FAMILY PLANNING IN 22 STATES/UNION TERRITORIES AND THEIR DISTRICTS:

Preliminary Analyses from NFHS-5 Factsheets and matched data from previous rounds of survey

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NFHS-5 summary data are available for:

- 22 states/UTs
- 342 districts
- 104 indicators [at district-level]
- 12 indicators on Family Planning
- 17 indicators on maternal/delivery care
- 18 indicators on child health
- 11 indicators on child feeding practices and nutritional status of children
- 8 indicators on women's empowerment and gender based violence [at state-level]

Together with other comparative datasets, we present:

- ❑ **Data quality on mCPR**
- ❑ **TFR and mCPR relationship**
- ❑ **Urban-rural differences**
- ❑ **District-level variations**
- ❑ **Potential factors that explain changes in FP indicators**

Few pointers

- Analyses are based on indicators available in NFHS-5 state/district-level fact sheets
- No unit level data; limiting the extent of analyses
- Presentation aimed to hear interpretations from you

Snapshot of FP indicators and change (2015-16 to 2019-20) at state level

- Even in states with no change or declined levels of FP indicators; district variations are noted.

States/UTs	METHOD USE						UNMET NEED			FP PROGRAM COVERAGE	
	CPR	mCPR	OCP use	Condom use	Injectables use	Traditional method	Unmet need total	Unmet need spacing	Demand satisfied with modern method	Health worker outreach for FP	Use were told about side-effect
Andhra Pradesh	71.1%	70.8%	0.1%	0.5%	0.0%	0.3%	4.7%	2.6%	93.4%	18.6%	28.9%
Assam	60.8%	45.3%	27.5%	4.9%	0.5%	15.5%	11.0%	4.1%	63.1%	21.4%	70.0%
Bihar	55.8%	44.4%	2.0%	4.0%	1.1%	11.4%	13.6%	6.1%	64.0%	20.2%	49.9%
Goa	67.9%	60.1%	2.7%	23.2%	0.0%	7.8%	8.4%	4.0%	78.8%	27.7%	85.5%
Gujarat	65.3%	53.6%	2.3%	11.4%	0.1%	11.7%	10.3%	4.5%	70.9%	29.8%	74.1%
Himachal Pradesh	74.2%	63.4%	1.5%	19.2%	0.1%	10.8%	7.9%	2.8%	77.2%	19.3%	58.1%
Karnataka	68.7%	68.2%	2.1%	4.1%	0.5%	0.5%	6.5%	3.8%	90.7%	35.8%	72.9%
Kerala	60.7%	52.8%	0.4%	3.4%	0.0%	7.9%	12.5%	7.0%	72.1%	15.0%	62.2%
Meghalaya	27.4%	22.5%	8.3%	2.7%	1.1%	4.9%	26.9%	18.3%	41.4%	27.4%	67.2%
Maharashtra	66.2%	63.8%	1.8%	10.2%	0.2%	2.4%	9.6%	3.9%	84.2%	21.9%	52.1%
Manipur	61.3%	18.2%	4.4%	4.8%	0.1%	43.1%	12.2%	4.7%	24.8%	6.0%	45.4%
Mizoram	31.2%	30.8%	12.9%	1.9%	0.1%	0.4%	18.9%	12.8%	61.5%	14.5%	58.4%
Nagaland	57.4%	45.3%	6.4%	3.3%	0.3%	12.1%	9.1%	4.5%	68.1%	9.7%	60.2%
Sikkim	69.1%	54.9%	18.2%	9.3%	3.5%	14.5%	11.9%	4.9%	67.8%	18.9%	69.8%
Telangana	68.1%	66.7%	0.8%	0.8%	0.1%	1.4%	6.4%	2.8%	89.5%	17.0%	49.2%
Tripura	71.2%	49.1%	32.8%	3.3%	0.3%	22.1%	8.2%	2.5%	61.8%	10.2%	41.9%
West Bengal	74.4%	60.7%	20.3%	7.0%	0.7%	13.7%	7.0%	3.0%	74.6%	17.5%	53.6%
Andaman and Nicobar	65.8%	57.7%	3.6%	9.8%	0.3%	8.1%	13.5%	6.1%	72.8%	30.6%	83.4%
Dadra-Nagar Haveli & Daman-Diu	68.0%	59.8%	3.1%	11.7%	0.9%	8.2%	11.9%	5.3%	74.8%	25.3%	69.9%
Jammu & Kashmir	59.8%	52.5%	9.0%	11.7%	3.6%	7.3%	7.8%	3.9%	77.7%	11.1%	64.0%
Ladakh	51.3%	48.0%	6.6%	9.0%	6.2%	3.3%	7.9%	4.0%	81.1%	12.2%	59.4%
Lakshadweep	52.6%	30.1%	1.2%	4.1%	0.0%	22.5%	12.3%	8.0%	46.4%	14.8%	85.0%

Improved up to 5% points between NFHS-4 to NFHS-5

Improved between 5-10% points between NFHS-4 to NFHS-5

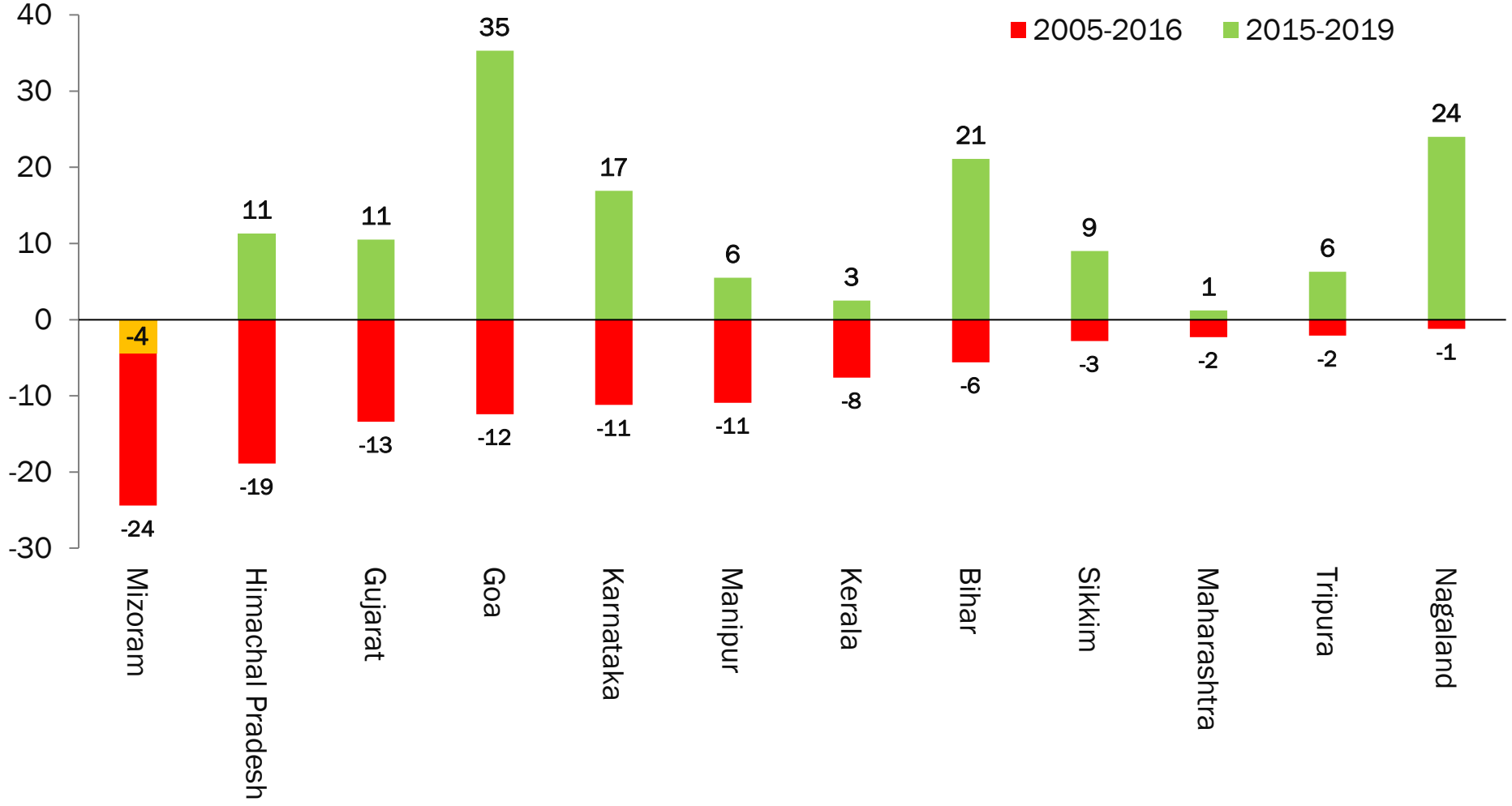
Improved >10% points between NFHS-4 to NFHS-5

Declined/not improved between NFHS-4 to NFHS-5

What is the quality of data for mCPR in NFHS-5 at state level?

- During 2005-2016, 12 states (out of current 22 states) showed decline in **use of modern method (mCPR)**
- But in last five years all 12 states experienced an increase (except Mizoram): It could be the program effort, potential data error in either of the survey rounds.

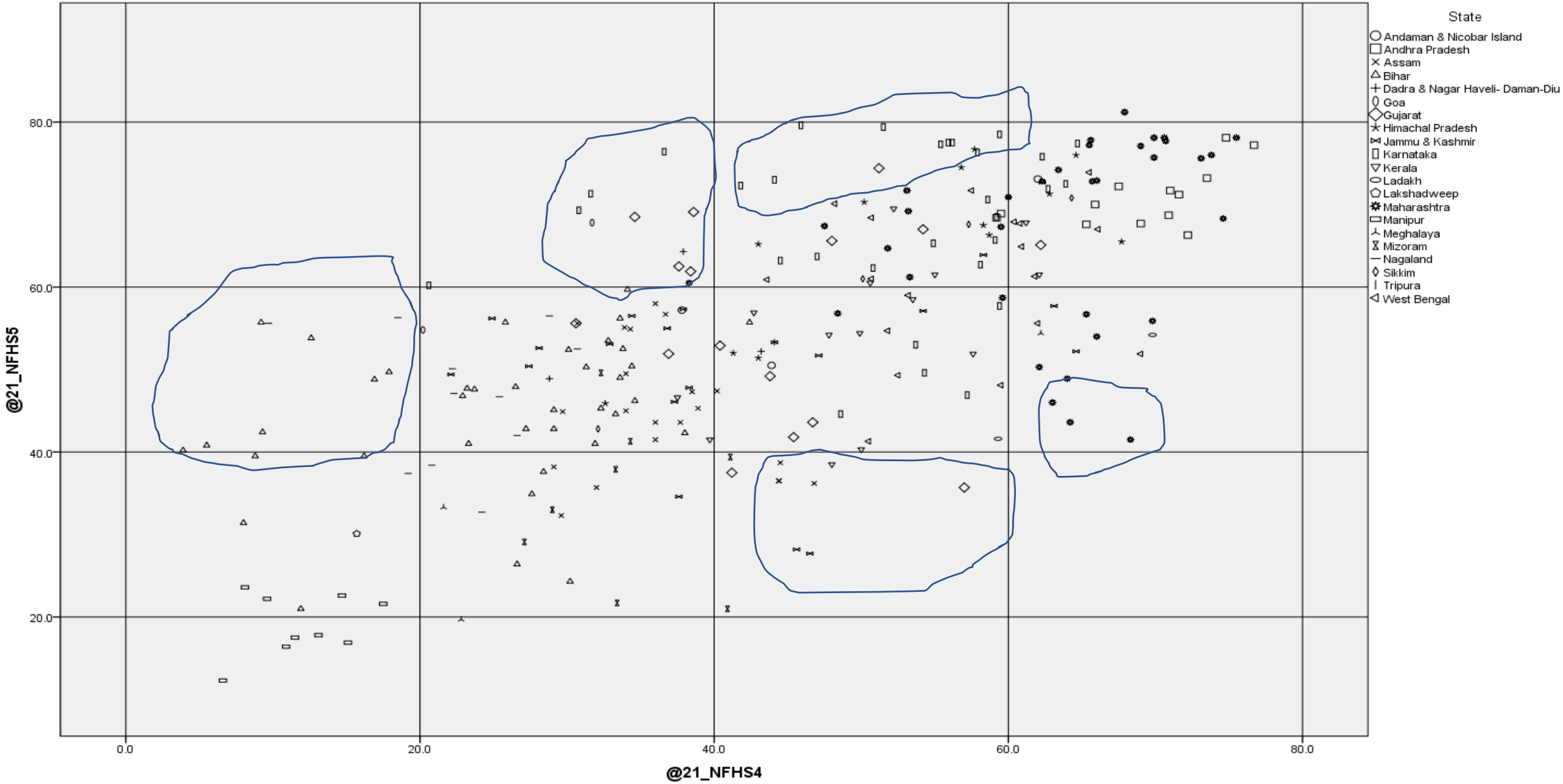
Absolute change in modern method use (mCPR) between 2005-06 to 2015-16, and between 2015-16 to 2019-20



Annual rate of change in mCPR between 2015-16 to 2019-20	
Goa	8.8
Nagaland	6.0
Bihar	5.3
Karnataka	4.2
Himachal Pradesh	2.8
Gujarat	2.6
Sikkim	2.3
Tripura	1.6
Manipur	1.4
Kerala	0.6
Maharashtra	0.3

What is the quality of data for mCPR at district-level in NFHS-5?

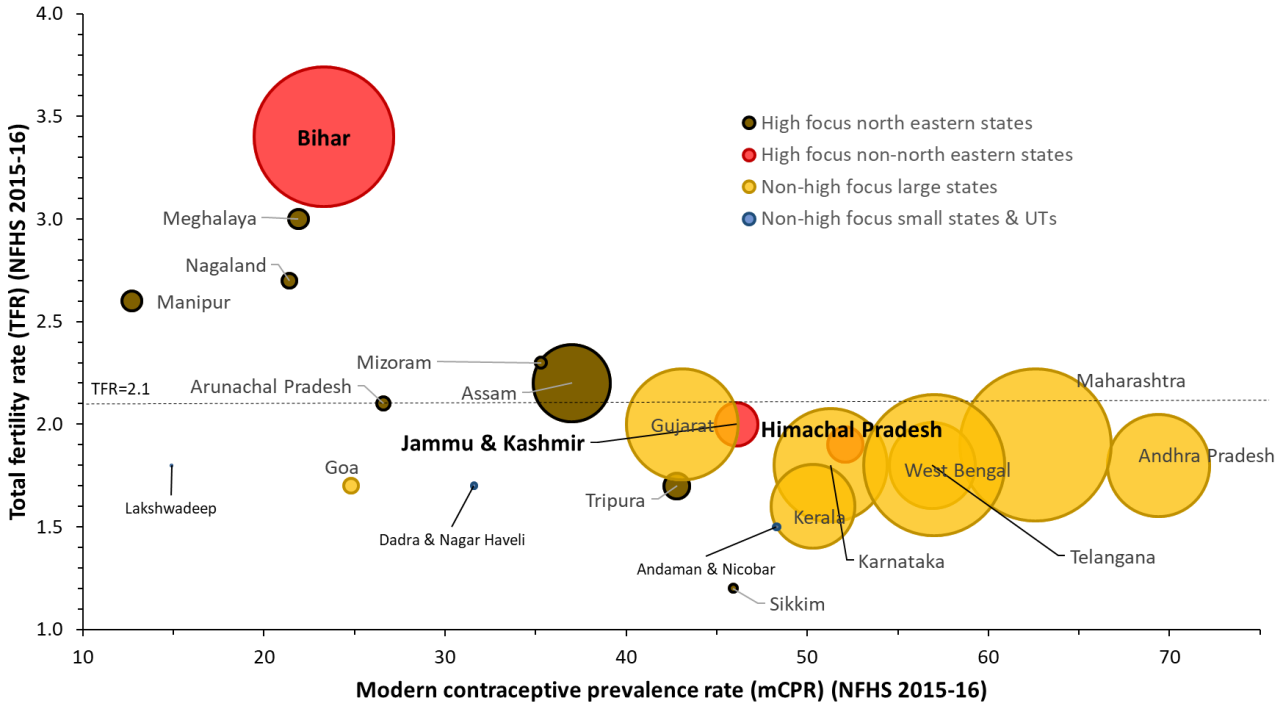
- In comparison with NFHS-4, most districts are in common direction but there are some outlier districts, specifically from Karnataka, Bihar, Gujarat, Maharashtra, Assam, J&K.
- More data and analysis is needed to examine this thoroughly.



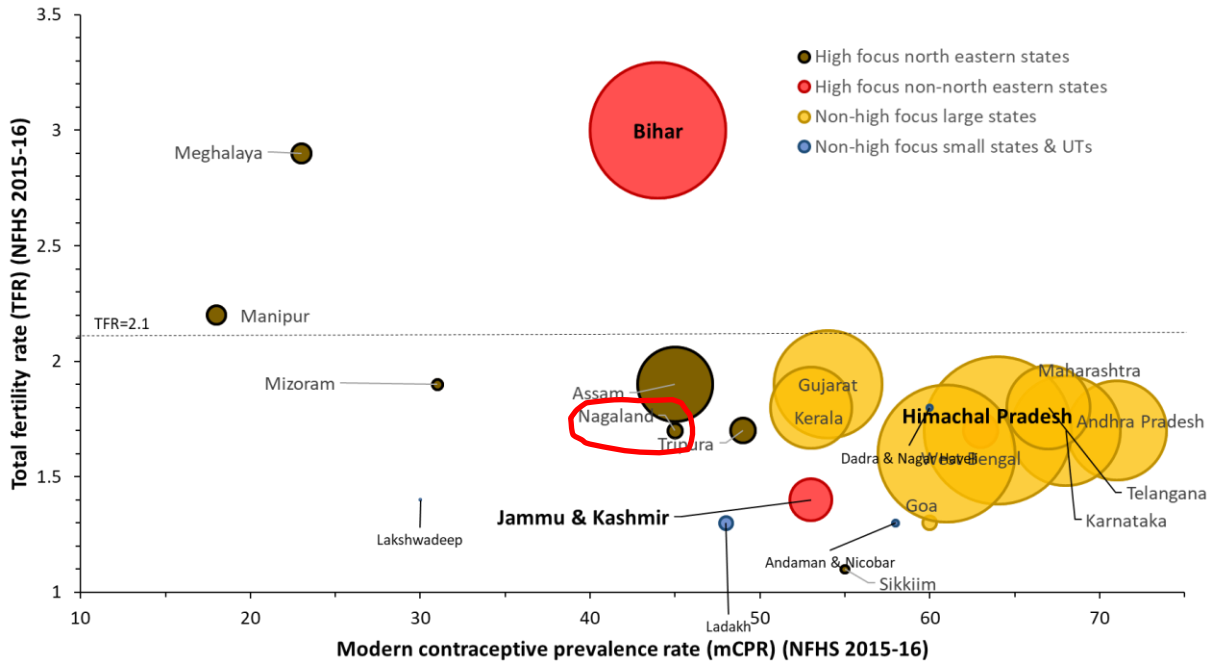
Total fertility rate and mCPR relationship; 2015-16 and 2019-20

- Of the 22 states/UTs, only 3 states have TFR >2.1; below replacement level in almost all states.
- Decline in TFR in Nagaland seems surprising.
- Manipur and Meghalaya have low mCPR and relatively high TFR.

NFHS-4, 2015-16

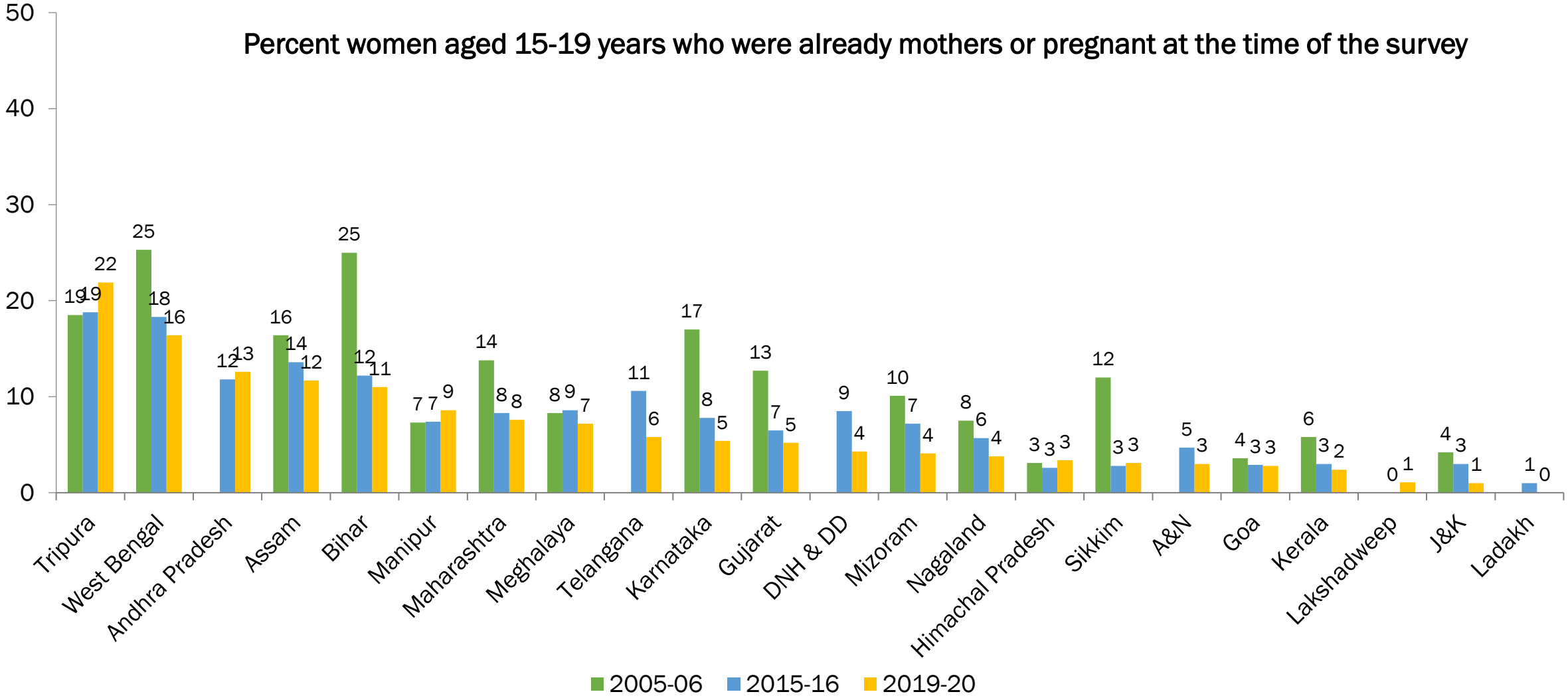


NFHS-5, 2019-20



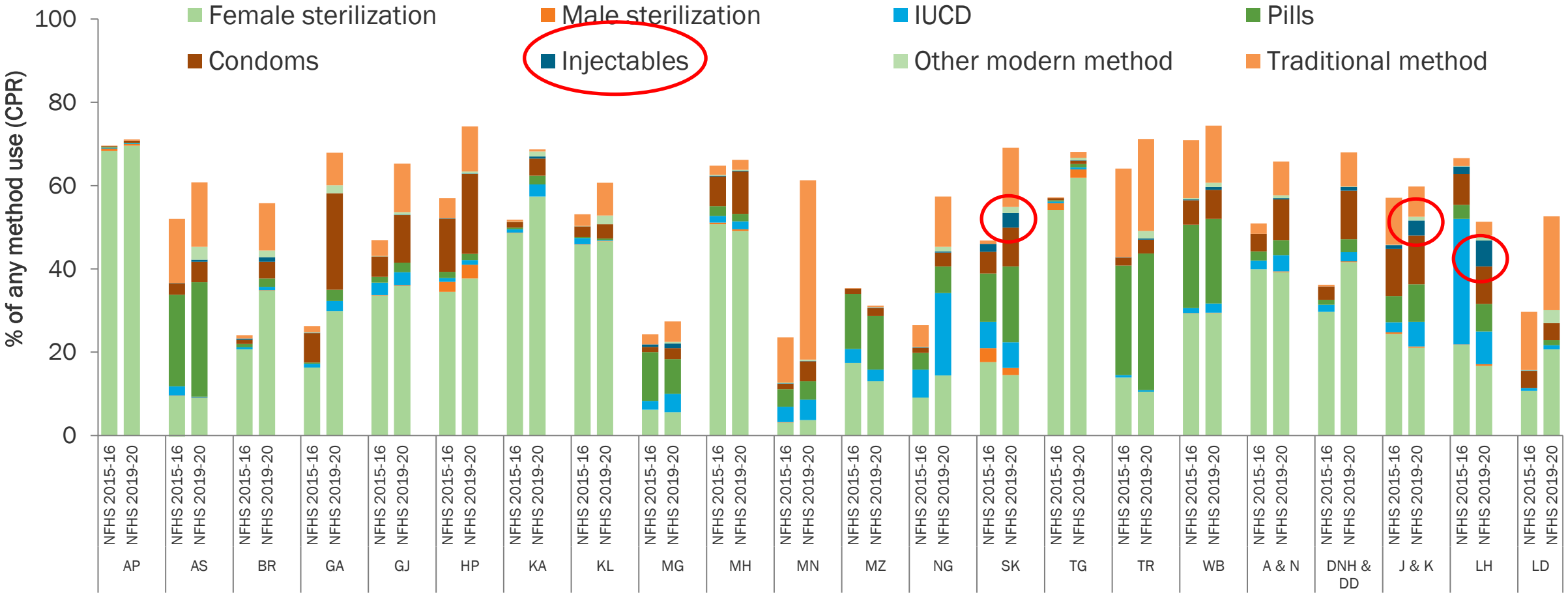
Trends in teenage pregnancy, NFHS 2005-06 to 2019-20

- Except for Tripura and Manipur, in most other places the teenage pregnancy is on the declining trend.
- States like Tripura, West Bengal, Assam, Andhra Pradesh and Bihar has >10% teenage pregnancies.



Contraceptive method mix, 2015-16 and 2019-20

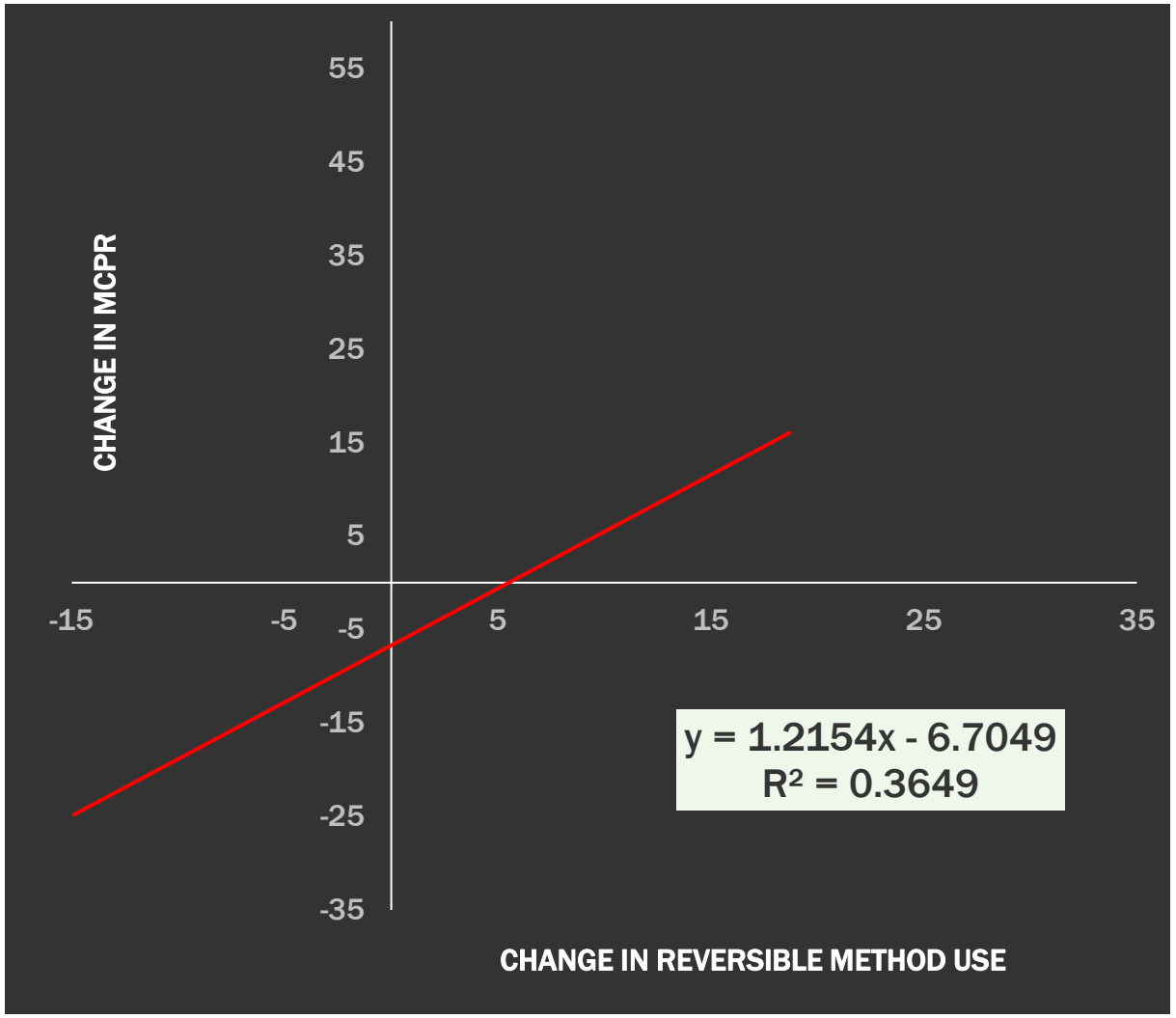
- Comparison of method mix between NFHS-3 and NFHS-4 indicated favorable shift towards reversible methods; and this shift is more prominent in NFHS-5.
- Huge increase in mCPR in Nagaland, driven mostly by IUCD.
- Traditional method use is also on the rise. Wherever the reversible methods of contraception increased, traditional methods use also increased.
- Eastern and north eastern states have better method mix.



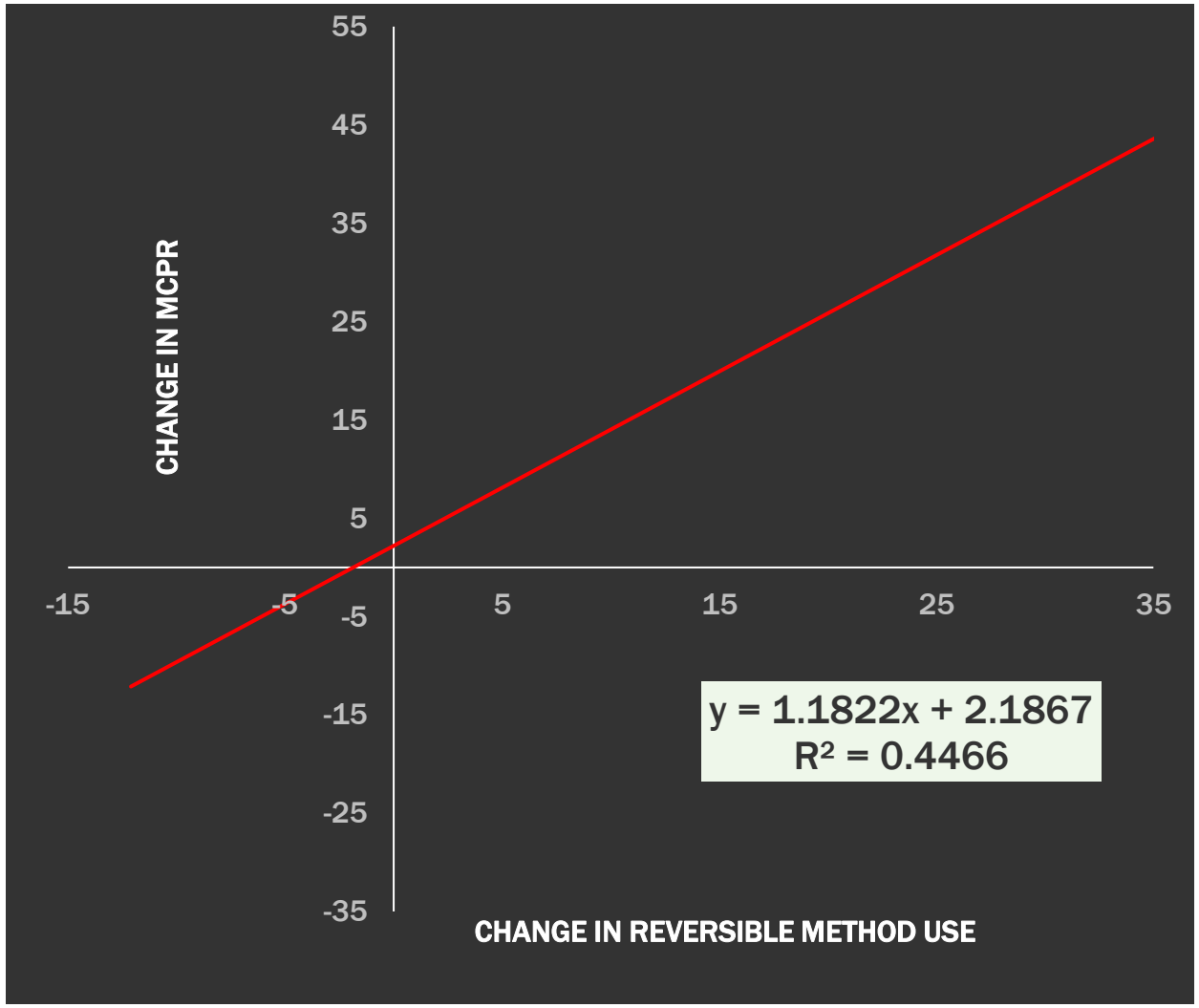
Relationship between change in reversible contraceptive methods and mCPR

- During 2007-08 to 2015-16, there was noise in the data and was pulled towards negative direction.
- During 2015-16 to 2019-20, there seems to be less noise and the relationship was positive (exception to some outliers).

Between DLHS 3 and NFHS 4



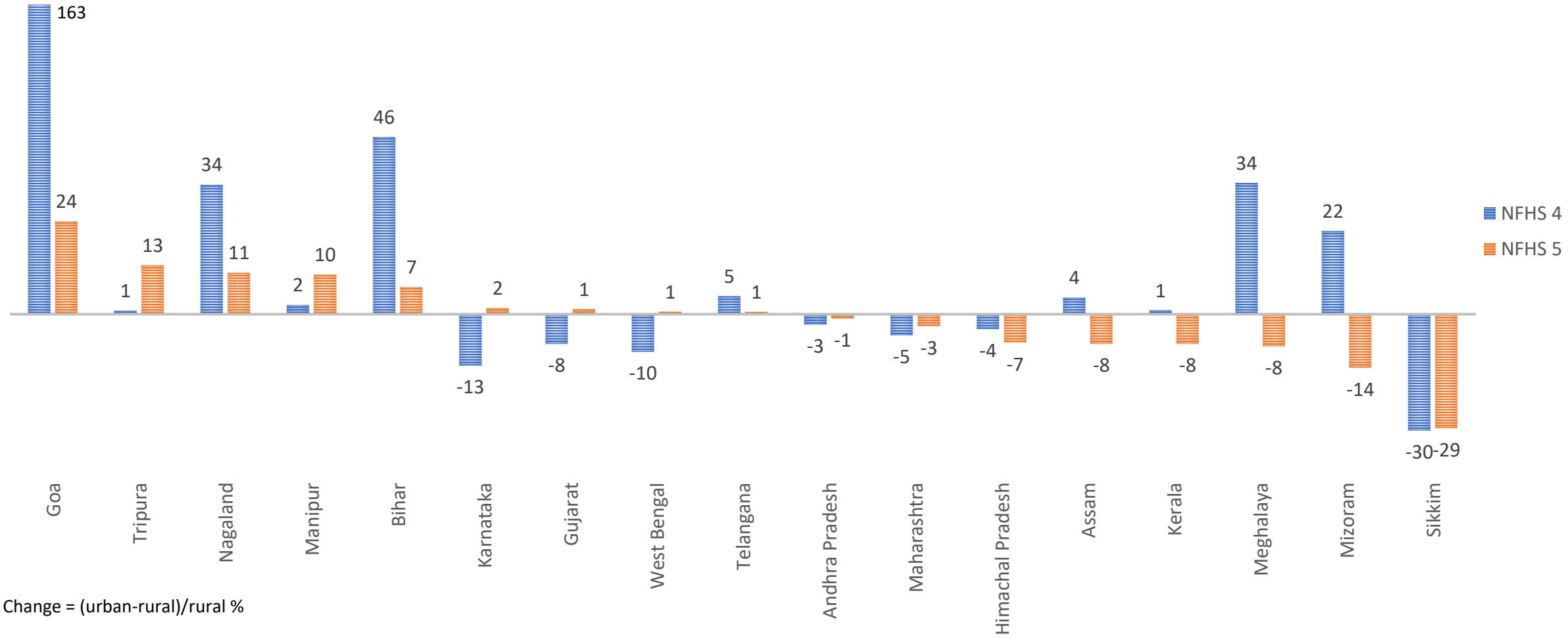
Between NFHS 4 and NFHS 5



Note: Only those districts are used in analysis for which data is available in all the surveys DLHS 3, NFHS 4 & 5

Difference between rural and urban areas for mCPR, NFHS 2005-06 and 19-20

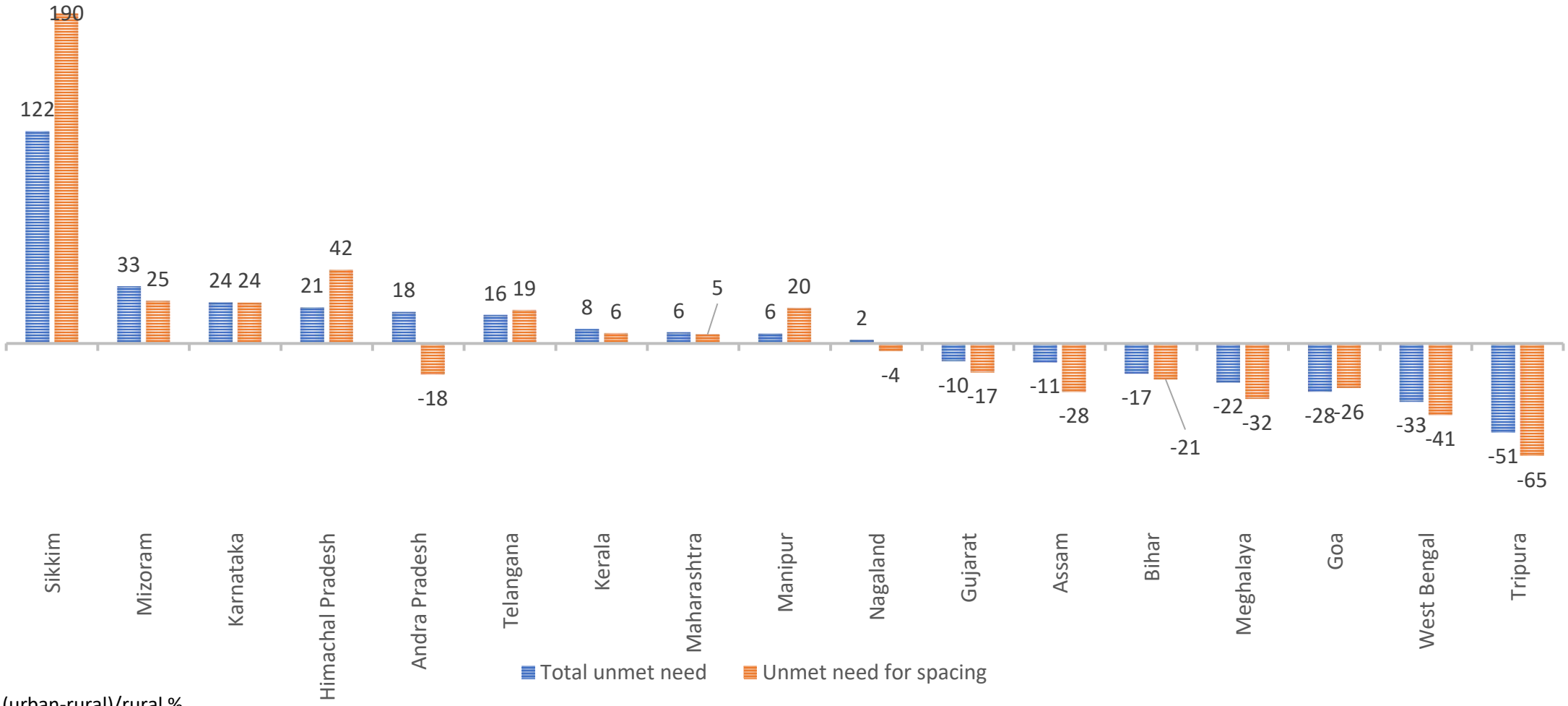
- Top 5 states where urban mCPR is more than rural are: Goa, Tripura, Nagaland, Manipur, Bihar
- In Bihar, the gap between rural and urban mCPR has reduced compared to NFHS 4
- Of the 7 states, where there is more than 10% difference between rural and urban mCPR; 4 are from north east
- Reduction in inequity between urban and rural areas for some states may have contributed by increase in reversible methods of contraception in rural areas; requiring additional analyses of data.



% Change = (urban-rural)/rural %

Difference between rural and urban areas for unmet need, NFHS 2019-20

- Top 5 states where urban total unmet need is more than rural are: Sikkim, Mizoram, Karnataka, Himachal Pradesh, Andhra Pradesh
- Sikkim's urban total unmet need is more than double of rural and urban unmet need to spacing is three times that of rural



% Change = (urban-rural)/rural %

States/UTs with high increase/decrease in specific methods between 2015-16 and 2019-20

- Sikkim witnessed highest increase in both pills and injectables use between the survey rounds
- Maharashtra and few north eastern states witnessed decline in female sterilization

States with the highest increase (percent point) in contraceptive method type between 2015-16 to 2019-20

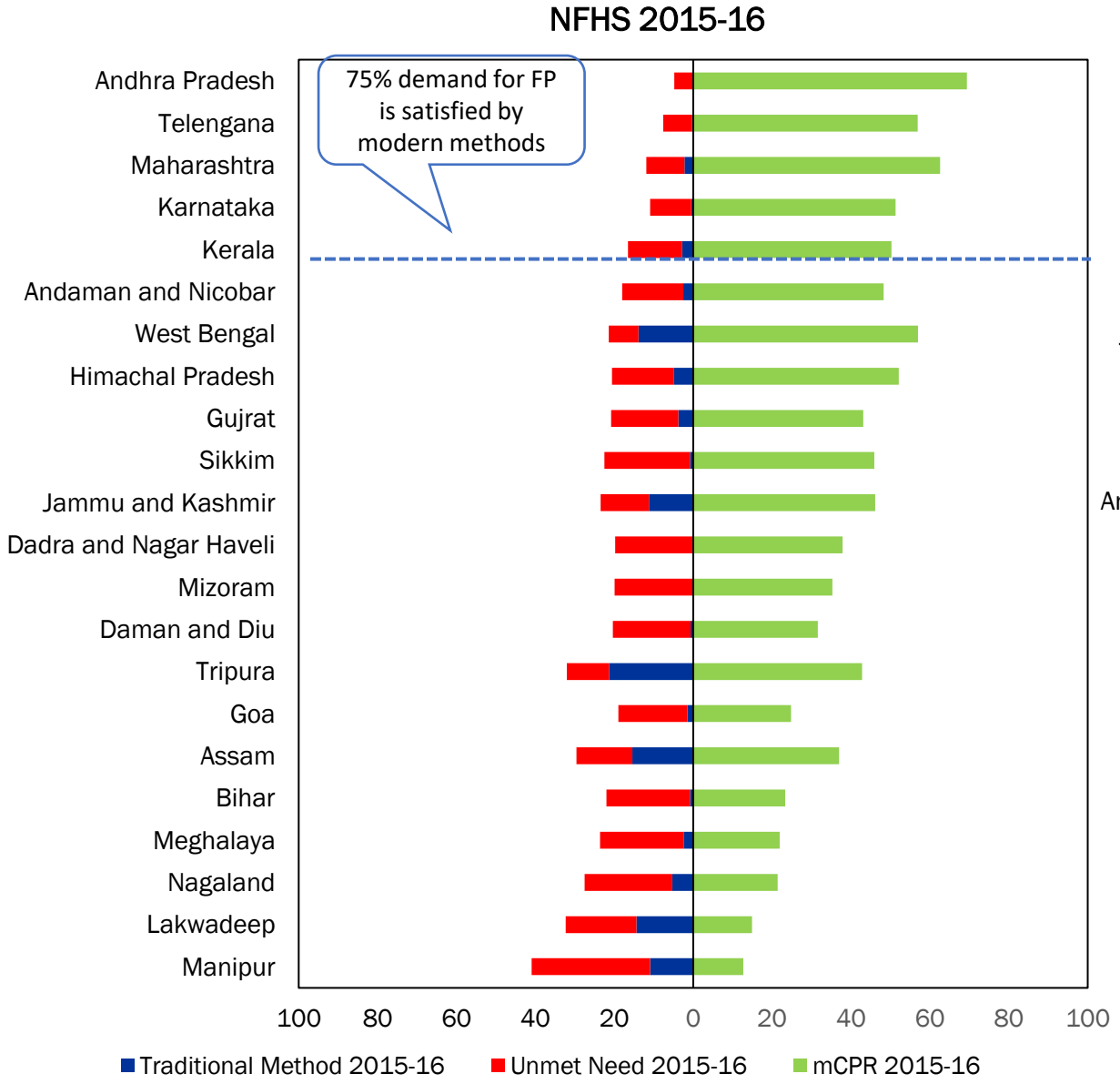
	Female Sterilization (%)	IUD/PPIUD (%)	Pill (%)	Condom (%)	Injectable (%)	Traditional method (%)
Top five states	Bihar (14.1%)	Nagaland (13.1%)	Sikkim (6.6%)	Goa (16.1%)	Sikkim (1.6%)	Manipur (32.2%)
	Goa (13.6%)	Meghalaya (2.3%)	Tripura (6.5%)	Gujarat (6.5%)	Bihar (0.8%)	Sikkim (13.4%)
	Karnataka (8.8%)	Karnataka (2.1%)	Assam (5.5%)	Himachal Pradesh (6.5%)	Meghalaya (0.5%)	Bihar (10.6%)
	Telangana (7.7%)	Goa (1.5%)	Goa (2.4%)	Sikkim (4.1%)	Karnataka (0.5%)	Nagaland (6.9%)
	Nagaland (5.6%)	Manipur (1.2%)	Nagaland (2.4%)	Manipur (3.5%)	West Bengal (0.5%)	Goa (6.3%)

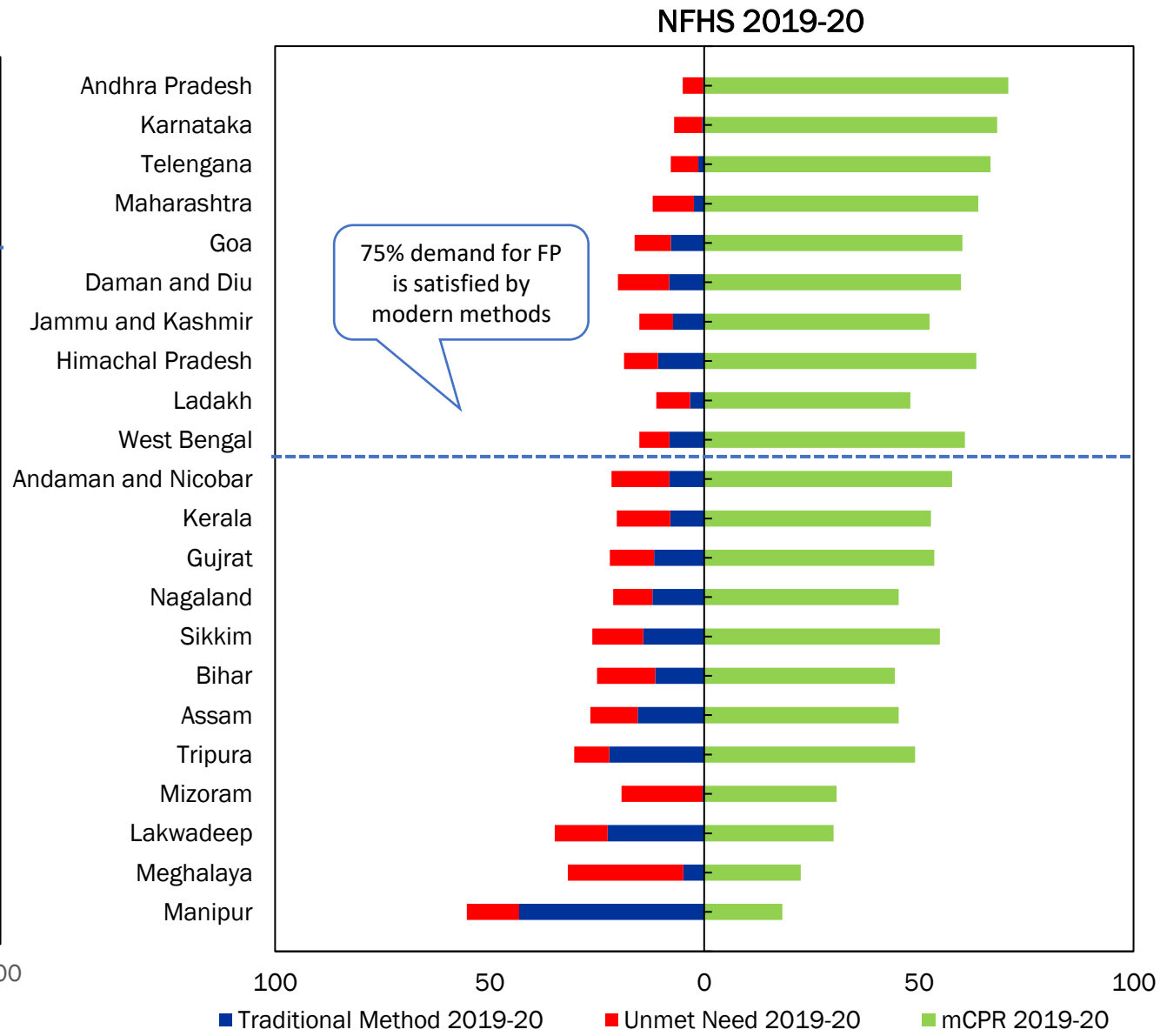
States with the lowest increase (percent point) in contraceptive method type between 2015-16 to 2019-20

	Female Sterilization (%)	IUD/PPIUD (%)	Pill (%)	Condom (%)	Injectable (%)	Traditional method (%)
Bottom five states	Mizoram (–4.4%)	Kerala (–1.3%)	Meghalaya (–3.4%)	Andhra Pradesh (0.3%)	Goa (–0.1%)	West Bengal (–0.2%)
	Tripura (–3.3%)	Mizoram (–0.6%)	Maharashtra (–0.6%)	Telangana (0.3%)	Andhra Pradesh (0.0%)	Karnataka (0.0%)
	Sikkim (–3.1%)	Tripura (–0.2%)	Mizoram (–0.3%)	Mizoram (0.6%)	Kerala (0.0%)	Assam (0.1%)
	Maharashtra (–1.6%)	Sikkim (–0.1%)	Andhra Pradesh (–0.1%)	Kerala (0.8%)	Maharashtra (0.0%)	Andhra Pradesh (0.2%)
	Meghalaya (–0.6)	Andhra Pradesh (0.0%)	Himachal Pradesh (0.0%)	West Bengal (1.1%)	Manipur (0.0%)	Maharashtra (0.2%)

Family planning demand satisfied by modern method of contraception

- In 2015-16, only 5 out of 22 states/UTs had 75% or more of FP demand satisfied by modern methods
- In 2019-20, 10 out of 22 states/UTs achieved 75% or more of FP demand satisfied by modern methods





According to 2015-16 NFHS data, very few states where FP demand met by modern method is >75%

		States where demand is met by modern method	
		Less than 75%	75% or more
TFR	Below replacement level (TFR <=2.1)	Gujarat, Himachal Pradesh, Daman & Diu, Lakshadweep, Andaman & Nicobar, Jammu & Kashmir, Goa, Tripura, Arunachal Pradesh, Sikkim	Andhra Pradesh, Karnataka, Kerala, Maharashtra, Telangana
	Above replacement level (TFR > 2.1)	Assam, Mizoram, Bihar, Dadra & Nagar Haveli, Nagaland, Meghalaya, Manipur	

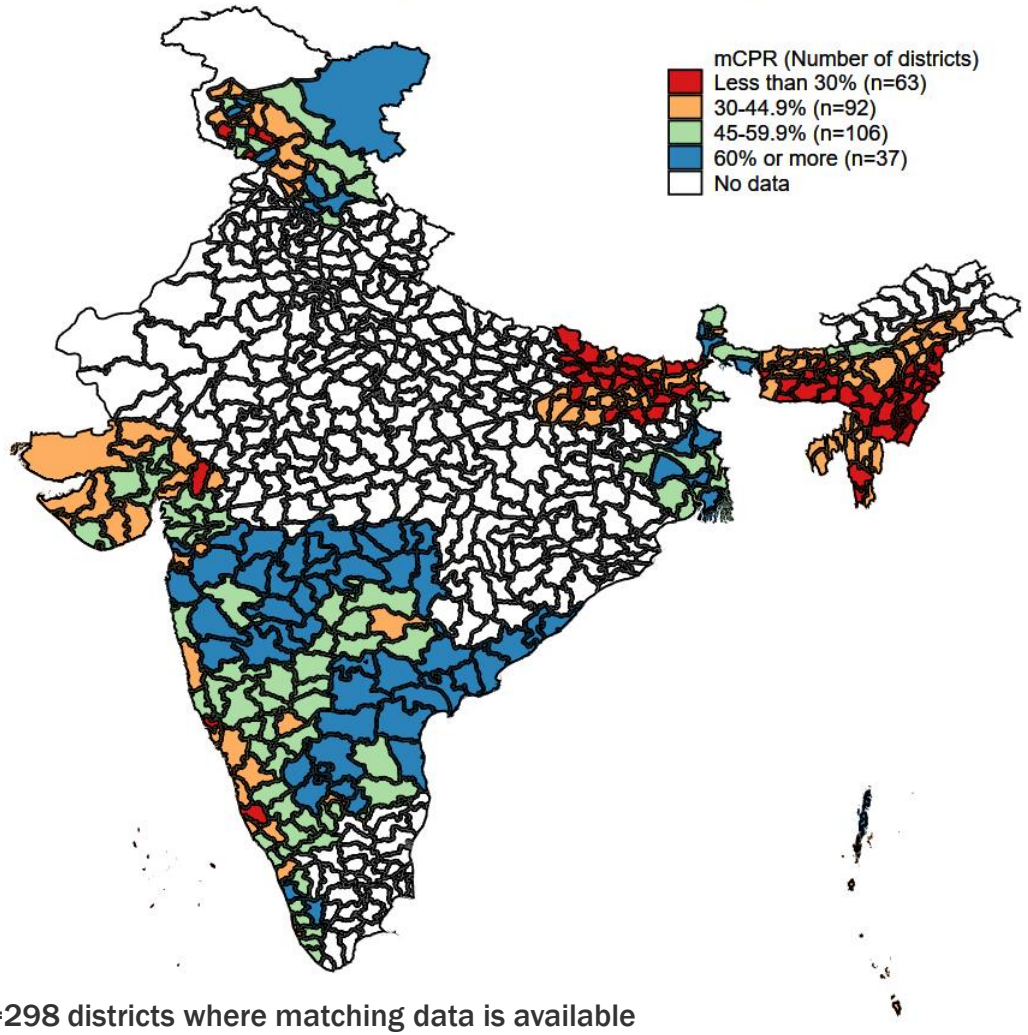
The 2019-20 survey data indicates the movement of states more towards achieving the goal of >75% demand being met.

		States where demand is met by modern method	
		Less than 75%	75% or more
TFR	Below replacement level (TFR <=2.1)	Gujarat, Himachal Pradesh, Kerala, Lakshadweep, Andaman & Nicobar, Jammu & Kashmir, Mizoram, Goa, Tripura, Arunachal Pradesh, Sikkim, Assam, Nagaland	Andhra Pradesh, Karnataka, Jammu & Kashmir, Kerala, Ladakh, Maharashtra, Telangana, Goa, Dadra & Nagar Haveli; Daman & Diu
	Above replacement level (TFR > 2.1)	Assam, Mizoram, Bihar, Dadra & Nagar Haveli, Nagaland, Meghalaya, Manipur	

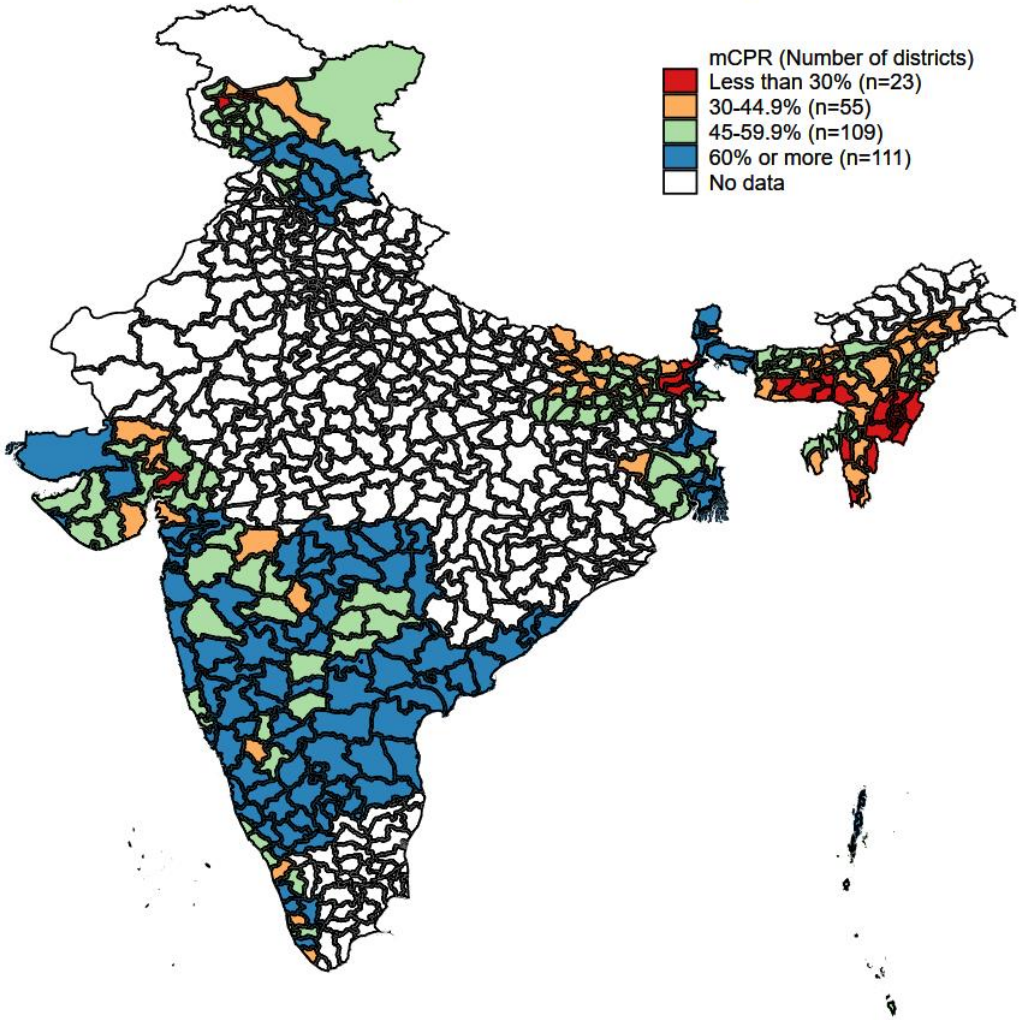
Modern contraceptive prevalence rate, at district-level

- Number of districts with mCPR of 60%+ has increased significantly between the survey rounds
- Change was higher in Maharashtra, Karnataka, Andhra Pradesh, Telangana and Kerala

Use of modern contraceptives in 22 states/UTs, NFHS 2015-16



Use of modern contraceptives in 22 states/UTs, NFHS 2019-20

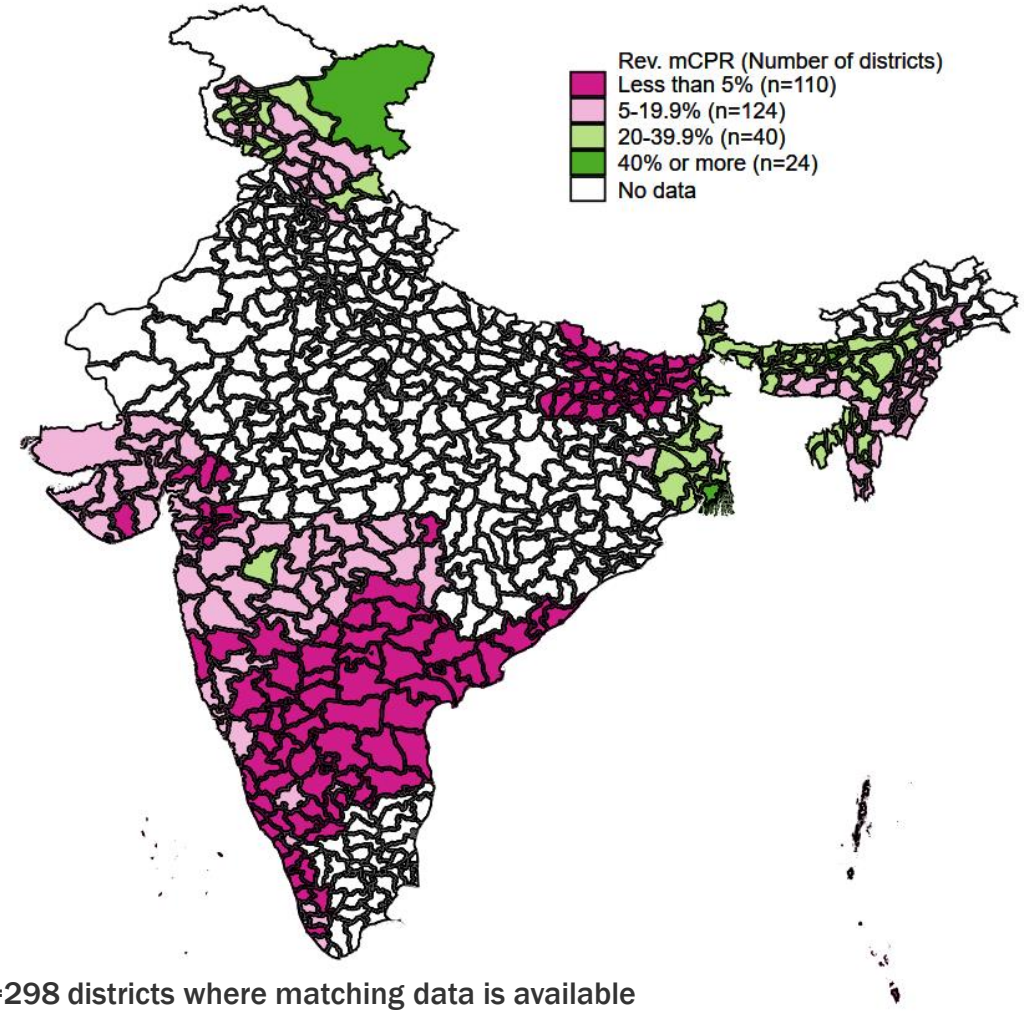


N=298 districts where matching data is available

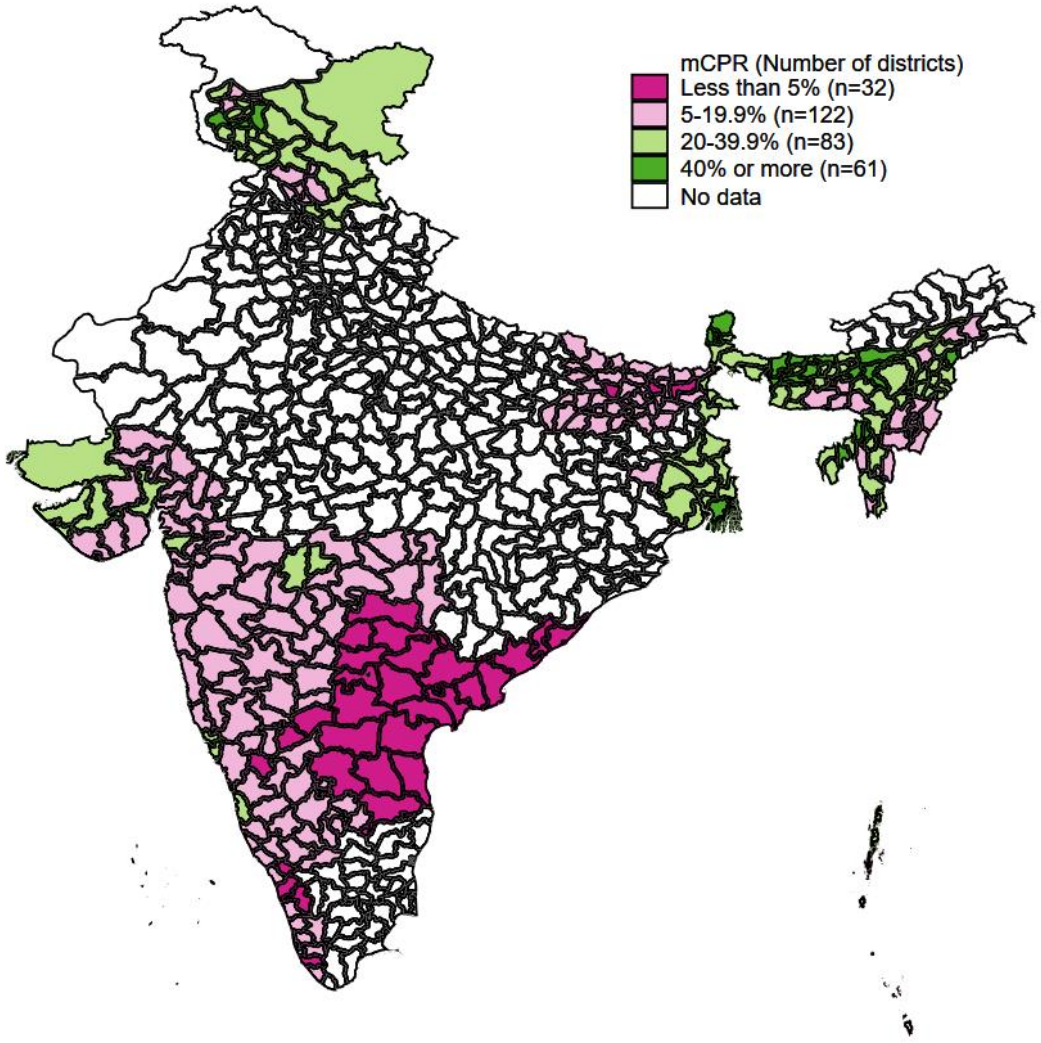
Reversible modern contraceptive method prevalence rate, at district-level

- Districts in eastern and northeastern states, J&K witnessed greater change in reversible contraceptive methods use between the survey rounds.

Use of reversible modern contraceptives in 22 states/UTs, NFHS 2015-16



Use of reversible modern contraceptives in 22 states/UTs, NFHS 2019-20



N=298 districts where matching data is available

Districts with greater or lesser change

- 3 districts with least change and greater change between NFHS 2015-16 and 2019-20 are shown below.
- Range of change (in percentage points): condom use: -7.5 to 16.6; IUD: -24.7 to 28.1; Pills: -10.8 to 27.6

	Least change			Greater change		
	District	mCPR	Change	District	mCPR	Change
Himachal Pradesh	Solan	65.5	-2.2	Chamba	65.2	22.2
	Lahul & Spiti	66.3	7.6	Bilaspur	70.3	20.1
	Hamirpur	51.4	8.4	Kinnaur	76.7	18.8
Assam	Udalguri	36.2	-10.6	Kokrajhar	58.0	22.0
	Tinsukia	36.5	-7.9	Chirang	55.6	24.9
	Darrang	36.5	-7.9	Dhubri	57.0	28.5
Jammu & Kashmir	Ganderbal	27.7	-18.8	Ramban	52.6	24.5
	Kargil	41.6	-17.7	Doda	49.4	27.3
	Baramula	28.2	-17.4	Rajouri	56.2	31.3
Bihar	Purnia	24.3	-5.9	Pashchim Champaran	40.2	36.3
	Katihar	26.4	-0.3	Samastipur	53.8	41.2
	Patna	42.3	4.3	Muzaffarpur	55.7	46.5
Sikkim	West District	70.8	6.5	East District	42.8	10.7
	South District	67.6	10.3	North District	61.0	10.9
Nagaland	Kiphire	32.7	8.5	Wokha	50.1	28.2
	Peren	42.0	15.4	Longleng	56.3	37.8
	Dimapur	38.4	17.4	Mon	55.6	45.9
Manipur	Imphal East	16.9	1.8	Churachandpur	22.6	7.9
	Bishnupur	21.6	4.1	Tamenglong	22.2	12.6
	Thoubal	17.8	4.7	Chandel	23.6	15.5
Mizoram	Aizawl	21.0	-13.6	Serchhip	39.4	5.5
	Lunglei	33.0	-7.8	Mamit	41.3	12.3
	Saiha	21.7	-5.4	Champhai	49.6	16.0
Tripura	Gomati	44.5	0.0	North Tripura	47.3	7.8
	Khowai	49.3	6.4	Dhalai	53.3	9.2

	Least change			Greater change		
	District	mCPR	Change	District	mCPR	Change
Meghalaya	East Khasi Hills	10.6	-9.8	South West Garo Hills	36.1	4.2
	Ribhoi	19.7	-3.1	South Garo Hills	33.3	11.7
	South West Khasi Hills	15.5	-2.6	East Garo Hills	26.8	14.4
West Bengal	Bankura	51.9	-17.1	Uttar Dinajpur	60.9	17.3
	Purba Medinipur	48.1	-11.4	Haora	68.4	17.7
	Puruliya	41.3	-9.2	Jalpaiguri	70.1	21.9
Gujarat	Bharuch	35.7	-21.3	Panchmahal	52.6	29.5
	Junagadh	46.7	-8.1	The Dangs	69.1	30.4
	Kheda	28.7	-3.8	Porbandar	68.5	33.9
Maharashtra	Parbhani	41.5	-26.8	Mumbai	71.7	18.6
	Jalgaon	43.6	-20.6	Ahmednagar	67.4	19.9
	Aurangabad	46.0	-17.0	Ratnagiri	60.5	22.2
Andhra Pradesh	East Godavari	66.3	-5.9	Hyderabad	70.0	14.5
	Prakasam	68.7	-2.2	Jangoan	66.3	15.5
	Visakhapatnam	67.7	-1.3	Jagitial	59.3	20.7
Karnataka	Davanagere	46.9	-10.3	Dakshina Kannada	60.2	39.6
	Raichur	49.6	-4.7	Udupi	71.3	39.7
	Haveri	44.6	-4.0	Shimoga	76.4	39.8
Kerala	Kottayam	40.3	-9.7	Kollam	60.5	9.9
	Thiruvanant hapuram	38.5	-9.5	Alappuzha	56.9	14.2
	Palakkad	51.9	-5.7	Wayanad	69.5	17.3
Telangana	Ranga Reddy	70.6	2.0	Hyderabad	70.0	14.5
	Khammam	75.1	6.0	Warangal	66.3	15.5
	Adilabad	54.3	6.0	Jagitial	59.3	20.7

What may have contributed to increase in mCPR (based on available district-level data)?

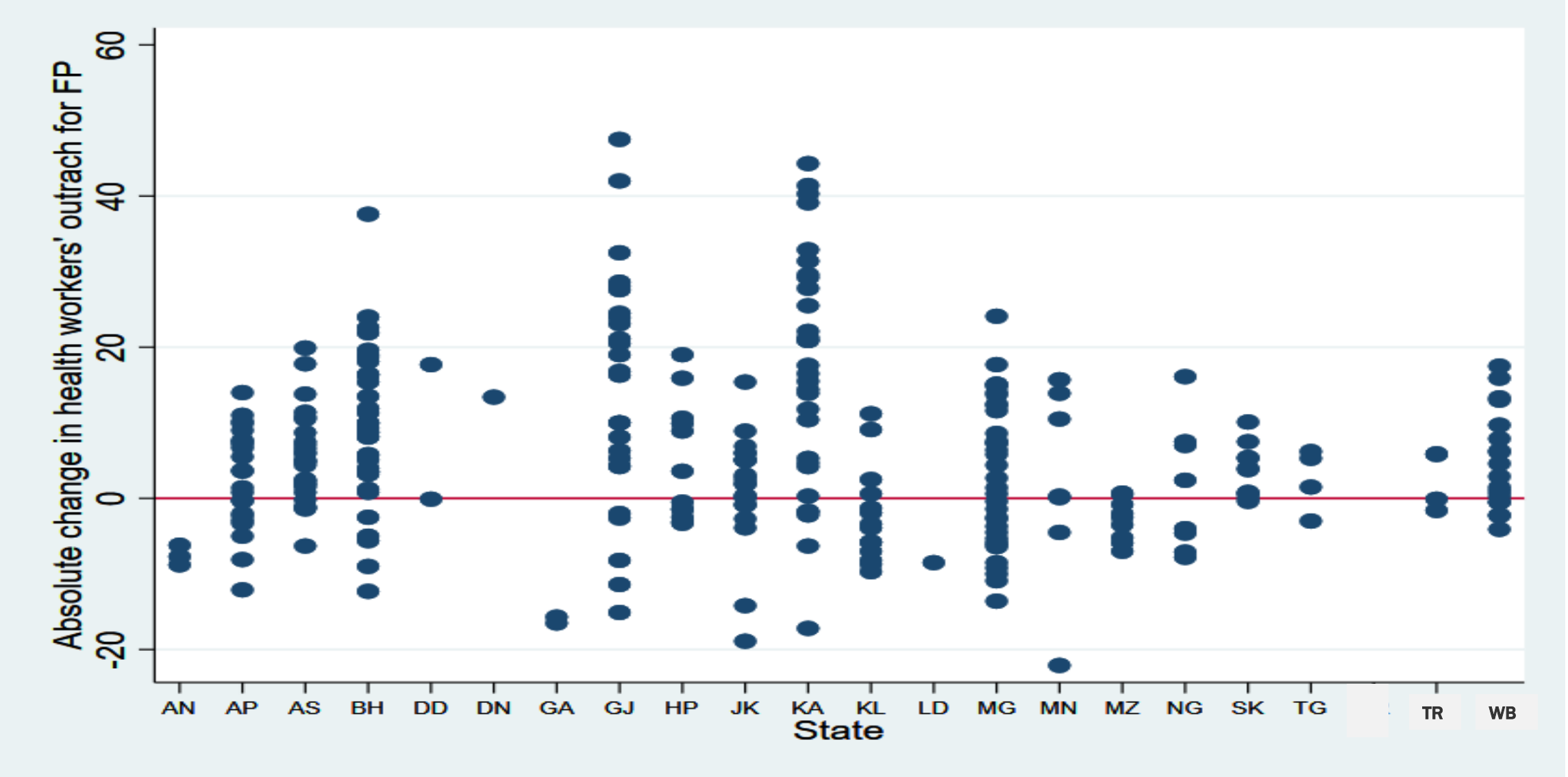
Change in selected FP determinants across states and districts

- Text coloured in red indicates the negative change.
- Although, fewer states/UTs saw negative change, there are number of districts within the states which saw negative change.

	Change at State/UT level (Out of 22)	Change at District level (out of 298)
10+ years of schooling	• 20 states/UTs saw increase • 2 states/UTs saw decline (Tripura and DNH & DD)	• 266 districts saw increase • 32 districts saw decline
Child marriage	• 17 states/UTs saw decline • 5 states/UTs saw no change/increase (Assam, Meghalaya, Manipur, Tripura)	• 187 districts saw decline • 111 districts saw increase
Adolescent childbearing	• 17 states/UTs saw decline • 5 states/UTs saw increase (Andhra Pradesh, Himachal Pradesh, Manipur, Sikkim, Ladakh)	• 192 districts saw decline • 106 districts saw increase
ANC check-up in 1st Trimester	• 18 states/UTs saw increase • 4 states/UTs saw decline (Andhra Pradesh, Goa, Kerala, Sikkim)	• 207 districts saw increase • 91 districts saw decline
4+ ANC visits	• 11 states/UTs saw increase • 11 states/UTs saw decline (Andhra Pradesh, Kerala, Maharashtra, Mizoram, Sikkim, Telangana, Tripura, West Bengal, A & N, Jammu & Kashmir, Lakshadweep)	• 168 districts saw increase • 130 districts saw decline
Post-natal care	• 19 states/UTs saw increase • 3 states/UTs saw decline (Meghalaya, Sikkim, Lakshadweep)	

Change in ‘Health worker ever talked to female non-users about family planning’

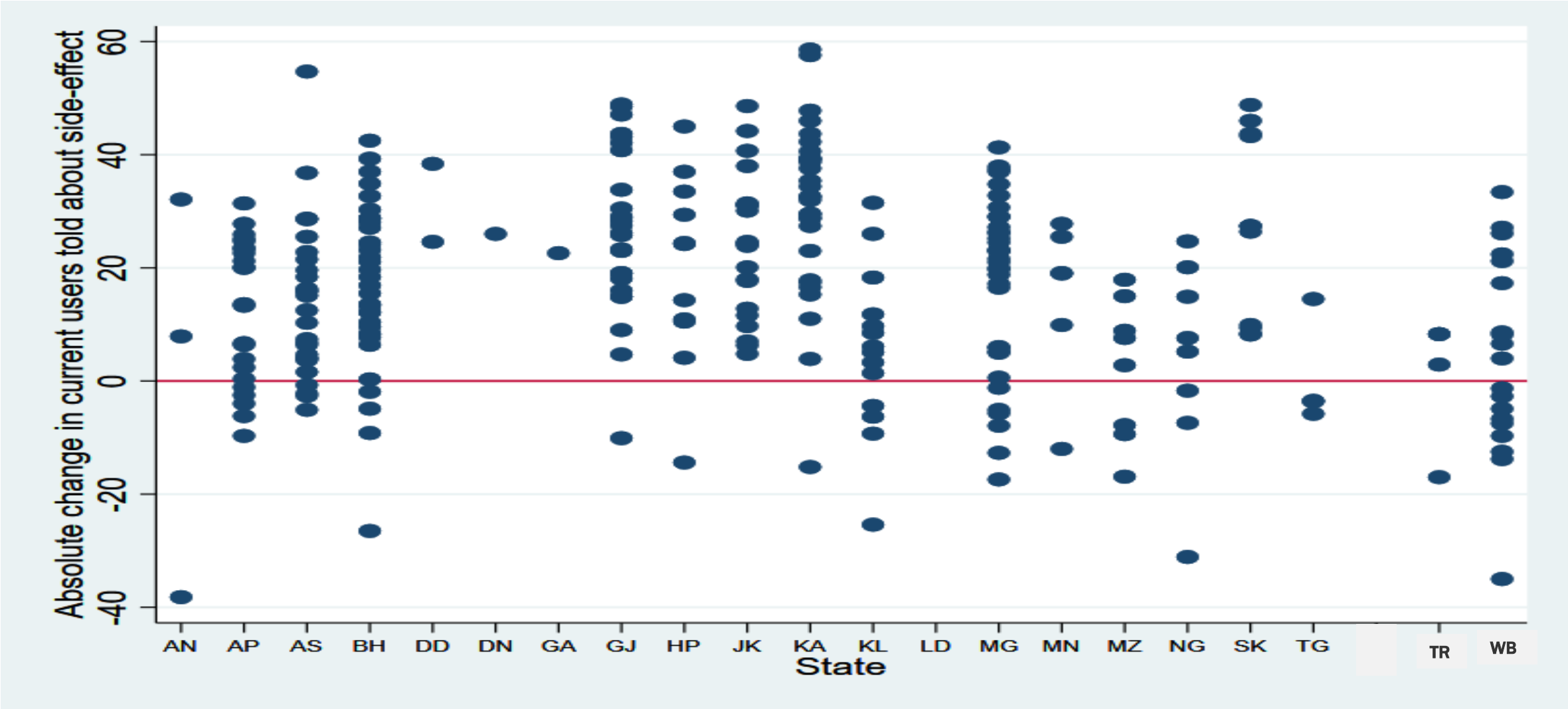
- Increase has been significant in some districts, above 10 percentage points.
- Also in some districts, decline is noted.



Note: Change from 2015-16 to 2019-20

Change in QoC indicator ‘Current users ever told about side effects’

- Increase has been significant in many districts.



Note: Change from 2015-16 to 2019-20

What explains change in mCPR

- District level regression for matched districts of NFHS-4 and NFHS-5 shows that:
  - Programmatic inputs and MCH improvements play crucial roles followed by developmental indicators and service quality
  - Largest contributor was increase in front line workers' discussion on FP with non-users
  - Followed by – improvement in first trimester ANC, improvement in percent households with electricity and improvement in quality of family planning services

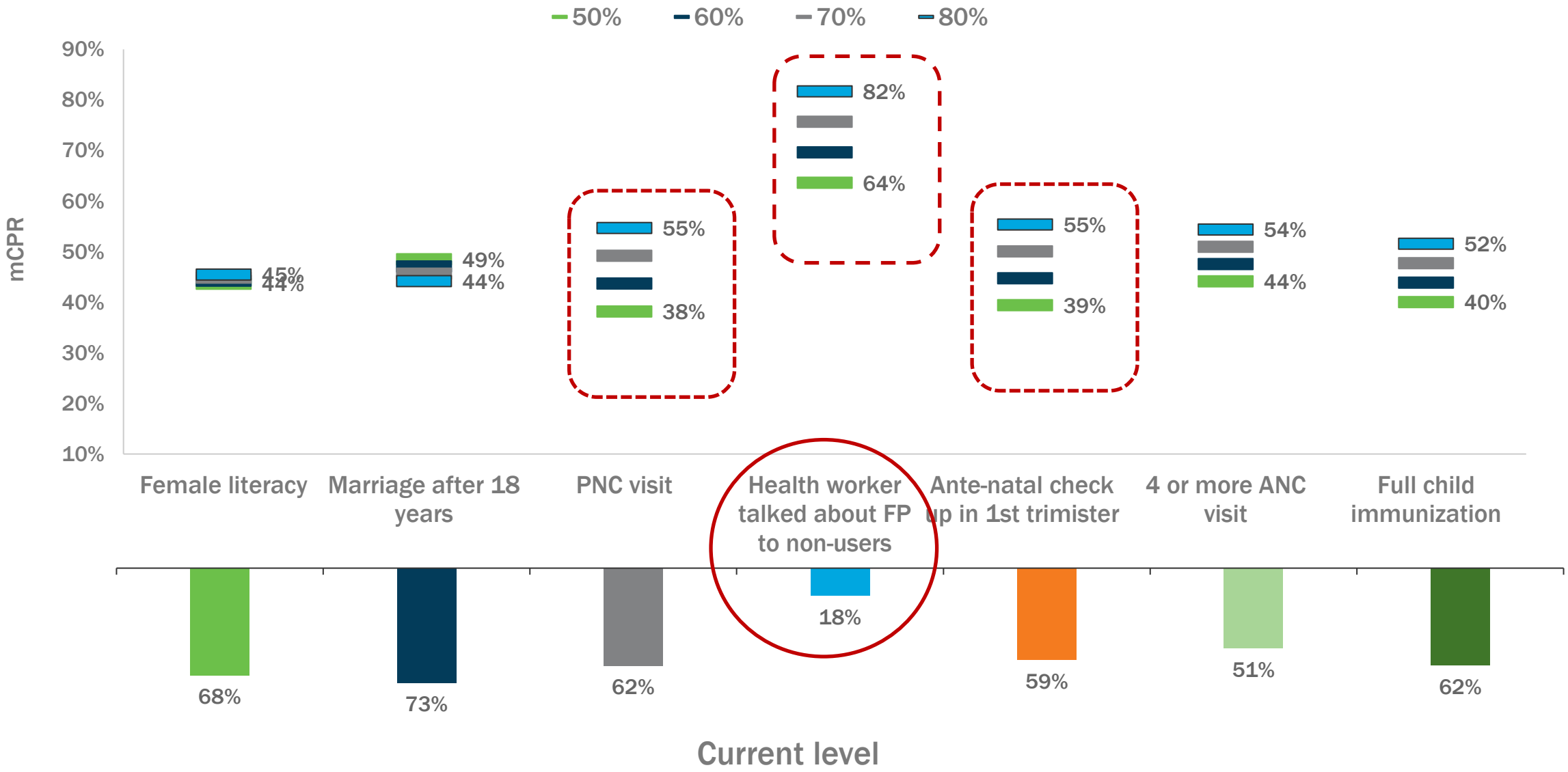
Change in:	Regression co-efficient
FLWs' discussion with non-users on FP	0.302***
Received ANC in the first trimester	0.273***
Percent household with electricity	0.132**
Informed about side effects of current method	0.107**

Dependent variable: Inter-survey change in mCPR; R^2 : 32%

Recommendation from NFHS-4 data:

Health worker talking about FP to non-users is the key to change mCPR:

Identify and talk to non-users



NFHS-5 data confirms it. What led to change in mCPR at district level? (based on available data; Decision Tree analyses)

What led to least amount of change- Node 15

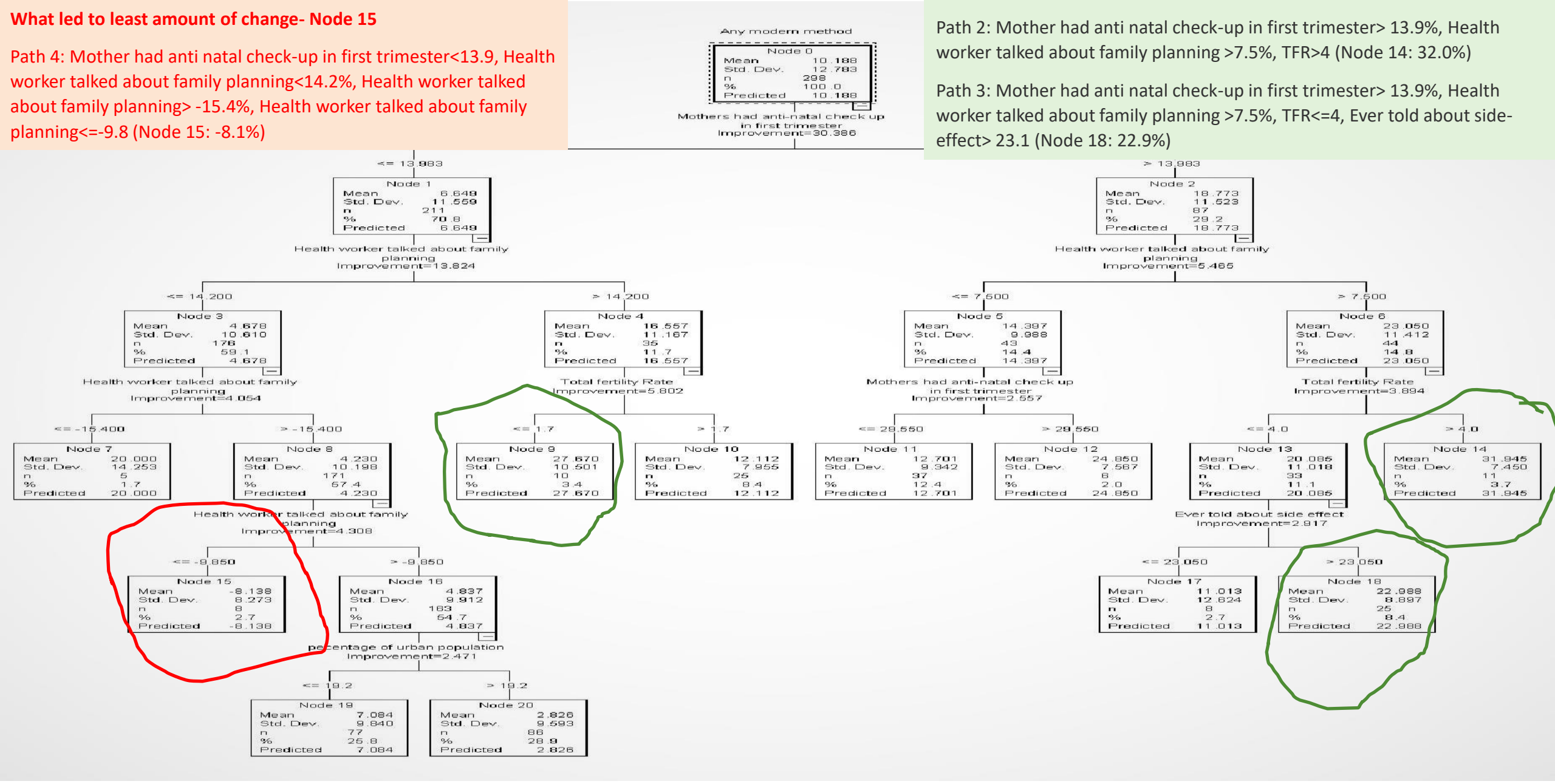
Path 4: Mother had anti natal check-up in first trimester<13.9, Health worker talked about family planning<14.2%, Health worker talked about family planning> -15.4%, Health worker talked about family planning<=-9.8 (Node 15: -8.1%)

What led to change more than the average change (10.2%)- Node 9, 14, 18

Path 1: Mother had anti natal check-up in first trimester<13.9, Health worker talked about family planning>14.2%, TFR<=1.7 (Node 9: 27.7%)

Path 2: Mother had anti natal check-up in first trimester> 13.9%, Health worker talked about family planning >7.5%, TFR>4 (Node 14: 32.0%)

Path 3: Mother had anti natal check-up in first trimester> 13.9%, Health worker talked about family planning >7.5%, TFR<=4, Ever told about side-effect> 23.1 (Node 18: 22.9%)



What explains change in unmet need

What led to least amount of change- Node 7

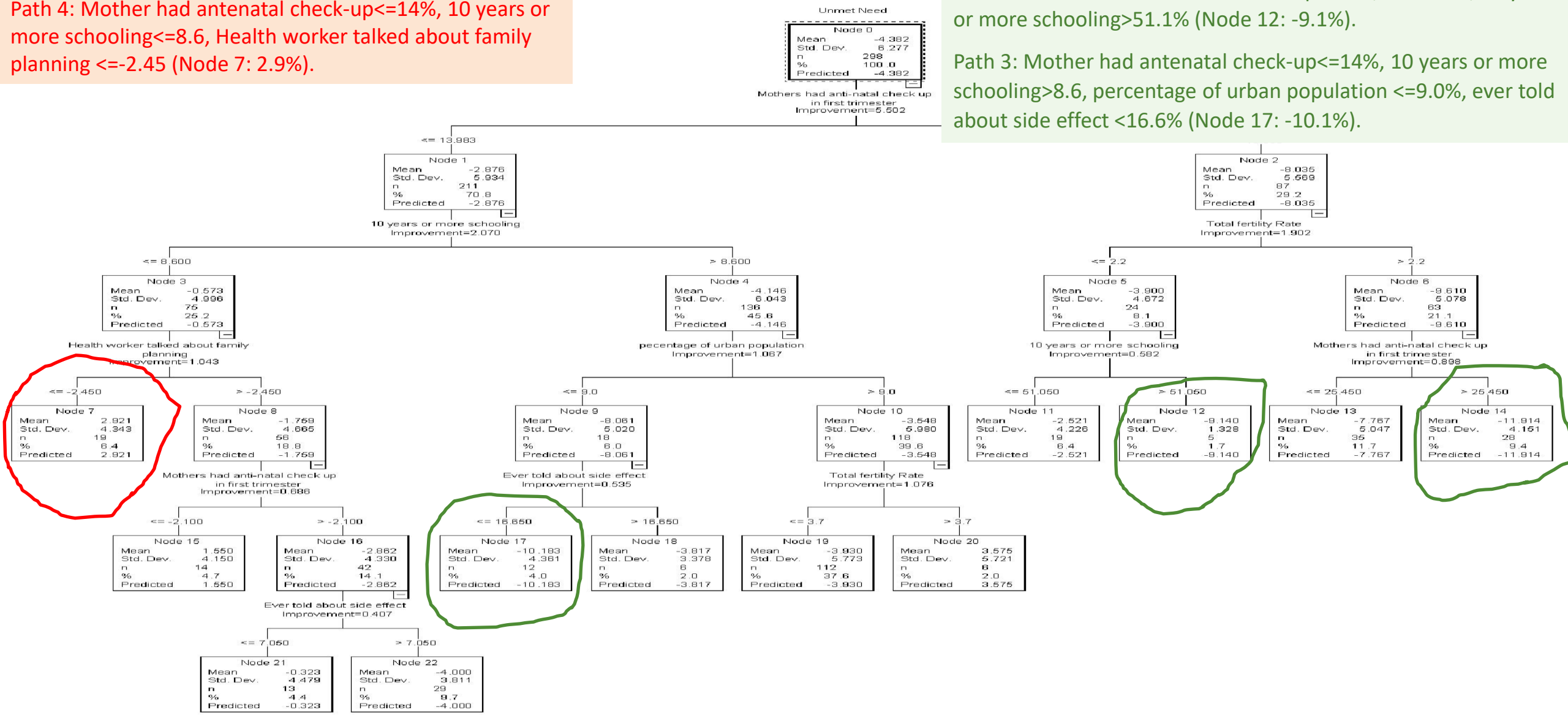
Path 4: Mother had antenatal check-up<=14%, 10 years or more schooling<=8.6, Health worker talked about family planning <=-2.45 (Node 7: 2.9%).

What led to more than average change- Nodes 14, 12, 17

Path 1: Mother had antenatal check-up> 14%, TFR>2.2, Mother had anti-natal check-up>25.5% (Node 14: -11.9%).

Path 2: Mother had antenatal check-up> 14%, TFR<=2.2, 10 years or more schooling>51.1% (Node 12: -9.1%).

Path 3: Mother had antenatal check-up<=14%, 10 years or more schooling>8.6, percentage of urban population <=9.0%, ever told about side effect <16.6% (Node 17: -10.1%).



What seems to have influenced change in MPV versus non-MPV districts?

What led to least change- Node 21

Path 4: Non-MPV, Health worker talked about family<=16.2, Mother had anti-natal check-up <=14%, Health worker talked about family> -15.4%, Health worker talked about family<-9.5 (Node 21: -8.5%)

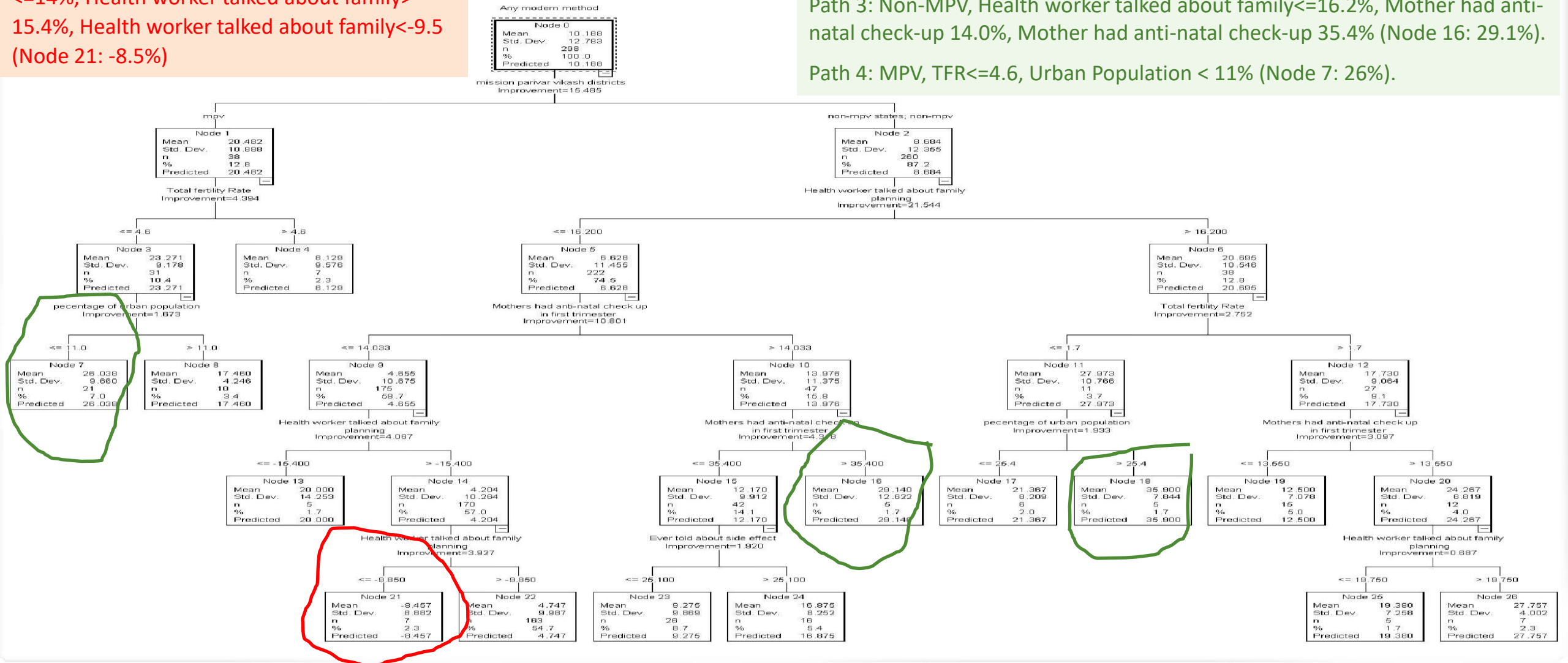
What led to more than the average change (10.1%) - Node 18, 26, 16

Path1: Non-MPV, Health worker talked about family>16.2, TFR<=1.7, percentage of urban population >35.9% (Node 18: 35.9%).

Path 2: Non-MPV, Health worker talked about family>16.2%, TFR>1.7, mother had anti-natal check-up > 13.5%, Health worker talked about family planning>19.8% (Node 26: 27.8%).

Path 3: Non-MPV, Health worker talked about family<=16.2%, Mother had anti-natal check-up 14.0%, Mother had anti-natal check-up 35.4% (Node 16: 29.1%).

Path 4: MPV, TFR<=4.6, Urban Population < 11% (Node 7: 26%).



Key messages

- Interpretations based on state level changes be limited
- mCPR change from NFHS-4 to NFHS-5 has been beyond imagination in some districts/states/UTs.
- TFR is already <=2.1 in 19 out of 22 states/UTs.
- Shift to reversible modern methods and good method mix is evident at district/state level
- Rural-urban divide is reducing
- Traditional method use increase is pointing to the (possible high) discontinuation of reversible contraceptive methods
- FP and MCH program coverage variables will have continuing role to play than the socio-economic and developmental determinants.

- How do you interpret these data?

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