

# Impact assessment of the SALT (Stimulate, Appreciate, Learn, and Transfer) approach of community engagement to increase immunisation coverage through ownership - a mixed methods study in Assam, India

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## Background

Despite a long standing national program for universal immunization in India (UIP) since 1985, only 65.2% of 12-23 month old children are fully immunized (RSOC, 2013-14). Full immunization coverage (FIC) is defined as children receiving 1 dose of BCG (to prevent tuberculosis), 3 doses of polio (to prevent poliomyelitis), 3 doses of DPT (to prevent diphtheria, pertussis and tetanus)/Pentavalent vaccine (DPT plus Hepatitis B and Haemophilus Influenza type B) , and 1 dose of measles. In Assam, FIC drops to 55.3%. Completion of vaccine schedule, particularly for antigens that require multiple doses (e.g., DPT/Pentavalent and OPV), remains a major challenge. Dropout rates for DPT 2 to 3 and OPV 2 to 3 are much higher in Assam (15.9% and 18.6%, respectively) than the national figures of 11.2% and 11.9% (RSOC, 2013-14). Both demand and supply side bottlenecks contribute to poor vaccination coverage rates. Lack of parental knowledge and awareness of the benefits of vaccination, immunization schedule and service provision (where to go and when to go), inconveniently located vaccination services, fear of side effects, among others are responsible for high proportion of incomplete or no immunization.

In a recently published draft scoping report on immunization by the funding agency <sup>3</sup>ie, it has been suggested that community engagement approaches to improving immunization can increase demand and potentially affect quality of immunization services. However, community engagement programs mostly focus on communication, and the communities are not actively involved in the planning, monitoring and surveillance activities. But participatory engagement of communities can help identify problems, barriers, desired outcomes and sustainable solutions, in a manner which a top-down approach can never achieve.

## Intervention

The proposed intervention is based on the premise that communities think and act for themselves, and that communities have the capacity to change themselves. Facilitators stimulate them to take action through an approach that appreciates their strengths and fosters local ownership. We call this methodology the Community Life Competence Process (CLCP). Facilitators accompany the community as it applies CLCP with an approach that is characterized with the acronym SALT (Stimulate, Appreciate, Learn, and Transfer). SALT employs facilitated conversations to elicit community strengths, increase self-awareness and stimulate self-confidence and action.

SALT describes the way of thinking and working with the people who adopt the approach. The starting point is the intent to Transfer what communities Learn from others into their contexts. Listening to and Appreciating others' strengths facilitates learning. Communities are Stimulated by questions that enable exploration of other people's experiences. Community Life Competence Process – CLCP describes the steps that communities take when they overcome the challenges they face in the pursuit of their dream for the future.

This community-based approach has been shown to be effective in generating behavior change in a variety of contexts. In the present application, we propose to use this innovative community engagement approach to increase immunization coverage.

### **Study site**

The program will be implemented in Assam, a north-eastern state of India. As per 2011 census, Assam has a population of 31.2 million. On account of high fertility and mortality indicators, Assam is considered to be one of nine high focus states by the Government of India. According to the latest SRS bulletin (2014), Assam has the highest infant mortality rate in the country i.e; 54 deaths in infants less than a year old per 1,000 live births, which greatly exceeds the national average of 40. Therefore conducting research in the area of infant and child health in the north-east is a priority. It is envisaged that the present intervention will be implemented in three districts in rural Assam. Community ownership being the heart and soul of the CLCP methodology, our proposed intervention might be more effective in a rural setting. The three districts- Kamrup rural, Udalguri, Bongaigaon- were selected in such a way that they represent Assam with respect to vaccination coverage-related outcomes and their determinants.

### **Evaluation questions**

We intend to evaluate the impact of the proposed intervention on coverage related outcomes around three key measures- full immunization coverage (FIC) in children 12-23 months old, coverage for different doses of DPT (diphtheria-pertussis-tetanus) vaccine and dropout between different doses in 6-23 month old children. Moreover, we will assess the effect of the intervention on other vaccination-related outcomes - age-appropriate vaccination, coverage among tribal populations and groups living in remote locations, inequities in coverage by gender and birth order, in enhancing awareness about service provision, and promoting utilization of preventive services. We will also assess indicators along the causal chain - knowledge, attitudes, and practices of the mothers/caregivers, in the context of child health.

### **Identification strategy**

We will adopt a village-level randomized controlled trial (RCT) design to evaluate the impact of the community-led intervention on vaccination coverage related indicators. Cluster randomized design is appropriate here as opposed to individual or household level randomization as the intervention is intended for implementation at the community level.

We will randomly allocate the sampled villages within a district to the treatment and control arms. A simple comparison of outcomes between sampled children in villages receiving the intervention and those in control villages will allow us to measure attributable change in coverage-related outcomes.

### **Sampling strategy**

For the selection of villages, we plan to use census 2011 village-level data as our sampling frame. We will use relevant covariates to stratify villages into 4 strata and within each stratum we will randomize villages to treatment and control groups. The main advantage of stratification is its potential to provide explicit balancing of potentially important covariates (known to be

associated with immunization coverage related outcomes) at baseline, as randomization happens within each stratum. While randomizing, we will incorporate distance buffers into the selection of treatment and control villages in order to minimize contamination between arms.

For all sampled villages from the district, after house listing, a random sample of eligible households – households having children in the age group 6 to 23 months- will be selected for the survey and assessment of outcomes. In a selected household, all mothers/ care givers having children in the age group 6-23 months are eligible to participate in the survey.

### **Sample size**

We need 120 villages per intervention group (a total 240 villages in Assam across 3 districts) to have sufficient power (80%) to detect a change of 10 percentage points in coverage (e.g., DPT3 coverage from 65% to 75% and FIC from 55% to 65%) at 5% level of significance. We plan to equally allocate these 240 villages across 3 districts, resulting in 40 treatment and 40 control villages in each of the selected districts. These calculations are based on the assumption that a village on average will have a minimum of 15 children 6-23 month old and 10 children 12-23 month old. If there are more children, we will randomly select them. We will therefore have a total of 1800 children ( $15 \times 40 \times 3 = 1800$ ) in the age group 6-23 months and a total of 1200 ( $10 \times 40 \times 3 = 1200$ ) children in the age group 12-23 months, in each intervention arm to compare DPT3 and full immunization coverage, respectively, between the two arms.

### **Data collection: use of mixed methods**

Both quantitative and qualitative methods of data collection will be used to assess the impact of the intervention on the above mentioned outcomes.

### **Quantitative**

Data from target households and children will be collected using two structured questionnaires. At the household level, household composition, socio-demographic characteristics, infrastructure access and asset possession of the household will be collected. Household head would be the preferred respondent for this questionnaire. The other questionnaire will be administered to the mother in the household having child in the age group 6-23 months. Mother questionnaire will include details about her age, age at marriage, number of children, educational attainment, occupation, empowerment and decision making power. For the most recent birth (youngest child), the immunization status of children will be collected either from the vaccination card or by maternal recall (if card was unavailable), reasons behind partial and non-vaccination will be explored, details on childhood illness will also be collected. Utilization of health system during pregnancy and place of delivery (corresponding to the youngest child) and access to immunization related communication messages will be obtained. We will also collect data to monitor indicators along the causal chain - knowledge, attitudes, and practices of the mothers/caregivers, in the context of child health.

## Qualitative

Focus group discussion (FGDs) deploying participatory learning and action methods (PLA) will be used to complement the quantitative survey at baseline and endline to explore how the intervention impacted the outcomes of interest, as perceived by the community. Given that the SALT approach engages community groups in a process of collective reflection, ownership and change, FGDs (using PLA tools) are a good method to use with community groups to explore how the SALT approach has been operationalized at the community level and whether and how it has enabled the community to take action to improve immunization coverage. We propose using PLA tools during FGDs with the communities to encourage active participation and draw out diverse experiences in a non-threatening manner.

For the *qualitative data collection*, a total of 100 FGDs will be conducted, 40 at baseline and 60 at endline. The FGDs will be conducted in a sub-sample of villages in the intervention and control arms that will be representative of villages across the 4 strata identified in the three districts. FGD participants will be selected purposively. Parents of children 6-23 months will be invited to participate in the FGD, with each FGD having a minimum of 8 and maximum of 12 participants.

Key informant interviews (KIIs) will also be conducted with select stakeholders (at baseline and endline) such as health care providers (at sub-centers and PHCs), local government (panchayat raj) representatives, as well as local NGO representatives. At baseline, KIIs will attempt to understand the current child health scenario, the challenges related to the uptake of immunization services, and actions or interventions that have been undertaken to improve immunization uptake. These KIIs will explore both the perceived demand side and supply side barriers to immunization uptake. At endline, KIIs will examine what changes there have been in child health status, especially immunization uptake and child survival, as well as how the SALT interventions has contributed to this change.

To the extent possible, all FGDs and KIIs will be audio-recorded while also maintaining detailed field notes. These will be transcribed and translated into English for analysis. The translated documents will be imported into NVivo (version 8) for analysis. The research team will code data in each transcript using attribute, structured and descriptive coding techniques, and write analytic memos based on the emerging patterns and associations. Further analysis using more complex analytical mechanisms (e.g., causal chain, pattern coding) will also be conducted.