WELCOME

HCE-Linksbridge Webinar:
Missed Campaign Integration Opportunities:
Development of an algorithm to identify potential co-delivery opportunities in 7 countries between 2019-2023

March 20, 2024
Presenters

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Data Scientist  
Linksbridge
Housekeeping

- **Please use the chat** to introduce yourself.
- **Please use the Q&A function** to submit questions to the presenters. Responses may be spoken live during the event, or answered in writing for the Attendees to see.

- **Captions** in English are available. Enable captions in the control panel at the bottom of your Zoom window.

- This webinar is being **recorded**.
A Fragmented Campaign Ecosystem With An Opportunity For Change

1. Over the last 25 years, there has been a growth of disease-specific financing, which has driven a proliferation of health campaigns targeting diseases, with little coordination between programs.

2. Global health campaigns play a strategic role within the context of a broader health system (e.g., PHC), and one does not always need to be at the cost of the other.

3. The long-term aim is to reduce reliance on campaigns by strengthening health systems, but campaigns will continue in the near-term to respond to outbreaks, and support disease elimination and SDG health goals.
The Health Campaign Effectiveness (HCE) Coalition

Founded in 2020, the HCE Coalition’s Program Office is run by the Task Force for Global Health (TFGH)

The Coalition Leadership Team comprises global campaign funders, multi- and bi-lateral institutions, and country

Coalition members work around the world and across multiple disease domains (e.g., NTD, polio, VPDs, malaria, nutrition)

The Coalition seeks to identify best practices, reduce fragmentation, harmonize financing and strengthen collaboration amongst country leaders, funders, and implementers

Country-led health systems use a strategic balance of targeted health campaigns in concert with regular health services to achieve and sustain health-related development goals for all people

Vision
What is the Collaborative Action Strategy for Campaign Effectiveness (CAS)?

The CAS is meant to shift ways of working amongst global, regional, and country level partners on key actions, roles, and coordinated approaches at the country level. It is designed to add practical but transformative value to countries’ existing campaign and health care efforts.

The Collaborative Action Strategy (CAS)\(^1\) for Campaign Effectiveness was developed in 2023 by ~50 global, regional, and country-level experts representing major campaign funders, implementers, and country leadership. It has been approved by the HCE Leadership Team.

CAS implementation is starting in 2 focus countries (Nigeria and Ethiopia) and will be scaled to other countries in the coming years.

12 Recommendations to Enhance Country-Level Impact and Coordination

The CAS recommendations are intended to be adaptable and flexible, allowing for country specific decision-making. All recommendations will require joint effort between countries, global funders and implementers, with specific recommendations targeting funders (e.g., campaign finance), implementers (e.g., 1d), and MOHs (e.g., 1a).

**Planning & Implementation**

- **Rec #1a**: Establish or leverage an existing multi-sectoral, cross-campaign National Coordination Body
- **Rec #1b**: Develop a multi-year, cross-campaign workplan and schedule for campaigns
- **Rec #1c**: Develop a coordinated and effective approach to enable active community engagement at all levels and phases

**M&E/MERLA**

- **Rec #2a**: Within countries, develop a coordinated and collaborative cross-campaign MERLA strategy
- **Rec #2b**: Aligned with the coordinated country MERLA strategy, improve the ability of campaign implementers and partners to identify, measure, utilize, and share data on campaign effectiveness
- **Rec #2c**: At the global level, develop a Learning Platform and a MERLA framework as a practical guidance to countries and global stakeholders

**Campaign Financing**

- **Rec #3a**: Create a comprehensive view of campaign financing at the country level
- **Rec #3b**: Take incremental steps toward harmonizing and aligning campaign financing
- **Rec #3c**: Harmonize and align incentive payment modalities and rates across campaigns
- **Rec #3d**: Advance government role in campaign financing

1. Monitoring, evaluation, research, learning, and adaption
Missed Campaign Integration Opportunities:
Development of an algorithm to identify potential integration opportunities in 7 countries between 2019-2023

Webinar for Health Campaign Effectiveness Coalition
20 March 2024
Agenda

- Context and Rationale
- Purpose and Objectives
- Approach and Methods
- Results
- Key Takeaways
- Limitations
- Requests
- Next Steps and Discussion
IA2030 proposes a strategic framework

7 Strategic Priorities

informed by

4 Core Principles
for action

People Centred, Country Owned, Partnership Based, Data Guided
What is new in IA2030?

- **Global-level partnership model**
- **Integration into UHC and PHC**
- **Co-developed and co-designed by countries, regions & global partners**
- **Tailored M&E framework adapted to country context**
- **Addresses immunization coverage & equity**

- **Stronger systems focus**
- **Addresses gender-related barriers**
- **Strengthening partnerships beyond immunization and health**
- **Integration of disease-specific initiatives**
- **Ensures self-sustainable programs**

Anindya to present
Campaign integration concept anchored to IA2030

• Many vaccine-preventable disease (VPD) initiatives have evolved with a targeted focus on the specific pathogen and disease.

• **Disease Specific Initiative (DSI) groups** have expertise and strong focus on disease control/elimination/eradication.
  • But they have often worked in silos

• Greater operational efficiency and potentially greater sustainability can be achieved through integrating surveillance and immunization response between DSI groups.
  • There are limited (if any) operational guidelines on integration

• An IA2030 In-depth Review (IDR) on campaign integration is nearly completed to support country programs and DSI groups to take an informed decision regarding integrated campaigns

• In the present work we report on a data-based approach to help program managers and policy makers to decide on integrated campaigns.
Purpose and Objectives

Purpose
• To identify potential missed opportunities for campaign integration from retrospective data in selected countries to inform future decisions regarding implementing integrated campaigns

Objectives
1. Use retrospective campaign data and data science methods to identify campaign characteristics that facilitate or inhibit integrated service delivery
2. Develop a user-friendly analytic method that can be adapted and applied at global, regional, and country levels to identify campaign combinations in advance for potential integration
3. Seek inputs from Regional and Country colleagues about usefulness and willingness to apply these tools in country context.
General Approach

Current Analysis: Retrospective Analysis of Historic Campaigns

- Analyze all possible combinations of campaigns from 2019-2023 within focus countries to identify which are feasible for integration
- Rank matches based on compatibility
- Use optimization to suggest best combination of matches based on compatibility

Next Steps: Country Engagement, Refinement, Modeling, Implementation

- Consultative engagement with countries/regions to better understand why missed opportunities for integration did not occur and to validate data inputs
- Additional refinement of algorithm
- Potential for modeling impact of integration (costs, coverage)
- Tailoring algorithm on prospective campaign data
- Develop an interactive online decision support tool to prospectively identify most feasible campaign integrations
- Coordinate with IA2030 to integrate tool into the Collaborative Action Strategy (CAS) package of decision-making materials under development by the Health Campaigns Effectiveness Coalition

Pratima to present IA2030
### Table: Disease Campaign Partnerships

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<th>ICG</th>
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**Retrospective analysis uses Health Campaigns Intelligence Hub database: 13 partners, 36 interventions, 20 diseases**
Applying country and campaign selection criteria yields 240 campaigns for analysis

Country selection

The following seven countries prioritized by IA2030 were selected for analysis as they represent certain archetypes and regions:

- **Afghanistan**: Conflict zone, high number of campaigns in database, polio-endemic country, EMR region
- **Brazil**: Low number of campaigns in database, self-financing, most campaigns integration, strong ownership country, AMR region
- **DRC**: High number of outbreak response campaigns, AFR region
- **Guinea**: High number of outbreak response campaigns, high number of campaigns, AFR region
- **India**: Self-financing mechanisms, strong government ownership, SEAR region
- **Nigeria**: Highest number of campaigns in database, high number of diseases addressed through campaigns, high number of outbreak response campaigns, AFR region
- **Pakistan**: High number of campaigns, high number of diseases addressed through campaigns, high number of outbreak response campaigns, Polio-endemic country, EMR region

Campaign selection criteria

A total of **240 campaigns** were identified as in-scope for this analysis:

- **Total Campaigns In Database**: 2,819
- **Timeframe (between 2019-2023)**: 2,303
- **Geographic (7 countries)**: 402
- **Exclude COVID, Ebola**: 386
- **Exclude OPV2**: 261
- **Exclude Outbreak Response***: 4

*Excluded: Polio (except in AFG/PAK), OCV, MenA
Included: YF, MCV
**Analytic Methods: Algorithm**

1. Get Phases
2. Create all possible Combinations
3. Remove Infeasible Combinations
4. Score the Feasible Pairs
5. Maximize Overall Compatibility

### Examples of infeasibility
- Non-overlapping geographies
- Incompatible start dates

### Compatibility score
- Based on the summation of weighted scores on:
  1. Target population within geographic scope
  2. Time match ± 4 weeks
  3. Historical precedence of proposed combinations

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Erik to present
Main Reasons for Infeasibility

The 240 campaigns included a total of 325 phases. Feasible combinations were identified at the phase level based on 10 rules. The most important two rules were as follows:

1. **Geographic overlap**: Campaign geographies must overlap in at least one Admin1 level.

2. **Close start dates**: Campaign start dates must be within 8 weeks of each other.
Example of two potential missed immunization integration opportunities in Pakistan: OPV + MCV/OCV/TCV/Td

Within a country there are specific suggested integration combinations that are repeatedly missed
- In Pakistan, the same intervention combination was possible on two distinct occasions (OPV + MCV/OCV/TCV/Td)
- Some overlap in geography (subnational/subnational and national/subnational) and age range (0-5 vs. 0.75-49 cohorts)
- Same start month for first proposed integration and one month apart for second proposed integration
- See Appendix for more details on these specific integrations

First Proposed Integration
- Multi-state subnational for 0-5 cohort
- Single state subnational for 0.75-49 cohort

Second Proposed Integration
- National for 0-5 cohort
- Single state subnational for 0.75-49 cohort

Target Population
- (Geography & Age Range)

Start Date
- Earliest Start Date
- Current Start Date
- Latest Start Date

Erik to present
This analysis identified 35-64% of campaigns from 7 countries had potential integration opportunities in 2019-2023

Analysis by year below; overall, 126 of the 240 campaigns (53%) had at least one integration opportunity*

*Some phases were already integrated with > 1 intervention but could still integrate with another phase with one or more interventions
Missed integration opportunities include commonly known (MCV+OPV) and unusual (MCV+OCV/OPV/TCV/Td)

Analysis returned 85 missed integration opportunities for 7 target countries between 2019-2023

There were 56 unique intervention combinations, with 33 being new to our database
Total Integration Opportunities by Country

Nigeria (27) and Pakistan (19) had the most integration opportunities between 2019-2023
MCV+OPV were the most commonly missed potential campaign integrations

<table>
<thead>
<tr>
<th>12 Most Common Intervention Combinations</th>
<th>Pakistan</th>
<th>Nigeria</th>
<th>India</th>
<th>Guinea</th>
<th>Afghanistan</th>
<th>DRC</th>
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Key Takeaways

1. Algorithm analyzed optimal integrations amongst 240 campaigns from 7 target countries occurring 2019-2023
   - 85 integrations were returned after optimizing for compatibility
   - 126 of the 240 campaigns (53%) had at least one integration opportunity

2. Algorithm identified familiar intervention combinations (Measles + Oral Polio vaccines, Oral Polio + Tetanus-Diphtheria vaccines), along with a diverse set of combinations (56 total)
   - Measles + Oral Polio vaccines were common missed integrations
   - 33 potential intervention combinations were not previously observed in the database
   - The 4 most common new integrations were Malaria-SMC + VitA (4), Malaria-SMC + MCV/MenA (3), DEC/ALB(M2) + MCV (2), and OPV + MCV/OCV/TCV/Td (2)

3. This analysis used retrospective data. This methodology can be used with prospective campaign data:
   - Identify if integrations are feasible,
   - Apply compatibility scores and
   - Explore other programmatic considerations to inform decisions for integration – perhaps in collaboration with Health Campaign Effectiveness Coalition Collaborative Action Strategy
Limitations

1. **Scope:** We are only looking at quantifiable characteristics of campaigns, but we recognize that many additional factors (e.g. donor restrictions) impact decision-making at the country level.

2. **External Validity:** The findings require validation by experts from selected countries and DSI groups and may not be generalizable to all country contexts.

3. **Data:** The analysis is only as good as the data in the campaign database.
   - Completeness and timely availability of planned and completed campaign reports could be improved.
   - Some campaigns lacked data on dates and subnational locations.
Requests

• Commitment to continue to share prospective campaign data routinely with Campaign Hub

• Request to IA2030 to encourage DSIs to proactively seek appropriate campaign integration opportunities at global, regional, country levels

• Align and fund the next version that answers practical questions about campaign integration (cost benefits; more countries; overlap for planning activities; recommendations for specific diseases or regions)
Next Steps

Current Analysis: Retrospective Analysis of Historic Campaigns

- Analyze all possible combinations of campaigns from 2019-2023 within focus countries to identify which are feasible for integration
- Rank matches based on compatibility
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Next Steps: Country Engagement, Refinement, Modeling, Implementation

- Consultative engagement with countries/regions to better understand why missed opportunities for integration did not occur and to validate data inputs
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- Coordinate with IA2030 to integrate tool into the Collaborative Action Strategy (CAS) package of decision-making materials under development by the Health Campaigns Effectiveness Coalition

Pratima to present
Appendix
Supplemental Results
### Full Results

- **OPV and MCV integrations** were most frequently proposed to be integrated together (8).
- **MCV + OPV** was the most common integration and was suggested for most target countries (5 of 7).
- **Nigeria**, given its large number of campaigns across diseases, had the most suggested integrations (27).
- **Nigeria integrations** were spread out across a diverse number of intervention combinations (25).
- **Pakistan integrations** were more concentrated into specific interventions that included OPV (OPV + Td; MCV + OPV).

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<tr>
<th>Combined Simple Interventions</th>
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Grand Total: 27, 19, 13, 13, 8, 4, 1, 1, 85
Integration #1 – OPV + MCV/OCV/TCV/Td in PAK

- **Same intervention combination** (OPV + MCV/OCV/TCV/Td) suggested in **two integrations** for the same country (PAK)
- **Same start month** for one (2023/08) and **one month apart** for the second (2023/10 vs. 2023/09)
- **Some target population overlap**
  - Subnational overlap for one and national/subnational overlap for the second
  - Some age range overlap with 0-5 for OPV and 0.75-49 for MCV/OCV/TCV/Td
- No precedence (i.e., we have not observed this combination in our database)

<table>
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<th>Type</th>
<th>Target Demographic</th>
<th>Start Date</th>
<th>Scope</th>
<th>Interventions</th>
<th>Population Score</th>
<th>Precedence Score</th>
<th>Start Date Score</th>
<th>Final Score</th>
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<td>Subnational</td>
<td>OPV</td>
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<td>0%</td>
<td>77%</td>
<td>32%</td>
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<td>Pakistan</td>
<td>Outbreak response</td>
<td>All 0.0-5</td>
<td>2023-10</td>
<td>OPV</td>
<td>Campaign All 0.75-49 2023-8 Subnational Measles-containing vaccines,OCV,TCV,Td</td>
<td>20%</td>
<td>0%</td>
<td>70%</td>
<td>30%</td>
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Integration #2 – 2*ALB(M4) + OPV/VitA in DRC

- Two full campaigns suggested to be integrated in DRC
  - Back-to-back phases of 2*ALB(M4) campaign to integrate with back-to-back phases of OPV/VitA campaign
- Same start month for both phases of each (2023/05 for first integration; 2023/11 for second integration)
- Some target population overlap
  - National/subnational overlap for both integrations
  - Some age range overlap with 1-60 for 2*ALB(M4) and 0.5-5 for OPV/VitA
- Somewhat uncommon combination of interventions (i.e., low precedence score means it has occurred infrequently in the past)
Examples of potential missed cross platform integration: DRC NTD and OPV/VitA

We are missing integration opportunities for every phase of certain campaigns
- In DRC, back-to-back phases from one NTD campaign could integrate with back-to-back phases of one OPV/VitA campaign
- Some overlap in geography (national/subnational) and age range (1-60 vs. 0.5-5 cohorts)
- Same start month for both phases of each campaign
- See Appendix for more details on these specific integrations

Target Population
(Geography & Age Range)

First Proposed Integration

Second Proposed Integration

Start Date

Target Population
(Geography & Age Range)

2023-04 2023-05 2023-06 2023-07 2023-08 2023-09 2023-10 2023-11 2023-12

Phase 1, NTD Campaign
Phase 2, NTD Campaign
Phase 1, OPV/VitA Campaign
Phase 2, OPV/VitA Campaign

Earliest Start Date | Current Start Date | Latest Start Date | National | Subnational | NTD Phase | OPV/VitA Phase
Menti Discussion

• Please join at menti.com | use code 4861 8156
What campaign domain(s) do you work in?

37 responses
Have you had positive or negative experiences with campaign integration?
### What barriers or challenges have you encountered with campaign integration?

<table>
<thead>
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<th>Challenge</th>
<th>Popularity</th>
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<td>Coordination of finance, supplies and people</td>
<td>Popular</td>
</tr>
<tr>
<td>Logistical issues, financial difficulties, timing</td>
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<tr>
<td>different funders</td>
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<tr>
<td>Poor planning</td>
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<tr>
<td>National programmes often refuse, supply chain issues</td>
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<tr>
<td>Adapting data collection tools and processes</td>
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<tr>
<td>Leadership buy-in, funding coordination, program silos, lack of donor support</td>
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<tr>
<td>In context of polio, that is seen as priority</td>
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</tbody>
</table>
What barriers or challenges have you encountered with campaign integration?

- Lack of access to reliable data: 2
- Lack of cooperation: 2
- Different partner reporting: 2
- Siloed programs at the MoH: Lack of planning coordination; even if you have buy-in for integration, then the 2 campaign plannings derail on their own track: 2
- Timing: 2
- Campaign delays: 1
- Different departments managing different disease areas: 1
- Stakeholders push back: Difficult achieving coordination; weak evidence of drug to drug interactions for MDA: 1
What barriers or challenges have you encountered with campaign integration?

<table>
<thead>
<tr>
<th>Unequal planning resulting in delays and under performance</th>
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<tbody>
<tr>
<td>Availability and adequate human resource</td>
</tr>
<tr>
<td>Lack of time or resources (ie: Human Resources) to coordinate across campaigns</td>
</tr>
<tr>
<td>Adequate and skilled human resource</td>
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<tr>
<td>Immunization teams at community levels want to be paid for more campaigns, not fewer campaigns!</td>
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<tr>
<td>Delayed and mixed communication messaging - confusion</td>
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</tbody>
</table>
Would you use a tool like this?
If yes, how would you use this tool and in what context?

1. **To look at potential integration opportunities of FUTURE campaigns, not past campaigns, to influence the funding and planning of those.**
   - Popular
   - 7

2. **Planning and working with stakeholders**
   - 6

3. **It should consider modality (house-to-house vs fixed site) and vaccine type (injectable vs oral vaccine)**
   - 4

4. **Outbreaks: what are other campaigns we can piggy back on and integrate campaigns for outbreaks?**
   - 4

5. **Create the tool to run the algorithms for implementation by the country planners not HQ database**
   - 4

6. **I’d LOVE to use this tool to evaluate / analyze the SAVINGS coming from integrated campaigns. This way, we have a better leverage to donors and MoH to go for integrated campaigns.**
   - 3

7. **National level strategic planning, grant applications (GAVI, Global Fund)**
   - 3

8. **More for long term planning**
   - 2
If yes, how would you use this tool and in what context?

1. If the tool is flexible and will include some contextual description of scenarios
2. Drive the decision of integration based on data
3. At national and subnational level. NTD and Immunization campaigns
4. Maybe for a last-minute outbreak response to see if it could capitalize on any planned campaign
If no, how should this tool be changed to be useful?

Country level usability

Forward facing - adjust the algorithms regarding start date

Include a cost-saving analysis. It's a good leverage to get buy-in from donors and MoHs for integrated campaigns (or it should be, at least!).

Modify based on menti pool

It would be great to also add some kind of analysis impact of integrated health campaigns on the demand side, specifically does it add more wait time for those getting the service

Digital component: is there an opportunity to leverage to integrate campaigns from a digital point of view?