HEALTH CAMPAIGN EFFECTIVENESS
Strengthen Systems. Maximize Impact.

A program of
THE TASK FORCE FOR GLOBAL HEALTH

Use of Predictive Analytics for Improving Efficiency and Effectiveness of Integrated Health Campaign Micro Planning

Rwanda National Countrywide Integrated Health Campaign (31 districts)
Health Domains: Vitamin A, Deworming, Schistosomiasis, Malnutrition Screening and Treatment, Family Planning, Health and Water Sanitation Education
Theme: Campaign Integration

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Background and Problem to be Addressed

Background	Problem or Gap
- Current health campaigns are planned using manual data systems. - Vulnerable or poor communities who need the health campaign services and least likely to have received them through routine healthcare are difficult to identify. - Deployment of resources is not optimized. - Trade-off scenarios such as, 'is it better to pay perdiem and bring HW for COVID19 vaccination to the capital or extend the cold supply chain to the HW location?' are difficult to quantify.	The use of Big Data is not streamlined in Health Campaign Microplanning process and consequently AI/machine learning methods are not possible to use. As a result, it is difficult to assess whether the intervention is effective in meeting its mission goals, or efficient in utilization of cost and other resources.

Purpose and Intended Application of Findings

Purpose	To test a hypothesis that the use of Big data and Machine Learning can better identify communities that need health campaign services and least likely to have received this care through routine healthcare delivery. In addition the study plans to show that automation of the micro planning process can lead to improved efficiency, and use of optimization and simulation strategies can improve better resource deployment and trade-off decisions
Expected Outcomes	Increased effectiveness due to improved coverage of poor communities, and decreased cost and of micro planning due to automation and optimization.

Research Questions Addressed

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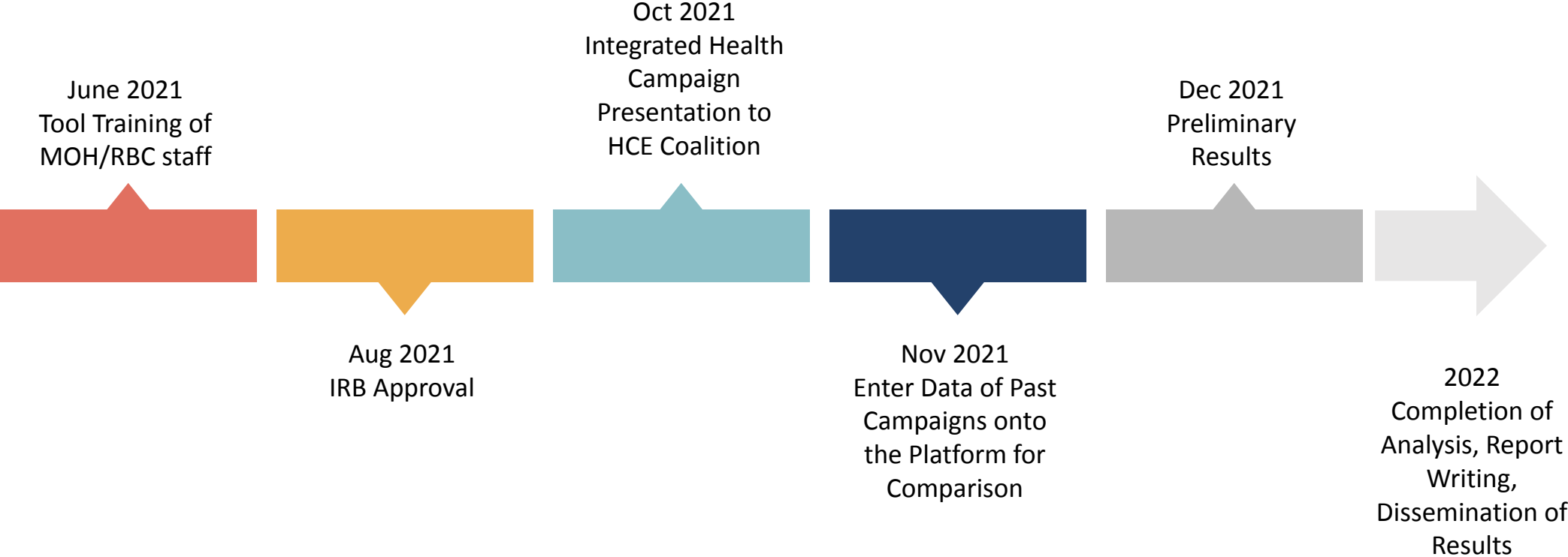**[Primary research question]**

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[Secondary research question]

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- By using Big data and Machine Learning, are we able to better identify poor communities that are least likely to have received this care through routine care care service delivery?

- We plan to use data such as poverty maps, education rates, social determinants factors such as how far a people willing to travel to seek preventive healthcare service to identify vulnerable communities and where they live.

- METHOD: Quantitative comparison – Prospective health campaign data using AI versus Retrospective health campaign data using manual system for planning

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- Does an automated health micro planning platform reduce planning costs, time, improve transparency and increase collaboration?

- Does the tool align well with the current planning process from the MOH perspective? Or is there a need to do additional work outside the tool to complete a comprehensive plan?

- METHOD: KPI comparison, FGD and KII

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Anticipated Project Timeline

June 2021
Tool Training of MOH/RBC staff

Aug 2021
IRB Approval

Oct 2021
Integrated Health Campaign Presentation to HCE Coalition

Nov 2021
Enter Data of Past Campaigns onto the Platform for Comparison

Dec 2021
Preliminary Results

2022
Completion of Analysis, Report Writing, Dissemination of Results

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Challenge in next 6 months

The Challenge(s)	Strategy for Mitigation
Delay in getting IRB approval due to COVID19, requiring all staff at all levels to focus on supporting COVID19 mitigation Integrated planned health campaign cancelled due to COVID19 mass vaccination implementation or continued shut-down to activities to control COVID19	Link with the committee members to ensure all the paperwork required is in order. Reduce any individual data collection, requiring additional clearances. Compare retrospective health campaigns; consider incorporating routine data and compare disease trends by district and campaign uptake.

THANK YOU