

IIHMR RESEARCH BRIEF

Synthesis and Translation of Research and Innovation in Polio Eradication (STRIPE): Lessons Learned from Implementation of Global Polio Eradication Initiative in India

BACKGROUND

Eradication of polio in the world is a historical and significant achievement in public health after eradication of smallpox. WHO's Global Polio Eradication Initiative (GPEI) focused on effective implementation strategies to enhance access and availability of polio vaccine, production and distribution of vaccine, strong logistics and supply chain, massive communication campaign and health systems strengthening. A multi-country research study, Synthesis and Translation of Research and Innovation in Polio Eradication (STRIPE) leveraged the knowledge assets created under GPEI to elucidate and synthesize lessons for effective implementation of health programs.

STRIPE is a collaborative research project the Johns Hopkins Bloomberg school of Public Health, USA in partnership with a consortium of research institutions in seven countries: Afghanistan, Bangladesh, Democratic Republic of the Congo, Ethiopia, India, Indonesia, and Nigeria.

OBJECTIVES

Prime objective was to operationalize the knowledge assets under the Global Polio Eradication Initiative (GPEI) into academic and training programs for various global health audiences and facilitate the diffusion of these knowledge assets into other global health initiatives and service delivery programs in various countries to improve population health outcomes.

Objective 1: Knowledge Mapping - Mapping of explicit and tacit knowledge of implementation of the GPEI.

Objective 2: Knowledge Synthesis - Synthesis and packaging of knowledge assets into a knowledge product as a global health course, and resource material for training on Implementation Science.

Objective 3: Knowledge Product dissemination as an academic course on implementation science, management development program or training program for public health professionals and students.

APPROACH

The study was initiated in April 2018 to collect information on experience, challenges and barriers in implementation and alternate strategies for polio eradication; synthesize information into knowledge products; lessons learned; and dissemination of these lessons as academic courses in universities and training programs for public health professionals, researchers, and students.

KNOWLEDGE MAPPING

Consultation Workshop

Knowledge mapping was a critical component of the study. A consultation workshop was organized with the key stakeholder and major players in the government at national and sub national levels, multi-lateral and bilateral international organizations, non-governmental organizations, and program implementors. The purpose was to take their inputs in approaches and methods in information gathering, fine tune instruments, identify resource material and data sources, key informants, and elicit their experience in implementation challenges and barriers.

The working definition of Polio Universe in the project was "a group of people who at any level (National, State, block, and field) had been

involved in Polio eradication effort in India any time over the total duration (1988-2017).

Scoping and Grey Literature Search



We identified around 360 documents from offline and online data sources pertaining of polio eradication from 1995-2017. Research team did the initial screening based on the title, abstract or summary for all the identified grey literature. Published and duplicate literature were removed from the list with mutual consensus. Finally, 242 grey literatures were utilized for grey literature extraction.

Online/Offline Data Collection

Online survey was conducted to capture views and opinion of health professionals which was missing in earlier efforts to study lessons learned from polio eradication. All those personnel who had participated in GPEI at policy, program and implementation level including social mobilization / IEC in any capacity for more than 1 year in health department, ICDS, IEC / BCC were approached through email. Grassroot level / frontline workers were also interviewed to understand the challenges faced by them during their journey of polio eradication.

Key Informant Interviews with Stakeholders

Role of partnerships and collaboration between government and non-government organizations, academic and research institutions, WHO, UNICEF, Rotary and BMGF was paramount. Key informant interviews were conducted with the functionaries of these stakeholders. A list of change agents working in the government and partner organization was prepared well in advance.

KNOWLEDGE SYNTHESIS

Technological

- Polio case identification and reporting
- Gaps in the AFP surveillance
- Maintenance of cold chain system
- Vaccine failure - VAPP
- Infrastructure gaps
- lack of approachable roads,
- appropriate place for polio booth

Operational

- Vaccine logistics - Oral Polio Vaccine Procurement to distribution posed a challenge due to huge requirement of vaccine and reaching target population.
- Missing children for vaccination due to migration
- Management and capacity building of human resource

Social

- Vaccine Hesitancy, non-acceptability of vaccine among specific group
- Religious Beliefs & Attitude of Some Minority communities leads to Vaccine refusal
- Myths/rumors associated with polio vaccine leads to upsurge in polio cases
- Social determinants like basic Sanitation and Hygiene, availability of clean water, diarrhea

Environmental /Topographical Challenge

- Topographical Disposition in Kosi river area in North Bihar. Area continuously flooded during rainy season
- Environmental risk factors like heat and monsoon created a perfect storm for virus transmission in Uttar Pradesh
- Reach the remotest corner, inaccessible areas and influence them to be part of immunization schedule and comply with the whole dose schedule

Health System Fatigue

- Too many and too frequent vaccination sessions leads to community fatigue
- Frequent and sporadic outbreaks lead to health system fatigue

- Building Confidence of Technical Person – we can do it!!
- Retain ongoing Momentum of implementors

Unintended Consequences

Positive - Health system strengthening; Capacity Building of Human Resource; strengthening of vaccine supply chain; Life transformation of community mobilizer; Efficient monitoring evaluation and supportive supervision; value-based evidence for Routine immunization Program.

Negative – Low priority of Routine immunization and other health Program (MCH); Developmental Challenges highlighted; Interlinkage of basic sanitation and child health; Rise in Perverse Incentive

LESSONS LEARNED

India successfully eradicated polio with the last case reported in 2012. Long and continuous political support, policy level commitment and advocacy, health infrastructure strengthening and engagement and deployment health workforce, and partnership with key stakeholders, were the most salient factors for successful implementation of polio eradication in India.

STRIPE synthesized information on the lessons learned in effective implementation of polio eradication program that can be in other national and global health initiatives and service delivery programs in India and other countries to improve population health outcomes.

Some of the lessons learned are as follows:

1. **Building partnerships and alliances** of the principal and diverse stakeholder – government, technical institutions, international and bilateral international organizations, philanthropies, and donors, played a critical and catalytic role effective implementation and achieving goals of polio eradication.
2. **Power of Engagement** of local communities and their mobilization in planning and implementation of program contributed significantly solving local problems and creating awareness of the programs. Engage,

Empower, Support, and Involve the community in the decision-making process.

3. **Field Epidemiology Support** – continuous surveillance and monitoring of program performance, detection new case and containment of spread, and outbreak investigations was crucial to identify problems, develop and implement solution.
4. **Behavior Change Communication** – Understand and leverage on social norms, perceptions, and beliefs to bring change in the community.
5. **Context Analysis and Developing Specific Strategies** – Contextualization of events is paramount to develop specific strategies for special situations such as floods, difficult terrains, and resistant populations.
6. **Human Resource Management** – Mobilizing and deployment of adequate health work force, capacity building, task orientation, motivation and incentivizing is an important component of successful implementation.
7. **Commodities and Logistic and Supply Management** – Continuous, timely and uninterrupted supplies of commodities is crucial continuity of services and program activities.
8. **Technology** can be of immense help and use in information management and data analysis, surveillance and monitoring, diagnostics, performance monitoring, problem analysis, measuring trends and making predictions.

KNOWLEDGE PRODUCTS

JHU and STRIPE Research Consortium synthesized learnings from in-depth research in implementation of GPEI in seven countries - Nigeria, Ethiopia, DRC, Afghanistan, India, Bangladesh, and Indonesia, developed global courses addressing 10 core implementation competencies on MOOC. These courses are available free of cost globally. (<https://www.futurelearn.com/partners/stripe>).

1. Global Health Course

Findings from the knowledge mapping phase are used to develop an online open-access global health course organized under 10 knowledge domains. Course materials (including recorded lectures and corresponding slides). These modules can be accessed at <https://stripe.jhu.edu/learning-hub/global-health-course/>

Global Health Knowledge Domains

- i. Introduction to Polio Eradication
- ii. Global Alliance for Public Health
- iii. Policy Engagement and Influence
- iv. Field Epidemiology and Emergency Response
- v. Data for Decision Making
- vi. Health Communications and Behaviour Change
- vii. Community Engagement
- viii. Planning and Management
- ix. Health Commodities, Logistics, and Supply
- x. Human Resources for Health
- xi. Health Equity and Social Justice

2. Massive Open Online Courses (MOOC)

- 1) **Collecting and Using Data for Disease Control and Global Health Decision Making.** The course addresses application of surveillance systems in a wide variety of epidemiological situations and make data informed decisions. 3 Weeks Course; 3 hours per week.
 - 2) **Building Alliances in Global Health: From Global Institutions to Local Communities.** This course aims a developing understanding of challenges of alliance building within the global health sector. 5 weeks. 3 hours per week.
 - 3) **Planning and managing Global Health Programmes: Promoting Quality, Accountability and Equity.** 5 weeks. 3 hours per week.
- ## 3 Implementation Science for Effective Implementation of Health Programs
- A 5-days Management Development Program and Implementation Clinic has been

designed and developed at IIHMR for health professionals national, state and district levels and researchers. The course will be offered in May 2021.

4. **Elective course on Implementation Science.** for MBA (Health Management) and MPH students, to be introduced at IIHMR University.
5. **Case Studies** on Implementation of Health Programs.

STRIPE CONSORTIUM MEMBER INSTITUTIONS

1. Johns Hopkins University School of Public Health, Department of International Health, USA
2. Indian Institute of Health Management Research, Jaipur, India
3. Global Innovations Consultancy Services (GLICS), Afghanistan
4. BRAC James P. Grant School of Public Health (BRAC JPGSPH), BRAC University, Bangladesh
5. University of Kinshasa, School of Public Health, DRC Congo
6. School of Public Health, Addis Ababa, Ethiopia
7. Faculty of Medicine, Public Health, and Nursing, Universitas Gadjah Mada, Indonesia
8. University of Abadan, Faculty of Medicine, Nigeria

INDIAN RESEARCH TEAM

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