



## FINDINGS FROM A RAPID ASSESSMENT SURVEY IN 100 ASPIRATIONAL BLOCKS TO IMPROVE ROUTINE IMMUNIZATION COVERAGE IN UTTAR PRADESH

### What have we learned?

The India Health Action Trust (IHAT) led Uttar Pradesh Technical Support Unit (UPTSU) conducted a comprehensive community-based study to understand the coverage of routine immunization in 100 focused blocks of the state covered under the Uttar Pradesh Routine Immunization (UP-RI) strengthening project. The aim of this project is to improve the immunization coverage through all basic vaccines up to 90%. This Rapid Assessment Survey (RAS) was designed to learn about the effective coverage, persisting gaps, and implementation opportunities to improve the immunization coverage. A number of important insights emerged.

1. All Basic Vaccine (ABV) coverage was 67.8% in the project blocks. 26.9% children were under-vaccinated and 5.3% had not started their primary series with DPT containing vaccines i.e., they fall in zero dose category.
2. There was a wide variation in the coverage of vaccines. While 94.7% children started primary series (Penta-1), only 70.4% received MCV
3. The coverage of Hepatitis-B birth dose was very low, with only 42.7% of the children receiving the vaccine within 24hrs of birth.
4. VHND was the preferred platform for routine immunization services as 92% women reported that they went to VHND for their child vaccination.
5. About 57% of the children were accompanied by their mothers to the immunization site suggested the opportunity for integrating other maternal/reproductive health services at the VHND site.
6. Mothers/caregivers showed a low level of knowledge about vaccines and vaccination schedule indicating the need of generating better awareness about the importance of vaccination and its' recommend schedule to ensure timely vaccination.
7. Incomplete information in the MCP card (the only document provided to the mother/caregiver) pose a major hurdle in timely vaccination, as due date for next vaccine was not mentioned in 46% cases. Hence, mothers/caregivers were not aware of the date when to go for the next dose of vaccination.
8. Addressing demand side issues such as unawareness of missed vaccines, importance of vaccination and knowledge about vaccination schedule seems to be critical to improve vaccination coverage.

## What is the issue?

One of the key agendas of Sustainable Development Goals (SDG) is to achieve 90% coverage of all vaccines in country's immunization schedule. Immunization Agenda 2030, adopted by the World Health Assembly also envisions a world where everyone, everywhere, at every age, fully benefits from vaccines to improve health and well-being. The state of Uttar Pradesh (UP), which is the most populous state with an estimated population of over 235 million, is still a long way from achieving these goals. All basic vaccines (ABV) coverage in the state among the children aged 12-23 months was 69.6% according to NFHS-5 (2019-21), while the same for the country was 76.5%. Although, the state of Uttar Pradesh made significant progress in ABV coverage between 2015 to 2019 (from 51.1% to 69.6% between NFHS-4 and NFHS-5), to achieve SDGs the state needs to revamp its strategy to improve not just coverage with basic vaccines but also the newer vaccines like PCV, Rotavirus and fIPV which have been added to the immunization schedule over the past five years. The country can achieve its SDG only if UP steps up, as the state contributes 22% to the national birth cohort.

## The Uttar Pradesh Routine Immunization (UP-RI) Strengthening Project

Bridging the barriers in achieving the immunization targets, which would also bring about monumental improvements in the shortcomings in RMNCH indicators, grew in importance in the last decade. In 2020, the IHAT led Uttar Pradesh Technical Support Unit (UPTSU) received the Bill and Melinda Gates Foundation's grant, through the University of Manitoba, to support the GoUP's efforts to accelerate the achievement of 90% full immunization coverage. Under this grant, a Routine Immunization Strengthening Project was initiated in collaboration between the University of Manitoba, India Health Action Trust and Clinton Health Access Initiative with a goal to improve the full immunization coverage. The project aimed to strengthen data-driven decision making across all levels of immunization ecosystem, enhance state's capacity in management, governance, and accountability for immunization service delivery, and enhance RI performance in prioritized blocks.

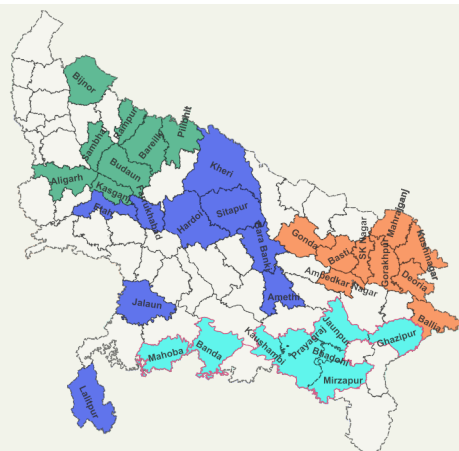
A Rapid Assessment Survey (RAS) was conducted to measure select indicators and provide programmatic insights to the key stakeholders for devising suitable strategies and action planning. RAS was designed to understand the coverage of routine immunisation in the project blocks along with the supply and demand side barriers. The 100 focused blocks in the state were divided into four programmatic clusters and 10,591 children aged between 0-15 months were covered in the survey. The survey was conducted between July 2021 and November 2021.

**Cluster-1(Green):** Bareilly- 26 blocks falling in 8 districts

**Cluster-2(Blue):** Farrukhabad- 19 blocks falling in 9 districts

**Cluster-3(Orange):** Gorakhpur- 32 blocks falling in 9 districts

**Cluster-4(Cyan):** Prayagraj- 23 blocks falling in 8 districts



**ABV:** Children aged 12-15 months received **BCG, OPV 1,2,3, Penta 1,2,3 and MR 1**

**All age appropriate vaccinations:** Children aged 12-15 months who received all applicable vaccines (except Hep-B and OPV0) within one year of age.

**Zero dose:** Children aged 12-15 months who have not received the penta-1 vaccine.

**Under vaccinated:** children aged 12-15 months who received penta-1 vaccination but have not been fully vaccinated.

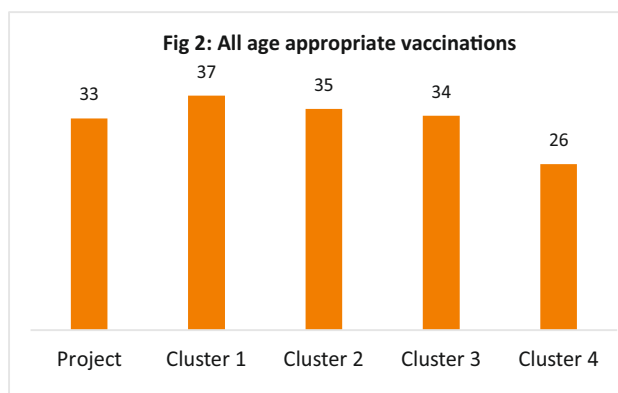
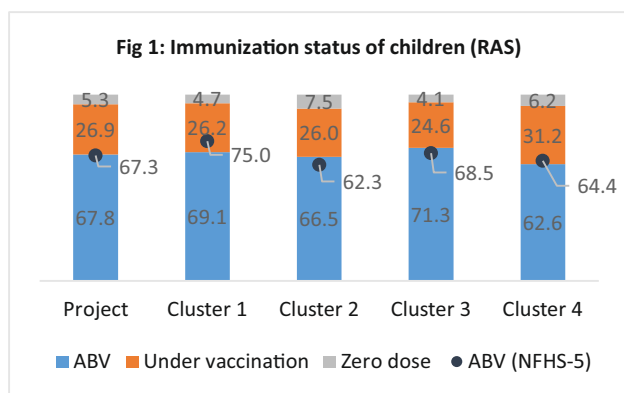
**Left-outs:** Children aged 12-15 months who never received any vaccines

## Key findings

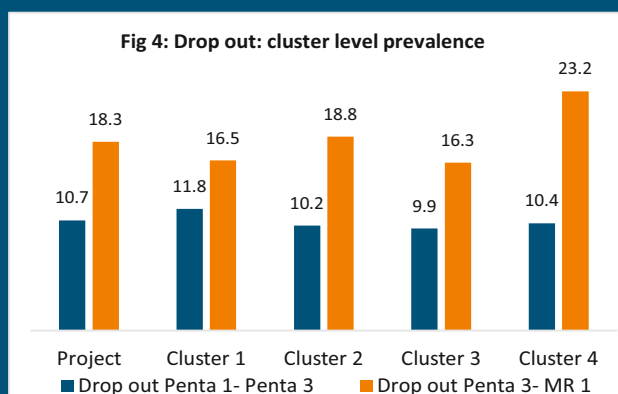
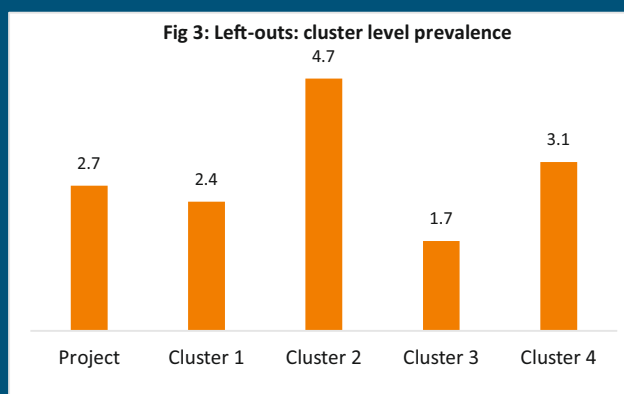
### 1. Only two-third of the children aged 12-15 months received All Basic Vaccine (ABV); 26.9% were under-vaccinated and 5.3% were zero dose.

The RAS showed that the all basic vaccination coverage in the project blocks was 67.8% (Fig 1), which was similar to the coverage of corresponding districts as measured in NFHS-5 (67.3%). The ABV in four clusters varied between 62.6% (cluster 4) to 71.3% (cluster 3). The zero-dose children were estimated as 5.3% at the project level, with a range of 4.1% (cluster 3) to 7.5% (cluster 2) across clusters. The proportion of under-vaccinated children were 26.9% varying from 24.6% in cluster 3 to 31.2% in cluster 4.

All age appropriate vaccinations coverage (except Hep-B and OPV0) in the project blocks was 33.4% (Fig2). Cluster 1 had the highest coverage (37%) while cluster 4 lagged behind with 26.2%.



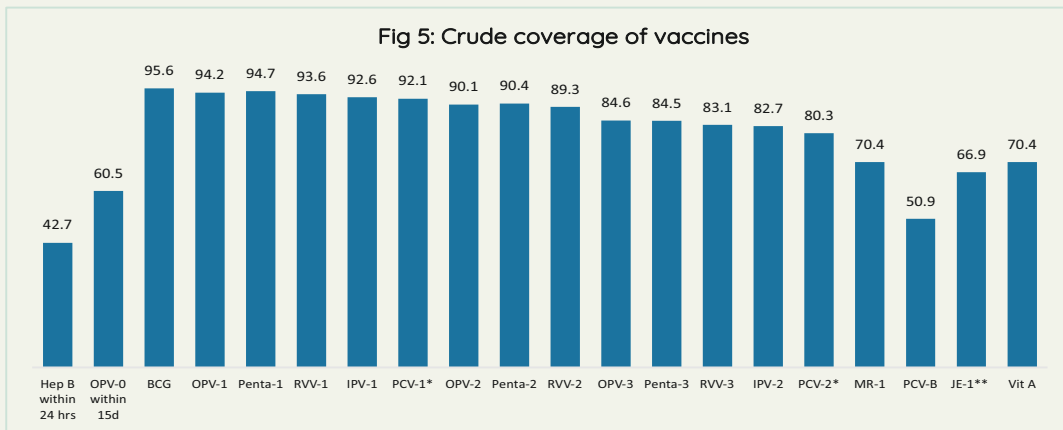
In addition, the overall estimates of left-out children was 2.7% (Fig 3) and drop out between Penta-1 and Penta-3 was 10.7%. The drop out was even higher between Penta-3 and MR 1 (18.3%) (Fig 4).



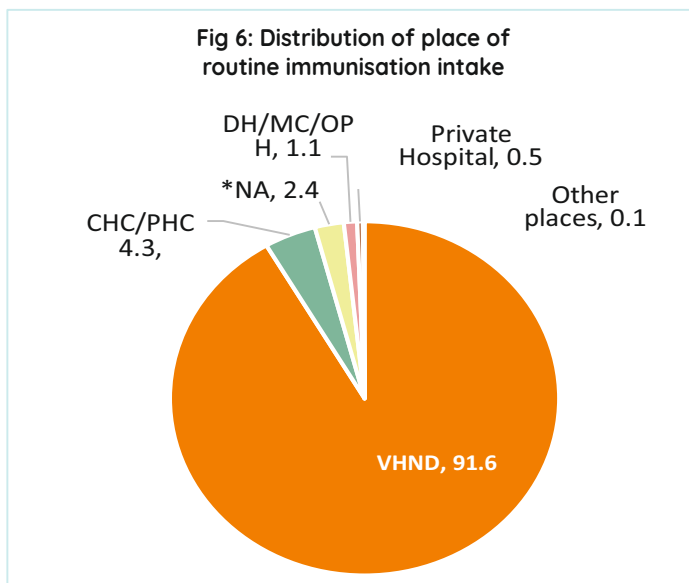
Similar to the exiting evidence, the ABV was significantly associated with the education of the parents and economic status of the family, i.e., higher coverage among children having educated parents and those belonging to rich households compared to their respective counterparts. There was a 4%-point difference in ABV between the children belonged to the Joint family (69.9%) and nuclear family. No significant gender differentials in ABV coverage observed (male 67.6% and female 68.1%). The findings showed that the Zero dose varied by economic status, education, religion, and birth order. The Zero dose was 3.3% among the children belonged to richest households compared to 7.4% among children belonged to poor households. There is a clear difference with the education levels of mothers (illiterate 9% and literate 3.1%). The zero dose increased with the increasing birth order - first child being 3.2%, 2nd child being 4.9%, 3rd child being 5.6%, 4th child and further being 9.2%.

## 2. Wide variations in the coverage of different doses of vaccines

Figure 5 shows that the coverage of different vaccine doses varied between 42.7% (Hep B) to 95.6% (BCG). Among all the basic vaccines, coverage of MR-1 was the lowest (70.4%) contribute the most to the fall of the overall ABV in the project blocks.



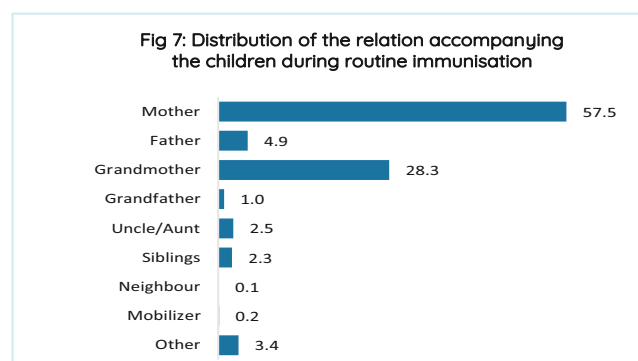
## 3. VHND was the preferred platform for routine immunisation services



Understanding the usual place of vaccination was an important step in assessing the RI services. This provides crucial information about where the interventions to improve should focus upon. One of the key findings of RAS is the dependency on VHNDs for routine immunisation services (fig 6). 91.6% mothers / caregivers mentioned VHND was as the usual site for immunization (Fig 6) followed by CHC/PHC (4.3%) This pattern was similar across all four clusters.

## 4. More than half of the children were accompanied by their mother for immunization indicating an opportunity for integration of other maternal/reproductive health services at the VHND platform

Mothers were the one who most commonly accompanied their children to the vaccination site. (Fig 7). About 28% grandmothers were also observed to do the same. The predominance of mothers accompanying children for RI, clearly point out to an opportunity for the integration of maternal and reproductive health services along with the routine immunisation processes. Additionally, provision of NCD services for grandmothers can also be explored.



## 5. Low level of knowledge and awareness about vaccines and vaccination schedule among mothers/caregivers requires some attention

The knowledge about vaccination and vaccination schedule is crucial for the timely uptake of immunization services. Only 2 out of 5 mothers were aware about the age by when their child should receive all the basic doses of vaccines with an equal proportion responding that they were unaware about the same (Fig 8a). A huge heterogeneity in awareness was observed amongst clusters (31.9% in cluster 1 and 57% in cluster 3).

These questions were specifically designed to test the recall of immunization program tagline '5 saal 7 baar' (Fig 9). The second part of the tagline regarding the number of visits needed to complete childhood vaccination, had even lower levels of recall with only 6% of the respondents answering the question correctly. Half of the respondents did not know about the same while 43% had incorrect knowledge (Fig 8b). The respondents from the 4 clusters fared similarly with this question. Only 1.5% of the respondents were aware about all the vaccinations in the immunization schedule.

One in four respondents were aware about vaccines given to their child during last visit. Three out of four respondents were unaware about when was their child due for next vaccine visit.

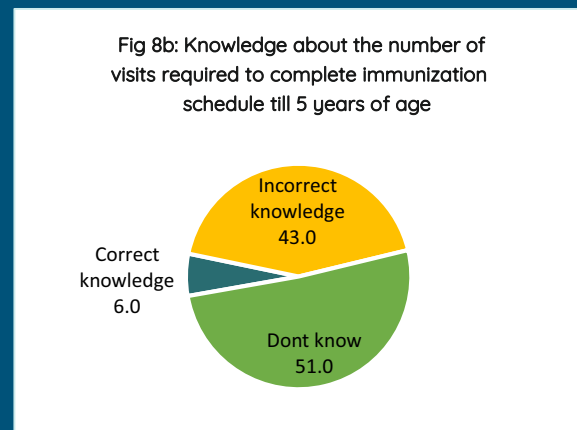
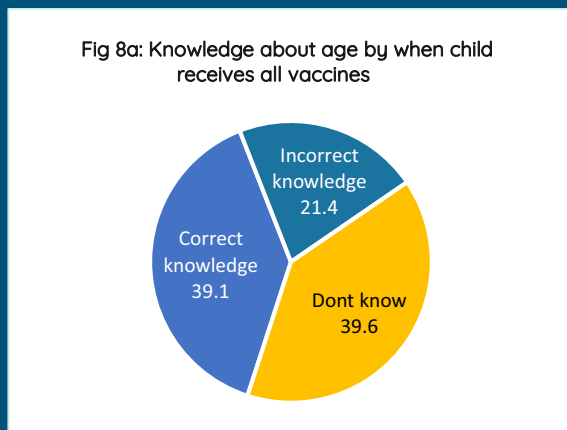


Fig 9: '5 Saal 7 Baar' awareness campaign

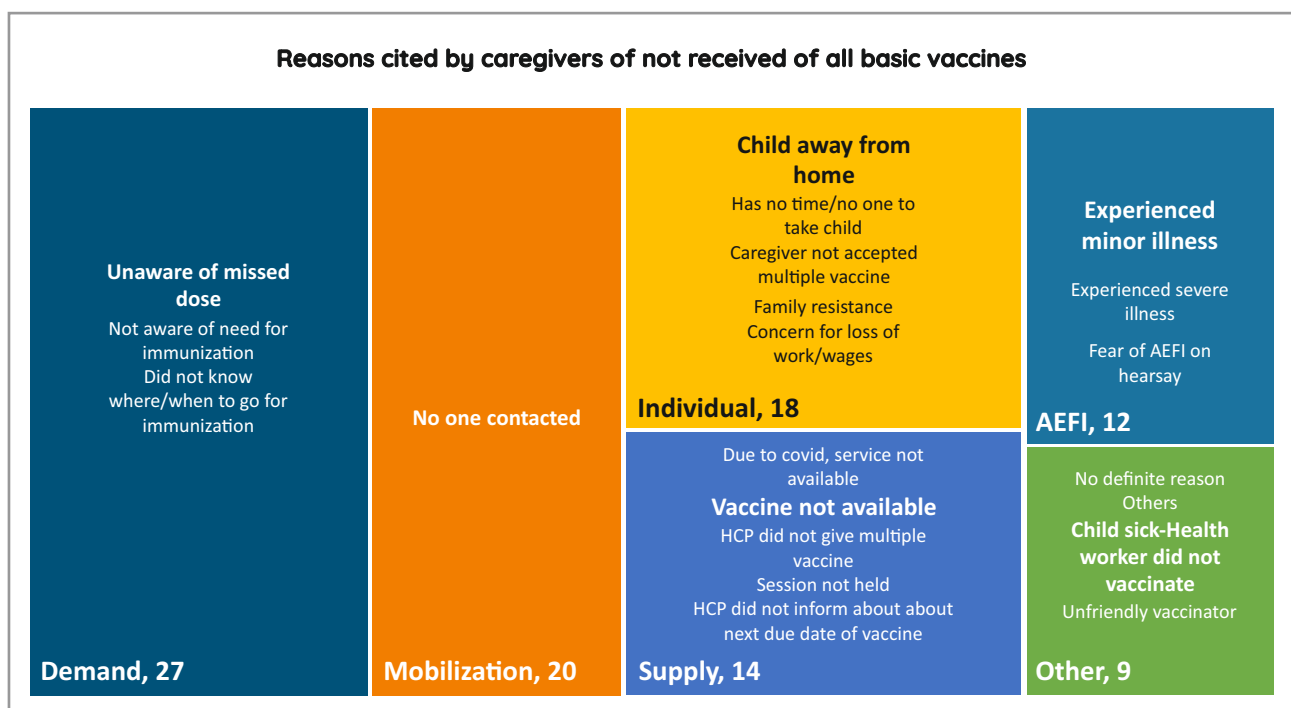


## 6. Major gaps identified in MCP card completeness, the only document provided to the client

While 12% of respondents did not have a MCP card, nearly half of the MCP cards had incomplete information about the next due date for vaccination and 4% had no mentioning of last vaccine administered (amongst those who had an MCP card).

## 7. Demand side issues pose a major challenge for improved vaccination coverage

When the reasons for non-vaccinations were assessed, about 25.2% responded that, the demand side challenges like lack of awareness regarding vaccinations and vaccine centres were reasons for non-vaccination (Fig 10). Supply side issues like lack of VHND sessions, unavailability of vaccinations, provider not giving multiple vaccines, provider not informing the due date contributed around 14% to non-vaccination. Supply side issue (mainly mobilization to the session site) contributed to 15.4% non-vaccination while personal fears and anxieties about Adverse Events Following Immunization (AEFI) accounted for 12.8%. Individual level factors were observed to be 19% of the reason for non-vaccination.



## Conclusion and call for action

The study provided opportunities to understand the immunization landscape and programmatic gaps in the system. The key findings from the study could help in framing interventions to strengthen the immunization ecosystem in the state.

- **Birth dose coverage:** Considering low coverage for the birth dose vaccines, emphasis was laid on improving the same by adding birth dose vaccination to the nurse mentoring program and SBA trainings. It was also made part of the agenda in district-level review meetings for continuous monitoring by key stakeholders at the local level.
- **Vaccine adequacy:** To reduce under-vaccination due to unavailability or inadequacy of vaccine at session site, the UPTSU conducted additional analysis using secondary data from VHND observation-routine community program monitoring data. The insights from RAS and VHND observations revealed that vaccines supplied in 5 dose vials were the ones that had disproportionate contribution in inadequate availability. The guidelines were issued by GoUP to ensure availability of minimum 10 doses of each vaccine at session site.
- **Introduction of RI-Wheel:** RI-wheel, a visual tool / job-aid was developed to aid the Front Line Workers (FLWs), mainly ASHAs and Auxiliary Nurse Midwife (ANM) to correctly counsel caregivers on four key messages (what vaccine was given and what disease it prevents, when and where to come for the next visit, what are the minor side effects and how to deal with them, to keep the immunization card safe and to bring it along for the next visit) vaccination touchpoints, antigens, and due dates. It also helps the FLWs to accurately prepare their due list and other records for delivering timely vaccination services to due beneficiaries. Along with being a calculation job-aid, the RI Wheel also acted as a handy IEC tool for the FLWs.
- **MCP card:** Based on findings from the survey, capacity building on MCP card is being included in all routine trainings which was earlier considered too basic knowledge that did not require periodic refreshers.
- **Syp PCM:** To address AEFI, Paracetamol (PCM) syrup availability was ensured at the session site. Emphasis was also given that the same has been given by ANM to the mothers/caregivers. Appropriate guidelines were issued by GoUP in this regard which comprehensively detailed out the necessity of the syrup, pathway for indenting and distribution, estimation of required quantity and training of FLWs. UPTSU-RI field team facilitated the dissemination of the guidelines at the district and block levels along with orientation of block and district officials.

Varma R., Dehury B., Thacker D, Singh S., Anthony J. and Prakash R. (2023). Findings from a Rapid Assessment Survey in 100 aspirational blocks to improve routine immunization coverage in Uttar Pradesh. Evidence Brief #1. Lucknow: India Health Action Trust.





### Uttar Pradesh Technical Support Unit

Uttar Pradesh Technical Support Unit (UP TSU) was established in 2013 under a Memorandum of Cooperation signed between the Government of Uttar Pradesh (GoUP) and Bill & Melinda Gates Foundation (BMGF) to strengthen the Reproductive, Maternal, Newborn, Child, Adolescence Health and Nutrition (RMNCAH+N). University of Manitoba's India-based partner, India Health Action Trust (IHAT) is the lead implementing organization. In 2020, with an aim to improve immunization coverage and equity outcomes in Uttar Pradesh (UP), UP TSU established a Routine Immunization Program Management Unit - a collaboration between UoM, IHAT and Clinton Health Access Initiative.

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