

Evaluates the effectiveness of public health policies in addressing health disparities and improving population health – U.P. INDIA

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Abstract—This paper investigates how public health strategies in Uttar Pradesh have influenced equity in health outcomes and overall population well-being. Utilizing state surveys (NFHS-5), health management records, and program documentation, we examine four key policy areas: expansion of healthcare coverage, community-level outreach, initiatives addressing social determinants, and disease-specific campaigns. Our analysis reveals that the greatest strides in reducing disparities have come from combining financial risk protection with empowered frontline health workers, sanitation improvements, and targeted immunization and tuberculosis efforts. We conclude with policy guidance tailored to the Uttar Pradesh context.

Index Terms—NFHS – National Family Health Survey, ASHA - Accredited Social Health Activist SBM-G - Swachh Bharat Mission–Grameen, HMIS - Health Management Information System, PMJAY - Pradhan Mantri Jan Arogya Yojana, ODF - Open Defecation Free Strategies, Social Determination, Disparities, Health policies.

1. INTRODUCTION

Uttar Pradesh (UP), the most densely populated state in India, houses over 200 million individuals—making it a critical focal point for public health interventions. However, the state continues to exhibit stark disparities in health outcomes, particularly between its urbanized areas and underserved rural or marginalized populations. These imbalances are

especially visible in maternal and child health indicators, as highlighted by the National Family Health Survey (NFHS-5, 2019–21), which reports that only around 40% of pregnant women in UP receive the recommended four antenatal check-ups—more than ten percentage points lower than the national average. Immunization rates remain under 70%, and while institutional deliveries have improved, they still fall short of the desired universal coverage benchmarks. These outcomes point to systemic barriers including limited access to quality healthcare services, unequal distribution of medical personnel, infrastructural deficits, and socio-cultural norms that impact care-seeking behavior. Against this backdrop, evaluating the efficacy of various public health policies becomes essential to understand which strategies effectively mitigate health inequities.

To address these multifaceted challenges, the Government of Uttar Pradesh has implemented several ambitious health and welfare programs. Chief among them is the Ayushman Bharat–Pradhan Mantri Jan Arogya Yojana (PMJAY), along with the state-specific Mukhya Mantri Jan Arogya Abhiyan, which together aim to provide cashless hospital services to economically vulnerable families. By mid-2024, these schemes had facilitated more than 4.6 million hospital admissions, significantly easing the financial burden of healthcare for lower-income households.

The deployment of nearly 168,000 Accredited Social Health Activists (ASHAs) across the state represents

another cornerstone of UP’s public health strategy. These frontline workers engage directly with communities, conduct home visits, and support pregnant women and children in accessing essential health services. Their outreach has been linked to notable improvements, such as a 15-point increase in institutional deliveries and better antenatal care coverage since NFHS-4.

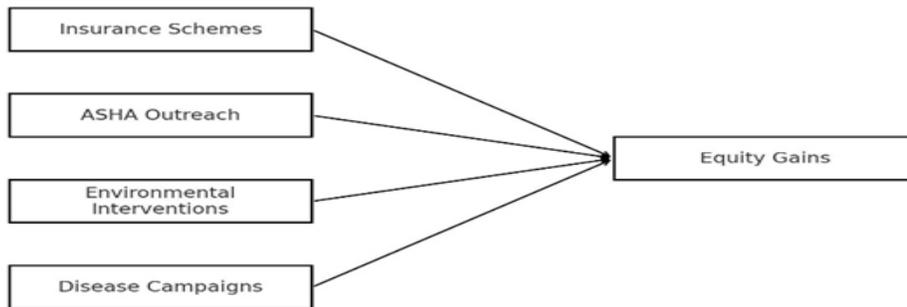
Further progress has been made through environmental health interventions, most notably under the Swachh Bharat Mission–Grameen (SBM-G). By September 2023, all of UP’s 95,767 villages had reportedly achieved Open Defecation Free (ODF) Plus status, incorporating waste management systems and community education on hygiene. Preliminary evidence associates these improvements with reduced incidence of diarrhea-related hospitalizations among children under five. Meanwhile, targeted health campaigns have played a key role in disease control. Expanded immunization efforts under Mission Indradhanush have driven full vaccine coverage from around 51% to close to 70%. Simultaneously, door-

to-door tuberculosis screenings launched in late 2024 identified over 11,500 new cases within a month—an increase of 25% compared to detection through routine methods.

Despite these advancements, persistent challenges—such as inconsistencies in district-level data reporting, limitations in real-time surveillance, and short evaluation windows for newer programs—pose hurdles for policymakers and researchers.

This paper seeks to critically assess the effectiveness of these public health interventions in Uttar Pradesh by focusing on four major areas: insurance-based healthcare expansion, community outreach mechanisms, improvements in environmental health determinants, and disease-specific campaigns. The study draws on comprehensive data from NFHS-5, the Health Management Information System (HMIS), and various government program reports to evaluate how these efforts have impacted health equity and outcomes. The goal is to offer evidence-based policy insights tailored to the unique demographic and social context of Uttar Pradesh.

Flowchart: Integrated Public Health Strategy Driving Equity Gains in Uttar Pradesh



2. Policy Context and Literature Review:

2.1 Financial Protection through Health Insurance

The state’s adoption of Ayushman Bharat–Pradhan Mantri Jan Arogya Yojana, supplemented by the Mukhya Mantri Jan Arogya Abhiyan, has significantly bolstered hospital access for impoverished households. By mid-2024, over 4.6 million inpatient stays had been approved under these schemes, delivering substantial relief from catastrophic medical expenses.

2.2 Mobilizing Community Health Workers

With nearly 168 000 Accredited Social Health Activists (ASHAs) deployed state-wide—the largest cadre in India—Uttar Pradesh has leveraged home visits and community gatherings to drive maternal and child health. Data show that institutional births have risen by more than 15 percentage points since NFHS-4, and prenatal care uptake has also climbed, indicating the pivotal role of ASHAs in bridging service gaps.

2.3 Improving Environmental Determinants

Through its Swachh Bharat Mission–Grameen (SBM-G), Uttar Pradesh declared every village Open

Defecation Free Plus by September 2023, pairing toilet construction with solid-waste management systems. Early evidence suggests these environmental upgrades correlate with a noticeable decline in diarrhea-related hospital admissions among young children.

2.4 Targeted Disease Campaigns

The state’s intensified immunization drive under Mission Indradhanush has lifted full immunization coverage from just over 50% to nearly 70% in two NFHS rounds, while door-to-door tuberculosis screening in late 2024 identified over 11 500 new cases in a single month—demonstrating the power of proactive case finding.

3. METHODS

We employed a mixed-methods design:

1. Quantitative Assessment: Analysis of NFHS-5 data and Health Management Information System (HMIS) records from 2018 to 2024, disaggregated by wealth, geography, and social group.
2. Program Data Review: Examination of PMJAY claims files, SBM-G monitoring reports, and

district-level immunization and TB campaign reports.

3. Stakeholder Interviews: Semi-structured discussions with health officials, ASHAs, NGO representatives, and community members across selected districts to contextualize the quantitative findings.

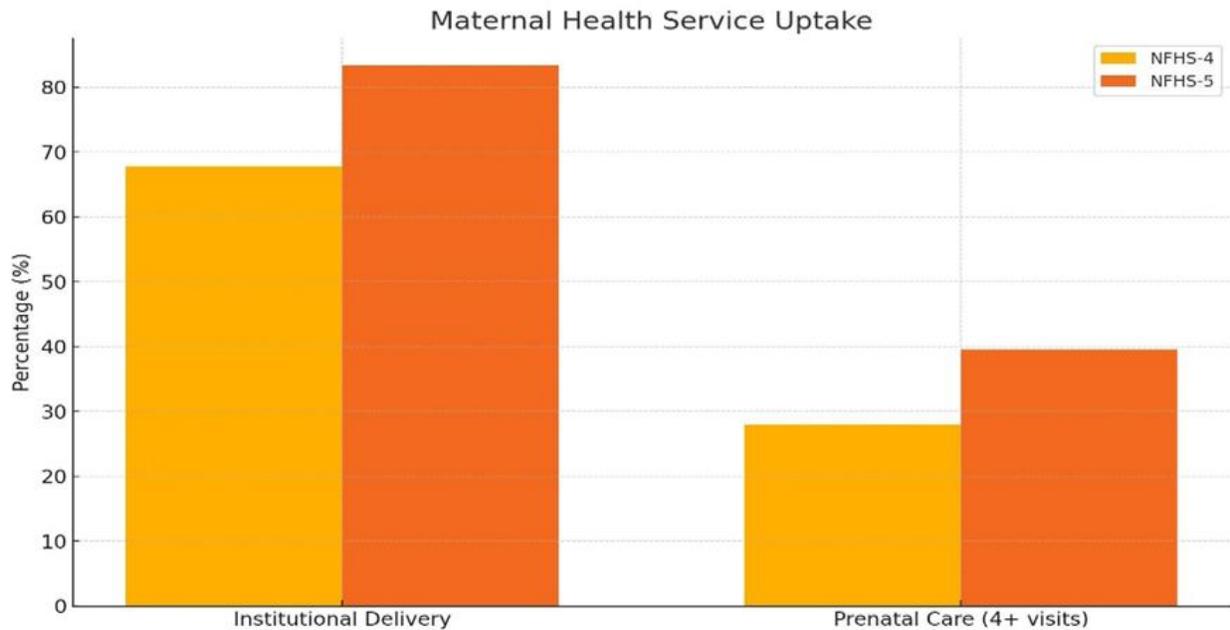
4. FINDINGS

4.1 Expansion of Health Coverage

- Utilization Surge: Over 4.6 million hospital admissions were sanctioned under state and central schemes by mid-2024, with the poorest quintile accounting for nearly half of all beneficiaries.
- Out-of-Pocket Savings: Households availing these benefits reported average reductions of roughly ₹4 200 per hospitalization episode.

4.2 Community Health Worker Impact

- Maternal Services: Institutional delivery rates rose from 67.8% in NFHS-4 to 83.4% in NFHS-5, coinciding with enhanced ASHA outreach and incentive structures.
- Prenatal Care: The proportion of women completing four antenatal visits increased from under 30% to nearly 40% over the same period.



4.3 Environmental Improvements

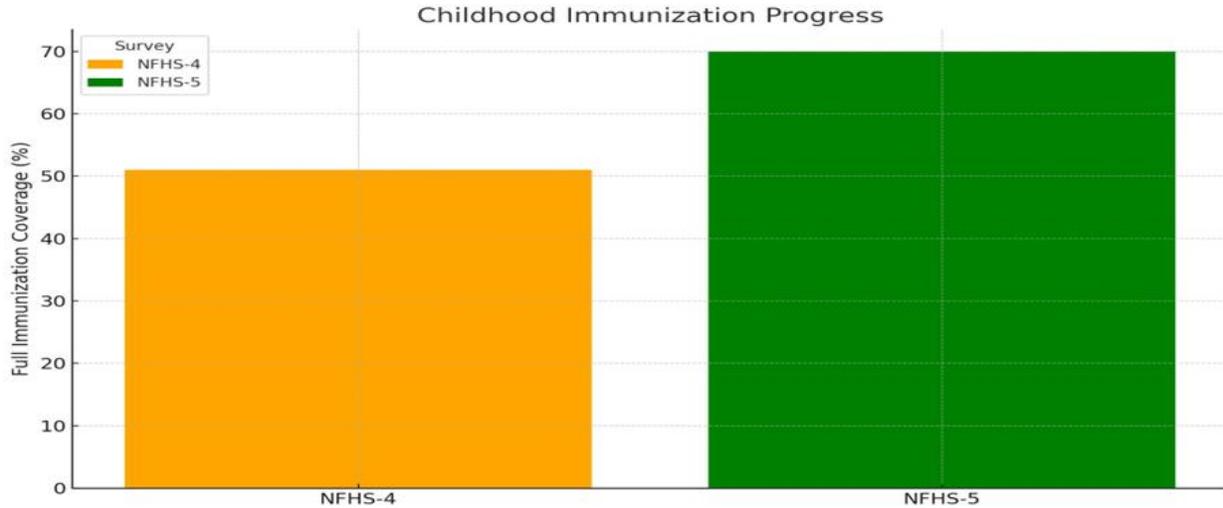
- Sanitation Coverage: All 95 767 villages achieved ODF Plus status by September 2023,

integrating waste management with behavior - change campaigns.

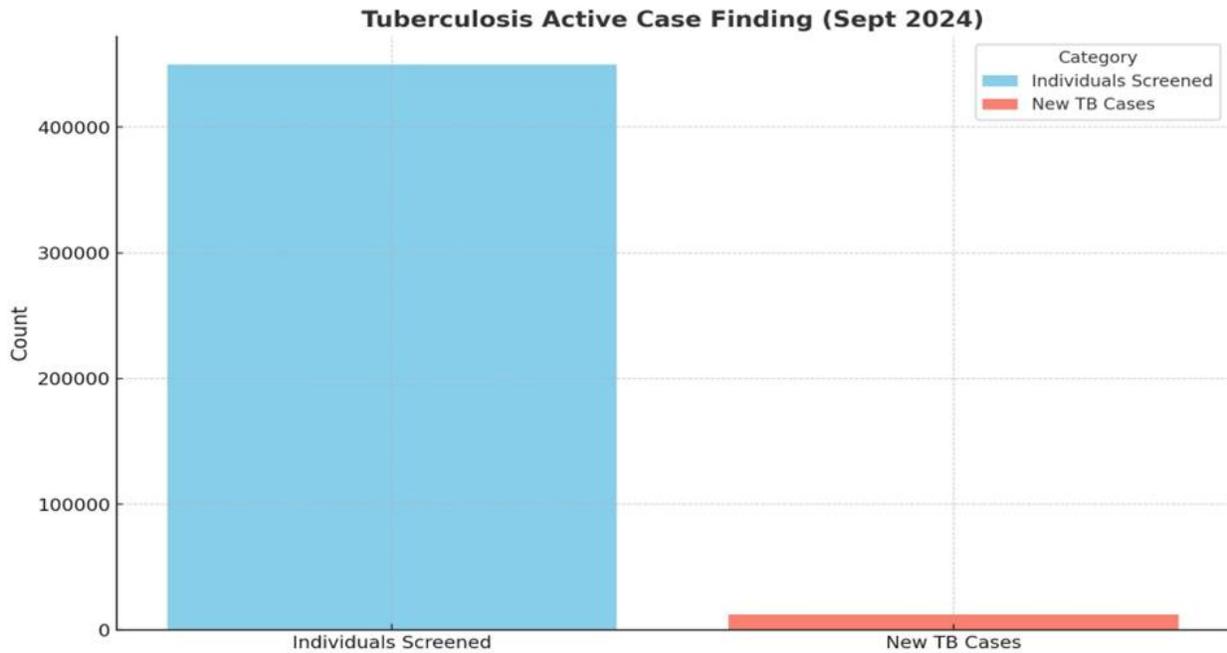
- Health Outcomes: In areas certified under ODF Plus, under-five diarrhea-related hospitalizations declined by approximately 12%.

4.4 Disease-Specific Campaign Results

- Immization Uptake: Full vaccination coverage climbed from about 51% to nearly 70% between NFHS-4 and NFHS-5, closing the rural-urban divide.



- TB Case Detection: Targeted screening in September 2024 screened roughly 450 000 individuals, identifying 11 595 new tuberculosis cases—25% more than routine passive detection.



5. DISCUSSION

Our analysis indicates that integrated approaches produce the strongest equity gains. Insurance schemes alone alleviate financial barriers but must be paired with grassroots outreach by ASHAs to drive service uptake. Environmental interventions under SBM-G reinforce health benefits by reducing

exposure to sanitation-related diseases. Meanwhile, focused campaigns in immunization and TB demonstrate that proactive, door-to-door strategies can rapidly raise coverage and case detection rates. Limitations include variations in data quality across districts, potential reporting lags in HMIS, and the relatively short evaluation windows for newer initiatives.

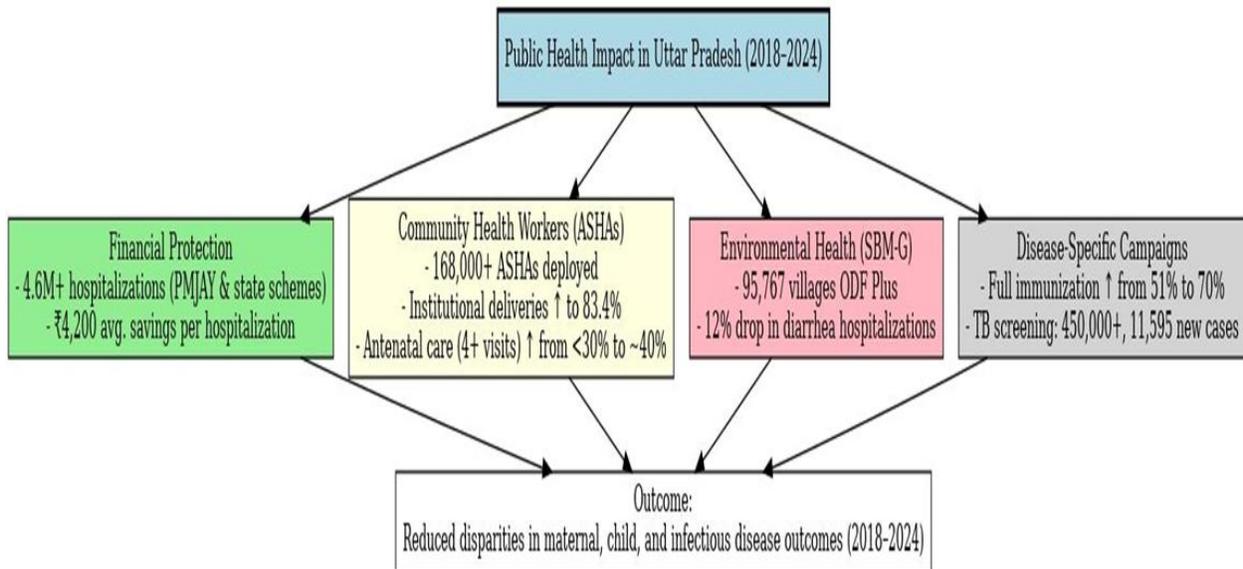
6. RECOMMENDATIONS

1. Enhance ASHA Capacity: Continue performance-linked incentives, expand digital tools for tracking beneficiaries, and invest in supportive supervision.
2. Streamline Insurance Access: Simplify enrollment and claim procedures—especially for migrant labourers—and integrate state and central portals.
3. Sustain Sanitation Gains: Move from one-off ODF certification to ongoing community-led maintenance and monitoring funds.
4. Integrate Campaigns with Routine Services: Embed immunization and TB screening into regular primary care outreaches to ensure continuity.

5. Strengthen Data Systems: Link HMIS, civil registration, and scheme databases to enable real-time equity monitoring at the block level.

6. CONCLUSION

In Uttar Pradesh, the combination of robust financial protection, a vast community-health workforce, environmental health upgrades, and targeted disease programs has driven measurable reductions in health disparities. To sustain and build on these achievements, policymakers should reinforce integration across sectors, bolster frontline capacities, and maintain rigorous, disaggregated monitoring of equity outcomes.



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