Family Planning Commodities Supply Chain Innovation

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Strengthening Family Planning Supply Chains

Project Overview

PATH

Content Guide

Abbreviations Guide

- OOS- Out Of Stock
- EDL- Essential Drug List
- IPM- Informed Push Model
- 3PL- Third Party Logistics
- WH- Warehouse
- CHC- Community Health Centre
- FLW- Frontline Worker
- SWH- State Warehouse
- PHC- Primary Health Centre
- AVD- Alternate Vaccine Delivery
- SC- Sub Center
- ELA- Expected Level of Achievement
- VC- Video Conferencing
- FP-LMIS- Family Planning Logistics Management Information System
- ED NHM- Executive Director National Health Mission
- MD NHM- Managing Director National Health Mission
- IFA- Iron and Folic Acid
- ASHA- Accredited Social Health Activist
- ANM- Auxiliary Nurse Midwife
- BCPM- Block Community Program Mobilizer
- HEO- Health Education Officer

Setting the Context

Family planning is recognized as the second-best return on investment, after education, among all targets set under the Sustainable Development Goals (SDGs). The goal of “every pregnancy a planned pregnancy” is fundamental to progress in health and economic development.[1] Due to lack of access to contraceptives and awareness, women and girls in India become pregnant when they aren’t ready or when they don’t want to get pregnant. India’s family planning program, currently skewed towards limiting methods, needs to focus on implementing a gender equal, rights-based approach, cater to a wider segment inclusive of youth, and expand the available family planning options.[2]

ABOUT THE PROJECT

To tackle issues of access, continuity of use, and exercise of choice in family planning options, PATH is working to strengthen the supply chain of FP commodities. With support from Bill and Melinda Gates Foundation, PATH carried out FP supply chain assessments in 8 states[3]. Based on data from assessment, PATH designed solutions to address identified challenges, piloted innovations in Uttar Pradesh, and implemented the interventions in many states such as Uttar Pradesh and Maharashtra.

Access to Contraceptives and Role of a Robust Family Planning Supply Chain

Lack of supply and access continue to be one of the most cited reasons for unmet demand, non-use, and discontinuing use of contraceptives in low- and middle-income countries[4].

A reliable stock of contraceptives supports voluntary choice, contributes to user satisfaction, and promotes method continuation[5]. More available options also lead to greater use, with studies noting a correlation between the number of contraceptive options available and the willingness of people to use them[6,7]

STRONG FP SUPPLY CHAINS CAN IMPACT FAMILY PLANNING OUTCOMES BY

Support voluntary choice— an important element in user satisfaction and method continuation.

Support an individual's ability to plan and space pregnancies.

Support women's choice of modern contraception, and potentially meet latent demand for previously unavailable methods.

Arriving at Interventions: Assessment & Solutions Brainstorming

RECORDING STOCKOUTS

During assessment, the flow of family planning commodities was mapped at relevant facility levels, and relevant stakeholders were located at each stage. Stockouts of FP products were recorded in each state, and at each level. In line with global benchmarks, availability of commodities was estimated as physical out-of-stock on the day of the visit for every entity visited.

The material flow, indenting behavior and transportation practice were mapped in each state, and out-of-stock instances were recorded through physical verification in each of the facilities visited. The figure shows the out of stock percentages across states and levels.

OUT-OF-STOCK PERCENTAGE ACROSS STATES ACROSS LEVELS

No.	Warehouse Facility	State 1	State 2	State 3	State 4	State 5	State 6	State 7	State 8
1.	State Warehouse	0%	25%	17%	8%	15%	16%	40%	0%
2.	Division Warehouse	NA	NA	8%	NA	NA	NA	10%	NA
3.	District Warehouse	52%	54%	31%	28%	13%	52%	20%	33%
4.	District Hospital	4%	40%	31%	28%	0%	63%	29%	20%
5.	Sub District Hospital	5%	46%	45%	NA	40%	NA	NA	0%
6.	Block Warehouse	NA	71%	NA	NA	NA	NA	NA	39%
7.	Community Health Center	42%	66%	NA	33%	38%	69%	41%	NA
8.	Primary Health Center	28%	50%	59%	100%	72%	69%	71%	100%

FRAMEWORK TO ESTIMATE STOCK AVAILABILITY

Selection of measure of availability based on
- Globally used metrics
- FP-LMIS data availability and accuracy

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Analysing Root Cause for Stockouts

Root cause analyses of each out-of-stock instance was conducted to identify the core challenges of the supply chain.

CORE CAUSES INCLUDED

RESOURCE CONSTRAINTS

Lack of human resource personnel, lack of computers to indent or issue, poor network connectivity

UNDEFINED PROCESSES

Lack of clarity about which commodities to store, who should indent or issue, when to indent or issue

KNOWLEDGE / SKILL GAPS

Lack of understanding of indenting or issuance through FP-LMIS, lack of knowledge of family planning commodities

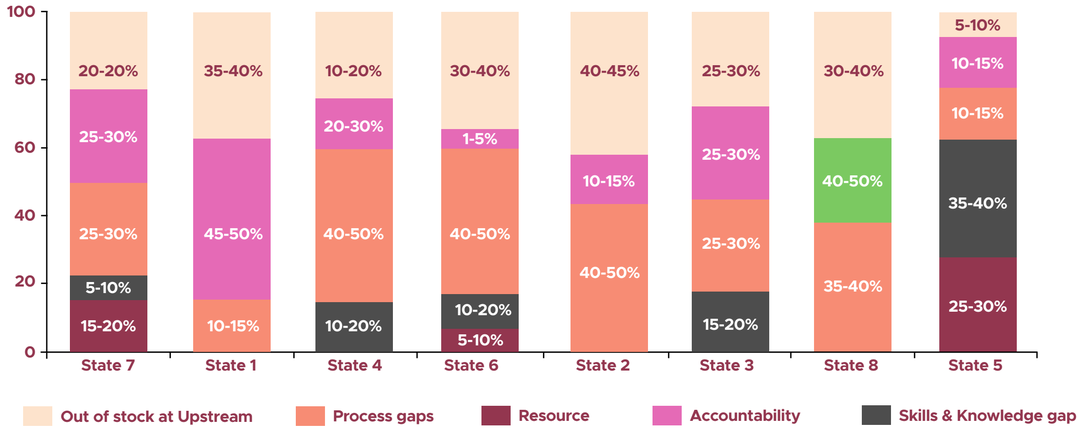
OUT-OF-STOCK UPSTREAM

The indent had been raised, but there was stock-out of commodity at parent facility

LACK OF ACCOUNTABILITY

Indents or issuance were not done even if resources, processes, and knowledge are present, and lack of regular review

STATE-WISE ANALYSIS OF REASONS FOR STOCK-OUT



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Identifying Key Challenges

Recurring issues across states were identified. Common challenges observed across states included:

DATA INACCURACY

Mismatch between ground stock and system stock is a common issue across states.

INADEQUATE REVIEWS

Review of family planning supply chain is one of the low priorities for the states. While family planning program indicators are occasionally reviewed, supply chain review remains a low priority.

LACK OF KEY PROCESS SKILLS

Storekeepers, for a large part, do not possess key process skills of raising indents, managing inventory, and estimating demand.

TRANSPORTATION DELAYS

Vehicles to pick up stock from upstream facilities are often unavailable and do not have enough stocking space.

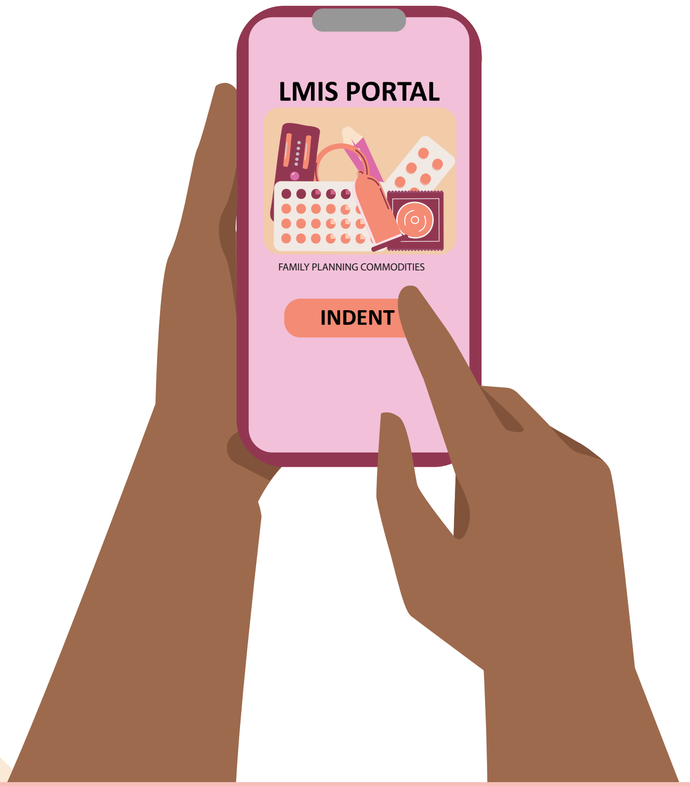
LACK OF ACCOUNTABILITY

While there is lack of due diligence at the level of pharmacists, stockout issues are also under prioritised by medical officers and other senior officials.

Designing an Interventions Approach

Drawing from assessment stage findings, best practices, and proven practices in the private sector, the following guiding principles were used for developing solution architecture:

- **Redesign supply chain networks using network optimization techniques to reduce layers and touch points.**
- **Build capacity of key resources involved in family planning supply chain management.**
- **Minimize number of resources involved in indenting and inventory management.**
- **Minimize the number of storage locations and introduce reliable/consistent/low cost options for transportation.**
- **Ensure data integrity in FP-LMIS.**
- **Strengthen family planning supply chain Key Performance Indicator (KPI) review mechanism.**
- **Set-up inventory management norms based on scientific estimates of demand.**



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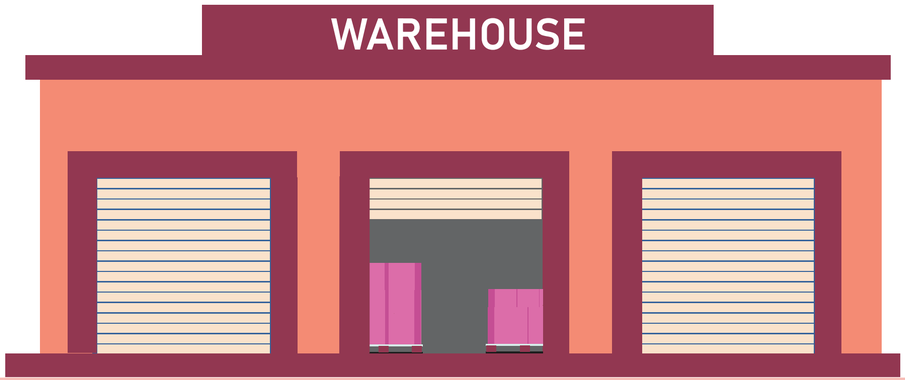
Supply Chain Strengthening Initiatives

Initiatives in addition to the innovations were leveraged to further strengthen the supply chain.

Capacity building, troubleshooting and handholding support on FP-LMIS: PATH trained and provided targeted handholding support to 10,000+ personnel on using FP-LMIS in different states, including state & district level personnel, warehouse data entry operators, pharmacists, ASHAs, ASHA supervisors, and ANMs.

Support on inventory norms: Facility staff were supported to calculate, forecast, and develop inventory norms for their facilities.



Warehouse optimization & transportation tool for vehicle management: A tool was created for storage space optimization and vehicle selection for transportation of right quantities of commodities.

Strengthening review mechanisms: PATH supported the state with monthly reports on availability of commodities at warehouses and facilities. In Punjab, a state level committee was formed which monitored stocks.

Demand planning tool: A standardized demand planning tool was developed for specific support to each project state.

Supply chain integration with essential drug list (EDL) supply chain: The project team helped state staff to optimize resources by integrating the supply chain of FP products with other EDL supply chains where possible.

Intervention 1: The Informed Push Model in Uttar Pradesh

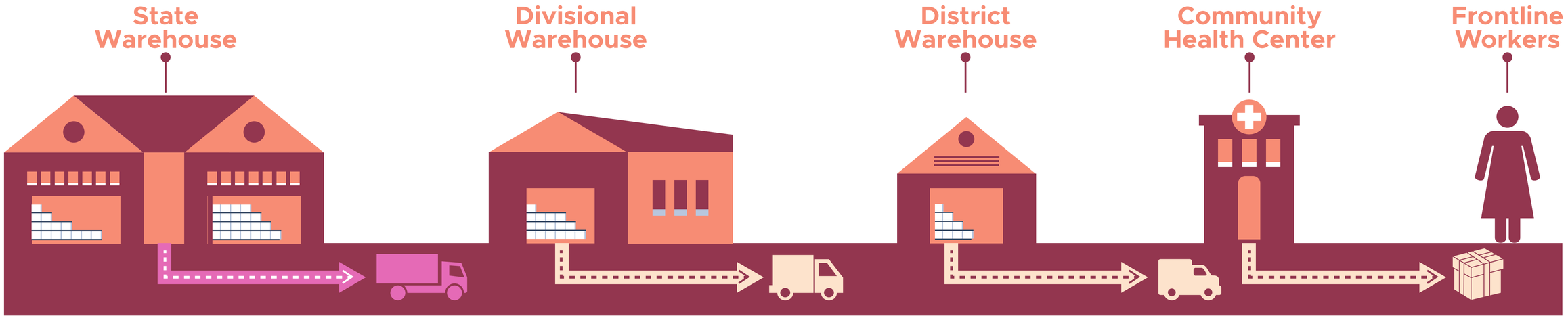
All states experienced stock outs of FP products at various levels. The IPM helped address the issues of stock-outs through following salient features:

It allowed upstream personnel to anticipate the required quantity of stock and directly distribute the supplies into the system, rather than wait for downstream facilities to requisition stock.

It minimised the need to place orders and reduced the time between indenting and delivery, as the supplies were replenished at regular intervals, preventing stockouts.

It was supported by standardized kits (kits designed with monthly consumption based family planning commodities), to ensure last mile availability of FP products.

Intervention 1: The Informed Push Model in Uttar Pradesh



- Nodes in the supply chain
- State arranged resources
- Project enabled elements

- Collection of stock from warehouse
- Return of remaining stock to warehouse

3rd party logistician

- Physical inventory
- Entry of stock status
- Refilling stock with suggested quantity
- Issuance in the App

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Intervention 2: Improving Last Mile Availability through Family Planning Kits

Demand estimation and requisition delays by frontline workers, led to inadequate availability of Family Planning (FP) products at the community Level. The Standardized Kit System ensured supply by providing ASHAs with kits with predetermined quantities of family planning products at regular intervals.

Bags for the kit were procured by PATH and supplied to the intervention CHCs and blocks.

The pharmacists at the block CHCs engaged support staff for preparing the kits.

Two bags were provided to the blocks for every ASHA. The bags were marked with a unique code for individual ASHA.

In the ASHA cluster meeting, pre-filled kits were handed over to the ASHAs and they were requested to return the unused commodities in the next cluster meeting.

After the kit with unused commodities was collected in the next meeting, a fresh kit with all the commodities was issued to them.

Commodities	Per ASHA
Mala-N	3 cycles
Chhaya	1 strip
EC Pills	2
Condom	30 pieces
PTK	2

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Intervention 3: Engaging India Post in Odisha

In Odisha, transport related challenges due to limited availability of vehicles, inadequate sized vehicles, breakdowns of vehicles, etc. To strengthen the distribution system for FP products, PATH implemented the use of postal services to deliver FP commodities in all 30 districts in the state of Odisha. India Post offered:

LOWER COSTS

The cost of their services was lower and contracting was easier as the agreement was between two government departments.

GREATER RESOURCE AND NETWORK DEPTH

A much wider and deeper network of services and significant resources were available.

FASTER DELIVERY

Delivery times were faster, there were no restrictions on the quantities that could be transported.

GREATER GEOGRAPHICAL REACH

Indian postal system has the capability to reach doorsteps, in both urban as well as rural areas.

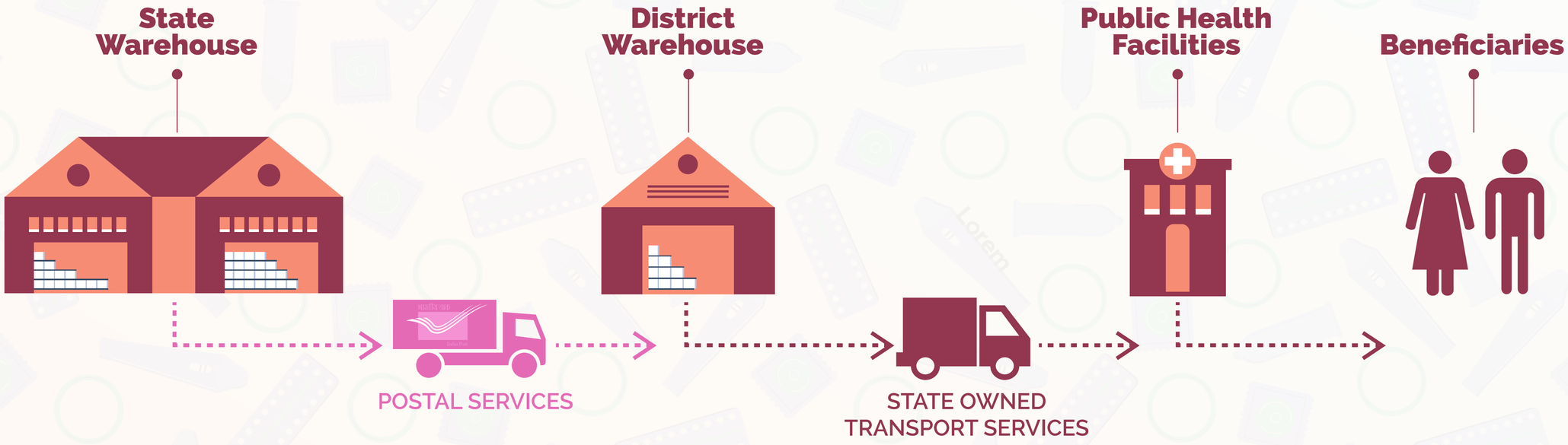
PROVISION OF TRACKING MECHANISMS

The India Post Parcel Services also provides the users with tracking facility for the consignments.

Intervention 3: Engaging India Post in Odisha

INTERVENTION LEVERAGING POSTAL SERVICES FOR DISTRIBUTION OF FP COMMODITIES

INTERVENTION IN ODISHA



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Learnings from Pilots

THE INFORMED PUSH MODEL IN UTTAR PRADESH

SHIFTED ACCOUNTABILITY

IPM moves the onus of tracking, delivering, and ensuring availability of health commodities at the health facilities from health workers to store managers and experienced logistics operators.

LIMITED RESOURCES

IPM can be considered as an option in places where the capability to manage the supply chain is limited either by skills of human resources or infrastructure, such as transportation.

PRIVATE SECTOR ROLE

The IPM pilot also demonstrated the role of private sector third party logistics (3PL) partners as an effective option for transporting commodities.

Learnings from Pilots

FAMILY PLANNING KITS

ENSURED RIGHT ESTIMATION

ASHAs required support to estimate the monthly requirement of FP products. Hand holding provided the ASHAs with the right tools to estimate the correct quantity to avoid stock outs.

COMFORT AND EASE OF CARRYING

The FP kit was packed in a cloth bag, which allowed ASHAs to carry condoms and other commodities safely, without embarrassment, and in larger quantities than earlier.

REDUCED WASTAGE

Pharmacists collected unused stocks from ASHAs before issuing a new kit during the pre-planned monthly meeting. This not only reduced wastage and pilferage but also helped to record consumption.

REDUCED TASKS

The Standardized FP Kit required minimal record keeping, allowed tabulation of actual dispensed-to-user data from ASHAS and ANMs and enabled use of this data to better project demand.

LEVERAGED EXISTING PLATFORMS

Using platforms like monthly cluster meetings for ASHAs and weekly meetings for ANMs, to collect Standardized FP Kits resulted in timely delivery of stocks to community-based delivery agents.

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Learnings from Pilots

ENGAGING INDIA POST IN ODISHA

ANONYMITY

There was a need to ensure anonymity of the beneficiaries to enhance continuity of contraceptive use.

PANDEMIC AND DISASTER READINESS

Postal service, being an essential service, was a reliable logistic enabler for health commodities during extraordinary circumstances like the pandemic.

SPECIAL TRANSPORT REQUIREMENTS

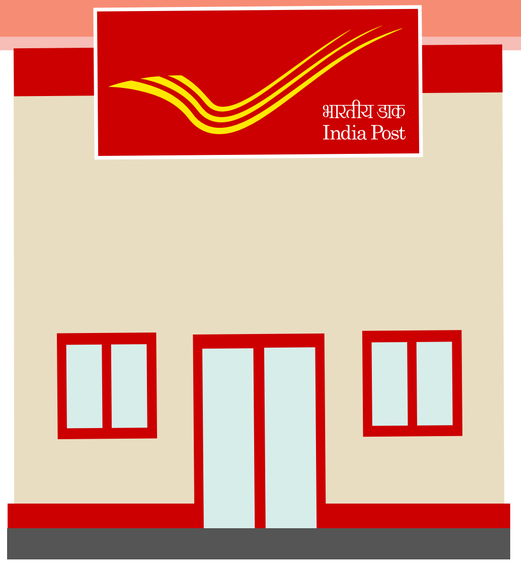
There is a need to explore the feasibility of postal services to deliver health commodities which need to be transported under unique conditions.

CONSIDERATIONS FOR LAST MILE DELIVERY

Though India post has been used to transport commodities from state to district warehouses, there is scope to assess the usage of postal services to deliver them up to the last mile, that is, to subcenters, ASHAs, ANMs or even directly to the intended beneficiary.

SCALING POTENTIAL

Using postal services to deliver FP commodities has shown great potential in the state of Odisha, and can be scaled up to other states of the country and for other commodities



Project Learnings & Insights

NEED FOR DIFFERENTIATED INTERVENTION STRATEGIES

Each state exhibited different reasons for stock unavailability, while also sharing some core supply chain issues. State-specific, differentiated plans can help customise approaches to resolve unique challenges, and achieve larger, shared goals.

LEARNING FROM BEST PRACTICES

Despite breaks and lags in FP commodity supplies, several states also demonstrated some best practices during assessment. For instance, West Bengal integrated FP and vaccine deliveries, leading to reduced delivery timelines. Learnings from these best practices were built into solutions design.

WHAT WORKS IN ONE PLACE, MAY NOT WORK IN ANOTHER

Innovations that work within a specific state structure or geography, might not work in another. In Odisha, leveraging India Post services as a transport mechanism was successful. The same could not be said for Uttar Pradesh, where operational issues with the postal system led to increased delays.

STRENGTHEN EXISTING SYSTEMS RATHER THAN INTRODUCING ADDITIONAL INTERVENTIONS

Interventions were also designed with the intent of providing support to existing structural flows, to ensure that they could be successfully integrated within existing processes, and build upon existing systems and best practices.

Endnotes

1 2021. Debanjana Choudhuri. “India’s Family Planning: Moving the Needle from ‘Control’ to ‘Choice’”in The Diplomat. September 16, 2021

2 2021. Ewerling, Fernanda et al. “Modern contraceptive use among women in need of family planning in India: an analysis of the inequalities related to the mix of methods used” in Reproductive Health. (2021) 18:173.

3 Assessment states included Uttar Pradesh, Bihar, Odisha, Telangana, Karnataka, Maharashtra, West Bengal, Punjab

4 2017. Mukasa, Bakali et al. “Contraception supply chain challenges: a review of evidence from low- and middle-income countries” in The European Journal of Contraception & Reproductive Health Care. (2017) 22:5.

5 2014. Christine Dehlendorf, Colleen Krajewski, and Sonya Borrero. “Contraceptive Counseling: Best Practices to Ensure Quality Communication and Enable Effective Contraceptive Use” in Clinical Obstetrics and Gynecology: December 2014 - Volume 57 - Issue 4 - p 659-673.

6 2018. Muttreja, Poonam & Sanghamitra Singh. “Family planning in India: The way forward” in Indian Journal of Medical Research (Supplement). December 2018, pp 1-9.

7 2017. Evidence Brief: Ensuring contraceptive security through effective supply chains. WHO/RHR/17.09. July, 2017.