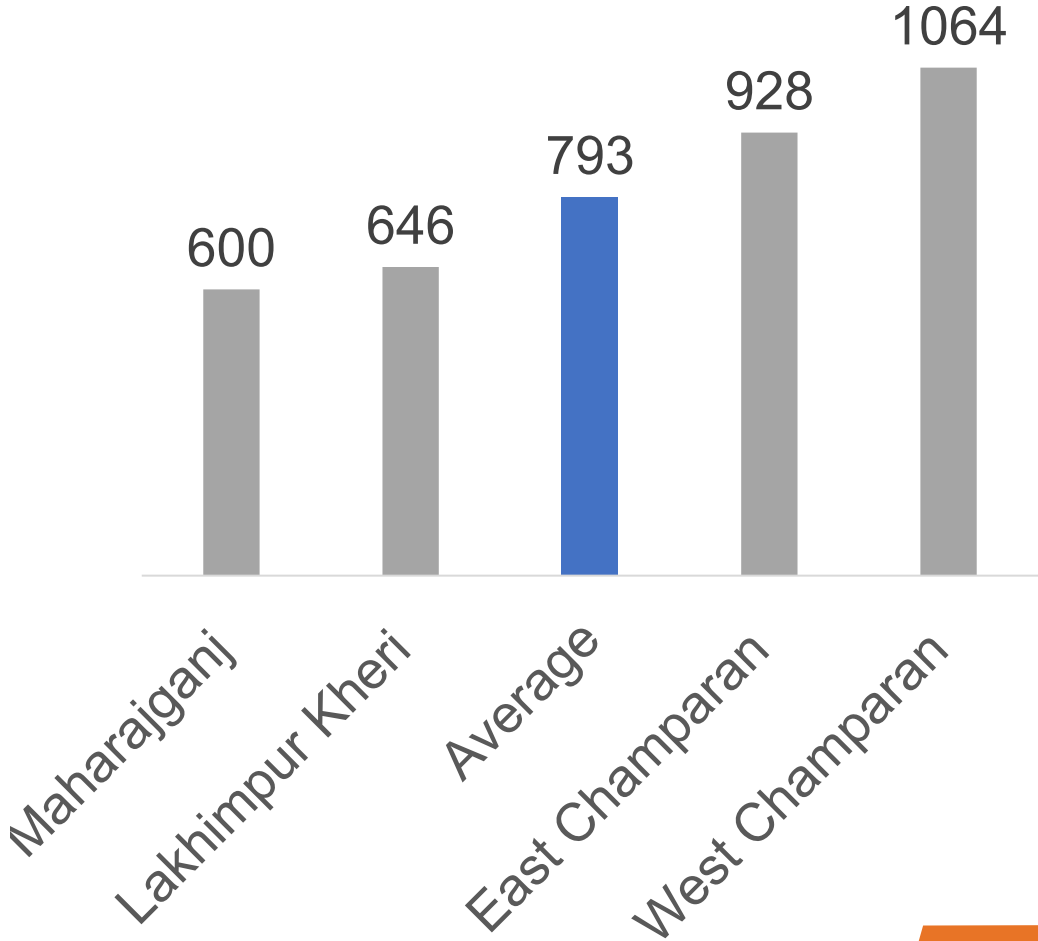


Preliminary Findings from the Costing Analysis (Roll-out Phase: April 2025 – Ongoing)* (1/2)

Distribution of Total Cost Incurred (Phase-wise)



Total Cost Per Facility (USD)



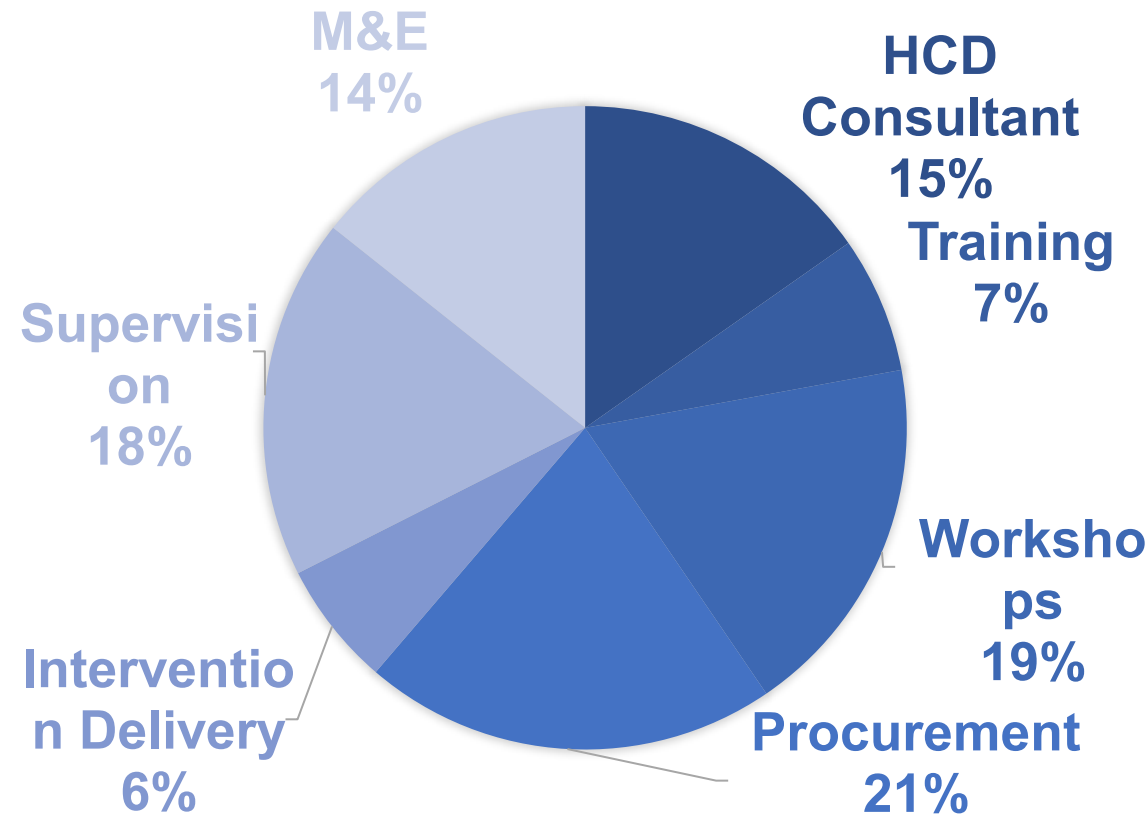
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*Project is currently underway; Expected completion by November 2025. Findings presented here are preliminary and subject to further validation.

Preliminary Findings from the Costing Analysis (Roll-out Phase: April 2025 – Ongoing)* (2/2)

Distribution of Total Cost Incurred (Component-wise)



Major Drivers:

- Procurement (including transportation & printing) of interventions
- Workshops (logistics, travel)
- Supervision (Costs of time spent by government staff)
- M&E (Baseline data collection)
- HCD Consultant Costs for Intervention design

Approach towards Assessing Benefit from HCD-based Interventions

Additional ZD Reached

- Interrupted Time-series Regression on reporting of Pentavalent 1st doses and DPT 1st doses basis the government administrative data sources (HMIS)
- Accounting for seasonal variation

Deaths Averted

- Utilisation of LiST to extrapolate deaths averted at a sub-national level



DALYs Averted

- Conversion of deaths averted to DALYs averted
- Factoring the benefit across all vaccination doses for the 0-2 y/o age cohort
- Sources: Global Burden of Disease Study , LiST, VPD Surveillance estimates

Initial Results on Cost-effectiveness for East Champaran, Bihar (April 2025-Ongoing)*

Within **two months of implementation**, our 27 focus facilities in East Champaran have displayed improvements in additional Zero dose children reached

Cost per additional ZD reached		Incremental Cost		Incremental Benefit
• \$501 (with technical assistance costs) • \$379 (without TA costs)**	=	• Total: \$25,045 (\$18,952 without TA) • Per Facility: \$927 (\$702 without TA)**	/	Total: 50 additional ZD children reached Average Per Facility: ~2

Given that the cost estimates are including everything apart from the additional variable cost for monitoring (less proportion of the whole) and that we will be able to reach more ZD children over time, **we expect the Cost per additional ZD reached to further decline**

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**Incremental economic delivery costs to be benchmarked to govt. standards

Learnings and Challenges

Challenges

Delayed Primary Data Collection on Remuneration of HCWs/FLWs

Intervention impact progressively increases, beyond the intervention timelines

Limited data visibility for estimating DALY averted estimations at hyperlocal levels

Unit of evaluation conversions need to be synchronous across the methodology

Externalities affecting the data source for benefit estimations

Learnings

Adaptive methodology design to accommodate alternate scenarios

Benefit estimation techniques should factor in projection based models

Utilisation of conversion techniques for arriving at DALY estimations

Leverage tested methods for aggregation of datapoints utilising sampling weights

Refer to multiple data sources for validation and triangulation

Way Forward

- Continued collection of variable costs (\$ value of time spent on intervention delivery, monitoring, supervision; changes in intervention design) on a monthly basis
- Benchmarking estimated costs (currently as per CHAI expenditure standards) to government standards (normalised mass procurement costs, technical assistance by existing government HR, workshop costs etc.) for adoption within existing systems
- Triangulation of data across multiple sources for validation of quality
- Projection based deterministic models for mapping incremental costs and incremental benefits over prolonged periods of time beyond the 6-month long implementation timeline
- Benchmarking of the incremental cost-effectiveness ratio against the World Health Organisation's Choosing Interventions that are Cost Effective (WHO-CHOICE) threshold.

Benchmarking the feasibility of implementation at scale basis cost-effectiveness considerations of the model to affect national/sub-national policies for reaching underserved ZD children in high burden regions

Thank you

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