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Conditional Cash Transfer Schemes in Madhya Pradesh, India

Potential Gains for Maternal and Child Health Service Uptake

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Rational of the Study
Methodology
Results

Rationale of the Study

- Maternal and child healthcare (MCH) has been prioritized
- 295000 women died worldwide during pregnancy and childbirth in 2017 (WHO, 2019)
- Poor health and nutrition (early childhood as well as maternal)
  - Long term physical and cognitive development of children
  - Most maternal mortality could be avoided through preventive measures
- SDG 3.1 (MMR 70) & SDG 3.2 (IMR 10)
  - India (113 MMR; 32 IMR)
- Despite Madhya Pradesh is well off in terms of economic performance,
  - The state is lagging behind in MCH and MCN
  - 3rd highest MMR (173) only after Assam (215) and Uttar Pradesh (197)
  - Highest IMR in the Country (48)

Rationale of the Study

- Exploring CCT to incentivize health promoting behaviour
- RMNCH+A framework in 2013 in India
- Efforts from the States
  - JSY in 2005
  - PMMVY in 2017 (IGMSY in 2012)
  - MMSSPSY (in 2018)
    - Target only households belongs to informal sector wag employee
    - Women herself or her husband should be registered as informal sector wage employee
    - Cash incentives for uptake of MCH services
    - Partial compensation to wage loss during perinatal period

Why Does It Need An Assessment

- Rolled out across the State in April 2018, MMSSPSY has emerged as the largest maternity scheme of the State
- More than 11 lakh PW/LMs
- Target group is vulnerable
- Any improvement in MCH status in this group will result in to an upsurge in the state-level outcome indicators
- An understanding of what impacts have occurred due to MMSSPSY is crucial for accountability and restructuring the scheme for better outcome realization

Instalment	Conditionality	Amount
First	➢ On completion of 4 ANC Check-ups confirmed either by MO/ANM	INR 4000*
Second	➢ On institutional delivery in a public health facility ➢ IBF and childbirth have been registered ➢ The child has received '0' dose of BCG, OPV & Hepatitis-B	INR 12000

Heading

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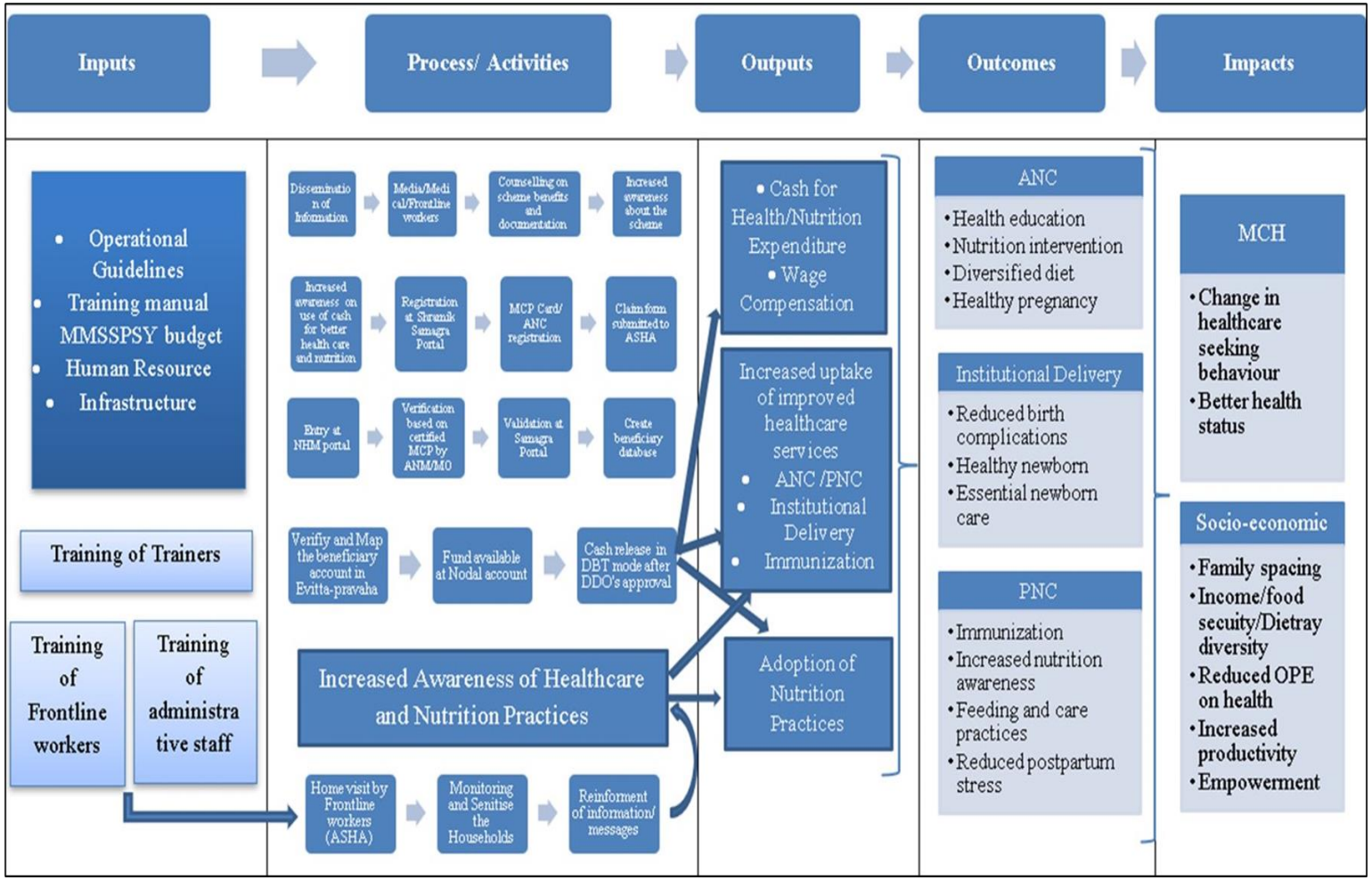
Objective and Theory of Change

Objective

- To analyze whether and to what extent the scheme promoted uptake of ANC visits and other health-seeking behaviour among the women belong to informal sector wage employee households
  - Impact of the scheme on intended outcomes (bounded by conditionalities and unintended outcomes (as a result of side effects)



Methods

- The fundamental issue here is to estimate the causal impact, i.e., the difference between the outcome with the program benefits and the same outcome without the program benefit.
- Randomized experiment is the gold standard
- DID, RDD, and PSM
- PSM fits in the present setting
  - Program is already in place
  - No new intervention was proposed
  - No baseline data available
  - No cutoff is defined except Shramik id

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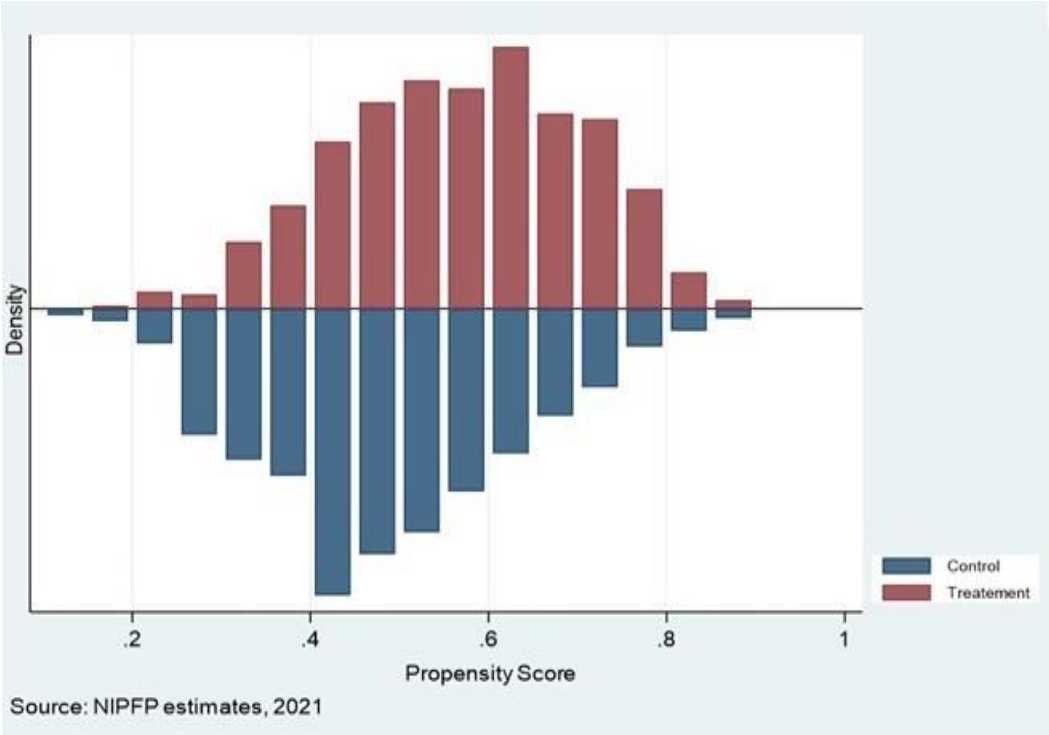
List of Covariates

Covariates	Definitions
Dependent variable	
MMSSPSY Benefits	Received MMSSPSY benefits (no-0; yes -1)
Covariates	
Caste	Caste of the women [OBC -1; Others -2, SC -3; ST -4]
Household's type	Type of Households: [Self-Employed in Agriculture -1; Casual Labour -2; Regular wage earners -3 Self-Employed in Non-agriculture -4]
Occupation	Occupation of the women [House-wife- 1, Wage Earner -2, Others -3]
Per Capita Expenditure	Per capita monthly consumption expenditure quantiles [Quantile 1 (low consumption) to Quantile 5 (high consumptions)]
HH Size	Household's size (below 5 members-1; 5-6 members -2; 7-8 members -3; 9-10 members -4; 10+ members -5)
Women' Education	Education level of women (illiterate -1; primary -2; upper primary -3; high school -4; secondary -5)
Age in 2017	Age of women before implementation (in years)
Age in 2017 square	Squared terms of age of women before implementation
Husband Education	Educational attainment of Husband (Years of schooling)
Husband Education^2	Squared terms of educational attainment of Husband
Urban	Place of stay of women (rural-0; urban -1)
Socio-economic condition	Wealth index quantiles [(Quantile 1 (poorest) to Quantile 5 (wealthiest)]
District	Name of home district of women (Bhopal -1; Chhindwara -2; Barwani/Jhabua -3; Morena -4; Sagar -5; Satna -6)

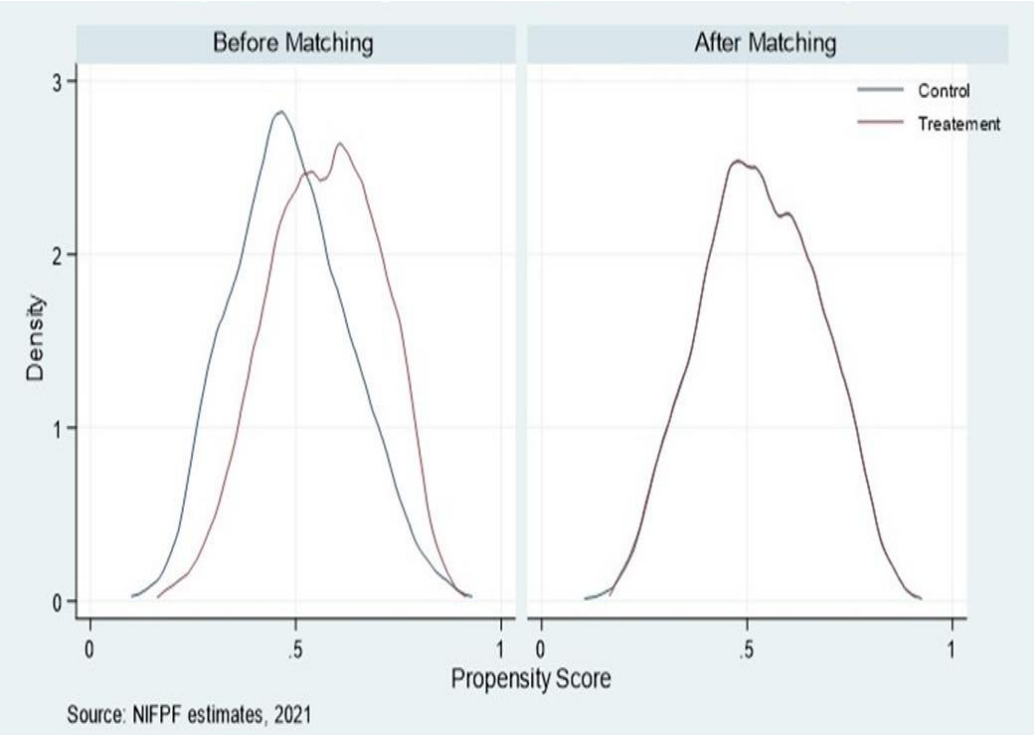
Data

- Primary data from 1246 LMs; Semi-structured interview schedule
- From two groups of mothers (who had given birth before July 2020)
- 53% of treatment households and 47% of control households
- 50.08% rural; 49.92% urban
- Average age 24.79 years; educational attainment 8.30 years; no of children 1.86; 30.42% are first time mothers
- Outcome variables
- Intended: pregnancy registration, At least 1 ANC; days taken for 1st ANC; 4+ANCs; Delivery at public facilities
- Unintended: Counselling received, Stunting, Exclusive breastfeeding; Maternal Underweight; Birth-spacing

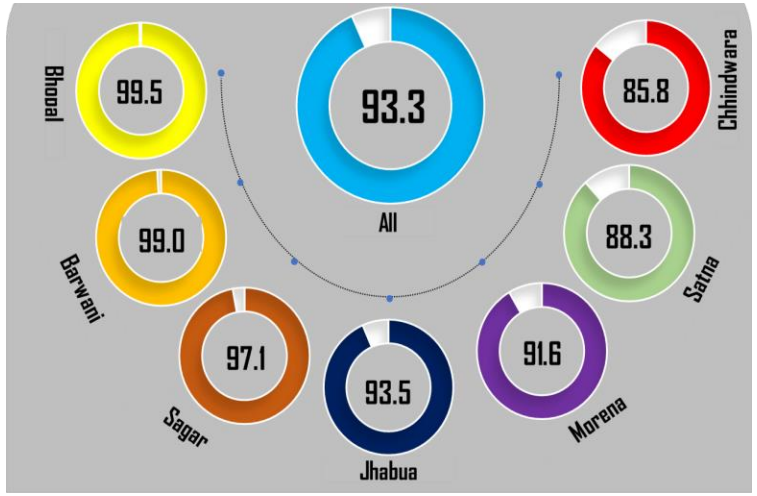
Distribution of P-Scores across Household Groups



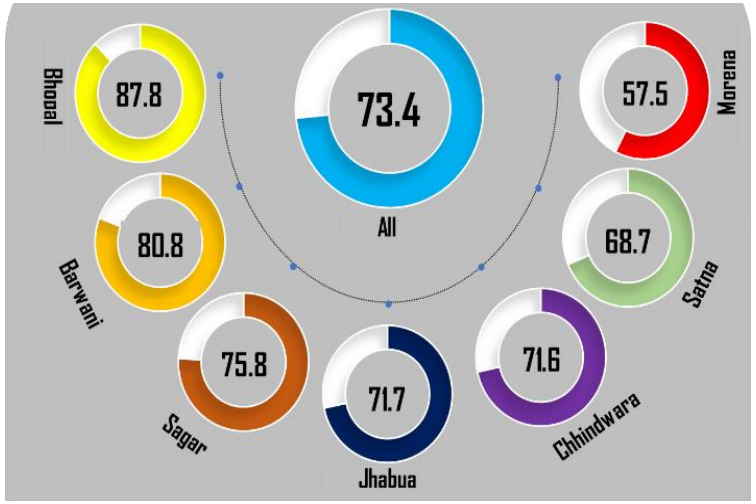
Balancing of P-Scores Before and After Matching



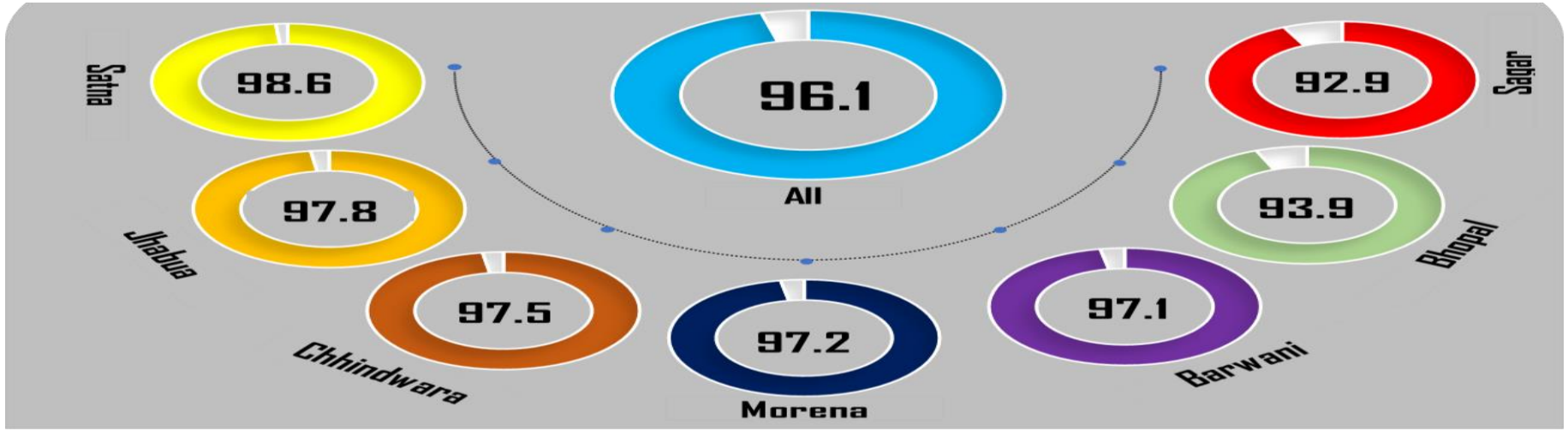
% Women with At least 1 ANC



% Women with At least 4 ANCs



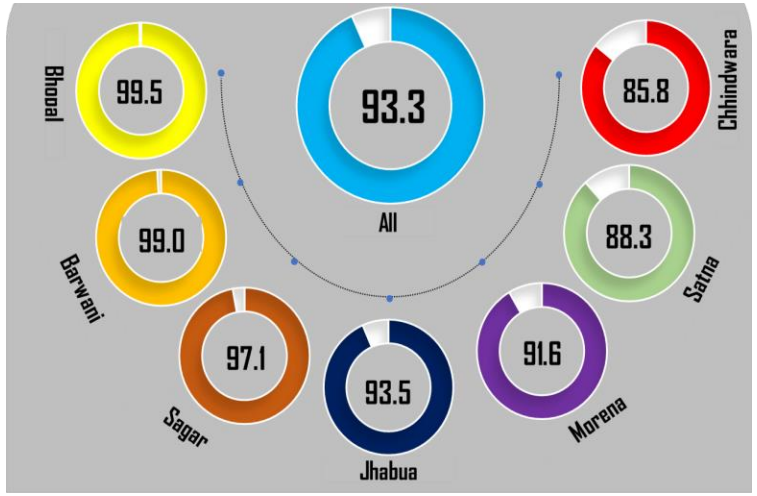
% Women with delivery at public facilities



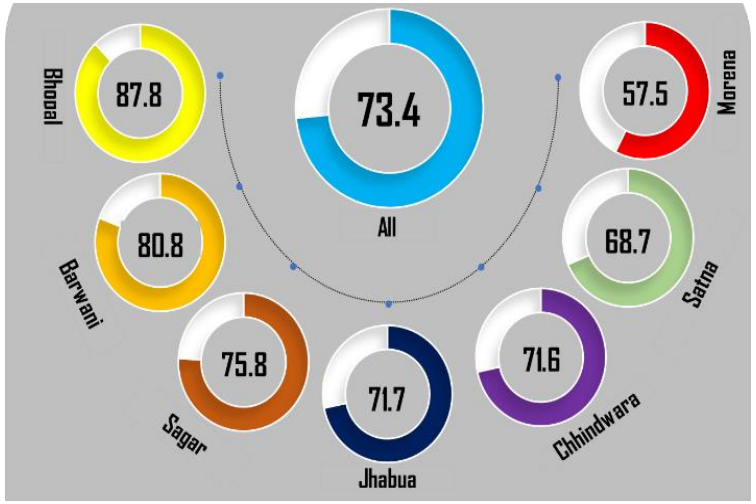
Descriptive Statistics

ANC Aspects	All	Treatment	Control	p-value	Rural	Urban	P-value
Pregnancy Registered (%)	98.64 (0.116)	100.00 (0.000)	97.09 (0.168)	0.001	98.88 (0.105)	98.39 (0.126)	0.460
At least 1 ANC (%)	93.26 (0.251)	98.79 (0.109)	87.01 (0.336)	0.001	93.27 (0.251)	93.25 (0.251)	0.988
4+ ANC (%)	73.43 (0.442)	91.07 (0.285)	53.50 (0.499)	0.001	76.28 (0.426)	70.58 (0.456)	0.023
1st ANC (days)	88.80 (33.72)	80.70 (29.51)	99.20 (35.90)	0.001	84.73 (32.61)	92.88 (34.35)	0.001
Government Facility (%)	96.15 (0.193)	100.00 (0.000)	91.79 (0.275)	0.001	95.83 (0.200)	96.46 (0.185)	0.564
Received ANC Counselling (%)	81.46 (0.389)	83.51 (0.371)	79.15 (0.407)	0.048	83.17 (0.374)	79.74 (0.402)	0.119
Stunted (%)	58.25 (0.49)	55.30 (0.50)	61.44 (0.49)	0.072	57.57 (0.49)	58.89 (0.49)	0.698
Maternal Underweight (%)	29.32 (0.455)	30.02 (0.459)	28.55 (0.452)	0.580	31.85 (0.466)	26.66 (0.443)	0.050
Exclusive Breast-feeding (6 months) (%)	67.74 (0.468)	73.07 (0.444)	61.71 (0.487)	0.001	68.27 (0.466)	67.20 (0.470)	0.687
Spacing (Months)	16.68 (5.116)	18.12 (5.268)	15.63 (4.742)	0.001	17.14 (5.196)	16.21 (5.003)	0.091

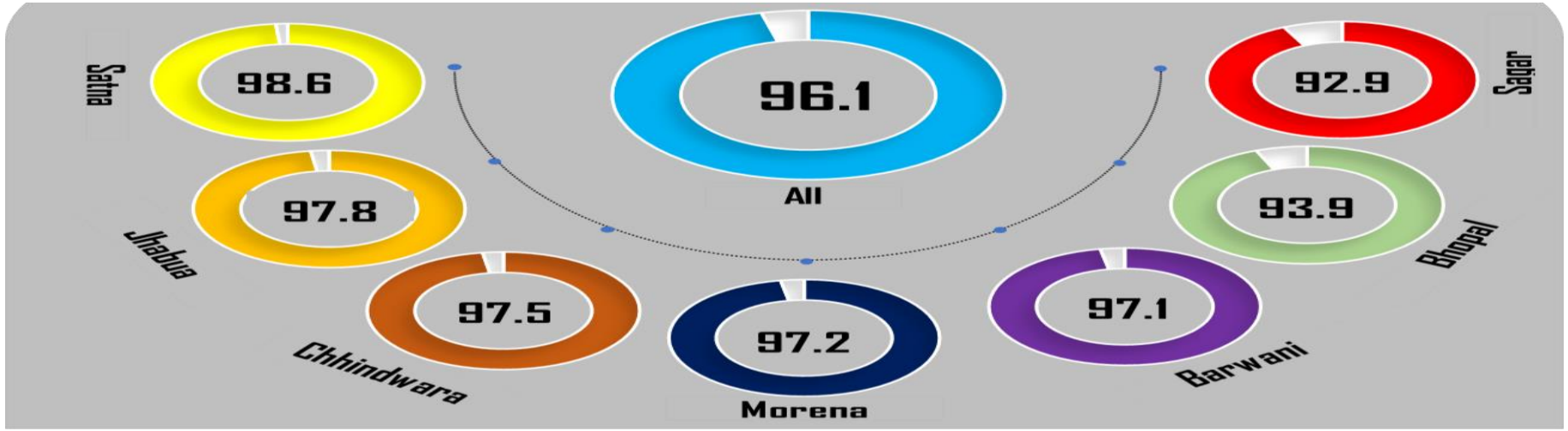
% Women with At least 1 ANC



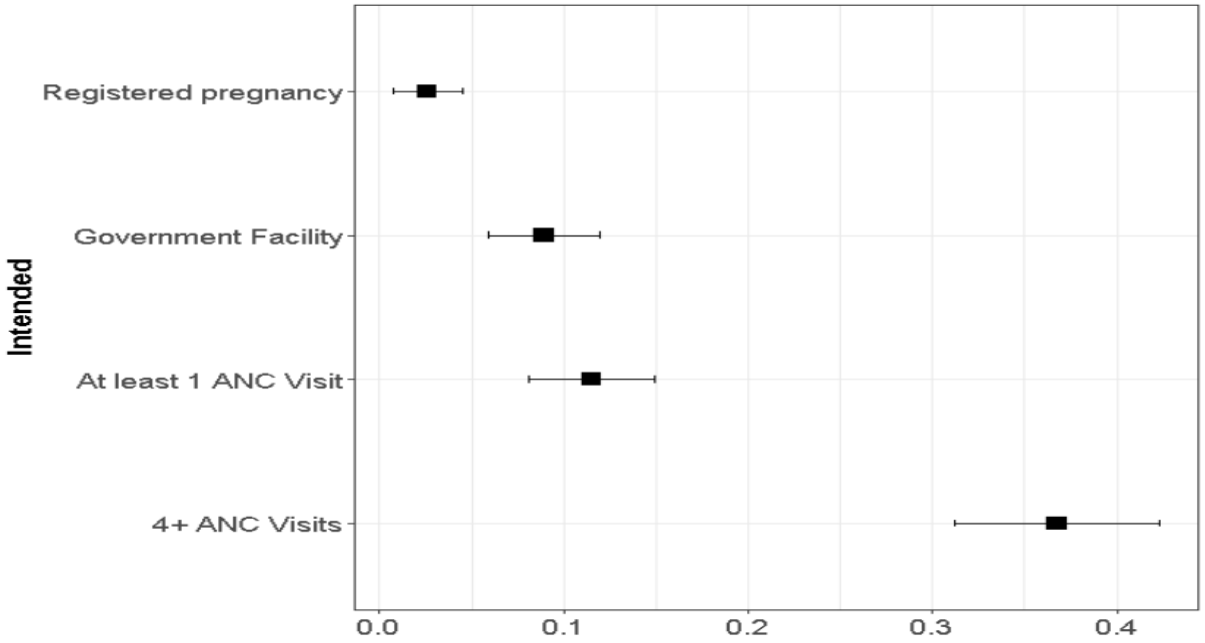
% Women with At least 4 ANCs

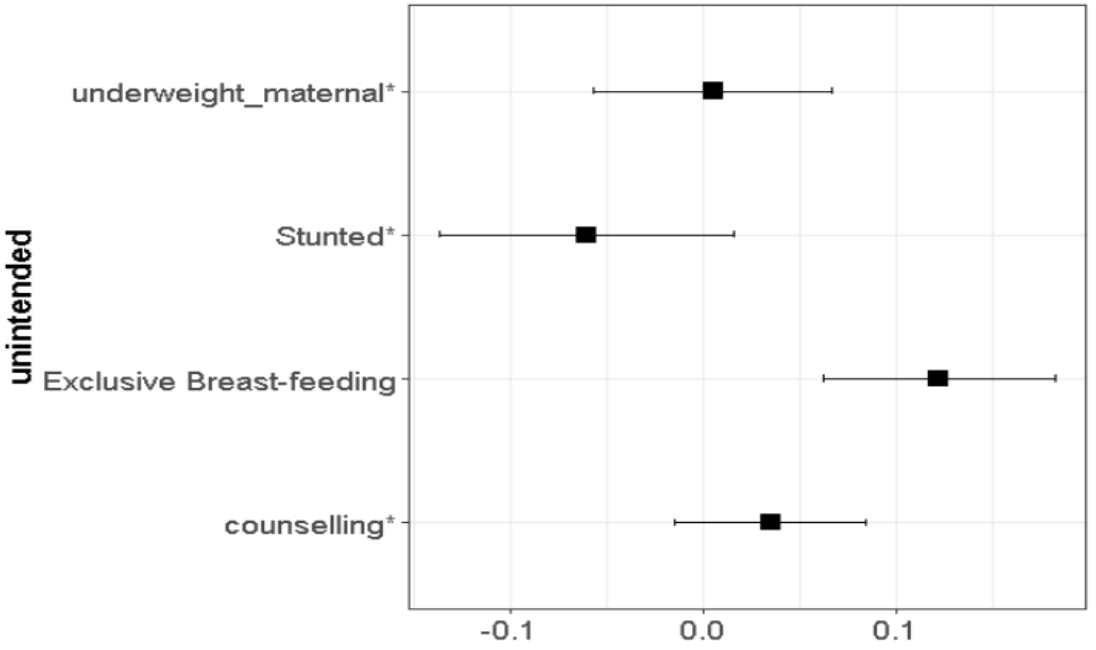


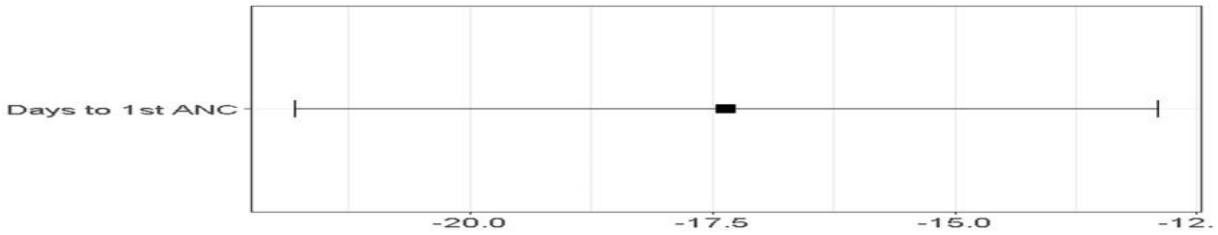
% Women with delivery at public facilities

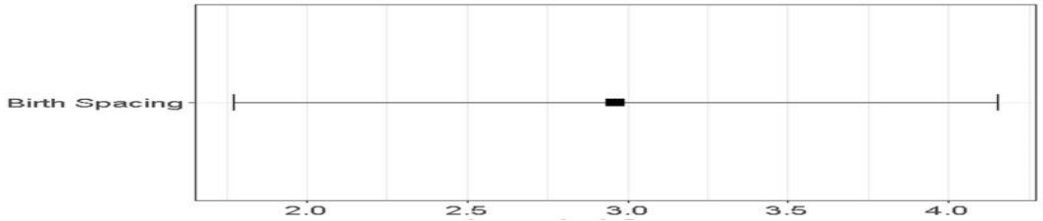


ATT with CI


Intended
Registered pregnancy
Government Facility
At least 1 ANC Visit
4+ ANC Visits
0.0
0.1
0.2
0.3
0.4


unintended
underweight_maternal*
Stunted*
Exclusive Breast-feeding
counselling*
-0.1
0.0
0.1


Days to 1st ANC
-20.0
-17.5
-15.0
-12.


Birth Spacing
2.0
2.5
3.0
3.5
4.0

ATT

ATT of Receiving MMSSPSY Benefits	Registered pregnancy	At least 1 ANC Visit	Days to 1st ANC	4+ ANC Visits	Government Facility	Counseling ANC	Stunted	Maternal Underweight	Exclusive Breast-feeding	Birth Spacing
Nearest Neighbour (5)	0.026*** (0.010)	0.115*** (0.017)	-17.353*** (2.273)	0.368*** (0.029)	0.089*** (0.016	0.035 (0.025)	-0.060 (0.039)	0.005 (0.031)	0.122*** (0.031)	2.963*** (0.607)
IPW	0.021*** (0.006)	0.111*** (0.017)	-14.643*** (2.055)	0.342*** (0.027)	0.113*** (0.018)	0.029 (0.022)	-0.029 (0.039)	0.024 (0.029)	0.083*** (0.029)	2.628*** (0.646)
Sample	1,242	1,242	1,159	1,242	1242	1246	836	1178	1242	340

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Place of Stay										
Rural	0.031*	0.126***	-16.787***	0.365***	0.072***	0.087**	-0.009	0.028	0.072	4.219***
Urban	0.028**	0.105***	-17.528***	0.358***	0.082***	-0.006	-0.108*	-0.034	0.177***	2.555***
Wealth Q1	0.036	0.162***	-14.269**	0.404***	0.038	0.053	0.001	0.092	0.109	6.162***
Wealth Q2	0.037	0.086*	-23.253***	0.418***	0.055***	0.086	-0.021	-0.053	0.057	2.971**
Wealth Q3	0.015	0.094**	-24.259***	0.425***	0.102***	0.007	0.005	0.018	0.220***	1.219
Wealth Q4	0.018*	0.080**	-13.249**	0.297***	0.115**	0.013	-0.123	-0.030	0.078	3.736**
Wealth Q5	0.047	0.142***	-10.663**	0.282***	0.167***	-0.025	-0.061	0.016	0.139**	2.608**

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Results

- There has been an improvement in the uptake of improved maternal and child services among the informal sector wage employee households due to the implementation of MMSSPSY.
- Heterogeneity in the impact across location and wealth level
- Steps should be taken to wider the coverage under the scheme by including the potential beneficiaries by minimizing exclusions errors.
- The estimated birth spacing, although improved, is still below WHO's recommended level.
- Diversion of cash amount and non-consumption of nutritious food
- The reported improved consumption basket does not actually get translated to a better nutritional status of children and mothers
- Hybrid model (cash+kind)

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