DEVELOPMENT MEDIA INTERNATIONAL

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DMI TIME SERIES METHODOLOGY

INTRODUCTION

Development Media International (DMI) is a UK-based, non-profit organisation that specialises in running evidence-based media campaigns to change behaviours and improve lives in developing countries. DMI has been working in Burkina Faso since 2011 on child and maternal health behaviour change media campaigns utilising both quantitative and qualitative research methods.

OBJECTIVES FOR THE TIME SERIES APPROACH

General Objective - The main objective for the time series study is to rigorously measure the impact of multiple DMI campaigns being delivered at scale, over pre-determined periods of time.

Pre-existing DMI quantitative and qualitative evaluation projects have tracked knowledge and crucial target behaviours in selected zones before, during and after our campaigns. An added time-series data collection programme will allow us to track the progress of DMI campaigns at regular intervals, and is an excellent way of measuring whether a given intervention has made a measurable social and behavioural impact. Additionally, the time series approach can help elucidate at what stage different behaviours were influenced by the campaign.

Other study designs such as a randomised controlled trial cannot be used to evaluate the impact of radio campaigns being delivered at a national scale, which precludes the possibility of either randomisation or control zones. A time series design also provides the opportunity to measure the impact of multiple campaigns implemented at different points in time, without the expense of conducting bespoke baseline and endline surveys for every new campaign. Further, monthly time-series data collection allows a more robust approach to impact evaluation than other study designs, such as simple before and after approaches, because consistent and continuous data collection allows us to detect the point at which interruption to the time series trend may have occurred. Thus this is a more subtle way to detect effects and provides a more reliable indication of causality/attribution of effects to a given campaign than a before and after evaluation.

Additionally, research findings from the time series data collection will be shared with DMI's creative team in Burkina and London in real time. Having consistent analysis of current trends within country will lead to better campaign design and implementation. DMI will be able to respond immediately to these trends and alter messaging to better target the desired population for the greatest impact. Any unusual findings will be assessed using DMI's qualitative research team through more in-depth focus groups and key informant interviews.

TIME SERIES DATA COLLECTION APPROACH

This evaluation approach consists of conducting thematic monthly **data collection** across key zones in Burkina Faso, specifically aligned to measure current and future campaign target indicators.

Process - The time series approach will consist of monthly individual interviews carried out by a team of seven enumerators who will visit between 7-10 villages a month within a previously delimited zone. The data collection approach will be randomised at the village level prior to beginning the research. Villages will be located in rural areas that are situated more than 5km from DMI's partner radio stations (outside the electricity grid) and will have a population of less than 5,000 inhabitants.

Each enumerator will be designated a particular region, overlapping some of DMI's radio station zones, wherein they will be based for the duration of the project. The enumerators will receive their monthly randomized assignment that consists of 7-10 villages in which they will need to interview 10 households – both the head of the household and his first wife. Upon entering a village, they will need to gain permission from the governmental, traditional, and/or religious leaders to conduct the research within said village.

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These opinion leaders will help assign families to the study by recommending those available and willing to participate who fit the sample requirements.

Location - The seven enumerators will be based within seven major towns and will cover between 2-3 radio station zones. This delimitation was based upon cultural context, language restrictions, ease of accessibility and transport, and maximum coverage of the different ethnic groups within Burkina Faso in order to be representative of the country as a whole. Annex 1 provides a map of the enumerators' bases as well as the approximate zones they will be covering each month.

Tools - Each enumerator will be provided with a Motorola PDA that will allow them to collect electronic data, including recording personal consent from all survey participants. The Computer Assisted Interview (CAI) has been designed using SurveyCTO which is based upon ODK software design. After the completion of surveys within each village, enumerators will be able to send their encrypted data in real time to DMI's databases in Ouagadougou. DMI's Head of Research in Burkina Faso will oversee all database management, including encryption and protection processes.

Questionnaire - The questionnaire is comprised of questions that cover current and potential future campaign indicators. The main themes addressed in the questionnaire include: demographic information on the respondent and household; radio ownership and listenership; knowledge and behaviours related to maternal, newborn and child health, nutrition, hygiene and family planning.

Monitoring of Data Quality - By utilizing a CAI survey methodology, DMI has the capacity to include built-in consistency and completeness checks within the time series questionnaire that will help guarantee data quality. The Head of Research in Burkina Faso will further employ data verification methods during management of the time series database on a regular basis. Additionally, Innovations for Poverty Action (IPA) will be providing quarterly independent verification of DMI's time series data as an additional level of external assessment.

Health Facility Data – In addition to the monthly time series data, DMI will be utilizing a triangulation method to include multiple data sources that will facilitate validation of our survey data and lead to a greater confidence level in our results. Available sources would include data collected from health centres, time series enumerators, qualitative research on key indicators, and RCT data from DMI's research with Innovations for Poverty Action and the Centre Muraz.

Survey of facilities – Additionally DMI is developing a short supply-side survey that enumerators would be able to routinely conduct at village community health centres. This survey will provide DMI with data from a sample of health centres on the availability and pricing of medication.

QUALITATIVE DATA COLLECTION
In addition to the time series data collection, DMI conducts bi-monthly qualitative monitoring and data collection that follow the design and broadcasting of each campaign. This post-broadcasting feedback research informs the implementation of campaigns as well as measuring their effect on knowledge and behaviour change. Where possible we will also quantify data emerging from our qualitative research. DMI also conducts formative research on each message theme (through focus groups discussions and individual in-depth interviews), which is used to produce message briefs, which are then used by DMI's creative team to develop radio messages (spots) on specific themes.

This qualitative research will support and additionally be informed by the time series data collection. As aforementioned, any unusual trends discovered in the time series data collection can be explored in greater depth through the qualitative research. At the same time, as new information is learned through these research trips, additional indicators or themes can be added to the time series collection. As such, both areas of research are integrated and both approaches support and engender the other in a symbiotic relationship.

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Annex 1